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EDITORIAL NOTICE

Yet again, this batch of *MPCs* and *MPSs* breaks records: $\sim 102\,000$ observations, 4303 new provisional designations and 203 new numberings of minor planets (up from last month's $\sim 67\,000$, 3029 and 174, respectively). Provisional designations in recent halfmonths extend to 1998 HY₁₅₀ and 1998 FV₁₃₅. The six (so far) comet designations in the second half of May (1998 K1-K6) equal the previous record of the first half of January 1989.

Downloading the PostScript versions of the *MPCs* and *MPSs* from the Extended Computer Service (ECS) in the WWW is starting to be an effective way, it seems, of solving the problem of distributing the enormously increased amount of material. We encourage other subscribers to explore this option and are examining ways of making the PostScript files available to *MPC* subscribers who do not subscribe to the ECS. Our proposal to issue the mailed *MPCs* with the pagesize reduced so that four pages appear on a single side of paper has not proven particularly popular, so we shall, at least for the moment, continue to provide the pages full size: if subscribers who are happy with downloading the pages from the WWW no longer need to receive the mailed copy, we should appreciate it if they would so inform us. Only a few subscribers have indicated their desire to continue to receive the *MPSs* by mail, and we are accommodating them; we apologize for the delay in distributing the Apr. 11 and May 11 *MPS* batches in this way, and we hope that these subscribers will have received these *MPS* batches by the time they receive this June 10 *MPC* batch.

The next *MPCs* will be published on or about 1998 Aug. 8. No *MPCs* will be issued in July.

ERRATUM

MPC Line
31698 -22

For F. B. Zoltowski read J. Broughton

NEW OBSERVATORY CODES

The following listing is a continuation to that on *MPC* 31634. The longitudes λ are measured in degrees eastward from Greenwich, and the parallax constants $\rho \cos \phi'$ and $\rho \sin \phi'$ are the product of the geocentric distance (in earth equatorial radii) and the cosine and sine, respectively, of the geocentric latitude.

Obs.	λ	$\rho \cos \phi'$	$\rho \sin \phi'$	
146	10.6673	0.71715	+0.69487	Frignano
147	8.5814	0.70043	+0.71139	Osservatorio Astronomico di Suno, Novara

636	6.9794	0.62524	+0.77783	Essen
682	247.6381	0.79932	+0.59932	Kanab
740	265.3517	0.8523	+0.5213	SFA Observatory, Nacogdoches

CORRECTED OBSERVATIONS

The following observations correct those previously published.

Object	Date	UT	α_{2000}	δ_{2000}	Reference	Mag.	N Obs.
1991 DF ₂	* 1991 02 23.17616	14 00 08.91	+01 15 45.9	<i>MPC</i> 20459			1 493
1991 DF ₂	1991 02 23.20949	14 00 10.01	+01 15 53.5	<i>MPC</i> 20459	16.0		1 493
1996 RD ₁	1996 10 19.85720	23 09 02.88	-06 08 37.8	<i>MPC</i> 28169			2 610

Note 1: Observations interchanged. 2: Originally published under erroneous designation.

DELETED OBSERVATIONS

The following observations are to be deleted.

Object	Date	UT	α_{2000}	δ_{2000}	Reference	Obs.
1953 CS	* 1953 02 09.48958	07 18 00.53	+15 16 52.0	<i>MPC</i> 8956		388
1972 RX ₂	1972 10 04.79078	22 32 11.29	-07 51 31.2	<i>MPC</i> 3633		095
1993 AT	1993 01 29.60243	07 27 50.3	+31 29 16	<i>MPC</i> 21900		896
1994 SZ ₉	1997 04 13.26074	12 06 07.96	+00 52 00.9	<i>MPC</i> 29464		691
1994 SZ ₉	1997 04 13.28235	12 06 06.99	+00 52 05.8	<i>MPC</i> 29464		691
(1056)	1956 12 25.70347	08 19 33.73	+20 42 49.5	<i>MPC</i> 2613		388
(1056)	1957 01 31.57743	07 40 07.09	+23 42 36.8	<i>MPC</i> 2613		388

IDENTIFICATION CHANGES

Continuation to *MPC* 31634.

Object	Date	UT	α_{2000}	δ_{2000}	Originally	Mag.	Obs.
1931 DA ₁	* 1931 02 25.33067	10 54 04.76	+08 10 47.3	1931 CD	16.5		754
1931 DA ₁	1931 02 26.30576	10 52 46.55	+08 21 32.0	1931 CD	16.5		754
1956 UT	* 1956 10 29.10802	01 16 49.06	-00 57 20.4	1956 TG			760
1956 UT	1956 10 29.15258	01 16 48.32	-00 56 53.6	1956 TG			760
1966 PG ₁	* 1966 08 09.91950	21 18 32.75	-17 45 02.6	1966 PS			074
1977 PO ₂	* 1977 08 09.54952	21 39 48.4	-16 35 32	1977 PB ₁			414
1978 TU ₉	* 1978 10 08.85938	23 38 27.97	-03 26 37.3	1978 TK ₁	17.2		095

1985 QX ₆	*	1985 08 17.96531	23 27 20.38	-11 35 46.4	1985 PK ₂	17.0	095
1986 XW ₅	*	1986 12 07.94502	04 39 11.93	+24 53 17.0	1986 XB ₄		046
1986 XW ₅		1986 12 07.95914	04 39 11.28	+24 53 18.3	1986 XB ₄		046
1988 VH ₁₄	*	1988 11 05.89039	02 30 36.00	+11 36 04.1	1988 VL ₅		046
1988 VH ₁₄		1988 11 05.90312	02 30 35.23	+11 36 05.0	1988 VL ₅		046
1990 SV ₂₉	*	1990 09 22.17153	00 45 18.04	+00 30 37.7	1990 RF ₁₆	19.0	809
1990 SV ₂₉		1990 09 22.18472	00 45 17.41	+00 30 33.0	1990 RF ₁₆		809
1990 SV ₂₉		1990 09 22.19792	00 45 16.84	+00 30 28.9	1990 RF ₁₆		809
1990 VJ ₁₆	*	1990 11 11.62951	01 45 35.33	+18 55 35.7	1990 UK ₃	16.0	408
1990 VJ ₁₆		1990 11 11.64340	01 45 34.95	+18 55 27.2	1990 UK ₃		408
1990 VJ ₁₆		1990 11 11.66424	01 45 34.11	+18 55 15.3	1990 UK ₃		408
1990 VJ ₁₆		1990 11 12.60868	01 44 58.53	+18 48 06.4	1990 UK ₃	16.0	408
1990 VJ ₁₆		1990 11 12.62951	01 44 57.81	+18 47 55.0	1990 UK ₃		408
1990 VJ ₁₆		1990 11 12.64236	01 44 57.25	+18 47 49.6	1990 UK ₃		408
1990 VJ ₁₆		1990 11 17.51765	01 42 09.92	+18 11 22.2	1990 UK ₃	16.5	408
1990 VJ ₁₆		1990 11 17.53857	01 42 09.22	+18 11 15.6	1990 UK ₃		408
1990 VJ ₁₆		1990 11 17.55619	01 42 08.38	+18 11 07.0	1990 UK ₃		408
1993 BQ ₁₅	*	1993 01 28.24931	09 40 55.06	+09 15 36.8	1993 BW ₁₄	18.8	809
1993 BQ ₁₅		1993 01 28.27569	09 40 53.65	+09 15 44.3	1993 BW ₁₄		809
1995 TK ₈	*	1995 10 11.44557	00 10 59.39	+08 43 53.3	1995 SY ₃	16.8 V	400
1995 TK ₈		1995 10 11.46600	00 10 58.43	+08 43 42.9	1995 SY ₃		400
1995 UJ ₅₃	*	1995 10 26.63611	02 43 24.66	+09 20 44.1	1995 US ₄₉	18	372
1996 YS ₃	*	1996 12 18.66478	07 33 42.62	+22 17 23.6	1996 XS ₃₁	16.4	327
1996 YS ₃		1996 12 18.68645	07 33 41.75	+22 17 28.2	1996 XS ₃₁		327
1996 YS ₃		1996 12 18.70815	07 33 40.88	+22 17 32.6	1996 XS ₃₁		327
1998 FD ₁₂₇	*	1998 03 26.44361	11 45 44.62	+10 13 08.8	1998 ET ₁₃	18.4 V	566
1998 FD ₁₂₇		1998 03 26.45392	11 45 44.00	+10 13 12.8	1998 ET ₁₃	18.7 V	566
1998 FD ₁₂₇		1998 03 26.46347	11 45 43.35	+10 13 16.5	1998 ET ₁₃	19.2 V	566
1998 GH ₁₁	*	1998 04 01.23059	12 26 37.42	-04 39 14.2	1998 FD ₅₈	19.3	704
1998 GH ₁₁		1998 04 01.25069	12 26 36.28	-04 39 05.0	1998 FD ₅₈	19.3	704
1998 GH ₁₁		1998 04 01.27071	12 26 35.05	-04 38 56.1	1998 FD ₅₈	19.6	704
1998 GH ₁₁		1998 04 01.31098	12 26 32.51	-04 38 39.8	1998 FD ₅₈	20.0	704
1998 HW ₁₄₇	*	1998 04 28.30010	12 48 00.15	+01 11 22.5	1998 FD ₇₇	17.9 V	691
1998 HW ₁₄₇		1998 04 28.32101	12 47 59.17	+01 11 26.5	1998 FD ₇₇	18.0 V	691
1998 HW ₁₄₇		1998 04 28.34187	12 47 58.17	+01 11 30.7	1998 FD ₇₇	18.0 V	691
1998 HX ₁₅₀	*	1998 04 21.19351	13 07 01.19	-11 48 47.7	1998 HL ₃₇	18.5	704
1998 HX ₁₅₀		1998 04 21.21355	13 07 00.02	-11 48 38.0	1998 HL ₃₇	18.6	704
1998 HX ₁₅₀		1998 04 21.23363	13 06 58.86	-11 48 29.8	1998 HL ₃₇	18.3	704
1998 HX ₁₅₀		1998 04 21.25366	13 06 57.71	-11 48 20.4	1998 HL ₃₇	18.1	704
1998 HX ₁₅₀		1998 04 21.27368	13 06 56.55	-11 48 11.0	1998 HL ₃₇	18.1	704
1998 HY ₁₅₀	*	1998 04 21.19351	13 07 10.96	-11 48 43.5	1998 HK ₃₇	17.7	704
1998 HY ₁₅₀		1998 04 21.21355	13 07 09.84	-11 48 35.7	1998 HK ₃₇	18.4	704
1998 HY ₁₅₀		1998 04 21.23363	13 07 08.75	-11 48 27.4	1998 HK ₃₇	18.1	704
1998 HY ₁₅₀		1998 04 21.25366	13 07 07.59	-11 48 18.8	1998 HK ₃₇	17.6	704
1998 HY ₁₅₀		1998 04 21.27368	13 07 06.48	-11 48 10.5	1998 HK ₃₇		704

IDENTIFICATIONS

The following identifications with numbered minor planets continue the list on *MPC* 31634:

	Note		Note		
1931 DA ₁	= (8619)	1	1957 YJ	= (8702)	2
1965 NA	= (8668)	2	1972 TX ₄	= (8648)	2
1978 RE ₁₂	= (8702)	2	1983 VW	= (8701)	2
1986 XB ₄	= (8657)	2			

Note 1: by T. Urata. 2: by G. V. Williams.

NUMBERING OF PERIODIC COMETS

Continuation to the list on *MPC* 31179.

136P/1990 S1 = 1998 K4 (Mueller 3)

137P/1990 UL₃ = 1998 K6 (Shoemaker-Levy 2)

OBSERVATIONS OF COMETS

Observations are published here for the following observatory codes:

046	Kletř. 0.57-m <i>f</i> /5.2 reflector + CCD. Observers J. Tichá, M. Tichý and Z. Moravec.
057	Belgrade. 0.14-m <i>f</i> /12 Askania astrograph + CCD. Observers Vl. Benishek and V. Protitch-Benishek.
104	San Marcello Pistoie. 0.40-m <i>f</i> /5 reflector + CCD. Observers L. Tesi, A. Boattini and M. Tombelli. Measured by A. Boattini, L. Tesi and G. Forti.
106	Crni vrh. 0.36-m <i>f</i> /6.7 Schmidt-Cassegrain + CCD. Observers H. Mikuz and J. Skvarc.
108	Montelupo. 0.30-m <i>f</i> /5.7 Schmidt-Cassegrain + CCD. Observers M. Tombelli, A. Boattini and G. Forti.
118	Modra. 0.6-m <i>f</i> /5.5 reflector + CCD. Observers A. Galád, P. Kolény, L. Kornoš and A. Pravda.
120	Višňan. 0.4-m <i>f</i> /4.3 reflector + CCD. Observer K. Korlević.
143	Gnosca. 0.20-m <i>f</i> /6.3 reflector + CCD. Observer S. Sposetti.
146	Frignano. 0.3-m <i>f</i> /6.3 Schmidt-Cassegrain + CCD. Observer R. Calanca.
249	SOHO. SOHO-LASCO coronagraph C3. Observers D. A. Biesecker and C. St. Cyr. Reduction by G. V. Williams.
292	Burlington. 0.30-m <i>f</i> /3.0 Schmidt-Cassegrain + CCD. Observer T. Handley.
323	Perth Observatory, Bickley. 0.25-m Mike Candy Telescope. Observers G. Lowe and T. Smith.
327	Xinglong. 0.60-m Schmidt + CCD. Observers H. T. Zhang, Z. Y. Zheng, S. J. Xue, X. M. Teng and Y. J. Chen. Measured by X. Y. Li and X. M. Teng.
352	Konan. 0.25-m <i>f</i> /6 reflector + CCD. Observer M. Hotta.
355	Hadano. 0.28-m <i>f</i> /5.0 reflector + CCD. Observer A. Asami.
360	Kuma Kogen. 0.60-m <i>f</i> /6.0 Ritchey-Chrétien + CCD. Observer A. Nakamura.
367	Yatsuka. 0.26-m <i>f</i> /4.8 reflector. Observer H. Abe.
402	Dynic Astronomical Observatory. 0.60-m <i>f</i> /4.0 reflector + CCD. Observer A. Sugie.
415	Kambah. Observer D. Herald.
422	Loomberah. 0.25-m <i>f</i> /4.1 reflector + CCD. Observer G. J. Garradd.

- 426 Woomera. 0.30-m $f/3.3$ Schmidt-Cassegrain + CCD. Observer F. B. Zoltowski.
- 504 Le Creusot. 0.40-m $f/5$ reflector + CCD. Observer J. C. Merlin.
- 540 Linz. 0.3-m $f/5.2$ Schmidt-Cassegrain + CCD. Observer E. Meyer.
- 557 Ondřejov. 0.65-m $f/3.6$ reflector + CCD. Observers P. Pravec and L. Šarounová.
- 560 Madonna di Dossobuono. 0.40-m $f/3.5$ reflector + CCD. Observer L. Lai.
- 568 Mauna Kea. 3.6-m Canada-France-Hawaii Telescope + CCD. Observer C. Veillet.
- 587 Sormano. 0.5-m reflector + CCD. Observers A. Testa, P. Chiavenna, F. Manca and P. Sicoli.
- 605 Marl. 0.2-m $f/10$ Schmidt-Cassegrain + CCD. Observer E. Jung.
- 609 Polino. 0.40-m $f/2.9$ reflector. Observers G. Iatteri, V. S. Casulli, V. Scirri, G. Bernabei and A. Boattini. Measured by V. S. Casulli, V. Scirri and A. Boattini.
- 610 Pianoro. 0.25-m $f/4$ Schmidt-Cassegrain. Observer V. Goretti.
- 611 Starkenberg. 0.45-m $f/4.4$ reflector + CCD. Observers M. Busch, U. Fuhrmann and R. Stoss. Measured by M. Busch.
- 620 Mallorca. 0.3-m $f/3.3$ Schmidt-Cassegrain + CCD. Observers A. Lopez and R. Pacheco.
- 658 Dominion Astrophysical Observatory, Victoria. 1.82-m Plaskett telescope + CCD. Observer D. D. Balam.
- 670 Camarillo. 0.25-m Schmidt-Cassegrain + CCD. Observer J. E. Rogers.
- 675 Palomar. 1.2-m Oschin Schmidt and 1.5-m reflector + CCD. Observers J. Mueller, K. Rykoski, R. Gal and V. Hradecky. Measured by J. Mueller and G. V. Williams.
- 682 Kanab. 0.25-m $f/4$ Schmidt-Cassegrain + CCD. Observer E. Sheridan.
- 691 Kitt Peak. 0.91-m Spacewatch telescope. Observer J. V. Scotti.
- 696 Mt. Hopkins. 1.2-m telescope + CCD. Observers C. W. Hergenrother and M. J. Holman. Measured by C. W. Hergenrother.
- 699 LONEOS. 0.59-m Schmidt + CCD. Observer B. A. Skiff. Measurers B. W. Koehn and E. Bowell.
- 700 Chinle. 0.30-m $f/10$ Schmidt-Cassegrain + CCD. Observer J. Bruton.
- 704 LINEAR. 1.0-m $f/2.15$ reflector + CCD. Observers M. Blythe, F. Shelly and M. Bezpalko. Measured by J. Stuart and H. Viggh.
- 709 Cloudcroft. 0.60-m $f/7$ Ritchey-Chrétien + CCD. Observer W. Offutt.
- 711 McDonald. 0.76-m reflector + CCD. Observer J. G. Ries. Measured by J. G. Ries and P. J. Shelus.
- 713 Thornton. 0.20-m $f/10$ Schmidt-Cassegrain + CCD. Observer R. A. Koff.
- 734 Eskridge. 0.30-m Schmidt-Cassegrain + CCD. Observer G. Hug.
- 735 Needville. 0.46-m reflector + CCD. Observers D. Borgman and K. Rivich. Measured by K. Rivich.
- 750 Hobbs Observatory, Fall Creek. 0.6-m $f/5$ telescope + CCD. Observer R. Elliott.
- 755 Optec Observatory. 0.25-m $f/6.3$ Schmidt-Cassegrain + CCD. Observer G. Persha.
- 758 Cocoa. 0.3-m reflector + CCD. Observer I. Griffin.
- 784 Alfred University Observatory. 0.81-m $f/4$ reflector + CCD. Observers D. R. DeGraff and A. M. Robbins.
- 816 Rand Observatory, Lake Placid. 0.37-m reflector + CCD. Observer G. R. Viscome.
- 817 Sudbury. 0.41-m Schmidt-Cassegrain. Observer D. di Cicco.

- 834 Buenos Aires-AAAA. 0.25-m $f/6.3$ reflector + CCD. Observers R. Caprio and R. Mackintosh. Measured by R. Mackintosh and J. R. Carozza.
- 844 Los Molinos. 0.35-m $f/6.4$ reflector + CCD. Observers O. Mendez, R. Salvo and J. Scheck.
- 860 Valinhos. 0.20-m $f/3.3$ reflector + CCD. Observers P. R. Holvorcem and F. Giroto.
- 867 Saji Observatory. 1.03-m $f/4.8$ reflector + CCD. Observers M. Yamanishi, A. Miyamoto, M. Aimoto and T. Oribe.
- 886 Susono. 0.25-m $f/6.3$ reflector + CCD. Observer M. Akiyama.
- 897 YGCO Chiyoda Observatory. 0.25-m $f/6.0$ reflector + CCD. Observer T. Kojima.
- 900 Moriyama. 0.25-m $f/6.3$ reflector + CCD. Observer Y. Ikari.
- 965 Algarve. 0.5-m reflector + CCD. Observers S. Stewart, M. Beales, R. Beales, M. Whitecross and S. Whitecross.
- 970 Chelmsford. Observer N. D. James. 0.30-m $f/5.25$ reflector + CCD.

Object	Date	UT	α_{2000}	δ_{2000}	Mag.	N Obs.
C/1995 O1 (Hale-Bopp)						
C/1995 O1	1996 07 26.49410		18 18 13.23	-09 23 43.1		323
C/1995 O1	1998 03 03.16387		04 54 43.11	-57 18 31.7		834
C/1995 O1	1998 03 13.03708		04 55 07.68	-55 47 18.8		834
C/1995 O1	1998 03 19.13454		04 56 32.67	-54 54 16.5		834
C/1995 O1	1998 03 23.10597		04 57 52.31	-54 21 26.2		834
C/1995 O1	1998 03 25.05660		04 58 38.22	-54 05 49.9		834
C/1995 O1	1998 05 06.93473		05 28 01.67	-50 10 18.8		844
C/1995 O1	1998 05 06.96538		05 28 03.31	-50 10 12.7		844
C/1995 O1	1998 05 15.37377		05 35 38.81	-49 50 36.2		426
C/1995 O1	1998 05 15.37887		05 35 39.10	-49 50 35.6		426
C/1995 O1	1998 05 15.38391		05 35 39.37	-49 50 34.8	11.4 N	426
C/1995 O1	1998 05 17.95981		05 38 03.08	-49 46 22.2	10.4 T	844
C/1995 O1	1998 05 17.98412		05 38 04.41	-49 46 18.8	10.3 T	844
C/1995 O1	1998 05 18.00813		05 38 05.89	-49 46 16.9	9.9 T	844
C/1995 O1	1998 05 19.94475		05 39 54.95	-49 43 42.0	9.9 T	844
C/1995 O1	1998 05 19.95814		05 39 55.77	-49 43 41.3	9.8 T	844
C/1995 O1	1998 05 23.39013		05 43 11.28	-49 40 22.8	12.7 N	422
C/1995 O1	1998 05 23.39098		05 43 11.32	-49 40 22.7	12.8 N	422
C/1995 O1	1998 05 23.39184		05 43 11.37	-49 40 22.6	12.7 N	422
C/1995 O1	1998 05 28.39198		05 48 00.64	-49 38 09.7	13.8 N	422
C/1995 O1	1998 05 28.39301		05 48 00.70	-49 38 09.6		422
C/1995 O1	1998 05 28.39405		05 48 00.80	-49 38 09.7	13.8 N	422
P/1996 A1 (Jedicke)						
P/1996 A1	1998 03 02.79866		14 19 36.23	-18 43 54.0	20.0 T	867
P/1996 A1	1998 03 02.81185		14 19 36.09	-18 43 54.5		867
P/1996 A1	1998 03 02.82157		14 19 36.02	-18 43 54.2		867
P/1996 A1	1998 04 27.68893		14 00 24.88	-17 03 19.6	19.5 T	1 867
P/1996 A1	1998 04 27.70109		14 00 24.54	-17 03 16.2		1 867
P/1996 A1	1998 05 15.47300		13 53 15.66	-16 14 08.2		568
P/1996 A1	1998 05 15.49564		13 53 15.16	-16 14 04.1		568
P/1996 A1	1998 05 15.50748		13 53 14.91	-16 14 02.2		568
P/1996 A1	1998 05 29.43033		13 48 55.68	-15 39 11.4		568
P/1996 A1	1998 05 29.44798		13 48 55.41	-15 39 08.7		568
P/1996 A1	1998 05 31.33702		13 48 27.01	-15 34 55.2	19.2 T	568

C/1997 BA ₆ (Spacewatch)						
C/1997 BA ₆	1998 05 07.82862	08 42 27.97	-05 42 04.4	17.8 T	046	
C/1997 BA ₆	1998 05 07.82972	08 42 27.94	-05 42 04.3		046	
C/1997 BA ₆	1998 05 07.83186	08 42 27.92	-05 42 04.0		046	
C/1997 BA ₆	1998 05 07.83294	08 42 27.89	-05 42 04.1		046	
C/1997 BA ₆	1998 05 20.47303	08 43 46.65	-05 52 31.7	17.5 T	402	
C/1997 BA ₆	1998 05 20.47581	08 43 46.80	-05 52 31.9		402	
C/1997 BA ₆	1998 05 20.47859	08 43 46.92	-05 52 28.9		402	

P/1997 G1 (Montani)						
P/1997 G1	1998 05 24.16565	10 42 12.72	+03 41 29.9	22.2 N	691	
P/1997 G1	1998 05 24.17670	10 42 12.95	+03 41 29.5	20.2 T	691	
P/1997 G1	1998 05 24.21351	10 42 13.72	+03 41 26.2	19.9 T	691	

C/1997 G2 (Montani)						
C/1997 G2	1998 04 20.35242	23 17 17.75	-74 01 43.5	14.9 T	860	
C/1997 G2	1998 04 20.35778	23 17 19.81	-74 01 44.7	15.2 T	860	
C/1997 G2	1998 04 20.36184	23 17 21.67	-74 01 45.5	15.5 T	860	

C/1997 J2 (Meunier-Dupouy)						
C/1997 J2	1998 05 12.04830	22 25 08.60	+30 41 24.8		118	
C/1997 J2	1998 05 12.05532	22 25 08.81	+30 41 24.3	12.7 T	118	
C/1997 J2	1998 05 13.36186	22 25 44.92	+30 39 17.4	12.8 T	758	
C/1997 J2	1998 05 13.36458	22 25 44.98	+30 39 17.3	13.0 T	758	
C/1997 J2	1998 05 13.36932	22 25 45.15	+30 39 17.4	13.1 T	758	
C/1997 J2	1998 05 28.96766	22 30 28.65	+30 04 40.4		118	
C/1997 J2	1998 05 28.97354	22 30 28.70	+30 04 39.2	12.5 T	118	
C/1997 J2	1998 05 29.97095	22 30 37.03	+30 01 40.8		118	
C/1997 J2	1998 05 29.98333	22 30 37.10	+30 01 38.5	12.6 T	118	
C/1997 J2	1998 06 03.78021	22 30 59.60	+29 45 39.1	12.1 T	360	
C/1997 J2	1998 06 03.78229	22 30 59.60	+29 45 38.6		360	

C/1997 L1 (Zhu-Balam)						
C/1997 L1	1998 04 27.77363	17 17 10.24	+22 45 24.1	18.5 T	867	
C/1997 L1	1998 04 27.78023	17 17 10.08	+22 45 28.4		867	
C/1997 L1	1998 04 27.78613	17 17 09.94	+22 45 32.3		867	
C/1997 L1	1998 05 19.60977	17 07 26.46	+25 50 03.3	19.3 T	867	
C/1997 L1	1998 05 19.62157	17 07 26.17	+25 50 08.2		867	
C/1997 L1	1998 05 19.64032	17 07 25.48	+25 50 15.8		867	
C/1997 L1	1998 05 29.67044	17 02 01.81	+26 55 02.8	19.7 T	327	
C/1997 L1	1998 05 29.69013	17 02 01.17	+26 55 10.2		327	
C/1997 L1	1998 05 29.71032	17 02 00.42	+26 55 13.9		327	
C/1997 L1	1998 05 30.62920	17 01 30.08	+27 00 29.0	19.0 T	402	
C/1997 L1	1998 05 30.63267	17 01 29.93	+27 00 30.2		402	
C/1997 L1	1998 05 30.63615	17 01 29.71	+27 00 32.1		402	

C/1997 T1 (Utsunomiya)						
C/1997 T1	1998 05 04.63586	15 58 40.07	-19 11 15.7	14.6 T	900	
C/1997 T1	1998 05 04.65562	15 58 34.77	-19 11 27.2		900	
C/1997 T1	1998 05 15.98130	15 10 36.03	-20 29 36.2		118	
C/1997 T1	1998 05 15.98559	15 10 34.99	-20 29 37.6	15.2 T	118	
C/1997 T1	1998 05 18.27010	15 01 38.17	-20 38 20.8	16.6 T	700	
C/1997 T1	1998 05 18.27909	15 01 36.21	-20 38 21.8	16.6 T	700	
C/1997 T1	1998 05 19.06604	14 58 36.26	-20 40 47.5		844	
C/1997 T1	1998 05 19.08932	14 58 30.87	-20 40 51.6		844	

C/1997 T1	1998 05 19.10209	14 58 27.91	-20 40 53.7		844	
C/1997 T1	1998 05 19.62257	14 56 30.26	-20 42 32.4	14.1 T	360	
C/1997 T1	1998 05 19.62760	14 56 29.12	-20 42 33.1		360	
C/1997 T1	1998 05 20.22300	14 54 15.91	-20 44 06.1	15.8 T	860	
C/1997 T1	1998 05 20.22468	14 54 15.55	-20 44 07.1		860	
C/1997 T1	1998 05 20.22832	14 54 14.85	-20 44 08.8		860	
C/1997 T1	1998 05 21.53414	14 49 28.79	-20 47 22.3	14.4 T	402	
C/1997 T1	1998 05 21.53623	14 49 28.41	-20 47 22.2		402	
C/1997 T1	1998 05 21.53831	14 49 27.93	-20 47 23.1		402	
C/1997 T1	1998 05 21.56596	14 49 21.88	-20 47 21.1		426	
C/1997 T1	1998 05 21.57589	14 49 19.75	-20 47 22.1		426	
C/1997 T1	1998 05 21.58571	14 49 17.57	-20 47 23.4	15.2 N	426	
C/1997 T1	1998 05 21.60365	14 49 13.69	-20 47 31.4	13.8 T	360	
C/1997 T1	1998 05 21.60747	14 49 12.86	-20 47 32.1		360	
C/1997 T1	1998 05 22.17447	14 47 11.73	-20 48 42.4	16.7 T	704	
C/1997 T1	1998 05 22.19414	14 47 07.41	-20 48 43.2		704	
C/1997 T1	1998 05 22.21369	14 47 03.06	-20 48 48.2	17.0 T	704	
C/1997 T1	1998 05 22.23334	14 46 58.99	-20 48 49.2		704	
C/1997 T1	1998 05 22.25293	14 46 54.60	-20 48 52.0		704	
C/1997 T1	1998 05 22.63729	14 45 33.04	-20 49 36.5		352	
C/1997 T1	1998 05 22.64007	14 45 32.48	-20 49 36.7		352	
C/1997 T1	1998 05 22.64285	14 45 31.82	-20 49 37.9		352	
C/1997 T1	1998 05 23.21630	14 43 31.84	-20 50 38.1	17.2 T	700	
C/1997 T1	1998 05 23.22079	14 43 30.89	-20 50 38.8	17.0 T	700	
C/1997 T1	1998 05 23.23363	14 43 28.17	-20 50 40.1	17.0 T	700	
C/1997 T1	1998 05 24.16131	14 40 17.52	-20 52 03.9	17.8 T	704	
C/1997 T1	1998 05 24.18093	14 40 13.25	-20 52 08.1		704	
C/1997 T1	1998 05 24.20064	14 40 09.38	-20 52 10.4	17.9 T	704	
C/1997 T1	1998 05 24.22021	14 40 05.19	-20 52 12.6	17.8 T	704	
C/1997 T1	1998 05 24.24001	14 40 01.13	-20 52 11.7		704	
C/1997 T1	1998 05 25.22704	14 36 42.76	-20 53 28.7	17.8 T	700	
C/1997 T1	1998 05 25.23881	14 36 40.38	-20 53 29.5	17.5 T	700	
C/1997 T1	1998 05 25.24747	14 36 38.70	-20 53 29.7	17.2 T	700	

P/1998 G1 (LINEAR)						
P/1998 G1	1998 05 04.53944	10 04 58.43	+23 41 43.7	18.3 N	402	
P/1998 G1	1998 05 04.54153	10 04 58.29	+23 41 43.3		402	
P/1998 G1	1998 05 04.54361	10 04 58.14	+23 41 37.8		402	
P/1998 G1	1998 05 09.89495	09 58 36.78	+22 28 04.8	16.8 T	504	
P/1998 G1	1998 05 09.89896	09 58 36.56	+22 28 01.7	16.7 T	504	
P/1998 G1	1998 05 14.45736	09 54 02.80	+21 24 32.4	18.2 N	402	
P/1998 G1	1998 05 14.46014	09 54 02.62	+21 24 30.3		402	
P/1998 G1	1998 05 14.46292	09 54 02.48	+21 24 27.8		402	
P/1998 G1	1998 05 14.88544	09 53 39.27	+21 18 32.2	18.0 T	2 118	
P/1998 G1	1998 05 16.84976	09 51 56.58	+20 51 03.8		118	
P/1998 G1	1998 05 16.85747	09 51 56.19	+20 50 57.2	17.8 T	118	
P/1998 G1	1998 05 19.48837	09 49 50.83	+20 14 07.1	18.7 N	360	
P/1998 G1	1998 05 19.49253	09 49 50.64	+20 14 03.5		360	
P/1998 G1	1998 05 19.49670	09 49 50.44	+20 13 59.9		360	
P/1998 G1	1998 05 20.49344	09 49 06.46	+20 00 01.3	18.7 N	402	
P/1998 G1	1998 05 20.49622	09 49 06.50	+19 59 58.4		402	
P/1998 G1	1998 05 20.49899	09 49 06.24	+19 59 56.1		402	
P/1998 G1	1998 05 20.87014	09 48 50.42	+19 54 42.5		587	

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P/1998 G1	1998 05 20.88229	09 48 49.81	+19 54 32.3		587
P/1998 G1	1998 05 20.89225	09 48 49.38	+19 54 24.0	3	587
P/1998 G1	1998 05 22.86152	09 47 29.46	+19 26 51.9		587
P/1998 G1	1998 05 22.86840	09 47 28.95	+19 26 45.0		587
P/1998 G1	1998 05 26.48376	09 45 20.26	+18 36 10.1	19.0 N	402
P/1998 G1	1998 05 26.48535	09 45 20.27	+18 36 07.7		402
P/1998 G1	1998 05 26.48694	09 45 20.14	+18 36 06.7		402

C/1998 H1 (Stonehouse)

C/1998 H1	1998 04 28.58096	15 15 07.68	+16 42 29.7		352
C/1998 H1	1998 04 28.58374	15 15 06.61	+16 42 53.1		352
C/1998 H1	1998 04 28.58652	15 15 05.44	+16 43 18.2		352
C/1998 H1	1998 04 29.54059	15 08 44.71	+19 01 21.7	11.0 T	886
C/1998 H1	1998 04 29.55131	15 08 40.37	+19 02 52.9		886
C/1998 H1	1998 05 04.51711	14 36 10.61	+29 22 06.6	12.3 T	900
C/1998 H1	1998 05 04.52866	14 36 06.18	+29 23 21.6		900
C/1998 H1	1998 05 04.66595	14 35 13.08	+29 37 56.4	13.0 T	402
C/1998 H1	1998 05 04.66734	14 35 12.57	+29 38 04.9		402
C/1998 H1	1998 05 04.66873	14 35 12.05	+29 38 13.6		402
C/1998 H1	1998 05 06.09044	14 26 16.78	+32 01 01.1		106
C/1998 H1	1998 05 06.10399	14 26 11.63	+32 02 22.9		106
C/1998 H1	1998 05 06.10979	14 26 09.45	+32 02 58.0		106
C/1998 H1	1998 05 07.82348	14 15 45.63	+34 36 24.2		057
C/1998 H1	1998 05 07.82622	14 15 44.37	+34 36 45.7		057
C/1998 H1	1998 05 07.83521	14 15 41.75	+34 37 30.4		057
C/1998 H1	1998 05 07.83736	14 15 40.65	+34 37 39.0		057
C/1998 H1	1998 05 07.83994	14 15 39.17	+34 37 51.0	13.9 T	057
C/1998 H1	1998 05 07.84234	14 15 38.85	+34 38 01.4		057
C/1998 H1	1998 05 07.84531	14 15 37.21	+34 38 19.6	13.7 T	057
C/1998 H1	1998 05 07.86916	14 15 28.94	+34 40 22.2		046
C/1998 H1	1998 05 07.87052	14 15 28.46	+34 40 29.0		046
C/1998 H1	1998 05 07.87149	14 15 28.09	+34 40 33.9		046
C/1998 H1	1998 05 07.87236	14 15 27.79	+34 40 38.3		046
C/1998 H1	1998 05 07.88589	14 15 23.09	+34 41 45.1		504
C/1998 H1	1998 05 07.88649	14 15 22.88	+34 41 47.9		504
C/1998 H1	1998 05 07.88694	14 15 22.68	+34 41 51.1		504
C/1998 H1	1998 05 07.88715	14 15 22.57	+34 41 51.4		504
C/1998 H1	1998 05 07.88759	14 15 22.44	+34 41 53.9		504
C/1998 H1	1998 05 07.88789	14 15 22.36	+34 41 55.1		504
C/1998 H1	1998 05 07.89007	14 15 21.55	+34 42 06.6		504
C/1998 H1	1998 05 08.85145	14 09 41.91	+35 59 25.5		057
C/1998 H1	1998 05 08.85409	14 09 41.24	+35 59 31.0		057
C/1998 H1	1998 05 08.85806	14 09 39.94	+35 59 54.7		057
C/1998 H1	1998 05 08.86215	14 09 38.31	+36 00 13.1	13.4 T	540
C/1998 H1	1998 05 08.86351	14 09 37.82	+36 00 19.9		540
C/1998 H1	1998 05 08.86473	14 09 37.43	+36 00 24.6		540
C/1998 H1	1998 05 08.86733	14 09 36.56	+36 00 34.5	13.7 T	605
C/1998 H1	1998 05 08.87707	14 09 33.16	+36 01 21.1	13.8 T	605
C/1998 H1	1998 05 08.91245	14 09 20.57	+36 04 04.0	13.7 T	605
C/1998 H1	1998 05 09.85279	14 03 57.04	+37 13 49.6	13.9 T	605
C/1998 H1	1998 05 09.87164	14 03 50.69	+37 15 11.8	14.1 T	605
C/1998 H1	1998 05 09.88152	14 03 47.18	+37 15 51.5	13.9 T	605
C/1998 H1	1998 05 09.98157	14 03 13.06	+37 23 03.7		611

C/1998 H1	1998 05 09.98432	14 03 12.17	+37 23 14.9		611
C/1998 H1	1998 05 09.98594	14 03 11.60	+37 23 21.9		611
C/1998 H1	1998 05 10.90318	13 58 05.59	+38 25 48.4	13.4 T	605
C/1998 H1	1998 05 10.91294	13 58 02.36	+38 26 27.8	13.6 T	605
C/1998 H1	1998 05 10.92322	13 57 58.98	+38 27 06.8	13.7 T	605
C/1998 H1	1998 05 11.10677	13 56 59.28	+38 39 04.6		735
C/1998 H1	1998 05 11.11580	13 56 56.33	+38 39 40.4		735
C/1998 H1	1998 05 11.12483	13 56 53.34	+38 40 15.0		735
C/1998 H1	1998 05 11.18321	13 56 34.10	+38 44 02.0	15.0 T	700
C/1998 H1	1998 05 11.18656	13 56 32.84	+38 44 15.0	14.5 T	700
C/1998 H1	1998 05 11.19299	13 56 30.64	+38 44 39.9	14.7 T	700
C/1998 H1	1998 05 11.84366	13 53 00.45	+39 25 12.7	14.3 T	560
C/1998 H1	1998 05 11.85228	13 52 57.56	+39 25 43.1	14.5 T	560
C/1998 H1	1998 05 11.86229	13 52 54.20	+39 26 20.1	15.1 N	557
C/1998 H1	1998 05 11.86486	13 52 53.36	+39 26 29.1	13.2 T	557
C/1998 H1	1998 05 11.86616	13 52 52.97	+39 26 34.2		557
C/1998 H1	1998 05 11.91385	13 52 37.47	+39 29 27.5		046
C/1998 H1	1998 05 11.91473	13 52 37.19	+39 29 30.7		046
C/1998 H1	1998 05 11.91558	13 52 36.90	+39 29 33.9		046
C/1998 H1	1998 05 11.91653	13 52 36.60	+39 29 37.0		046
C/1998 H1	1998 05 12.00485	13 52 07.98	+39 34 54.9		2 118
C/1998 H1	1998 05 12.01058	13 52 06.15	+39 35 15.2	13.6 T	2 118
C/1998 H1	1998 05 12.89896	13 47 27.95	+40 26 30.2	15.5 T	610
C/1998 H1	1998 05 12.90302	13 47 26.64	+40 26 44.0		610
C/1998 H1	1998 05 12.91183	13 47 23.80	+40 27 13.8		610
C/1998 H1	1998 05 12.91898	13 47 21.49	+40 27 38.0		610
C/1998 H1	1998 05 12.92319	13 47 20.13	+40 27 52.3		610
C/1998 H1	1998 05 13.07206	13 46 34.85	+40 36 06.8	13.8 T	758
C/1998 H1	1998 05 13.08035	13 46 32.28	+40 36 34.4	13.8 T	758
C/1998 H1	1998 05 14.56600	13 39 06.61	+41 52 57.9	13.4 T	402
C/1998 H1	1998 05 14.56738	13 39 06.18	+41 53 01.8		402
C/1998 H1	1998 05 14.56877	13 39 05.77	+41 53 05.9		402
C/1998 H1	1998 05 15.05554	13 36 45.73	+42 16 06.1	14.9 T	758
C/1998 H1	1998 05 15.05926	13 36 44.43	+42 16 16.4	14.7 T	758
C/1998 H1	1998 05 15.06566	13 36 42.64	+42 16 35.1	15.0 T	758
C/1998 H1	1998 05 15.20343	13 36 02.88	+42 22 54.0	16.1 T	700
C/1998 H1	1998 05 15.20858	13 36 01.47	+42 23 07.6	15.5 T	700
C/1998 H1	1998 05 16.18470	13 31 28.34	+43 05 55.1	15.4 T	700
C/1998 H1	1998 05 16.18828	13 31 27.40	+43 06 03.5	15.4 T	700
C/1998 H1	1998 05 16.19177	13 31 26.45	+43 06 11.4	15.4 T	700
C/1998 H1	1998 05 16.25469	13 31 09.08	+43 08 49.4	14.5 T	670
C/1998 H1	1998 05 16.26840	13 31 05.23	+43 09 23.7		670
C/1998 H1	1998 05 16.29149	13 30 58.76	+43 10 22.5		670
C/1998 H1	1998 05 16.89962	13 28 14.46	+43 35 00.4	15.5 T	610
C/1998 H1	1998 05 16.90840	13 28 12.13	+43 35 22.6		610
C/1998 H1	1998 05 16.91206	13 28 11.16	+43 35 31.8		610
C/1998 H1	1998 05 16.91471	13 28 10.46	+43 35 38.5		610
C/1998 H1	1998 05 16.92042	13 28 08.94	+43 35 52.9		610
C/1998 H1	1998 05 16.99801	13 27 47.77	+43 38 50.4	13.3 T	2 118
C/1998 H1	1998 05 17.51205	13 25 32.91	+43 58 36.6	13.7 T	355
C/1998 H1	1998 05 17.51310	13 25 32.67	+43 58 38.7		355
C/1998 H1	1998 05 17.91814	13 23 47.64	+44 13 31.4	14.7 T	560
C/1998 H1	1998 05 17.92149	13 23 46.85	+44 13 38.3	14.8 T	560

C/1998 H1	1998 05 18.88682	13 19 44.46	+44 47 09.1		504
C/1998 H1	1998 05 18.88781	13 19 44.15	+44 47 12.3		504
C/1998 H1	1998 05 18.88968	13 19 43.77	+44 47 15.1		504
C/1998 H1	1998 05 18.89060	13 19 43.45	+44 47 17.9		504
C/1998 H1	1998 05 19.53369	13 17 07.12	+45 08 08.3		900
C/1998 H1	1998 05 19.53976	13 17 05.62	+45 08 20.2	13.4 T	402
C/1998 H1	1998 05 19.54253	13 17 04.95	+45 08 25.2		402
C/1998 H1	1998 05 19.54531	13 17 04.28	+45 08 30.4		402
C/1998 H1	1998 05 19.55779	13 17 01.29	+45 08 53.6		900
C/1998 H1	1998 05 19.61198	13 16 48.02	+45 10 35.8		360
C/1998 H1	1998 05 19.61476	13 16 47.39	+45 10 40.9	13.6 T	360
C/1998 H1	1998 05 19.61719	13 16 46.79	+45 10 45.4		360
C/1998 H1	1998 05 19.84509	13 15 53.31	+45 17 45.3		146
C/1998 H1	1998 05 19.85399	13 15 51.07	+45 18 02.3	15.9 T	108
C/1998 H1	1998 05 19.85556	13 15 50.62	+45 18 03.8		108
C/1998 H1	1998 05 19.85729	13 15 50.24	+45 18 08.5	15.8 T	108
C/1998 H1	1998 05 19.86028	13 15 49.57	+45 18 14.6		146
C/1998 H1	1998 05 19.89863	13 15 40.41	+45 19 24.8		504
C/1998 H1	1998 05 19.89962	13 15 40.20	+45 19 27.0		504
C/1998 H1	1998 05 19.90023	13 15 40.02	+45 19 27.7		504
C/1998 H1	1998 05 19.90157	13 15 39.74	+45 19 29.6		504
C/1998 H1	1998 05 19.90242	13 15 39.51	+45 19 30.7		504
C/1998 H1	1998 05 19.91535	13 15 36.35	+45 19 53.0		146
C/1998 H1	1998 05 19.92461	13 15 34.12	+45 20 11.3		146
C/1998 H1	1998 05 20.04766	13 15 05.81	+45 23 53.8	14.4 T	758
C/1998 H1	1998 05 20.05097	13 15 04.94	+45 24 03.0	14.6 T	758
C/1998 H1	1998 05 21.91269	13 08 05.77	+46 15 43.3		146
C/1998 H1	1998 05 22.55310	13 05 49.53	+46 31 39.5		352
C/1998 H1	1998 05 22.55588	13 05 49.05	+46 31 43.2		352
C/1998 H1	1998 05 22.55865	13 05 48.35	+46 31 47.8		352
C/1998 H1	1998 05 22.83810	13 04 50.50	+46 38 27.2		108
C/1998 H1	1998 05 22.84433	13 04 49.16	+46 38 36.9		108
C/1998 H1	1998 05 22.84861	13 04 48.45	+46 38 43.6		108
C/1998 H1	1998 05 22.94157	13 04 28.84	+46 40 54.1		143
C/1998 H1	1998 05 22.94276	13 04 28.54	+46 40 55.9		143
C/1998 H1	1998 05 22.94392	13 04 28.35	+46 40 56.9		143
C/1998 H1	1998 05 22.96156	13 04 24.71	+46 41 21.1		143
C/1998 H1	1998 05 22.96273	13 04 24.50	+46 41 22.6		143
C/1998 H1	1998 05 22.96391	13 04 24.19	+46 41 24.5		143
C/1998 H1	1998 05 23.55682	13 02 24.16	+46 54 55.9	14.9 T	355
C/1998 H1	1998 05 23.55780	13 02 24.00	+46 54 57.0		355
C/1998 H1	1998 05 23.55972	13 02 23.59	+46 54 59.6		355
C/1998 H1	1998 05 23.90855	13 01 14.51	+47 02 37.4		504
C/1998 H1	1998 05 23.91244	13 01 13.60	+47 02 40.5		504
C/1998 H1	1998 05 24.15194	13 00 27.09	+47 07 46.8	17.2 T	755
C/1998 H1	1998 05 24.16008	13 00 25.42	+47 07 57.2	17.1 T	755
C/1998 H1	1998 05 25.96929	12 54 48.79	+47 43 07.6		2 118
C/1998 H1	1998 05 25.97490	12 54 47.78	+47 43 13.6		2 118
C/1998 H1	1998 05 26.47292	12 53 20.88	+47 52 02.0	14.0 T	402
C/1998 H1	1998 05 26.47432	12 53 20.64	+47 52 03.7		402
C/1998 H1	1998 05 26.47571	12 53 20.39	+47 52 05.2		402
C/1998 H1	1998 05 26.58229	12 53 01.55	+47 53 53.9	14.0 T	360
C/1998 H1	1998 05 26.58542	12 53 01.02	+47 53 57.1		360

C/1998 H1	1998 05 26.58658	12 53 00.94	+47 53 56.4	14.0 T	900
C/1998 H1	1998 05 26.59931	12 52 58.70	+47 54 09.3		900
C/1998 H1	1998 05 27.11500	12 51 31.38	+48 02 43.6	16.6 T	755
C/1998 H1	1998 05 27.12272	12 51 30.10	+48 02 52.1	16.6 T	755
C/1998 H1	1998 05 27.85634	12 49 29.15	+48 14 23.6		046
C/1998 H1	1998 05 27.85756	12 49 28.95	+48 14 24.6		046
C/1998 H1	1998 05 27.85900	12 49 28.72	+48 14 26.0		046
C/1998 H1	1998 05 27.96264	12 49 11.80	+48 15 58.0		2 118
C/1998 H1	1998 05 27.96793	12 49 10.96	+48 16 02.8	13.8 T	2 118
C/1998 H1	1998 05 29.16853	12 46 04.48	+48 33 15.1	15.5 T	682
C/1998 H1	1998 05 29.17630	12 46 03.41	+48 33 21.0	15.5 T	682
C/1998 H1	1998 05 29.18274	12 46 02.35	+48 33 26.8	15.5 T	682
C/1998 H1	1998 05 29.90534	12 44 15.27	+48 42 55.4		118
C/1998 H1	1998 05 29.91559	12 44 13.72	+48 43 03.9	13.8 T	118
C/1998 H1	1998 05 30.14116	12 43 41.44	+48 45 53.4	17.0 T	755
C/1998 H1	1998 05 30.14549	12 43 40.81	+48 45 56.4	17.0 T	755
C/1998 H1	1998 06 02.87765	12 35 37.69	+49 25 29.7		118
C/1998 H1	1998 06 02.88523	12 35 36.75	+49 25 33.6		118
C/1998 H1	1998 06 04.50337	12 32 37.47	+49 39 01.6	15.1 T	900
C/1998 H1	1998 06 04.51640	12 32 36.07	+49 39 07.7		900
C/1998 H1	1998 06 05.89434	12 30 16.45	+49 49 03.2	15.7 N	143
C/1998 H1	1998 06 05.90218	12 30 15.70	+49 49 07.0	15.6 N	143
C/1998 H1	1998 06 05.91003	12 30 14.80	+49 49 10.3	16.1 N	143
C/1998 H1	1998 06 06.86083	12 28 45.08	+49 55 22.4		046
C/1998 H1	1998 06 06.86362	12 28 44.84	+49 55 23.2		046
C/1998 H1	1998 06 06.86640	12 28 44.58	+49 55 24.5		046
C/1998 H1	1998 06 07.87384	12 27 15.28	+50 01 22.3		118
C/1998 H1	1998 06 07.88157	12 27 14.61	+50 01 25.1		118
C/1998 H1	1998 06 08.17913	12 26 49.31	+50 03 04.0		750
C/1998 H1	1998 06 08.19720	12 26 47.82	+50 03 10.1		750

C/1998 J1 (SOHO)

C/1998 J1	1998 05 05.58167	02 29 18.8	+22 19 25		249
Geocentric position (AU)	+0.00581848	+0.00904375	+0.00308769		
C/1998 J1	1998 05 05.62176	02 29 50.4	+22 22 27		249
Geocentric position (AU)	+0.00581652	+0.00904529	+0.00308771		
C/1998 J1	1998 05 05.66032	02 30 13.9	+22 26 34		249
Geocentric position (AU)	+0.00581465	+0.00904676	+0.00308774		
C/1998 J1	1998 05 05.70039	02 30 41.9	+22 29 23		249
Geocentric position (AU)	+0.00581270	+0.00904829	+0.00308776		
C/1998 J1	1998 05 05.72137	02 30 59.2	+22 31 07		249
Geocentric position (AU)	+0.00581169	+0.00904909	+0.00308777		
C/1998 J1	1998 05 05.77029	02 31 30.5	+22 34 59		249
Geocentric position (AU)	+0.00580932	+0.00905094	+0.00308780		
C/1998 J1	1998 05 05.81840	02 32 04.6	+22 39 14		249
Geocentric position (AU)	+0.00580700	+0.00905276	+0.00308783		
C/1998 J1	1998 05 05.85966	02 32 35.9	+22 42 18		249
Geocentric position (AU)	+0.00580502	+0.00905432	+0.00308785		
C/1998 J1	1998 05 05.91394	02 33 14.5	+22 46 56		249
Geocentric position (AU)	+0.00580241	+0.00905636	+0.00308788		
C/1998 J1	1998 05 05.96310	02 33 51.8	+22 51 30		249
Geocentric position (AU)	+0.00580006	+0.00905820	+0.00308791		

C/1998 J1	1998 05 05.98781	02 34 10.0	+22 53 12	249
Geocentric position (AU)	+0.00579888	+0.00905912	+0.00308792	
C/1998 J1	1998 05 06.02802	02 34 39.0	+22 56 55	249
Geocentric position (AU)	+0.00579697	+0.00906062	+0.00308794	
C/1998 J1	1998 05 06.07263	02 35 11.0	+22 59 59	249
Geocentric position (AU)	+0.00579485	+0.00906228	+0.00308796	
C/1998 J1	1998 05 06.11284	02 35 42.0	+23 02 53	249
Geocentric position (AU)	+0.00579294	+0.00906376	+0.00308798	
C/1998 J1	1998 05 06.15363	02 36 14.2	+23 06 57	249
Geocentric position (AU)	+0.00579101	+0.00906527	+0.00308800	
C/1998 J1	1998 05 06.23706	02 37 15.1	+23 13 36	249
Geocentric position (AU)	+0.00578708	+0.00906834	+0.00308803	
C/1998 J1	1998 05 06.27863	02 37 44.5	+23 17 25	249
Geocentric position (AU)	+0.00578513	+0.00906986	+0.00308805	
C/1998 J1	1998 05 06.32315	02 38 21.2	+23 19 49	249
Geocentric position (AU)	+0.00578304	+0.00907149	+0.00308806	
C/1998 J1	1998 05 06.36434	02 38 50.6	+23 23 38	249
Geocentric position (AU)	+0.00578112	+0.00907299	+0.00308808	
C/1998 J1	1998 05 06.40578	02 39 21.8	+23 26 31	249
Geocentric position (AU)	+0.00577919	+0.00907449	+0.00308809	
C/1998 J1	1998 05 06.44868	02 39 59.6	+23 30 00	249
Geocentric position (AU)	+0.00577719	+0.00907604	+0.00308811	
C/1998 J1	1998 05 06.49161	02 40 30.9	+23 33 03	249
Geocentric position (AU)	+0.00577520	+0.00907759	+0.00308812	
C/1998 J1	1998 05 06.53220	02 41 03.5	+23 34 58	249
Geocentric position (AU)	+0.00577332	+0.00907905	+0.00308814	
C/1998 J1	1998 05 06.57664	02 41 37.1	+23 39 06	249
Geocentric position (AU)	+0.00577127	+0.00908065	+0.00308815	
C/1998 J1	1998 05 06.61784	02 42 08.2	+23 42 05	249
Geocentric position (AU)	+0.00576938	+0.00908212	+0.00308816	
C/1998 J1	1998 05 06.65744	02 42 39.0	+23 44 58	249
Geocentric position (AU)	+0.00576756	+0.00908354	+0.00308817	
C/1998 J1	1998 05 06.69841	02 43 10.3	+23 47 49	249
Geocentric position (AU)	+0.00576568	+0.00908499	+0.00308819	
C/1998 J1	1998 05 06.73729	02 43 44.1	+23 50 57	249
Geocentric position (AU)	+0.00576391	+0.00908637	+0.00308820	
C/1998 J1	1998 05 06.77866	02 44 13.6	+23 52 40	249
Geocentric position (AU)	+0.00576202	+0.00908784	+0.00308821	
C/1998 J1	1998 05 06.82596	02 44 55.7	+23 56 35	249
Geocentric position (AU)	+0.00575987	+0.00908951	+0.00308822	
C/1998 J1	1998 05 06.86003	02 45 19.3	+23 58 44	249
Geocentric position (AU)	+0.00575833	+0.00909071	+0.00308823	
C/1998 J1	1998 05 06.90377	02 45 57.8	+24 02 11	249
Geocentric position (AU)	+0.00575635	+0.00909224	+0.00308824	
C/1998 J1	1998 05 06.97760	02 46 59.9	+24 07 00	249
Geocentric position (AU)	+0.00575302	+0.00909483	+0.00308825	
C/1998 J1	1998 05 07.02784	02 47 40.2	+24 10 35	249
Geocentric position (AU)	+0.00575076	+0.00909658	+0.00308826	
C/1998 J1	1998 05 07.07264	02 48 13.8	+24 12 43	249
Geocentric position (AU)	+0.00574876	+0.00909814	+0.00308827	
C/1998 J1	1998 05 07.11366	02 48 45.7	+24 15 39	249
Geocentric position (AU)	+0.00574692	+0.00909956	+0.00308828	

C/1998 J1	1998 05 07.15438	02 49 21.5	+24 18 02	249
Geocentric position (AU)	+0.00574511	+0.00910096	+0.00308829	
C/1998 J1	1998 05 07.23787	02 50 30.1	+24 23 13	249
Geocentric position (AU)	+0.00574140	+0.00910384	+0.00308830	
C/1998 J1	1998 05 07.27863	02 51 06.2	+24 25 31	249
Geocentric position (AU)	+0.00573960	+0.00910524	+0.00308831	
C/1998 J1	1998 05 07.32310	02 51 40.1	+24 27 30	249
Geocentric position (AU)	+0.00573764	+0.00910676	+0.00308831	
C/1998 J1	1998 05 07.36333	02 52 16.2	+24 29 56	249
Geocentric position (AU)	+0.00573587	+0.00910813	+0.00308832	
C/1998 J1	1998 05 07.40472	02 52 52.7	+24 32 17	249
Geocentric position (AU)	+0.00573406	+0.00910954	+0.00308833	
C/1998 J1	1998 05 07.44792	02 53 29.6	+24 35 23	249
Geocentric position (AU)	+0.00573217	+0.00911100	+0.00308833	
C/1998 J1	1998 05 07.49079	02 54 07.0	+24 36 57	249
Geocentric position (AU)	+0.00573029	+0.00911246	+0.00308834	
C/1998 J1	1998 05 07.55214	02 54 58.8	+24 40 38	249
Geocentric position (AU)	+0.00572763	+0.00911453	+0.00308834	
C/1998 J1	1998 05 07.65363	02 56 24.7	+24 45 27	249
Geocentric position (AU)	+0.00572323	+0.00911794	+0.00308835	
C/1998 J1	1998 05 07.69531	02 57 02.3	+24 47 50	249
Geocentric position (AU)	+0.00572144	+0.00911933	+0.00308836	
C/1998 J1	1998 05 07.73697	02 57 40.1	+24 49 20	249
Geocentric position (AU)	+0.00571965	+0.00912072	+0.00308836	
C/1998 J1	1998 05 07.80366	02 58 37.9	+24 51 33	249
Geocentric position (AU)	+0.00571679	+0.00912294	+0.00308837	
C/1998 J1	1998 05 07.82380	02 58 56.9	+24 53 13	249
Geocentric position (AU)	+0.00571593	+0.00912360	+0.00308837	
C/1998 J1	1998 05 07.90340	03 00 05.6	+24 56 33	249
Geocentric position (AU)	+0.00571254	+0.00912624	+0.00308838	
C/1998 J1	1998 05 07.97736	03 01 09.6	+24 59 04	249
Geocentric position (AU)	+0.00570941	+0.00912867	+0.00308838	
C/1998 J1	1998 05 08.02784	03 01 54.7	+25 02 14	249
Geocentric position (AU)	+0.00570728	+0.00913033	+0.00308839	
C/1998 J1	1998 05 08.07262	03 02 34.0	+25 02 53	249
Geocentric position (AU)	+0.00570539	+0.00913180	+0.00308839	
C/1998 J1	1998 05 08.11284	03 03 12.8	+25 04 19	249
Geocentric position (AU)	+0.00570371	+0.00913311	+0.00308839	
C/1998 J1	1998 05 08.15428	03 03 52.0	+25 05 41	249
Geocentric position (AU)	+0.00570197	+0.00913446	+0.00308840	
C/1998 J1	1998 05 08.23935	03 05 04.1	+25 08 05	249
Geocentric position (AU)	+0.00569842	+0.00913722	+0.00308840	
C/1998 J1	1998 05 08.27862	03 05 43.3	+25 09 25	249
Geocentric position (AU)	+0.00569679	+0.00913849	+0.00308840	
C/1998 J1	1998 05 08.32373	03 06 23.7	+25 10 07	249
Geocentric position (AU)	+0.00569493	+0.00913995	+0.00308841	
C/1998 J1	1998 05 08.36455	03 07 00.1	+25 11 28	249
Geocentric position (AU)	+0.00569324	+0.00914126	+0.00308841	
C/1998 J1	1998 05 08.40586	03 07 35.8	+25 11 47	249
Geocentric position (AU)	+0.00569154	+0.00914259	+0.00308841	
C/1998 J1	1998 05 08.44831	03 08 09.6	+25 13 29	249
Geocentric position (AU)	+0.00568979	+0.00914395	+0.00308841	

C/1998 J1	1998 05 08.49112	03 08 52.1	+25 12 29		249
Geocentric position (AU)	+0.00568804	+0.00914532	+0.00308842		
C/1998 J1	1998 05 08.53047	03 09 29.7	+25 14 32		249
Geocentric position (AU)	+0.00568643	+0.00914658	+0.00308842		
C/1998 J1	1998 05 08.57492	03 10 10.9	+25 15 06		249
Geocentric position (AU)	+0.00568462	+0.00914800	+0.00308842		
C/1998 J1	1998 05 08.61586	03 10 40.1	+25 15 46		249
Geocentric position (AU)	+0.00568296	+0.00914930	+0.00308843		
C/1998 J1	1998 05 08.65527	03 11 20.5	+25 16 14		249
Geocentric position (AU)	+0.00568136	+0.00915055	+0.00308843		
C/1998 J1	1998 05 08.73696	03 12 37.1	+25 16 04		249
Geocentric position (AU)	+0.00567806	+0.00915313	+0.00308844		
C/1998 J1	1998 05 08.77863	03 13 18.4	+25 16 23		249
Geocentric position (AU)	+0.00567638	+0.00915445	+0.00308844		
C/1998 J1	1998 05 08.82314	03 13 59.6	+25 16 02		249
Geocentric position (AU)	+0.00567460	+0.00915585	+0.00308844		
C/1998 J1	1998 05 08.86740	03 14 32.2	+25 15 18		249
Geocentric position (AU)	+0.00567283	+0.00915724	+0.00308845		
C/1998 J1	1998 05 20.35333	05 18 56.61	+04 36 49.9	8.5 N	4 422
C/1998 J1	1998 05 20.35406	05 18 56.89	+04 36 44.7	8.1 N	4 422
C/1998 J1	1998 05 20.35481	05 18 57.21	+04 36 38.8	8.4 N	4 422
C/1998 J1	1998 05 20.35557	05 18 57.44	+04 36 34.9	8.2 N	4 422
C/1998 J1	1998 05 20.36016	05 18 59.55	+04 35 58.8	8.3 N	4 422
C/1998 J1	1998 05 20.36083	05 18 59.90	+04 35 54.0	8.4 N	4 422
C/1998 J1	1998 05 20.36151	05 19 00.24	+04 35 49.0	8.5 N	4 422
C/1998 J1	1998 05 20.36219	05 19 00.63	+04 35 42.0	8.4 N	4 422
C/1998 J1	1998 05 20.36491	05 19 01.96	+04 35 19.9	8.3 N	4 422
C/1998 J1	1998 05 20.37536	05 19 06.20	+04 34 05.1	6.4 N	426
C/1998 J1	1998 05 20.37672	05 19 06.75	+04 33 56.2	6.3 N	426
C/1998 J1	1998 05 20.37887	05 19 07.65	+04 33 38.8	6.7 N	426
C/1998 J1	1998 05 20.38359	05 19 09.73	+04 33 04.3	7.1 N	426
C/1998 J1	1998 05 20.38547	05 19 10.55	+04 32 50.2	7.2 N	426
C/1998 J1	1998 05 20.38827	05 19 11.75	+04 32 29.1	7.1 N	426
C/1998 J1	1998 05 20.39113	05 19 13.04	+04 32 07.1	7.0 N	426
C/1998 J1	1998 05 20.39359	05 19 14.20	+04 31 48.2	7.0 N	426
C/1998 J1	1998 05 20.39612	05 19 15.26	+04 31 29.7	6.9 N	426
C/1998 J1	1998 05 20.39791	05 19 16.03	+04 31 16.7	6.6 N	426
C/1998 J1	1998 05 21.35881	05 26 04.79	+02 33 06.0	9.3 N	422
C/1998 J1	1998 05 21.35946	05 26 05.06	+02 33 00.9	9.4 N	422
C/1998 J1	1998 05 21.36012	05 26 05.31	+02 32 56.2	9.2 N	422
C/1998 J1	1998 05 21.36155	05 26 05.96	+02 32 45.6		422
C/1998 J1	1998 05 21.36227	05 26 06.26	+02 32 40.5		422
C/1998 J1	1998 05 21.36300	05 26 06.52	+02 32 35.1		422
C/1998 J1	1998 05 21.36372	05 26 06.81	+02 32 30.2		422
C/1998 J1	1998 05 21.36445	05 26 07.15	+02 32 24.4		422
C/1998 J1	1998 05 21.36517	05 26 07.44	+02 32 19.2		422
C/1998 J1	1998 05 21.37578	05 26 11.85	+02 31 02.0	7.0 N	426
C/1998 J1	1998 05 21.37648	05 26 12.03	+02 30 58.4	9.0 N	422
C/1998 J1	1998 05 21.37943	05 26 13.37	+02 30 35.4	7.4 N	426
C/1998 J1	1998 05 21.38423	05 26 15.40	+02 30 00.1	7.3 N	426
C/1998 J1	1998 05 21.38914	05 26 17.43	+02 29 23.9	7.5 N	426
C/1998 J1	1998 05 21.39554	05 26 20.02	+02 28 38.0	7.4 N	426
C/1998 J1	1998 05 22.34381	05 32 47.71	+00 34 59.9	10.2 N	422

C/1998 J1	1998 05 22.34455	05 32 47.98	+00 34 54.8	10.2 N	422
C/1998 J1	1998 05 22.34529	05 32 48.30	+00 34 49.4	10.2 N	422
C/1998 J1	1998 05 22.34603	05 32 48.60	+00 34 44.1	10.1 N	422
C/1998 J1	1998 05 22.34677	05 32 48.90	+00 34 39.1	10.0 N	422
C/1998 J1	1998 05 22.35947	05 32 53.95	+00 33 09.1	10.0 N	422
C/1998 J1	1998 05 22.36023	05 32 54.28	+00 33 03.5	10.0 N	422
C/1998 J1	1998 05 22.36099	05 32 54.60	+00 32 57.8	10.1 N	422
C/1998 J1	1998 05 23.34639	05 39 22.71	-01 21 44.5	10.9 N	422
C/1998 J1	1998 05 23.34713	05 39 23.00	-01 21 49.6	11.0 N	422
C/1998 J1	1998 05 23.34786	05 39 23.30	-01 21 54.6	11.1 N	422
C/1998 J1	1998 05 23.34859	05 39 23.57	-01 21 59.4	10.9 N	422
C/1998 J1	1998 05 23.34932	05 39 23.84	-01 22 04.4	10.9 N	422
C/1998 J1	1998 05 23.35564	05 39 26.29	-01 22 47.9		422
C/1998 J1	1998 05 23.36046	05 39 28.14	-01 23 21.0		422
C/1998 J1	1998 05 23.36843	05 39 31.26	-01 24 16.0	8.6 N	426
C/1998 J1	1998 05 23.37517	05 39 33.88	-01 25 02.3	9.0 N	426
C/1998 J1	1998 05 23.38078	05 39 36.03	-01 25 41.3	8.8 N	426
C/1998 J1	1998 05 23.38620	05 39 38.13	-01 26 18.3	9.2 N	426
C/1998 J1	1998 05 23.39117	05 39 40.07	-01 26 52.1	8.9 N	426
C/1998 J1	1998 05 23.39747	05 39 42.44	-01 27 35.1	8.6 N	426
C/1998 J1	1998 05 23.40146	05 39 43.99	-01 28 02.7	9.1 N	426
C/1998 J1	1998 05 24.35564	05 45 46.59	-03 15 29.3	11.2 N	4 422
C/1998 J1	1998 05 24.35639	05 45 46.89	-03 15 34.4	11.3 N	4 422
C/1998 J1	1998 05 24.35712	05 45 47.19	-03 15 39.6	10.9 N	4 422
C/1998 J1	1998 05 24.35786	05 45 47.44	-03 15 44.0	11.2 N	4 422
C/1998 J1	1998 05 24.35859	05 45 47.71	-03 15 48.8	11.3 N	4 422
C/1998 J1	1998 05 24.36581	05 45 50.41	-03 16 36.9	11.0 N	4 422
C/1998 J1	1998 05 24.36708	05 45 50.92	-03 16 46.1	8.2 N	426
C/1998 J1	1998 05 24.36800	05 45 51.21	-03 16 51.5	11.0 N	4 422
C/1998 J1	1998 05 24.37455	05 45 53.70	-03 17 35.3	8.9 N	426
C/1998 J1	1998 05 24.38369	05 45 57.10	-03 18 35.9	9.4 N	426
C/1998 J1	1998 05 24.39174	05 46 00.07	-03 19 29.0	9.2 N	426
C/1998 J1	1998 05 24.39607	05 46 01.69	-03 19 58.0	9.1 N	426
C/1998 J1	1998 05 25.34528	05 51 50.78	-05 03 16.2		415
C/1998 J1	1998 05 25.35708	05 51 55.10	-05 04 30.7	11.3 N	422
C/1998 J1	1998 05 25.35774	05 51 55.33	-05 04 34.9	11.4 N	422
C/1998 J1	1998 05 25.35840	05 51 55.58	-05 04 39.4	11.3 N	422
C/1998 J1	1998 05 25.35908	05 51 55.79	-05 04 43.5	11.1 N	422
C/1998 J1	1998 05 25.35975	05 51 56.02	-05 04 47.8	10.9 N	422
C/1998 J1	1998 05 25.36990	05 51 59.74	-05 05 52.9	8.3 N	426
C/1998 J1	1998 05 25.37873	05 52 02.94	-05 06 49.6	8.9 N	426
C/1998 J1	1998 05 25.38536	05 52 05.32	-05 07 31.9	9.2 N	426
C/1998 J1	1998 05 25.39515	05 52 08.88	-05 08 34.7	8.9 N	426
C/1998 J1	1998 05 26.34687	05 57 47.95	-06 48 25.5		415
C/1998 J1	1998 05 26.35223	05 57 49.91	-06 48 58.7	11.7 N	422
C/1998 J1	1998 05 26.35299	05 57 50.21	-06 49 03.3	11.6 N	422
C/1998 J1	1998 05 26.35375	05 57 50.48	-06 49 08.3	11.7 N	422
C/1998 J1	1998 05 26.35453	05 57 50.74	-06 49 12.9	11.7 N	422
C/1998 J1	1998 05 26.35529	05 57 50.98	-06 49 17.4	11.5 N	422
C/1998 J1	1998 05 26.37148	05 57 56.69	-06 50 57.6	9.2 N	426
C/1998 J1	1998 05 26.37717	05 57 58.68	-06 51 32.8	9.6 N	426
C/1998 J1	1998 05 26.38330	05 58 00.83	-06 52 10.9	9.6 N	426
C/1998 J1	1998 05 26.38969	05 58 03.07	-06 52 50.0	9.7 N	426

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C/1998 J1	1998 05 28.37266	06 09 19.57	-10 09 10.1	9.8 N	426
C/1998 J1	1998 05 28.37669	06 09 20.85	-10 09 32.6	12.0 N	422
C/1998 J1	1998 05 28.37745	06 09 21.12	-10 09 37.3	12.1 N	422
C/1998 J1	1998 05 28.37822	06 09 21.36	-10 09 41.6	12.0 N	422
C/1998 J1	1998 05 28.37898	06 09 21.60	-10 09 45.6	11.9 N	422
C/1998 J1	1998 05 28.38163	06 09 22.54	-10 10 01.4	9.9 N	426
C/1998 J1	1998 05 28.38909	06 09 25.03	-10 10 44.0	9.7 N	426
C/1998 J1	1998 05 28.39800	06 09 27.95	-10 11 34.4	9.8 N	426
C/1998 J1	1998 05 28.89796	06 12 12.78	-10 58 40.0	7.7 T	860
C/1998 J1	1998 05 28.90111	06 12 13.90	-10 58 57.7	7.8 T	860
C/1998 J1	1998 05 28.90602	06 12 15.45	-10 59 25.8	7.1 T	860
C/1998 J1	1998 05 28.91065	06 12 17.02	-10 59 50.4	7.0 T	860
C/1998 J1	1998 05 28.91130	06 12 17.02	-10 59 50.0		834
C/1998 J1	1998 05 28.91414	06 12 18.16	-11 00 10.8	8.0 T	860
C/1998 J1	1998 05 28.92203	06 12 20.77	-11 00 55.6	8.0 T	860
C/1998 J1	1998 05 28.93575	06 12 25.07	-11 02 05.5		834
C/1998 J1	1998 05 29.37592	06 14 48.11	-11 42 41.8	11.3 N	422
C/1998 J1	1998 05 29.37664	06 14 48.36	-11 42 45.8	11.4 N	422
C/1998 J1	1998 05 29.37736	06 14 48.64	-11 42 49.5	11.3 N	422
C/1998 J1	1998 05 29.37807	06 14 48.81	-11 42 53.9	11.3 N	422
C/1998 J1	1998 05 30.36816	06 20 05.04	-13 11 28.3	12.5 N	422
C/1998 J1	1998 05 30.36903	06 20 05.34	-13 11 32.9	12.7 N	422
C/1998 J1	1998 05 30.36991	06 20 05.60	-13 11 37.4	12.7 N	422
C/1998 J1	1998 05 30.37079	06 20 05.89	-13 11 42.1	12.6 N	422
C/1998 J1	1998 05 30.37564	06 20 07.41	-13 12 07.6		422
C/1998 J1	1998 05 30.37644	06 20 07.67	-13 12 11.8		422
C/1998 J1	1998 05 31.35430	06 25 12.48	-14 36 08.4	11.9 N	422
C/1998 J1	1998 05 31.35506	06 25 12.73	-14 36 12.1	12.1 N	422
C/1998 J1	1998 05 31.35583	06 25 12.95	-14 36 15.9	12.1 N	422
C/1998 J1	1998 05 31.35659	06 25 13.20	-14 36 19.9	12.1 N	422
C/1998 J1	1998 05 31.36009	06 25 14.26	-14 36 37.4	12.0 N	422
C/1998 J1	1998 05 31.37188	06 25 17.92	-14 37 37.2	9.7 N	426
C/1998 J1	1998 05 31.38256	06 25 21.20	-14 38 31.1	10.0 N	426
C/1998 J1	1998 05 31.39244	06 25 24.23	-14 39 20.3	10.0 N	426
C/1998 J1	1998 06 01.35746	06 30 18.06	-15 58 42.8	10.8 N	422
C/1998 J1	1998 06 01.35823	06 30 18.30	-15 58 46.7	10.9 N	422
C/1998 J1	1998 06 01.35898	06 30 18.52	-15 58 50.5	10.9 N	422
C/1998 J1	1998 06 01.35973	06 30 18.76	-15 58 54.0	10.9 N	422
C/1998 J1	1998 06 01.36049	06 30 18.98	-15 58 57.8	11.0 N	422
C/1998 J1	1998 06 04.35916	06 44 53.62	-19 45 44.1	12.5 N	4 422
C/1998 J1	1998 06 04.36016	06 44 53.89	-19 45 48.3	12.5 N	4 422
C/1998 J1	1998 06 04.36116	06 44 54.17	-19 45 52.5	12.4 N	4 422
C/1998 J1	1998 06 06.36736	06 54 10.27	-22 02 11.6	10.1 N	426
C/1998 J1	1998 06 06.38300	06 54 14.50	-22 03 12.4	10.4 N	426
C/1998 J1	1998 06 06.39871	06 54 18.74	-22 04 13.6	10.4 N	426
C/1998 J1	1998 06 06.41523	06 54 23.20	-22 05 17.6	10.0 N	426

C/1998 K1 (Mueller)

C/1998 K1	1998 05 16.20104	10 38 17.53	+32 34 25.4	17.5 T	675
C/1998 K1	1998 05 17.32032	10 38 38.87	+32 18 20.3		675
C/1998 K1	1998 05 17.91916	10 38 50.97	+32 09 44.0	16 T	046
C/1998 K1	1998 05 17.92615	10 38 51.07	+32 09 37.9		046
C/1998 K1	1998 05 17.92782	10 38 51.06	+32 09 37.4		046

C/1998 K1	1998 05 17.92899	10 38 51.14	+32 09 35.8		046
C/1998 K1	1998 05 17.93014	10 38 51.16	+32 09 35.1		046
C/1998 K1	1998 05 18.15106	10 38 55.66	+32 06 24.6	16.4 T	696
C/1998 K1	1998 05 18.17778	10 38 56.10	+32 06 03.4		675
C/1998 K1	1998 05 18.19169	10 38 56.45	+32 05 49.1	16.4 T	696
C/1998 K1	1998 05 18.27426	10 38 58.08	+32 04 37.7		696
C/1998 K1	1998 05 18.86935	10 39 10.63	+31 56 03.4	14.9 T	504
C/1998 K1	1998 05 18.87427	10 39 10.78	+31 56 00.2	14.9 T	504
C/1998 K1	1998 05 18.87899	10 39 10.92	+31 55 55.3		504
C/1998 K1	1998 05 19.11944	10 39 15.96	+31 52 25.9	15.5 T	816
C/1998 K1	1998 05 19.13404	10 39 16.29	+31 52 13.0	15.4 T	816
C/1998 K1	1998 05 19.13887	10 39 16.39	+31 52 08.8	15.5 T	816
C/1998 K1	1998 05 19.16962	10 39 17.16	+31 51 43.4	16.5 T	670
C/1998 K1	1998 05 19.18125	10 39 17.37	+31 51 31.9		670
C/1998 K1	1998 05 19.19167	10 39 17.55	+31 51 24.6		670
C/1998 K1	1998 05 19.46948	10 39 23.61	+31 47 22.5	16.1 T	402
C/1998 K1	1998 05 19.47156	10 39 23.62	+31 47 21.0		402
C/1998 K1	1998 05 19.47546	10 39 23.69	+31 47 17.7		402
C/1998 K1	1998 05 19.53021	10 39 24.86	+31 46 30.0	16.0 T	360
C/1998 K1	1998 05 19.53472	10 39 24.94	+31 46 26.0		360
C/1998 K1	1998 05 19.53889	10 39 25.04	+31 46 22.3		360
C/1998 K1	1998 05 19.59389	10 39 26.29	+31 45 34.7	15.4 T	900
C/1998 K1	1998 05 19.60662	10 39 26.55	+31 45 23.8		900
C/1998 K1	1998 05 19.83492	10 39 31.62	+31 42 04.9		557
C/1998 K1	1998 05 19.83980	10 39 31.73	+31 42 01.0		557
C/1998 K1	1998 05 19.84584	10 39 31.85	+31 41 55.6		557
C/1998 K1	1998 05 19.87222	10 39 32.48	+31 41 33.1		504
C/1998 K1	1998 05 19.87528	10 39 32.58	+31 41 30.5		504
C/1998 K1	1998 05 19.87706	10 39 32.64	+31 41 30.1		504
C/1998 K1	1998 05 19.88409	10 39 32.75	+31 41 23.2	15.2 T	504
C/1998 K1	1998 05 19.93488	10 39 33.78	+31 40 38.4		046
C/1998 K1	1998 05 19.93623	10 39 33.83	+31 40 37.4		046
C/1998 K1	1998 05 19.93876	10 39 33.90	+31 40 34.7		046
C/1998 K1	1998 05 20.13603	10 39 38.33	+31 37 45.1		696
C/1998 K1	1998 05 20.14304	10 39 38.49	+31 37 38.6	16.5 T	696
C/1998 K1	1998 05 20.15081	10 39 38.66	+31 37 32.1	16.5 T	696
C/1998 K1	1998 05 20.46818	10 39 45.89	+31 32 56.0		897
C/1998 K1	1998 05 20.47276	10 39 46.03	+31 32 52.2	15.7 T	897
C/1998 K1	1998 05 20.49017	10 39 46.41	+31 32 36.4		897
C/1998 K1	1998 05 20.50090	10 39 46.61	+31 32 28.0		897
C/1998 K1	1998 05 20.51318	10 39 46.88	+31 32 17.1	16.2 T	402
C/1998 K1	1998 05 20.51596	10 39 46.88	+31 32 14.6		402
C/1998 K1	1998 05 20.51874	10 39 46.95	+31 32 12.4		402
C/1998 K1	1998 05 20.54759	10 39 47.69	+31 31 47.4	16.0 T	355
C/1998 K1	1998 05 20.56037	10 39 47.92	+31 31 36.3		355
C/1998 K1	1998 05 20.59870	10 39 48.84	+31 31 02.4		900
C/1998 K1	1998 05 20.60721	10 39 48.99	+31 30 53.8		900
C/1998 K1	1998 05 20.84727	10 39 54.61	+31 27 26.4		046
C/1998 K1	1998 05 20.84833	10 39 54.54	+31 27 25.3		046
C/1998 K1	1998 05 20.84935	10 39 54.58	+31 27 24.1		046
C/1998 K1	1998 05 20.85079	10 39 54.60	+31 27 22.9		046
C/1998 K1	1998 05 21.49531	10 40 09.75	+31 18 02.7	15.9 T	402
C/1998 K1	1998 05 21.49741	10 40 09.80	+31 18 00.9		402

C/1998 K1	1998 05 21.49949	10 40 09.83	+31 17 59.0		402
C/1998 K1	1998 05 21.56684	10 40 11.38	+31 17 00.2	16.1 T	360
C/1998 K1	1998 05 21.57135	10 40 11.50	+31 16 56.1		360
C/1998 K1	1998 05 21.57587	10 40 11.62	+31 16 52.2		360
C/1998 K1	1998 05 21.85362	10 40 18.46	+31 12 50.5		143
C/1998 K1	1998 05 21.85753	10 40 18.58	+31 12 48.0		143
C/1998 K1	1998 05 21.87319	10 40 18.94	+31 12 33.1		143
C/1998 K1	1998 05 22.47715	10 40 33.58	+31 03 46.9	16.0 T	402
C/1998 K1	1998 05 22.47924	10 40 33.62	+31 03 44.9		402
C/1998 K1	1998 05 22.48132	10 40 33.67	+31 03 43.4		402
C/1998 K1	1998 05 22.86193	10 40 43.20	+30 58 11.3		143
C/1998 K1	1998 05 22.86819	10 40 43.34	+30 58 05.3		143
C/1998 K1	1998 05 22.87447	10 40 43.43	+30 58 00.2		143
C/1998 K1	1998 05 22.91368	10 40 44.39	+30 57 24.9		046
C/1998 K1	1998 05 22.91913	10 40 44.53	+30 57 19.8		046
C/1998 K1	1998 05 22.92020	10 40 44.57	+30 57 19.0		046
C/1998 K1	1998 05 22.92128	10 40 44.58	+30 57 18.1		046
C/1998 K1	1998 05 23.18038	10 40 51.14	+30 53 32.6	16.6 T	670
C/1998 K1	1998 05 23.19358	10 40 51.39	+30 53 21.4	16.4 T	670
C/1998 K1	1998 05 23.20938	10 40 51.97	+30 53 06.9		670
C/1998 K1	1998 05 23.51552	10 40 59.73	+30 48 40.1		355
C/1998 K1	1998 05 23.52029	10 40 59.86	+30 48 35.4	16.3 T	355
C/1998 K1	1998 05 23.52509	10 40 59.91	+30 48 30.9		355
C/1998 K1	1998 05 23.88635	10 41 09.36	+30 43 14.0	15.1 T	504
C/1998 K1	1998 05 23.89140	10 41 09.51	+30 43 09.3	15.0 T	504
C/1998 K1	1998 05 23.89384	10 41 09.58	+30 43 06.9	14.7 T	504
C/1998 K1	1998 05 23.91090	10 41 09.94	+30 42 53.5		965
C/1998 K1	1998 05 23.91405	10 41 10.05	+30 42 51.8		965
C/1998 K1	1998 05 23.91908	10 41 10.25	+30 42 45.9		965
C/1998 K1	1998 05 23.92114	10 41 10.21	+30 42 44.7		965
C/1998 K1	1998 05 24.11126	10 41 15.28	+30 39 58.8	17.2 T	755
C/1998 K1	1998 05 24.12163	10 41 15.51	+30 39 49.4	17.3 T	755
C/1998 K1	1998 05 24.12589	10 41 15.66	+30 39 45.6	17.1 T	755
C/1998 K1	1998 05 25.15994	10 41 43.25	+30 24 40.1	16.4 T	700
C/1998 K1	1998 05 25.17131	10 41 43.55	+30 24 29.8	16.3 T	700
C/1998 K1	1998 05 26.15744	10 42 10.90	+30 10 04.8	16.4 T	700
C/1998 K1	1998 05 26.16293	10 42 11.06	+30 10 00.1	16.4 T	700
C/1998 K1	1998 05 26.47605	10 42 19.92	+30 05 24.8	15.8 T	867
C/1998 K1	1998 05 26.48126	10 42 20.06	+30 05 20.3		867
C/1998 K1	1998 05 26.48890	10 42 20.29	+30 05 13.2		867
C/1998 K1	1998 05 26.49201	10 42 20.35	+30 05 10.9	16.2 T	402
C/1998 K1	1998 05 26.49376	10 42 20.40	+30 05 09.2		867
C/1998 K1	1998 05 26.49410	10 42 20.35	+30 05 08.9		402
C/1998 K1	1998 05 26.49618	10 42 20.43	+30 05 07.1		402
C/1998 K1	1998 05 26.55219	10 42 22.08	+30 04 17.9	15.3 T	900
C/1998 K1	1998 05 26.56496	10 42 22.37	+30 04 06.3		900
C/1998 K1	1998 05 27.47352	10 42 48.67	+29 50 47.8	16.0 T	402
C/1998 K1	1998 05 27.47560	10 42 48.73	+29 50 46.1		402
C/1998 K1	1998 05 27.47769	10 42 48.76	+29 50 43.9		402
C/1998 K1	1998 05 27.51563	10 42 49.86	+29 50 10.6	16.2 T	360
C/1998 K1	1998 05 27.52031	10 42 49.98	+29 50 06.5		360
C/1998 K1	1998 05 27.85068	10 42 59.74	+29 45 15.3		046
C/1998 K1	1998 05 27.85200	10 42 59.77	+29 45 14.2		046

C/1998 K1	1998 05 27.85310	10 42 59.80	+29 45 13.0		046
C/1998 K1	1998 05 27.90978	10 43 01.51	+29 44 23.4		2 118
C/1998 K1	1998 05 27.91845	10 43 01.75	+29 44 15.8	16.2 T	2 118
C/1998 K1	1998 05 30.10850	10 44 08.74	+29 12 05.3	17.0 T	755
C/1998 K1	1998 05 30.11814	10 44 09.08	+29 11 55.6	17.2 T	755
C/1998 K1	1998 05 31.17813	10 44 43.05	+28 56 20.6	16.2 T	670
C/1998 K1	1998 05 31.18871	10 44 43.37	+28 56 10.5		670
C/1998 K1	1998 06 04.13521	10 46 57.73	+27 57 55.9		750
C/1998 K1	1998 06 04.14008	10 46 57.87	+27 57 52.0		750
C/1998 K1	1998 06 04.16073	10 46 58.54	+27 57 32.7		750
C/1998 K1	1998 06 06.84811	10 48 36.82	+27 17 46.2		046
C/1998 K1	1998 06 06.85168	10 48 36.95	+27 17 42.8		046
C/1998 K1	1998 06 06.85421	10 48 37.02	+27 17 40.8		046
C/1998 K1	1998 06 08.15036	10 49 26.29	+26 58 27.9		750
C/1998 K1	1998 06 08.15680	10 49 26.56	+26 58 23.5		750

C/1998 K2 (LINEAR)

C/1998 K2	1998 05 22.36543	16 58 57.18	-28 48 32.8	15.7 T	704
C/1998 K2	1998 05 22.38507	16 58 55.33	-28 49 07.3		704
C/1998 K2	1998 05 22.40467	16 58 52.84	-28 49 33.5	15.8 T	704
C/1998 K2	1998 05 22.42418	16 58 50.87	-28 50 08.9		704
C/1998 K2	1998 05 22.44369	16 58 48.97	-28 50 37.8		704
C/1998 K2	1998 05 24.35255	16 55 18.85	-29 41 53.6	16.2 T	704
C/1998 K2	1998 05 24.37209	16 55 16.62	-29 42 24.0	16.6 T	704
C/1998 K2	1998 05 24.39166	16 55 13.80	-29 42 53.3	17.0 T	704
C/1998 K2	1998 05 24.41125	16 55 12.08	-29 43 22.8		704
C/1998 K2	1998 05 24.43103	16 55 09.75	-29 43 58.1		704
C/1998 K2	1998 05 25.55245	16 53 01.84	-30 14 09.4		5 422
C/1998 K2	1998 05 25.55428	16 53 01.83	-30 14 10.3		5 422
C/1998 K2	1998 05 25.56302	16 53 00.81	-30 14 27.4	14.8 N	422
C/1998 K2	1998 05 25.57032	16 53 00.06	-30 14 38.9	13.0 T	426
C/1998 K2	1998 05 25.57421	16 52 59.60	-30 14 45.2	13.6 T	426
C/1998 K2	1998 05 25.57817	16 52 59.14	-30 14 51.8	13.7 T	426
C/1998 K2	1998 05 25.58261	16 52 58.61	-30 14 58.9	13.7 T	426
C/1998 K2	1998 05 25.58696	16 52 58.10	-30 15 06.0	13.5 T	426
C/1998 K2	1998 05 26.47308	16 51 14.53	-30 39 01.4	15.3 N	422
C/1998 K2	1998 05 26.47432	16 51 14.39	-30 39 03.4	15.3 N	422
C/1998 K2	1998 05 26.47556	16 51 14.25	-30 39 05.5	15.5 N	422
C/1998 K2	1998 05 26.50499	16 51 10.78	-30 39 53.4	11.8 T	426
C/1998 K2	1998 05 26.51102	16 51 10.05	-30 40 03.3	12.0 T	426
C/1998 K2	1998 05 26.51644	16 51 09.41	-30 40 12.1	11.9 T	426
C/1998 K2	1998 05 26.58226	16 51 01.49	-30 42 04.1	13.8 T	402
C/1998 K2	1998 05 26.58435	16 51 01.25	-30 42 07.8		402
C/1998 K2	1998 05 26.58644	16 51 00.99	-30 42 11.0		402
C/1998 K2	1998 05 26.61233	16 50 57.83	-30 42 52.6	13.4 T	367
C/1998 K2	1998 05 26.61373	16 50 57.70	-30 42 55.3		367
C/1998 K2	1998 05 26.61509	16 50 57.54	-30 42 57.1		367
C/1998 K2	1998 05 26.61648	16 50 57.33	-30 42 59.6		367
C/1998 K2	1998 05 26.61787	16 50 57.19	-30 43 02.3		367
C/1998 K2	1998 05 26.62897	16 50 55.79	-30 43 19.4		900
C/1998 K2	1998 05 26.64182	16 50 54.23	-30 43 40.6	13.6 T	900
C/1998 K2	1998 05 26.64375	16 50 54.08	-30 43 44.2		867
C/1998 K2	1998 05 26.64688	16 50 53.72	-30 43 49.1		867

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C/1998 K2	1998 05 26.66215	16 50 51.84	-30 44 13.8		867
C/1998 K2	1998 05 26.97118	16 50 15.13	-30 52 35.4		046
C/1998 K2	1998 05 26.97250	16 50 14.96	-30 52 37.5		046
C/1998 K2	1998 05 26.97353	16 50 14.83	-30 52 39.3		046
C/1998 K2	1998 05 26.97471	16 50 14.70	-30 52 41.2		046
C/1998 K2	1998 05 27.58697	16 49 01.23	-31 09 14.1	13.3 T	367
C/1998 K2	1998 05 27.58974	16 49 00.89	-31 09 18.9		367
C/1998 K2	1998 05 27.59252	16 49 00.49	-31 09 23.1		367
C/1998 K2	1998 05 27.60566	16 48 58.91	-31 09 39.3	13.1 T	426
C/1998 K2	1998 05 27.60860	16 48 58.57	-31 09 49.0	13.4 T	402
C/1998 K2	1998 05 27.61068	16 48 58.32	-31 09 52.4		402
C/1998 K2	1998 05 27.61277	16 48 58.05	-31 09 55.8		402
C/1998 K2	1998 05 27.61904	16 48 57.26	-31 10 01.2	13.1 T	426
C/1998 K2	1998 05 27.62657	16 48 56.32	-31 10 18.0	13.5 T	900
C/1998 K2	1998 05 27.63192	16 48 55.68	-31 10 22.1	12.9 T	426
C/1998 K2	1998 05 27.63942	16 48 54.74	-31 10 38.7		900
C/1998 K2	1998 05 27.64132	16 48 54.56	-31 10 42.4	12.7 T	360
C/1998 K2	1998 05 27.64444	16 48 54.17	-31 10 47.3		360
C/1998 K2	1998 05 27.64509	16 48 54.04	-31 10 43.4	13.2 T	426
C/1998 K2	1998 05 27.65330	16 48 53.07	-31 11 01.9		360
C/1998 K2	1998 05 28.45438	16 47 15.57	-31 32 34.6	15.2 N	422
C/1998 K2	1998 05 28.45565	16 47 15.43	-31 32 36.8	15.2 N	422
C/1998 K2	1998 05 28.45689	16 47 15.25	-31 32 39.2	15.2 N	422
C/1998 K2	1998 05 29.17586	16 45 45.93	-31 52 08.0	13.4 T	860
C/1998 K2	1998 05 29.18142	16 45 45.19	-31 52 16.7	13.0 T	860
C/1998 K2	1998 05 29.19113	16 45 44.02	-31 52 33.2	13.3 T	860
C/1998 K2	1998 05 29.41566	16 45 16.29	-31 58 33.3	15.3 N	5 422
C/1998 K2	1998 05 29.41689	16 45 16.19	-31 58 34.9	15.4 N	5 422
C/1998 K2	1998 05 29.41858	16 45 16.05	-31 58 36.9	15.4 N	5 422
C/1998 K2	1998 05 31.38509	16 41 05.23	-32 51 33.8	15.5 N	422
C/1998 K2	1998 05 31.38619	16 41 05.11	-32 51 35.2	15.9 N	422
C/1998 K2	1998 05 31.38730	16 41 04.96	-32 51 37.1	15.4 N	422
C/1998 K2	1998 05 31.66007	16 40 29.11	-32 59 02.9	12.3 T	360
C/1998 K2	1998 05 31.66324	16 40 28.67	-32 59 03.4	14.0 T	426
C/1998 K2	1998 05 31.66597	16 40 28.32	-32 59 12.5		360
C/1998 K2	1998 05 31.66875	16 40 27.94	-32 59 16.8		360
C/1998 K2	1998 05 31.67153	16 40 27.56	-32 59 16.6	13.9 T	426
C/1998 K2	1998 05 31.68006	16 40 26.42	-32 59 30.4	14.0 T	426
C/1998 K2	1998 06 02.49674	16 36 26.57	-33 48 00.3	12.4 T	426
C/1998 K2	1998 06 02.50506	16 36 25.43	-33 48 13.6	12.4 T	426
C/1998 K2	1998 06 02.51374	16 36 24.25	-33 48 27.6	12.5 T	426
C/1998 K2	1998 06 06.55253	16 27 07.86	-35 34 25.6	12.2 T	426
C/1998 K2	1998 06 06.56463	16 27 06.12	-35 34 44.3	12.1 T	426
C/1998 K2	1998 06 06.57017	16 27 05.32	-35 34 53.0	12.2 T	426

C/1998 K3 (LINEAR)

C/1998 K3	1998 05 23.36714	16 36 54.32	+02 27 43.5	18.4 N	704
C/1998 K3	1998 05 23.38685	16 36 51.19	+02 27 56.1	18.3 N	704
C/1998 K3	1998 05 23.40637	16 36 48.20	+02 28 08.1	18.5 N	704
C/1998 K3	1998 05 23.42590	16 36 45.51	+02 28 17.1	18.8 N	704
C/1998 K3	1998 05 23.44545	16 36 42.47	+02 28 28.8	18.1 N	704
C/1998 K3	1998 05 24.25114	16 34 43.54	+02 35 49.2	18.5 N	704
C/1998 K3	1998 05 24.27078	16 34 40.59	+02 36 00.1	18.4 N	704

C/1998 K3	1998 05 24.29037	16 34 37.61	+02 36 09.8	18.9 N	704
C/1998 K3	1998 05 24.31012	16 34 34.68	+02 36 20.5	18.9 N	704
C/1998 K3	1998 05 24.32999	16 34 31.69	+02 36 31.8	18.8 N	704
C/1998 K3	1998 05 24.47093	16 34 11.07	+02 37 51.3		422
C/1998 K3	1998 05 24.51462	16 34 04.59	+02 38 15.1	17.5 T	426
C/1998 K3	1998 05 24.52332	16 34 03.29	+02 38 18.6	18.1 T	426
C/1998 K3	1998 05 24.52699	16 34 02.78	+02 38 22.0	17.7 T	426
C/1998 K3	1998 05 25.13759	16 32 32.30	+02 43 45.2	16.9 T	816
C/1998 K3	1998 05 25.14135	16 32 31.75	+02 43 46.9	16.8 T	816
C/1998 K3	1998 05 25.14620	16 32 31.04	+02 43 49.4	17.0 T	816
C/1998 K3	1998 05 25.52106	16 31 35.60	+02 47 11.6	17.9 T	426
C/1998 K3	1998 05 25.52642	16 31 34.78	+02 47 14.9	18.3 T	426
C/1998 K3	1998 05 25.56847	16 31 28.45	+02 47 37.3	18.6 T	422
C/1998 K3	1998 05 25.57102	16 31 28.01	+02 47 39.1	18.3 T	422
C/1998 K3	1998 05 25.57359	16 31 27.67	+02 47 40.7	18.7 T	422
C/1998 K3	1998 05 25.84741	16 30 47.23	+02 50 02.3	17.8 T	046
C/1998 K3	1998 05 25.84848	16 30 47.03	+02 50 01.4		046
C/1998 K3	1998 05 25.84955	16 30 46.93	+02 50 01.8		046
C/1998 K3	1998 05 25.85387	16 30 46.22	+02 50 02.9		046
C/1998 K3	1998 05 25.86100	16 30 45.05	+02 50 07.6		046
C/1998 K3	1998 05 25.86245	16 30 44.97	+02 50 08.1		046
C/1998 K3	1998 05 25.96373	16 30 29.83	+02 51 01.6	17.8 T	104
C/1998 K3	1998 05 25.96481	16 30 29.70	+02 51 02.8		104
C/1998 K3	1998 05 25.96590	16 30 29.50	+02 51 03.5		104
C/1998 K3	1998 05 25.96698	16 30 29.32	+02 51 04.2		104
C/1998 K3	1998 05 26.04133	16 30 18.34	+02 51 42.1		557
C/1998 K3	1998 05 26.04366	16 30 17.97	+02 51 43.5		557
C/1998 K3	1998 05 26.06394	16 30 14.92	+02 51 53.2		557
C/1998 K3	1998 05 26.06657	16 30 14.51	+02 51 55.1	18.1 T	557
C/1998 K3	1998 05 26.13713	16 30 04.30	+02 52 32.7	18.6 T	709
C/1998 K3	1998 05 26.14133	16 30 03.71	+02 52 34.9	18.3 T	709
C/1998 K3	1998 05 26.15109	16 30 02.27	+02 52 40.5	18.0 T	709
C/1998 K3	1998 05 26.15968	16 30 01.01	+02 52 44.1	18.4 T	709
C/1998 K3	1998 05 26.16407	16 30 00.35	+02 52 46.7	18.3 T	709
C/1998 K3	1998 05 26.29366	16 29 41.04	+02 53 53.4	18.3 T	704
C/1998 K3	1998 05 26.29375	16 29 41.03	+02 53 53.9	18.5 T	704
C/1998 K3	1998 05 26.31138	16 29 38.39	+02 54 02.8	18.7 T	704
C/1998 K3	1998 05 26.31148	16 29 38.37	+02 54 03.9	18.5 T	704
C/1998 K3	1998 05 26.32907	16 29 35.77	+02 54 13.2	18.5 T	704
C/1998 K3	1998 05 26.32917	16 29 35.78	+02 54 13.0	18.6 T	704
C/1998 K3	1998 05 26.34705	16 29 33.08	+02 54 21.6	18.7 T	704
C/1998 K3	1998 05 26.34714	16 29 33.29	+02 54 20.8	18.7 T	704
C/1998 K3	1998 05 26.36463	16 29 30.40	+02 54 31.3	18.3 T	704
C/1998 K3	1998 05 26.36473	16 29 30.46	+02 54 31.9	18.8 T	704
C/1998 K3	1998 05 26.49147	16 29 11.79	+02 55 41.3	18.0 T	422
C/1998 K3	1998 05 26.49318	16 29 11.59	+02 55 41.1		422
C/1998 K3	1998 05 26.55715	16 29 02.10	+02 56 11.4	18.3 T	402
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C/1998 K3	1998 05 26.56271	16 29 01.25	+02 56 13.8		402
C/1998 K3	1998 05 26.56520	16 29 00.88	+02 56 15.6		402
C/1998 K3	1998 05 26.65935	16 28 46.75	+02 57 07.4	17.4 T	426
C/1998 K3	1998 05 26.66475	16 28 46.01	+02 57 09.8	18.3 T	426
C/1998 K3	1998 05 26.91382	16 28 09.17	+02 59 14.3		120

C/1998 K3	1998 05 26.91649	16 28 08.90	+02 59 16.6		120
C/1998 K3	1998 05 26.92520	16 28 07.57	+02 59 20.9	17.7 T	120
C/1998 K3	1998 05 26.92669	16 28 07.34	+02 59 21.6		120
C/1998 K3	1998 05 26.97866	16 27 59.63	+02 59 48.6		046
C/1998 K3	1998 05 26.98017	16 27 59.29	+02 59 48.5		046
C/1998 K3	1998 05 26.98119	16 27 59.22	+02 59 49.4		046
C/1998 K3	1998 05 26.98222	16 27 59.12	+02 59 49.8		046
C/1998 K3	1998 05 26.98498	16 27 58.65	+02 59 52.3		046
C/1998 K3	1998 05 27.26891	16 27 16.68	+03 02 18.0	18.3 T	704
C/1998 K3	1998 05 27.28889	16 27 13.96	+03 02 27.6	18.8 T	704
C/1998 K3	1998 05 27.30851	16 27 10.80	+03 02 37.6	18.3 T	704
C/1998 K3	1998 05 27.32819	16 27 07.78	+03 02 47.5	18.4 T	704
C/1998 K3	1998 05 27.34787	16 27 04.89	+03 02 58.2	18.0 T	704
C/1998 K3	1998 05 27.59644	16 26 28.28	+03 05 07.2	17.3 T	426
C/1998 K3	1998 05 27.59823	16 26 27.94	+03 05 04.7	18.0 T	402
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C/1998 K3	1998 05 27.60240	16 26 27.32	+03 05 07.1		402
C/1998 K3	1998 05 27.60448	16 26 27.03	+03 05 07.5		402
C/1998 K3	1998 05 27.61145	16 26 25.95	+03 05 15.3	17.5 T	426
C/1998 K3	1998 05 27.61510	16 26 25.44	+03 05 13.5	17.9 T	360
C/1998 K3	1998 05 27.61927	16 26 24.82	+03 05 15.6		360
C/1998 K3	1998 05 27.62344	16 26 24.18	+03 05 17.6		360
C/1998 K3	1998 05 27.62420	16 26 24.07	+03 05 21.4	17.5 T	426
C/1998 K3	1998 05 27.69793	16 26 13.11	+03 05 55.1	17.5 T	867
C/1998 K3	1998 05 27.70348	16 26 12.28	+03 05 58.0		867
C/1998 K3	1998 05 27.70835	16 26 11.54	+03 06 00.7		867
C/1998 K3	1998 05 28.06561	16 25 18.59	+03 08 59.3	17.9 T	046
C/1998 K3	1998 05 28.06674	16 25 18.45	+03 09 00.4		046
C/1998 K3	1998 05 28.10733	16 25 12.67	+03 09 20.6		817
C/1998 K3	1998 05 28.11743	16 25 11.25	+03 09 25.9		817
C/1998 K3	1998 05 28.13880	16 25 08.13	+03 09 37.3		817
C/1998 K3	1998 05 28.29761	16 24 44.61	+03 10 56.5	18.4 T	704
C/1998 K3	1998 05 28.31754	16 24 41.58	+03 11 06.1	19.0 T	704
C/1998 K3	1998 05 28.33746	16 24 38.61	+03 11 15.0	18.7 T	704
C/1998 K3	1998 05 28.35742	16 24 35.68	+03 11 26.5	18.6 T	704
C/1998 K3	1998 05 28.37733	16 24 32.67	+03 11 35.9	18.8 T	704
C/1998 K3	1998 05 28.48556	16 24 16.90	+03 12 33.8	18.4 T	422
C/1998 K3	1998 05 28.48715	16 24 16.66	+03 12 34.3	18.3 T	422
C/1998 K3	1998 05 29.49038	16 21 48.64	+03 20 46.0	18.7 T	422
C/1998 K3	1998 05 29.49342	16 21 48.15	+03 20 47.7	18.5 T	422
C/1998 K3	1998 05 30.61707	16 19 02.72	+03 29 39.7	17.3 T	402
C/1998 K3	1998 05 30.61916	16 19 02.35	+03 29 41.1		402
C/1998 K3	1998 05 30.62124	16 19 02.00	+03 29 42.0		402
C/1998 K3	1998 05 31.67882	16 16 26.90	+03 37 53.9	17.9 T	360
C/1998 K3	1998 05 31.68316	16 16 26.27	+03 37 55.6		360
C/1998 K3	1998 05 31.68698	16 16 25.69	+03 37 57.5		360
C/1998 K3	1998 06 01.95462	16 13 20.81	+03 47 27.2	18.0 T	046
C/1998 K3	1998 06 01.95597	16 13 20.63	+03 47 27.3		046
C/1998 K3	1998 06 01.95714	16 13 20.44	+03 47 28.0		046
C/1998 K3	1998 06 01.95834	16 13 20.23	+03 47 28.3		046
C/1998 K3	1998 06 02.05435	16 13 06.23	+03 48 10.5	17.2 T	118
C/1998 K3	1998 06 02.05701	16 13 05.81	+03 48 12.2		118
C/1998 K3	1998 06 02.15828	16 12 51.25	+03 48 57.2	20.4 N	691

C/1998 K3	1998 06 02.16228	16 12 50.65	+03 48 58.9	18.3 T	691
C/1998 K3	1998 06 02.16880	16 12 49.70	+03 49 01.5	18.3 T	691
C/1998 K3	1998 06 03.00249	16 10 48.70	+03 55 01.9	17.7 T	118
C/1998 K3	1998 06 03.00649	16 10 48.15	+03 55 03.4		118
C/1998 K3	1998 06 03.21544	16 10 18.20	+03 56 32.8	18.3 T	704
C/1998 K3	1998 06 03.22811	16 10 16.34	+03 56 39.5	18.8 T	704
C/1998 K3	1998 06 03.24076	16 10 14.35	+03 56 42.5	18.2 T	704
C/1998 K3	1998 06 03.25340	16 10 12.52	+03 56 51.7	18.9 T	704
C/1998 K3	1998 06 03.26608	16 10 10.43	+03 56 54.3	18.4 T	704
C/1998 K3	1998 06 04.90690	16 06 14.87	+04 08 13.4		046
C/1998 K3	1998 06 04.90818	16 06 14.74	+04 08 14.3		046
C/1998 K3	1998 06 04.90963	16 06 14.46	+04 08 14.7		046
C/1998 K3	1998 06 04.91087	16 06 14.33	+04 08 15.9		046
C/1998 K3	1998 06 04.91226	16 06 14.12	+04 08 15.6		046
C/1998 K3	1998 06 04.96830	16 06 06.03	+04 08 39.0	17.5 T	118
C/1998 K3	1998 06 04.97539	16 06 05.02	+04 08 42.0		118
C/1998 K3	1998 06 05.03866	16 05 55.98	+04 09 07.3		557

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C/1998 K5	1998 05 26.37939	17 26 02.33	+02 02 11.1	18.0 N	704
C/1998 K5	1998 05 26.39698	17 26 05.24	+02 03 19.0	18.5 N	704
C/1998 K5	1998 05 26.41459	17 26 08.08	+02 04 25.3	18.5 N	704
C/1998 K5	1998 05 26.43225	17 26 11.06	+02 05 32.7	19.2 N	704
C/1998 K5	1998 05 26.44980	17 26 13.95	+02 06 39.6	18.1 N	704
C/1998 K5	1998 05 26.98696	17 27 50.01	+02 41 11.4	16.8 T	046
C/1998 K5	1998 05 26.98839	17 27 50.25	+02 41 17.0		046
C/1998 K5	1998 05 26.99279	17 27 50.99	+02 41 34.5		046
C/1998 K5	1998 05 26.99392	17 27 51.19	+02 41 38.4		046
C/1998 K5	1998 05 27.02597	17 27 56.72	+02 43 44.2		557
C/1998 K5	1998 05 27.02725	17 27 56.93	+02 43 49.2		557
C/1998 K5	1998 05 27.02853	17 27 57.16	+02 43 54.4	16.3 T	557
C/1998 K5	1998 05 27.26903	17 28 41.42	+02 59 50.3	17.1 N	704
C/1998 K5	1998 05 27.28901	17 28 44.84	+03 01 08.7		704
C/1998 K5	1998 05 27.30863	17 28 48.27	+03 02 27.7		704
C/1998 K5	1998 05 27.32148	17 28 50.27	+03 03 16.5	17.2 T	734
C/1998 K5	1998 05 27.32372	17 28 50.64	+03 03 25.1	17.2 T	734
C/1998 K5	1998 05 27.32831	17 28 51.55	+03 03 46.5	18.0 N	704
C/1998 K5	1998 05 27.33081	17 28 51.85	+03 03 54.1	16.9 T	734
C/1998 K5	1998 05 27.33363	17 28 52.36	+03 04 05.7	16.8 T	734
C/1998 K5	1998 05 27.34799	17 28 55.04	+03 05 04.0		704
C/1998 K5	1998 05 27.54431	17 29 31.98	+03 18 43.1	16.1 T	422
C/1998 K5	1998 05 27.54590	17 29 32.26	+03 18 49.4	16.2 T	422
C/1998 K5	1998 05 27.54748	17 29 32.53	+03 18 55.9	16.3 T	422
C/1998 K5	1998 05 27.57419	17 29 37.56	+03 20 12.8	16.2 T	402
C/1998 K5	1998 05 27.57628	17 29 37.93	+03 20 21.2		402
C/1998 K5	1998 05 27.57837	17 29 38.29	+03 20 29.6		402
C/1998 K5	1998 05 27.58045	17 29 38.67	+03 20 38.2		402
C/1998 K5	1998 05 27.88514	17 30 35.57	+03 41 12.9		557
C/1998 K5	1998 05 27.88676	17 30 35.88	+03 41 19.4		557
C/1998 K5	1998 05 27.88839	17 30 36.18	+03 41 26.5		557
C/1998 K5	1998 05 27.89002	17 30 36.45	+03 41 32.9		557
C/1998 K5	1998 05 27.90163	17 30 38.61	+03 42 21.1	15.9 T	046
C/1998 K5	1998 05 27.90273	17 30 38.80	+03 42 25.7		046

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C/1998 K5	1998 05 27.90610	17 30 39.42	+03 42 39.4		046
C/1998 K5	1998 05 27.90704	17 30 39.63	+03 42 43.5		046
C/1998 K5	1998 05 27.96870	17 30 50.79	+03 46 56.5	16.0 T	557
C/1998 K5	1998 05 27.98190	17 30 53.17	+03 47 51.0		557
C/1998 K5	1998 05 28.00775	17 30 57.88	+03 49 37.7		557
C/1998 K5	1998 05 28.02887	17 31 01.72	+03 51 04.9		557
C/1998 K5	1998 05 28.04684	17 31 04.98	+03 52 19.3		557
C/1998 K5	1998 05 28.06354	17 31 08.05	+03 53 28.4	15.9 T	557
C/1998 K5	1998 05 28.16146	17 31 27.98	+04 00 17.8	15.3 T	784
C/1998 K5	1998 05 28.16285	17 31 28.25	+04 00 23.5	15.4 T	784
C/1998 K5	1998 05 28.27222	17 31 48.30	+04 08 00.3	15.5 T	784
C/1998 K5	1998 05 28.27378	17 31 48.58	+04 08 06.9	15.5 T	784
C/1998 K5	1998 05 28.30298	17 31 54.66	+04 10 12.3	17.9 N	704
C/1998 K5	1998 05 28.32291	17 31 58.13	+04 11 37.5	18.4 N	704
C/1998 K5	1998 05 28.34289	17 32 01.93	+04 12 58.2	17.8 N	704
C/1998 K5	1998 05 28.34879	17 32 02.40	+04 13 21.4	15.5 T	784
C/1998 K5	1998 05 28.35017	17 32 02.65	+04 13 27.2	15.6 T	784
C/1998 K5	1998 05 28.36276	17 32 05.59	+04 14 23.3		704
C/1998 K5	1998 05 28.38268	17 32 09.23	+04 15 46.9		704
C/1998 K5	1998 05 28.49296	17 32 32.29	+04 24 03.9	15.9 T	422
C/1998 K5	1998 05 28.49430	17 32 32.54	+04 24 09.6	15.9 T	422
C/1998 K5	1998 05 28.49565	17 32 32.80	+04 24 15.5	15.8 T	422
C/1998 K5	1998 05 28.87694	17 33 47.46	+04 50 49.1		557
C/1998 K5	1998 05 28.87951	17 33 47.98	+04 51 00.3		557
C/1998 K5	1998 05 28.88337	17 33 48.72	+04 51 17.0	15.9 T	557
C/1998 K5	1998 05 28.92755	17 33 57.63	+04 54 32.5	16.0 T	620
C/1998 K5	1998 05 28.93044	17 33 58.18	+04 54 45.0		620
C/1998 K5	1998 05 28.93542	17 33 59.12	+04 55 06.7		620
C/1998 K5	1998 05 28.93979	17 33 59.61	+04 55 21.8	15.7 T	046
C/1998 K5	1998 05 28.94073	17 33 59.78	+04 55 25.8		046
C/1998 K5	1998 05 28.94154	17 33 59.95	+04 55 29.5		046
C/1998 K5	1998 05 28.94155	17 34 00.29	+04 55 33.3		620
C/1998 K5	1998 05 28.94225	17 34 00.07	+04 55 32.4		046
C/1998 K5	1998 05 29.02756	17 34 16.45	+05 01 42.6		557
C/1998 K5	1998 05 29.03527	17 34 17.94	+05 02 16.1		557
C/1998 K5	1998 05 29.04275	17 34 19.38	+05 02 48.8	15.7 T	557
C/1998 K5	1998 05 29.16181	17 34 44.52	+05 11 31.9	14.8 T	784
C/1998 K5	1998 05 29.17385	17 34 47.51	+05 12 28.0	15.7 T	709
C/1998 K5	1998 05 29.17710	17 34 48.16	+05 12 42.0	15.8 T	709
C/1998 K5	1998 05 29.18002	17 34 48.73	+05 12 54.8	15.8 T	709
C/1998 K5	1998 05 29.18311	17 34 49.33	+05 13 08.4	15.8 T	709
C/1998 K5	1998 05 29.18851	17 34 50.41	+05 13 32.2	15.8 T	709
C/1998 K5	1998 05 29.19177	17 34 51.04	+05 13 46.5	15.7 T	709
C/1998 K5	1998 05 29.19505	17 34 51.67	+05 14 00.8	15.7 T	709
C/1998 K5	1998 05 29.19531	17 34 51.04	+05 13 59.0	15.0 T	784
C/1998 K5	1998 05 29.19740	17 34 51.45	+05 14 08.0	15.0 T	784
C/1998 K5	1998 05 29.23053	17 34 58.54	+05 16 35.0	15.6 T	713
C/1998 K5	1998 05 29.24031	17 34 58.81	+05 17 47.3	15.8 T	860
C/1998 K5	1998 05 29.24486	17 34 59.62	+05 18 08.5	15.7 T	860
C/1998 K5	1998 05 29.25170	17 35 02.58	+05 18 07.3	15.6 T	713
C/1998 K5	1998 05 29.26148	17 35 02.69	+05 19 22.3	16.3 T	860
C/1998 K5	1998 05 29.27501	17 35 07.22	+05 19 53.4	17.4 N	704
C/1998 K5	1998 05 29.27950	17 35 08.06	+05 20 10.8	15.6 T	713

C/1998 K5	1998 05 29.29491	17 35 10.91	+05 21 21.4	18.6 N	704
C/1998 K5	1998 05 29.31469	17 35 14.90	+05 22 46.6	15.5 T	713
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C/1998 K5	1998 05 29.38537	17 35 28.58	+05 28 02.6		711
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C/1998 K5	1998 05 29.87985	17 37 12.76	+06 04 54.8	15.6 T	046
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C/1998 K5	1998 05 29.88447	17 37 13.69	+06 05 15.8		046
C/1998 K5	1998 05 29.97832	17 37 32.81	+06 12 23.8		557
C/1998 K5	1998 05 29.97949	17 37 33.05	+06 12 29.2		557
C/1998 K5	1998 05 29.98066	17 37 33.29	+06 12 34.5	15.9 T	557
C/1998 K5	1998 05 29.98183	17 37 33.53	+06 12 39.9		557
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C/1998 K5	1998 05 30.05813	17 37 49.11	+06 18 29.4		557
C/1998 K5	1998 05 30.06046	17 37 49.59	+06 18 40.2	15.6 T	557
C/1998 K5	1998 05 30.06163	17 37 49.83	+06 18 45.3		557
C/1998 K5	1998 05 30.21417	17 38 23.87	+06 30 33.1	15.2 T	713
C/1998 K5	1998 05 30.24679	17 38 30.78	+06 33 04.4	15.4 T	713
C/1998 K5	1998 05 30.26179	17 38 33.69	+06 34 14.2	16.0 T	734
C/1998 K5	1998 05 30.26395	17 38 34.12	+06 34 23.5	16.0 T	734
C/1998 K5	1998 05 30.26763	17 38 34.86	+06 34 41.3	16.2 T	734
C/1998 K5	1998 05 30.28551	17 38 38.79	+06 36 04.0	15.6 T	713
C/1998 K5	1998 05 30.31614	17 38 45.58	+06 38 27.7		670
C/1998 K5	1998 05 30.32778	17 38 47.95	+06 39 22.2	15.8 T	670
C/1998 K5	1998 05 30.34045	17 38 50.54	+06 40 21.6	15.8 T	670
C/1998 K5	1998 05 30.34722	17 38 51.95	+06 40 53.4		670
C/1998 K5	1998 05 30.41308	17 39 05.08	+06 46 01.8		711
C/1998 K5	1998 05 30.41678	17 39 05.85	+06 46 19.2		711
C/1998 K5	1998 05 30.42058	17 39 06.63	+06 46 36.9		711
C/1998 K5	1998 05 30.50202	17 39 26.55	+06 53 29.2	15.7 T	422
C/1998 K5	1998 05 30.50327	17 39 26.82	+06 53 35.1	15.7 T	422
C/1998 K5	1998 05 30.50451	17 39 27.07	+06 53 40.7	15.7 T	422
C/1998 K5	1998 05 30.54240	17 39 35.35	+06 56 05.4	15.6 T	402
C/1998 K5	1998 05 30.54448	17 39 35.79	+06 56 15.2		402
C/1998 K5	1998 05 30.54656	17 39 36.24	+06 56 25.0		402
C/1998 K5	1998 05 30.59513	17 39 46.45	+07 00 48.2	15.8 T	426
C/1998 K5	1998 05 30.59822	17 39 47.11	+07 01 02.4	15.7 T	426
C/1998 K5	1998 05 30.60255	17 39 48.03	+07 01 23.5	15.7 T	426
C/1998 K5	1998 05 30.60689	17 39 48.96	+07 01 43.9	15.6 T	426
C/1998 K5	1998 05 30.70625	17 40 09.87	+07 09 00.7	15.5 T	867
C/1998 K5	1998 05 30.71181	17 40 11.04	+07 09 27.1		867
C/1998 K5	1998 05 30.71563	17 40 11.85	+07 09 45.3		867
C/1998 K5	1998 05 30.71659	17 40 12.00	+07 09 49.7	15.5 T	900
C/1998 K5	1998 05 30.72400	17 40 13.54	+07 10 24.6		900

C/1998 K5	1998 05 30.90617	17 40 55.67	+07 24 46.8		108	C/1998 K5	1998 06 06.62778	18 12 19.00	+18 01 08.7	13.3 T	426
C/1998 K5	1998 05 30.90891	17 40 56.31	+07 25 04.8		108	C/1998 K5	1998 06 06.63193	18 12 20.40	+18 01 36.1	13.4 T	426
C/1998 K5	1998 05 30.91146	17 40 56.85	+07 25 13.1	15.9 T	108	C/1998 K5	1998 06 06.63595	18 12 21.76	+18 02 02.8	12.8 T	426
C/1998 K5	1998 05 30.98245	17 41 12.74	+07 30 59.1		965	C/1998 K5	1998 06 06.63997	18 12 23.10	+18 02 29.1	13.1 T	426
C/1998 K5	1998 05 30.98457	17 41 12.54	+07 31 07.4	16.0 T	609	C/1998 K5	1998 06 06.93363	18 14 07.26	+18 34 06.4	14.0 T	046
C/1998 K5	1998 05 30.98678	17 41 13.05	+07 31 17.8		609	C/1998 K5	1998 06 06.93459	18 14 07.61	+18 34 13.0		046
C/1998 K5	1998 05 30.98787	17 41 13.28	+07 31 22.8		609	C/1998 K5	1998 06 06.93528	18 14 07.85	+18 34 17.6		046
C/1998 K5	1998 05 30.98862	17 41 14.06	+07 31 29.1		965	C/1998 K5	1998 06 07.03712	18 14 43.13	+18 45 39.0	13.9 T	118
C/1998 K5	1998 05 30.99306	17 41 15.05	+07 31 51.0		965	C/1998 K5	1998 06 07.04058	18 14 44.34	+18 46 02.1		118
C/1998 K5	1998 05 31.35000	17 42 35.75	+08 00 46.3	15.9 T	670	C/1998 K5	1998 06 08.20370	18 22 02.74	+20 58 49.4		750
C/1998 K5	1998 05 31.36250	17 42 38.50	+08 01 47.7		670	C/1998 K5	1998 06 08.21176	18 22 05.82	+20 59 46.2		750
C/1998 K5	1998 05 31.37795	17 42 41.88	+08 03 03.4		670	C/1998 K5	1998 06 08.21744	18 22 07.98	+21 00 26.0		750
C/1998 K5	1998 05 31.53792	17 43 20.27	+08 16 44.9	15.7 T	426	C/1998 K5	1998 06 08.35928	18 23 03.18	+21 17 01.1		658
C/1998 K5	1998 05 31.54848	17 43 22.64	+08 17 37.6	15.6 T	426	C/1998 K5	1998 06 08.36492	18 23 05.43	+21 17 41.2		658
C/1998 K5	1998 05 31.55442	17 43 23.98	+08 18 07.0	15.7 T	426	C/1998 K5	1998 06 08.36814	18 23 06.61	+21 18 03.7		658
C/1998 K5	1998 05 31.71597	17 44 00.16	+08 30 57.5	15.3 N	360	C/1998 K5	1998 06 09.37593	18 30 01.43	+23 18 19.3		658
C/1998 K5	1998 05 31.71806	17 44 00.63	+08 31 08.0		360	C/1998 K5	1998 06 09.37970	18 30 02.99	+23 18 46.9		658
C/1998 K5	1998 05 31.72014	17 44 01.09	+08 31 18.2		360	C/1998 K5	1998 06 09.38322	18 30 04.47	+23 19 12.7		658
C/1998 K5	1998 05 31.94924	17 44 56.42	+08 50 21.7	15.0 T	046	4P/Faye					
C/1998 K5	1998 05 31.95876	17 44 58.54	+08 51 10.4		118	4P	1998 05 24.40463	20 26 11.51	-07 59 06.2	20.5 T	691
C/1998 K5	1998 05 31.96226	17 44 59.36	+08 51 28.3		118	4P	1998 05 24.46081	20 26 11.75	-07 58 53.7	20.8 T	691
C/1998 K5	1998 05 31.96662	17 45 00.35	+08 51 50.4	15.0 T	118	4P	1998 05 26.72120	20 26 25.16	-07 50 40.3	20.2 T	867
C/1998 K5	1998 06 01.86255	17 48 41.38	+10 09 03.0	15.0 T	540	4P	1998 05 26.72745	20 26 25.20	-07 50 38.7		867
C/1998 K5	1998 06 01.86659	17 48 42.42	+10 09 24.7		540	4P	1998 05 26.73405	20 26 25.28	-07 50 36.9		867
C/1998 K5	1998 06 01.87214	17 48 43.75	+10 09 54.6		540	4P	1998 05 27.71634	20 26 29.27	-07 47 08.6	20.3 T	867
C/1998 K5	1998 06 01.99201	17 49 13.25	+10 20 31.3	15.0 T	046	4P	1998 05 27.75211	20 26 29.34	-07 47 01.0		867
C/1998 K5	1998 06 01.99338	17 49 13.59	+10 20 38.6		046	4P	1998 05 27.75940	20 26 29.39	-07 46 58.6		867
C/1998 K5	1998 06 01.99499	17 49 13.98	+10 20 47.2		046	4P	1998 05 27.76565	20 26 29.36	-07 46 58.2		867
C/1998 K5	1998 06 03.00078	17 53 38.98	+11 52 16.7	14.8 T	046	4P	1998 05 28.41239	20 26 31.31	-07 44 42.1	21.4 N	691
C/1998 K5	1998 06 03.00189	17 53 39.24	+11 52 22.0		046	4P	1998 05 28.43260	20 26 31.34	-07 44 37.3	20.1 T	691
C/1998 K5	1998 06 03.00309	17 53 39.55	+11 52 28.6		046	4P	1998 05 28.45289	20 26 31.38	-07 44 33.5	20.1 T	691
C/1998 K5	1998 06 03.73542	17 57 03.14	+13 02 04.6	15.1 N	360	4P	1998 05 30.44314	20 26 34.65	-07 37 45.7	19.1 T	568
C/1998 K5	1998 06 03.73819	17 57 03.92	+13 02 20.9		360	4P	1998 05 30.50542	20 26 34.63	-07 37 33.4		568
C/1998 K5	1998 06 03.99850	17 58 19.83	+13 27 29.5	14.9 T	046	4P	1998 05 31.50143	20 26 34.36	-07 34 15.8		568
C/1998 K5	1998 06 03.99966	17 58 20.17	+13 27 36.5		046	21P/Giacobini-Zinner					
C/1998 K5	1998 06 04.00254	17 58 20.98	+13 27 53.7		046	21P	1998 04 27.76044	17 40 30.96	+12 46 11.7	17.5 T	867
C/1998 K5	1998 06 04.00377	17 58 21.32	+13 28 00.8		046	21P	1998 04 27.76669	17 40 30.93	+12 46 18.5		867
C/1998 K5	1998 06 04.20066	17 59 20.00	+13 47 22.6		750	21P	1998 04 29.28264	17 40 22.58	+13 13 44.2	19.3 T	292
C/1998 K5	1998 06 04.20682	17 59 21.75	+13 47 58.5		750	21P	1998 04 29.29654	17 40 22.42	+13 13 57.2	20.3 T	292
C/1998 K5	1998 06 04.32690	17 59 56.56	+13 59 56.9	17.1 T	704	21P	1998 04 29.31042	17 40 22.30	+13 14 15.5	18.9 T	292
C/1998 K5	1998 06 04.33972	18 00 00.14	+14 01 14.9		704	21P	1998 05 04.45168	17 39 25.20	+14 48 45.3	18.1 T	696
C/1998 K5	1998 06 04.35298	18 00 03.97	+14 02 33.2		704	21P	1998 05 04.45556	17 39 25.13	+14 48 49.9	17.9 T	696
C/1998 K5	1998 06 04.36616	18 00 07.71	+14 03 53.2	17.8 T	704	21P	1998 05 04.45944	17 39 25.08	+14 48 53.9	17.9 T	696
C/1998 K5	1998 06 04.37927	18 00 11.46	+14 05 10.2		704	21P	1998 05 07.95313	17 38 21.37	+15 53 58.5	16.2 T	504
C/1998 K5	1998 06 04.91524	18 02 55.83	+14 59 00.2	14.6 T	046	21P	1998 05 07.95606	17 38 21.26	+15 54 02.5	16.2 T	504
C/1998 K5	1998 06 04.91745	18 02 56.50	+14 59 13.7		046	21P	1998 05 16.01528	17 34 32.86	+18 24 41.4		118
C/1998 K5	1998 06 04.91911	18 02 56.99	+14 59 23.9		046	21P	1998 05 16.02378	17 34 32.53	+18 24 50.7	17.0 T	118
C/1998 K5	1998 06 05.05006	18 03 36.34	+15 12 48.2	13.8 T	118	21P	1998 05 20.55867	17 31 34.01	+19 48 20.8	17.0 T	402
C/1998 K5	1998 06 05.05267	18 03 37.21	+15 13 03.7	14.8 N	557	21P	1998 05 20.56076	17 31 33.94	+19 48 22.9		402
C/1998 K5	1998 06 05.05461	18 03 37.71	+15 13 16.2		118	21P	1998 05 21.72084	17 30 42.15	+20 09 25.2	16.6 T	867
C/1998 K5	1998 06 05.05535	18 03 38.02	+15 13 20.1	14.4 T	557	21P	1998 05 21.72778	17 30 41.73	+20 09 32.8	16.7 T	360
C/1998 K5	1998 06 05.05981	18 03 39.37	+15 13 47.5		557	21P	1998 05 21.72848	17 30 41.79	+20 09 33.3		867
C/1998 K5	1998 06 05.06160	18 03 39.91	+15 13 58.6		557						

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21P	1998 05 21.73194	17 30 41.53	+20 09 37.1		360
21P	1998 05 21.73439	17 30 41.50	+20 09 39.6		867
21P	1998 05 22.67318	17 29 58.12	+20 26 33.1		352
21P	1998 05 22.67596	17 29 58.01	+20 26 36.0		352
21P	1998 05 22.67874	17 29 57.87	+20 26 39.4		352
21P	1998 05 26.01800	17 27 11.25	+21 25 37.0		118
21P	1998 05 26.02124	17 27 11.08	+21 25 40.6		118
21P	1998 05 26.02732	17 27 10.75	+21 25 46.9	16.4 T	118
21P	1998 05 27.35884	17 25 59.15	+21 48 45.5	18.0 T	704
21P	1998 05 27.37830	17 25 58.07	+21 49 05.3		704
21P	1998 05 27.39780	17 25 57.23	+21 49 24.8	18.7 T	704
21P	1998 05 27.41728	17 25 55.68	+21 49 44.3	18.9 T	704
21P	1998 05 27.43673	17 25 54.77	+21 50 04.8	19.4 T	704
21P	1998 05 28.00686	17 25 23.35	+21 59 47.3		118
21P	1998 05 28.01366	17 25 22.96	+21 59 54.1	16.1 T	118
21P	1998 05 29.93800	17 23 32.74	+22 32 08.7		118
21P	1998 05 29.94595	17 23 32.26	+22 32 16.7	16.0 T	118
21P	1998 05 29.98378	17 23 30.04	+22 32 52.6		970
21P	1998 05 29.98615	17 23 29.91	+22 32 56.7		970
21P	1998 05 29.98772	17 23 29.78	+22 32 56.8		970
21P	1998 05 29.99009	17 23 29.68	+22 33 00.8		970
21P	1998 05 30.68837	17 22 48.06	+22 44 30.2	16.0 T	402
21P	1998 05 30.69114	17 22 47.88	+22 44 33.0		402
21P	1998 05 30.69392	17 22 47.72	+22 44 35.7		402
21P	1998 05 31.72604	17 21 45.06	+23 01 20.1	16.5 T	360
21P	1998 05 31.73038	17 21 44.78	+23 01 24.1		360
21P	1998 05 31.99501	17 21 28.62	+23 05 37.4		118
21P	1998 06 01.01119	17 21 27.58	+23 05 53.0	16.2 T	118
21P	1998 06 01.96959	17 20 27.79	+23 21 05.7	16.5 T	046
21P	1998 06 01.97160	17 20 27.66	+23 21 07.7		046
21P	1998 06 01.97362	17 20 27.53	+23 21 09.6		046
29P/Schwassmann-Wachmann 1					
29P	1998 05 15.87697	13 09 41.61	-18 50 24.2		118
29P	1998 05 15.88543	13 09 41.45	-18 50 22.7	16.2 T	118
29P	1998 05 19.56493	13 08 36.90	-18 40 40.3	13.9 T	360
29P	1998 05 19.56771	13 08 36.81	-18 40 39.8	17.1 N	360
29P	1998 05 21.56270	13 08 04.64	-18 35 29.5		426
29P	1998 05 21.57248	13 08 04.49	-18 35 27.7		426
29P	1998 05 21.58125	13 08 04.41	-18 35 29.0	14.0 T	360
29P	1998 05 21.58243	13 08 04.34	-18 35 26.7	15.8 T	426
29P	1998 05 21.58403	13 08 04.38	-18 35 28.4	17.2 N	360
29P	1998 05 26.57361	13 06 53.56	-18 23 05.9	14.5 T	360
29P	1998 05 26.57639	13 06 53.50	-18 23 05.2	17.2 N	360
29P	1998 05 28.88006	13 06 25.60	-18 17 39.2		118
29P	1998 05 28.88546	13 06 25.54	-18 17 38.6	14.1 T	118
29P	1998 06 01.88443	13 05 44.44	-18 08 40.3		046
29P	1998 06 01.88598	13 05 44.44	-18 08 39.9		046
29P	1998 06 01.88707	13 05 44.39	-18 08 39.8		046
43P/Wolf-Harrington					
43P	1998 05 22.47361	10 04 28.61	-09 46 30.7	14.9 T	360
43P	1998 05 22.47830	10 04 28.93	-09 46 30.0		360
43P	1998 05 26.15244	10 08 35.02	-09 40 14.9	17.1 T	691

43P	1998 05 26.15661	10 08 35.34	-09 40 14.5	21.3 N	691
43P	1998 05 26.16090	10 08 35.66	-09 40 14.0	17.2 T	691
43P	1998 05 26.16535	10 08 35.90	-09 40 13.7	17.3 T	691
43P	1998 05 26.16979	10 08 36.22	-09 40 13.3	17.3 T	691
62P/Tsuchinshan 1					
62P	1998 05 11.84424	06 57 06.61	+27 54 45.7		118
62P	1998 05 11.84936	06 57 07.67	+27 54 44.9	14.3 T	118
62P	1998 05 15.84365	07 11 07.09	+27 49 25.6		118
62P	1998 05 15.85007	07 11 08.44	+27 49 24.9	14.6 T	118
62P	1998 05 19.47222	07 23 47.44	+27 40 01.7	13.5 T	360
62P	1998 05 19.47465	07 23 47.94	+27 40 01.4		360
62P	1998 05 26.45719	07 47 59.03	+27 09 59.0	14.1 T	402
62P	1998 05 26.45823	07 47 59.25	+27 09 59.2		402
62P	1998 05 26.45927	07 47 59.45	+27 09 58.8		402
69P/Taylor					
69P	1998 03 02.58278	08 07 43.80	+36 54 50.2		352
69P	1998 03 02.58556	08 07 43.88	+36 54 50.8		352
69P	1998 03 02.58833	08 07 43.84	+36 54 51.9		352
69P	1998 04 08.89474	08 40 20.27	+36 44 16.0		965
69P	1998 04 08.90538	08 40 21.04	+36 44 12.4		965
69P	1998 04 08.96426	08 40 25.62	+36 43 56.4		965
69P	1998 04 21.79815	08 58 39.92	+35 37 09.5	15.7 T	610
69P	1998 04 21.80288	08 58 40.30	+35 37 07.8		610
69P	1998 04 21.80635	08 58 40.58	+35 37 06.5		610
69P	1998 04 21.81260	08 58 41.07	+35 37 04.2		610
69P	1998 04 27.46461	09 07 20.81	+35 00 24.1		867
69P	1998 04 27.47120	09 07 21.44	+35 00 21.8		867
69P	1998 05 10.84560	09 28 52.29	+33 18 48.9	15.8 T	605
69P	1998 05 10.86248	09 28 54.10	+33 18 39.3	15.8 T	605
69P	1998 05 10.87166	09 28 54.84	+33 18 36.8	15.7 T	605
69P	1998 05 11.92559	09 30 39.10	+33 09 49.6		118
69P	1998 05 11.93513	09 30 40.05	+33 09 44.7	15.8 T	118
69P	1998 05 19.50191	09 43 15.98	+32 03 51.2	14.6 T	360
69P	1998 05 19.50469	09 43 16.26	+32 03 49.2		360
69P	1998 05 29.88694	10 00 47.12	+30 25 50.2		6 118
69P	1998 05 29.89256	10 00 47.67	+30 25 46.9	15.3 T	6 118
69P	1998 06 02.84554	10 07 29.88	+29 46 33.7		118
69P	1998 06 02.85326	10 07 30.62	+29 46 29.1		118
88P/Howell					
88P	1998 05 04.56454	13 12 47.14	-03 37 24.2		900
88P	1998 05 04.58078	13 12 46.15	-03 37 21.5	15.3 T	900
88P	1998 05 11.96914	13 05 59.65	-03 22 01.1		118
88P	1998 05 11.97894	13 05 59.17	-03 22 00.3	16.2 T	118
88P	1998 05 16.18412	13 02 45.91	-03 18 13.0	18.7 T	704
88P	1998 05 16.20364	13 02 44.82	-03 18 12.1	18.5 T	704
88P	1998 05 16.22318	13 02 43.84	-03 18 11.2	18.5 T	704
88P	1998 05 16.24273	13 02 43.02	-03 18 11.3	18.1 T	704
88P	1998 05 16.26219	13 02 41.97	-03 18 10.7	18.0 T	704
88P	1998 05 19.57240	13 00 32.78	-03 18 01.0	15.1 T	360
88P	1998 05 19.57517	13 00 32.66	-03 18 00.9		360
88P	1998 05 21.55946	12 59 25.70	-03 19 00.8		426

88P	1998 05 21.56921	12 59 25.35	−03 19 01.2		426
88P	1998 05 21.57921	12 59 25.01	−03 19 01.8	15.7 N	426
88P	1998 05 22.51898	12 58 56.36	−03 20 02.1	14.5 T	402
88P	1998 05 22.52106	12 58 56.29	−03 20 02.5		402
88P	1998 05 22.52315	12 58 56.23	−03 20 02.7		402
88P	1998 05 27.17791	12 57 02.23	−03 27 31.5	16.1 T	682
88P	1998 05 27.20019	12 57 01.75	−03 27 34.9	16.5 T	682
88P	1998 05 27.23015	12 57 01.09	−03 27 38.3	16.5 T	682
88P	1998 05 28.16310	12 56 44.57	−03 29 47.5	16.0 T	699
88P	1998 05 28.17825	12 56 44.22	−03 29 50.3		699
88P	1998 05 28.19813	12 56 43.69	−03 29 52.8		699
88P	1998 05 28.93336	12 56 31.65	−03 31 44.5		4 118
88P	1998 05 28.93977	12 56 31.53	−03 31 45.3	14.2 T	4 118
88P	1998 06 01.87876	12 55 49.92	−03 43 56.9		046
88P	1998 06 01.88005	12 55 49.89	−03 43 57.3		046
88P	1998 06 01.88222	12 55 49.86	−03 43 57.5		046

91P/Russell 3

91P	1998 05 21.75697	20 41 59.24	−06 09 37.1	18.5 T	867
91P	1998 05 21.76391	20 41 59.33	−06 09 33.8		867
91P	1998 05 24.41133	20 42 44.23	−05 47 44.0	21.7 N	691
91P	1998 05 24.46617	20 42 45.00	−05 47 17.0	19.5 T	691
91P	1998 05 26.03905	20 43 07.20	−05 34 33.9		118
91P	1998 05 26.04256	20 43 07.26	−05 34 32.0	18.5 T	118
91P	1998 05 27.73197	20 43 27.10	−05 21 02.1	18.6 T	867
91P	1998 05 27.73891	20 43 27.14	−05 20 59.5		867
91P	1998 05 27.74516	20 43 27.21	−05 20 55.8		867
91P	1998 05 29.02621	20 43 39.49	−05 10 51.4	18.0 T	4 118

98P/Takamizawa

98P	1998 03 02.74900	12 07 46.25	+10 48 13.4	20.6 T	867
98P	1998 03 02.76116	12 07 45.68	+10 48 21.1		867
98P	1998 03 02.78650	12 07 44.80	+10 48 33.5		867
98P	1998 05 16.89566	11 25 15.98	+16 03 27.8		118
98P	1998 05 16.91659	11 25 16.20	+16 03 22.8	18.2 T	118
98P	1998 05 19.51046	11 25 52.20	+15 53 03.0	19.6 T	867
98P	1998 05 19.52366	11 25 52.30	+15 52 59.1		867
98P	1998 05 19.53616	11 25 52.54	+15 52 55.1		867
98P	1998 05 25.89428	11 28 08.66	+15 21 57.2		7 118
98P	1998 05 25.90015	11 28 08.74	+15 21 55.3	18.7 T	7 118

103P/Hartley 2

103P	1998 05 04.14744	07 22 15.53	+09 28 44.2	16.9 T	696
103P	1998 05 04.14922	07 22 15.79	+09 28 44.1	16.8 T	696
103P	1998 05 04.15101	07 22 16.03	+09 28 43.9	16.9 T	696
103P	1998 05 19.47847	07 55 55.71	+08 57 25.2	15.3 T	360
103P	1998 05 19.48090	07 55 56.04	+08 57 25.1		360

110P/Hartley 3

110P	1998 05 30.43191	20 25 31.69	−17 43 17.4		568
110P	1998 05 30.45522	20 25 31.42	−17 43 16.5	22.7 T	568
110P	1998 05 30.51798	20 25 30.67	−17 43 13.3		568
110P	1998 05 31.46866	20 25 19.30	−17 42 27.2		568
110P	1998 05 31.51817	20 25 18.64	−17 42 25.4		568

118P/Shoemaker-Levy 4

118P	1998 05 26.17586	13 55 18.05	−01 11 14.0	20.5 T	691
118P	1998 05 26.17978	13 55 17.94	−01 11 12.3	20.1 T	691
118P	1998 05 26.18365	13 55 17.86	−01 11 13.1	20.1 T	691

121P/Shoemaker-Holt 2

121P	1998 03 29.03532	15 19 30.88	+02 05 25.4	19.0 T	504
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129P/Shoemaker-Levy 3

129P	1998 03 02.60123	07 18 14.28	+22 07 19.0		352
129P	1998 03 02.60400	07 18 14.32	+22 07 18.8		352
129P	1998 05 22.48403	08 26 23.17	+17 38 05.1	17.2 T	360
129P	1998 05 22.48819	08 26 23.50	+17 38 04.3		360

132P/Helin-Roman-Alu 2

132P	1998 05 03.13863	05 57 54.60	+19 00 31.2	20.7 T	F 696
132P	1998 05 03.14236	05 57 55.05	+19 00 31.4	21.1 T	F 696

134P/Kowal-Vávrová

134P	1998 05 19.51059	10 09 21.55	+08 46 21.4	18.0 T	360
134P	1998 05 19.51510	10 09 21.75	+08 46 20.6		360
134P	1998 05 19.52396	10 09 22.14	+08 46 19.5		360

136P/Mueller 3

136P	1998 05 24.43002	21 31 51.97	−11 59 36.1	20.6 N	691
136P	1998 05 24.44144	21 31 52.30	−11 59 34.0	21.4 N	691
136P	1998 05 24.45263	21 31 52.66	−11 59 33.5	21.1 N	691
136P	1998 05 26.44283	21 32 53.34	−11 56 56.4	21.2 N	691
136P	1998 05 26.45382	21 32 53.76	−11 56 55.5	21.2 N	691
136P	1998 05 26.47267	21 32 54.27	−11 56 54.6	21.0 N	691

137P/Shoemaker-Levy 2

137P	1998 05 19.35584	16 17 28.53	−20 20 43.7	21.0 N	696
137P	1998 05 19.35971	16 17 28.37	−20 20 42.8	21.0 N	696
137P	1998 05 19.36359	16 17 28.21	−20 20 42.7	21.0 N	696
137P	1998 05 20.32096	16 16 50.24	−20 18 41.0	21.0 N	696
137P	1998 05 20.32483	16 16 50.13	−20 18 40.4	21.3 N	696
137P	1998 05 20.32869	16 16 49.98	−20 18 39.8	21.5 N	696

Note 1: very faint image. 2: poor distribution of reference stars. 3: poor image.
4: bad seeing. 5: involved with star. 6: measurement difficult. 7: right
ascension uncertain.

OBSERVATIONS OF MINOR PLANETS

The summary lists, for each observatory code, the designation of each object observed (an asterisk signifying a new discovery), with three numbers indicating the number of observations, the number of different nights on which the object was observed and the arc (in days) covered by the observations; at the end of each observatory listing there is a count of the total number of observations, of the number of objects and of the number of discoveries followed by an asterisk, together with the total range of dates covered by the observations.

012 Uccle

T. Pauwels, Koninklijke Sterrenwacht van België, Ringlaan 3, B-1180 Brussels,
Belgium [Thierry.Pauwels@oma.be]
Observers E. Elst, T. Pauwels

Measurer T. Pauwels

0.85-m $f/2.5$ Schmidt + CCD

GSC 1.2

1998 EA₉, 2, 1, 0; 1998 HS₂₄, 2, 1, 0; (5136), 2, 1, 0; [6, 3, 0*, 1998/05/04]

033 Tautenburg

F. Börngen, Thüringer Landessternwarte, Sternwarte 5, D-07778 Tautenburg,

Germany [boerg@tls.tautenburg.de]

1.3-m Schmidt telescope

PPM

(327), 3, 2, 1; [3, 1, 0*, 1995/10/23–1995/10/24]

046 Kleť

J. Tichá, Hvězdárna Kleť, Zátkovo nábřeží 4, CZ-37001 České Budějovice, Czech

Republic [klet@klet.cz]

Observers J. Tichá, M. Tichý, Z. Moravec

Measurer M. Tichý

0.57-m $f/5.2$ reflector + CCD

GSC, USNO-SA1.0

1980 DN, 5, 2, 27; 1985 UT, 6, 2, 1; 1988 VN₅, 6, 2, 8; 1989 BE₁, 7, 2, 4; 1992 PJ, 3, 1, 0; 1995 UP₂, 7, 2, 8; 1996 UN, 6, 2, 1; 1996 VM₅, 6, 2, 2; 1996 XM₂, 6, 2, 2; 1996 XT₁₄, 8, 2, 4; 1996 XW₁₈, 12, 4, 21; 1997 BG, 6, 2, 1; 1997 CV₁, 6, 2, 8; 1997 CN₁₃, 6, 2, 1; 1997 EJ₆, 6, 2, 8; 1998 DV₉, 6, 2, 17; 1998 EC₃, 11, 4, 15; 1998 EV₈, 6, 2, 25; 1998 FX₂, 15, 5, 30; 1998 FM₅, 14, 4, 21; 1998 FF₇₈, 6, 2, 1; 1998 GN₁, 11, 3, 7; 1998 GO₁, 9, 3, 20; 1998 HK₁, 4, 1, 0; 1998 HC₃, 7, 2, 7; 1998 HD₃, 13, 4, 20; 1998 HE₃, 17, 3, 3; 1998 HL₃, 5, 1, 0; 1998 HM₃, 6, 2, 1; 1998 HO₄, 8, 2, 1; 1998 HZ₇, 27, 7, 19; 1998 HT₃₁, 8, 1, 0; 1998 HJ₄₁, 11, 3, 26; 1998 HM₄₉ *, 9, 2, 7; 1998 HN₄₉ *, 15, 5, 34; 1998 HF₉₄, 5, 1, 0; 1998 HJ₉₄, 10, 2, 4; 1998 HU₁₀₈, 14, 4, 14; 1998 HD₁₂₆, 7, 2, 4; 1998 KH, 4, 1, 0; 1998 KU₂, 16, 5, 9; 1998 KV₂, 4, 1, 0; 1998 KD₃, 39, 8, 8; 1998 KE₃, 17, 5, 10; 1998 KF₃, 11, 3, 7; 1998 KL₃ *, 8, 2, 7; 1998 KM₃, 7, 2, 1; 1998 KN₃, 15, 3, 5; 1998 KO₃, 9, 2, 1; 1998 KC₅ *, 23, 5, 14; 1998 KF₆, 12, 2, 1; 1998 KH₉, 28, 8, 8; 1998 KJ₉, 39, 8, 8; 1998 KK₉ *, 23, 6, 7; 1998 KH₁₇, 24, 7, 7; 1998 KJ₁₇, 19, 4, 7; 1998 KK₁₇, 23, 6, 5; 1998 KY₂₆, 48, 7, 6; 1998 KM₃₂, 3, 1, 0; 1998 KK₅₆, 12, 3, 2; 1998 LD, 22, 4, 3; 1998 LE, 16, 3, 2; (887), 3, 1, 0; (1862), 6, 2, 3; (1866), 6, 2, 1; (2060), 3, 1, 0; (3361), 3, 1, 0; (3800), 3, 1, 0; (4824), 3, 1, 0; (5066), 3, 1, 0; (5145), 3, 1, 0; (7358), 4, 2, 1; (7889), 3, 1, 0; [802, 73, 5*, 1998/03/31–1998/06/06]

072 Scheuren Observatory

N. Ehring, Stationenweg 54, D-53332 Bornheim, Germany [norbert.ehring@t-online.de]

0.19-m $f/4$ FFC + CCD

GSC

1990 XB, 2, 1, 0; [2, 1, 0*, 1995/11/12]

095 Crimean Astrophysical Observatory

G. R. Kastel', Institute for Theoretical Astronomy, Naberezhnaya Kutuzova 10, St. Petersburg 191187, Russia [kastel@ita.spb.su]

N. S. Chernykh, Crimean Astrophysical Observatory, Nauchnyj, UA-334413, Ukraine [nik@crao.crimea.ua]

Observer L. V. Zhuravleva

0.4-m $f/4$ double astrophotograph

PPM

1992 SU₁, 4, 2, 26; [4, 1, 0*, 1992/09/03–1992/09/29]

097 Wise Observatory, Mitzpeh Ramon

E. O. Ofek, Wise Observatory, Tel-Aviv University, IL-69978 Tel-Aviv, Israel

[eran@wise1.tau.ac.il]

Observers O. Kovo, E. O. Ofek

Measurer E. O. Ofek

1.0-m $f/7$ reflector + CCD

USNO-A1.0

1997 NU, 7, 3, 8; [7, 1, 0*, 1998/05/23–1998/05/31]

104 San Marcello Pistoiese

L. Tesi, Osservatorio di Pian dei Termini, Viale Panoramico 45, I-51028 San Marcello Pistoiese (PT), Italy [iau@arcetri.astro.it]

Observers L. Tesi, A. Caronia, M. Tombelli, A. Boattini, S. Casulli, G. Forti, V. S. Casulli

Measurers A. Boattini, G. Forti, L. Tesi, M. Tombelli

0.40-m $f/5$ reflector + CCD

GSC

1982 JM₁, 4, 1, 0; 1982 QY₁, 3, 1, 0; 1990 QR₂, 3, 1, 0; 1990 RK₇, 4, 1, 0; 1991 LH₁, 3, 1, 0; 1992 WJ₂, 3, 1, 0; 1994 EL₃, 9, 2, 13; 1995 OD, 18, 5, 16; 1995 WL, 2, 1, 0; 1996 XG₃₂, 4, 1, 0; 1997 BC₉, 3, 1, 0; 1997 BD₉, 6, 2, 4; 1997 BF₉, 6, 2, 13; 1997 BG₉, 9, 3, 14; 1997 CA₁₇, 4, 1, 0; 1997 FU, 3, 1, 0; 1998 HT₃₁, 9, 1, 0; 1998 HJ₄₁, 7, 1, 0; 1998 HU₁₀₈, 3, 1, 0; 1998 JW₃ *, 17, 5, 20; 1998 KH, 3, 1, 0; 1998 KM *, 14, 4, 6; 1998 KV₂, 3, 1, 0; 1998 KD₃, 6, 1, 0; 1998 KE₃, 11, 3, 2; 1998 KF₃, 3, 1, 0; 1998 KO₃, 3, 1, 0; (2322), 4, 1, 0; (4174), 3, 1, 0; [170, 29, 2*, 1998/05/05–1998/05/26]

106 Crni vrh

H. Mikuž, Kersnikova 11, SI-61000 Ljubljana, Slovenia [herman.mikuz@uni-lj.si]

Observers H. Mikuž, J. Skvarc

0.36-m $f/6.7$ Schmidt-Cassegrain + CCD

USNO SA-1, GSC

1998 KN₃, 4, 1, 0; 1998 KO₃, 3, 1, 0; [7, 2, 0*, 1998/05/26]

108 Montelupo

M. Tombelli, Via Bozzeto 26, I-50056 Montelupo (Fi), Italy

[iau@arcetri.astro.it]

Observers M. Tombelli, A. Boattini, G. Forti

0.30-m $f/5.7$ Schmidt-Cassegrain + CCD

GSC

1994 EL₃, 3, 1, 0; 1996 XG₃₂, 4, 2, 11; 1998 HU₁₀₈, 2, 1, 0; 1998 KH₁₇, 2, 1, 0; 1998 KK₁₇, 3, 1, 0; [14, 5, 0*, 1998/05/19–1998/05/30]

113 Volkssternwarte Drebach, Schönbrunn

G. Lehmann, Volkssternwarte Drebach, D-09430 Drebach, Germany

[lehmann@stw-drebach.zp.sn.schule.de]

Observers G. Lehmann, J. Kandler

0.50-m $f/4$ reflector + CCD, 0.18-m $f/9.0$ refractor + CCD

USNO-A1.0

1988 PO₂, 2, 1, 0; 1989 CO₅, 6, 3, 19; 1990 TO₃, 5, 2, 17; 1991 GN₁₀, 2, 1, 0; 1991 TF₇, 6, 3, 19; 1995 SQ₅₄, 2, 1, 0; (8661), 7, 3, 19; [30, 7, 0*, 1998/05/13–1998/06/01]

116 Giesing

H. Beuchat, European Patent Office, Erhardstrasse 27, D-80331 Munich, Germany

[100341.75@compuserve.com]

Observers J.-L. Dighaye, P. Sala

Measurers P. Sala, H. Beuchat

0.20-m reflector + CCD

(3218), 5, 2, 1; [5, 1, 0*, 1998/03/10]

118 Modra

A. Galád, AGO MFF UK, P.O. Box 4, SK-90001 Modra, Slovakia

[ago_modra@center.fmph.uniba.sk]

Observers P. Kolény, L. Kornoš, A. Galád, A. Pravda

0.6-m $f/5.5$ reflector + CCD
GSC, USNO-SA1.0

1996 AD₂, 5, 2, 20; 1998 EC₃, 6, 3, 36; 1998 FX₂, 8, 4, 31; 1998 FP₅, 4, 2, 18; 1998 FQ₅, 7, 3, 30; 1998 HK₁, 1, 1, 0; 1998 HE₃, 4, 1, 0; 1998 HF₃, 10, 4, 20; 1998 HG₃, 7, 3, 21; 1998 HH₃, 7, 3, 13; 1998 HL₃, 2, 1, 0; 1998 HM₃, 7, 3, 29; 1998 HT₃₁, 3, 1, 0; 1998 HJ₄₁, 10, 4, 17; 1998 HU₁₀₈, 2, 1, 0; 1998 JD₄ *, 16, 6, 16; 1998 KH₅, 2, 5; 1998 KU₂, 2, 1, 0; 1998 KV₂, 3, 1, 0; 1998 KD₃, 10, 4, 6; 1998 KE₃, 2, 1, 0; 1998 KF₃, 5, 2, 3; 1998 KN₃, 3, 1, 0; 1998 KO₃, 4, 1, 0; 1998 KH₉, 4, 2, 3; 1998 KJ₉, 15, 5, 7; 1998 KH₁₇, 4, 2, 1; 1998 KK₁₇, 6, 3, 6; 1998 KY₂₆, 10, 3, 5; 1998 KK₅₆, 4, 2, 1; 1998 LD₅, 2, 2; 1998 LE₆, 2, 1; (1862), 2, 1, 0; (1951), 2, 1, 0; (2102), 2, 1, 0; (3256), 2, 1, 0; (3752), 3, 1, 0; (3800), 2, 1, 0; (4495), 2, 1, 0; (4780), 2, 1, 0; (5672), 2, 1, 0; (5751), 2, 1, 0; (5949), 2, 1, 0; (6683), 2, 1, 0; (6708), 2, 1, 0; (7343), 2, 1, 0; (7888), 2, 1, 0; (7889), 4, 2, 9; (8373), 6, 3, 42; (8709), 2, 1, 0; [230, 50, 1*, 1998/04/26–1998/06/08]

120 Višnjan

K. Korlević, Istarska 5, HR-51463 Višnjan, Croatia [kkorlevic@x400.srce.hr]

Observers K. Korlević, B. Andric

0.41-m $f/4.3$ reflector + CCD

GSC, USNO-SA1.0

1998 HT₄, 4, 1, 0; 1998 HB₉₅, 2, 1, 0; 1998 HZ₉₆, 3, 1, 0; 1998 JK₄ *, 6, 2, 2; 1998 KE₃, 4, 1, 0; 2319 T-2, 6, 2, 2; (743), 3, 1, 0; (2901), 2, 1, 0; (3948), 4, 1, 0; (4330), 3, 1, 0; (5161), 3, 1, 0; [40, 11, 1*, 1998/04/25–1998/05/26]

121 Kharkov University, Chuguevskaya Station

Yu. N. Krugly, Astronomical Observatory of the Kharkov State University,

Sumskaya Str. 35, UA-310022 Kharkov, Ukraine

[krugly@astron.kharkov.ua]

0.70-m $f/4$ reflector + CCD

GSC

(1866), 2, 1, 0; [2, 1, 0*, 1998/05/22]

127 Bornheim

N. Ehring, Stationenweg 54, D-53332 Bornheim, Germany [norbert.ehring@t-online.de]

0.19-m $f/4$ FFC + CCD

GSC

1980 UL, 2, 1, 0; 1988 MF, 4, 2, 3; 1990 QR, 4, 2, 1; 1993 BA, 4, 2, 1; 1998 FX₂, 4, 2, 1; (780), 4, 2, 1; [22, 6, 0*, 1998/05/18–1998/05/22]

132 Bedoin

P. Antonini, 47 rue Guillaume Puy, F-84000 Avignon, France

[Pierre.Antonini@wanadoo.fr]

0.16-m $f/3.3$ reflector + CCD

GSC

1997 FC, 2, 1, 0; 1998 HD₈, 2, 1, 0; 1998 HT₉₅, 3, 1, 0; (1384), 2, 1, 0; (1449), 3, 1, 0; (3913), 3, 1, 0; [15, 6, 0*, 1998/05/05–1998/05/21]

133 Les Tardieux

M. Boeuf, Les Tardieux, St Julien, F-13500 Martigues, France

[Michel.Boeuf@wanadoo.fr]

0.20-m $f/3.5$ reflector + CCD

GSC

1998 HV₆, 5, 2, 3; 1998 HE₈, 3, 1, 0; [8, 2, 0*, 1998/05/20–1998/05/23]

138 Village-Neuf

C. Demeautis, 9 rue de Huningue, F-68300 Saint-Louis, France

[Sky.walker@wanadoo.fr]

Observers C. Demeautis, D. Matter

Measurer C. Demeautis

0.20-m $f/10$ Schmidt-Cassegrain + focal reducer + CCD

GSC

1995 QG₂, 3, 1, 0; (276), 3, 1, 0; (1606), 3, 1, 0; (1784), 3, 1, 0; [12, 4, 0*, 1998/05/07]

143 Gnosca

S. Sposetti, CH-6525 Gnosca, Switzerland [spo@di.al.eunet.ch]

0.20-m $f/6.3$ reflector + CCD, 0.20-m $f/7.1$ reflector + CCD

GSC, USNO-SA1.0

1994 EL₃, 3, 1, 0; 1996 XG₃₂, 3, 1, 0; 1998 HU₁₀₈, 7, 2, 3; (6), 3, 1, 0; (1365), 3, 1, 0; (1384), 3, 1, 0; (1449), 3, 1, 0; (3687), 4, 1, 0; (3875), 3, 1, 0; (3913), 3, 1, 0; (5066), 5, 1, 0; [40, 11, 0*, 1998/05/15–1998/06/05]

147 Osservatorio Astronomico di Suno

G. Bianchi, Osservatorio G. Galilei, loc. Mottozifulone, I-28019 Suno, Italy

[apan@pn.itnet.it]

Observers G. Bianchi, C. Demarchi, S. Minuto, V. Sacco

Measurer M. Carpino

0.40-m $f/4.1$ reflector + CCD

USNO-A1.0

(1521), 2, 1, 0; (3800), 9, 4, 25; (4495), 4, 1, 0; (4582), 4, 2, 14; (4780), 2, 1, 0; (5956), 2, 1, 0; (6493), 1, 1, 0; [24, 7, 0*, 1998/03/13–1998/05/02]

292 Burlington

T. Handley, 13 Linden Road, Burlington, NJ 08016, U.S.A.

0.30-m $f/3.0$ Schmidt-Cassegrain + focal reducer + CCD

GSC

1992 YS, 3, 1, 0; 1998 FJ₇₀, 3, 1, 0; 1998 KW₅₃, 3, 1, 0; [9, 3, 0*, 1998/04/29–1998/05/24]

323 Perth

J. Biggs, Perth Observatory, Bickley, WA 6076, Australia

[rbiggsgjd@cc.curtin.edu.au]

Observers G. Lowe, T. Smith

0.3-m astrophotograph

(541), 1, 1, 0; (845), 3, 3, 36; (1036), 1, 1, 0; (2204), 6, 4, 34; (6500), 3, 3, 32; (7482), 1, 1, 0; [15, 6, 0*, 1996/12/05–1997/03/04]

327 Peking Observatory, Xinglong Station

J. Zhu, Peking Astronomical Observatory, Chinese Academy of Sciences,

Zhongguancun, Peking 100101, Peoples Republic of China

[zj@bac.pku.edu.cn]

Observers B. Zhao, J. Zhu, Z. Zheng, R. Chen, Z. Y. Zheng, H. T. Zhang,

Z. J. Jiang, L. C. Deng, X. Zhou, S. J. Xue, X. Y. Li, X. M. Teng, Y. J. Chen

Measurers Y. J. Chen, X. M. Teng, X. Y. Li

0.60-m Schmidt + CCD

1982 UX₅, 6, 2, 12; 1987 BR₁, 8, 2, 1; 1991 ED₂, 3, 1, 0; 1991 GJ₈, 4, 1, 0; 1991 VC₆, 3, 1, 0; 1993 BK₂, 6, 2, 10; 1995 SG₅, 3, 1, 0; 1995 VU₁₈, 6, 2, 4; 1995 WO₄₂, 3, 1, 0; 1995 XB₂, 7, 2, 1; 1995 XP₂, 6, 2, 3; 1996 CC, 14, 4, 89; 1996 EU₂, 7, 2, 11; 1996 OR₁, 22, 6, 73; 1996 RG₁, 16, 5, 71; 1996 RE₄, 13, 4, 101; 1996 SG₄, 3, 1, 0; 1996 SJ₄, 3, 1, 0; 1996 SS₆, 10, 3, 88; 1996 TB₆, 21, 7, 96; 1996 TU₁₃, 14, 4, 47; 1996 UF₄, 6, 2, 5; 1996 XT₁, 3, 1, 0; 1996 XY₅, 3, 1, 0; 1996 YV₁, 8, 2, 1; 1996 YD₂, 3, 1, 0; 1996 YH₂, 10, 3, 24; 1996 YH₃, 7, 2, 31; 1997 AM₂₂, 3, 1, 0; 1997 BB₁, 6, 2, 57; 1997 CW₂₇, 6, 2, 3; 1997 CM₂₈, 6, 2, 6; 1997 EG₄₆, 8, 3, 83; 1997 FN, 6, 2, 4; 1997 FO, 8, 3, 83; 1997 GQ₂₇, 6, 2, 3; 1997 SW₃₃, 3, 1, 0; 1997 SX₃₃, 3, 1, 0; 1997 YN₇, 3, 1, 0; 1997 YF₁₁, 3, 1, 0; 1998 BO₁, 3, 1, 0; 1998 BT₁, 3, 1, 0; 1998 DL₈, 2, 1, 0; 1998 DP₉, 7, 2, 4; 1998 DJ₁₀, 3, 1, 0; 1998 DQ₁₀, 3, 1, 0; 1998 DQ₃₂, 3, 1, 0; 1998 EF₂, 3, 1, 0; 1998 ES₃, 3, 1, 0; 1998 EJ₈, 3, 1, 0; 1998 EB₉, 3, 1, 0; 1998 EG₉, 3, 1, 0; 1998 EE₁₀, 3, 1, 0; 1998 EZ₁₂, 3, 1, 0; 1998 EY₁₃, 3, 1, 0; 1998 FA₃, 3, 1, 0; 1998 FZ₈, 4, 1, 0; 1998 FA₁₂, 3, 1, 0; 1998 FN₁₂, 3, 1, 0; 1998 FT₁₃, 10, 3, 10; 1998 FJ₃₁, 3, 1, 0; 1998 FK₃₁, 3, 1, 0; 1998 FA₃₃, 9, 3, 6; 1998 FD₃₃, 3, 1, 0; 1998 FT₃₉, 9, 3, 8; 1998 FA₅₁, 3, 1, 0; 1998 FA₅₉, 3, 1, 0; 1998 FR₆₄, 3, 1, 0; 1998 FP₇₀, 3, 1, 0; 1998 FK₈₀, 3, 1, 0; 1998 FH₈₂, 10, 3, 10; 1998 FP₉₃, 6, 2, 4; 1998 FL₁₀₅, 3, 1, 0; 1998 FM₁₂₆, 3, 1, 0;

1998 FB₁₂₇, 7, 2, 5; 1998 FG₁₃₄ *, 6, 2, 2; 1998 FL₁₃₄, 3, 1, 0; 1998 FM₁₃₄, 6, 1, 0; 1998 FR₁₃₄, 3, 1, 0; 1998 FS₁₃₄, 4, 1, 0; 1998 FT₁₃₄, 3, 1, 0; 1998 FH₁₃₅, 3, 1, 0; 1998 FJ₁₃₅, 3, 1, 0; 1998 FK₁₃₅, 6, 1, 0; 1998 FL₁₃₅, 3, 1, 0; 1998 GX₈, 3, 1, 0; 1998 HB₃₀, 4, 1, 0; 1998 HL₃₀, 4, 1, 0; 1998 HL₇₉, 6, 2, 3; 1998 HG₉₇, 6, 2, 2; 1998 HT₉₈, 3, 1, 0; 1998 HU₉₈, 3, 1, 0; 1998 HV₉₈, 3, 1, 0; 1998 HJ₁₀₀, 7, 2, 3; 1998 HB₁₀₁, 9, 3, 26; 1998 HJ₁₃₂, 6, 2, 2; 1998 HQ₁₃₂, 3, 1, 0; 1998 JQ₁, 3, 1, 0; 1998 KQ₂, 7, 2, 1; 1998 KB₄, 6, 2, 3; 1998 KO₉ *, 7, 2, 8; 1998 KP₉ *, 11, 3, 10; 1998 KS₉ *, 7, 2, 4; 1998 KT₉ *, 8, 2, 1; 1998 KU₉ *, 7, 2, 1; 1998 KV₉ *, 7, 2, 1; 1998 KW₉ *, 10, 3, 11; 1998 KX₉ *, 11, 2, 1; 1998 KY₉ *, 11, 2, 1; 1998 KZ₉ *, 8, 2, 1; 1998 KA₁₀ *, 8, 2, 1; 1998 KB₁₀ *, 6, 2, 3; 1998 KC₁₀ *, 6, 2, 3; 1998 KD₁₀ *, 6, 2, 2; 1998 KX₂₆ *, 6, 2, 1; 1998 KY₂₆, 3, 1, 0; 1998 KJ₄₂ *, 8, 2, 1; 1998 KC₅₈ *, 10, 2, 1; 1998 KD₅₈ *, 14, 3, 7; 1998 KE₅₈ *, 13, 2, 1; 1998 KF₅₈ *, 10, 2, 5; 3286 T-1, 3, 1, 0; 3770 T-1, 3, 1, 0; (366), 3, 1, 0; (926), 6, 2, 2; (935), 3, 1, 0; (2030), 3, 1, 0; (3462), 3, 1, 0; (3651), 11, 2, 2; (3714), 8, 2, 1; (3866), 3, 1, 0; (5699), 7, 2, 5; (7168), 3, 1, 0; (7406), 3, 1, 0; (8228), 3, 1, 0; (8523), 3, 1, 0; (8584), 4, 1, 0; [780, 137, 21*, 1995/09/23–1998/06/05]

358 Nanyou

T. Okuni, 158-28, Mitsuma-dori, Nanyou, Yamagata-Ken, 999-22 Japan

0.28-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC

1998 HT₄₂, 5, 2, 15; 1998 HO₅₂ *, 7, 3, 4; 1998 HP₅₂ *, 8, 3, 4; 1998 HQ₅₂ *, 9, 3, 4; 1998 KU *, 6, 3, 2; 1998 KM₄₀, 6, 2, 3; [41, 6, 4*, 1998/04/30–1998/05/30]

360 Kuma Kogen Astronomical Observatory

A. Nakamura, Shimo-Hatanokawa, Kuma, Kamiukena-Gun, Ehime-Ken, 791-12

Japan [a-nakamu@mx2.nisiq.net]

0.60-m $f/6.0$ Ritchey-Chrétien + CCD

GSC, USNO-SA1.0

1969 TT₁, 3, 1, 0; 1987 SE₃, 3, 1, 0; 1993 BW₂, 3, 1, 0; 1994 PN₂₁, 3, 1, 0; 1994 VY, 5, 2, 3; 1994 VR₆, 2, 1, 0; 1995 SP₂, 4, 2, 3; 1998 FM₅, 3, 1, 0; 1998 FR₁₁, 3, 1, 0; 1998 HK₁, 6, 2, 7; 1998 HL₃, 3, 1, 0; 1998 HM₃, 6, 2, 8; 1998 HJ₄₁, 3, 1, 0; 1998 KH, 6, 2, 5; 1998 KN *, 8, 3, 6; 1998 KV *, 9, 3, 6; 1998 KU₂, 3, 1, 0; 1998 KD₃, 3, 1, 0; 1998 KE₃, 3, 1, 0; 1998 KF₃, 3, 1, 0; 1998 KB₅ *, 10, 4, 9; (1866), 2, 1, 0; (2961), 2, 1, 0; (6673), 2, 1, 0; [98, 24, 3*, 1998/05/19–1998/06/03]

367 Yatsuka

H. Abe, 461-2, Futago, Yatsuka-Cho, Shimane-Ken, 690-14 Japan

0.26-m $f/6.0$ reflector + CCD

GSC

1995 UJ₄, 2, 1, 0; 1995 WL₇, 2, 1, 0; 1995 XE₁, 2, 1, 0; 1995 YA, 2, 1, 0; 1996 VT₄, 2, 1, 0; 1996 WQ₁, 2, 1, 0; 1997 AC₄, 2, 1, 0; 1997 CE₁, 2, 1, 0; [16, 8, 0*, 1998/05/26]

385 Nihondaira Observatory

T. Urata, 1-8, Dobayashi 1 Chome, Shimizu, Shizuoka-Ken 424-0851, Japan

[urata@sannet.ne.jp]

0.31-m $f/4.7$ reflector + CCD

GSC, USNO-A1.0

1992 UX, 2, 1, 0; 1994 OC, 2, 1, 0; 1995 QS, 2, 1, 0; 1996 RG₅, 4, 2, 31; 1998 FO₁₁, 2, 1, 0; 1998 GZ, 2, 1, 0; 1998 GA₁, 2, 1, 0; [16, 7, 0*, 1998/04/20–1998/05/21]

399 Kushiro

H. Kaneda, Taiyo MS 2-H, 2-15, Kawazoe 8 Jo 2 Chime, Minami-Ku, Sapporo, 005 Japan

Observer S. Ueda

Measurer H. Kaneda

0.25-m $f/3.4$ hyperboloid astrocamera

GSC

1982 UX₅, 2, 1, 0; [2, 1, 0*, 1993/02/21]

402 Dynic Astronomical Observatory

A. Sugie, Dynic Astronomical Observatory, Taga 283-1, Taga, Inukami-Gun, Shiga-Ken 522-03, Japan [sugiea@mx.biwa.or.jp]

0.60-m $f/5.0$ reflector + CCD

GSC

1995 TG, 3, 1, 0; 1996 VB₅, 3, 1, 0; 1997 CU₂₆, 2, 1, 0; 1998 EC₃, 3, 1, 0; 1998 FM₅, 6, 2, 2; 1998 HK₁, 9, 3, 18; 1998 HL₁, 3, 1, 0; 1998 HE₃, 3, 1, 0; 1998 HL₃, 3, 1, 0; 1998 HM₃, 3, 1, 0; 1998 HZ₇, 6, 2, 17; 1998 HT₃₁, 4, 1, 0; 1998 HJ₄₁, 3, 1, 0; 1998 HU₁₀₈, 12, 4, 8; 1998 KH, 12, 4, 3; 1998 KN, 6, 2, 1; 1998 KU₂, 3, 1, 0; 1998 KV₂, 3, 1, 0; 1998 KD₃, 6, 2, 4; 1998 KE₃, 3, 1, 0; 1998 KF₃, 3, 1, 0; 1998 KM₃, 3, 1, 0; 1998 KN₃, 3, 1, 0; 1998 KO₃, 10, 3, 4; 1998 KF₆, 9, 2, 1; 1998 KH₉, 3, 1, 0; 1998 KJ₉, 3, 1, 0; 1998 KH₁₇, 3, 1, 0; 1998 KJ₁₇, 3, 1, 0; 1998 KK₁₇, 3, 1, 0; [139, 30, 0*, 1998/05/04–1998/05/30]

411 Oizumi

T. Kobayashi, 8-6, Nishi Koizumi 1 Chome, Oizumi, Ora-Gun, Gunma-Ken, 370-05 Japan [kobataka@oaa.iiijnet.or.jp]

0.25-m $f/4.4$ reflector + CCD, 0.41-m $f/4.3$ reflector + CCD

GSC

1996 XD₃₁, 3, 2, 2; [3, 1, 0*, 1997/01/13–1997/01/15]

422 Loomberah

G. J. Garradd, P.O. Box 157, Tamworth, NSW 2340, Australia [gjjg@mpx.com.au]

0.25-m $f/4.1$ reflector + CCD, 0.45-m $f/5.4$ reflector + CCD

ACT, GSC

1994 VR₆, 3, 1, 0; 1998 HU₁₀₈, 3, 1, 0; 1998 KU₂, 14, 5, 6; 1998 KD₃, 28, 6, 5; 1998 KE₃, 18, 6, 6; 1998 KM₃, 1, 1, 0; 1998 KN₃, 3, 1, 0; 1998 KO₃, 10, 3, 2; 1998 KH₉, 10, 3, 2; 1998 KJ₉, 12, 3, 2; 1998 KH₁₇, 6, 2, 1; 1998 KK₁₇, 9, 3, 2; 1998 KY₂₆, 15, 3, 5; 1998 KK₅₆, 3, 1, 0; 1998 LD, 3, 2, 1; (433), 6, 1, 0; (705), 13, 2, 6; (3122), 3, 1, 0; (5066), 3, 1, 0; [163, 19, 0*, 1998/05/24–1998/06/06]

423 North Ryde

S. McAndrew, 2/32 Twin Rd, North Ryde, NSW 2113, Australia

[mcandrew@trinity.nsw.edu.au]

0.2-m $f/4$ hyperbolic astrograph + CCD

GSC

1931 TD₃, 8, 3, 13; 1989 RW, 8, 2, 2; 1990 OO₂, 2, 1, 0; 1991 JL, 7, 2, 3; 1992 YY, 14, 3, 17; 1994 KA, 3, 2, 5; 1995 PV, 3, 1, 0; (4088), 2, 1, 0; (4644), 2, 1, 0; (8737), 4, 1, 0; [53, 10, 0*, 1998/04/26–1998/05/29]

426 Woomera

F. B. Zoltowski, 10 Gundawarra St., P.O. Box 84, Woomera, SA 5720, Australia

[100356.23@CompuServe.com]

0.30-m $f/3.3$ Schmidt-Cassegrain + CCD

USNO-SA1.0, GSC

1978 RR₁, 5, 2, 8; 1979 XJ, 6, 2, 1; 1981 EM₁₇, 8, 3, 18; 1984 HM₁, 6, 2, 1; 1986 EP₅, 6, 2, 1; 1987 WS₃, 4, 2, 5; 1991 HC, 6, 2, 1; 1991 RM₁₅, 8, 2, 2; 1991 SZ, 7, 2, 2; 1992 ER₄, 6, 2, 4; 1992 HA₅, 5, 2, 1; 1994 CS₈, 6, 2, 1; 1994 GW₁₀, 7, 3, 4; 1994 VR₆, 5, 2, 1; 1995 SA₃, 6, 2, 1; 1995 UK₃, 5, 2, 1; 1995 WH, 6, 2, 10; 1995 XE₁, 5, 2, 1; 1995 YA, 6, 2, 8; 1996 VQ₃₀, 6, 2, 1; 1997 CY₂, 4, 2, 2; 1998 FG, 4, 2, 1; 1998 FJ, 5, 2, 3; 1998 FK₁, 6, 2, 4; 1998 FM₅, 3, 1, 0; 1998 FN₅, 5, 2, 4; 1998 FO₅, 5, 2, 4; 1998 FZ₁₄, 5, 2, 4; 1998 FN₁₅, 3, 1, 0; 1998 FG₇₄, 6, 2, 2; 1998 FC₁₁₁, 5, 2, 2; 1998 FS₁₁₁, 6, 2, 2; 1998 GY, 9, 3, 16; 1998 GG₁, 5, 2, 2; 1998 GH₁, 8, 3, 18; 1998 GL₁, 8, 3, 16; 1998 HK₁, 3, 1, 0; 1998 HL₈, 11, 4, 26; 1998 HN₄₉, 5, 2, 2; 1998 HJ₅₂ *, 14, 5, 36; 1998 HK₅₂ *, 11, 4, 21; 1998 HL₅₂ *, 11, 4, 20; 1998 HM₅₂ *, 11, 4, 20; 1998 HA₁₀₃, 5, 2, 2; 1998 HU₁₀₈, 13, 4, 12; 1998 HG₁₄₉, 6, 2, 1; 1998 JC₂, 5, 2, 5; 1998 JB₄ *, 12, 4, 16; 1998 JC₄ *, 12, 4, 16; 1998 JF₄ *, 12, 4, 18; 1998 JG₄ *, 12, 4, 16; 1998 JH₄ *, 13, 5, 18; 1998 JJ₄ *, 11, 4, 16; 1998 JL₄ *, 12, 5, 26; 1998 KA *, 12, 4, 15; 1998 KH, 4, 1, 0; 1998 KL *, 11, 4, 12; 1998 KN, 6, 2, 2; 1998 KU₂, 11, 3, 2; 1998 KV₂, 9, 3, 2; 1998 KD₃, 12, 3, 6; 1998 KE₃, 14, 4, 7; 1998 KF₃, 6, 2, 1; 1998 KM₃, 2, 1, 0; 1998 KN₃, 7, 2, 4; 1998 KO₃, 6, 2, 1; 1998 KP₃ *, 9, 3, 8; 1998 KD₅ *, 12, 4, 13; 1998 KH₉, 3, 1, 0; 1998 KJ₁₇, 2, 1, 0; 1998 KK₁₇, 4, 1, 0; 1998 KY₂₆, 10, 2, 4; 1998 KZ₂₆ *, 8, 3, 8; 1998 KK₅₆, 4, 1, 0; 1998 LD, 4, 1, 0; 1998 LE, 6, 1, 0; 4588 P-L, 6, 2, 11; (2853), 4, 2, 2; (2922), 3, 1, 0; (3256), 6, 2, 1; (3756), 6, 2, 2; (4088), 8, 2, 2; (4166), 4, 2, 2; (4248), 6, 2, 3; (4618), 4, 2, 5; (4644), 6, 2, 5; (4716), 5, 2, 1; (4973), 6, 2, 5; (5170), 3, 1, 0; (5546), 6, 2, 1; (5636), 7, 3, 2; (5648), 6, 2, 4; (5858), 3, 1, 0; (5887), 8, 2, 1; (6078), 5, 2, 1; (6223), 6, 2, 2; (6232), 6, 2, 5; (6378), 5, 2, 2; (6587), 4, 2, 1; (6630), 5, 2, 5; (6633), 6, 2, 1; (6772), 6, 2, 1;

(6858), 6, 2, 2; (6971), 5, 2, 1; (7177), 6, 2, 1; (7417), 5, 2, 1; (8709), 6, 2, 2; [715, 107, 16*, 1998/04/25–1998/06/06]

428 Reedy Creek

J. Broughton, 18 Branch Crescent, Reedy Creek, QLD 4228, Australia

0.25-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC

1987 BW₁, 4, 2, 6; 1990 EA₇, 2, 1, 0; 1998 BU₄₁, 2, 1, 0; 1998 DL₄, 1, 1, 0; 1998 DM₃₅, 2, 1, 0; 1998 FD₄₉, 2, 1, 0; 1998 FP₆₈, 2, 1, 0; 1998 FM₁₁₅, 2, 1, 0; 1998 FE₁₁₇, 2, 1, 0; 1998 FH₁₁₈, 6, 4, 5; 1998 FJ₁₂₆, 3, 2, 6; 1998 FK₁₂₆, 4, 2, 8; 1998 FL₁₂₆, 2, 2, 14; 1998 FM₁₂₆, 7, 4, 10; 1998 FN₁₂₆, 4, 2, 9; 1998 GK₁₀, 2, 2, 5; 1998 HU₁₀₁ *, 8, 5, 6; 1998 HV₁₀₁ *, 7, 4, 6; 1998 HW₁₀₁ *, 7, 3, 2; 1998 HS₁₄₀, 2, 1, 0; (2479), 4, 2, 1; (3744), 2, 1, 0; (4176), 2, 1, 0; (4233), 2, 1, 0; (8749), 3, 2, 9; [84, 25, 3*, 1998/04/05–1998/04/30]

482 St. Andrews

F. Clarke, School of Physics and Astronomy, North Haugh, St. Andrews, Fife

KY16 9SS Scotland [fjc3@st-and.ac.uk]

0.25-m $f/10$ Schmidt-Cassegrain + CCD

GSC

(714), 15, 5, 24; [15, 1, 0*, 1997/09/19–1997/10/13]

504 Le Creusot

J.-C. Merlin, 18 rue P. Mendès-France, F-71200 Le Creusot, France

[merlin@obspm.fr]

0.40-m $f/5.1$ reflector + CCD

GSC

1997 CU₂₆, 2, 1, 0; 1998 EC₃, 3, 1, 0; 1998 FX₂, 4, 1, 0; 1998 FM₅, 3, 1, 0; [12, 4, 0*, 1998/05/07–1998/05/09]

540 Linz

E. Meyer, F. Marklstrasse 1/62, A-4040 Linz, Austria [erich.meyer@ooenet.at]

Observers E. Meyer, E. Obermair, H. Raab

0.30-m $f/5.2$ Schmidt Cassegrain + CCD

GSC

1998 BS₁₃, 2, 1, 0; 1998 HT₃₁, 13, 3, 2; 1998 KE₃, 2, 1, 0; 1998 KJ₉, 5, 2, 1; 1998 KH₁₇, 3, 1, 0; [25, 5, 0*, 1998/05/07–1998/06/01]

552 San Vittore

E. Colombini, Via S. Vittore 44, I-40136 Bologna, Italy

[ermes.colombini@iol.it]

Observers C. Vacchi, G. Sassi, E. Colombini, R. Di Luca

0.45-m $f/3.3$ reflector + CCD

GSC

1995 SC₂, 5, 2, 4; 1998 FH₁₆, 6, 2, 10; [11, 2, 0*, 1998/05/16–1998/05/30]

553 Chorzów

I. Włodarczyk, Astronomical Observatory, WPKiW, P.O. Box 10, PL-41501

Chorzów, Poland [plan.s11@netkat.com.pl]

Observers I. Włodarczyk, S. Janta, T. Piwek

Measurers I. Włodarczyk

0.2-m $f/5$ Zeiss astrograph + CCD

GSC

(148), 2, 1, 0; [2, 1, 0*, 1998/04/23]

557 Ondřejov

P. Pravec, Astronomical Institute, Czech Academy of Sciences, CZ-25165 Ondřejov,

Czech Republic [ppravec@asu.cas.cz]

Observers P. Pravec, L. Šarounová

0.65-m $f/3.6$ reflector + CCD

USNO-SA1.0, GSC

1988 TG, 3, 1, 0; 1993 BW₂, 2, 1, 0; 1995 SG, 5, 2, 1; 1995 SO, 3, 1, 0; 1996 AY₁, 2, 1, 0; 1998 DV₉, 2, 1, 0; 1998 DF₂₀, 2, 1, 0; 1998 FD₂, 2, 1, 0; 1998 FX₂, 6, 2, 4; 1998 FA₃, 4, 2, 18; 1998 FC₃, 3, 1, 0; 1998 FD₃, 3, 1, 0; 1998 FE₃, 3, 2, 12; 1998 FM₅, 2, 1, 0; 1998 FD₇₃, 4, 2, 18; 1998 FO₇₃, 2, 1, 0; 1998 FP₇₃, 1, 1, 0; 1998 GM₁, 3, 2, 2; 1998 HA, 5, 2, 18; 1998 HK₁, 5, 2, 12; 1998 HL₁, 1, 1, 0; 1998 HE₂, 5, 3, 17; 1998 HL₃, 3, 1, 0; 1998 HM₃, 10, 4, 13; 1998 HZ₇, 2, 1, 0; 1998 HD₁₄, 2, 1, 0; 1998 HC₂₉, 2, 1, 0; 1998 HR₃₁, 2, 1, 0; 1998 HJ₄₁, 8, 3, 7; 1998 HO₅₁, 4, 2, 1; 1998 HV₉₀, 4, 2, 1; 1998 HU₁₀₈, 8, 2, 1; 1998 JG₃, 7, 2, 1; 1998 KH, 7, 2, 1; 1998 KJ *, 13, 4, 9; 1998 KU₂, 6, 2, 8; 1998 KD₃, 11, 3, 3; 1998 KE₃, 3, 1, 0; 1998 KF₃, 10, 4, 7; 1998 KM₃, 3, 1, 0; 1998 KN₃, 3, 1, 0; 1998 KO₃, 4, 2, 2; 1998 KF₆, 4, 2, 2; 1998 KH₉, 15, 5, 8; 1998 KJ₉, 28, 7, 9; 1998 KH₁₇, 9, 3, 2; 1998 KJ₁₇, 23, 4, 4; 1998 KK₁₇, 9, 3, 3; 1998 KY₂₆, 46, 6, 6; 1998 KL₃₃, 3, 1, 0; 1998 KK₅₆, 6, 2, 1; 1998 LD, 3, 1, 0; 1998 LE, 13, 2, 1; 1097 T-3, 3, 1, 0; (1866), 4, 1, 0; (4957), 3, 1, 0; (5365), 3, 1, 0; [352, 57, 1*, 1998/04/20–1998/06/07]

560 Madonna di Dossobuono

L. Lai, Via Mantovana 130e, I-37062 Dossobuono (Verona), Italy

[astrofil@astbo1.bo.cnr.it]

Observers L. Lai, I. Rocchetti, G. Vesentini

0.40-m $f/3.5$ reflector + CCD

GSC

1992 EE₇, 4, 1, 0; 1992 EA₂₂, 4, 1, 0; 1996 WC₂, 10, 3, 28; (2770), 3, 1, 0; (4335), 3, 1, 0; [24, 5, 0*, 1998/04/20–1998/05/18]

565 Bassano Bresciano

U. Quadri, Osservatorio di Bassano Bresciano, Via S. Michele 4, I-25020 Bassano

Bresciano (BS), Italy [astrofil@astbo1.bo.cnr.it]

Observers U. Quadri, L. Strabla

0.40-m $f/2.5$ Schmidt + CCD

GSC

(63), 3, 1, 0; [3, 1, 0*, 1998/05/13]

566 Haleakala-NEAT/GEODSS

E. F. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A.

[efh@ipl.jpl.nasa.gov]

Observers E. F. Helin, S. H. Pravdo, K. J. Lawrence, D. L. Rabinowitz, S. Groom,

C. Clark, R. Bamberg, S. Levin, J. Lorre, S. Shaklan, R. Byrd, A. Esquibel,

C. Cotton, D. Bascon

1-m $f/2.2$ Ritchey-Chrétien + CCD

1972 AU, 3, 1, 0; 1975 SG₁, 6, 2, 29; 1977 EK₁, 3, 1, 0; 1978 TT₈, 3, 1, 0; 1980 KE, 3, 1, 0; 1981 EP₁, 3, 1, 0; 1981 EQ₁₃, 3, 1, 0; 1981 EU₂₈, 3, 1, 0; 1981 JB₂, 3, 1, 0; 1981 UD₂₃, 3, 1, 0; 1985 VG, 3, 1, 0; 1987 WS₃, 3, 1, 0; 1988 RV₁₀, 3, 1, 0; 1988 SM₂, 3, 1, 0; 1989 SU₃, 3, 1, 0; 1989 UP₁, 3, 1, 0; 1989 UW₂, 3, 1, 0; 1990 SS₈, 3, 1, 0; 1991 FJ₂, 6, 2, 16; 1991 JF, 3, 1, 0; 1991 LH₁, 3, 1, 0; 1991 NG₅, 3, 1, 0; 1991 SR₁, 3, 1, 0; 1991 TE₅, 3, 1, 0; 1991 TF₇, 3, 1, 0; 1991 UL₃, 3, 1, 0; 1991 VC₆, 6, 2, 28; 1992 BR, 3, 1, 0; 1992 DW₅, 3, 1, 0; 1992 OB₃, 3, 1, 0; 1992 YJ₂, 3, 1, 0; 1993 FT₅, 6, 2, 32; 1993 FZ₂₃, 3, 1, 0; 1993 FT₃₃, 3, 1, 0; 1993 FC₄₂, 3, 1, 0; 1993 FX₈₁, 3, 1, 0; 1993 WB, 6, 2, 39; 1994 AS, 3, 1, 0; 1994 BX, 3, 1, 0; 1994 CM₂, 3, 1, 0; 1994 CD₉, 3, 1, 0; 1994 EL₂, 3, 1, 0; 1994 JN, 3, 1, 0; 1994 JR, 3, 1, 0; 1994 LK₁, 3, 1, 0; 1994 PF₂₀, 3, 1, 0; 1995 CK, 3, 1, 0; 1995 QN, 3, 1, 0; 1995 SH, 3, 1, 0; 1995 UK₄, 3, 1, 0; 1995 WH, 3, 1, 0; 1995 XE₁, 3, 1, 0; 1996 OM₂, 3, 1, 0; 1996 VP₃₀, 3, 1, 0; 1996 XY, 3, 1, 0; 1996 XM₁₃, 3, 1, 0; 1996 YT, 6, 2, 16; 1996 YG₁, 3, 1, 0; 1996 YC₂, 3, 1, 0; 1997 AX₃, 3, 1, 0; 1997 AK₁₉, 6, 2, 16; 1997 AF₂₁, 3, 1, 0; 1997 CB, 3, 1, 0; 1997 EL, 3, 1, 0; 1997 XH, 3, 1, 0; 1997 XX₄, 6, 2, 56; 1997 XZ₄, 3, 1, 0; 1997 XR₈, 3, 1, 0; 1997 YQ₅, 3, 1, 0; 1997 YF₁₀, 3, 1, 0; 1998 AF₆, 6, 2, 28; 1998 AL₇, 3, 1, 0; 1998 BE₂, 3, 1, 0; 1998 BL₉, 3, 1, 0; 1998 BS₁₅, 3, 1, 0; 1998 DE₁₁, 3, 1, 0; 1998 DD₁₄, 3, 1, 0; 1998 DE₁₄, 3, 1, 0; 1998 DB₃₆, 3, 1, 0; 1998 EX₂, 3, 1, 0; 1998 EV₈, 3, 1, 0; 1998 EP₁₀, 3, 1, 0; 1998 EQ₁₀, 6, 2, 28; 1998 EA₁₂, 6, 2, 62; 1998 EF₁₂, 3, 1, 0; 1998 FO, 3, 1, 0; 1998 FQ₂, 3, 1, 0; 1998 FF₉, 3, 1, 0; 1998 FG₁₀, 3, 1, 0; 1998 FG₁₁, 3, 1, 0; 1998 FO₁₁, 3, 1, 0; 1998 FB₁₆, 3, 1, 0; 1998 FS₂₀, 3, 1, 0; 1998 FV₂₀, 3, 1, 0; 1998 FP₂₆, 3, 1, 0; 1998 FT₂₆, 6, 2, 28; 1998 FL₃₀, 3, 1, 0; 1998 FJ₃₁, 3, 1, 0; 1998 FN₃₂, 3, 1, 0; 1998 FV₃₂, 3, 1, 0; 1998 FA₃₃, 3, 1, 0; 1998 FL₃₆, 6, 2, 29; 1998 FV₄₀, 3, 1, 0; 1998 FB₄₉, 3, 1, 0; 1998 FS₄₉, 3, 1, 0; 1998 FK₅₁, 3, 1, 0; 1998 FN₅₃, 3, 1, 0; 1998 FP₅₃, 3, 1, 0; 1998 FN₅₄, 3, 1, 0; 1998 FT₅₄, 3, 1, 0; 1998 FU₅₄, 3, 1, 0; 1998 FX₅₄, 6, 2, 29; 1998 FP₅₅, 3, 1, 0; 1998 FA₅₆, 6, 2, 28;

1998 FO₅₆, 3, 1, 0; 1998 FB₅₇, 3, 1, 0; 1998 FG₅₇, 6, 2, 28; 1998 FK₅₇, 3, 1, 0; 1998 FR₅₇, 3, 1, 0; 1998 FL₅₈, 3, 1, 0; 1998 FN₅₈, 3, 1, 0; 1998 FC₅₉, 3, 1, 0; 1998 FE₆₂, 3, 1, 0; 1998 FM₆₂, 3, 1, 0; 1998 FV₆₃, 3, 1, 0; 1998 FG₆₅, 6, 2, 36; 1998 FK₆₅, 3, 1, 0; 1998 FH₆₇, 3, 1, 0; 1998 FV₆₇, 3, 1, 0; 1998 FW₆₇, 3, 1, 0; 1998 FG₆₉, 3, 1, 0; 1998 FO₆₉, 6, 2, 36; 1998 FQ₆₉, 3, 1, 0; 1998 FR₆₉, 3, 1, 0; 1998 FT₆₉, 3, 1, 0; 1998 FU₆₉, 3, 1, 0; 1998 FK₇₀, 3, 1, 0; 1998 FQ₇₀, 3, 1, 0; 1998 FR₇₀, 3, 1, 0; 1998 FS₇₀, 3, 1, 0; 1998 FZ₇₀, 3, 1, 0; 1998 FH₇₁, 3, 1, 0; 1998 FQ₇₂, 3, 1, 0; 1998 FY₇₃, 3, 1, 0; 1998 FZ₇₃, 3, 1, 0; 1998 FD₇₄, 3, 1, 0; 1998 FX₇₄, 3, 1, 0; 1998 FF₇₅, 3, 1, 0; 1998 FN₇₅, 3, 1, 0; 1998 FB₇₇, 3, 1, 0; 1998 FG₇₇, 3, 1, 0; 1998 FY₇₇, 3, 1, 0; 1998 FP₉₀, 3, 1, 0; 1998 FK₉₈, 6, 2, 28; 1998 FR₉₈, 3, 1, 0; 1998 FU₉₈, 3, 1, 0; 1998 FN₁₀₃, 3, 1, 0; 1998 FG₁₀₄, 3, 1, 0; 1998 FO₁₀₄, 3, 1, 0; 1998 FM₁₀₅, 3, 1, 0; 1998 FT₁₀₆, 3, 1, 0; 1998 FK₁₀₇, 3, 1, 0; 1998 FU₁₀₈, 3, 1, 0; 1998 FB₁₀₉, 3, 1, 0; 1998 FS₁₁₀, 3, 1, 0; 1998 FC₁₁₁, 3, 1, 0; 1998 FP₁₁₁, 3, 1, 0; 1998 FE₁₁₂, 3, 1, 0; 1998 FX₁₁₃, 3, 1, 0; 1998 FY₁₁₃, 3, 1, 0; 1998 FS₁₁₅, 6, 2, 36; 1998 FY₁₁₆, 3, 1, 0; 1998 FU₁₁₇, 3, 1, 0; 1998 FL₁₂₁, 3, 1, 0; 1998 FM₁₂₂, 3, 1, 0; 1998 FS₁₂₂, 3, 1, 0; 1998 FT₁₂₂, 3, 1, 0; 1998 FV₁₂₂, 3, 1, 0; 1998 FY₁₂₂, 3, 1, 0; 1998 FP₁₂₅, 6, 2, 28; 1998 FJ₁₂₆, 3, 1, 0; 1998 FT₁₂₆, 3, 1, 0; 1998 FC₁₂₇, 3, 1, 0; 1998 GM₆, 6, 2, 8; 1998 GX₇, 3, 1, 0; 1998 GZ₇, 3, 1, 0; 1998 GH₈, 3, 1, 0; 1998 GW₈, 3, 1, 0; 1998 GY₈, 3, 1, 0; 1998 GA₉, 3, 1, 0; 1998 GC₉, 3, 1, 0; 1998 GD₉, 3, 1, 0; 1998 GO₉, 3, 1, 0; 1998 GP₉, 3, 1, 0; 1998 GD₁₀, 3, 1, 0; 1998 HK₃, 1, 0; 1998 HR₇, 6, 2, 1; 1998 HK₈, 3, 1, 0; 1998 HB₁₈, 3, 1, 0; 1998 HC₁₈, 3, 1, 0; 1998 HO₁₈, 3, 1, 0; 1998 HW₁₈, 3, 1, 0; 1998 HK₁₉, 3, 1, 0; 1998 HM₁₉, 3, 1, 0; 1998 HC₂₂, 3, 1, 0; 1998 HP₂₄, 3, 1, 0; 1998 HN₃₀, 3, 1, 0; 1998 HO₃₀, 3, 1, 0; 1998 HY₃₁, 3, 1, 0; 1998 HB₃₂, 3, 1, 0; 1998 HN₃₂, 3, 1, 0; 1998 HS₃₄, 3, 1, 0; 1998 HK₃₅, 3, 1, 0; 1998 HT₄₂, 3, 1, 0; 1998 HM₄₃, 3, 1, 0; 1998 HO₄₃, 3, 1, 0; 1998 HO₄₉ *, 6, 2, 8; 1998 HP₄₉ *, 6, 2, 3; 1998 HD₅₁, 3, 1, 0; 1998 HL₅₁, 3, 1, 0; 1998 HR₅₁, 3, 1, 0; 1998 HK₅₂, 3, 1, 0; 1998 HP₅₂, 3, 1, 0; 1998 HQ₅₂, 3, 1, 0; 1998 HH₇₀, 3, 1, 0; 1998 HW₇₀, 3, 1, 0; 1998 HA₇₅, 3, 1, 0; 1998 HP₈₃, 3, 1, 0; 1998 HA₈₉, 3, 1, 0; 1998 HV₉₃, 3, 1, 0; 1998 HY₉₃, 3, 1, 0; 1998 HF₉₄, 3, 1, 0; 1998 HH₉₄, 3, 1, 0; 1998 HT₉₄, 3, 1, 0; 1998 HV₉₄, 3, 1, 0; 1998 HX₉₄, 3, 1, 0; 1998 HB₉₅, 3, 1, 0; 1998 HD₉₅, 3, 1, 0; 1998 HG₉₆, 3, 1, 0; 1998 HP₉₇, 3, 1, 0; 1998 HW₉₇, 3, 1, 0; 1998 HC₉₈, 3, 1, 0; 1998 HJ₉₈, 3, 1, 0; 1998 HV₉₈, 3, 1, 0; 1998 HB₉₉, 3, 1, 0; 1998 HC₉₉, 3, 1, 0; 1998 HD₉₉, 3, 1, 0; 1998 HF₉₉, 3, 1, 0; 1998 HG₉₉, 3, 1, 0; 1998 HZ₉₉, 12, 1, 0; 1998 HG₁₀₀, 3, 1, 0; 1998 HO₁₀₀, 3, 1, 0; 1998 HQ₁₀₀, 3, 1, 0; 1998 HT₁₀₀, 3, 1, 0; 1998 HW₁₀₁, 3, 1, 0; 1998 HW₁₀₂, 3, 1, 0; 1998 HY₁₀₈, 3, 1, 0; 1998 HK₁₀₉, 3, 1, 0; 1998 HL₁₁₆, 3, 1, 0; 1998 HQ₁₁₇, 3, 1, 0; 1998 HG₁₁₉, 3, 1, 0; 1998 HL₁₁₉, 3, 1, 0; 1998 HZ₁₁₉, 3, 1, 0; 1998 HA₁₂₀, 3, 1, 0; 1998 HL₁₂₀, 3, 1, 0; 1998 HG₁₂₁, 3, 1, 0; 1998 HJ₁₂₁, 3, 1, 0; 1998 HC₁₂₂, 3, 1, 0; 1998 HR₁₂₄, 3, 1, 0; 1998 HS₁₂₄, 3, 1, 0; 1998 HD₁₂₅, 3, 1, 0; 1998 HN₁₃₂, 3, 1, 0; 1998 HQ₁₃₂, 3, 1, 0; 1998 HA₁₃₃, 3, 1, 0; 1998 HZ₁₃₄, 3, 1, 0; 1998 HR₁₃₅, 3, 1, 0; 1998 HS₁₄₀, 3, 1, 0; 1998 HM₁₄₄, 6, 2, 20; 1998 HQ₁₄₄, 3, 1, 0; 1998 HK₁₄₅, 3, 1, 0; 1998 HP₁₄₅, 3, 1, 0; 1998 HV₁₄₅, 3, 1, 0; 1998 HC₁₄₆, 3, 1, 0; 1998 HJ₁₄₆, 3, 1, 0; 1998 HK₁₄₈, 3, 1, 0; 1998 HL₁₄₉, 3, 1, 0; 1998 JX₃, 1, 0; 1998 JO₁, 3, 1, 0; 1998 JZ₁, 6, 2, 16; 1998 JJ₂ *, 6, 2, 1; 1998 JP₂, 3, 1, 0; 1998 JS₂, 3, 1, 0; 1998 JJ₃, 3, 1, 0; 1998 JK₃, 3, 1, 0; 1998 JC₄, 6, 2, 21; 1998 JM₄, 3, 1, 0; 1998 KJ₁, 3, 1, 0; 1998 KK₇, 3, 1, 0; 1998 KY₈, 3, 1, 0; 1998 KP₁₄, 3, 1, 0; 1998 KY₁₄, 3, 1, 0; 1998 KG₃₁, 3, 1, 0; 1998 KW₄₈, 3, 1, 0; 1998 KX₄₈, 6, 2, 16; 1998 KF₄₉, 3, 1, 0; 1998 KJ₅₂, 3, 1, 0; 1998 KF₅₃, 3, 1, 0; 6035 P-L, 3, 1, 0; 2208 T-1, 3, 1, 0; 3770 T-1, 3, 1, 0; 2256 T-2, 3, 1, 0; 3260 T-2, 3, 1, 0; 3297 T-2, 3, 1, 0; 5087 T-2, 3, 1, 0; (3), 6, 1, 0; (6), 3, 1, 0; (16), 3, 1, 0; (30), 3, 1, 0; (32), 3, 1, 0; (48), 3, 1, 0; (55), 6, 2, 15; (56), 3, 1, 0; (61), 3, 1, 0; (63), 3, 1, 0; (85), 3, 1, 0; (90), 6, 1, 0; (93), 3, 1, 0; (100), 6, 2, 16; (111), 3, 1, 0; (112), 3, 1, 0; (115), 3, 1, 0; (116), 3, 1, 0; (117), 3, 1, 0; (118), 3, 1, 0; (121), 3, 1, 0; (123), 3, 1, 0; (125), 3, 1, 0; (127), 3, 1, 0; (131), 6, 2, 16; (136), 3, 1, 0; (148), 3, 1, 0; (151), 3, 1, 0; (153), 3, 1, 0; (158), 3, 1, 0; (159), 3, 1, 0; (166), 3, 1, 0; (169), 3, 1, 0; (179), 3, 1, 0; (194), 3, 1, 0; (198), 6, 2, 6; (210), 6, 2, 22; (211), 3, 1, 0; (214), 3, 1, 0; (219), 3, 1, 0; (221), 3, 1, 0; (224), 6, 1, 0; (235), 3, 1, 0; (242), 3, 1, 0; (260), 3, 1, 0; (311), 3, 1, 0; (318), 6, 2, 8; (363), 3, 1, 0; (366), 3, 1, 0; (374), 6, 2, 11; (384), 3, 1, 0; (388), 3, 1, 0; (401), 3, 1, 0; (405), 3, 1, 0; (422), 3, 1, 0; (427), 3, 1, 0; (436), 3, 1, 0; (443), 6, 2, 14; (470), 3, 1, 0; (477), 3, 1, 0; (478), 3, 1, 0; (479), 3, 1, 0; (496), 3, 1, 0; (503), 6, 2, 6; (508), 3, 1, 0; (524), 3, 1, 0; (527), 3, 1, 0; (528), 3, 1, 0; (545), 3, 1, 0; (551), 3, 1, 0; (570), 3, 1, 0; (584), 3, 1, 0; (602), 3, 1, 0; (608), 3, 1, 0; (625), 3, 1, 0; (626), 3, 1, 0; (632), 3, 1, 0; (655), 3, 1, 0; (656), 3, 1, 0; (664), 3, 1, 0; (671), 3, 1, 0; (675), 6, 2, 22; (680), 3, 1, 0; (699), 3, 1, 0; (715), 6, 2, 9; (755), 3, 1, 0; (782), 3, 1, 0; (810), 6, 1, 0; (833), 3, 1, 0; (834), 3, 1, 0; (862), 6, 2, 16; (867), 3, 1, 0; (870), 3, 1, 0; (903), 3, 1, 0; (924), 3, 1, 0; (926), 3, 1, 0; (928), 3, 1, 0; (940), 3, 1, 0; (946), 3, 1, 0; (1056), 3, 1, 0; (1064), 3, 1, 0; (1085), 3, 1, 0; (1086), 3, 1, 0; (1087), 3, 1, 0; (1107), 3, 1, 0; (1126), 6, 2, 6; (1130), 6, 1, 0; (1155), 6, 2, 16; (1176), 3, 1, 0; (1184), 3, 1, 0; (1200), 3, 1, 0; (1210), 6, 2, 8; (1227), 6, 2, 11; (1238), 3, 1, 0; (1248), 3, 1, 0; (1254), 3, 1, 0; (1258), 3, 1, 0; (1281), 3, 1, 0; (1285), 3, 1, 0; (1314), 3, 1, 0; (1334), 3, 1, 0; (1353), 3, 1, 0; (1355), 6, 2, 6; (1365), 3, 1, 0; (1366), 3, 1, 0; (1384), 3, 1, 0; (1385), 6, 2, 6; (1430), 3, 1, 0; (1453), 3, 1, 0; (1457), 6, 2, 19; (1471), 3, 1, 0; (1527), 3, 1, 0; (1532), 3, 1, 0; (1544), 6, 2, 6; (1554), 3, 1, 0; (1559), 3, 1, 0; (1561), 3, 1, 0; (1588), 3, 1, 0; (1607), 3, 1, 0; (1614), 3, 1, 0; (1621), 3, 1, 0; (1644), 3, 1, 0; (1648), 3, 1, 0; (1722), 3, 1, 0; (1779), 3, 1, 0; (1785), 3, 1, 0; (1805), 3, 1, 0; (1813), 3, 1, 0; (1833), 3, 1, 0; (1856), 6, 2, 4; (1888), 3, 1, 0; (1912), 3, 1, 0; (1951), 3, 1, 0; (1961), 3, 1, 0; (2002), 3, 1, 0; (2007), 3, 1, 0; (2013), 3, 1, 0; (2016), 3, 1, 0; (2038), 3, 1, 0; (2060), 6, 2, 17; (2085), 3, 1, 0; (2091), 6, 2, 22; (2112), 3, 1, 0; (2181), 6, 2, 16; (2196), 6, 2, 8; (2199), 3, 1, 0; (2214), 3, 1, 0; (2233), 3, 1, 0; (2269), 3, 1, 0; (2367), 3, 1, 0; (2376), 3, 1, 0; (2407), 3,

1, 0; (2412), 2, 1, 0; (2420), 6, 2, 8; (2433), 3, 1, 0; (2445), 3, 1, 0; (2450), 3, 1, 0; (2452), 3, 1, 0; (2479), 3, 1, 0; (2536), 3, 1, 0; (2541), 3, 1, 0; (2616), 3, 1, 0; (2621), 3, 1, 0; (2636), 3, 1, 0; (2644), 3, 1, 0; (2646), 3, 1, 0; (2670), 3, 1, 0; (2687), 3, 1, 0; (2700), 3, 1, 0; (2730), 3, 1, 0; (2746), 3, 1, 0; (2761), 3, 1, 0; (2765), 3, 1, 0; (2768), 3, 1, 0; (2790), 3, 1, 0; (2792), 3, 1, 0; (2857), 3, 1, 0; (2909), 3, 1, 0; (2967), 6, 2, 16; (3029), 3, 1, 0; (3034), 3, 1, 0; (3036), 3, 1, 0; (3065), 3, 1, 0; (3076), 3, 1, 0; (3160), 3, 1, 0; (3167), 3, 1, 0; (3297), 3, 1, 0; (3321), 3, 1, 0; (3358), 3, 1, 0; (3377), 3, 1, 0; (3385), 3, 1, 0; (3440), 3, 1, 0; (3453), 3, 1, 0; (3471), 3, 1, 0; (3476), 3, 1, 0; (3492), 3, 1, 0; (3555), 3, 1, 0; (3571), 3, 1, 0; (3605), 3, 1, 0; (3623), 3, 1, 0; (3628), 3, 1, 0; (3657), 6, 2, 8; (3727), 3, 1, 0; (3777), 6, 2, 8; (3846), 3, 1, 0; (4006), 3, 1, 0; (4105), 3, 1, 0; (4163), 3, 1, 0; (4175), 3, 1, 0; (4182), 3, 1, 0; (4223), 3, 1, 0; (4227), 3, 1, 0; (4245), 3, 1, 0; (4246), 3, 1, 0; (4263), 3, 1, 0; (4326), 3, 1, 0; (4366), 3, 1, 0; (4368), 3, 1, 0; (4422), 3, 1, 0; (4553), 6, 2, 6; (4582), 3, 1, 0; (4629), 6, 2, 16; (4653), 3, 1, 0; (4732), 3, 1, 0; (4772), 3, 1, 0; (4774), 3, 1, 0; (4780), 3, 1, 0; (4819), 3, 1, 0; (4871), 3, 1, 0; (4875), 3, 1, 0; (4892), 3, 1, 0; (4974), 3, 1, 0; (5334), 3, 1, 0; (5341), 3, 1, 0; (5391), 3, 1, 0; (5445), 3, 1, 0; (5505), 3, 1, 0; (5514), 3, 1, 0; (5563), 3, 1, 0; (5577), 3, 1, 0; (5588), 3, 1, 0; (5654), 6, 2, 3; (5745), 3, 1, 0; (5915), 3, 1, 0; (5916), 3, 1, 0; (5935), 3, 1, 0; (5949), 3, 1, 0; (5962), 3, 1, 0; (5965), 3, 1, 0; (5984), 3, 1, 0; (5988), 3, 1, 0; (6015), 3, 1, 0; (6384), 3, 1, 0; (6469), 3, 1, 0; (6495), 3, 1, 0; (6549), 3, 1, 0; (6566), 3, 1, 0; (6572), 3, 1, 0; (6592), 3, 1, 0; (6605), 3, 1, 0; (6656), 3, 1, 0; (6667), 3, 1, 0; (6694), 3, 1, 0; (6733), 3, 1, 0; (7261), 3, 1, 0; (7288), 3, 1, 0; (7329), 6, 2, 15; (7385), 3, 1, 0; (7453), 3, 1, 0; (7523), 6, 2, 1; (7539), 3, 1, 0; (7562), 3, 1, 0; (7564), 3, 1, 0; (7650), 3, 1, 0; (7662), 3, 1, 0; (7674), 3, 1, 0; (8205), 3, 1, 0; (8481), 3, 1, 0; (8602), 3, 1, 0; (8638), 3, 1, 0; (8645), 3, 1, 0; (8777), 6, 2, 8; [2072, 618, 3*, 1995/12/19–1998/05/26]

568 Mauna Kea

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CFHT 3.6-m + CCD

USNO-A1.0, USNO-SA1.0

1993 FW₃, 3, 1, 0; 1994 ES₂, 5, 3, 2; 1995 WQ₅, 4, 2, 14; 1996 KV₁, 4, 2, 1; 1997 RT₅, 6, 2, 1; 1998 FG₂, 3, 2, 1; 1998 FL₃, 3, 2, 1; 1998 FW₄, 4, 2, 2; 1998 FL₅, 2, 1, 0; 1998 FH₁₂, 3, 2, 1; 1998 HH₄₉, 3, 2, 1; 1998 KY₂₆, 5, 1, 0; [45, 12, 0*, 1998/05/15–1998/06/05]

587 Sormano

P. Sicoli, Via Valli 9, I-23846 Garbagnate Monastero (Lecco), Italy [sormano@tin.it]

Observers A. Testa, P. Chiavenna, F. Manca, P. Sicoli

0.5-m reflector + CCD

GSC

1995 RK₂, 2, 1, 0; 1997 BD₂, 2, 1, 0; 1998 AX₄, 2, 1, 0; 1998 FX₂, 2, 1, 0; 1998 HJ₄₁, 3, 1, 0; 1998 HQ₁₂₂, 4, 2, 2; [15, 6, 0*, 1998/05/20–1998/05/22]

589 Santa Lucia Stroncone

A. Vagnozzi, Via Santa Lucia 68, I-05039 Stroncone (Terni), Italy [vagnozzi@freenet.hut.fi]

Observers A. Vagnozzi, G. Bernabei, V. Risoldi, V. Scirri

0.50-m $f/2.8$ Ritchey-Chrétien + CCD

GSC

1995 SX₄, 4, 1, 0; 1996 TN₁₂, 3, 1, 0; 1997 BH₃, 3, 1, 0; 1998 DA₃₅, 3, 1, 0; 1998 FR₇₃, 6, 2, 5; 1998 HO₁, 3, 1, 0; 1998 HP₁, 2, 1, 0; 1998 HH₈, 6, 2, 8; 1998 KO *, 3, 1, 0; [33, 9, 1*, 1998/03/22–1998/05/21]

595 Farra d'Isonzo

L. Bittesini, Via dei Conventi 10, I-34070 Farra D'Isonzo (GO), Italy [ccaf@tmedia.it]

Observers A. Toso, W. Boschin, L. Drigo, G. Lombardi, E. Pettarin, F. Piani

Measurers L. Drigo, G. Lombardi, E. Pettarin, A. Toso

0.4-m $f/4.5$ reflector + CCD

GSC

1994 LH₂, 2, 1, 0; 1994 NC₄, 4, 2, 1; 1995 JG₄, 4, 2, 24; 1995 WM₃, 2, 1, 0; 1996 WE₃, 4, 2, 4; 1996 XG₂, 2, 1, 0; 1997 AS₁₇, 4, 2, 22; 1998 FK₁₅, 4, 2, 2; 1998 HD₂, 2, 1, 0; 1998 KE₁₀ *, 4, 2, 1; 1998 KY₂₆, 3, 1, 0; [35, 11, 1*, 1998/04/24–1998/06/05]

596 Colleverde di Guidonia

V. S. Casulli, Via M. Rosa 1, I-00010 Colleverde di Guidonia (RM), Italy
[v.casulli@priminet.it]

0.40-m $f/3.2$ reflector + CCD

GSC

1993 XQ₁, 2, 1, 0; 1997 EL, 3, 1, 0; 1998 DO, 3, 1, 0; 1998 LE, 2, 1, 0; (5553), 3, 1, 0; [13, 5, 0*, 1998/04/25–1998/06/05]

609 Osservatorio Polino

G. Iatteri, Via Val Serra 45h, Terni, Italy

Observers G. Iatteri, V. Scirri, A. Vagnozzi, V. S. Casulli, G. Bernabei, A. Boattini
Measurers A. Vagnozzi, V. S. Casulli, V. Scirri, A. Boattini

0.40-m $f/2.9$ reflector + CCD

GSC

1997 BH₃, 2, 1, 0; 1998 KO, 2, 1, 0; 1998 KJ₉, 3, 1, 0; 1998 KH₁₇, 3, 1, 0; 1998 KJ₁₇, 3, 1, 0; 1998 KK₁₇, 4, 1, 0; (5362), 4, 1, 0; [21, 7, 0*, 1998/05/22–1998/05/31]

610 Pianoro

V. Goretti, Via Resistenza 93, I-40065 Pianoro (BO), Italy

[astrofil@astbo1.bo.cnr.it]

0.25-m $f/4$ Schmidt-Cassegrain + CCD

GSC

1942 TB, 8, 2, 1; 1971 SB, 5, 1, 0; 1977 RK, 7, 2, 1; 1978 EU₉, 4, 1, 0; 1983 BD, 2, 1, 0; 1985 RQ₃, 4, 1, 0; 1988 MF, 4, 1, 0; 1989 GM, 8, 2, 6; 1990 QR, 8, 2, 1; 1993 LE, 4, 1, 0; (570), 4, 1, 0; (625), 3, 1, 0; (872), 4, 1, 0; (1089), 4, 1, 0; (1856), 3, 1, 0; (1990), 4, 1, 0; (2009), 3, 1, 0; (2740), 4, 1, 0; (2932), 9, 2, 1; (4105), 4, 1, 0; (4582), 4, 1, 0; (4780), 7, 2, 5; (5048), 4, 1, 0; (5098), 5, 1, 0; (5949), 3, 1, 0; (6575), 4, 1, 0; (7564), 4, 1, 0; (8447), 4, 1, 0; (8532), 8, 2, 1; (8641), 3, 1, 0; (8654), 3, 1, 0; (8663), 3, 1, 0; [148, 32, 0*, 1998/04/20–1998/05/26]

611 Starkenburg Sternwarte, Heppenheim

M. Busch, Giessener Strasse 4, D-64646 Heppenheim, Germany [mab@iez.com]

Observers M. Busch, P. Geffert, A. Seib, R. Stoss, U. Fuhrmann, W. Ernst,

J. Rothermel, E. Schwab, L. Kurtze

Measurers M. Busch, R. Stoss

0.45-m $f/4.4$ Newtonian reflector + CCD, 0.20-m $f/6$ Newtonian reflector + CCD,

0.19-m $f/4$ Flat-Field camera + CCD

USNO-SA1.0

1997 WT₂₂, 1, 1, 0; 1998 AK₈, 3, 1, 0; 1998 FW₁₅, 4, 2, 21; 1998 HT₃₁, 11, 1, 0; 1998 JE₄ *, 13, 6, 17; 1998 KH, 3, 1, 0; 1998 KK *, 9, 4, 11; (3912), 3, 1, 0; (8661), 3, 1, 0; [50, 9, 2*, 1998/05/08–1998/06/01]

620 Observatorio Astronómico de Mallorca

M. Blasco, Afueras s/n, E-07144 Costitx, Baleares, Spain

[astroam@dinky.bitel.es]

Observers R. Pacheco, A. Lopez

Measurer A. Lopez

0.30-m $f/3.3$ Schmidt-Cassegrain + CCD

GSC

1991 UV₂, 7, 2, 2; 1995 QS, 6, 2, 5; 1998 FX₂, 4, 1, 0; 1998 FM₅, 5, 1, 0; 1998 HG₂₄, 7, 2, 4; 1998 HT₃₁, 4, 1, 0; 1998 HU₁₀₈, 3, 1, 0; 1998 HW₁₄₀, 7, 2, 2; 1998 HT₁₅₀, 7, 2, 2; 1998 KH₉, 4, 1, 0; 1998 KJ₉, 5, 1, 0; 1998 KW₂₆ *, 8, 2, 7; (6444), 7, 2, 2; [74, 13, 1*, 1998/05/01–1998/05/29]

621 Bergisch Gladbach

W. Bickel, Schau ins Land 21, D-51429 Bergisch Gladbach, Germany [0220455671-0001@t-online.de]

0.60-m $f/5$ reflector + CCD

USNO-SA1.0

1998 CR₁, 25, 8, 53; 1998 FO₅, 6, 2, 1; 1998 FO₇₄, 15, 5, 23; 1998 FB₁₃₅, 3, 1, 0; (1142), 3, 1, 0; (1962), 3, 1, 0; (3256), 7, 2, 8; (5098), 6, 2, 1; (5370), 11, 3, 3; (7287), 7, 2, 1; [86, 10, 0*, 1998/03/21–1998/05/20]

627 Blauvac

R. Roy, Le Badassier St Esteve, F-84570 Blauvac, France [Rene.Roy@wanadoo.fr]

0.26-m $f/4.7$ reflector + CCD

GSC

1992 AY, 3, 1, 0; 1998 JJ₃, 6, 2, 1; (1166), 2, 1, 0; (1365), 2, 1, 0; (2651), 3, 1, 0; (3070), 3, 1, 0; (3913), 2, 1, 0; (6619), 2, 1, 0; [23, 8, 0*, 1998/05/18–1998/05/24]

628 Mülheim-Ruhr

A. Martin, Turtle Star Observatory, Friedhostr. 15, D-45478 Mülheim-Ruhr,

Germany [axelm@bph.ruhr-uni-bochum.de]

0.2-m Schmidt-Cassegrain + CCD

GSC, USNO-SA1.0

(32), 5, 1, 0; [5, 1, 0*, 1998/05/16–1998/05/17]

635 Perpignan

J.-M. Llapasset, 66 Cours De Lassus, F-66000 Perpignan, France [Jean-

Marie.Llapasset@wanadoo.fr]

Observers J.-M. Llapasset, G. Authier

Measurer J.-M. Llapasset

0.28-m $f/6.3$ reflector + CCD

USNO

(1384), 2, 2, 1; (1449), 4, 2, 4; (3913), 4, 2, 1; [10, 3, 0*, 1998/05/05–1998/05/22]

636 Essen

A. Knöfel, Saarbrücker Str. 8, D-40476 Düsseldorf, Germany

[aknoefel@mail.ddorf.rhein-ruhr.de]

0.318-m $f/5.7$ reflector + CCD

GSC

(386), 6, 2, 1; (6384), 3, 1, 0; (7318), 5, 2, 1; [14, 3, 0*, 1998/05/16–1998/05/17]

658 Dominion Astrophysical Observatory, Victoria

J. B. Tatum, Dept. of Physics, University of Victoria, P.O. Box 3055, Victoria, BC

V8W 3P6, Canada [universe@uvvm.uvic.ca]

Observers D. D. Balam, G. C. L. Aikman

1.82-m Plaskett telescope + CCD

GSC, USNO-A1.0

1998 FX₂, 3, 1, 0; 1998 HM₃, 2, 1, 0; 1998 HJ₄₁, 6, 2, 1; 1998 KD₃, 6, 2, 1; 1998 KF₃, 5, 2, 1; 1998 KJ₉, 3, 1, 0; 1998 KH₁₇, 6, 2, 1; 1998 KK₁₇, 3, 1, 0; 1998 KY₂₆, 9, 3, 2; 1998 KK₅₆, 6, 2, 2; 1998 LD, 3, 1, 0; 1998 LE, 3, 1, 0; [55, 12, 0*, 1998/06/06–1998/06/08]

663 Red Mountain Observatory

R. B. Denny, 6665 E. Vanguard St., Mesa, AZ 85215, U.S.A. [rdenny@dc3.com]

0.2-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC 1.1

1990 QR, 6, 3, 4; 1997 BA₂, 2, 1, 0; (4210), 2, 1, 0; (6519), 2, 1, 0; (7184), 4, 2, 1; (7581), 2, 1, 0; [18, 6, 0*, 1998/05/16–1998/05/26]

670 Camarillo

J. E. Rogers, 441 Rowland Avenue, Camarillo, CA 93010, U.S.A.

[72401.3174@compuserve.com]

0.25-m Schmidt-Cassegrain + CCD

GSC

1998 FX₂, 3, 1, 0; 1998 HU₁₀₈, 10, 3, 4; 1998 KU₂, 13, 4, 8; 1998 KD₃, 11, 2, 3; 1998 KE₃, 8, 2, 1; 1998 KH₉, 6, 2, 1; 1998 KJ₉, 9, 2, 1; 1998 KH₁₇, 6, 2, 1; 1998 KK₁₇, 7, 2, 1; 1998 KY₂₆, 7, 1, 0; 1998 KK₅₆, 7, 2, 1; 1998 LE, 5, 1, 0; (1866), 6, 2, 1; [98, 13, 0*, 1998/05/16–1998/06/06]

675 Palomar

E. F. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A.

[efh@alps.jpl.nasa.gov] (2)

C. S. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A.

[gshoemaker@iflag2.wr.usgs.gov] (3)

C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The Netherlands [vanhouten@rulh11.leidenuniv.nl] (4)

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. [elgb@lowell.edu] (6)

9 = 6 + 3

Observers T. Gehrels (4, L), E. F. Helin (2, S), H. E. Holt (3, S), K. Lawrence (2, S), D. H. Levy (3, S), C. S. Shoemaker (3, S), E. M. Shoemaker (3, S)

Measurers K. Lawrence (2), T. Melis (6), B. A. Skiff (6), C. S. Shoemaker (3),

C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)

1.2-m Oschin Schmidt (L), 0.46-m Schmidt (S)

(4) 2102 P-L *, 10, 8, 32; 2542 P-L *, 7, 7, 32; 2611 P-L *, 9, 8, 32; 2728 P-L *, 7, 4, 5; 4647 P-L *, 12, 9, 32; 4824 P-L *, 8, 4, 4; 5560 P-L *, 3, 3, 9; 6539 P-L *, 9, 8, 32; 6606 P-L *, 8, 7, 32; 1029 T-1 *, 5, 4, 3; 1134 T-1 *, 6, 5, 9; 1206 T-1 *, 6, 5, 9; 2013 T-1 *, 4, 3, 2; 2123 T-1 *, 6, 5, 9; 3033 T-1 *, 13, 8, 51; 3063 T-1 *, 6, 5, 9; 4361 T-1 *, 5, 4, 9; 4855 T-1 *, 5, 4, 30; 1005 T-2 *, 11, 6, 15; 1150 T-2 *, 28, 8, 16; 1191 T-2 *, 15, 8, 16; 1244 T-2 *, 11, 7, 16; 1435 T-2 *, 6, 3, 5; 2180 T-2 *, 15, 8, 16; 2187 T-2 *, 15, 8, 16; 2261 T-2 *, 15, 8, 16; 3100 T-2 *, 22, 8, 16; 3164 T-2 *, 15, 8, 16; 3193 T-2 *, 11, 6, 11; 3227 T-2 *, 15, 8, 16; 3267 T-2 *, 8, 4, 6; 3328 T-2 *, 7, 4, 6; 4203 T-2 *, 11, 5, 10; 4232 T-2 *, 15, 8, 16; 4238 T-2 *, 15, 8, 16; 4830 T-2 *, 5, 3, 5; 2212 T-3 *, 12, 6, 11; 2266 T-3 *, 19, 7, 15; 3016 T-3 *, 8, 4, 6; 3103 T-3 *, 15, 7, 15; 3135 T-3 *, 13, 7, 15; 3151 T-3 *, 13, 7, 15; 3384 T-3 *, 9, 5, 10; 4288 T-3 *, 12, 6, 11; 5051 T-3 *, 12, 6, 11; 5694 T-3 *, 8, 4, 6; [490, 46, 46*, 1960/09/24–1977/10/22]

(6) 1994 WB₁, 2, 1, 0; [2, 1, 0*, 1955/03/27]

(9) 1990 XU, 2, 1, 0; 1992 EG₆, 2, 1, 0; 1992 UX₂, 2, 1, 0; 1995 SK₃, 2, 1, 0; 1996 WC, 2, 1, 0; 1996 YB, 2, 1, 0; [12, 6, 0*, 1988/05/10–1994/09/11]

676 San Clemente

J. E. Root, 1303 S. Ola Vista, San Clemente, CA 92672, U.S.A. [jhoot@exo.com]

0.33-m *f*/3.3 Schmidt Cassegrain + CCD

GSC

(6577), 2, 2, 5; [2, 1, 0*, 1998/05/28–1998/06/02]

683 Goodricke-Pigott Observatory, Tucson

R. A. Tucker, 5500 West Nebraska Street, Tucson, AZ 85746, U.S.A.

[tucker@noao.edu]

0.36-m *f*/11 Schmidt-Cassegrain + CCD

GSC

1998 HE₃, 9, 3, 10; [9, 1, 0*, 1998/05/05–1998/05/15]

684 Prescott

P. G. Comba, 1411 Galaxy Lane, Prescott, AZ 86303, U.S.A.

[comba@northlink.com]

0.46-m *f*/4.5 reflector + CCD

GSC

1978 VZ₇, 4, 2, 1; 1983 XG, 4, 2, 1; 1996 TD₇, 4, 2, 1; 1996 WX, 4, 2, 1; 1996 XH₂₆, 7, 3, 19; 1997 CM, 4, 2, 1; 1997 CM₁₉, 4, 2, 1; 1997 CF₂₂, 5, 2, 1; 1997 CK₂₂, 4, 2, 2; 1997 EO₇, 4, 2, 1; 1997 FH₁, 11, 4, 20; 1998 DS₂₀, 4, 2, 1; 1998 FZ₄, 2, 1, 0; 1998 FA₅, 5, 2, 1; 1998 HC₂₀, 4, 2, 1; 1998 HE₂₀, 4, 2, 1; 1998 HF₂₀, 4, 2, 1; 1998 HQ₂₃, 4, 2, 1; 1998 HR₂₃, 10, 5, 17; 1998 HS₂₃, 4, 2, 1; 1998 KB *, 10, 5, 17; 1998 KX *, 9, 4, 11; 1998 KE₅ *, 10, 5, 7; 1998 KL₉ *, 9, 4, 6; 1998 KM₉ *, 9, 4, 6; 1998 KN₉ *, 8, 4, 6; 2221 P-L, 4, 2, 1; [155, 27, 6*, 1998/05/04–1998/06/03]

686 Mt. Lemmon

C. W. Hergenrother, Space Sciences Building, University of Arizona, Tucson, AZ 85721, U.S.A. [chergen@pir1.lpl.arizona.edu]

Observers S. M. Larson, C. W. Hergenrother

1.5-m reflector + CCD

GSC 1.1

1998 KY₂₆, 10, 1, 0; [10, 1, 0*, 1998/06/06]

688 Lowell Observatory, Anderson Mesa Station

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff AZ 86001,

U.S.A. [elgb@lowell.edu]

Observer B. A. Skiff

Measurer M. W. Buie

1.07-m Hall reflector + CCD

USNO-A1.0

1979 OA, 3, 1, 0; 1980 VX₂, 3, 1, 0; 1980 WE₅, 3, 1, 0; 1981 EZ₄₂, 3, 1, 0; 1982 RR, 3, 1, 0; 1985 RP, 3, 1, 0; 1985 RJ₅, 3, 1, 0; 1990 FQ, 3, 1, 0; 1990 QO₆, 3, 1, 0; 1990 RF, 3, 1, 0; 1990 RD₁, 3, 1, 0; 1990 RK₂, 3, 1, 0; 1990 SJ₁₆, 6, 2, 105; 1990 XU, 3, 1, 0; 1991 ED₂, 3, 1, 0; 1991 PO₁₁, 3, 1, 0; 1991 PG₁₅, 3, 1, 0; 1991 RE₂₅, 3, 1, 0; 1991 VP₄, 3, 1, 0; 1991 VL₁₀, 3, 1, 0; 1992 PQ₂, 3, 1, 0; 1993 FE₃₁, 3, 1, 0; 1993 TU₂₀, 3, 1, 0; 1994 CJ₂, 3, 1, 0; 1994 NR₁, 3, 1, 0; 1994 UT₁₁, 5, 2, 294; 1995 GA, 3, 1, 0; 1996 QP₁, 3, 1, 0; 1996 TN₁₂, 3, 1, 0; 1996 UC₃, 3, 1, 0; 1996 WC, 3, 1, 0; 1996 WU₁, 5, 2, 146; 1997 AM₂₁, 3, 1, 0; 1997 YV₁₃, 3, 1, 0; 1998 BT₃, 3, 1, 0; 1998 BC₃₁, 2, 1, 0; 1998 FK₅, 3, 1, 0; 1998 HP₇₁, 3, 1, 0; 1998 KG₅₄, 3, 1, 0; 4089 P-L, 3, 1, 0; 1125 T-2, 3, 1, 0; (113), 3, 1, 0; (3245), 3, 1, 0; (4551), 3, 1, 0; (8673), 3, 1, 0; [141, 45, 0*, 1997/08/01–1998/05/22]

689 U.S. Naval Observatory, Flagstaff Station

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff AZ 86001,

U.S.A. [elgb@lowell.edu]

A. K. B. Monet, U. S. Naval Observatory, Flagstaff Station, P.O. Box 1149,

Flagstaff AZ 86002-1149 [alice@nobs.navy.mil]

0.20-m transit telescope + CCD

ACT

1980 PV₁, 1, 1, 0; 1983 BD, 1, 1, 0; 1990 VZ₄, 1, 1, 0; 1991 NV₁, 1, 1, 0; 1991 TE₅, 1, 1, 0; 1991 TF₇, 2, 2, 1; 1991 XH, 1, 1, 0; 1995 QG₂, 2, 2, 1; 1995 UJ₄, 2, 2, 1; 1996 XU₁, 1, 1, 0; 1996 YF, 1, 1, 0; 1997 BL₂, 1, 1, 0; 3040 P-L, 1, 1, 0; 4886 T-1, 1, 1, 0; 3067 T-2, 2, 2, 13; 4195 T-3, 1, 1, 0; 5174 T-3, 1, 1, 0; (6), 1, 1, 0; (16), 2, 2, 1; (28), 2, 2, 1; (32), 2, 2, 13; (76), 2, 2, 1; (85), 1, 1, 0; (91), 4, 4, 14; (112), 1, 1, 0; (141), 4, 4, 14; (184), 2, 2, 13; (413), 2, 2, 1; (428), 1, 1, 0; (454), 2, 2, 13; (471), 1, 1, 0; (538), 2, 2, 1; (811), 3, 3, 14; (895), 2, 2, 1; (908), 3, 3, 13; (1065), 1, 1, 0; (1793), 1, 1, 0; (1990), 3, 3, 13; (2060), 3, 3, 13; (3231), 2, 2, 1; (3674), 1, 1, 0; (4088), 4, 4, 14; (5196), 1, 1, 0; (5357), 1, 1, 0; (5546), 3, 3, 13; (8645), 1, 1, 0; (8661), 2, 2, 1; (8761), 1, 1, 0; [82, 48, 0*, 1998/05/15–1998/05/29]

691 Kitt Peak, Steward Observatory

T. Gehrels, Space Sciences Building, University of Arizona, Tucson, AZ 85721,

U.S.A. [tgehrels@lpl.arizona.edu]

C. W. Hergenrother, Space Sciences Building, University of Arizona, Tucson, AZ

85721, U.S.A. [chergen@pir1.lpl.arizona.edu]

Observers T. Gehrels, J. Larsen, J. Montani, J. V. Scotti, S. M. Larson,

C. W. Hergenrother

0.91-m Spacewatch telescope + CCD, 2.3-m reflector + CCD

GSC

1976 UB₁₆, 3, 1, 0; 1981 EQ₂₉, 6, 2, 5; 1981 UH₂₈, 5, 2, 8; 1982 UY₆, 3, 1, 0; 1989 UM₁, 3, 1, 0; 1990 QM₉, 5, 2, 6; 1991 FN₂, 3, 1, 0; 1991 GG₆, 3, 1, 0; 1991 SO, 3, 1, 0; 1992 ER₂₈, 2, 1, 0; 1992 SY₁₄, 3, 1, 0; 1992 WJ₂, 3, 1, 0; 1993 CR₁, 3, 1, 0; 1993 FX₂, 3, 1, 0; 1993 FF₇₆, 3, 1, 0; 1993 FF₈₂, 6, 2, 2; 1994 NR₁, 6, 2, 6; 1995 SL₃, 3, 1, 0; 1995 UD₂, 12, 4, 16; 1996 SG₄, 8, 3, 15; 1996 TD₇, 5, 2, 6; 1996 VW₂, 8, 3, 14; 1996 VU₈, 3, 1, 0; 1996 XT₁₆, 3, 1, 0; 1996 XJ₁₉, 3, 1, 0; 1996 XA₃₂, 5, 2, 2; 1997 EB₁, 2, 1, 0; 1998 CS₃, 3, 1, 0; 1998 ED₂₁, 3, 1, 0; 1998 FX₁₄, 2, 1, 0; 1998 FL₄₈, 3, 1, 0; 1998 FC₆₀, 3, 1, 0; 1998 FY₆₁, 3, 1, 0; 1998 FP₆₃, 3, 1, 0; 1998 FQ₆₃, 3, 1, 0; 1998 FP₆₄, 3, 1, 0; 1998 FU₆₄, 3, 1, 0; 1998 FZ₆₆, 3, 1, 0; 1998 FN₆₇, 6, 2, 5; 1998 FP₆₇, 3, 1, 0;

1998 FQ₆₇, 3, 1, 0; 1998 FW₆₇, 3, 1, 0; 1998 FQ₆₉, 6, 2, 9; 1998 FA₇₀, 3, 1, 0; 1998 FG₇₀, 3, 1, 0; 1998 FD₇₂, 3, 1, 0; 1998 FY₇₂, 3, 1, 0; 1998 FC₇₄, 3, 1, 0; 1998 FD₇₄, 3, 1, 0; 1998 FE₇₄, 3, 1, 0; 1998 FF₇₄, 3, 1, 0; 1998 FS₇₆, 9, 3, 18; 1998 FV₇₆, 3, 1, 0; 1998 FY₇₆, 3, 1, 0; 1998 FA₇₇, 3, 1, 0; 1998 FM₇₇, 3, 1, 0; 1998 FJ₇₈, 3, 1, 0; 1998 FT₇₉, 3, 1, 0; 1998 FU₇₉, 3, 1, 0; 1998 FB₁₀₆, 3, 1, 0; 1998 FP₁₁₇, 5, 2, 8; 1998 FR₁₁₇, 8, 3, 11; 1998 FN₁₂₁, 3, 1, 0; 1998 FS₁₂₂, 6, 2, 15; 1998 FU₁₂₂, 3, 1, 0; 1998 FV₁₂₂, 3, 1, 0; 1998 FA₁₂₃, 3, 1, 0; 1998 FC₁₂₃, 3, 1, 0; 1998 FX₁₂₃, 3, 1, 0; 1998 FM₁₂₅, 3, 1, 0; 1998 FJ₁₃₄, 3, 1, 0; 1998 FK₁₃₄, 3, 1, 0; 1998 FM₁₃₄, 3, 1, 0; 1998 FO₁₃₄, 3, 1, 0; 1998 FP₁₃₄, 3, 1, 0; 1998 FQ₁₃₄, 3, 1, 0; 1998 FU₁₃₄, 3, 1, 0; 1998 FV₁₃₄, 3, 1, 0; 1998 FW₁₃₄, 3, 1, 0; 1998 FX₁₃₄, 3, 1, 0; 1998 FY₁₃₄, 3, 1, 0; 1998 FZ₁₃₄, 3, 1, 0; 1998 FA₁₃₅, 3, 1, 0; 1998 FB₁₃₅, 3, 1, 0; 1998 FD₁₃₅, 3, 1, 0; 1998 FE₁₃₅, 3, 1, 0; 1998 FF₁₃₅, 3, 1, 0; 1998 FG₁₃₅, 3, 1, 0; 1998 FM₁₃₅, 3, 1, 0; 1998 HO₇, 3, 1, 0; 1998 HN₈, 3, 1, 0; 1998 HM₁₀, 6, 1, 0; 1998 HT₁₄, 3, 1, 0; 1998 HA₁₅, 3, 1, 0; 1998 HC₁₅, 3, 1, 0; 1998 HT₁₅, 3, 1, 0; 1998 HM₁₆, 3, 1, 0; 1998 HV₁₈, 3, 1, 0; 1998 HP₁₉, 3, 1, 0; 1998 HO₂₀, 3, 1, 0; 1998 HP₂₀, 3, 1, 0; 1998 HA₂₂, 3, 1, 0; 1998 HQ₂₂, 6, 2, 5; 1998 HS₂₂, 6, 2, 5; 1998 HD₂₃, 3, 1, 0; 1998 HF₂₃, 3, 1, 0; 1998 HL₂₃, 6, 2, 9; 1998 HT₂₃, 3, 1, 0; 1998 HC₂₄, 3, 1, 0; 1998 HK₂₄, 3, 1, 0; 1998 HN₂₄, 6, 2, 6; 1998 HQ₂₄, 3, 1, 0; 1998 HA₂₆, 3, 1, 0; 1998 HB₂₇, 3, 1, 0; 1998 HP₂₇, 3, 1, 0; 1998 HQ₂₇, 3, 1, 0; 1998 HV₂₈, 3, 1, 0; 1998 HB₃₀, 6, 2, 9; 1998 HF₃₀, 6, 2, 6; 1998 HL₃₀, 6, 2, 16; 1998 HM₃₀, 3, 1, 0; 1998 HK₃₄, 3, 1, 0; 1998 HS₃₄, 3, 1, 0; 1998 HT₄₁, 3, 1, 0; 1998 HM₄₂, 11, 4, 28; 1998 HA₄₃, 3, 1, 0; 1998 HH₄₃, 9, 3, 61; 1998 HK₄₃, 3, 1, 0; 1998 HU₄₃, 3, 1, 0; 1998 HH₄₄, 3, 1, 0; 1998 HL₄₉, 3, 1, 0; 1998 HQ₄₉, 6, 2, 9; 1998 HR₄₉, 6, 2, 9; 1998 HS₄₉, 6, 2, 9; 1998 HT₄₉, 6, 2, 8; 1998 HU₄₉, 6, 2, 6; 1998 HV₄₉, 6, 2, 6; 1998 HW₄₉, 6, 2, 6; 1998 HX₄₉, 6, 2, 6; 1998 HY₄₉, 6, 2, 6; 1998 HZ₄₉, 6, 2, 6; 1998 HA₅₀, 6, 2, 6; 1998 HB₅₀, 6, 2, 6; 1998 HC₅₀, 6, 2, 6; 1998 HD₅₀, 5, 2, 5; 1998 HE₅₀, 5, 2, 5; 1998 HF₅₀, 6, 2, 5; 1998 HG₅₀, 6, 2, 5; 1998 HH₅₀, 6, 2, 5; 1998 HJ₅₀, 6, 2, 4; 1998 HK₅₀, 6, 2, 4; 1998 HL₅₀, 6, 2, 4; 1998 HM₅₀, 6, 2, 4; 1998 HN₅₀, 6, 2, 4; 1998 HO₅₀, 6, 2, 4; 1998 HP₅₀, 6, 2, 4; 1998 HQ₅₀, 6, 2, 4; 1998 HR₅₀, 6, 2, 4; 1998 HS₅₀, 6, 2, 4; 1998 HZ₅₀, 3, 1, 0; 1998 HS₅₁, 3, 1, 0; 1998 HB₅₂, 3, 1, 0; 1998 HN₆₈, 9, 3, 14; 1998 HO₆₈, 6, 2, 9; 1998 HQ₆₈, 5, 2, 1; 1998 HS₇₂, 6, 2, 8; 1998 HS₇₆, 3, 1, 0; 1998 HA₇₈, 3, 1, 0; 1998 HP₇₈, 8, 3, 14; 1998 HV₇₈, 6, 2, 2; 1998 HW₇₈, 9, 3, 6; 1998 HX₇₈, 8, 3, 15; 1998 HT₇₉, 8, 3, 15; 1998 HY₇₉, 5, 2, 7; 1998 HA₈₀, 6, 2, 1; 1998 HG₈₀, 2, 1, 0; 1998 HH₈₀, 9, 3, 9; 1998 HJ₈₀, 9, 3, 6; 1998 HL₈₀, 6, 2, 2; 1998 HM₈₀, 3, 1, 12; 1998 HT₈₁, 3, 1, 0; 1998 HG₈₅, 2, 1, 0; 1998 HU₈₅, 3, 1, 0; 1998 HX₈₅, 2, 1, 0; 1998 HH₈₆, 6, 2, 2; 1998 HL₈₆, 5, 2, 7; 1998 HV₈₆, 10, 4, 15; 1998 HB₈₇, 11, 4, 7; 1998 HE₈₇, 5, 2, 7; 1998 HF₈₇, 8, 3, 7; 1998 HH₈₇, 5, 2, 3; 1998 HV₈₇, 5, 2, 8; 1998 HZ₈₇, 7, 3, 8; 1998 HB₈₈, 8, 3, 8; 1998 HD₈₈, 12, 4, 16; 1998 HP₈₈, 5, 2, 7; 1998 HV₈₈, 6, 2, 5; 1998 HA₈₉, 9, 3, 5; 1998 HX₈₉, 8, 3, 15; 1998 HV₉₂, 9, 3, 5; 1998 HX₉₂, 5, 2, 7; 1998 HZ₉₂, 9, 3, 5; 1998 HA₉₃, 6, 2, 5; 1998 HR₁₀₇, 3, 1, 0; 1998 HT₁₀₇, 3, 1, 0; 1998 HX₁₀₇, 3, 1, 0; 1998 HN₁₁₀, 3, 1, 0; 1998 HQ₁₁₇, 3, 1, 0; 1998 HL₁₂₃, 3, 1, 0; 1998 HN₁₂₃, 3, 1, 0; 1998 HR₁₂₄, 3, 1, 0; 1998 HH₁₂₅, 5, 2, 43; 1998 HN₁₃₀, 3, 1, 0; 1998 HB₁₄₃, 9, 3, 5; 1998 HV₁₄₃, 12, 4, 13; 1998 HT₁₄₇, 6, 2, 24; 1998 HZ₁₄₇, 3, 1, 0; 1998 HX₁₄₉, 3, 1, 0; 1998 HY₁₄₉, 3, 1, 0; 1998 HZ₁₄₉, 3, 1, 0; 1998 HA₁₅₀, 3, 1, 0; 1998 HB₁₅₀, 3, 1, 0; 1998 HC₁₅₀, 3, 1, 0; 1998 HD₁₅₀, 3, 1, 0; 1998 HE₁₅₀, 3, 1, 0; 1998 HF₁₅₀, 3, 1, 0; 1998 HG₁₅₀, 3, 1, 0; 1998 HH₁₅₀, 3, 1, 0; 1998 HJ₁₅₀, 3, 1, 0; 1998 HK₁₅₀, 3, 1, 0; 1998 HL₁₅₀, 3, 1, 0; 1998 HM₁₅₀, 3, 1, 0; 1998 HN₁₅₀, 3, 1, 0; 1998 HO₁₅₀, 3, 1, 0; 1998 HP₁₅₀, 3, 1, 0; 1998 HQ₁₅₀, 3, 1, 0; 1998 HR₁₅₀, 3, 1, 0; 1998 HS₁₅₀, 3, 1, 0; 1998 HT₁₅₀, 3, 1, 0; 1998 HV₁₅₀, 3, 1, 0; 1998 HW₁₅₀, 3, 1, 0; 1998 JE₃, 1, 0; 1998 JU₃, 1, 0; 1998 JV₃, 1, 0; 1998 JX₃, 1, 0; 1998 JB₁, 3, 1, 0; 1998 JF₂, 2, 1, 0; 1998 JH₂, 6, 2, 2; 1998 JK₂, 6, 2, 2; 1998 JL₂, 6, 2, 2; 1998 JM₂, 6, 2, 2; 1998 JS₂, 3, 1, 0; 1998 JX₂, 9, 3, 14; 1998 KD₂, 5, 2, 2; 1998 KE₂, 6, 2, 2; 1998 KF₂, 12, 4, 15; 1998 KG₂, 6, 2, 2; 1998 KP₂, 6, 2, 3; 1998 KQ₂, 6, 2, 3; 1998 KR₂, 5, 2, 3; 1998 KS₂, 6, 2, 2; 1998 KT₂, 6, 2, 2; 1998 KA₁, 5, 2, 7; 1998 KB₁, 9, 3, 8; 1998 KC₁, 6, 2, 1; 1998 KX₂, 5, 2, 8; 1998 KY₂, 5, 2, 8; 1998 KZ₂, 5, 2, 8; 1998 KA₃, 7, 3, 9; 1998 KB₃, 7, 3, 9; 1998 KC₃, 6, 2, 1; 1998 KG₃, 18, 6, 10; 1998 KX₃, 2, 1, 0; 1998 KF₅, 6, 2, 9; 1998 KG₅, 6, 2, 9; 1998 KH₅, 6, 2, 9; 1998 KJ₅, 6, 2, 9; 1998 KK₅, 6, 2, 9; 1998 KL₅, 6, 2, 9; 1998 KM₅, 6, 2, 9; 1998 KN₅, 6, 2, 8; 1998 KO₅, 6, 2, 9; 1998 KP₅, 9, 3, 11; 1998 KQ₅, 9, 3, 10; 1998 KR₅, 6, 2, 8; 1998 KS₅, 6, 2, 8; 1998 KT₅, 9, 3, 12; 1998 KU₅, 9, 3, 12; 1998 KV₅, 6, 2, 4; 1998 KW₅, 5, 2, 3; 1998 KX₅, 8, 3, 7; 1998 KY₅, 8, 3, 7; 1998 KZ₅, 6, 2, 2; 1998 KA₆, 6, 2, 2; 1998 KB₆, 6, 2, 2; 1998 KC₆, 5, 2, 2; 1998 KD₆, 6, 2, 2; 1998 KE₆, 5, 2, 2; 1998 KB₉, 2, 1, 0; 1998 KF₁₀, 3, 1, 0; 1998 KG₁₀, 6, 2, 10; 1998 KH₁₀, 6, 2, 10; 1998 KK₁₀, 9, 3, 14; 1998 KL₁₀, 9, 3, 14; 1998 KM₁₀, 6, 2, 9; 1998 KN₁₀, 6, 2, 9; 1998 KO₁₀, 6, 2, 9; 1998 KP₁₀, 6, 2, 9; 1998 KQ₁₀, 6, 2, 6; 1998 KR₁₀, 9, 3, 11; 1998 KS₁₀, 9, 3, 11; 1998 KT₁₀, 9, 3, 7; 1998 KU₁₀, 9, 3, 11; 1998 KV₁₀, 9, 3, 11; 1998 KW₁₀, 6, 2, 6; 1998 KX₁₀, 9, 3, 11; 1998 KY₁₀, 9, 3, 11; 1998 KZ₁₀, 6, 2, 6; 1998 KA₁₁, 9, 3, 11; 1998 KB₁₁, 6, 2, 6; 1998 KC₁₁, 6, 2, 6; 1998 KD₁₁, 6, 2, 5; 1998 KE₁₁, 9, 3, 9; 1998 KF₁₁, 9, 3, 9; 1998 KG₁₁, 6, 2, 4; 1998 KH₁₁, 5, 2, 4; 1998 KJ₁₁, 6, 2, 2; 1998 KK₁₁, 6, 2, 1; 1998 KL₁₁, 6, 2, 7; 1998 KM₁₁, 6, 2, 7; 1998 KN₁₁, 5, 2, 7; 1998 KO₁₁, 4, 2, 6; 1998 KP₁₁, 6, 2, 6; 1998 KQ₁₁, 6, 2, 6; 1998 KR₁₁, 6, 2, 6; 1998 KS₁₁, 6, 2, 6; 1998 KT₁₁, 9, 3, 8; 1998 KU₁₁, 9, 3, 10; 1998 KV₁₁, 6, 2, 3; 1998 KW₁₁, 6, 2, 3; 1998 KX₁₁, 6, 2, 3; 1998 KY₁₁, 6, 2, 3; 1998 KZ₁₁, 6, 2, 3; 1998 KA₁₂, 6, 2, 2; 1998 KB₁₂, 6, 2, 2; 1998 KC₁₂, 5, 2, 2; 1998 KD₁₂, 6, 2, 2; 1998 KE₁₂, 6, 2, 2; 1998 KF₁₂, 6, 2, 2; 1998 KG₁₂, 6, 2, 2; 1998 KH₁₂, 9, 3, 6;

1998 KJ₁₂, 6, 2, 2; 1998 KK₁₂, 6, 2, 2; 1998 KL₁₂, 6, 2, 2; 1998 KM₁₂, 6, 2, 2; 1998 KN₁₂, 5, 2, 2; 1998 KO₁₂, 6, 2, 2; 1998 KP₁₂, 6, 2, 1; 1998 KA₁₇, 5, 2, 6; 1998 KB₁₇, 5, 2, 6; 1998 KC₁₇, 8, 3, 4; 1998 KD₁₇, 8, 3, 5; 1998 KE₁₇, 6, 2, 3; 1998 KF₁₇, 6, 2, 3; 1998 KG₁₇, 6, 2, 3; 1998 KK₂₆, 9, 3, 10; 1998 KL₂₆, 5, 2, 7; 1998 KM₂₆, 9, 3, 5; 1998 KN₂₆, 9, 3, 5; 1998 KO₂₆, 6, 2, 5; 1998 KP₂₆, 6, 2, 4; 1998 KQ₂₆, 6, 2, 4; 1998 KR₂₆, 9, 3, 5; 1998 KS₂₆, 5, 2, 4; 1998 KT₂₆, 6, 2, 4; 1998 KU₂₆, 6, 2, 3; 1998 KV₂₆, 6, 2, 1; 1998 KY₂₆, 19, 5, 8; 1998 KE₃₂, 3, 1, 0; 1998 KN₃₂, 3, 1, 0; 1998 KZ₄₁, 9, 3, 6; 1998 KA₄₂, 6, 2, 6; 1998 KB₄₂, 6, 2, 6; 1998 KC₄₂, 6, 2, 5; 1998 KD₄₂, 6, 2, 4; 1998 KE₄₂, 6, 2, 4; 1998 KF₄₂, 6, 2, 4; 1998 KG₄₂, 6, 2, 4; 1998 KH₄₂, 6, 2, 4; 1998 KT₄₂, 6, 2, 6; 1998 KU₄₂, 6, 2, 5; 1998 KV₄₂, 6, 2, 5; 1998 KW₄₂, 6, 2, 5; 1998 KX₄₂, 6, 2, 5; 1998 KY₄₂, 6, 2, 5; 1998 KZ₄₂, 6, 2, 5; 1998 KA₄₃, 6, 2, 5; 1998 KB₄₃, 6, 2, 5; 1998 KC₄₃, 6, 2, 5; 1998 KD₄₃, 6, 2, 5; 1998 KE₄₃, 6, 2, 5; 1998 KF₄₃, 5, 2, 5; 1998 KG₄₃, 5, 2, 5; 1998 KH₄₃, 5, 2, 5; 1998 KJ₄₃, 6, 2, 4; 1998 KK₄₃, 6, 2, 4; 1998 KL₄₃, 6, 2, 4; 1998 KM₄₃, 6, 2, 4; 1998 KN₄₃, 6, 2, 4; 1998 KO₄₃, 6, 2, 4; 1998 KP₄₃, 6, 2, 4; 1998 KL₅₀, 4, 2, 4; 1998 KG₅₃, 3, 1, 0; 2091 P-L, 3, 1, 0; 4300 T-1, 1, 1, 0; 1355 T-2, 3, 1, 0; 3198 T-2, 6, 2, 13; 4102 T-3, 3, 1, 0; (360), 3, 1, 0; (1255), 5, 2, 7; (1325), 3, 1, 0; (1363), 3, 1, 0; (1420), 6, 2, 5; (1846), 3, 1, 0; (2362), 8, 3, 15; (2433), 2, 1, 0; (2622), 1, 1, 0; (3377), 3, 1, 0; (3528), 3, 1, 0; (3642), 3, 1, 0; (4039), 3, 1, 0; (4595), 3, 1, 0; (4685), 3, 1, 0; (4852), 3, 1, 0; (5191), 6, 2, 14; (5473), 3, 1, 0; (5508), 3, 1, 0; (5699), 4, 2, 7; (6384), 3, 1, 0; (6642), 3, 1, 0; (6652), 3, 1, 0; (7618), 3, 1, 0; (8460), 3, 1, 0; (8518), 3, 1, 0; (8606), 3, 1, 0; [2267, 446, 209*, 1998/02/02–1998/06/05]

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Observers C. W. Hergenrother, S. M. Larson

Measur C. W. Hergenrother

1.5m reflector

USNO-A1.0

(2204), 3, 1, 0; [3, 1, 0*, 1998/05/27]

696 F. L. Whipple Observatory, Mount Hopkins

B. G. Marsden, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. [bmarsden@cfa.harvard.edu]

Observers C. W. Hergenrother, M. J. Holman

1.2-m *f*/8 reflector + CCD

USNO-A1.0

1994 JR₁, 2, 1, 0; 1994 LC₁, 6, 2, 17; 1995 KF₃, 3, 1, 0; 1995 KZ₃, 3, 1, 0; 1997 VZ₄, 2, 1, 0; 1998 FS₁₁, 3, 1, 0; 1998 FG₁₂, 3, 1, 0; 1998 FC₅₉, 3, 1, 0; 1998 FR₆₃, 3, 1, 0; 1998 GL₁₀, 3, 1, 0; 1998 HH₁, 3, 1, 0; 1998 HL₁, 3, 1, 0; 1998 HK₄₉, 3, 1, 0; 1998 HU₁₀₈, 3, 1, 0; (182), 3, 1, 0; (1422), 3, 1, 0; [49, 16, 0*, 1998/05/02–1998/05/19]

699 Lowell Observatory–LONEOS

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U.S.A. [elgb@lowell.edu]

Observers B. A. Skiff, B. W. Koehn

Measurers B. W. Koehn, E. Bowell

0.59-m LONEOS Schmidt + CCD

USNO-A1.0

1942 TB₆, 2, 18; 1973 SQ₃, 6, 2, 1; 1976 GA₂, 9, 3, 18; 1976 UG₂, 6, 2, 18; 1977 EK₁, 3, 1, 0; 1977 EU₉, 3, 1, 0; 1978 RQ₁, 3, 1, 0; 1978 RR₁, 9, 3, 19; 1978 TL₄, 3, 1, 0; 1978 TT₈, 3, 1, 0; 1978 UN₄, 3, 1, 0; 1978 VP₂, 6, 2, 17; 1979 YQ₆, 2, 6; 1981 EP₁, 3, 1, 0; 1981 EQ₄, 3, 1, 0; 1981 EF₅, 6, 2, 17; 1981 EO₇, 1, 1, 0; 1981 EF₁₄, 6, 2, 5; 1981 ED₁₆, 3, 1, 0; 1981 EM₁₇, 12, 4, 19; 1981 EQ₂₃, 6, 2, 24; 1981 EU₃₈, 3, 1, 0; 1981 QE₂, 3, 1, 0; 1981 RF₂, 3, 1, 0; 1981 UM₁₁, 12, 4, 19; 1981 UU₁₁, 6, 2, 20; 1981 UD₂₃, 6, 2, 27; 1981 UH₂₈, 3, 1, 0; 1982 JM₁, 6, 2, 13; 1982 QY₁, 6, 2, 27; 1982 SC₃, 2, 1, 0; 1982 UY₆, 6, 2, 4; 1983 XG₉, 3, 19; 1984 DR₃, 3, 1, 0; 1984 DZ₃, 3, 1, 0; 1984 EU₁, 3, 1, 0; 1985 JU₁, 6, 2, 38; 1985 RW₂, 6, 2, 13; 1985 RQ₃, 9, 3, 12; 1985 RR₄, 3, 1, 0; 1985 TS₃, 3, 1, 0; 1985 VJ₁, 6, 2, 3; 1987 BW₁, 3, 1, 0; 1987 DO₃, 3, 1, 0; 1987 DP₆, 6, 2, 4; 1987 XC₃, 3, 1, 0; 1988 CK₄, 3, 1, 0; 1988 PZ₁, 9, 3, 27; 1988 PO₂, 3, 1, 0; 1988 RM₃, 3, 1, 0; 1988 RW₃, 3, 1, 0; 1988 RZ₅, 9, 3, 3; 1988 RC₇, 5, 2, 1; 1988 RF₉, 5, 2, 6; 1988 RV₁₀, 12, 4, 19; 1988 ST₂, 5, 2, 17; 1988 VE₇, 2, 1, 0; 1989 CO₅, 5, 2, 33; 1989 EC₃, 6, 2, 20; 1989 RW₉, 9, 3, 19; 1989 SO₃, 3, 1, 0; 1989 SZ₁, 3, 1, 0; 1989 SV₂, 3, 1, 0; 1989 SX₂, 9, 3, 19; 1989 SA₃, 3, 1, 0; 1989 SB₄, 3, 1, 0; 1989 SC₄, 6, 2, 6; 1989 TF₄, 12, 4, 32;

1989 TP₇, 6, 2, 18; 1989 UW₂, 3, 1, 0; 1989 UB₈, 3, 1, 0; 1989 WT, 6, 2, 17; 1989 YV₄, 3, 1, 0; 1990 BC₂, 6, 2, 1; 1990 EK, 3, 1, 0; 1990 EC₁, 3, 1, 0; 1990 EM₁, 3, 1, 0; 1990 FQ, 3, 1, 0; 1990 HP, 6, 2, 1; 1990 KF, 3, 1, 0; 1990 QR, 3, 1, 0; 1990 QZ₅, 6, 2, 1; 1990 QO₆, 3, 1, 0; 1990 QU₇, 6, 2, 1; 1990 QB₈, 3, 1, 0; 1990 TO₃, 6, 2, 17; 1990 TG₈, 6, 2, 23; 1990 UB₁, 3, 1, 0; 1990 VZ₄, 9, 3, 38; 1990 VZ₆, 3, 1, 0; 1990 XB, 9, 3, 23; 1990 XU, 3, 1, 0; 1991 AB₂, 3, 1, 0; 1991 CX, 3, 1, 0; 1991 EN₂, 3, 1, 0; 1991 FS, 3, 1, 0; 1991 FT₂, 3, 1, 0; 1991 GR₃, 3, 1, 0; 1991 GL₇, 3, 1, 0; 1991 GE₈, 3, 1, 0; 1991 GJ₈, 3, 1, 0; 1991 GC₁₀, 6, 2, 17; 1991 LB, 3, 1, 0; 1991 LH₁, 6, 2, 24; 1991 NB₄, 3, 1, 0; 1991 PA₇, 6, 2, 23; 1991 PT₇, 6, 2, 17; 1991 PL₁₃, 6, 2, 1; 1991 PG₁₅, 9, 3, 2; 1991 RO₂, 9, 3, 5; 1991 RP₂₃, 3, 1, 0; 1991 RT₂₆, 9, 3, 25; 1991 SR₁, 6, 2, 28; 1991 TV₁, 3, 1, 0; 1991 UZ, 6, 2, 20; 1991 UL₃, 6, 2, 1; 1991 VU, 3, 1, 0; 1991 VW₅, 6, 2, 4; 1991 XD, 9, 3, 32; 1991 XH, 12, 3, 12; 1991 YO, 3, 1, 0; 1992 BF₄, 3, 1, 0; 1992 CZ₁, 9, 3, 36; 1992 DC₃, 9, 3, 17; 1992 EE₇, 6, 2, 6; 1992 EE₁₁, 3, 1, 0; 1992 EA₂₂, 6, 2, 6; 1992 GA₄, 3, 1, 0; 1992 PO₂, 3, 1, 0; 1992 RP₃, 3, 1, 0; 1992 SO, 3, 1, 0; 1992 SY₁₄, 3, 1, 0; 1992 US₁, 3, 1, 0; 1992 UY₃, 3, 1, 0; 1992 WJ₂, 6, 2, 25; 1992 WC₃, 6, 2, 2; 1992 WU₃, 3, 1, 0; 1992 YS, 6, 2, 1; 1992 YJ₂, 9, 3, 19; 1992 YM₂, 3, 1, 0; 1993 BA, 6, 2, 1; 1993 BR₃, 6, 2, 1; 1993 CR₁, 3, 1, 0; 1993 FN₁, 3, 1, 0; 1993 FH₅, 3, 1, 0; 1993 FN₁₆, 3, 1, 0; 1993 FS₂₇, 6, 2, 33; 1993 FT₃₃, 3, 1, 0; 1993 FO₃₆, 9, 3, 32; 1993 FW₃₆, 6, 2, 17; 1993 FF₈₂, 6, 2, 22; 1993 GL₆, 2, 27; 1993 LE, 3, 1, 0; 1994 BX, 3, 1, 0; 1994 BS₄, 6, 2, 10; 1994 CL₁₄, 3, 1, 0; 1994 EB, 6, 2, 1; 1994 EP, 6, 2, 27; 1994 EL₃, 6, 2, 27; 1994 EG₆, 6, 2, 1; 1994 EJ₇, 9, 3, 38; 1994 FF, 6, 2, 6; 1994 GB₉, 3, 1, 0; 1994 HA, 12, 4, 25; 1994 JN, 3, 1, 0; 1994 JU₈, 3, 1, 0; 1994 JG₉, 9, 3, 32; 1994 PQ₁₄, 6, 2, 2; 1994 PC₃₄, 3, 1, 0; 1994 PS₃₇, 3, 1, 0; 1994 RC₁, 3, 1, 0; 1994 TX₁₂, 3, 1, 0; 1994 UN₁, 9, 3, 19; 1994 VR₆, 6, 2, 17; 1994 WQ₃, 12, 3, 12; 1995 HK, 3, 1, 0; 1995 OD, 6, 2, 18; 1995 OJ, 9, 3, 25; 1995 QR, 9, 3, 36; 1995 QG₂, 3, 1, 0; 1995 RK, 3, 1, 0; 1995 SH, 9, 3, 32; 1995 SX, 6, 2, 26; 1995 SC₂, 3, 1, 0; 1995 SL₂, 3, 1, 0; 1995 SX₁₉, 3, 1, 0; 1995 SO₂₆, 3, 1, 0; 1995 TT, 3, 1, 0; 1995 UL, 6, 2, 5; 1995 UB₁, 3, 1, 0; 1995 UD₂, 3, 1, 0; 1995 UJ₄, 9, 3, 20; 1995 UK₄, 6, 2, 18; 1995 UU₄, 3, 1, 0; 1995 UP₆, 3, 1, 0; 1995 UB₇, 6, 2, 18; 1995 VY, 3, 1, 0; 1995 WH, 9, 3, 19; 1995 WL, 6, 2, 25; 1995 WJ₅, 3, 1, 0; 1995 WY₆, 6, 2, 30; 1995 WL₇, 6, 2, 18; 1995 YA, 6, 2, 17; 1995 YF, 6, 2, 6; 1995 YB₂, 3, 1, 0; 1995 YP₂, 12, 4, 26; 1995 YK₃, 3, 1, 0; 1996 CC, 3, 1, 0; 1996 SH₆, 3, 1, 0; 1996 TD₇, 6, 2, 1; 1996 TN₁₂, 3, 1, 0; 1996 UN, 6, 2, 23; 1996 VN, 3, 1, 0; 1996 VM₁, 3, 1, 0; 1996 VW₂, 3, 1, 0; 1996 VT₄, 3, 1, 0; 1996 VM₅, 6, 2, 1; 1996 VH₈, 9, 3, 3; 1996 VU₈, 6, 2, 1; 1996 VG₁₁, 3, 1, 0; 1996 VX₁₅, 9, 3, 3; 1996 VZ₂₉, 9, 3, 19; 1996 VH₃₀, 3, 1, 0; 1996 VO₃₀, 3, 1, 0; 1996 VQ₃₀, 12, 4, 20; 1996 WQ₁, 6, 2, 17; 1996 WE₃, 3, 1, 0; 1996 XV₁, 3, 1, 0; 1996 XE₂, 6, 2, 1; 1996 XG₂, 3, 1, 0; 1996 XW₂, 6, 2, 38; 1996 XF₃, 3, 1, 0; 1996 XA₁₈, 3, 1, 0; 1996 XJ₁₉, 6, 2, 1; 1996 XA₃₂, 6, 2, 30; 1996 XG₃₂, 3, 1, 0; 1996 YT, 3, 1, 0; 1996 YG₁, 6, 2, 19; 1996 YD₂, 6, 2, 5; 1997 AO₂, 6, 2, 26; 1997 AR₂, 3, 1, 0; 1997 AM₄, 3, 1, 0; 1997 AO₄, 3, 1, 0; 1997 AR₄, 6, 2, 27; 1997 AU₆, 6, 2, 33; 1997 AS₁₆, 6, 2, 33; 1997 AS₁₇, 6, 2, 1; 1997 AK₁₉, 9, 3, 23; 1997 AF₂₁, 3, 1, 0; 1997 AM₂₁, 6, 2, 20; 1997 BU₁, 6, 2, 27; 1997 BA₂, 3, 1, 0; 1997 BL₂, 3, 1, 0; 1997 CO, 3, 1, 0; 1997 CF₃, 3, 1, 0; 1997 CN₅, 3, 1, 0; 1997 CA₂₀, 3, 1, 0; 1997 CW₂₇, 3, 1, 0; 1997 CM₂₈, 3, 1, 0; 1997 EL, 9, 3, 19; 1997 EQ₂₅, 6, 2, 11; 1997 GQ₂₇, 3, 1, 0; 1998 AH₃, 3, 1, 0; 1998 AU₉, 9, 3, 18; 1998 CA₂, 3, 1, 0; 1998 DL₁, 3, 1, 0; 1998 DZ₅, 3, 1, 0; 1998 DT₁₁, 3, 1, 0; 1998 DE₁₄, 9, 3, 61; 1998 DF₁₄, 6, 2, 1; 1998 DN₂₃, 3, 1, 0; 1998 DC₂₄, 3, 1, 0; 1998 ED, 3, 1, 0; 1998 EG₂, 3, 1, 0; 1998 EW₂, 3, 1, 0; 1998 ER₃, 3, 1, 0; 1998 EE₁₁, 3, 1, 0; 1998 EP₁₁, 6, 2, 1; 1998 EA₁₂, 3, 1, 0; 1998 EF₁₂, 3, 1, 0; 1998 EK₁₂, 3, 1, 0; 1998 EU₁₂, 3, 1, 0; 1998 ER₁₄, 3, 1, 0; 1998 FO, 6, 2, 8; 1998 FK₂, 3, 1, 0; 1998 FQ₂, 6, 2, 1; 1998 FF₄, 6, 2, 26; 1998 FK₅, 3, 1, 0; 1998 FO₈, 3, 1, 0; 1998 FT₈, 3, 1, 0; 1998 FF₁₀, 3, 1, 0; 1998 FY₁₄, 3, 1, 0; 1998 FO₁₅, 3, 1, 0; 1998 FZ₁₅, 6, 2, 12; 1998 FB₁₆, 6, 2, 1; 1998 FF₁₆, 9, 3, 2; 1998 FK₂₆, 3, 1, 0; 1998 FS₄₉, 3, 1, 0; 1998 FN₅₄, 6, 2, 8; 1998 FT₅₄, 3, 1, 0; 1998 FK₅₈, 3, 1, 0; 1998 FR₅₈, 3, 1, 0; 1998 FM₅₉, 3, 1, 0; 1998 FU₅₉, 3, 1, 0; 1998 FU₆₀, 3, 1, 0; 1998 FV₆₀, 6, 2, 55; 1998 FD₆₁, 3, 1, 0; 1998 FH₆₁, 3, 1, 0; 1998 FL₆₁, 3, 1, 0; 1998 FD₆₂, 3, 1, 0; 1998 FK₆₂, 6, 2, 3; 1998 FM₆₂, 6, 2, 1; 1998 FY₆₂, 6, 2, 2; 1998 FT₆₂, 9, 3, 3; 1998 FC₆₃, 3, 1, 0; 1998 FH₆₃, 9, 3, 3; 1998 FK₆₃, 6, 2, 1; 1998 FZ₆₃, 9, 3, 3; 1998 FH₆₄, 2, 1, 0; 1998 FQ₆₄, 3, 1, 0; 1998 FS₆₄, 3, 1, 0; 1998 FU₆₄, 9, 3, 3; 1998 FX₆₄, 3, 1, 0; 1998 FZ₆₄, 3, 1, 0; 1998 FC₆₅, 9, 3, 3; 1998 FE₆₅, 3, 1, 0; 1998 FG₆₅, 15, 5, 27; 1998 FH₆₅, 6, 2, 1; 1998 FS₆₅, 3, 1, 0; 1998 FV₆₅, 3, 1, 0; 1998 FY₆₅, 3, 1, 0; 1998 FC₆₆, 6, 2, 2; 1998 FD₆₆, 9, 3, 3; 1998 FF₆₆, 3, 1, 0; 1998 FG₆₆, 9, 3, 3; 1998 FJ₆₆, 3, 1, 0; 1998 FL₆₆, 5, 2, 1; 1998 FT₆₆, 6, 2, 2; 1998 FH₆₇, 6, 2, 2; 1998 FQ₆₇, 3, 1, 0; 1998 FR₆₇, 9, 3, 3; 1998 FV₆₇, 9, 3, 3; 1998 FD₆₈, 3, 1, 0; 1998 FF₆₈, 3, 1, 0; 1998 FJ₆₈, 6, 2, 2; 1998 FM₆₈, 3, 1, 0; 1998 FO₆₈, 3, 1, 0; 1998 FS₆₈, 3, 1, 0; 1998 FU₆₈, 3, 1, 0; 1998 FZ₆₈, 9, 3, 3; 1998 FE₆₉, 3, 1, 0; 1998 FG₆₉, 3, 1, 0; 1998 FO₆₉, 6, 2, 2; 1998 FT₆₉, 6, 2, 2; 1998 FU₆₉, 6, 2, 3; 1998 FW₆₉, 9, 3, 3; 1998 FX₆₉, 6, 2, 2; 1998 FF₇₀, 6, 2, 1; 1998 FJ₇₀, 6, 2, 2; 1998 FL₇₀, 9, 3, 3; 1998 FM₇₀, 6, 2, 3; 1998 FP₇₀, 9, 3, 3; 1998 FR₇₀, 3, 1, 0; 1998 FS₇₀, 3, 1, 0; 1998 FV₇₀, 9, 3, 3; 1998 FA₇₁, 6, 2, 1; 1998 FL₇₁, 3, 1, 0; 1998 FM₇₁, 3, 1, 0; 1998 FN₇₁, 3, 1, 0; 1998 FA₇₃, 3, 1, 0; 1998 FY₇₃, 3, 1, 0; 1998 FZ₇₃, 3, 1, 0; 1998 FA₇₄, 3, 1, 0; 1998 FC₇₄, 9, 3, 3; 1998 FX₇₄, 3, 1, 0; 1998 FC₇₅, 3, 1, 0; 1998 FF₇₅, 3, 1, 0; 1998 FL₇₅, 3, 1, 0; 1998 FY₇₆, 6, 2, 2; 1998 FA₇₇, 9, 3, 3; 1998 FB₇₇, 3, 1, 0; 1998 FN₇₈, 3, 1, 0; 1998 FV₇₈, 5, 2, 1; 1998 FM₇₉, 3, 1, 0; 1998 FP₇₉, 3, 1, 0; 1998 FR₇₉, 3, 1, 0; 1998 FS₇₉, 9, 3, 50; 1998 FO₁₀₄, 3, 1, 0; 1998 FK₁₀₅, 3, 1, 0; 1998 FK₁₀₆, 3, 1, 0; 1998 FP₁₀₆, 3, 1, 0; 1998 FB₁₀₉, 3, 1, 0; 1998 FP₁₁₁, 3, 1, 0; 1998 FX₁₁₁, 3, 1, 0; 1998 FZ₁₁₂, 3, 1, 0; 1998 FB₁₁₄, 3, 1, 0; 1998 FL₁₁₄, 3, 1, 0; 1998 FX₁₁₄, 6, 2, 28; 1998 FE₁₁₅, 6, 2, 28; 1998 FG₁₁₅, 6, 2, 5; 1998 FO₁₁₅, 3, 1, 0; 1998 FP₁₁₅, 6, 2, 5; 1998 FX₁₁₅, 3, 1, 0; 1998 FG₁₁₆, 3, 1, 0; 1998 FW₁₁₆, 6, 2, 5; 1998 FY₁₁₆, 3, 1, 0; 1998 FB₁₁₇, 3, 1, 0;

1998 FC₁₁₇, 3, 1, 0; 1998 FF₁₁₇, 3, 1, 0; 1998 FH₁₁₇, 3, 1, 0; 1998 FL₁₁₇, 6, 2, 5; 1998 FR₁₁₇, 3, 1, 0; 1998 FW₁₁₇, 3, 1, 0; 1998 FX₁₁₇, 3, 1, 0; 1998 FY₁₁₇, 6, 2, 5; 1998 FZ₁₁₇, 3, 1, 0; 1998 FB₁₁₈, 3, 1, 0; 1998 FC₁₁₈, 3, 1, 0; 1998 FE₁₁₈, 3, 1, 0; 1998 FH₁₁₈, 3, 1, 0; 1998 FJ₁₁₈, 6, 2, 5; 1998 FK₁₁₈, 3, 1, 0; 1998 FN₁₁₈, 3, 1, 0; 1998 FP₁₁₈, 3, 1, 0; 1998 FR₁₁₈, 3, 1, 0; 1998 FV₁₁₈, 3, 1, 0; 1998 FX₁₁₈, 3, 1, 0; 1998 FN₁₁₉, 3, 1, 0; 1998 FS₁₂₁, 3, 1, 0; 1998 FT₁₂₁, 3, 1, 0; 1998 FB₁₂₂, 3, 1, 0; 1998 FM₁₂₂, 3, 1, 0; 1998 FT₁₂₂, 6, 2, 1; 1998 FV₁₂₂, 3, 1, 0; 1998 FA₁₂₃, 3, 1, 0; 1998 FH₁₂₃, 3, 1, 0; 1998 FR₁₂₃, 3, 1, 0; 1998 FL₁₂₅, 3, 1, 0; 1998 FM₁₂₅, 3, 1, 0; 1998 FJ₁₂₆, 3, 1, 0; 1998 FK₁₂₆, 3, 1, 0; 1998 FM₁₂₆, 3, 1, 0; 1998 GK, 6, 2, 1; 1998 GW, 3, 1, 0; 1998 GG₁, 3, 1, 0; 1998 GO₁, 6, 2, 26; 1998 GD₉, 3, 1, 0; 1998 GE₉, 3, 1, 0; 1998 GK₁₀, 3, 1, 0; 1998 GO₁₀, 3, 1, 0; 1998 GG₁₁, 3, 1, 0; 1998 HW, 3, 1, 0; 1998 HX, 6, 2, 3; 1998 HE₁, 3, 1, 0; 1998 HD₂, 6, 2, 30; 1998 HE₂, 3, 1, 0; 1998 HX₂, 3, 1, 0; 1998 HB₃, 3, 1, 0; 1998 HD₃, 3, 1, 0; 1998 HF₃, 6, 2, 28; 1998 HT₄, 3, 1, 0; 1998 HV₄, 12, 4, 22; 1998 HA₆, 6, 2, 51; 1998 HN₆, 3, 1, 0; 1998 HU₆, 9, 3, 19; 1998 HV₆, 12, 4, 27; 1998 HW₆, 9, 3, 32; 1998 HK₇, 3, 1, 0; 1998 HL₇, 6, 2, 1; 1998 HO₇, 3, 1, 0; 1998 HP₇, 6, 2, 6; 1998 HR₇, 3, 1, 0; 1998 HU₇, 3, 1, 0; 1998 HV₇, 3, 1, 0; 1998 HW₇, 9, 3, 30; 1998 HD₈, 6, 2, 32; 1998 HE₈, 3, 1, 0; 1998 HH₈, 6, 2, 27; 1998 HT₈, 3, 1, 0; 1998 HJ₉, 6, 2, 6; 1998 HM₁₁, 6, 2, 6; 1998 HE₁₂, 3, 1, 0; 1998 HJ₁₂, 3, 1, 0; 1998 HA₁₃, 6, 2, 23; 1998 HB₁₄, 6, 2, 6; 1998 HH₁₄, 3, 1, 0; 1998 HC₁₅, 3, 1, 0; 1998 HB₁₈, 6, 2, 37; 1998 HC₁₈, 3, 1, 0; 1998 HO₁₈, 6, 2, 1; 1998 HV₁₈, 6, 2, 28; 1998 HX₁₈, 3, 1, 0; 1998 HY₁₈, 3, 1, 0; 1998 HM₁₉, 6, 2, 2; 1998 HS₁₉, 6, 2, 32; 1998 HC₂₀, 6, 2, 1; 1998 HE₂₀, 6, 2, 18; 1998 HF₂₀, 9, 3, 19; 1998 HC₂₁, 3, 1, 0; 1998 HC₂₂, 6, 2, 1; 1998 HS₂₂, 3, 1, 0; 1998 HN₂₃, 6, 2, 1; 1998 HO₂₃, 6, 2, 49; 1998 HQ₂₃, 6, 2, 1; 1998 HC₂₄, 3, 1, 0; 1998 HP₂₄, 9, 3, 24; 1998 HQ₂₄, 3, 1, 0; 1998 HR₂₄, 9, 3, 21; 1998 HU₂₄, 9, 3, 37; 1998 HL₂₇, 6, 2, 20; 1998 HD₂₉, 9, 3, 40; 1998 HL₃₀, 6, 2, 1; 1998 HO₃₀, 6, 2, 1; 1998 HS₃₀, 6, 2, 6; 1998 HU₃₁, 9, 3, 38; 1998 HV₃₁, 9, 3, 38; 1998 HW₃₁, 3, 1, 0; 1998 HY₃₁, 3, 1, 0; 1998 HZ₃₁, 6, 2, 39; 1998 HB₃₂, 6, 2, 38; 1998 HO₃₂, 3, 1, 0; 1998 HQ₃₂, 3, 1, 0; 1998 HU₃₂, 3, 1, 0; 1998 HX₃₂, 3, 1, 0; 1998 HC₃₃, 3, 1, 0; 1998 HR₃₃, 3, 1, 0; 1998 HY₃₃, 3, 1, 0; 1998 HK₃₄, 9, 3, 3; 1998 HS₃₄, 12, 4, 37; 1998 HO₃₅, 3, 1, 0; 1998 HR₃₅, 3, 1, 0; 1998 HY₃₅, 6, 2, 27; 1998 HZ₃₆, 3, 1, 0; 1998 HC₃₇, 6, 2, 36; 1998 HM₃₇, 6, 2, 5; 1998 HP₃₇, 3, 1, 0; 1998 HQ₃₇, 3, 1, 0; 1998 HR₃₇, 3, 1, 0; 1998 HT₃₇, 3, 1, 0; 1998 HY₃₇, 3, 1, 0; 1998 HZ₃₇, 3, 1, 0; 1998 HB₃₈, 9, 3, 36; 1998 HE₃₈, 3, 1, 0; 1998 HG₃₈, 12, 3, 36; 1998 HM₃₈, 3, 1, 0; 1998 HN₃₈, 3, 1, 0; 1998 HG₃₉, 3, 1, 0; 1998 HJ₃₉, 3, 1, 0; 1998 HK₃₉, 3, 1, 0; 1998 HN₃₉, 3, 1, 0; 1998 HV₃₉, 3, 1, 0; 1998 HD₄₀, 6, 2, 33; 1998 HE₄₀, 3, 1, 0; 1998 HS₄₂, 6, 2, 1; 1998 HE₄₃, 6, 2, 4; 1998 HH₄₃, 6, 2, 6; 1998 HK₄₃, 3, 1, 0; 1998 HL₄₃, 9, 3, 33; 1998 HU₄₃, 6, 2, 31; 1998 HH₄₄, 3, 1, 0; 1998 HP₄₄, 3, 1, 0; 1998 HH₄₅, 3, 1, 0; 1998 HL₄₅, 3, 1, 0; 1998 HO₄₅, 3, 1, 0; 1998 HQ₄₅, 3, 1, 0; 1998 HR₄₅, 3, 1, 0; 1998 HT₄₅, 3, 1, 0; 1998 HN₄₉, 12, 4, 29; 1998 HO₄₉, 3, 1, 0; 1998 HT₅₀, 6, 2, 5; 1998 HU₅₀, 6, 2, 5; 1998 HV₅₀, 9, 3, 36; 1998 HW₅₀, 6, 2, 5; 1998 HX₅₀, 6, 2, 5; 1998 HY₅₀, 6, 2, 5; 1998 HZ₅₀, 6, 2, 6; 1998 HA₅₁, 6, 2, 10; 1998 HB₅₁, 6, 2, 10; 1998 HC₅₁, 6, 2, 5; 1998 HD₅₁, 6, 2, 6; 1998 HE₅₁, 12, 4, 27; 1998 HF₅₁, 9, 3, 27; 1998 HG₅₁, 15, 5, 33; 1998 HH₅₁, 9, 3, 27; 1998 HJ₅₁, 12, 4, 38; 1998 HK₅₁, 9, 3, 38; 1998 HL₅₁, 9, 3, 33; 1998 HM₅₁, 6, 2, 6; 1998 HN₅₁, 6, 2, 6; 1998 HO₅₁, 9, 3, 32; 1998 HP₅₁, 6, 2, 3; 1998 HQ₅₁, 12, 4, 7; 1998 HR₅₁, 6, 2, 1; 1998 HS₅₁, 6, 2, 1; 1998 HT₅₁, 9, 3, 25; 1998 HU₅₁, 9, 3, 25; 1998 HV₅₁, 6, 2, 1; 1998 HW₅₁, 6, 2, 1; 1998 HX₅₁, 6, 2, 1; 1998 HY₅₁, 6, 2, 1; 1998 HZ₅₁, 6, 2, 1; 1998 HA₅₂, 6, 2, 1; 1998 HB₅₂, 6, 2, 1; 1998 HC₅₂, 6, 2, 1; 1998 HD₅₂, 6, 2, 1; 1998 HE₅₂, 6, 2, 1; 1998 HF₅₂, 9, 3, 25; 1998 HG₅₂, 6, 2, 1; 1998 HH₅₂, 6, 2, 1; 1998 HJ₅₂, 3, 1, 0; 1998 HK₅₂, 9, 3, 19

1998 HE₁₂₁, 9, 3, 32; 1998 HG₁₂₁, 9, 3, 38; 1998 HJ₁₂₁, 9, 3, 38; 1998 HM₁₂₁, 3, 1, 0; 1998 HV₁₂₁, 9, 3, 32; 1998 HC₁₂₂, 6, 2, 6; 1998 HE₁₂₂, 6, 2, 6; 1998 HK₁₂₂, 6, 2, 6; 1998 HQ₁₂₂, 3, 1, 0; 1998 HD₁₂₃, 9, 3, 38; 1998 HH₁₂₃, 9, 3, 32; 1998 HL₁₂₃, 3, 1, 0; 1998 HM₁₂₃, 6, 2, 6; 1998 HP₁₂₃, 6, 2, 6; 1998 HR₁₂₃, 6, 2, 6; 1998 HT₁₂₃, 3, 1, 0; 1998 HQ₁₂₄, 6, 2, 6; 1998 HO₁₂₄, 6, 2, 8; 1998 HQ₁₂₄, 3, 1, 0; 1998 HS₁₂₄, 9, 3, 28; 1998 HX₁₂₄, 6, 2, 5; 1998 HD₁₂₅, 3, 1, 0; 1998 HG₁₂₅, 9, 3, 32; 1998 HH₁₂₅, 6, 2, 6; 1998 HJ₁₂₅, 6, 2, 6; 1998 HT₁₂₅, 3, 1, 0; 1998 HU₁₂₅, 3, 1, 0; 1998 HD₁₂₆, 3, 1, 0; 1998 HL₁₂₆, 9, 3, 29; 1998 HF₁₃₁, 3, 1, 0; 1998 HQ₁₃₂, 3, 1, 0; 1998 HV₁₃₂, 3, 1, 0; 1998 HA₁₃₃, 3, 1, 0; 1998 HW₁₃₅, 3, 1, 0; 1998 HW₁₄₀, 3, 1, 0; 1998 HB₁₄₃, 6, 2, 25; 1998 HK₁₄₃, 6, 2, 1; 1998 HP₁₄₄, 3, 1, 0; 1998 HQ₁₄₄, 3, 1, 0; 1998 HF₁₄₅, 9, 3, 32; 1998 HK₁₄₅, 3, 1, 0; 1998 HO₁₄₅, 3, 1, 0; 1998 HP₁₄₅, 6, 2, 23; 1998 HV₁₄₅, 3, 1, 0; 1998 HD₁₄₆, 6, 2, 6; 1998 HH₁₄₆, 3, 1, 0; 1998 HJ₁₄₆, 3, 1, 0; 1998 HX₁₄₆, 6, 2, 6; 1998 HD₁₄₇, 3, 1, 0; 1998 HP₁₄₇, 3, 1, 0; 1998 HT₁₄₇, 9, 3, 32; 1998 HY₁₄₇, 9, 3, 30; 1998 HZ₁₄₇, 9, 3, 20; 1998 HC₁₄₈, 6, 2, 2; 1998 HD₁₄₈, 9, 3, 3; 1998 HE₁₄₈, 6, 2, 1; 1998 HG₁₄₈, 3, 1, 0; 1998 HH₁₄₈, 3, 1, 0; 1998 HJ₁₄₈, 9, 3, 2; 1998 HK₁₄₈, 3, 1, 0; 1998 HO₁₄₈, 6, 2, 1; 1998 HQ₁₄₈, 3, 1, 0; 1998 HS₁₄₈, 3, 1, 0; 1998 HV₁₄₈, 3, 1, 0; 1998 HY₁₄₈, 3, 1, 0; 1998 HZ₁₄₈, 3, 1, 0; 1998 HG₁₄₉, 6, 2, 1; 1998 HJ₁₄₉, 3, 1, 0; 1998 HQ₁₄₉, 3, 1, 0; 1998 HS₁₄₉, 6, 2, 2; 1998 HW₁₅₀, 3, 1, 0; 1998 JD₅, 2, 1; 1998 JE₃, 3, 1, 0; 1998 JK₃, 3, 1, 0; 1998 JP₃, 3, 1, 0; 1998 JQ₃, 3, 1, 0; 1998 JR₃, 3, 1, 0; 1998 JS₃, 3, 1, 0; 1998 JT₃, 3, 1, 0; 1998 JV₃, 3, 1, 0; 1998 JW₁₅, 5, 30; 1998 JX₆, 2, 4; 1998 JY₃, 3, 1, 0; 1998 JZ₆, 2, 24; 1998 JA₁, 3, 1, 0; 1998 JB₁, 3, 1, 0; 1998 JC₁, 6, 2, 4; 1998 JL₁, 3, 1, 0; 1998 JN₁, 3, 1, 0; 1998 JO₁, 6, 2, 27; 1998 JP₁, 3, 1, 0; 1998 JQ₁, 9, 3, 27; 1998 JR₁, 6, 2, 33; 1998 JT₁, 3, 1, 0; 1998 JU₁, 3, 1, 0; 1998 JV₁, 12, 4, 32; 1998 JA₂, 3, 1, 0; 1998 JB₂, 9, 3, 18; 1998 JC₂, 12, 4, 19; 1998 JD₂, 12, 4, 19; 1998 JE₂, 3, 1, 0; 1998 JF₂, 9, 3, 2; 1998 JG₂, 3, 1, 0; 1998 JO₂, 12, 4, 32; 1998 JP₂, 12, 4, 32; 1998 JQ₂, 6, 2, 4; 1998 JR₂, 6, 2, 4; 1998 JS₂, 9, 3, 24; 1998 JT₂, 6, 2, 4; 1998 JU₂, 6, 2, 4; 1998 JV₂, 12, 4, 32; 1998 JW₂, 12, 4, 32; 1998 JX₂, 6, 2, 4; 1998 JY₂, 6, 2, 4; 1998 JZ₂, 6, 2, 4; 1998 JA₃, 6, 2, 4; 1998 JB₃, 6, 2, 4; 1998 JC₃, 6, 2, 4; 1998 JD₃, 9, 3, 23; 1998 JE₃, 12, 4, 32; 1998 JF₃, 6, 2, 4; 1998 JG₃, 9, 3, 24; 1998 JH₃, 6, 2, 4; 1998 JJ₃, 6, 2, 4; 1998 JK₃, 6, 2, 4; 1998 JL₃, 6, 2, 2; 1998 JO₃, 6, 2, 1; 1998 JB₄, 3, 1, 0; 1998 JC₄, 9, 3, 19; 1998 JF₄, 3, 1, 0; 1998 JH₄, 6, 2, 1; 1998 JJ₄, 6, 2, 1; 1998 JK₄, 3, 1, 0; 1998 JM₄, 6, 2, 19; 1998 KA₃, 3, 1, 0; 1998 KL₃, 3, 1, 0; 1998 KN₆, 6, 2, 2; 1998 KD₁, 6, 2, 4; 1998 KE₁, 6, 2, 4; 1998 KF₁, 6, 2, 4; 1998 KG₁, 6, 2, 4; 1998 KH₁, 9, 3, 5; 1998 KJ₁, 9, 3, 17; 1998 KK₁, 6, 2, 4; 1998 KL₁, 6, 2, 4; 1998 KM₁, 9, 3, 17; 1998 KN₁, 6, 2, 4; 1998 KO₁, 6, 2, 4; 1998 KP₁, 6, 2, 4; 1998 KQ₁, 6, 2, 4; 1998 KR₁, 9, 3, 27; 1998 KS₁, 6, 2, 4; 1998 KT₁, 6, 2, 4; 1998 KU₁, 6, 2, 4; 1998 KW₁, 3, 1, 0; 1998 KB₂, 3, 1, 0; 1998 KC₂, 6, 2, 8; 1998 KE₂, 3, 1, 0; 1998 KF₂, 6, 2, 1; 1998 KG₂, 3, 1, 0; 1998 KU₂, 6, 2, 20; 1998 KQ₃, 6, 2, 3; 1998 KR₃, 15, 5, 20; 1998 KS₃, 9, 3, 2; 1998 KT₃, 6, 2, 2; 1998 KU₃, 6, 2, 2; 1998 KV₃, 6, 2, 2; 1998 KW₃, 12, 4, 19; 1998 KX₃, 12, 4, 19; 1998 KY₃, 9, 3, 2; 1998 KZ₃, 9, 3, 2; 1998 KA₄, 9, 3, 2; 1998 KB₄, 9, 3, 19; 1998 KC₄, 6, 2, 2; 1998 KD₄, 6, 2, 2; 1998 KE₄, 9, 3, 2; 1998 KF₄, 6, 2, 2; 1998 KG₄, 6, 2, 2; 1998 KH₄, 6, 2, 2; 1998 KJ₄, 9, 3, 2; 1998 KK₄, 9, 3, 2; 1998 KL₄, 9, 3, 2; 1998 KM₄, 12, 4, 19; 1998 KN₄, 9, 3, 2; 1998 KO₄, 9, 3, 19; 1998 KP₄, 9, 3, 19; 1998 KQ₄, 6, 2, 2; 1998 KR₄, 9, 3, 2; 1998 KS₄, 9, 3, 2; 1998 KT₄, 9, 3, 2; 1998 KU₄, 9, 3, 2; 1998 KV₄, 6, 2, 2; 1998 KW₄, 9, 3, 2; 1998 KX₄, 9, 3, 2; 1998 KY₄, 9, 3, 2; 1998 KZ₄, 6, 2, 2; 1998 KA₅, 9, 3, 2; 1998 KT₅, 6, 2, 6; 1998 KO₆, 6, 2, 1; 1998 KP₆, 9, 3, 18; 1998 KQ₆, 6, 2, 1; 1998 KR₆, 6, 2, 1; 1998 KS₆, 6, 2, 1; 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700 Chinle

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0.30-m $f/10$ Schmidt-Cassegrain + CCD

GSC

1976 GA₂, 4, 2, 2; 1988 BH, 5, 2, 4; 1989 RW, 5, 2, 1; 1990 KF, 4, 2, 4; 1992 QS₁, 4, 2, 4; 1994 EG₆, 5, 2, 3; 1995 YP₂, 4, 2, 3; 1996 CC, 5, 2, 1; 1997 AO₄, 4, 2, 4; 1998 FX₂, 3, 1, 0; 1998 FM₅, 3, 1, 0; 1998 HE₃, 3, 1, 0; 1998 HT₃₁, 6, 2, 3; 1998 HU₁₀₈, 3, 2, 1; 1998 KU₂, 4, 2, 1; 1998 KD₃, 3, 1, 0; 1998 KE₃, 2, 1, 0; (699), 5, 2, 3; (3256), 4, 2, 2; (5098), 4, 2, 4; (8777), 4, 2, 6; [84, 21, 0*, 1998/05/05-1998/05/27]

701 Sierra Vista

D. Healy, Junk Bond Observatory, 6929 Madera Dr, Sierra Vista, AZ 85635, U.S.A.
[76443.1440@compuserve.com]

Observers D. Healy, J. Medkeff

Measurer J. Medkeff

0.4-m Schmidt-Cassegrain + CCD

GSC

1990 TG₈, 4, 2, 1; 1992 US₁, 3, 1, 0; 1992 UT₂, 4, 2, 1; 1995 OD, 5, 2, 1; 1997 AP₁₂, 3, 1, 0; 1997 AN₂₁, 3, 1, 0; 1998 HS₁₀₂, 5, 2, 1; 1998 JN₂ *, 4, 2, 2; (2233), 3, 1, 0; [34, 9, 1*, 1998/05/03-1998/06/03]

704 Lincoln Laboratory Experimental Test System, New Mexico

H. Viggh, MIT Lincoln Laboratory, 244 Wood Street, Lexington, MA 02173,

U.S.A. [viggh@ll.mit.edu]

Observers M. Blythe, F. Shelly, M. Bezpalko

Measurers J. Stuart, H. Viggh

1.0-m $f/2.15$ reflector + CCD

USNO-SA1.0

1931 TD₃, 10, 2, 2; 1942 TB, 10, 2, 11; 1955 RE₁, 10, 2, 1; 1964 YJ, 9, 2, 3; 1969 TT₁, 9, 2, 2; 1971 UH₁, 9, 2, 21; 1975 LT, 14, 3, 4; 1975 SC₂, 9, 2, 3; 1975 TE, 10, 2, 2; 1976 GA₂, 10, 2, 2; 1976 UG₂, 5, 1, 0; 1976 UP₂, 10, 2, 1; 1976 UN₁₄, 10, 2, 48; 1976 UB₁₆, 5, 1, 0; 1977 DL₄, 9, 2, 2; 1977 EK₁, 10, 2, 23; 1977 RL₇, 4, 1, 0; 1977 RQ₁₉, 5, 1, 0; 1978 EU₉, 10, 2, 1; 1978 PV₃, 10, 2, 2; 1978 QA₂, 10, 2, 1; 1978 RK, 10, 2, 1; 1978 RU, 15, 3, 23; 1978 RQ₁, 9, 2, 48; 1978 RR₁, 14, 3, 23; 1978 RT₆, 5, 1, 0; 1978 RU₈, 12, 3, 23; 1978 RQ₉, 5, 1, 0; 1978 SQ₄, 9, 2, 1; 1978 TP₂, 29, 4, 23; 1978 TL₄, 9, 2, 48; 1978 TO₈, 4, 1, 0; 1978 TT₈, 20, 4, 23; 1978 UL₄, 15, 3, 23; 1978 UN₄, 5, 1, 0; 1978 UR₄, 5, 1, 0; 1978 VN₂, 8, 2, 23; 1978 VP₂, 12, 3, 23; 1978 VX₄, 5, 1, 0; 1978 VZ₇, 10, 2, 2; 1978 VD₉, 4, 1, 0; 1978 VN₉, 15, 3, 23; 1978 VG₁₁, 8, 2, 21; 1978 VH₁₁, 14, 3, 23; 1979 KO₁, 5, 1, 0; 1979 MB₆, 5, 1, 0; 1979 QP, 5, 1, 0; 1979 QX, 10, 2, 2; 1979 SG₂, 4, 1, 0; 1979 TT₂, 10, 2, 1; 1979 UC₄, 5, 1, 0; 1979 XJ, 4, 1, 0; 1979 YQ, 15, 3, 31; 1980 DN, 9, 2, 2; 1980 KE, 5, 1, 0; 1980 PJ, 3, 1, 0; 1980 PV₁, 5, 1, 0; 1980 RL₂, 13, 3, 23; 1980 TK₆, 10, 2, 2; 1980 UL, 9, 2, 7; 1980 VG, 4, 1, 0; 1981 DA₂, 8, 2, 1; 1981 EP₁, 10, 2, 1; 1981 EN₄, 4, 1, 0; 1981 EQ₄, 8, 2, 2; 1981 EW₅, 5, 1, 0; 1981 EO₇, 10, 2, 48; 1981 EF₈, 5, 1, 0; 1981 EO₉, 5, 1, 0; 1981 EU₉, 10, 2, 1; 1981 EC₁₀, 4, 1, 0; 1981 EM₁₀, 10, 2, 1; 1981 EO₁₀, 9, 2, 1; 1981 EE₁₁, 10, 2, 2; 1981 EH₁₁, 5, 1, 0; 1981 ER₁₁, 5, 1, 0; 1981 EA₁₂, 7, 2, 22; 1981 EG₁₂, 4, 1, 0; 1981 EP₁₂, 4, 1, 0; 1981 EZ₁₂, 29, 4, 2, 1; 1981 EV₁₃, 5, 1, 0; 1981 EY₁₃, 4, 1, 0; 1981 EF₁₄, 5, 1, 0; 1981 ES₁₄, 14, 3, 2; 1981 EB₁₅, 5, 1, 0; 1981 EN₁₅, 5, 1, 0; 1981 ED₁₆, 10, 2, 2; 1981 EQ₁₆, 4, 1, 0; 1981 EL₁₇, 8, 2, 1; 1981 EM₁₇, 10, 2, 2; 1981 EE₁₈, 5, 1, 0; 1981 EG₁₈, 5, 1, 0; 1981 EP₁₈, 12, 3, 22; 1981 ET₁₈, 5, 1, 0; 1981 EU₁₈, 9, 2, 2; 1981 EH₁₉, 8, 2, 2; 1981 EK₂₀, 5, 1, 0; 1981 EN₂₀, 10, 2, 1; 1981 ET₂₀, 5, 1, 0; 1981 ET₂₁, 10, 2, 1; 1981 EH₂₂, 10, 2, 1; 1981 EG₂₃, 10, 2, 1; 1981 EM₂₃, 9, 2, 1; 1981 EQ₂₃, 20, 4, 32; 1981 ES₂₃, 5, 1, 0; 1981 ET₂₃, 5, 1, 0; 1981 EV₂₃, 5, 1, 0; 1981 EZ₂₃, 4, 1, 0; 1981 EF₂₄, 10, 2, 1; 1981 EN₂₄, 10, 2, 1; 1981 EH₂₅, 9, 2, 23; 1981 ER₂₅, 8, 2, 21; 1981 EB₂₆, 9, 2, 1; 1981 EF₂₇, 10, 2, 1; 1981 EU₂₇, 5, 1, 0; 1981 EJ₂₈, 10, 2, 2; 1981 EQ₂₉, 5, 1, 0; 1981 ER₂₉, 5, 1, 0; 1981 ET₂₉, 4, 1, 0; 1981 EO₃₀, 18, 4, 62; 1981 EP₃₀, 4, 1, 0; 1981 EF₃₁, 5, 1, 0; 1981 EW₃₁, 8, 2, 30; 1981 EL₃₄, 5, 1, 0; 1981 EU₃₈, 18, 4, 48; 1981 EC₃₉, 5, 1, 0; 1981 EY₃₉, 4, 1, 0; 1981 ED₄₀, 5, 1, 0; 1981 EJ₄₂, 9, 2, 1; 1981 ER₄₂, 4, 1, 0; 1981 ET₄₃, 13, 3, 29; 1981 ER₄₅, 10, 2, 1; 1981 EE₄₇, 15, 3, 23; 1981 JB₂, 14, 3, 23; 1981 QE₂, 10, 2, 11; 1981 SL₅, 1, 0; 1981 SD₂, 10, 2, 1; 1981 SE₂, 5, 1, 0; 1981 UK₁₁, 5, 1, 0; 1981 UM₁₁, 10, 2, 2; 1981 UU₁₁, 25, 3, 23; 1981 UW₂₁, 9, 2, 2; 1981 UD₂₃, 14, 3, 12; 1981 UL₂₉, 9, 2, 2; 1981 VF, 9, 2, 1; 1981 WE₁, 14, 3, 23; 1981 WF₉, 10, 2, 2; 1982 BU, 4, 1, 0; 1982 JM₁, 4, 2, 23; 1982 QY₁, 10, 2, 21; 1982 RR, 14, 3, 11; 1982 SM₂, 5, 1, 0; 1982 SJ₇, 5, 1, 0; 1982 SC₈, 4, 1, 0; 1982 SG₁₂, 5, 1, 0; 1982 UX₅, 4, 1, 0; 1982 UY₆, 10, 2, 21; 1982 VC₃, 13, 3, 12; 1982 VD₅, 9, 2, 2; 1983 BD, 19, 4, 35; 1983 CZ₂, 4, 1, 0; 1983 RL₃, 9, 2, 1; 1983 RL₄, 5, 1, 0; 1983 WF₁, 13, 3, 33; 1983 XG, 10, 2, 2; 1984 DR, 15, 3, 23; 1984 UY₂, 5, 1, 0; 1984 HH₁, 9, 2, 1; 1984 HM₁, 15, 3, 12; 1984 SV₅, 10, 2, 1; 1984 SC₆, 10, 2, 1; 1984 YN₁, 14, 3, 23; 1985 JU₁, 20, 4, 31; 1985 RP, 5, 1, 0; 1985 RW₂, 13, 3, 23; 1985 RQ₃, 15, 3, 11; 1985 RR₄, 15, 4, 32; 1985 TN, 4, 1, 0; 1985 TS, 14, 3, 23; 1985 UJ₃, 9, 2, 1; 1985 UF₅, 10, 2, 1; 1985 UG₅, 10, 2, 2; 1985 VG, 5, 1, 0; 1985 VF₁, 5, 1, 0; 1986 AT₂, 10, 2, 22; 1986 EP₅, 10, 2, 2; 1986 PX, 14, 3, 12; 1986 QZ, 5, 1, 0; 1986 QF₁, 10, 2, 1; 1986 QU₂, 5, 1, 0; 1986 QG₃, 9, 2, 1; 1986 RP₂, 9, 2, 11; 1986 RW₅, 9, 2, 1; 1987 BR₁, 4, 1, 0; 1987 DD₆, 8, 2, 2; 1987 DP₆, 17, 4, 31; 1987 KF₁, 24, 5, 35; 1987 QF₃, 2, 1, 0; 1987 QE₇, 5, 1, 0; 1987 RQ₂, 4, 1, 0; 1987 SC₁, 4, 1, 0; 1987 SG₂, 14, 3, 12; 1987 SE₃, 14, 3, 12; 1987 SN₁₂, 5, 1, 0; 1987 WO₁, 10, 2, 2; 1987 WS₃, 18, 4, 12; 1987 XC, 10, 2, 35; 1988 DF₂, 4, 1, 0; 1988 DF₃, 10, 2, 1; 1988 MF, 10, 2, 8; 1988 PC₁, 10, 2, 2; 1988 PD₁, 14, 3, 34; 1988 PN₁, 5, 1, 0; 1988 PZ₁, 24, 4, 23; 1988 PO₂, 10, 2, 2; 1988 RK, 10, 2, 1; 1988 RG₁, 4, 1, 0; 1988 RW₃, 9, 2, 21; 1988 RZ₅, 15, 3, 49; 1988 RL₆, 10, 2, 1; 1988 RC₇, 15, 3, 23; 1988 RM₇, 9, 2, 2; 1988 RV₁₀, 10, 2, 2; 1988 SN, 9, 2, 2; 1988 SN₁, 20, 4, 35; 1988 SM₂, 5, 1, 0; 1988 ST₂, 14,

3, 23; 1988 TE₉, 2, 1; 1988 TM₁, 5, 1, 0; 1988 VZ₁₀, 2, 2; 1988 VH₁, 10, 2, 1; 1988 VR₃, 18, 4, 23; 1988 VN₅, 8, 2, 2; 1988 VE₇, 10, 2, 1; 1988 VM₉, 13, 3, 2; 1988 XL₉, 2, 1; 1988 XB₂, 8, 2, 2; 1989 AW₅, 10, 2, 48; 1989 AG₇, 20, 4, 35; 1989 CO₅, 15, 3, 23; 1989 EC₃, 14, 3, 31; 1989 GM₁₀, 2, 8; 1989 GS₄, 10, 2, 1; 1989 RL₅, 5, 1, 0; 1989 RW₁₅, 3, 12; 1989 SO₁₀, 2, 21; 1989 SR₁₀, 2, 2; 1989 SZ₁, 5, 1, 0; 1989 SV₂, 10, 2, 2; 1989 SX₂, 13, 3, 12; 1989 SA₃, 10, 2, 21; 1989 SD₃, 5, 1, 0; 1989 SN₃, 4, 1, 0; 1989 SP₃, 5, 1, 0; 1989 SU₃, 8, 2, 3; 1989 SV₃, 4, 1, 0; 1989 SC₄, 8, 2, 1; 1989 SM₄, 4, 1, 0; 1989 SA₁₀, 5, 1, 0; 1989 TW₄, 4, 1, 0; 1989 TT₂, 9, 2, 1; 1989 TF₄, 7, 2, 1; 1989 TY₄, 10, 2, 1; 1989 TP₇, 10, 2, 2; 1989 TY₁₀, 10, 2, 1; 1989 TO₁₅, 4, 1, 0; 1989 UM₁, 10, 2, 1; 1989 UV₁, 5, 1, 0; 1989 UW₂, 10, 2, 2; 1989 UO₃, 9, 2, 21; 1989 UB₈, 10, 2, 2; 1989 WR₅, 1, 0; 1989 WT₁₅, 3, 23; 1989 WZ₁, 5, 1, 0; 1989 WS₂, 9, 2, 2; 1989 WU₂, 4, 1, 0; 1989 WK₄, 9, 2, 2; 1989 YV₄, 5, 1, 0; 1989 YX₆, 13, 3, 23; 1990 AD₈, 2, 2; 1990 BF₅, 5, 1, 0; 1990 BC₂, 10, 2, 1; 1990 DW₂, 4, 1, 0; 1990 EC₁, 12, 3, 12; 1990 EM₁, 4, 1, 0; 1990 HP₅, 5, 1, 0; 1990 KD₁₅, 3, 30; 1990 KF₁₆, 4, 33; 1990 KN₁, 9, 2, 2; 1990 OH₃, 3, 1, 0; 1990 OZ₉, 2, 2, 1; 1990 OY₁, 8, 2, 10; 1990 OE₄, 4, 1, 0; 1990 QR₁₀, 2, 3; 1990 QO₁, 5, 1, 0; 1990 QF₂, 10, 2, 1; 1990 QR₂, 10, 2, 21; 1990 QZ₅, 19, 4, 35; 1990 QO₆, 13, 3, 11; 1990 QK₇, 5, 1, 0; 1990 QU₇, 10, 2, 1; 1990 QB₈, 5, 1, 0; 1990 QX₈, 5, 1, 0; 1990 QW₉, 9, 2, 8; 1990 RD₅, 5, 1, 0; 1990 RO₆, 9, 2, 1; 1990 RK₇, 10, 2, 2; 1990 SH₁, 9, 2, 2; 1990 SB₆, 9, 2, 1; 1990 SH₉, 5, 1, 0; 1990 SS₇, 9, 2, 48; 1990 TS₁, 5, 1, 0; 1990 TO₃, 5, 1, 0; 1990 TC₄, 10, 2, 1; 1990 TT₄, 5, 1, 0; 1990 TE₉, 9, 2, 1; 1990 TG₈, 14, 3, 23; 1990 UD₃, 4, 1, 0; 1990 VK₁, 13, 3, 23; 1990 VU₄, 15, 3, 23; 1990 VS₅, 5, 1, 0; 1990 VK₆, 5, 1, 0; 1990 VQ₆, 20, 4, 35; 1990 VX₆, 4, 1, 0; 1990 VZ₆, 16, 4, 23; 1990 VF₈, 4, 1, 0; 1990 VH₁₂, 15, 3, 49; 1990 VN₁₄, 10, 2, 1; 1990 WM₁, 4, 1, 0; 1990 WB₄, 10, 2, 2; 1990 WR₅, 5, 1, 0; 1990 WC₉, 15, 3, 35; 1990 XB₁₄, 3, 23; 1991 AY₂, 10, 2, 1; 1991 BX₄, 1, 0; 1991 CX₁₄, 3, 12; 1991 CR₁, 13, 3, 12; 1991 ED₂, 5, 1, 0; 1991 EX₂, 5, 1, 0; 1991 FJ₂, 15, 3, 23; 1991 FT₂, 10, 2, 23; 1991 GO₁, 14, 3, 47; 1991 GR₂, 10, 2, 48; 1991 GU₃, 5, 1, 0; 1991 GY₄, 12, 3, 12; 1991 GG₆, 4, 1, 0; 1991 GC₇, 10, 2, 2; 1991 GP₇, 5, 1, 0; 1991 GE₈, 25, 5, 33; 1991 GJ₈, 5, 1, 0; 1991 GW₈, 9, 2, 1; 1991 GF₉, 10, 2, 48; 1991 GN₉, 10, 2, 1; 1991 GC₁₀, 10, 2, 21; 1991 GN₁₀, 10, 2, 8; 1991 HC₁₄, 3, 12; 1991 JL₁₀, 2, 2; 1991 LR₁₇, 4, 31; 1991 LH₁, 10, 2, 21; 1991 LV₂, 5, 1, 0; 1991 NB₁, 10, 2, 3; 1991 NV₁, 5, 1, 0; 1991 NU₃, 9, 2, 1; 1991 PH₂, 5, 1, 0; 1991 PL₂, 10, 2, 1; 1991 PQ₂, 5, 1, 0; 1991 PK₃, 10, 2, 1; 1991 PA₇, 15, 3, 22; 1991 PT₇, 14, 3, 23; 1991 PH₁₀, 9, 2, 48; 1991 PJ₁₁, 4, 1, 0; 1991 PQ₁₁, 4, 1, 0; 1991 PL₁₃, 5, 1, 0; 1991 PG₁₅, 9, 2, 2; 1991 PL₁₆, 4, 1, 0; 1991 QF₄, 1, 0; 1991 RO₂, 10, 2, 2; 1991 RA₄, 5, 1, 0; 1991 RG₄, 4, 1, 0; 1991 RN₁₁, 8, 2, 2; 1991 RB₁₃, 8, 2, 1; 1991 RK₁₆, 10, 2, 1; 1991 RD₂₄, 13, 3, 12; 1991 RE₂₅, 8, 2, 29; 1991 RT₂₆, 5, 1, 0; 1991 RQ₂₇, 14, 3, 12; 1991 SR₁₄, 3, 23; 1991 SR₁, 20, 4, 55; 1991 TV₁, 9, 2, 21; 1991 TC₂, 4, 1, 0; 1991 TD₄, 4, 1, 0; 1991 TE₄, 4, 1, 0; 1991 TF₇, 10, 2, 2; 1991 TL₁₃, 9, 2, 1; 1991 UZ₁₄, 3, 23; 1991 UV₂, 14, 3, 23; 1991 UC₃, 5, 1, 0; 1991 UL₃, 5, 1, 0; 1991 VU₂₃, 4, 23; 1991 VV₁, 5, 1, 0; 1991 VW₅, 17, 4, 32; 1991 VJ₆, 10, 2, 1; 1991 VZ₈, 4, 1, 0; 1991 VY₁₂, 5, 1, 0; 1991 WB₅, 5, 1, 0; 1991 XD₉, 2, 1; 1991 XH₁₅, 3, 11; 1991 YO₁₅, 3, 11; 1992 AF₁₅, 3, 23; 1992 BF₄, 14, 3, 23; 1992 CZ₁, 15, 3, 7; 1992 CP₂, 10, 2, 2; 1992 DC₃, 15, 3, 23; 1992 DX₅, 5, 1, 0; 1992 DO₆, 5, 1, 0; 1992 DO₇, 10, 2, 2; 1992 DO₈, 5, 1, 0; 1992 EB₂, 5, 1, 0; 1992 ED₄, 10, 2, 1; 1992 EG₄, 9, 2, 1; 1992 ER₄, 9, 2, 2; 1992 EE₇, 17, 4, 32; 1992 EK₇, 17, 3, 23; 1992 EE₁₁, 5, 1, 0; 1992 EH₁₁, 5, 1, 0; 1992 EQ₁₁, 15, 3, 23; 1992 EY₁₁, 10, 2, 1; 1992 EA₂₂, 17, 4, 32; 1992 EQ₂₇, 15, 3, 12; 1992 EU₂₈, 10, 2, 1; 1992 GQ₁₀, 2, 2; 1992 GM₂, 5, 1, 0; 1992 GA₄, 14, 3, 12; 1992 GZ₄, 9, 2, 2; 1992 HA₅, 9, 2, 10; 1992 OV₂, 5, 1, 0; 1992 PC₉, 9, 2, 2; 1992 PJ₁₀, 2, 2; 1992 PH₁, 10, 2, 2; 1992 PZ₁, 10, 2, 1; 1992 PO₂, 10, 2, 1; 1992 QS₁, 10, 2, 22; 1992 RM₁, 15, 3, 12; 1992 RS₃, 10, 2, 1; 1992 RZ₃, 5, 1, 0; 1992 RL₇, 4, 1, 0; 1992 SE₅, 1, 0; 1992 SF₄, 1, 0; 1992 SK₁₃, 4, 1, 0; 1992 SY₁₄, 14, 3, 12; 1992 UJ₅, 1, 0; 1992 UX₁₀, 2, 21; 1992 UY₁₄, 3, 23; 1992 US₁, 18, 4, 32; 1992 UM₂, 5, 1, 0; 1992 UN₂, 4, 1, 0; 1992 UT₂, 10, 2, 22; 1992 UW₂, 20, 4, 48; 1992 UD₃, 15, 3, 23; 1992 UY₃, 10, 2, 2; 1992 UE₄, 4, 1, 0; 1992 UJ₆, 14, 3, 12; 1992 UZ₆, 4, 1, 0; 1992 UP₁₀, 8, 2, 2; 1992 WJ₇, 2, 2; 1992 WX₁₀, 10, 2, 22; 1992 WC₁, 4, 1, 0; 1992 WJ₂, 5, 1, 0; 1992 WC₃, 9, 2, 2; 1992 WU₃, 12, 3, 23; 1992 YH₁₅, 3, 35; 1992 YS₅, 1, 0; 1992 YC₂, 5, 1, 0; 1992 YJ₂, 9, 2, 2; 1992 YM₂, 15, 3, 31; 1992 YE₄, 14, 2, 1; 1993 AJ₁₀, 2, 22; 1993 BA₁₅, 3, 11; 1993 BK₂, 10, 2, 1; 1993 BR₂, 10, 2, 1; 1993 BR₃, 4, 1, 0; 1993 BM₅, 5, 1, 0; 1993 BL₇, 9, 2, 1; 1993 CR₁, 14, 3, 11; 1993 DV₉, 9, 2, 2; 1993 FO₄, 1, 0; 1993 FX₂, 4, 1, 0; 1993 FG₅, 10, 2, 1; 1993 FH₅, 14, 3, 49; 1993 FU₆, 5, 1, 0; 1993 FM₇, 5, 1, 0; 1993 FO₈, 17, 4, 23; 1993 FQ₁₀, 9, 2, 1; 1993 FP₁₁, 5, 1, 0; 1993 FF₁₆, 9, 2, 2; 1993 FW₁₆, 5, 1, 0; 1993 FN₁₉, 5, 1, 0; 1993 FZ₂₀, 14, 3, 23; 1993 FX₂₀, 9, 2, 1; 1993 FF₂₁, 4, 1, 0; 1993 FA₂₃, 5, 1, 0; 1993 FS₂₃, 4, 1, 0; 1993 FZ₂₄, 5, 1, 0; 1993 FW₂₆, 10, 2, 1; 1993 FX₂₆, 5, 1, 0; 1993 FS₂₇, 10, 2, 21; 1993 FQ₃₂, 10, 2, 1; 1993 FT₃₃, 15, 3, 23; 1993 FU₃₃, 10, 2, 2; 1993 FO₃₆, 15, 4, 32; 1993 FW₃₆, 13, 3, 12; 1993 FK₃₇, 5, 1, 0; 1993 FF₄₀, 5, 1, 0; 1993 FR₄₁, 4, 1, 0; 1993 FB₄₄, 19, 4, 55; 1993 FZ₄₄, 10, 2, 1; 1993 FJ₄₈, 10, 2, 1; 1993 FF₄₉, 10, 2, 1; 1993 FH₄₉, 10, 2, 1; 1993 FC₅₁, 4, 1, 0; 1993 FZ₅₇, 3, 1, 0; 1993 FR₅₈, 8, 2, 48; 1993 FX₈₁, 5, 1, 0; 1993 FF₈₂, 5, 1, 0; 1993 FL₈₂, 5, 1, 0; 1993 GL₁₄, 3, 23; 1993 GR₁₄, 3, 12; 1993 HR₁₀, 2, 2; 1993 HJ₃, 8, 2, 48; 1993 KB₂, 9, 2, 22; 1993 LE₁₃, 3, 11; 1993 MK₅, 1, 0; 1993 OV₁₀, 2, 2; 1993 OW₁, 5, 1, 0; 1993 OH₅, 9, 2, 2; 1993 PZ₂, 4, 1, 0; 1993 PK₇, 9, 2, 2; 1993 QB₃, 5, 1, 0; 1993 TJ₂₄, 8, 2, 6; 1993 WB₁₀, 2, 1; 1993 XQ₁, 10, 2, 2; 1993 YG₄, 4, 1, 0; 1994 AC₁₀, 10, 2, 21; 1994 AG₅, 5, 1, 0; 1994 AU₅, 5, 1, 0; 1994 AG₁, 4, 1, 0; 1994 AP₂, 14, 3, 31; 1994 AS₂, 10, 2, 1; 1994 AE₃, 10, 2, 1; 1994 AB₈, 5, 1, 0; 1994 AK₁₆, 4, 1, 0; 1994 BW₁₃, 3, 35; 1994 BX₁₄, 3, 29; 1994 BF₁, 5, 1, 0; 1994 BS₄, 15, 3, 23; 1994 CL₁₀, 2, 1; 1994 CA₁, 5, 1, 0; 1994 CD₉, 10, 2, 1; 1994 CK₁₀, 9, 2, 2; 1994 CM₁₁, 10, 2, 2; 1994 CM₁₃, 5, 1, 0; 1994 CN₁₃, 5, 1, 0;

0; 1994 CL₁₄, 10, 2, 2; 1994 DS₁₅, 3, 12; 1994 EP₅, 5, 1, 0; 1994 ER₉, 2, 10; 1994 EL₂, 5, 1, 0; 1994 EL₃, 16, 4, 33; 1994 EC₅, 10, 2, 1; 1994 EG₆, 19, 4, 12; 1994 EO₆, 15, 3, 24; 1994 EG₇, 9, 2, 22; 1994 EJ₇, 15, 3, 23; 1994 GD₉, 9, 2, 3; 1994 GW₁₀, 9, 2, 2; 1994 HA₁₅, 3, 49; 1994 JB₅, 5, 1, 0; 1994 JN₁₀, 2, 48; 1994 JR₁₅, 3, 35; 1994 JS₁, 10, 2, 35; 1994 JU₈, 15, 3, 23; 1994 JE₉, 10, 2, 2; 1994 JG₉, 19, 4, 35; 1994 KA₅, 5, 1, 0; 1994 LH₅, 1, 0; 1994 LK₁, 15, 3, 23; 1994 NC₄, 1, 0; 1994 NT₁, 14, 3, 11; 1994 PV₄, 4, 1, 0; 1994 PB₂, 15, 3, 12; 1994 PA₁₀, 9, 3, 30; 1994 PJ₁₃, 5, 1, 0; 1994 PQ₁₄, 14, 3, 49; 1994 PG₁₇, 10, 2, 1; 1994 PW₁₇, 5, 1, 0; 1994 PY₁₇, 9, 2, 2; 1994 PT₁₉, 9, 2, 1; 1994 PN₂₁, 3, 1, 0; 1994 PO₂₅, 10, 2, 2; 1994 PC₃₄, 19, 4, 35; 1994 PS₃₇, 15, 3, 23; 1994 PD₃₈, 5, 1, 0; 1994 RC₁, 14, 3, 23; 1994 RC₁₁, 8, 2, 2; 1994 RB₁₇, 15, 3, 12; 1994 SH₃, 4, 1, 0; 1994 TP₁₀, 10, 2, 2; 1994 UN₁, 10, 2, 2; 1994 UH₂, 9, 2, 2; 1994 VR₆, 15, 3, 2; 1995 CG₄, 1, 0; 1995 CS₁, 10, 2, 8; 1995 FA₁, 5, 1, 0; 1995 HK₁₀, 2, 2; 1995 OD₈, 2, 2; 1995 OJ₁₀, 2, 1; 1995 OE₁, 10, 2, 1; 1995 ON₄, 5, 1, 0; 1995 PK₁₄, 3, 12; 1995 QK₅, 5, 1, 0; 1995 QN₁₅, 3, 12; 1995 QR₁₀, 2, 1; 1995 QS₉, 9, 2, 2; 1995 QB₁, 10, 2, 1; 1995 QC₂, 5, 1, 0; 1995 QG₂, 15, 3, 23; 1995 QH₂, 9, 2, 2; 1995 QJ₃, 5, 1, 0; 1995 QQ₃, 10, 2, 1; 1995 QT₃, 4, 1, 0; 1995 QW₃, 10, 2, 2; 1995 QP₁₀, 5, 1, 0; 1995 RK₁₄, 3, 23; 1995 SH₁₇, 4, 32; 1995 SX₁₀, 2, 2; 1995 SC₂, 4, 1, 0; 1995 SL₂, 9, 2, 2; 1995 SP₂, 9, 2, 2; 1995 SX₂, 5, 1, 0; 1995 SA₃, 13, 3, 12; 1995 SZ₃, 4, 1, 0; 1995 ST₄, 10, 2, 3; 1995 SZ₁₀, 2, 1; 1995 SH₅, 10, 2, 1; 1995 SL₅, 8, 2, 15; 1995 SR₉, 4, 1, 0; 1995 SX₁₉, 10, 2, 1; 1995 SD₂₄, 9, 2, 1; 1995 SO₂₆, 8, 2, 48; 1995 SR₂₆, 10, 2, 1; 1995 SM₂₉, 5, 1, 0; 1995 SX₂₉, 17, 4, 35; 1995 SV₄₃, 10, 2, 1; 1995 ST₄₈, 10, 2, 1; 1995 SK₅₁, 10, 2, 1; 1995 SV₅₃, 5, 1, 0; 1995 SM₅₄, 10, 2, 1; 1995 SQ₅₄, 9, 2, 2; 1995 TC₁₀, 10, 2, 1; 1995 TN₁₀, 2, 1; 1995 TS₄, 4, 1, 0; 1995 TT₉, 9, 2, 1; 1995 UL₉, 2, 48; 1995 UB₁, 14, 3, 23; 1995 UJ₁, 10, 2, 1; 1995 UD₂, 5, 1, 0; 1995 UP₂, 13, 3, 23; 1995 UK₃, 10, 2, 2; 1995 UZ₃, 5, 1, 0; 1995 UJ₄, 10, 2, 2; 1995 UK₄, 10, 2, 2; 1995 UN₄, 4, 1, 0; 1995 UU₄, 4, 1, 0; 1995 UF₆, 9, 2, 22; 1995 UH₆, 5, 1, 0; 1995 UL₆, 3, 1, 0; 1995 UP₆, 4, 1, 0; 1995 UW₆, 10, 2, 1; 1995 UB₇, 5, 1, 0; 1995 UE₈, 5, 1, 0; 1995 UG₈, 5, 1, 0; 1995 UJ₈, 4, 1, 0; 1995 UW₈, 5, 1, 0; 1995 UZ₈, 4, 1, 0; 1995 UA₁₀, 10, 2, 1; 1995 US₁₁, 5, 1, 0; 1995 UX₄, 4, 1, 0; 1995 UD₄₅, 5, 1, 0; 1995 VK₁₄, 3, 12; 1995 VL₁₄, 3, 23; 1995 VY₁₅, 15, 3, 23; 1995 VT₁, 5, 1, 0; 1995 VA₁₄, 14, 3, 12; 1995 WH₁₀, 2, 2; 1995 WJ₈, 2, 21; 1995 VL₁₀, 2, 21; 1995 WT₉, 9, 2, 2; 1995 WX₁, 9, 2, 10; 1995 WF₂, 13, 3, 23; 1995 WM₃, 4, 1, 0; 1995 WM₅, 15, 3, 23; 1995 WY₆, 14, 3, 12; 1995 WZ₆, 10, 2, 2; 1995 WL₇, 14, 3, 23; 1995 WM₇, 5, 1, 0; 1995 WX₈, 4, 1, 0; 1995 WO₁₅, 4, 1, 0; 1995 WO₄₂, 9, 2, 22; 1995 XT₃, 3, 1; 1995 XX₄, 4, 1, 0; 1995 XE₁, 8, 2, 2; 1995 XJ₁, 10, 2, 2; 1995 YK₈, 2, 2; 1995 YL₈, 2, 2; 1995 YO₁₀, 2, 3, 12; 1995 YN₁, 13, 3, 23; 1995 YB₂, 13, 3, 23; 1995 YP₂, 18, 4, 31; 1995 YP₂, 9, 2, 29; 1995 YK₃, 15, 3, 23; 1996 AD₂, 12, 3, 12; 1996 AY₃, 10, 2, 3; 1996 CC₁₄, 3, 31; 1996 OR₁, 9, 2, 2; 1996 PZ₆, 12, 3, 31; 1996 PA₇, 4, 1, 0; 1996 PX₈, 9, 2, 1; 1996 QH₅, 1, 0; 1996 RW₁₀, 10, 2, 1; 1996 RO₄, 14, 3, 24; 1996 RH₂₅, 10, 2, 1; 1996 SA₁, 23, 5, 55; 1996 SU₄, 10, 2, 1; 1996 SH₆, 5, 1, 0; 1996 TR₆, 5, 1, 0; 1996 TQ₁, 5, 1, 0; 1996 TD₇, 9, 2, 15; 1996 TM₉, 8, 2, 1; 1996 TL₁₀, 5, 1, 0; 1996 TO₁₀, 5, 1, 0; 1996 TS₁₀, 10, 2, 1; 1996 TU₁₁, 8, 2, 22; 1996 TN₁₂, 14, 3, 22; 1996 TQ₁₂, 4, 1, 0; 1996 TG₁₃, 8, 2, 1; 1996 TT₁₄, 10, 2, 1; 1996 TC₁₅, 9, 2, 22; 1996 TG₁₅, 4, 1, 0; 1996 TF₁₈, 5, 1, 0; 1996 TS₁₈, 5, 1, 0; 1996 TL₂₉, 13, 3, 24; 1996 TY₄₆, 9, 2, 1; 1996 TY₆₄, 9, 2, 1; 1996 UD₉, 9, 2, 48; 1996 UF₁₀, 10, 2, 1; 1996 UM₅, 5, 1, 0; 1996 UN₁₅, 3, 23; 1996 VN₁₀, 10, 2, 1; 1996 VW₅, 1, 0; 1996 VF₁, 9, 2, 1; 1996 VM₁, 5, 1, 0; 1996 VD₂, 5, 1, 0; 1996 VG₂, 4, 1, 0; 1996 VT₂, 4, 1, 0; 1996 VW₂, 5, 1, 0

3; 1997 CO₂₀, 20, 4, 23; 1997 CE₁, 9, 2, 2; 1997 CQ₁, 9, 2, 1; 1997 CR₁, 5, 1, 0; 1997 CV₁, 10, 2, 2; 1997 CA₃, 4, 1, 0; 1997 CN₅, 15, 3, 12; 1997 CB₁₃, 8, 2, 2; 1997 CK₁₃, 5, 1, 0; 1997 CF₁₇, 4, 1, 0; 1997 CA₂₀, 10, 2, 3; 1997 CE₂₀, 10, 2, 2; 1997 CB₂₂, 4, 1, 0; 1997 CF₂₂, 14, 3, 12; 1997 CD₂₆, 9, 2, 3; 1997 CH₂₆, 11, 3, 30; 1997 CW₂₇, 14, 3, 23; 1997 CM₂₈, 10, 2, 2; 1997 CU₂₈, 4, 1, 0; 1997 EL₁₄, 14, 3, 11; 1997 ET₁, 10, 2, 1; 1997 EJ₆, 15, 3, 12; 1997 EE₇, 4, 1, 0; 1997 EQ₁₇, 4, 1, 0; 1997 EQ₂₅, 14, 3, 11; 1997 FU₄, 1, 0; 1997 GD₂₀, 4, 1, 0; 1997 GO₂₄, 13, 3, 4; 1997 WO₂₃, 10, 2, 1; 1997 XX₃, 10, 2, 1; 1997 XY₃, 10, 2, 1; 1997 XV₄, 10, 2, 1; 1997 XY₈, 10, 2, 1; 1997 XA₉, 10, 2, 1; 1997 XD₉, 10, 2, 35; 1997 XH₉, 9, 2, 1; 1997 XE₁₁, 5, 1, 0; 1998 AF₆, 14, 3, 28; 1998 AH₆, 10, 2, 1; 1998 AJ₆, 10, 2, 1; 1998 AU₉, 10, 2, 1; 1998 AV₉, 10, 2, 2; 1998 BB₇, 10, 2, 1; 1998 BN₈, 10, 2, 1; 1998 BX₈, 8, 2, 1; 1998 BX₂₄, 10, 2, 1; 1998 BY₂₄, 10, 2, 1; 1998 BH₂₅, 10, 2, 1; 1998 BP₂₅, 10, 2, 1; 1998 BE₂₆, 10, 2, 1; 1998 BH₂₆, 10, 2, 1; 1998 BJ₂₆, 9, 2, 1; 1998 BK₂₆, 9, 2, 1; 1998 BL₂₆, 10, 2, 1; 1998 BE₃₃, 9, 2, 1; 1998 BB₄₂, 10, 2, 1; 1998 CA₁, 10, 2, 1; 1998 CL₁, 10, 2, 1; 1998 CV₁, 10, 2, 1; 1998 CZ₁, 19, 4, 35; 1998 CA₂, 20, 4, 36; 1998 CC₂, 9, 2, 1; 1998 CF₂, 8, 2, 1; 1998 CC₃, 9, 2, 1; 1998 CS₃, 4, 1, 0; 1998 DA₁₀, 10, 2, 1; 1998 DW₅, 5, 1, 0; 1998 DA₆, 9, 2, 1; 1998 DJ₇, 10, 2, 1; 1998 DS₉, 14, 3, 30; 1998 DT₉, 5, 1, 0; 1998 DH₁₀, 8, 2, 6; 1998 DJ₁₀, 5, 1, 0; 1998 DQ₁₀, 4, 1, 0; 1998 DU₁₁, 5, 1, 0; 1998 DU₁₁, 5, 1, 0; 1998 DZ₁₂, 5, 1, 0; 1998 DL₁₃, 11, 3, 2; 1998 DQ₁₃, 10, 2, 1; 1998 DU₁₃, 8, 2, 1; 1998 DV₁₃, 9, 2, 1; 1998 DB₁₃, 10, 2, 1; 1998 DA₁₄, 10, 2, 1; 1998 DB₁₄, 10, 2, 1; 1998 DC₁₄, 14, 3, 25; 1998 DD₁₄, 15, 3, 25; 1998 DE₁₄, 15, 3, 21; 1998 DF₁₄, 5, 1, 0; 1998 DF₁₅, 8, 2, 6; 1998 DR₁₅, 5, 1, 0; 1998 DE₁₆, 4, 1, 0; 1998 DX₁₇, 10, 2, 1; 1998 DF₂₀, 10, 2, 1; 1998 DG₂₀, 15, 3, 35; 1998 DS₂₀, 5, 1, 0; 1998 DN₂₃, 14, 3, 25; 1998 DV₂₃, 4, 1, 0; 1998 DQ₃₂, 3, 1, 0; 1998 DA₃₃, 4, 1, 0; 1998 DT₃₃, 5, 1, 0; 1998 DU₃₃, 5, 1, 0; 1998 DX₃₃, 5, 1, 0; 1998 DZ₃₃, 9, 2, 46; 1998 DA₃₄, 5, 1, 0; 1998 DB₃₄, 9, 2, 46; 1998 DC₃₄, 8, 2, 4; 1998 DE₃₄, 5, 1, 0; 1998 DF₃₄, 5, 1, 0; 1998 DG₃₄, 5, 1, 0; 1998 DH₃₄, 5, 1, 0; 1998 DN₃₄, 5, 1, 0; 1998 DT₃₄, 7, 2, 4; 1998 DV₃₄, 5, 1, 0; 1998 DA₃₅, 5, 1, 0; 1998 DH₃₅, 5, 1, 0; 1998 DB₃₆, 7, 2, 2; 1998 DE₃₆, 12, 3, 27; 1998 EU₇, 2, 6; 1998 EP₁, 5, 1, 0; 1998 ES₁, 10, 2, 5; 1998 EF₂, 5, 1, 0; 1998 EC₂, 19, 4, 55; 1998 EJ₂, 7, 2, 1; 1998 EL₂, 9, 2, 52; 1998 EP₂, 5, 1, 0; 1998 ER₂, 10, 2, 1; 1998 ES₂, 9, 2, 1; 1998 EW₂, 17, 4, 52; 1998 EX₂, 10, 2, 1; 1998 ED₃, 10, 2, 22; 1998 EP₃, 10, 2, 2; 1998 ER₃, 10, 2, 1; 1998 ES₃, 4, 1, 0; 1998 EL₅, 10, 2, 1; 1998 EN₅, 9, 2, 2; 1998 EL₆, 8, 2, 6; 1998 EP₆, 5, 1, 0; 1998 ER₆, 4, 1, 0; 1998 EX₆, 4, 1, 0; 1998 EB₈, 10, 2, 1; 1998 EV₈, 24, 4, 5; 1998 EZ₈, 4, 1, 0; 1998 EA₉, 15, 3, 53; 1998 EE₁₀, 10, 2, 1; 1998 ER₁₀, 7, 2, 2; 1998 EZ₁₀, 7, 2, 2; 1998 EA₁₂, 12, 3, 24; 1998 EB₁₂, 5, 1, 0; 1998 EF₁₂, 4, 1, 0; 1998 EZ₁₂, 4, 1, 0; 1998 EA₁₃, 5, 1, 0; 1998 ER₁₃, 10, 2, 28; 1998 EV₁₃, 8, 2, 46; 1998 EX₁₃, 10, 2, 1; 1998 EG₁₄, 5, 1, 0; 1998 EL₁₄, 30, 3, 5; 1998 ES₁₄, 9, 2, 1; 1998 EV₁₄, 8, 2, 1; 1998 ED₂₁, 5, 1, 0; 1998 FJ₉, 2, 1; 1998 FO₉, 2, 1; 1998 FK₁, 5, 1, 0; 1998 FO₁, 8, 2, 1; 1998 FS₁, 8, 2, 1; 1998 FY₁, 8, 2, 1; 1998 FK₂, 5, 1, 0; 1998 FD₃, 10, 2, 1; 1998 FX₂, 10, 2, 8; 1998 FA₃, 4, 1, 0; 1998 FB₃, 10, 2, 15; 1998 FC₃, 3, 1, 0; 1998 FD₃, 14, 3, 25; 1998 FK₃, 5, 1, 0; 1998 FF₄, 7, 2, 1; 1998 FT₄, 9, 2, 1; 1998 FZ₄, 10, 2, 22; 1998 FJ₅, 10, 2, 22; 1998 FO₅, 4, 1, 0; 1998 FQ₅, 10, 2, 24; 1998 FB₆, 9, 2, 1; 1998 FK₆, 9, 2, 1; 1998 FL₆, 9, 2, 1; 1998 FO₈, 10, 2, 1; 1998 FT₈, 9, 2, 1; 1998 FV₈, 5, 1, 0; 1998 FX₈, 9, 2, 1; 1998 FZ₈, 4, 1, 0; 1998 FA₉, 8, 2, 1; 1998 FC₉, 9, 2, 48; 1998 FD₉, 8, 2, 1; 1998 FF₉, 9, 2, 48; 1998 FW₉, 9, 2, 1; 1998 FA₁₀, 10, 2, 1; 1998 FB₁₀, 10, 2, 1; 1998 FG₁₀, 8, 2, 1; 1998 FH₁₀, 5, 1, 0; 1998 FI₁₀, 9, 2, 1; 1998 FJ₁₀, 10, 2, 1; 1998 FA₁₁, 9, 2, 2; 1998 FB₁₁, 7, 2, 1; 1998 FG₁₁, 10, 2, 48; 1998 FH₁₁, 9, 2, 22; 1998 FJ₁₁, 15, 3, 53; 1998 FO₁₁, 14, 3, 3; 1998 FP₁₁, 10, 2, 1; 1998 FY₁₁, 5, 1, 0; 1998 FA₁₂, 5, 1, 0; 1998 FY₁₃, 5, 1, 0; 1998 FB₁₄, 25, 4, 26; 1998 FC₁₄, 15, 3, 22; 1998 FG₁₄, 9, 2, 1; 1998 FI₁₄, 10, 2, 1; 1998 FX₁₄, 10, 2, 1; 1998 FY₁₄, 10, 2, 1; 1998 FZ₁₄, 5, 1, 0; 1998 FD₁₅, 10, 2, 1; 1998 FF₁₅, 13, 2, 1; 1998 FG₁₅, 9, 2, 1; 1998 FH₁₅, 9, 2, 1; 1998 FN₁₅, 10, 2, 1; 1998 FO₁₅, 20, 4, 23; 1998 FU₁₅, 10, 2, 1; 1998 FV₁₅, 10, 2, 1; 1998 FW₁₅, 10, 2, 22; 1998 FZ₁₅, 14, 3, 11; 1998 FB₁₆, 10, 2, 1; 1998 FF₁₆, 10, 2, 1; 1998 FQ₂₀, 8, 2, 1; 1998 FS₂₀, 8, 2, 1; 1998 FH₂₃, 5, 1, 0; 1998 FP₂₆, 5, 1, 0; 1998 FT₂₆, 5, 1, 0; 1998 FA₂₇, 8, 2, 6; 1998 FD₂₇, 7, 2, 6; 1998 FM₂₇, 5, 1, 0; 1998 FT₂₇, 8, 2, 6; 1998 FX₂₇, 5, 1, 0; 1998 FY₂₇, 5, 1, 0; 1998 FC₂₈, 8, 2, 6; 1998 FG₂₈, 12, 3, 6; 1998 FK₂₈, 5, 1, 0; 1998 FW₂₉, 5, 1, 0; 1998 FZ₂₉, 5, 1, 0; 1998 FD₃₀, 12, 3, 23; 1998 FE₃₀, 8, 2, 6; 1998 FF₃₀, 12, 3, 23; 1998 FK₃₀, 8, 2, 6; 1998 FL₃₀, 12, 3, 23; 1998 FJ₃₁, 3, 1, 0; 1998 FZ₃₁, 8, 2, 6; 1998 FE₃₂, 9, 2, 1; 1998 FF₃₂, 9, 2, 1; 1998 FN₃₂, 17, 4, 24; 1998 FP₃₂, 5, 1, 0; 1998 FV₃₂, 8, 2, 2; 1998 FA₃₃, 28, 3, 26; 1998 FD₃₃, 5, 1, 0; 1998 FM₃₄, 5, 1, 0; 1998 FS₃₄, 5, 1, 0; 1998 FL₃₆, 14, 3, 22; 1998 FD₃₈, 13, 3, 6; 1998 FT₃₉, 5, 1, 0; 1998 FX₃₉, 5, 1, 0; 1998 FG₄₀, 5, 1, 0; 1998 FV₄₀, 15, 3, 22; 1998 FT₄₁, 10, 2, 1; 1998 FH₄₂, 4, 1, 0; 1998 FJ₄₂, 23, 5, 47; 1998 FO₄₂, 17, 4, 22; 1998 FT₄₂, 10, 2, 1; 1998 FV₄₂, 10, 2, 1; 1998 FW₄₂, 10, 2, 1; 1998 FA₄₃, 8, 2, 1; 1998 FV₄₃, 10, 2, 1; 1998 FL₄₄, 10, 2, 1; 1998 FR₄₆, 15, 3, 21; 1998 FE₄₇, 10, 2, 1; 1998 FK₄₇, 10, 2, 1; 1998 FR₄₇, 10, 2, 1; 1998 FX₄₇, 9, 2, 1; 1998 FZ₄₇, 10, 2, 1; 1998 FE₄₈, 10, 2, 1; 1998 FL₄₈, 11, 3, 22; 1998 FO₄₈, 10, 2, 1; 1998 FX₄₈, 8, 2, 1; 1998 FB₄₉, 10, 2, 1; 1998 FD₄₉, 10, 2, 1; 1998 FK₄₉, 10, 2, 1; 1998 FL₄₉, 10, 2, 1; 1998 FO₄₉, 10, 2, 1; 1998 FS₄₉, 14, 3, 22; 1998 FA₅₁, 15, 3, 22; 1998 FK₅₁, 10, 2, 1; 1998 FT₅₁, 9, 2, 1; 1998 FZ₅₂, 10, 2, 1; 1998 FA₅₃, 18, 4, 23; 1998 FG₅₃, 10, 2, 1; 1998 FN₅₃, 10, 2, 1; 1998 FE₅₃, 19, 4, 22; 1998 FT₅₃, 10, 2, 1; 1998 FX₅₃, 14, 3, 2; 1998 FD₅₄, 9, 2, 1; 1998 FE₅₄, 9, 2, 1; 1998 FK₅₄, 10, 2, 1; 1998 FM₅₄, 10, 2, 1; 1998 FN₅₄, 29, 6, 27; 1998 FT₅₄, 9, 2, 1; 1998 FO₅₄, 9, 2, 1; 1998 FX₅₄, 9, 2, 1; 1998 FY₅₄, 9, 2, 1; 1998 FD₅₅, 9, 2, 1; 1998 FK₅₅, 9, 2, 1; 1998 FP₅₅, 9, 2, 1; 1998 FR₅₅, 9, 2, 1; 1998 FX₅₅, 9, 2, 1; 1998 FZ₅₅, 9, 2, 1; 1998 FA₅₆, 9, 2, 1; 1998 FG₅₆, 9, 2, 1; 1998 FH₅₆, 9, 2, 1; 1998 FJ₅₆, 10, 2, 1; 1998 FO₅₆, 10, 2, 1; 1998 FQ₅₆, 9, 2, 1; 1998 FR₅₆, 9, 2, 1; 1998 FV₅₆, 9, 2, 1; 1998 FZ₅₆, 10, 2, 1; 1998 FA₅₇, 10, 2, 1; 1998 FB₅₇,

9, 2, 1; 1998 FD₅₇, 10, 2, 1; 1998 FE₅₇, 9, 2, 1; 1998 FF₅₇, 9, 2, 1; 1998 FG₅₇, 9, 2, 1; 1998 FJ₅₇, 10, 2, 1; 1998 FK₅₇, 10, 2, 1; 1998 FM₅₇, 10, 2, 1; 1998 FN₅₇, 10, 2, 1; 1998 FO₅₇, 10, 2, 1; 1998 FP₅₇, 9, 2, 1; 1998 FR₅₇, 10, 2, 1; 1998 FU₅₇, 10, 2, 1; 1998 FY₅₇, 9, 2, 1; 1998 FA₅₈, 18, 4, 23; 1998 FB₅₈, 8, 2, 1; 1998 FC₅₈, 10, 2, 1; 1998 FD₅₈, 10, 2, 1; 1998 FE₅₈, 8, 2, 1; 1998 FG₅₈, 10, 2, 1; 1998 FH₅₈, 10, 2, 1; 1998 FK₅₈, 10, 2, 1; 1998 FL₅₈, 10, 2, 1; 1998 FN₅₈, 10, 2, 1; 1998 FO₅₈, 10, 2, 1; 1998 FV₅₈, 9, 2, 1; 1998 FX₅₈, 8, 2, 1; 1998 FY₅₈, 10, 2, 1; 1998 FA₅₉, 9, 2, 1; 1998 FC₅₉, 10, 2, 1; 1998 FH₅₉, 9, 2, 1; 1998 FK₅₉, 9, 2, 1; 1998 FM₅₉, 9, 2, 1; 1998 FR₅₉, 9, 2, 3; 1998 FT₅₉, 10, 2, 1; 1998 FU₅₉, 9, 2, 1; 1998 FW₅₉, 9, 2, 1; 1998 FY₅₉, 12, 3, 3; 1998 FA₆₀, 14, 3, 3; 1998 FB₆₀, 8, 2, 1; 1998 FC₆₀, 8, 2, 3; 1998 FP₆₀, 10, 2, 1; 1998 FQ₆₀, 9, 2, 1; 1998 FR₆₀, 10, 2, 1; 1998 FS₆₀, 9, 2, 1; 1998 FV₆₀, 10, 2, 1; 1998 FX₆₀, 9, 2, 1; 1998 FA₆₁, 9, 2, 1; 1998 FC₆₁, 5, 1, 0; 1998 FE₆₁, 9, 2, 1; 1998 FH₆₁, 9, 2, 1; 1998 FL₆₁, 10, 2, 1; 1998 FN₆₁, 9, 2, 3; 1998 FO₆₁, 19, 4, 23; 1998 FP₆₁, 9, 2, 1; 1998 FQ₆₁, 9, 2, 1; 1998 FR₆₁, 10, 2, 1; 1998 FT₆₁, 10, 2, 1; 1998 FY₆₁, 14, 3, 22; 1998 FC₆₂, 10, 2, 3; 1998 FE₆₂, 9, 2, 1; 1998 FF₆₂, 10, 2, 1; 1998 FG₆₂, 9, 2, 3; 1998 FK₆₂, 5, 1, 0; 1998 FL₆₂, 14, 3, 3; 1998 FN₆₂, 10, 2, 1; 1998 FO₆₂, 10, 2, 1; 1998 FT₆₂, 10, 2, 1; 1998 FU₆₂, 8, 2, 1; 1998 FV₆₂, 9, 2, 3; 1998 FX₆₂, 17, 4, 22; 1998 FY₆₂, 15, 3, 49; 1998 FC₆₃, 10, 2, 1; 1998 FE₆₃, 8, 2, 1; 1998 FG₆₃, 10, 2, 1; 1998 FK₆₃, 15, 2, 1; 1998 FP₆₃, 9, 2, 22; 1998 FR₆₃, 10, 2, 1; 1998 FS₆₃, 14, 3, 3; 1998 FT₆₃, 10, 2, 1; 1998 FV₆₃, 15, 3, 23; 1998 FX₆₃, 10, 2, 2; 1998 FD₆₄, 8, 2, 1; 1998 FF₆₄, 9, 2, 3; 1998 FH₆₄, 10, 2, 1; 1998 FL₆₄, 10, 2, 1; 1998 FM₆₄, 10, 2, 1; 1998 FN₆₄, 9, 2, 3; 1998 FP₆₄, 9, 2, 19; 1998 FR₆₄, 9, 2, 1; 1998 FX₆₄, 4, 1, 0; 1998 FY₆₄, 10, 2, 1; 1998 FA₆₅, 9, 2, 3; 1998 FG₆₅, 14, 3, 3; 1998 FH₆₅, 10, 2, 1; 1998 FJ₆₅, 8, 2, 1; 1998 FN₆₅, 8, 2, 1; 1998 FP₆₅, 10, 2, 1; 1998 FT₆₅, 9, 2, 1; 1998 FY₆₅, 10, 2, 1; 1998 FC₆₆, 15, 3, 49; 1998 FG₆₆, 5, 1, 0; 1998 FH₆₆, 13, 3, 2; 1998 FL₆₆, 15, 3, 49; 1998 FM₆₆, 24, 5, 24; 1998 FO₆₆, 10, 2, 1; 1998 FQ₆₆, 8, 2, 2; 1998 FS₆₆, 9, 2, 3; 1998 FV₆₆, 8, 2, 1; 1998 FY₆₆, 10, 2, 1; 1998 FZ₆₆, 4, 1, 0; 1998 FC₆₇, 14, 3, 5; 1998 FE₆₇, 13, 3, 3; 1998 FF₆₇, 10, 2, 1; 1998 FG₆₇, 8, 2, 1; 1998 FH₆₇, 8, 2, 1; 1998 FI₆₇, 8, 2, 25; 1998 FJ₆₇, 5, 1, 0; 1998 FK₆₇, 10, 2, 48; 1998 FW₆₇, 14, 3, 3; 1998 FY₆₇, 10, 2, 1; 1998 FD₆₈, 9, 2, 2; 1998 FF₆₈, 8, 2, 1; 1998 FG₆₈, 15, 3, 4; 1998 FM₆₈, 10, 2, 2; 1998 FO₆₈, 10, 2, 1; 1998 FP₆₈, 14, 3, 3; 1998 FS₆₈, 14, 3, 49; 1998 FU₆₈, 10, 2, 28; 1998 FX₆₈, 15, 3, 52; 1998 FY₆₈, 8, 2, 4; 1998 FZ₆₈, 15, 3, 49; 1998 FA₆₉, 19, 4, 24; 1998 FC₆₉, 9, 2, 1; 1998 FD₆₉, 5, 1, 0; 1998 FE₆₉, 8, 2, 49; 1998 FG₆₉, 10, 2, 52; 1998 FH₆₉, 15, 3, 52; 1998 FJ₆₉, 10, 2, 52; 1998 FQ₆₉, 10, 2, 52; 1998 FR₆₉, 9, 2, 52; 1998 FT₆₉, 9, 2, 2; 1998 FW₆₉, 10, 2, 52; 1998 FX₆₉, 9, 2, 48; 1998 FF₇₀, 9, 2, 48; 1998 FG₇₀, 10, 2, 52; 1998 FH₇₀, 14, 3, 49; 1998 FJ₇₀, 14, 3, 49; 1998 FM₇₀, 10, 2, 1; 1998 FN₇₀, 5, 1, 0; 1998 FO₇₀, 10, 2, 1; 1998 FP₇₀, 9, 2, 1; 1998 FQ₇₀, 10, 2, 1; 1998 FR₇₀, 9, 2, 1; 1998 FT₇₀, 13, 3, 49; 1998 FU₇₀, 10, 2, 52; 1998 FZ₇₀, 9, 2, 48; 1998 FA₇₁, 5, 1, 0; 1998 FD₇₁, 5, 1, 0; 1998 FE₇₁, 10, 2, 4; 1998 FG₇₁, 14, 3, 52; 1998 FH₇₁, 8, 2, 48; 1998 FJ₇₁, 7, 2, 2; 1998 FL₇₁, 10, 2, 48; 1998 FM₇₁, 15, 2, 53; 1998 FN₇₁, 4, 1, 0; 1998 FP₇₁, 9, 2, 1; 1998 FR₇₁, 4, 1, 0; 1998 FX₇₁, 9, 2, 1; 1998 FD₇₂, 5, 1, 0; 1998 FE₇₂, 9, 2, 2; 1998 FO₇₂, 13, 3, 49; 1998 FQ₇₂, 10, 2, 1; 1998 FG₇₂, 14, 3, 52; 1998 FS₇₂, 9, 2, 22; 1998 FV₇₂, 9, 2, 1; 1998 FW₇₂, 10, 2, 1; 1998 FX₇₂, 10, 2, 1; 1998 FY₇₂, 10, 2, 1; 1998 FZ₇₂, 8, 2, 2; 1998 FA₇₃, 10, 2, 1; 1998 FB₇₃, 10, 2, 1; 1998 FF₇₃, 5, 1, 0; 1998 FG₇₃, 14, 3, 49; 1998 FH₇₃, 24, 5, 55; 1998 FZ₇₃, 20, 4, 55; 1998 FA₇₄, 20, 4, 55; 1998 FC₇₄, 25, 5, 55; 1998 FD₇₄, 20, 3, 49; 1998 FE₇₄, 5, 1, 0; 1998 FF₇₄, 9, 2, 31; 1998 FX₇₄, 19, 4, 57; 1998 FZ₇₄

1998 FU₁₁₀, 8, 2, 1; 1998 FP₁₁₁, 5, 1, 0; 1998 FS₁₁₁, 5, 1, 0; 1998 FX₁₁₁, 5, 1, 0; 1998 FE₁₁₂, 5, 1, 0; 1998 FD₁₁₃, 13, 3, 28; 1998 FH₁₁₃, 5, 1, 0; 1998 FK₁₁₃, 9, 2, 1; 1998 FQ₁₁₃, 13, 3, 27; 1998 FR₁₁₃, 5, 1, 0; 1998 FS₁₁₃, 10, 2, 1; 1998 FX₁₁₃, 9, 2, 1; 1998 FY₁₁₃, 5, 1, 0; 1998 FA₁₁₄, 14, 3, 27; 1998 FB₁₁₄, 13, 3, 28; 1998 FC₁₁₄, 9, 2, 27; 1998 FD₁₁₄, 14, 2, 26; 1998 FE₁₁₄, 9, 2, 1; 1998 FJ₁₁₄, 14, 3, 28; 1998 FK₁₁₄, 14, 3, 28; 1998 FL₁₁₄, 10, 2, 26; 1998 FM₁₁₅, 20, 4, 52; 1998 FG₁₁₅, 10, 2, 1; 1998 FH₁₁₅, 10, 2, 1; 1998 FJ₁₁₅, 10, 2, 1; 1998 FK₁₁₅, 10, 2, 1; 1998 FO₁₁₅, 19, 4, 52; 1998 FR₁₁₅, 8, 2, 2; 1998 FS₁₁₅, 8, 2, 1; 1998 FV₁₁₅, 14, 3, 2; 1998 FX₁₁₅, 9, 2, 1; 1998 FC₁₁₆, 10, 2, 1; 1998 FK₁₁₆, 8, 2, 1; 1998 FS₁₁₆, 12, 3, 3; 1998 FW₁₁₆, 8, 2, 52; 1998 FY₁₁₆, 19, 4, 52; 1998 FC₁₁₇, 4, 1, 0; 1998 FF₁₁₇, 5, 1, 0; 1998 FG₁₁₇, 13, 3, 49; 1998 FH₁₁₇, 4, 1, 0; 1998 FL₁₁₇, 10, 2, 52; 1998 FR₁₁₇, 15, 3, 25; 1998 FU₁₁₇, 10, 2, 1; 1998 FX₁₁₇, 9, 2, 52; 1998 FY₁₁₇, 4, 1, 0; 1998 FB₁₁₈, 9, 2, 52; 1998 FC₁₁₈, 4, 1, 0; 1998 FD₁₁₈, 10, 2, 1; 1998 FE₁₁₈, 15, 3, 25; 1998 FG₁₁₈, 5, 1, 0; 1998 FH₁₁₈, 4, 1, 0; 1998 FJ₁₁₈, 13, 3, 52; 1998 FK₁₁₈, 8, 2, 52; 1998 FN₁₁₈, 13, 3, 52; 1998 FS₁₁₈, 14, 3, 28; 1998 FY₁₁₈, 14, 3, 25; 1998 FJ₁₁₉, 4, 1, 0; 1998 FN₁₁₉, 5, 1, 0; 1998 FZ₁₁₉, 12, 3, 23; 1998 FA₁₂₀, 8, 2, 6; 1998 FK₁₂₁, 8, 2, 1; 1998 FL₁₂₁, 9, 2, 1; 1998 FN₁₂₁, 10, 2, 1; 1998 FO₁₂₁, 8, 2, 1; 1998 FP₁₂₁, 14, 3, 3; 1998 FS₁₂₁, 10, 2, 1; 1998 FZ₁₂₁, 8, 2, 49; 1998 FA₁₂₂, 8, 2, 1; 1998 FB₁₂₂, 9, 2, 2; 1998 FC₁₂₂, 10, 2, 1; 1998 FG₁₂₂, 8, 2, 3; 1998 FM₁₂₂, 14, 3, 3; 1998 FS₁₂₂, 9, 2, 25; 1998 FV₁₂₂, 9, 2, 52; 1998 FY₁₂₂, 20, 4, 52; 1998 FD₁₂₃, 10, 2, 52; 1998 FG₁₂₃, 19, 4, 52; 1998 FQ₁₂₃, 9, 2, 1; 1998 FR₁₂₃, 9, 2, 1; 1998 FX₁₂₃, 4, 1, 0; 1998 FR₁₂₄, 9, 2, 48; 1998 FE₁₂₅, 10, 2, 22; 1998 FG₁₂₅, 4, 1, 0; 1998 FJ₁₂₅, 4, 1, 0; 1998 FL₁₂₅, 14, 3, 47; 1998 FM₁₂₅, 15, 3, 23; 1998 FP₁₂₅, 9, 2, 3; 1998 FT₁₂₅, 8, 2, 1; 1998 FJ₁₂₆, 20, 4, 48; 1998 FK₁₂₆, 5, 1, 0; 1998 FT₁₂₆, 9, 2, 1; 1998 FB₁₂₇, 8, 2, 2; 1998 FC₁₂₇, 9, 2, 1; 1998 FE₁₂₇ *, 9, 2, 1; 1998 FF₁₂₇ *, 8, 2, 1; 1998 FG₁₂₇ *, 10, 2, 3; 1998 FH₁₂₇ *, 7, 2, 5; 1998 FJ₁₂₇ *, 8, 2, 6; 1998 FK₁₂₇ *, 7, 2, 6; 1998 FL₁₂₇ *, 11, 3, 2; 1998 FM₁₂₇ *, 10, 3, 2; 1998 FN₁₂₇ *, 7, 2, 2; 1998 FO₁₂₇ *, 6, 2, 2; 1998 FP₁₂₇ *, 7, 2, 1; 1998 FQ₁₂₇ *, 8, 2, 1; 1998 FR₁₂₇ *, 8, 2, 1; 1998 FS₁₂₇ *, 7, 2, 1; 1998 FT₁₂₇ *, 7, 2, 1; 1998 FU₁₂₇ *, 8, 2, 1; 1998 FV₁₂₇ *, 8, 2, 1; 1998 FW₁₂₇ *, 8, 2, 1; 1998 FX₁₂₇ *, 8, 2, 1; 1998 FY₁₂₇ *, 8, 2, 1; 1998 FZ₁₂₇ *, 8, 2, 1; 1998 FA₁₂₈ *, 8, 2, 1; 1998 FB₁₂₈ *, 8, 2, 1; 1998 FC₁₂₈ *, 8, 2, 1; 1998 FD₁₂₈ *, 8, 2, 1; 1998 FE₁₂₈ *, 7, 2, 1; 1998 FF₁₂₈ *, 7, 2, 1; 1998 FG₁₂₈ *, 7, 2, 1; 1998 FH₁₂₈ *, 7, 2, 4; 1998 FJ₁₂₈ *, 8, 2, 4; 1998 FK₁₂₈ *, 8, 2, 4; 1998 FL₁₂₈ *, 7, 2, 4; 1998 FM₁₂₈ *, 8, 2, 4; 1998 FN₁₂₈ *, 7, 2, 4; 1998 FO₁₂₈ *, 7, 2, 4; 1998 FP₁₂₈ *, 7, 2, 4; 1998 FQ₁₂₈ *, 7, 2, 4; 1998 FR₁₂₈ *, 8, 2, 4; 1998 FS₁₂₈ *, 8, 2, 4; 1998 FT₁₂₈ *, 8, 2, 4; 1998 FU₁₂₈ *, 8, 2, 4; 1998 FV₁₂₈ *, 7, 2, 4; 1998 FW₁₂₈ *, 7, 2, 4; 1998 FX₁₂₈ *, 7, 2, 4; 1998 FY₁₂₈ *, 7, 2, 4; 1998 FZ₁₂₈ *, 8, 2, 4; 1998 FA₁₂₉ *, 7, 2, 4; 1998 FB₁₂₉ *, 7, 2, 4; 1998 FC₁₂₉ *, 8, 2, 4; 1998 FD₁₂₉ *, 7, 2, 4; 1998 FE₁₂₉ *, 7, 2, 4; 1998 FG₁₂₉ *, 7, 2, 4; 1998 FH₁₂₉ *, 8, 2, 4; 1998 FJ₁₂₉ *, 8, 2, 4; 1998 FK₁₂₉ *, 7, 2, 4; 1998 FL₁₂₉ *, 8, 2, 4; 1998 FM₁₂₉ *, 7, 2, 4; 1998 FN₁₂₉ *, 7, 2, 4; 1998 FO₁₂₉ *, 6, 2, 4; 1998 FP₁₂₉ *, 8, 2, 4; 1998 FQ₁₂₉ *, 7, 2, 4; 1998 FR₁₂₉ *, 7, 2, 4; 1998 FS₁₂₉ *, 6, 2, 4; 1998 FT₁₂₉ *, 8, 2, 3; 1998 FU₁₂₉ *, 8, 2, 4; 1998 FV₁₂₉ *, 8, 2, 4; 1998 FW₁₂₉ *, 25, 4, 28; 1998 FX₁₂₉ *, 12, 2, 2; 1998 FY₁₂₉ *, 19, 2, 2; 1998 FZ₁₂₉ *, 7, 2, 4; 1998 FA₁₃₀ *, 10, 2, 2; 1998 FB₁₃₀ *, 15, 2, 2; 1998 FC₁₃₀ *, 12, 2, 2; 1998 FD₁₃₀ *, 14, 2, 3; 1998 FE₁₃₀ *, 7, 2, 4; 1998 FF₁₃₀ *, 7, 2, 4; 1998 FG₁₃₀ *, 7, 2, 4; 1998 FH₁₃₀ *, 7, 2, 4; 1998 FJ₁₃₀ *, 8, 2, 2; 1998 FK₁₃₀ *, 8, 2, 3; 1998 FL₁₃₀ *, 19, 2, 2; 1998 FM₁₃₀ *, 15, 2, 2; 1998 FN₁₃₀ *, 9, 2, 2; 1998 FO₁₃₀ *, 15, 2, 2; 1998 FP₁₃₀ *, 14, 2, 2; 1998 FQ₁₃₀ *, 9, 2, 2; 1998 FR₁₃₀ *, 9, 2, 2; 1998 FS₁₃₀ *, 14, 2, 2; 1998 FT₁₃₀ *, 15, 2, 2; 1998 FU₁₃₀ *, 9, 2, 2; 1998 FV₁₃₀ *, 10, 2, 2; 1998 FW₁₃₀ *, 8, 2, 3; 1998 FX₁₃₀ *, 8, 2, 3; 1998 FY₁₃₀ *, 9, 2, 3; 1998 FZ₁₃₀ *, 9, 2, 3; 1998 FA₁₃₁ *, 8, 2, 3; 1998 FB₁₃₁ *, 14, 3, 29; 1998 FC₁₃₁ *, 15, 4, 31; 1998 FD₁₃₁ *, 8, 2, 3; 1998 FE₁₃₁ *, 7, 2, 3; 1998 FF₁₃₁ *, 9, 2, 3; 1998 FG₁₃₁ *, 10, 2, 3; 1998 FH₁₃₁ *, 9, 2, 3; 1998 FJ₁₃₁ *, 8, 2, 3; 1998 FK₁₃₁ *, 8, 2, 3; 1998 FL₁₃₁ *, 8, 2, 3; 1998 FM₁₃₁ *, 9, 2, 5; 1998 FN₁₃₁ *, 8, 2, 5; 1998 FO₁₃₁ *, 9, 2, 5; 1998 FP₁₃₁ *, 7, 2, 6; 1998 FQ₁₃₁ *, 8, 2, 6; 1998 FR₁₃₁ *, 8, 2, 5; 1998 FS₁₃₁ *, 7, 2, 6; 1998 FT₁₃₁ *, 8, 2, 6; 1998 FU₁₃₁ *, 8, 2, 6; 1998 FV₁₃₁ *, 8, 2, 6; 1998 FW₁₃₁ *, 8, 2, 6; 1998 FX₁₃₁ *, 7, 2, 6; 1998 FY₁₃₁ *, 8, 2, 6; 1998 FZ₁₃₁ *, 8, 2, 6; 1998 FA₁₃₂ *, 8, 2, 6; 1998 FB₁₃₂ *, 7, 2, 6; 1998 FC₁₃₂ *, 8, 2, 6; 1998 FD₁₃₂ *, 8, 2, 6; 1998 FE₁₃₂ *, 7, 2, 6; 1998 FF₁₃₂ *, 8, 2, 6; 1998 FG₁₃₂ *, 7, 2, 6; 1998 FH₁₃₂ *, 8, 2, 6; 1998 FJ₁₃₂ *, 6, 2, 6; 1998 FK₁₃₂ *, 8, 2, 6; 1998 FL₁₃₂ *, 7, 2, 6; 1998 FM₁₃₂ *, 8, 2, 6; 1998 FN₁₃₂ *, 7, 2, 6; 1998 FO₁₃₂ *, 8, 2, 6; 1998 FP₁₃₂ *, 6, 2, 6; 1998 FQ₁₃₂ *, 8, 2, 6; 1998 FR₁₃₂ *, 8, 2, 6; 1998 FS₁₃₂ *, 10, 2, 4; 1998 FT₁₃₂ *, 19, 2, 4; 1998 FU₁₃₂ *, 8, 2, 4; 1998 FV₁₃₂ *, 8, 2, 4; 1998 FW₁₃₂ *, 15, 2, 4; 1998 FX₁₃₂ *, 8, 2, 2; 1998 FY₁₃₂ *, 15, 2, 4; 1998 FZ₁₃₂ *, 9, 2, 4; 1998 FA₁₃₃ *, 7, 2, 6; 1998 FB₁₃₃ *, 7, 2, 6; 1998 FC₁₃₃ *, 6, 2, 6; 1998 FD₁₃₃ *, 7, 2, 6; 1998 FE₁₃₃ *, 7, 2, 6; 1998 FF₁₃₃ *, 7, 2, 6; 1998 FG₁₃₃ *, 7, 2, 6; 1998 FH₁₃₃ *, 7, 2, 6; 1998 FJ₁₃₃ *, 7, 2, 6; 1998 FK₁₃₃ *, 7, 2, 6; 1998 FL₁₃₃ *, 6, 2, 6; 1998 FM₁₃₃ *, 7, 2, 6; 1998 FN₁₃₃ *, 9, 2, 4; 1998 FO₁₃₃ *, 9, 2, 4; 1998 FP₁₃₃ *, 8, 2, 4; 1998 FQ₁₃₃ *, 9, 2, 5; 1998 FR₁₃₃ *, 13, 2, 4; 1998 FS₁₃₃ *, 13, 2, 4; 1998 FT₁₃₃ *, 15, 2, 5; 1998 FU₁₃₃ *, 10, 2, 4; 1998 FV₁₃₃ *, 9, 2, 4; 1998 FW₁₃₃ *, 14, 2, 4; 1998 FX₁₃₃ *, 14, 2, 4; 1998 FY₁₃₃ *, 13, 3, 5; 1998 FZ₁₃₃ *, 15, 4, 33; 1998 FA₁₃₄ *, 9, 2, 5; 1998 FB₁₃₄ *, 10, 2, 5; 1998 FC₁₃₄ *, 8, 2, 5; 1998 FD₁₃₄ *, 8, 2, 5; 1998 FE₁₃₄ *, 12, 2, 4; 1998 FF₁₃₄ *, 7, 2, 4; 1998 FG₁₃₄ *, 5, 1, 0; 1998 FH₁₃₄ *, 4, 1, 0; 1998 FM₁₃₄ *, 5, 1, 0; 1998 FN₁₃₄ *, 4, 1, 0; 1998 FO₁₃₄ *, 4, 1, 0; 1998 FP₁₃₄ *, 5, 1, 0; 1998 FQ₁₃₄ *, 5, 1, 0; 1998 FR₁₃₄ *, 5, 1, 0; 1998 FS₁₃₄ *, 4, 1, 0; 1998 FT₁₃₄ *,

4, 1, 0; 1998 FU₁₃₄, 4, 1, 0; 1998 FV₁₃₄ *, 4, 1, 0; 1998 FW₁₃₄ *, 4, 1, 0; 1998 FX₁₃₄ *, 4, 1, 0; 1998 FY₁₃₄ *, 4, 1, 0; 1998 FZ₁₃₄ *, 4, 1, 0; 1998 FA₁₃₅ *, 4, 1, 0; 1998 FB₁₃₅ *, 4, 1, 0; 1998 FC₁₃₅ *, 3, 1, 0; 1998 FK₁₃₅ *, 3, 1, 0; 1998 FL₁₃₅ *, 4, 1, 0; 1998 FM₁₃₅ *, 4, 1, 0; 1998 FN₁₃₅ *, 9, 2, 1; 1998 FO₁₃₅ *, 8, 2, 1; 1998 FP₁₃₅ *, 9, 2, 1; 1998 FQ₁₃₅ *, 9, 2, 1; 1998 FR₁₃₅ *, 10, 2, 1; 1998 FS₁₃₅ *, 10, 2, 1; 1998 FT₁₃₅ *, 8, 2, 1; 1998 FU₁₃₅ *, 7, 2, 1; 1998 FV₁₃₅ *, 7, 2, 1; 1998 GA₁₀, 10, 2, 1; 1998 GE₆, 2, 3; 1998 GF₁₁, 11, 3, 23; 1998 GK₂₂, 5, 27; 1998 GS₉, 9, 2, 3; 1998 GW₁₆, 4, 31; 1998 GY₈, 8, 2, 1; 1998 GZ₁₀, 10, 2, 1; 1998 GA₁, 4, 1, 0; 1998 GH₁, 4, 1, 0; 1998 GJ₁, 5, 1, 0; 1998 GL₁, 15, 3, 25; 1998 GP₅, 5, 1, 0; 1998 GM₆, 5, 1, 0; 1998 GS₆, 10, 2, 22; 1998 GT₆, 9, 2, 2; 1998 GD₇, 10, 2, 22; 1998 GN₇, 10, 2, 22; 1998 GX₇, 9, 2, 2; 1998 GZ₇, 8, 2, 2; 1998 GH₈, 15, 3, 23; 1998 GK₈, 10, 2, 1; 1998 GL₈, 10, 2, 1; 1998 GM₈, 20, 4, 53; 1998 GN₈, 14, 3, 23; 1998 GP₈, 10, 2, 1; 1998 GQ₈, 14, 3, 23; 1998 GR₈, 9, 2, 1; 1998 GT₈, 14, 3, 18; 1998 GW₈, 15, 3, 23; 1998 GX₈, 15, 3, 23; 1998 GY₈, 14, 3, 18; 1998 GA₉, 14, 3, 18; 1998 GC₉, 8, 2, 1; 1998 GD₉, 15, 3, 23; 1998 GE₉, 15, 3, 23; 1998 GF₉, 15, 3, 23; 1998 GG₉, 14, 3, 23; 1998 GH₉, 10, 2, 22; 1998 GM₉, 10, 2, 1; 1998 GN₉, 15, 3, 23; 1998 GO₉, 10, 2, 1; 1998 GP₉, 15, 3, 23; 1998 GD₁₀, 8, 2, 2; 1998 GF₁₀, 14, 3, 23; 1998 GK₁₀, 13, 3, 10; 1998 GW₁₀, 8, 2, 1; 1998 GC₁₁ *, 8, 2, 1; 1998 GD₁₁ *, 9, 2, 1; 1998 GE₁₁ *, 9, 2, 1; 1998 GF₁₁ *, 14, 2, 2; 1998 GG₁₁ *, 35, 7, 31; 1998 GJ₁₁ *, 22, 5, 25; 1998 GK₁₁ *, 17, 4, 31; 1998 HK₁₃, 3, 46; 1998 HT₉, 9, 2, 1; 1998 HU₁₀, 10, 2, 1; 1998 HW₁₅, 3, 25; 1998 HX₁₅, 3, 25; 1998 HC₁, 7, 2, 1; 1998 HE₁, 19, 4, 48; 1998 HK₁, 9, 2, 1; 1998 HD₂, 5, 1, 0; 1998 HE₂, 15, 3, 23; 1998 HB₃, 9, 2, 2; 1998 HD₃, 9, 2, 2; 1998 HF₃, 4, 1, 0; 1998 HG₃, 7, 2, 1; 1998 HO₃, 14, 3, 25; 1998 HP₃, 10, 2, 52; 1998 HA₄, 4, 1, 0; 1998 HH₄, 13, 3, 23; 1998 HV₄, 5, 1, 0; 1998 HX₄, 8, 2, 1; 1998 HO₅, 12, 3, 32; 1998 HT₅, 4, 1, 0; 1998 HA₆, 4, 1, 0; 1998 HE₆, 14, 3, 28; 1998 HK₆, 9, 2, 1; 1998 HM₆, 10, 2, 1; 1998 HN₆, 18, 4, 32; 1998 HR₆, 9, 2, 2; 1998 HS₆, 9, 2, 2; 1998 HT₆, 8, 2, 2; 1998 HU₆, 8, 2, 2; 1998 HV₆, 5, 1, 0; 1998 HW₆, 15, 3, 31; 1998 HY₆, 4, 1, 0; 1998 HC₇, 7, 2, 1; 1998 HK₇, 7, 2, 1; 1998 HO₇, 9, 2, 1; 1998 HR₇, 8, 2, 10; 1998 HS₇, 14, 3, 23; 1998 HU₇, 10, 2, 1; 1998 HW₇, 20, 4, 25; 1998 HY₇, 9, 2, 2; 1998 HD₈, 20, 4, 32; 1998 HE₈, 9, 2, 1; 1998 HH₈, 9, 2, 1; 1998 HK₈, 12, 3, 10; 1998 HL₈, 13, 3, 10; 1998 HN₈, 15, 3, 25; 1998 HT₈, 10, 2, 1; 1998 HV₈, 10, 2, 1; 1998 HY₈, 10, 2, 1; 1998 HH₉, 7, 2, 1; 1998 HJ₉, 8, 2, 1; 1998 HQ₉, 7, 2, 1; 1998 HR₉, 7, 2, 1; 1998 HW₉, 10, 2, 1; 1998 HB₁₀, 7, 2, 1; 1998 HV₁₀, 8, 2, 2; 1998 HY₁₀, 10, 2, 1; 1998 HB₁₁, 10, 2, 1; 1998 HC₁₁, 8, 2, 1; 1998 HE₁₁, 10, 2, 1; 1998 HM₁₁, 7, 2, 1; 1998 HA₁₂, 10, 2, 1; 1998 HE₁₂, 10, 2, 1; 1998 HJ₁₂, 9, 2, 1; 1998 HL₁₂, 9, 2, 1; 1998 HU₁₂, 15, 3, 43; 1998 HW₁₂, 10, 2, 1; 1998 HA₁₃, 18, 4, 33; 1998 HT₁₃, 4, 1, 0; 1998 HY₁₃, 10, 2, 1; 1998 HA₁₄, 8, 2, 5; 1998 HB₁₄, 9, 2, 1; 1998 HC₁₄, 8, 2, 1; 1998 HF₁₄, 4, 1, 0; 1998 HH₁₄, 24, 5, 33; 1998 HJ₁₄, 24, 5, 53; 1998 HA₁₅, 13, 3, 5; 1998 HC₁₅, 28, 6, 55; 1998 HG₁₅, 8, 2, 2; 1998 HJ₁₅, 18, 4, 32; 1998 HT₁₅, 20, 4, 25; 1998 HG₁₆, 8, 2, 3; 1998 HD₁₆, 4, 1, 0; 1998 HF₁₆, 4, 1, 0; 1998 HG₁₆, 5, 1, 0; 1998 HJ₁₆, 5, 1, 0; 1998 HW₁₆, 8, 2, 1; 1998 HA₁₇, 14, 3, 4; 1998 HV₁₇, 13, 3, 12; 1998 HW₁₇, 4, 1, 0; 1998 HB₁₈, 5, 1, 0; 1998 HC₁₈, 17, 4, 55; 1998 HG₁₈, 8, 2, 2; 1998 HO₁₈, 10, 2, 7; 1998 HP₁₈, 14, 3, 12; 1998 HQ₁₈, 10, 2, 1; 1998 HR₁₈, 10, 2, 1; 1998 HV₁₈, 10, 2, 19; 1998 HW₁₈, 17, 4, 31; 1998 HX₁₈, 13, 3, 12; 1998 HY₁₈, 15, 3, 9; 1998 HE₁₉, 9, 2, 12; 1998 HK₁₉, 13, 3, 12; 1998 HL₁₉, 17, 4, 57; 1998 HM₁₉, 19, 4, 55; 1998 HP₁₉, 4, 1, 0; 1998 HQ₁₉, 5, 1, 0; 1998 HS₁₉, 18, 4, 33; 1998 HX₁₉, 13, 3, 10; 1998 HC₂₀, 19, 4, 25; 1998 HE₂₀, 8, 2, 2; 1998 HF₂₀, 10, 2, 2; 1998 HH₂₀, 10, 2, 1; 1998 HO₂₀, 4, 1, 0; 1998 HP₂₀, 4, 1, 0; 1998 HC₂₁, 5, 1, 0; 1998 HA₂₂, 15, 3, 12; 1998 HD₂₂, 12, 3, 28; 1998 HJ₂₂, 14, 3, 28; 1998 HK₂₂, 14, 3, 28; 1998 HQ₂₂, 5, 1, 0; 1998 HS₂₂, 5, 1, 0; 1998 HD₂₃, 4, 1, 0; 1998 HG₂₃, 12, 3, 30; 1998 HK₂₃, 19, 4, 30; 1998 HL₂₃, 5, 1, 0; 1998 HN₂₃, 25, 5, 53; 1998 HO₂₃, 25, 5, 53; 1998 HQ₂₃, 9, 2, 2; 1998 HR₂₃, 13, 3, 12; 1998 HS₂₃, 4, 1, 0; 1998 HT₂₃, 12, 3, 19; 1998 HY₂₃, 8, 2, 3; 1998 HC₂₄, 18, 4, 32; 1998 HG₂₄, 20, 4, 32; 1998 HP₂₄, 28, 4, 31; 1998 HQ₂₄, 10, 2, 1; 1998 HR₂₄, 10, 2, 2; 1998 HU₂₄, 14, 3, 55; 1998 HV₂₄, 16, 4, 31; 1998 HY₂₄, 15, 3, 5; 1998 HA₂₆, 8, 2, 2; 1998 HG₂₆,

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1998 HA₄₃, 15, 3, 25; 1998 HE₄₃, 14, 3, 23; 1998 HH₄₃, 7, 2, 1; 1998 HK₄₃, 14, 13, 25; 1998 HL₄₃, 20, 4, 33; 1998 HO₄₃, 13, 3, 55; 1998 HU₄₃, 9, 2, 52; 1998 HV₄₃, 9, 2, 52; 1998 HW₄₃, 9, 2, 52; 1998 HX₄₃, 9, 2, 52; 1998 HY₄₃, 9, 2, 7; 1998 HO₄₅, 15, 3, 52; 1998 HQ₄₅, 5, 1, 0; 1998 HR₄₅, 5, 1, 0; 1998 HS₄₅, 5, 1, 0; 1998 HT₄₅, 10, 2, 1; 1998 HU₄₅, 10, 2, 1; 1998 HV₄₅, 10, 2, 1; 1998 HW₄₅, 10, 2, 1; 1998 HX₄₅, 10, 2, 1; 1998 HY₄₅, 10, 2, 1; 1998 HO₄₇, 10, 2, 1; 1998 HQ₄₇, 10, 2, 1; 1998 HR₄₇, 10, 2, 1; 1998 HS₄₇, 10, 2, 1; 1998 HT₄₇, 10, 2, 1; 1998 HU₄₇, 10, 2, 1; 1998 HV₄₇, 10, 2, 1; 1998 HW₄₇, 10, 2, 1; 1998 HX₄₇, 10, 2, 1; 1998 HY₄₇, 10, 2, 1; 1998 HO₄₉, 15, 3, 31; 1998 HQ₄₉, 10, 2, 2; 1998 HR₄₉, 7, 2, 1; 1998 HS₄₉, 20, 4, 28; 1998 HT₄₉, 20, 4, 52; 1998 HU₄₉, 20, 4, 52; 1998 HV₄₉, 20, 4, 52; 1998 HW₄₉, 20, 4, 52; 1998 HX₄₉, 18, 4, 28; 1998 HY₄₉, 10, 2, 1; 1998 HO₅₁, 9, 2, 2; 1998 HQ₅₁, 10, 2, 1; 1998 HR₅₁, 10, 2, 1; 1998 HS₅₁, 15, 3, 10; 1998 HT₅₁, 24, 5, 33; 1998 HU₅₁, 24, 5, 33; 1998 HV₅₁, 9, 2, 9; 1998 HW₅₁, 10, 2, 1; 1998 HX₅₁, 10, 2, 1; 1998 HY₅₁, 10, 2, 1; 1998 HO₅₃, 14, 3, 3; 1998 HQ₅₃, 14, 3, 3; 1998 HR₅₃, 10, 2, 1; 1998 HS₅₃, 20, 4, 33; 1998 HT₅₃, 20, 4, 33; 1998 HU₅₃, 19, 4, 33; 1998 HV₅₃, 19, 4, 33; 1998 HW₅₃, 19, 4, 33; 1998 HX₅₃, 19, 4, 33; 1998 HY₅₃, 19, 4, 33; 1998 HO₅₅, 15, 3, 25; 1998 HQ₅₅, 15, 3, 25; 1998 HR₅₅, 15, 3, 25; 1998 HS₅₅, 15, 3, 25; 1998 HT₅₅, 15, 3, 25; 1998 HU₅₅, 15, 3, 25; 1998 HV₅₅, 15, 3, 25; 1998 HW₅₅, 15, 3, 25; 1998 HX₅₅, 15, 3, 25; 1998 HY₅₅, 15, 3, 25; 1998 HO₅₇, 20, 4, 25; 1998 HQ₅₇, 20, 4, 25; 1998 HR₅₇, 20, 4, 25; 1998 HS₅₇, 20, 4, 25; 1998 HT₅₇, 20, 4, 25; 1998 HU₅₇, 20, 4, 25; 1998 HV₅₇, 20, 4, 25; 1998 HW₅₇, 20, 4, 25; 1998 HX₅₇, 20, 4, 25; 1998 HY₅₇, 20, 4, 25; 1998 HO₅₉, 15, 3, 25; 1998 HQ₅₉, 15, 3, 25; 1998 HR₅₉, 15, 3, 25; 1998 HS₅₉, 15, 3, 25; 1998 HT₅₉, 15, 3, 25; 1998 HU₅₉, 15, 3, 25; 1998 HV₅₉, 15, 3, 25; 1998 HW₅₉, 15, 3, 25; 1998 HX₅₉, 15, 3, 25; 1998 HY₅₉, 15, 3, 25; 1998 HO₆₁, 15, 3, 25; 1998 HQ₆₁, 15, 3, 25; 1998 HR₆₁, 15, 3, 25; 1998 HS₆₁, 15, 3, 25; 1998 HT₆₁, 15, 3, 25; 1998 HU₆₁, 15, 3, 25; 1998 HV₆₁, 15, 3, 25; 1998 HW₆₁, 15, 3, 25; 1998 HX₆₁, 15, 3, 25; 1998 HY₆₁, 15, 3, 25; 1998 HO₆₃, 15, 3, 25; 1998 HQ₆₃, 15, 3, 25; 1998 HR₆₃, 15, 3, 25; 1998 HS₆₃, 15, 3, 25; 1998 HT₆₃, 15, 3, 25; 1998 HU₆₃, 15, 3, 25; 1998 HV₆₃, 15, 3, 25; 1998 HW₆₃, 15, 3, 25; 1998 HX₆₃, 15, 3, 25; 1998 HY₆₃, 15, 3, 25; 1998 HO₆₅, 15, 3, 25; 1998 HQ₆₅, 15, 3, 25; 1998 HR₆₅, 15, 3, 25; 1998 HS₆₅, 15, 3, 25; 1998 HT₆₅, 15, 3, 25; 1998 HU₆₅, 15, 3, 25; 1998 HV₆₅, 15, 3, 25; 1998 HW₆₅, 15, 3, 25; 1998 HX₆₅, 15, 3, 25; 1998 HY₆₅, 15, 3, 25; 1998 HO₆₇, 15, 3, 25; 1998 HQ₆₇, 15, 3, 25; 1998 HR₆₇, 15, 3, 25; 1998 HS₆₇, 15, 3, 25; 1998 HT₆₇, 15, 3, 25; 1998 HU₆₇, 15, 3, 25; 1998 HV₆₇, 15, 3, 25; 1998 HW₆₇, 15, 3, 25; 1998 HX₆₇, 15, 3, 25; 1998 HY₆₇, 15, 3, 25; 1998 HO₆₉, 15, 3, 25; 1998 HQ₆₉, 15, 3, 25; 1998 HR₆₉, 15, 3, 25; 1998 HS₆₉, 15, 3, 25; 1998 HT₆₉, 15, 3, 25; 1998 HU₆₉, 15, 3, 25; 1998 HV₆₉, 15, 3, 25; 1998 HW₆₉, 15, 3, 25; 1998 HX₆₉, 15, 3, 25; 1998 HY₆₉, 15, 3, 25; 1998 HO₇₁, 15, 3, 25; 1998 HQ₇₁, 15, 3, 25; 1998 HR₇₁, 15, 3, 25; 1998 HS₇₁, 15, 3, 25; 1998 HT₇₁, 15, 3, 25; 1998 HU₇₁, 15, 3, 25; 1998 HV₇₁, 15, 3, 25; 1998 HW₇₁, 15, 3, 25; 1998 HX₇₁, 15, 3, 25; 1998 HY₇₁, 15, 3, 25; 1998 HO₇₃, 15, 3, 25; 1998 HQ₇₃, 15, 3, 25; 1998 HR₇₃, 15, 3, 25; 1998 HS₇₃, 15, 3, 25; 1998 HT₇₃, 15, 3, 25; 1998 HU₇₃, 15, 3, 25; 1998 HV₇₃, 15, 3, 25; 1998 HW₇₃, 15, 3, 25; 1998 HX₇₃, 15, 3, 25; 1998 HY₇₃, 15, 3, 25; 1998 HO₇₅, 15, 3, 25; 1998 HQ₇₅, 15, 3, 25; 1998 HR₇₅, 15, 3, 25; 1998 HS₇₅, 15, 3, 25

2, 1; 1998 HO₆₁ *, 10, 2, 1; 1998 HP₆₁ *, 10, 2, 1; 1998 HQ₆₁ *, 9, 2, 1; 1998 HR₆₁ *, 10, 2, 1; 1998 HS₆₁ *, 10, 2, 1; 1998 HT₆₁ *, 10, 2, 1; 1998 HU₆₁ *, 10, 2, 1; 1998 HV₆₁ *, 10, 2, 1; 1998 HW₆₁ *, 9, 2, 1; 1998 HX₆₁ *, 10, 2, 1; 1998 HY₆₁ *, 9, 2, 1; 1998 HZ₆₁ *, 10, 2, 1; 1998 HA₆₂ *, 14, 3, 25; 1998 HB₆₂ *, 10, 2, 1; 1998 HC₆₂ *, 14, 3, 25; 1998 HD₆₂ *, 9, 2, 1; 1998 HE₆₂ *, 10, 2, 1; 1998 HF₆₂ *, 10, 2, 1; 1998 HG₆₂ *, 10, 2, 1; 1998 HH₆₂ *, 10, 2, 1; 1998 HJ₆₂ *, 10, 2, 1; 1998 HK₆₂ *, 10, 2, 1; 1998 HL₆₂ *, 9, 2, 1; 1998 HM₆₂ *, 9, 2, 1; 1998 HN₆₂ *, 10, 2, 1; 1998 HO₆₂ *, 10, 2, 1; 1998 HP₆₂ *, 10, 2, 1; 1998 HQ₆₂ *, 10, 2, 1; 1998 HR₆₂ *, 10, 2, 1; 1998 HS₆₂ *, 10, 2, 1; 1998 HT₆₂ *, 10, 2, 1; 1998 HU₆₂ *, 10, 2, 1; 1998 HV₆₂ *, 9, 2, 1; 1998 HW₆₂ *, 10, 2, 1; 1998 HX₆₂ *, 10, 2, 1; 1998 HY₆₂ *, 10, 2, 1; 1998 HZ₆₂ *, 8, 2, 1; 1998 HA₆₃ *, 8, 2, 1; 1998 HB₆₃ *, 10, 2, 1; 1998 HC₆₃ *, 10, 2, 1; 1998 HD₆₃ *, 10, 2, 1; 1998 HE₆₃ *, 10, 2, 1; 1998 HF₆₃ *, 8, 2, 1; 1998 HG₆₃ *, 10, 2, 1; 1998 HH₆₃ *, 10, 2, 1; 1998 HJ₆₃ *, 10, 2, 1; 1998 HK₆₃ *, 9, 2, 1; 1998 HL₆₃ *, 10, 2, 1; 1998 HM₆₃ *, 14, 3, 25; 1998 HN₆₃ *, 10, 2, 1; 1998 HO₆₃ *, 9, 2, 1; 1998 HP₆₃ *, 9, 2, 1; 1998 HQ₆₃ *, 10, 2, 1; 1998 HR₆₃ *, 10, 2, 1; 1998 HS₆₃ *, 10, 2, 1; 1998 HT₆₃ *, 10, 2, 1; 1998 HU₆₃ *, 10, 2, 1; 1998 HV₆₃ *, 9, 2, 1; 1998 HW₆₃ *, 10, 2, 1; 1998 HX₆₃ *, 9, 2, 1; 1998 HZ₆₃ *, 10, 2, 1; 1998 HA₆₄ *, 10, 2, 1; 1998 HB₆₄ *, 10, 2, 1; 1998 HC₆₄ *, 10, 2, 1; 1998 HD₆₄ *, 10, 2, 1; 1998 HE₆₄ *, 10, 2, 1; 1998 HF₆₄ *, 10, 2, 1; 1998 HG₆₄ *, 10, 2, 1; 1998 HH₆₄ *, 9, 2, 1; 1998 HJ₆₄ *, 10, 2, 1; 1998 HK₆₄ *, 10, 2, 1; 1998 HL₆₄ *, 10, 2, 1; 1998 HM₆₄ *, 10, 2, 1; 1998 HN₆₄ *, 9, 2, 1; 1998 HO₆₄ *, 10, 2, 1; 1998 HP₆₄ *, 10, 2, 1; 1998 HQ₆₄ *, 9, 2, 1; 1998 HR₆₄ *, 9, 2, 1; 1998 HS₆₄ *, 10, 2, 1; 1998 HT₆₄ *, 10, 2, 1; 1998 HU₆₄ *, 9, 2, 1; 1998 HV₆₄ *, 10, 2, 1; 1998 HW₆₄ *, 10, 2, 1; 1998 HX₆₄ *, 10, 2, 1; 1998 HY₆₄ *, 9, 2, 1; 1998 HZ₆₄ *, 10, 2, 1; 1998 HA₆₅ *, 9, 2, 1; 1998 HB₆₅ *, 9, 2, 1; 1998 HC₆₅ *, 10, 2, 1; 1998 HD₆₅ *, 9, 2, 1; 1998 HE₆₅ *, 9, 2, 1; 1998 HF₆₅ *, 9, 2, 1; 1998 HG₆₅ *, 9, 2, 1; 1998 HH₆₅ *, 9, 2, 1; 1998 HJ₆₅ *, 9, 2, 1; 1998 HK₆₅ *, 9, 2, 1; 1998 HL₆₅ *, 8, 2, 1; 1998 HM₆₅ *, 9, 2, 1; 1998 HN₆₅ *, 8, 2, 1; 1998 HO₆₅ *, 9, 2, 1; 1998 HP₆₅ *, 9, 2, 1; 1998 HQ₆₅ *, 9, 2, 1; 1998 HR₆₅ *, 8, 2, 1; 1998 HS₆₅ *, 9, 2, 1; 1998 HT₆₅ *, 8, 2, 1; 1998 HU₆₅ *, 9, 2, 1; 1998 HV₆₅ *, 9, 2, 1; 1998 HX₆₅ *, 8, 2, 1; 1998 HZ₆₅ *, 9, 2, 1; 1998 HA₆₆ *, 8, 2, 1; 1998 HB₆₆ *, 9, 2, 1; 1998 HC₆₆ *, 9, 2, 1; 1998 HD₆₆ *, 8, 2, 1; 1998 HE₆₆ *, 8, 2, 1; 1998 HF₆₆ *, 9, 2, 1; 1998 HG₆₆ *, 8, 2, 1; 1998 HH₆₆ *, 8, 2, 1; 1998 HJ₆₆ *, 8, 2, 1; 1998 HK₆₆ *, 9, 2, 1; 1998 HL₆₆ *, 8, 2, 1; 1998 HM₆₆ *, 9, 2, 1; 1998 HN₆₆ *, 9, 2, 1; 1998 HO₆₆ *, 9, 2, 1; 1998 HP₆₆ *, 8, 2, 1; 1998 HQ₆₆ *, 8, 2, 1; 1998 HR₆₆ *, 9, 2, 1; 1998 HS₆₆ *, 8, 2, 1; 1998 HT₆₆ *, 8, 2, 1; 1998 HU₆₆ *, 8, 2, 1; 1998 HV₆₆ *, 8, 2, 1; 1998 HX₆₆ *, 8, 2, 1; 1998 HZ₆₆ *, 8, 2, 1; 1998 HA₆₇ *, 9, 2, 1; 1998 HB₆₇ *, 9, 2, 1; 1998 HC₆₇ *, 9, 2, 1; 1998 HD₆₇ *, 9, 2, 1; 1998 HE₆₇ *, 9, 2, 1; 1998 HF₆₇ *, 9, 2, 1; 1998 HG₆₇ *, 9, 2, 1; 1998 HH₆₇ *, 9, 2, 1; 1998 HJ₆₇ *, 9, 2, 1; 1998 HK₆₇ *, 9, 2, 1; 1998 HL₆₇ *, 10, 2, 1; 1998 HM₆₇ *, 9, 2, 1; 1998 HN₆₇ *, 10, 2, 1; 1998 HO₆₇ *, 10, 2, 1; 1998 HP₆₇ *, 10, 2, 1; 1998 HQ₆₇ *, 10, 2, 1; 1998 HR₆₇ *, 10, 2, 1; 1998 HS₆₇ *, 9, 2, 1; 1998 HT₆₇ *, 9, 2, 1; 1998 HU₆₇ *, 10, 2, 1; 1998 HV₆₇ *, 10, 2, 1; 1998 HW₆₇ *, 10, 2, 1; 1998 HX₆₇ *, 10, 2, 1; 1998 HY₆₇ *, 9, 2, 1; 1998 HZ₆₇ *, 10, 2, 1; 1998 HA₆₈ *, 10, 2, 1; 1998 HB₆₈ *, 8, 2, 1; 1998 HC₆₈ *, 9, 2, 1; 1998 HD₆₈ *, 10, 2, 1; 1998 HE₆₈ *, 10, 2, 1; 1998 HF₆₈ *, 8, 2, 1; 1998 HG₆₈ *, 10, 2, 1; 1998 HH₆₈ *, 10, 2, 1; 1998 HJ₆₈ *, 10, 2,

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2, 1; 1998 HA₈₄ *, 10, 2, 1; 1998 HB₈₄ *, 10, 2, 1; 1998 HC₈₄ *, 14, 2, 1; 1998 HD₈₄ *, 8, 2, 1; 1998 HE₈₄ *, 10, 2, 1; 1998 HF₈₄ *, 10, 2, 1; 1998 HG₈₄ *, 8, 2, 1; 1998 HH₈₄ *, 7, 2, 1; 1998 HJ₈₄ *, 7, 2, 1; 1998 HK₈₄ *, 8, 2, 1; 1998 HL₈₄ *, 10, 2, 1; 1998 HM₈₄ *, 10, 2, 1; 1998 HN₈₄ *, 9, 2, 1; 1998 HO₈₄ *, 10, 2, 1; 1998 HP₈₄ *, 10, 2, 1; 1998 HQ₈₄ *, 9, 2, 1; 1998 HR₈₄ *, 10, 2, 1; 1998 HS₈₄ *, 10, 2, 1; 1998 HT₈₄ *, 9, 2, 1; 1998 HU₈₄ *, 9, 2, 1; 1998 HV₈₄ *, 8, 2, 1; 1998 HW₈₄ *, 10, 2, 1; 1998 HX₈₄ *, 9, 2, 1; 1998 HY₈₄ *, 9, 2, 1; 1998 HZ₈₄ *, 8, 2, 1; 1998 HA₈₅ *, 10, 2, 1; 1998 HB₈₅ *, 9, 2, 1; 1998 HC₈₅ *, 7, 2, 1; 1998 HD₈₅ *, 10, 2, 1; 1998 HE₈₅ *, 10, 2, 1; 1998 HF₈₅ *, 10, 2, 1; 1998 HG₈₅ *, 10, 2, 1; 1998 HH₈₅ *, 9, 2, 1; 1998 HJ₈₅ *, 9, 2, 1; 1998 HK₈₅ *, 9, 2, 1; 1998 HL₈₅ *, 8, 2, 1; 1998 HM₈₅ *, 9, 2, 1; 1998 HN₈₅ *, 9, 2, 1; 1998 HO₈₅ *, 10, 2, 1; 1998 HP₈₅ *, 9, 2, 1; 1998 HQ₈₅ *, 10, 2, 1; 1998 HR₈₅ *, 10, 2, 1; 1998 HS₈₅ *, 10, 2, 1; 1998 HT₈₅ *, 9, 2, 1; 1998 HU₈₅ *, 10, 2, 1; 1998 HV₈₅ *, 10, 2, 1; 1998 HW₈₅ *, 10, 2, 1; 1998 HX₈₅ *, 15, 3, 25; 1998 HY₈₅ *, 8, 2, 1; 1998 HZ₈₅ *, 8, 2, 1; 1998 HA₈₆ *, 8, 2, 1; 1998 HB₈₆ *, 9, 2, 1; 1998 HC₈₆ *, 9, 2, 1; 1998 HD₈₆ *, 10, 2, 1; 1998 HE₈₆ *, 10, 2, 1; 1998 HF₈₆ *, 9, 2, 1; 1998 HG₈₆ *, 10, 2, 1; 1998 HH₈₆ *, 15, 3, 10; 1998 HJ₈₆ *, 10, 2, 1; 1998 HK₈₆ *, 10, 2, 1; 1998 HL₈₆ *, 14, 3, 10; 1998 HM₈₆ *, 10, 2, 1; 1998 HN₈₆ *, 10, 2, 1; 1998 HO₈₆ *, 10, 2, 1; 1998 HP₈₆ *, 10, 2, 1; 1998 HQ₈₆ *, 10, 2, 1; 1998 HR₈₆ *, 10, 2, 1; 1998 HS₈₆ *, 10, 2, 1; 1998 HT₈₆ *, 8, 2, 1; 1998 HU₈₆ *, 10, 2, 1; 1998 HV₈₆ *, 9, 2, 1; 1998 HW₈₆ *, 8, 2, 1; 1998 HX₈₆ *, 10, 2, 1; 1998 HY₈₆ *, 8, 2, 1; 1998 HZ₈₆ *, 9, 2, 1; 1998 HA₈₇ *, 9, 2, 1; 1998 HB₈₇ *, 10, 2, 1; 1998 HC₈₇ *, 10, 2, 1; 1998 HD₈₇ *, 10, 2, 1; 1998 HE₈₇ *, 10, 2, 1; 1998 HF₈₇ *, 10, 2, 1; 1998 HG₈₇ *, 8, 2, 1; 1998 HH₈₇ *, 9, 2, 1; 1998 HJ₈₇ *, 9, 2, 1; 1998 HK₈₇ *, 10, 2, 1; 1998 HL₈₇ *, 10, 2, 1; 1998 HM₈₇ *, 10, 2, 1; 1998 HN₈₇ *, 8, 2, 1; 1998 HO₈₇ *, 9, 2, 1; 1998 HP₈₇ *, 10, 2, 1; 1998 HQ₈₇ *, 10, 2, 1; 1998 HR₈₇ *, 10, 2, 1; 1998 HS₈₇ *, 10, 2, 1; 1998 HT₈₇ *, 10, 2, 1; 1998 HU₈₇ *, 9, 2, 1; 1998 HV₈₇ *, 15, 3, 10; 1998 HW₈₇ *, 10, 2, 1; 1998 HX₈₇ *, 10, 2, 1; 1998 HY₈₇ *, 8, 2, 1; 1998 HZ₈₇ *, 13, 3, 10; 1998 HA₈₈ *, 10, 2, 1; 1998 HB₈₈ *, 15, 3, 10; 1998 HC₈₈ *, 9, 2, 1; 1998 HD₈₈ *, 15, 3, 10; 1998 HE₈₈ *, 9, 2, 1; 1998 HF₈₈ *, 8, 2, 1; 1998 HG₈₈ *, 8, 2, 1; 1998 HH₈₈ *, 15, 3, 10; 1998 HJ₈₈ *, 9, 2, 1; 1998 HK₈₈ *, 9, 2, 1; 1998 HL₈₈ *, 9, 2, 1; 1998 HM₈₈ *, 10, 2, 1; 1998 HN₈₈ *, 9, 2, 1; 1998 HO₈₈ *, 9, 2, 1; 1998 HP₈₈ *, 15, 3, 10; 1998 HQ₈₈ *, 10, 2, 1; 1998 HR₈₈ *, 10, 2, 1; 1998 HS₈₈ *, 10, 2, 1; 1998 HT₈₈ *, 10, 2, 1; 1998 HU₈₈ *, 8, 2, 1; 1998 HV₈₈ *, 14, 3, 10; 1998 HW₈₈ *, 14, 3, 10; 1998 HX₈₈ *, 9, 2, 1; 1998 HY₈₈ *, 10, 2, 1; 1998 HZ₈₈ *, 10, 2, 1; 1998 HA₈₉ *, 15, 3, 10; 1998 HB₈₉ *, 9, 2, 1; 1998 HC₈₉ *, 8, 2, 1; 1998 HD₈₉ *, 10, 2, 1; 1998 HE₈₉ *, 10, 2, 1; 1998 HF₈₉ *, 9, 2, 1; 1998 HG₈₉ *, 10, 2, 1; 1998 HH₈₉ *, 9, 2, 1; 1998 HJ₈₉ *, 23, 5, 33; 1998 HK₈₉ *, 10, 2, 1; 1998 HL₈₉ *, 9, 2, 1; 1998 HM₈₉ *, 10, 2, 1; 1998 HN₈₉ *, 9, 2, 1; 1998 HO₈₉ *, 10, 2, 1; 1998 HP₈₉ *, 10, 2, 1; 1998 HQ₈₉ *, 13, 3, 2; 1998 HR₈₉ *, 9, 2, 1; 1998 HS₈₉ *, 8, 2, 1; 1998 HT₈₉ *, 9, 2, 1; 1998 HU₈₉ *, 8, 2, 1; 1998 HV₈₉ *, 8, 2, 1; 1998 HW₈₉ *, 8, 2, 1; 1998 HX₈₉ *, 14, 3, 10; 1998 HY₈₉ *, 9, 2, 1; 1998 HZ₈₉ *, 9, 2, 1; 1998 HA₉₀ *, 9, 2, 1; 1998 HB₉₀ *, 9, 2, 1; 1998 HC₉₀ *, 8, 2, 1; 1998 HD₉₀ *, 9, 2, 1; 1998 HE₉₀ *, 10, 2, 1; 1998 HF₉₀ *, 8, 2, 1; 1998 HG₉₀ *, 10, 2, 1; 1998 HH₉₀ *, 7, 2, 1; 1998 HJ₉₀ *, 7, 2, 1; 1998 HK₉₀ *, 9, 2, 1; 1998 HL₉₀ *, 8, 2, 1; 1998 HM₉₀ *, 8, 2, 1; 1998 HN₉₀ *, 10, 2, 1; 1998 HO₉₀ *, 25, 5, 33; 1998 HP₉₀ *, 8, 2, 1; 1998 HQ₉₀ *, 15, 2, 1; 1998 HR₉₀ *, 8, 2, 1; 1998 HS₉₀ *, 10, 2, 1; 1998 HT₉₀ *, 15, 2, 1; 1998 HU₉₀ *, 14, 2, 1; 1998 HV₉₀ *, 20, 3, 29; 1998 HW₉₀ *, 10, 2, 1; 1998 HX₉₀ *, 10, 2, 1; 1998 HY₉₀ *, 10, 2, 1; 1998 HZ₉₀ *, 10, 2, 1; 1998 HA₉₁ *, 29, 6, 38; 1998 HB₉₁ *, 9, 2, 1; 1998 HC₉₁ *, 10, 2, 1; 1998 HD₉₁ *, 9, 2, 1; 1998 HE₉₁ *, 10, 2, 1; 1998 HF₉₁ *, 8, 2, 1; 1998 HG₉₁ *, 9, 2, 1; 1998 HH₉₁ *, 9, 2, 1; 1998 HJ₉₁ *, 8, 2, 1; 1998 HK₉₁ *, 19, 4, 33; 1998 HL₉₁ *, 20, 4, 33; 1998 HM₉₁ *, 10, 2, 1; 1998 HN₉₁ *, 8, 2, 1; 1998 HO₉₁ *, 8, 2, 1; 1998 HP₉₁ *, 10, 2, 1; 1998 HQ₉₁ *, 10, 2, 1; 1998 HR₉₁ *, 24, 5, 33; 1998 HS₉₁ *, 9, 2, 1; 1998 HT₉₁ *, 10, 2, 1; 1998 HU₉₁ *, 8, 2, 1; 1998 HV₉₁ *, 8, 2, 1; 1998 HW₉₁ *, 8, 2, 1; 1998 HX₉₁ *, 22, 5, 33; 1998 HY₉₁ *, 8, 2, 1; 1998 HZ₉₁ *, 25, 5, 33; 1998 HA₉₂ *, 10, 2, 1; 1998 HB₉₂ *, 24, 5, 33; 1998 HC₉₂ *, 10, 2, 1; 1998 HD₉₂ *, 23, 5, 33; 1998 HE₉₂ *, 9, 2, 1; 1998 HF₉₂ *, 9, 2, 1; 1998 HG₉₂ *, 10, 2, 1; 1998 HH₉₂ *, 8, 2, 1; 1998 HJ₉₂ *, 10, 2, 1; 1998 HK₉₂ *, 8, 2, 1; 1998 HL₉₂ *, 9, 2, 1; 1998 HM₉₂ *, 23, 5, 33; 1998 HN₉₂ *, 9, 2, 1; 1998 HO₉₂ *, 9, 2, 1; 1998 HP₉₂

1998 HE₉₅ *, 7, 2, 1; 1998 HF₉₅ *, 7, 2, 1; 1998 HG₉₅ *, 8, 2, 1; 1998 HH₉₅ *, 8, 2, 1; 1998 HJ₉₅ *, 7, 2, 1; 1998 HK₉₅ *, 9, 2, 1; 1998 HL₉₅ *, 8, 2, 1; 1998 HM₉₅ *, 8, 2, 1; 1998 HN₉₅ *, 23, 5, 33; 1998 HO₉₅ *, 9, 2, 1; 1998 HP₉₅ *, 8, 2, 1; 1998 HQ₉₅ *, 7, 2, 1; 1998 HR₉₅ *, 8, 2, 1; 1998 HS₉₅ *, 25, 5, 33; 1998 HT₉₅ *, 25, 5, 33; 1998 HU₉₅ *, 10, 2, 1; 1998 HV₉₅ *, 9, 2, 1; 1998 HW₉₅ *, 10, 2, 1; 1998 HX₉₅ *, 9, 2, 1; 1998 HY₉₅ *, 7, 2, 1; 1998 HZ₉₅ *, 9, 2, 1; 1998 HA₉₆ *, 17, 4, 33; 1998 HB₉₆ *, 8, 2, 1; 1998 HC₉₆ *, 23, 5, 33; 1998 HD₉₆ *, 9, 2, 1; 1998 HE₉₆ *, 9, 2, 1; 1998 HF₉₆ *, 24, 5, 33; 1998 HG₉₆ *, 23, 5, 10; 1998 HH₉₆ *, 22, 5, 33; 1998 HJ₉₆ *, 7, 2, 1; 1998 HK₉₆ *, 10, 2, 1; 1998 HL₉₆ *, 25, 5, 33; 1998 HM₉₆ *, 9, 2, 1; 1998 HN₉₆ *, 8, 2, 1; 1998 HO₉₆ *, 20, 4, 33; 1998 HP₉₆ *, 9, 2, 1; 1998 HQ₉₆ *, 9, 2, 1; 1998 HR₉₆ *, 8, 2, 1; 1998 HS₉₆ *, 25, 5, 33; 1998 HT₉₆ *, 7, 2, 1; 1998 HU₉₆ *, 8, 2, 1; 1998 HV₉₆ *, 23, 5, 33; 1998 HW₉₆ *, 7, 2, 1; 1998 HX₉₆ *, 9, 2, 1; 1998 HY₉₆ *, 24, 5, 33; 1998 HZ₉₆ *, 25, 5, 33; 1998 HA₉₇ *, 9, 2, 1; 1998 HB₉₇ *, 22, 5, 33; 1998 HC₉₇ *, 9, 2, 1; 1998 HD₉₇ *, 23, 5, 33; 1998 HE₉₇ *, 10, 2, 1; 1998 HF₉₇ *, 8, 2, 1; 1998 HG₉₇ *, 20, 4, 33; 1998 HH₉₇ *, 20, 4, 33; 1998 HJ₉₇ *, 9, 2, 1; 1998 HK₉₇ *, 10, 2, 1; 1998 HL₉₇ *, 9, 2, 1; 1998 HM₉₇ *, 8, 2, 1; 1998 HN₉₇ *, 8, 2, 1; 1998 HO₉₇ *, 22, 5, 33; 1998 HP₉₇ *, 9, 2, 1; 1998 HQ₉₇ *, 22, 5, 33; 1998 HR₉₇ *, 23, 5, 33; 1998 HS₉₇ *, 9, 2, 1; 1998 HT₉₇ *, 21, 5, 33; 1998 HU₉₇ *, 22, 5, 33; 1998 HV₉₇ *, 23, 5, 33; 1998 HW₉₇ *, 24, 5, 33; 1998 HX₉₇ *, 9, 2, 1; 1998 HY₉₇ *, 8, 2, 1; 1998 HZ₉₇ *, 20, 5, 33; 1998 HA₉₈ *, 20, 4, 33; 1998 HB₉₈ *, 17, 4, 33; 1998 HC₉₈ *, 19, 4, 33; 1998 HD₉₈ *, 19, 4, 33; 1998 HE₉₈ *, 8, 2, 1; 1998 HF₉₈ *, 20, 5, 33; 1998 HG₉₈ *, 23, 5, 33; 1998 HH₉₈ *, 9, 2, 1; 1998 HJ₉₈ *, 24, 5, 33; 1998 HK₉₈ *, 23, 5, 33; 1998 HL₉₈ *, 8, 2, 1; 1998 HM₉₈ *, 9, 2, 1; 1998 HN₉₈ *, 20, 4, 33; 1998 HO₉₈ *, 19, 4, 33; 1998 HP₉₈ *, 22, 5, 33; 1998 HQ₉₈ *, 24, 5, 33; 1998 HR₉₈ *, 20, 4, 33; 1998 HS₉₈ *, 20, 4, 33; 1998 HT₉₈ *, 20, 4, 33; 1998 HU₉₈ *, 23, 5, 33; 1998 HV₉₈ *, 20, 4, 33; 1998 HW₉₈ *, 8, 2, 1; 1998 HX₉₈ *, 10, 2, 1; 1998 HY₉₈ *, 20, 4, 33; 1998 HZ₉₈ *, 10, 2, 1; 1998 HA₉₉ *, 10, 2, 1; 1998 HB₉₉ *, 23, 5, 33; 1998 HC₉₉ *, 20, 4, 33; 1998 HD₉₉ *, 24, 5, 33; 1998 HE₉₉ *, 25, 5, 33; 1998 HF₉₉ *, 20, 4, 33; 1998 HG₉₉ *, 15, 4, 33; 1998 HH₉₉ *, 25, 5, 33; 1998 HJ₉₉ *, 23, 5, 33; 1998 HK₉₉ *, 20, 4, 33; 1998 HL₉₉ *, 19, 4, 33; 1998 HM₉₉ *, 9, 2, 1; 1998 HN₉₉ *, 9, 2, 1; 1998 HO₉₉ *, 24, 5, 33; 1998 HP₉₉ *, 9, 2, 1; 1998 HQ₉₉ *, 24, 5, 33; 1998 HR₉₉ *, 22, 5, 33; 1998 HS₉₉ *, 9, 2, 1; 1998 HT₉₉ *, 10, 2, 1; 1998 HU₉₉ *, 8, 2, 1; 1998 HV₉₉ *, 20, 4, 33; 1998 HW₉₉ *, 19, 4, 33; 1998 HX₉₉ *, 25, 5, 33; 1998 HY₉₉ *, 8, 2, 1; 1998 HZ₉₉ *, 20, 4, 33; 1998 HA₁₀₀ *, 7, 2, 1; 1998 HB₁₀₀ *, 25, 5, 33; 1998 HC₁₀₀ *, 10, 2, 1; 1998 HD₁₀₀ *, 20, 4, 33; 1998 HE₁₀₀ *, 20, 4, 33; 1998 HF₁₀₀ *, 20, 4, 33; 1998 HG₁₀₀ *, 25, 5, 33; 1998 HH₁₀₀ *, 20, 4, 33; 1998 HJ₁₀₀ *, 18, 4, 33; 1998 HK₁₀₀ *, 8, 2, 1; 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1998 HF₁₀₂ *, 10, 2, 2; 1998 HG₁₀₂ *, 10, 2, 2; 1998 HH₁₀₂ *, 9, 2, 2; 1998 HJ₁₀₂ *, 19, 4, 32; 1998 HL₁₀₂ *, 19, 4, 32; 1998 HM₁₀₂ *, 14, 3, 23; 1998 HN₁₀₂ *, 7, 2, 2; 1998 HO₁₀₂ *, 9, 2, 2; 1998 HP₁₀₂ *, 10, 2, 2; 1998 HQ₁₀₂ *, 9, 2, 2; 1998 HR₁₀₂ *, 9, 2, 2; 1998 HS₁₀₂ *, 9, 2, 2; 1998 HT₁₀₂ *, 9, 2, 2; 1998 HU₁₀₂ *, 10, 2, 2; 1998 HV₁₀₂ *, 9, 2, 2; 1998 HW₁₀₂ *, 10, 2, 2; 1998 HX₁₀₂ *, 9, 2, 2; 1998 HA₁₀₃ *, 9, 2, 2; 1998 HB₁₀₃ *, 8, 2, 2; 1998 HC₁₀₃ *, 9, 2, 2; 1998 HD₁₀₃ *, 8, 2, 2; 1998 HE₁₀₃ *, 9, 2, 2; 1998 HF₁₀₃ *, 9, 2, 2; 1998 HG₁₀₃ *, 9, 2, 2; 1998 HH₁₀₃ *, 10, 2, 1; 1998 HJ₁₀₃ *, 10, 2, 1; 1998 HK₁₀₃ *, 10, 2, 1; 1998 HL₁₀₃ *, 10, 2, 1; 1998 HM₁₀₃ *, 9, 2, 1; 1998 HN₁₀₃ *, 10, 2, 1; 1998 HO₁₀₃ *, 8, 2, 1; 1998 HP₁₀₃ *, 10, 2, 1; 1998 HQ₁₀₃ *, 9, 2, 1; 1998 HR₁₀₃ *, 10, 2, 1; 1998 HS₁₀₃ *, 8, 2, 1; 1998 HT₁₀₃ *, 10, 2, 1; 1998 HU₁₀₃ *, 10, 2, 1; 1998 HV₁₀₃ *, 10, 2, 1; 1998 HW₁₀₃ *, 10, 2, 1; 1998 HX₁₀₃ *, 10, 2, 1; 1998 HY₁₀₃ *, 8, 2, 1; 1998 HZ₁₀₃ *, 9, 2, 1; 1998 HA₁₀₄ *, 8, 2, 1; 1998 HB₁₀₄ *, 9, 2, 1; 1998 HC₁₀₄ *, 10, 2, 1; 1998 HD₁₀₄ *, 9, 2, 1; 1998 HE₁₀₄ *, 8, 2, 1; 1998 HF₁₀₄ *, 9, 2, 1; 1998 HG₁₀₄ *, 10, 2, 1; 1998 HH₁₀₄ *, 9, 2, 1; 1998 HJ₁₀₄ *, 9, 2, 1; 1998 HK₁₀₄ *, 10, 2, 1; 1998 HL₁₀₄ *, 10, 2, 1; 1998 HM₁₀₄ *, 9, 2, 1; 1998 HN₁₀₄ *, 10, 2, 1; 1998 HO₁₀₄ *, 10, 2, 1; 1998 HP₁₀₄ *, 10, 2, 1; 1998 HQ₁₀₄ *, 10, 2, 1; 1998 HR₁₀₄ *, 10, 2, 1; 1998 HS₁₀₄ *, 10, 2, 1; 1998 HT₁₀₄ *, 7, 2, 1; 1998 HU₁₀₄ *, 10, 2, 1; 1998 HV₁₀₄ *, 9, 2, 1; 1998 HW₁₀₄ *, 9, 2, 1; 1998 HX₁₀₄ *, 9, 2, 1; 1998 HY₁₀₄ *, 9, 2, 1; 1998 HZ₁₀₄ *, 9, 2, 1; 1998 HA₁₀₅ *, 10, 2, 1; 1998 HB₁₀₅ *, 8, 2, 1; 1998 HC₁₀₅ *, 10, 2, 1; 1998 HD₁₀₅ *, 10, 2, 1; 1998 HE₁₀₅ *, 10, 2, 1; 1998 HF₁₀₅ *, 10, 2, 1; 1998 HG₁₀₅ *, 15, 3, 3; 1998 HH₁₀₅ *, 10, 2, 1; 1998 HJ₁₀₅ *, 15, 3, 3; 1998 HK₁₀₅ *, 9, 2, 1; 1998 HL₁₀₅ *, 9, 2, 1; 1998 HM₁₀₅ *, 10, 2, 1; 1998 HN₁₀₅ *, 9, 2, 1; 1998 HO₁₀₅ *, 14, 3, 23; 1998 HP₁₀₅ *, 9, 2, 1; 1998 HQ₁₀₅ *, 8, 2, 1; 1998 HR₁₀₅ *, 7, 2, 1; 1998 HS₁₀₅ *, 10, 2, 1; 1998 HT₁₀₅ *, 10, 2, 1; 1998 HU₁₀₅ *, 10, 2, 1; 1998 HV₁₀₅ *, 9, 2, 1; 1998 HW₁₀₅ *, 24, 5, 53; 1998 HX₁₀₅ *, 10, 2, 1; 1998 HY₁₀₅ *, 10, 2, 1; 1998 HZ₁₀₅ *, 10, 2, 1; 1998 HA₁₀₆ *, 9, 2, 1; 1998 HB₁₀₆ *, 10, 2, 1; 1998 HC₁₀₆ *, 10, 2, 1; 1998 HD₁₀₆ *, 9, 2, 1; 1998 HE₁₀₆ *, 9, 2, 1; 1998 HF₁₀₆ *, 8, 2, 1; 1998 HG₁₀₆ *, 9, 2, 1; 1998 HH₁₀₆ *, 9, 2, 1; 1998 HJ₁₀₆ *, 10, 2, 1; 1998 HK₁₀₆ *, 10, 2, 1; 1998 HL₁₀₆ *, 10, 2, 1; 1998 HM₁₀₆ *, 9, 2, 1; 1998 HN₁₀₆ *, 10, 2, 1; 1998 HO₁₀₆ *, 9, 2, 1; 1998 HP₁₀₆ *, 9, 2, 1; 1998 HQ₁₀₆ *, 8, 2, 1; 1998 HR₁₀₆ *, 9, 2, 1; 1998 HS₁₀₆ *, 10, 2, 1; 1998 HT₁₀₆ *, 10, 2, 1; 1998 HU₁₀₆ *, 10,

2, 1; 1998 HV₁₀₆ *, 10, 2, 1; 1998 HW₁₀₆ *, 9, 2, 1; 1998 HX₁₀₆ *, 10, 2, 1; 1998 HY₁₀₆ *, 9, 2, 1; 1998 HZ₁₀₆ *, 10, 2, 1; 1998 HA₁₀₇ *, 8, 2, 1; 1998 HB₁₀₇ *, 9, 2, 1; 1998 HC₁₀₇ *, 9, 2, 1; 1998 HD₁₀₇ *, 8, 2, 1; 1998 HE₁₀₇ *, 9, 2, 1; 1998 HF₁₀₇ *, 8, 2, 1; 1998 HG₁₀₇ *, 9, 2, 1; 1998 HH₁₀₇ *, 10, 2, 1; 1998 HJ₁₀₇ *, 9, 2, 1; 1998 HK₁₀₇ *, 8, 2, 1; 1998 HL₁₀₇ *, 7, 2, 1; 1998 HM₁₀₇ *, 7, 2, 1; 1998 HN₁₀₇ *, 8, 2, 1; 1998 HO₁₀₇ *, 9, 2, 1; 1998 HP₁₀₇ *, 10, 2, 1; 1998 HQ₁₀₇ *, 9, 2, 1; 1998 HR₁₀₇ *, 14, 3, 3; 1998 HS₁₀₇ *, 9, 2, 1; 1998 HT₁₀₇ *, 15, 3, 3; 1998 HU₁₀₇ *, 10, 2, 1; 1998 HV₁₀₇ *, 10, 2, 1; 1998 HW₁₀₇ *, 9, 2, 1; 1998 HX₁₀₇ *, 15, 3, 3; 1998 HY₁₀₇ *, 8, 2, 1; 1998 HZ₁₀₇ *, 10, 2, 1; 1998 HA₁₀₈ *, 10, 2, 1; 1998 HB₁₀₈ *, 10, 2, 1; 1998 HC₁₀₈ *, 10, 2, 1; 1998 HD₁₀₈ *, 10, 2, 1; 1998 HE₁₀₈ *, 9, 2, 1; 1998 HF₁₀₈ *, 9, 2, 1; 1998 HG₁₀₈ *, 10, 2, 1; 1998 HH₁₀₈ *, 10, 2, 1; 1998 HJ₁₀₈ *, 10, 2, 1; 1998 HK₁₀₈ *, 10, 2, 1; 1998 HL₁₀₈ *, 10, 2, 1; 1998 HM₁₀₈ *, 10, 2, 1; 1998 HN₁₀₈ *, 10, 2, 1; 1998 HO₁₀₈ *, 10, 2, 1; 1998 HP₁₀₈ *, 15, 3, 23; 1998 HQ₁₀₈ *, 9, 2, 1; 1998 HS₁₀₈ *, 10, 2, 1; 1998 HT₁₀₈ *, 10, 2, 1; 1998 HU₁₀₈ *, 17, 4, 24; 1998 HV₁₀₈ *, 10, 2, 1; 1998 HW₁₀₈ *, 10, 2, 1; 1998 HX₁₀₈ *, 9, 2, 1; 1998 HY₁₀₈ *, 15, 3, 23; 1998 HZ₁₀₈ *, 13, 3, 23; 1998 HA₁₀₉ *, 9, 2, 1; 1998 HB₁₀₉ *, 8, 2, 1; 1998 HC₁₀₉ *, 9, 2, 1; 1998 HD₁₀₉ *, 9, 2, 1; 1998 HE₁₀₉ *, 10, 2, 1; 1998 HF₁₀₉ *, 8, 2, 1; 1998 HG₁₀₉ *, 10, 2, 1; 1998 HH₁₀₉ *, 8, 2, 1; 1998 HJ₁₀₉ *, 9, 2, 1; 1998 HK₁₀₉ *, 20, 4, 53; 1998 HL₁₀₉ *, 8, 2, 1; 1998 HM₁₀₉ *, 10, 2, 1; 1998 HN₁₀₉ *, 10, 2, 1; 1998 HO₁₀₉ *, 10, 2, 1; 1998 HP₁₀₉ *, 10, 2, 1; 1998 HQ₁₀₉ *, 9, 2, 1; 1998 HR₁₀₉ *, 10, 2, 1; 1998 HS₁₀₉ *, 8, 2, 1; 1998 HT₁₀₉ *, 6, 2, 1; 1998 HU₁₀₉ *, 9, 2, 1; 1998 HV₁₀₉ *, 10, 2, 1; 1998 HW₁₀₉ *, 9, 2, 1; 1998 HX₁₀₉ *, 9, 2, 1; 1998 HY₁₀₉ *, 10, 2, 1; 1998 HZ₁₀₉ *, 9, 2, 1; 1998 HA₁₁₀ *, 9, 2, 1; 1998 HB₁₁₀ *, 10, 2, 1; 1998 HC₁₁₀ *, 8, 2, 1; 1998 HD₁₁₀ *, 10, 2, 1; 1998 HE₁₁₀ *, 10, 2, 1; 1998 HF₁₁₀ *, 10, 2, 1; 1998 HG₁₁₀ *, 7, 2, 1; 1998 HH₁₁₀ *, 10, 2, 1; 1998 HJ₁₁₀ *, 10, 2, 1; 1998 HK₁₁₀ *, 10, 2, 1; 1998 HL₁₁₀ *, 8, 2, 1; 1998 HM₁₁₀ *, 10, 2, 1; 1998 HN₁₁₀ *, 14, 3, 3; 1998 HO₁₁₀ *, 9, 2, 1; 1998 HP₁₁₀ *, 8, 2, 1; 1998 HQ₁₁₀ *, 9, 2, 1; 1998 HR₁₁₀ *, 10, 2, 1; 1998 HS₁₁₀ *, 8, 2, 1; 1998 HT₁₁₀ *, 9, 2, 1; 1998 HU₁₁₀ *, 9, 2, 1; 1998 HV₁₁₀ *, 10, 2, 1; 1998 HW₁₁₀ *, 8, 2, 1; 1998 HX₁₁₀ *, 9, 2, 1; 1998 HY₁₁₀ *, 10, 2, 1; 1998 HZ₁₁₀ *, 10, 2, 1; 1998 HA₁₁₁ *, 8, 2, 1; 1998 HB₁₁₁ *, 10, 2, 1; 1998 HC₁₁₁ *, 10, 2, 1; 1998 HD₁₁₁ *, 10, 2, 1; 1998 HE₁₁₁ *, 10, 2, 1; 1998 HF₁₁₁ *, 9, 2, 1; 1998 HG₁₁₁ *, 10, 2, 1; 1998 HH₁₁₁ *, 10, 2, 1; 1998 HJ₁₁₁ *, 9, 2, 1; 1998 HK₁₁₁ *, 10, 2, 1; 1998 HL₁₁₁ *, 10, 2, 1; 1998 HM₁₁₁ *, 10, 2, 1; 1998 HN₁₁₁ *, 9, 2, 1; 1998 HO₁₁₁ *, 10, 2, 1; 1998 HP₁₁₁ *, 8, 2, 1; 1998 HQ₁₁₁ *, 9, 2, 1; 1998 HR₁₁₁ *, 9, 2, 1; 1998 HS₁₁₁ *, 10, 2, 1; 1998 HT₁₁₁ *, 10, 2, 1; 1998 HU₁₁₁ *, 9, 2, 1; 1998 HV₁₁₁ *, 9, 2, 1; 1998 HW₁₁₁ *, 9, 2, 1; 1998 HX₁₁₁ *, 10, 2, 1; 1998 HY₁₁₁ *, 9, 2, 1; 1998 HZ₁₁₁ *, 8, 2, 1; 1998 HA₁₁₂ *, 10, 2, 1; 1998 HB₁₁₂ *, 9, 2, 1; 1998 HC₁₁₂ *, 10, 2, 1; 1998 HD₁₁₂ *, 8, 2, 1; 1998 HE₁₁₂ *, 10, 2, 1; 1998 HF₁₁₂ *, 8, 2, 1; 1998 HG₁₁₂ *, 9, 2, 1; 1998 HH₁₁₂ *, 10, 2, 1; 1998 HJ₁₁₂ *, 8, 2, 1; 1998 HK₁₁₂ *, 10, 2, 1; 1998 HL₁₁₂ *, 9, 2, 1; 1998 HM₁₁₂ *, 6, 2, 1; 1998 HN₁₁₂ *, 9, 2, 1; 1998 HO₁₁₂ *, 8, 2, 1; 1998 HP₁₁₂ *, 8, 2, 1; 1998 HQ₁₁₂ *, 10, 2, 1; 1998 HR₁₁₂ *, 8, 2, 1; 1998 HS₁₁₂ *, 9, 2, 1; 1998 HT₁₁₂ *, 9, 2, 1; 1998 HU₁₁₂ *, 15, 3, 23; 1998 HV₁₁₂ *, 10, 2, 1; 1998 HW₁₁₂ *, 10, 2, 1; 1998 HX₁₁₂ *, 23, 5, 53; 1998 HY₁₁₂ *, 10, 2, 1; 1998 HZ₁₁₂ *, 10, 2, 1; 1998 HA₁₁₃ *, 9, 2, 1; 1998 HB₁₁₃ *, 25, 5, 53; 1998 HC₁₁₃ *, 9, 2, 1; 1998 HD₁₁₃ *, 10, 2, 1; 1998 HE₁₁₃ *, 7, 2, 1; 1998 HF₁₁₃ *, 10, 2, 1; 1998 HG₁₁₃ *, 9, 2, 1; 1998 HH₁₁₃ *, 10, 2, 1; 1998 HJ₁₁₃ *, 10, 2, 1; 1998 HK₁₁₃ *, 10, 2, 1; 1998 HL₁₁₃ *, 7, 2, 1; 1998 HM₁₁₃ *, 10, 2, 1; 1998 HN₁₁₃ *, 9, 2, 1; 1998 HO₁₁₃ *, 8, 2, 1; 1998 HP₁₁₃ *, 10, 2, 1; 1998 HQ₁₁₃ *, 8, 2, 1; 1998 HR₁₁₃ *, 10, 2, 1; 1998 HS₁₁₃ *, 14, 3, 23; 1998 HT₁₁₃ *, 10, 2, 1; 1998 HU₁₁₃ *, 10, 2, 1; 1998 HV₁₁₃ *, 9, 2, 1; 1998 HW₁₁₃ *, 9, 2, 1; 1998 HX₁₁₃ *, 10, 2, 1; 1998 HY₁₁₃ *, 9, 2, 1; 1998 HZ₁₁₃ *, 10, 2, 1; 1998 HA₁₁₄ *, 10, 2, 1; 1998 HB₁₁₄ *, 10, 2, 1; 1998 HC₁₁₄ *, 10, 2, 1; 1998 HD₁₁₄ *, 10, 2, 1; 1998 HE₁₁₄ *, 10, 2, 1; 1998 HF₁₁₄ *, 8, 2, 1; 1998 HG₁₁₄ *, 10, 2, 1; 1998 HH₁₁₄ *, 10, 2, 1; 1998 HJ₁₁₄ *, 10, 2, 1; 1998 HK₁₁₄ *, 9, 2, 1; 1998 HL₁₁₄ *, 10, 2, 1; 1998 HM₁₁₄ *, 10, 2, 1; 1998 HN₁₁₄ *, 8, 2, 1; 1998 HO₁₁₄ *, 10, 2,

2, 1; 1998 HS₁₁₇ *, 25, 4, 31; 1998 HT₁₁₇ *, 10, 2, 1; 1998 HU₁₁₇ *, 29, 6, 61; 1998 HV₁₁₇ *, 8, 2, 1; 1998 HW₁₁₇ *, 9, 2, 1; 1998 HX₁₁₇ *, 8, 2, 1; 1998 HY₁₁₇ *, 10, 2, 1; 1998 HZ₁₁₇ *, 10, 2, 1; 1998 HA₁₁₈ *, 9, 2, 1; 1998 HB₁₁₈ *, 9, 2, 1; 1998 HC₁₁₈ *, 10, 2, 1; 1998 HD₁₁₈ *, 9, 2, 1; 1998 HE₁₁₈ *, 10, 2, 1; 1998 HF₁₁₈ *, 10, 2, 1; 1998 HG₁₁₈ *, 9, 2, 1; 1998 HH₁₁₈ *, 8, 2, 1; 1998 HJ₁₁₈ *, 10, 2, 1; 1998 HK₁₁₈ *, 10, 2, 1; 1998 HL₁₁₈ *, 8, 2, 1; 1998 HM₁₁₈ *, 10, 2, 1; 1998 HN₁₁₈ *, 7, 2, 1; 1998 HO₁₁₈ *, 8, 2, 1; 1998 HP₁₁₈ *, 9, 2, 1; 1998 HQ₁₁₈ *, 10, 2, 1; 1998 HR₁₁₈ *, 10, 2, 1; 1998 HS₁₁₈ *, 9, 2, 1; 1998 HT₁₁₈ *, 8, 2, 1; 1998 HU₁₁₈ *, 10, 2, 1; 1998 HV₁₁₈ *, 10, 2, 1; 1998 HW₁₁₈ *, 8, 2, 1; 1998 HX₁₁₈ *, 8, 2, 1; 1998 HY₁₁₈ *, 10, 2, 1; 1998 HZ₁₁₈ *, 10, 2, 1; 1998 HA₁₁₉ *, 10, 2, 1; 1998 HB₁₁₉ *, 10, 2, 1; 1998 HC₁₁₉ *, 10, 2, 1; 1998 HD₁₁₉ *, 9, 2, 1; 1998 HE₁₁₉ *, 10, 2, 1; 1998 HF₁₁₉ *, 7, 2, 1; 1998 HG₁₁₉ *, 24, 5, 33; 1998 HH₁₁₉ *, 10, 2, 1; 1998 HJ₁₁₉ *, 7, 2, 1; 1998 HK₁₁₉ *, 9, 2, 1; 1998 HL₁₁₉ *, 19, 4, 31; 1998 HM₁₁₉ *, 8, 2, 1; 1998 HN₁₁₉ *, 9, 2, 1; 1998 HO₁₁₉ *, 9, 2, 1; 1998 HP₁₁₉ *, 9, 2, 1; 1998 HQ₁₁₉ *, 8, 2, 1; 1998 HR₁₁₉ *, 24, 5, 33; 1998 HS₁₁₉ *, 21, 5, 33; 1998 HT₁₁₉ *, 8, 2, 1; 1998 HU₁₁₉ *, 8, 2, 1; 1998 HV₁₁₉ *, 8, 2, 1; 1998 HW₁₁₉ *, 9, 2, 1; 1998 HX₁₁₉ *, 8, 2, 1; 1998 HY₁₁₉ *, 8, 2, 1; 1998 HZ₁₁₉ *, 9, 2, 1; 1998 HA₁₂₀ *, 8, 2, 1; 1998 HB₁₂₀ *, 8, 2, 1; 1998 HC₁₂₀ *, 9, 2, 1; 1998 HD₁₂₀ *, 9, 2, 1; 1998 HE₁₂₀ *, 10, 2, 1; 1998 HF₁₂₀ *, 10, 2, 1; 1998 HG₁₂₀ *, 10, 2, 1; 1998 HJ₁₂₀ *, 9, 2, 1; 1998 HK₁₂₀ *, 10, 2, 1; 1998 HL₁₂₀ *, 10, 2, 1; 1998 HM₁₂₀ *, 10, 2, 1; 1998 HN₁₂₀ *, 8, 2, 1; 1998 HO₁₂₀ *, 9, 2, 1; 1998 HP₁₂₀ *, 8, 2, 1; 1998 HQ₁₂₀ *, 9, 2, 1; 1998 HR₁₂₀ *, 8, 2, 1; 1998 HS₁₂₀ *, 8, 2, 1; 1998 HT₁₂₀ *, 9, 2, 1; 1998 HU₁₂₀ *, 8, 2, 1; 1998 HV₁₂₀ *, 8, 2, 1; 1998 HW₁₂₀ *, 8, 2, 1; 1998 HX₁₂₀ *, 8, 2, 1; 1998 HY₁₂₀ *, 8, 2, 1; 1998 HZ₁₂₀ *, 22, 5, 33; 1998 HA₁₂₁ *, 9, 2, 1; 1998 HB₁₂₁ *, 8, 2, 1; 1998 HC₁₂₁ *, 8, 2, 1; 1998 HD₁₂₁ *, 8, 2, 1; 1998 HE₁₂₁ *, 14, 3, 3; 1998 HF₁₂₁ *, 9, 2, 1; 1998 HG₁₂₁ *, 23, 5, 33; 1998 HH₁₂₁ *, 8, 2, 1; 1998 HJ₁₂₁ *, 23, 5, 33; 1998 HK₁₂₁ *, 8, 2, 1; 1998 HL₁₂₁ *, 8, 2, 1; 1998 HM₁₂₁ *, 18, 4, 31; 1998 HN₁₂₁ *, 18, 4, 31; 1998 HO₁₂₁ *, 8, 2, 1; 1998 HP₁₂₁ *, 18, 4, 31; 1998 HQ₁₂₁ *, 8, 2, 1; 1998 HR₁₂₁ *, 9, 2, 1; 1998 HS₁₂₁ *, 9, 2, 1; 1998 HT₁₂₁ *, 8, 2, 1; 1998 HU₁₂₁ *, 8, 2, 1; 1998 HV₁₂₁ *, 8, 2, 1; 1998 HW₁₂₁ *, 8, 2, 1; 1998 HX₁₂₁ *, 8, 2, 1; 1998 HY₁₂₁ *, 9, 2, 1; 1998 HZ₁₂₁ *, 9, 2, 1; 1998 HA₁₂₂ *, 8, 2, 1; 1998 HB₁₂₂ *, 8, 2, 1; 1998 HC₁₂₂ *, 8, 2, 1; 1998 HD₁₂₂ *, 8, 2, 1; 1998 HE₁₂₂ *, 8, 2, 1; 1998 HF₁₂₂ *, 9, 2, 1; 1998 HG₁₂₂ *, 8, 2, 1; 1998 HH₁₂₂ *, 8, 2, 1; 1998 HJ₁₂₂ *, 9, 2, 1; 1998 HK₁₂₂ *, 7, 2, 1; 1998 HL₁₂₂ *, 8, 2, 1; 1998 HM₁₂₂ *, 8, 2, 1; 1998 HN₁₂₂ *, 8, 2, 1; 1998 HO₁₂₂ *, 7, 2, 1; 1998 HP₁₂₂ *, 7, 2, 1; 1998 HQ₁₂₂ *, 7, 2, 1; 1998 HR₁₂₂ *, 8, 2, 1; 1998 HS₁₂₂ *, 8, 2, 1; 1998 HT₁₂₂ *, 8, 2, 1; 1998 HU₁₂₂ *, 7, 2, 1; 1998 HV₁₂₂ *, 7, 2, 1; 1998 HW₁₂₂ *, 17, 4, 31; 1998 HX₁₂₂ *, 17, 4, 31; 1998 HY₁₂₂ *, 8, 2, 1; 1998 HZ₁₂₂ *, 6, 2, 1; 1998 HA₁₂₃ *, 18, 4, 31; 1998 HB₁₂₃ *, 8, 2, 1; 1998 HC₁₂₃ *, 16, 4, 31; 1998 HD₁₂₃ *, 18, 4, 31; 1998 HE₁₂₃ *, 17, 4, 31; 1998 HF₁₂₃ *, 8, 2, 1; 1998 HG₁₂₃ *, 7, 2, 1; 1998 HH₁₂₃ *, 8, 2, 1; 1998 HJ₁₂₃ *, 6, 2, 1; 1998 HK₁₂₃ *, 7, 2, 1; 1998 HL₁₂₃ *, 18, 4, 31; 1998 HM₁₂₃ *, 7, 2, 1; 1998 HN₁₂₃ *, 8, 2, 1; 1998 HO₁₂₃ *, 7, 2, 1; 1998 HP₁₂₃ *, 7, 2, 1; 1998 HQ₁₂₃ *, 7, 2, 1; 1998 HR₁₂₃ *, 8, 2, 1; 1998 HS₁₂₃ *, 6, 2, 1; 1998 HT₁₂₃ *, 7, 2, 1; 1998 HU₁₂₃ *, 8, 2, 1; 1998 HV₁₂₃ *, 8, 2, 1; 1998 HW₁₂₃ *, 7, 2, 1; 1998 HX₁₂₃ *, 7, 2, 1; 1998 HY₁₂₃ *, 7, 2, 1; 1998 HZ₁₂₃ *, 8, 2, 1; 1998 HA₁₂₄ *, 8, 2, 1; 1998 HB₁₂₄ *, 7, 2, 1; 1998 HC₁₂₄ *, 7, 2, 1; 1998 HD₁₂₄ *, 7, 2, 1; 1998 HE₁₂₄ *, 7, 2, 1; 1998 HF₁₂₄ *, 8, 2, 1; 1998 HG₁₂₄ *, 6, 2, 1; 1998 HH₁₂₄ *, 7, 2, 1; 1998 HJ₁₂₄ *, 8, 2, 1; 1998 HK₁₂₄ *, 17, 4, 31; 1998 HL₁₂₄ *, 17, 4, 31; 1998 HM₁₂₄ *, 8, 2, 1; 1998 HN₁₂₄ *, 8, 2, 1; 1998 HO₁₂₄ *, 18, 4, 31; 1998 HP₁₂₄ *, 15, 4, 31; 1998 HQ₁₂₄ *, 17, 4, 31; 1998 HR₁₂₄ *, 17, 4, 31; 1998 HS₁₂₄ *, 8, 2, 1; 1998 HT₁₂₄ *, 7, 2, 1; 1998 HU₁₂₄ *, 7, 2, 1; 1998 HV₁₂₄ *, 7, 2, 1; 1998 HW₁₂₄ *, 8, 2, 1; 1998 HX₁₂₄ *, 8, 2, 1; 1998 HY₁₂₄ *, 7, 2, 1; 1998 HZ₁₂₄ *, 7, 2, 1; 1998 HA₁₂₅ *, 8, 2, 1; 1998 HB₁₂₅ *, 7, 2, 1; 1998 HC₁₂₅ *, 6, 2, 1; 1998 HD₁₂₅ *, 7, 2, 1; 1998 HE₁₂₅ *, 7, 2, 1; 1998 HF₁₂₅ *, 7, 2, 1; 1998 HG₁₂₅ *, 8, 2, 1; 1998 HH₁₂₅ *, 7, 2, 1; 1998 HJ₁₂₅ *, 7, 2, 1; 1998 HK₁₂₅ *, 7, 2, 1; 1998 HL₁₂₅ *, 7, 2, 1; 1998 HM₁₂₅ *, 7, 2, 1; 1998 HN₁₂₅ *, 7, 2, 1; 1998 HO₁₂₅ *, 7, 2, 1; 1998 HP₁₂₅ *, 7, 2, 1; 1998 HQ₁₂₅ *, 7, 2, 1; 1998 HR₁₂₅ *, 8, 2, 1; 1998 HS₁₂₅ *, 8, 2, 1; 1998 HT₁₂₅ *, 21, 5, 31; 1998 HU₁₂₅ *, 17, 4, 31; 1998 HV₁₂₅ *, 7, 2, 1; 1998 HW₁₂₅ *, 7, 2, 1; 1998 HX₁₂₅ *, 7, 2, 1; 1998 HY₁₂₅ *, 7, 2, 1; 1998 HZ₁₂₅ *, 7, 2, 1; 1998 HA₁₂₆ *, 7, 2, 1; 1998 HB₁₂₆ *, 7, 2, 1; 1998 HC₁₂₆ *, 7, 2, 1; 1998 HD₁₂₆ *, 7, 2, 1; 1998 HE₁₂₆ *, 7, 2, 1; 1998 HF₁₂₆ *, 7, 2, 1; 1998 HG₁₂₆ *, 7, 2, 1; 1998 HH₁₂₆ *, 7, 2, 1; 1998 HJ₁₂₆ *, 7, 2, 1; 1998 HK₁₂₆ *, 6, 2, 1; 1998 HL₁₂₆ *, 10, 2, 2; 1998 HM₁₂₆ *, 9, 2, 2; 1998 HN₁₂₆ *, 9, 2, 2; 1998 HO₁₂₆ *, 9, 2, 2; 1998 HP₁₂₆ *, 16, 2, 1; 1998 HQ₁₂₆ *, 9, 2, 2; 1998 HR₁₂₆ *, 9, 2, 1; 1998 HS₁₂₆ *, 8, 2, 1; 1998 HT₁₂₆ *, 9, 2, 2; 1998 HU₁₂₆ *, 8, 2, 1; 1998 HV₁₂₆ *, 9, 2, 1; 1998 HW₁₂₆ *, 9, 2, 1; 1998 HX₁₂₆ *, 9, 2, 1; 1998 HY₁₂₆ *, 9, 2, 1; 1998 HZ₁₂₆ *, 9, 2, 1; 1998 HA₁₂₇ *, 8, 2, 1; 1998 HB₁₂₇ *, 13, 3, 4; 1998 HC₁₂₇ *, 13, 2, 1; 1998 HD₁₂₇ *, 12, 3, 2; 1998 HE₁₂₇ *, 23, 5, 33; 1998 HF₁₂₇ *, 8, 2, 2; 1998 HG₁₂₇ *, 7, 2, 1; 1998 HH₁₂₇ *, 9, 2, 1; 1998 HJ₁₂₇ *, 15, 3, 28; 1998 HK₁₂₇ *, 7, 2, 1; 1998 HL₁₂₇ *, 9, 2, 4; 1998 HM₁₂₇ *, 9, 2, 4; 1998 HN₁₂₇ *, 8, 2, 4; 1998 HO₁₂₇ *, 33, 7, 31; 1998 HP₁₂₇ *, 10, 2, 4; 1998 HQ₁₂₇ *, 10, 2, 4; 1998 HR₁₂₇ *, 8, 2, 4; 1998 HS₁₂₇ *, 10, 2, 4; 1998 HT₁₂₇ *, 9, 2, 4; 1998 HU₁₂₇ *, 9, 2, 4; 1998 HV₁₂₇ *, 20, 5, 33; 1998 HW₁₂₇ *, 8, 2, 2; 1998 HX₁₂₇ *, 9, 2, 4; 1998 HY₁₂₇ *, 18, 4, 29; 1998 HZ₁₂₇ *, 27, 6, 31; 1998 HA₁₂₈ *, 8, 2, 4; 1998 HB₁₂₈ *, 8, 2, 4; 1998 HC₁₂₈ *, 15, 3, 4; 1998 HD₁₂₈ *, 10, 2, 1; 1998 HE₁₂₈ *, 9, 2, 1; 1998 HF₁₂₈ *, 9, 2, 1; 1998 HG₁₂₈ *, 9, 2, 1; 1998 HH₁₂₈ *, 10, 2, 1; 1998 HJ₁₂₈ *, 10, 2, 1; 1998 HK₁₂₈ *, 10, 2, 1; 1998 HL₁₂₈ *, 8, 2, 1; 1998 HM₁₂₈ *, 10, 2, 1; 1998 HN₁₂₈ *, 10, 2, 1; 1998 HO₁₂₈ *,

10, 2, 1; 1998 HP₁₂₈ *, 10, 2, 1; 1998 HQ₁₂₈ *, 10, 2, 1; 1998 HR₁₂₈ *, 10, 2, 1; 1998 HS₁₂₈ *, 9, 2, 1; 1998 HT₁₂₈ *, 9, 2, 1; 1998 HU₁₂₈ *, 12, 2, 1; 1998 HV₁₂₈ *, 9, 2, 1; 1998 HW₁₂₈ *, 9, 2, 1; 1998 HX₁₂₈ *, 10, 2, 1; 1998 HY₁₂₈ *, 8, 2, 1; 1998 HZ₁₂₈ *, 10, 2, 1; 1998 HA₁₂₉ *, 10, 2, 1; 1998 HB₁₂₉ *, 10, 2, 1; 1998 HC₁₂₉ *, 9, 2, 1; 1998 HD₁₂₉ *, 10, 2, 1; 1998 HE₁₂₉ *, 10, 2, 1; 1998 HF₁₂₉ *, 9, 2, 1; 1998 HG₁₂₉ *, 8, 2, 1; 1998 HH₁₂₉ *, 8, 2, 1; 1998 HJ₁₂₉ *, 8, 2, 1; 1998 HK₁₂₉ *, 9, 2, 1; 1998 HL₁₂₉ *, 9, 2, 1; 1998 HM₁₂₉ *, 9, 2, 1; 1998 HN₁₂₉ *, 10, 2, 1; 1998 HO₁₂₉ *, 10, 2, 1; 1998 HP₁₂₉ *, 7, 2, 1; 1998 HQ₁₂₉ *, 8, 2, 1; 1998 HR₁₂₉ *, 9, 2, 1; 1998 HS₁₂₉ *, 9, 2, 3; 1998 HT₁₂₉ *, 24, 5, 31; 1998 HU₁₂₉ *, 8, 2, 1; 1998 HV₁₂₉ *, 10, 2, 1; 1998 HW₁₂₉ *, 10, 2, 1; 1998 HX₁₂₉ *, 8, 2, 1; 1998 HY₁₂₉ *, 8, 2, 1; 1998 HZ₁₂₉ *, 25, 6, 31; 1998 HA₁₃₀ *, 10, 2, 1; 1998 HB₁₃₀ *, 20, 4, 31; 1998 HC₁₃₀ *, 8, 2, 1; 1998 HD₁₃₀ *, 9, 2, 1; 1998 HE₁₃₀ *, 8, 2, 1; 1998 HF₁₃₀ *, 8, 2, 1; 1998 HG₁₃₀ *, 8, 2, 1; 1998 HH₁₃₀ *, 8, 2, 1; 1998 HJ₁₃₀ *, 8, 2, 3; 1998 HK₁₃₀ *, 8, 2, 3; 1998 HL₁₃₀ *, 8, 2, 1; 1998 HM₁₃₀ *, 8, 2, 1; 1998 HN₁₃₀ *, 23, 5, 31; 1998 HO₁₃₀ *, 8, 2, 1; 1998 HP₁₃₀ *, 8, 2, 1; 1998 HQ₁₃₀ *, 8, 2, 1; 1998 HR₁₃₀ *, 9, 2, 3; 1998 HS₁₃₀ *, 9, 2, 1; 1998 HT₁₃₀ *, 9, 2, 1; 1998 HU₁₃₀ *, 8, 2, 1; 1998 HV₁₃₀ *, 9, 2, 1; 1998 HW₁₃₀ *, 9, 2, 1; 1998 HX₁₃₀ *, 8, 2, 1; 1998 HY₁₃₀ *, 8, 2, 1; 1998 HZ₁₃₀ *, 7, 2, 3; 1998 HA₁₃₁ *, 8, 2, 3; 1998 HB₁₃₁ *, 8, 2, 1; 1998 HC₁₃₁ *, 8, 2, 1; 1998 HD₁₃₁ *, 9, 2, 3; 1998 HE₁₃₁ *, 8, 2, 1; 1998 HF₁₃₁ *, 9, 2, 1; 1998 HG₁₃₁ *, 9, 2, 1; 1998 HH₁₃₁ *, 8, 2, 1; 1998 HJ₁₃₁ *, 8, 2, 1; 1998 HK₁₃₁ *, 9, 2, 1; 1998 HL₁₃₁ *, 9, 2, 1; 1998 HM₁₃₁ *, 9, 2, 1; 1998 HN₁₃₁ *, 8, 2, 1; 1998 HO₁₃₁ *, 8, 2, 1; 1998 HP₁₃₁ *, 7, 2, 1; 1998 HQ₁₃₁ *, 8, 2, 1; 1998 HR₁₃₁ *, 8, 2, 1; 1998 HS₁₃₁ *, 8, 2, 1; 1998 HT₁₃₁ *, 8, 2, 1; 1998 HU₁₃₁ *, 8, 2, 1; 1998 HV₁₃₁ *, 14, 3, 5; 1998 HW₁₃₁ *, 14, 3, 3; 1998 HX₁₃₁ *, 8, 2, 1; 1998 HY₁₃₁ *, 8, 2, 1; 1998 HZ₁₃₁ *, 9, 2, 1; 1998 HA₁₃₂ *, 9, 2, 1; 1998 HB₁₃₂ *, 14, 3, 5; 1998 HC₁₃₂ *, 14, 3, 5; 1998 HD₁₃₂ *, 8, 2, 1; 1998 HE₁₃₂ *, 9, 2, 1; 1998 HF₁₃₂ *, 8, 2, 1; 1998 HG₁₃₂ *, 7, 2, 1; 1998 HH₁₃₂ *, 8, 2, 1; 1998 HJ₁₃₂ *, 9, 2, 1; 1998 HL₁₃₂ *, 9, 2, 1; 1998 HM₁₃₂ *, 19, 4, 31; 1998 HN₁₃₂ *, 9, 2, 1; 1998 HO₁₃₂ *, 9, 2, 1; 1998 HP₁₃₂ *, 8, 2, 1; 1998 HQ₁₃₂ *, 19, 4, 31; 1998 HR₁₃₂ *, 9, 2, 1; 1998 HS₁₃₂ *, 9, 2, 1; 1998 HT₁₃₂ *, 9, 2, 1; 1998 HU₁₃₂ *, 9, 2, 1; 1998 HV₁₃₂ *, 9, 2, 1; 1998 HW₁₃₂ *, 8, 2, 3; 1998 HX₁₃₂ *, 8, 2, 1; 1998 HY₁₃₂ *, 8, 2, 1; 1998 HZ₁₃₂ *, 8, 2, 1; 1998 HA₁₃₃ *, 28, 6, 55; 1998 HB₁₃₃ *, 8, 2, 1; 1998 HC₁₃₃ *, 8, 2, 1; 1998 HD₁₃₃ *, 8, 2, 3; 1998 HE₁₃₃ *, 12, 2, 1; 1998 HF₁₃₃ *, 8, 2, 1; 1998 HG₁₃₃ *, 9, 2, 1; 1998 HH₁₃₃ *, 9, 2, 1; 1998 HJ₁₃₃ *, 9, 2, 1; 1998 HK₁₃₃ *, 9, 2, 1; 1998 HL₁₃₃ *, 9, 2, 1; 1998 HM₁₃₃ *, 9, 2, 1; 1998 HN₁₃₃ *, 9, 2, 1; 1998 HO₁₃₃ *, 13, 3, 5; 1998 HP₁₃₃ *, 12, 3, 3; 1998 HQ₁₃₃ *, 13, 3, 5; 1998 HR₁₃₃ *, 13, 3, 5; 1998 HS₁₃₃ *, 14, 3, 5; 1998 HT₁₃₃ *, 13, 3, 5; 1998 HU₁₃₃ *, 8, 2, 1; 1998 HV₁₃₃ *, 12, 3, 5; 1998 HW₁₃₃ *, 14, 3, 5; 1998 HX₁₃₃ *, 8, 2, 1; 1998 HY₁₃₃ *, 14, 3, 5; 1998 HZ₁₃₃ *, 14, 3, 5; 1998 HA₁₃₄ *, 9, 2, 1; 1998 HB₁₃₄ *, 9, 2, 1; 1998 HC₁₃₄ *, 9, 2, 1; 1998 HD₁₃₄ *, 8, 2, 1; 1998 HE₁₃₄ *, 9, 2, 1; 1998 HF₁₃₄ *, 8, 2, 3; 1998 HG₁₃₄ *, 13, 3, 5; 1998 HH₁₃₄ *, 14, 3, 5; 1998 HJ₁₃₄ *, 14, 3, 5; 1998 HK₁₃₄ *, 9, 2, 5; 1998 HL₁₃₄ *, 14, 3, 5; 1998 HM₁₃₄ *, 14, 3, 5; 1998 HN₁₃₄ *, 14, 3, 5; 1998 HO₁₃₄ *, 12, 3, 5; 1998 HP₁₃₄ *, 14, 3, 5; 1998 HQ₁₃₄ *, 9, 2, 5; 1998 HR₁₃₄ *, 13, 3, 5; 1998 HS₁₃₄ *, 12, 3, 5; 1998 HT₁₃₄ *, 8, 2, 1; 1998 HU₁₃₄ *, 8, 2, 1; 1998 HV₁₃₄ *, 8, 2, 1; 1998 HW₁₃₄ *, 9, 2, 1; 1998 HX₁₃₄ *, 8, 2, 1; 1998 HY₁₃₄ *, 9, 2, 1; 1998 HZ₁₃₄ *, 9, 2, 1; 1998 HA₁₃₅ *, 9, 2, 1; 1998 HB₁₃₅ *, 9, 2, 1; 1998 HC₁₃₅ *, 8, 2, 1; 1998 HD₁₃₅ *, 8, 2, 1; 1998 HE₁₃₅ *, 9, 2, 1; 1998 HF₁₃₅ *, 9, 2, 1; 1998 HG₁₃₅ *, 9, 2, 1; 1998 HH₁₃₅ *, 9, 2, 1; 1998 HJ₁₃₅ *, 9, 2, 1; 1998 HK₁₃₅ *, 9, 2, 1; 1998 HL₁₃₅ *, 9, 2, 1; 1998 HM₁₃₅ *, 9, 2, 1; 1998 HN₁₃₅ *, 9, 2, 1; 1998 HO₁₃₅ *, 8, 2, 1; 1998 HP₁₃₅ *, 8, 2, 1; 1998 HQ₁₃₅ *, 8, 2, 1; 1998 HR₁₃₅ *, 9, 2, 1; 1998 HS₁₃₅ *, 9, 2, 1; 1998 HT₁₃₅ *, 8, 2, 1; 1998 HU₁₃₅ *, 9, 2, 2; 1998 HV₁₃₅ *, 7, 2, 2; 1998 HW₁₃₅ *, 19, 4, 25; 1998 HX₁₃₅ *, 9, 2, 4; 1998 HY₁₃₅ *, 9, 2, 4; 1998 HZ₁₃₅ *, 8, 2, 4; 1998 HA₁₃₆ *, 9, 2, 4; 1998 HB₁₃₆ *, 8, 2, 4; 1998 HC₁₃₆ *, 10, 2, 4; 1998 HD₁₃₆ *, 8, 2, 4; 1998 HE₁₃₆ *, 9, 2, 4; 1998 HF₁₃₆ *, 9, 2, 4; 1998 HG₁₃₆ *, 9, 2, 4; 1998 HH₁₃₆ *, 10, 2, 4; 1998 HJ₁₃₆ *, 10, 2, 4; 1998 HK₁₃₆ *, 9, 2, 4; 1998 HL₁₃₆ *, 10, 2, 4; 1998 HM₁₃₆ *, 8, 2, 4; 1998 HN₁₃₆ *, 9, 2, 4; 1998 HO₁₃₆ *, 9, 2, 4; 1998 HP₁₃₆ *, 10, 2, 2; 1998 HQ₁₃₆ *, 16, 4, 31; 1998 HR₁₃₆ *, 18, 4, 33; 1998 HS₁₃₆ *, 18, 4, 31; 1998 HT₁₃₆ *, 9, 2, 4; 1998 HU₁₃₆ *, 10, 2, 4; 1998 HV₁₃₆ *, 10, 2, 4; 1998 HW₁₃₆ *, 10, 2, 4; 1998 HX₁₃₆ *, 10, 2, 4; 1998 HY₁₃₆ *, 10, 2,

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2, 1; 3: 1998 HM₁₃₉ *, 9, 2, 3; 1998 HN₁₃₉ *, 9, 2, 3; 1998 HO₁₃₉ *, 10, 2, 3; 1998 HP₁₃₉ *, 10, 2, 1; 1998 HQ₁₃₉ *, 9, 2, 3; 1998 HR₁₃₉ *, 8, 2, 2; 1998 HS₁₃₉ *, 8, 2, 3; 1998 HT₁₃₉ *, 9, 2, 3; 1998 HU₁₃₉ *, 10, 2, 2; 1998 HV₁₃₉ *, 10, 2, 3; 1998 HW₁₃₉ *, 15, 3, 3; 1998 HX₁₃₉ *, 10, 2, 2; 1998 HY₁₃₉ *, 10, 2, 1; 1998 HZ₁₃₉ *, 10, 2, 1; 1998 HA₁₄₀ *, 9, 2, 3; 1998 HB₁₄₀ *, 10, 2, 2; 1998 HC₁₄₀ *, 10, 2, 2; 1998 HD₁₄₀ *, 10, 2, 2; 1998 HE₁₄₀ *, 9, 2, 3; 1998 HF₁₄₀ *, 10, 2, 2; 1998 HG₁₄₀ *, 9, 2, 2; 1998 HH₁₄₀ *, 10, 2, 2; 1998 HJ₁₄₀ *, 10, 2, 2; 1998 HK₁₄₀ *, 8, 2, 2; 1998 HL₁₄₀ *, 15, 3, 3; 1998 HM₁₄₀ *, 10, 2, 2; 1998 HN₁₄₀ *, 10, 2, 2; 1998 HO₁₄₀ *, 9, 2, 2; 1998 HP₁₄₀ *, 9, 2, 2; 1998 HQ₁₄₀ *, 10, 2, 3; 1998 HR₁₄₀ *, 9, 2, 1; 1998 HS₁₄₀ *, 15, 3, 3; 1998 HT₁₄₀ *, 9, 2, 2; 1998 HU₁₄₀ *, 10, 2, 2; 1998 HV₁₄₀ *, 10, 2, 2; 1998 HW₁₄₀ *, 20, 4, 25; 1998 HX₁₄₀ *, 14, 3, 3; 1998 HY₁₄₀ *, 9, 2, 3; 1998 HZ₁₄₀ *, 9, 2, 2; 1998 HA₁₄₁ *, 9, 2, 2; 1998 HB₁₄₁ *, 10, 2, 2; 1998 HC₁₄₁ *, 10, 2, 2; 1998 HD₁₄₁ *, 8, 2, 2; 1998 HE₁₄₁ *, 10, 2, 2; 1998 HF₁₄₁ *, 10, 2, 3; 1998 HG₁₄₁ *, 15, 3, 3; 1998 HH₁₄₁ *, 8, 2, 2; 1998 HJ₁₄₁ *, 10, 2, 3; 1998 HK₁₄₁ *, 9, 2, 3; 1998 HL₁₄₁ *, 9, 2, 3; 1998 HM₁₄₁ *, 14, 3, 3; 1998 HN₁₄₁ *, 9, 2, 3; 1998 HO₁₄₁ *, 9, 2, 3; 1998 HP₁₄₁ *, 9, 2, 3; 1998 HQ₁₄₁ *, 9, 2, 3; 1998 HR₁₄₁ *, 9, 2, 1; 1998 HS₁₄₁ *, 8, 2, 1; 1998 HT₁₄₁ *, 8, 2, 3; 1998 HU₁₄₁ *, 8, 2, 3; 1998 HV₁₄₁ *, 9, 2, 3; 1998 HW₁₄₁ *, 8, 2, 1; 1998 HX₁₄₁ *, 8, 2, 1; 1998 HY₁₄₁ *, 7, 2, 1; 1998 HZ₁₄₁ *, 9, 2, 1; 1998 HA₁₄₂ *, 8, 2, 1; 1998 HB₁₄₂ *, 8, 2, 2; 1998 HC₁₄₂ *, 8, 2, 1; 1998 HD₁₄₂ *, 8, 2, 1; 1998 HE₁₄₂ *, 9, 2, 1; 1998 HF₁₄₂ *, 9, 2, 1; 1998 HG₁₄₂ *, 9, 2, 1; 1998 HJ₁₄₂ *, 8, 2, 2; 1998 HK₁₄₂ *, 9, 2, 2; 1998 HL₁₄₂ *, 8, 2, 2; 1998 HM₁₄₂ *, 9, 2, 2; 1998 HN₁₄₂ *, 8, 2, 1; 1998 HO₁₄₂ *, 8, 2, 1; 1998 HP₁₄₂ *, 9, 2, 2; 1998 HQ₁₄₂ *, 7, 2, 2; 1998 HR₁₄₂ *, 9, 2, 3; 1998 HS₁₄₂ *, 9, 2, 3; 1998 HT₁₄₂ *, 8, 2, 2; 1998 HU₁₄₂ *, 7, 2, 3; 1998 HV₁₄₂ *, 8, 2, 2; 1998 HW₁₄₂ *, 8, 2, 2; 1998 HX₁₄₂ *, 9, 2, 1; 1998 HY₁₄₂ *, 9, 2, 1; 1998 HZ₁₄₂ *, 9, 2, 1; 1998 HA₁₄₃ *, 10, 2, 1; 1998 HB₁₄₃ *, 10, 2, 1; 1998 HC₁₄₃ *, 9, 2, 1; 1998 HD₁₄₃ *, 9, 2, 1; 1998 HE₁₄₃ *, 10, 2, 2; 1998 HF₁₄₃ *, 9, 2, 2; 1998 HG₁₄₃ *, 8, 2, 2; 1998 HH₁₄₃ *, 8, 2, 2; 1998 HJ₁₄₃ *, 9, 2, 2; 1998 HK₁₄₃ *, 14, 3, 3; 1998 HL₁₄₃ *, 10, 2, 2; 1998 HM₁₄₃ *, 9, 2, 23; 1998 HN₁₄₃ *, 10, 2, 1; 1998 HO₁₄₃ *, 10, 2, 1; 1998 HP₁₄₃ *, 10, 2, 1; 1998 HQ₁₄₃ *, 8, 2, 1; 1998 HR₁₄₃ *, 8, 2, 1; 1998 HS₁₄₃ *, 9, 2, 1; 1998 HT₁₄₃ *, 9, 2, 1; 1998 HU₁₄₃ *, 8, 2, 1; 1998 HV₁₄₃ *, 9, 2, 1; 1998 HW₁₄₃ *, 9, 2, 1; 1998 HX₁₄₃ *, 10, 2, 2; 1998 HY₁₄₃ *, 10, 2, 2; 1998 HZ₁₄₃ *, 10, 2, 2; 1998 HA₁₄₄ *, 9, 2, 2; 1998 HB₁₄₄ *, 10, 2, 2; 1998 HC₁₄₄ *, 10, 2, 2; 1998 HD₁₄₄ *, 14, 3, 3; 1998 HE₁₄₄ *, 10, 2, 2; 1998 HF₁₄₄ *, 19, 3, 3; 1998 HG₁₄₄ *, 9, 2, 2; 1998 HH₁₄₄ *, 10, 2, 2; 1998 HJ₁₄₄ *, 9, 2, 2; 1998 HK₁₄₄ *, 8, 2, 3; 1998 HL₁₄₄ *, 10, 2, 2; 1998 HM₁₄₄ *, 10, 2, 1; 1998 HN₁₄₄ *, 8, 2, 1; 1998 HO₁₄₄ *, 7, 2, 1; 1998 HP₁₄₄ *, 24, 5, 33; 1998 HQ₁₄₄ *, 18, 4, 33; 1998 HR₁₄₄ *, 9, 2, 1; 1998 HS₁₄₄ *, 10, 2, 1; 1998 HT₁₄₄ *, 8, 2, 1; 1998 HU₁₄₄ *, 24, 5, 33; 1998 HV₁₄₄ *, 8, 2, 1; 1998 HW₁₄₄ *, 18, 4, 33; 1998 HX₁₄₄ *, 14, 3, 2; 1998 HY₁₄₄ *, 8, 2, 2; 1998 HZ₁₄₄ *, 8, 2, 3; 1998 HA₁₄₅ *, 9, 2, 3; 1998 HB₁₄₅ *, 9, 2, 3; 1998 HC₁₄₅ *, 9, 2, 3; 1998 HD₁₄₅ *, 9, 2, 3; 1998 HE₁₄₅ *, 10, 2, 2; 1998 HF₁₄₅ *, 23, 5, 33; 1998 HG₁₄₅ *, 9, 2, 2; 1998 HH₁₄₅ *, 9, 2, 3; 1998 HJ₁₄₅ *, 8, 2, 2; 1998 HK₁₄₅ *, 20, 4, 33; 1998 HL₁₄₅ *, 7, 2, 2; 1998 HM₁₄₅ *, 10, 2, 2; 1998 HN₁₄₅ *, 9, 2, 2; 1998 HO₁₄₅ *, 23, 5, 33; 1998 HP₁₄₅ *, 25, 5, 33; 1998 HQ₁₄₅ *, 9, 2, 1; 1998 HR₁₄₅ *, 8, 2, 2; 1998 HS₁₄₅ *, 16, 4, 33; 1998 HT₁₄₅ *, 9, 2, 2; 1998 HU₁₄₅ *, 9, 2, 3; 1998 HV₁₄₅ *, 24, 5, 33; 1998 HW₁₄₅ *, 9

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1998 JY, 10, 2, 1; 1998 JZ, 20, 4, 38; 1998 JB₁, 15, 3, 10; 1998 JH₁, 9, 2, 2; 1998 JJ₁, 13, 3, 23; 1998 JL₁, 9, 2, 2; 1998 JM₁, 10, 2, 2; 1998 JN₁, 10, 2, 2; 1998 JO₁, 20, 4, 32; 1998 JQ₁, 5, 1, 0; 1998 JR₁, 20, 4, 32; 1998 JS₁, 10, 2, 2; 1998 JT₁, 10, 2, 2; 1998 JA₂, 10, 1, 0; 1998 JB₂, 14, 3, 23; 1998 JC₂, 9, 2, 2; 1998 JD₂, 10, 2, 2; 1998 JE₂, 14, 3, 23; 1998 JF₂, 10, 2, 1; 1998 JG₂, 18, 4, 31; 1998 JP₂, 17, 4, 33; 1998 JQ₂, 7, 2, 1; 1998 JS₂, 17, 4, 31; 1998 JT₂, 18, 4, 31; 1998 JV₂, 7, 2, 1; 1998 JW₂, 7, 2, 1; 1998 JD₃, 10, 2, 2; 1998 JE₃, 7, 2, 1; 1998 JF₃, 7, 2, 1; 1998 JG₃, 10, 2, 2; 1998 JH₃, 13, 3, 30; 1998 JJ₃, 12, 3, 30; 1998 JK₃, 12, 3, 30; 1998 JL₃, 10, 2, 2; 1998 JO₃, 9, 2, 2; 1998 JZ₃, 14, 3, 12; 1998 JA₄, 9, 2, 2; 1998 JB₄, 9, 2, 9; 1998 JC₄, 10, 2, 2; 1998 JE₄, 18, 4, 32; 1998 JF₄, 4, 1, 0; 1998 JG₄, 9, 2, 2; 1998 JH₄, 8, 2, 2; 1998 JI₄, 19, 4, 32; 1998 JL₄, 4, 1, 0; 1998 JM₄, 5, 1, 0; 1998 KA, 18, 4, 32; 1998 KC *, 16, 4, 32; 1998 KH *, 14, 3, 2; 1998 KK, 15, 3, 32; 1998 KL, 10, 2, 2; 1998 KN, 14, 3, 12; 1998 KU, 14, 3, 12; 1998 KY *, 15, 3, 2; 1998 KZ *, 15, 3, 2; 1998 KD₁, 19, 4, 32; 1998 KE₁, 15, 3, 32; 1998 KF₁, 8, 2, 2; 1998 KH₁, 10, 2, 2; 1998 KJ₁, 14, 3, 23; 1998 KK₁, 19, 4, 32; 1998 KL₁, 19, 4, 32; 1998 KM₁, 19, 4, 32; 1998 KO₁, 10, 2, 2; 1998 KP₁, 20, 4, 32; 1998 KQ₁, 8, 2, 2; 1998 KR₁, 20, 4, 32; 1998 KS₁, 10, 2, 2; 1998 KT₁, 19, 4, 33; 1998 KV₁ *, 10, 2, 2; 1998 KW₁ *, 14, 3, 32; 1998 KX₁ *, 8, 2, 2; 1998 KY₁ *, 9, 2, 2; 1998 KZ₁ *, 9, 2, 2; 1998 KA₂ *, 8, 2, 2; 1998 KB₂ *, 10, 2, 2; 1998 KC₂ *, 19, 4, 32; 1998 KD₂ *, 9, 2, 2; 1998 KE₂ *, 10, 2, 2; 1998 KF₂ *, 10, 2, 2; 1998 KG₂ *, 10, 2, 2; 1998 KH₂ *, 8, 2, 2; 1998 KJ₂ *, 10, 2, 2; 1998 KK₂ *, 10, 2, 2; 1998 KL₂ *, 10, 2, 2; 1998 KM₂ *, 10, 2, 2; 1998 KN₂ *, 10, 2, 2; 1998 KO₂ *, 9, 2, 2; 1998 KP₂ *, 14, 3, 12; 1998 KQ₂ *, 15, 3, 12; 1998 KR₂ *, 8, 2, 2; 1998 KS₂ *, 9, 2, 1; 1998 KT₂ *, 10, 2, 1; 1998 KU₂ *, 38, 6, 33; 1998 KV₂ *, 12, 2, 2; 1998 KW₂ *, 19, 4, 30; 1998 KD₃ *, 23, 4, 3; 1998 KE₃ *, 31, 4, 3; 1998 KF₃ *, 14, 3, 3; 1998 KH₃ *, 8, 2, 3; 1998 KJ₃ *, 10, 2, 3; 1998 KK₃ *, 15, 3, 11; 1998 KM₃ *, 7, 2, 2; 1998 KN₃ *, 13, 2, 2; 1998 KO₃ *, 14, 3, 3; 1998 KP₃, 10, 2, 2; 1998 KR₃, 19, 4, 32; 1998 KT₃, 9, 2, 2; 1998 KU₃, 10, 2, 2; 1998 KV₃, 9, 2, 2; 1998 KW₃, 15, 3, 32; 1998 KX₃, 14, 3, 32; 1998 KY₃, 9, 2, 2; 1998 KA₄, 10, 2, 2; 1998 KB₄, 10, 2, 2; 1998 KC₄, 10, 2, 2; 1998 KD₄, 10, 2, 2; 1998 KE₄, 10, 2, 2; 1998 KF₄, 10, 2, 2; 1998 KG₄, 9, 2, 2; 1998 KH₄, 9, 2, 2; 1998 KK₄, 10, 2, 2; 1998 KL₄, 10, 2, 2; 1998 KM₄, 10, 2, 2; 1998 KN₄, 10, 2, 2; 1998 KO₄, 14, 3, 12; 1998 KP₄, 15, 3, 12; 1998 KU₄, 10, 2, 2; 1998 KW₄, 15, 3, 12; 1998 KX₄, 10, 2, 2; 1998 KY₄, 14, 3, 12; 1998 KA₅, 14, 3, 12; 1998 KC₅, 10, 2, 2; 1998 KF₆ *, 7, 2, 1; 1998 KG₆ *, 9, 2, 2; 1998 KH₆ *, 9, 2, 2; 1998 KJ₆ *, 8, 2, 2; 1998 KK₆ *, 6, 2, 2; 1998 KL₆ *, 9, 2, 2; 1998 KM₆ *, 10, 2, 1; 1998 KN₆ *, 15, 3, 11; 1998 KO₆, 10, 2, 2; 1998 KP₆, 14, 3, 12; 1998 KQ₆, 14, 3, 12; 1998 KR₆, 9, 2, 2; 1998 KS₆, 4, 1, 0; 1998 KU₆, 14, 3, 12; 1998 KV₆, 14, 3, 12; 1998 KW₆, 14, 3, 12; 1998 KX₆, 14, 3, 12; 1998 KY₆, 14, 3, 12; 1998 KZ₆, 8, 2, 2; 1998 KA₇, 10, 2, 2; 1998 KB₇, 10, 2, 2; 1998 KC₇, 10, 2, 2; 1998 KD₇, 10, 2, 2; 1998 KE₇, 19, 4, 32; 1998 KF₇, 9, 2, 2; 1998 KG₇, 10, 2, 2; 1998 KH₇, 10, 2, 2; 1998 KJ₇, 10, 2, 2; 1998 KM₇, 10, 2, 2; 1998 KN₇, 9, 2, 2; 1998 KO₇, 10, 2, 2; 1998 KP₇, 10, 2, 2; 1998 KQ₇, 15, 3, 12; 1998 KR₇, 9, 2, 2; 1998 KS₇, 9, 2, 2; 1998 KU₇, 10, 2, 2; 1998 KV₇, 14, 3, 12; 1998 KW₇, 15, 3, 12; 1998 KY₇, 9, 2, 2; 1998 KZ₇, 14, 3, 12; 1998 KB₈, 10, 2, 2; 1998 KC₈, 14, 3, 12; 1998 KD₈, 10, 2, 2; 1998 KE₈, 9, 2, 2; 19

7, 2, 2; 1998 KW₁₆ *, 8, 2, 2; 1998 KX₁₆ *, 7, 2, 2; 1998 KY₁₆ *, 8, 2, 2; 1998 KZ₁₆ *, 7, 2, 2; 1998 KH₁₇ *, 10, 2, 1; 1998 KJ₁₇ *, 4, 1, 0; 1998 KK₁₇ *, 5, 1, 0; 1998 KL₁₇ *, 10, 2, 2; 1998 KM₁₇ *, 10, 2, 2; 1998 KN₁₇ *, 10, 2, 2; 1998 KO₁₇ *, 10, 2, 2; 1998 KP₁₇ *, 9, 2, 2; 1998 KQ₁₇ *, 10, 2, 2; 1998 KR₁₇ *, 10, 2, 2; 1998 KS₁₇ *, 10, 2, 2; 1998 KT₁₇ *, 9, 2, 2; 1998 KU₁₇ *, 10, 2, 2; 1998 KV₁₇ *, 10, 2, 2; 1998 KW₁₇ *, 10, 2, 2; 1998 KX₁₇ *, 8, 2, 2; 1998 KY₁₇ *, 9, 2, 2; 1998 KZ₁₇ *, 10, 2, 2; 1998 KA₁₈ *, 10, 2, 2; 1998 KB₁₈ *, 10, 2, 2; 1998 KC₁₈ *, 10, 2, 2; 1998 KD₁₈ *, 10, 2, 2; 1998 KE₁₈ *, 10, 2, 2; 1998 KF₁₈ *, 9, 2, 2; 1998 KG₁₈ *, 8, 2, 2; 1998 KH₁₈ *, 9, 2, 2; 1998 KJ₁₈ *, 10, 2, 2; 1998 KK₁₈ *, 10, 2, 2; 1998 KL₁₈ *, 9, 2, 2; 1998 KM₁₈ *, 6, 2, 2; 1998 KN₁₈ *, 8, 2, 2; 1998 KO₁₈ *, 9, 2, 2; 1998 KP₁₈ *, 9, 2, 2; 1998 KQ₁₈ *, 9, 2, 2; 1998 KR₁₈ *, 10, 2, 2; 1998 KS₁₈ *, 9, 2, 2; 1998 KT₁₈ *, 9, 2, 2; 1998 KU₁₈ *, 10, 2, 2; 1998 KV₁₈ *, 9, 2, 2; 1998 KW₁₈ *, 8, 2, 2; 1998 KX₁₈ *, 10, 2, 2; 1998 KY₁₈ *, 10, 2, 2; 1998 KZ₁₈ *, 10, 2, 2; 1998 KA₁₉ *, 10, 2, 2; 1998 KB₁₉ *, 10, 2, 2; 1998 KC₁₉ *, 10, 2, 2; 1998 KD₁₉ *, 10, 2, 2; 1998 KE₁₉ *, 9, 2, 2; 1998 KF₁₉ *, 8, 2, 2; 1998 KG₁₉ *, 6, 2, 2; 1998 KH₁₉ *, 9, 2, 2; 1998 KJ₁₉ *, 9, 2, 2; 1998 KK₁₉ *, 9, 2, 2; 1998 KL₁₉ *, 8, 2, 2; 1998 KM₁₉ *, 10, 2, 2; 1998 KN₁₉ *, 9, 2, 2; 1998 KO₁₉ *, 8, 2, 2; 1998 KP₁₉ *, 10, 2, 2; 1998 KQ₁₉ *, 10, 2, 2; 1998 KR₁₉ *, 8, 2, 2; 1998 KS₁₉ *, 20, 4, 32; 1998 KT₁₉ *, 10, 2, 2; 1998 KU₁₉ *, 9, 2, 2; 1998 KV₁₉ *, 7, 2, 2; 1998 KW₁₉ *, 9, 2, 2; 1998 KX₁₉ *, 9, 2, 2; 1998 KY₁₉ *, 9, 2, 2; 1998 KZ₁₉ *, 10, 2, 2; 1998 KA₂₀ *, 8, 2, 2; 1998 KB₂₀ *, 7, 2, 2; 1998 KC₂₀ *, 10, 2, 2; 1998 KD₂₀ *, 8, 2, 2; 1998 KE₂₀ *, 10, 2, 2; 1998 KF₂₀ *, 10, 2, 2; 1998 KG₂₀ *, 9, 2, 2; 1998 KH₂₀ *, 9, 2, 2; 1998 KJ₂₀ *, 9, 2, 2; 1998 KK₂₀ *, 10, 2, 2; 1998 KL₂₀ *, 10, 2, 2; 1998 KM₂₀ *, 10, 2, 2; 1998 KN₂₀ *, 10, 2, 2; 1998 KO₂₀ *, 10, 2, 2; 1998 KP₂₀ *, 10, 2, 2; 1998 KQ₂₀ *, 9, 2, 2; 1998 KR₂₀ *, 10, 2, 2; 1998 KS₂₀ *, 9, 2, 2; 1998 KT₂₀ *, 9, 2, 2; 1998 KU₂₀ *, 9, 2, 2; 1998 KV₂₀ *, 10, 2, 2; 1998 KW₂₀ *, 9, 2, 2; 1998 KX₂₀ *, 10, 2, 2; 1998 KY₂₀ *, 9, 2, 2; 1998 KZ₂₀ *, 9, 2, 2; 1998 KA₂₁ *, 10, 2, 2; 1998 KB₂₁ *, 10, 2, 2; 1998 KC₂₁ *, 10, 2, 2; 1998 KD₂₁ *, 10, 2, 2; 1998 KE₂₁ *, 8, 2, 2; 1998 KF₂₁ *, 8, 2, 2; 1998 KG₂₁ *, 7, 2, 2; 1998 KH₂₁ *, 10, 2, 2; 1998 KJ₂₁ *, 9, 2, 2; 1998 KK₂₁ *, 10, 2, 2; 1998 KL₂₁ *, 9, 2, 2; 1998 KM₂₁ *, 9, 2, 2; 1998 KN₂₁ *, 9, 2, 2; 1998 KO₂₁ *, 10, 2, 2; 1998 KP₂₁ *, 10, 2, 2; 1998 KQ₂₁ *, 10, 2, 2; 1998 KR₂₁ *, 10, 2, 2; 1998 KS₂₁ *, 10, 2, 2; 1998 KT₂₁ *, 10, 2, 2; 1998 KU₂₁ *, 10, 2, 2; 1998 KV₂₁ *, 9, 2, 2; 1998 KW₂₁ *, 10, 2, 2; 1998 KX₂₁ *, 10, 2, 2; 1998 KY₂₁ *, 9, 2, 2; 1998 KZ₂₁ *, 8, 2, 2; 1998 KA₂₂ *, 8, 2, 2; 1998 KB₂₂ *, 9, 2, 2; 1998 KC₂₂ *, 10, 2, 2; 1998 KD₂₂ *, 10, 2, 2; 1998 KE₂₂ *, 10, 2, 2; 1998 KF₂₂ *, 10, 2, 2; 1998 KG₂₂ *, 10, 2, 2; 1998 KH₂₂ *, 9, 2, 2; 1998 KJ₂₂ *, 9, 2, 2; 1998 KK₂₂ *, 10, 2, 2; 1998 KL₂₂ *, 10, 2, 2; 1998 KM₂₂ *, 8, 2, 2; 1998 KN₂₂ *, 9, 2, 2; 1998 KO₂₂ *, 8, 2, 2; 1998 KP₂₂ *, 9, 2, 2; 1998 KQ₂₂ *, 7, 2, 2; 1998 KR₂₂ *, 9, 2, 2; 1998 KS₂₂ *, 9, 2, 2; 1998 KT₂₂ *, 9, 2, 2; 1998 KU₂₂ *, 7, 2, 2; 1998 KV₂₂ *, 9, 2, 2; 1998 KW₂₂ *, 7, 2, 2; 1998 KX₂₂ *, 9, 2, 2; 1998 KY₂₂ *, 9, 2, 2; 1998 KZ₂₂ *, 8, 2, 2; 1998 KA₂₃ *, 8, 2, 2; 1998 KB₂₃ *, 7, 2, 2; 1998 KC₂₃ *, 9, 2, 2; 1998 KD₂₃ *, 9, 2, 2; 1998 KE₂₃ *, 9, 2, 2; 1998 KF₂₃ *, 7, 2, 2; 1998 KG₂₃ *, 7, 2, 2; 1998 KH₂₃ *, 10, 2, 2; 1998 KJ₂₃ *, 10, 2, 2; 1998 KK₂₃ *, 10, 2, 2; 1998 KL₂₃ *, 10, 2, 2; 1998 KM₂₃ *, 10, 2, 2; 1998 KN₂₃ *, 19, 2, 2; 1998 KO₂₃ *, 20, 2, 2; 1998 KP₂₃ *, 12, 2, 2; 1998 KQ₂₃ *, 10, 2, 2; 1998 KR₂₃ *, 9, 2, 2; 1998 KS₂₃ *, 9, 2, 2; 1998 KT₂₃ *, 10, 2, 2; 1998 KU₂₃ *, 10, 2, 2; 1998 KV₂₃ *, 9, 2, 2; 1998 KW₂₃ *, 9, 2, 2; 1998 KX₂₃ *, 10, 2, 2; 1998 KY₂₃ *, 10, 2, 2; 1998 KZ₂₃ *, 10, 2, 2; 1998 KA₂₄ *, 9, 2, 2; 1998 KB₂₄ *, 10, 2, 2; 1998 KC₂₄ *, 9, 2, 2; 1998 KD₂₄ *, 10, 2, 2; 1998 KE₂₄ *, 9, 2, 2; 1998 KF₂₄ *, 9, 2, 2; 1998 KG₂₄ *, 10, 2, 2; 1998 KH₂₄ *, 10, 2, 2; 1998 KJ₂₄ *, 10, 2, 2; 1998 KK₂₄ *, 10, 2, 2; 1998 KL₂₄ *, 10, 2, 2; 1998 KM₂₄ *, 9, 2, 2; 1998 KN₂₄ *, 19, 4, 32; 1998 KO₂₄ *, 10, 2, 2; 1998 KP₂₄ *, 9, 2, 2; 1998 KQ₂₄ *, 10, 2, 2; 1998 KR₂₄ *, 9, 2, 2; 1998 KS₂₄ *, 7, 2, 2; 1998 KT₂₄ *, 10, 2, 2; 1998 KU₂₄ *, 8, 2, 2; 1998 KV₂₄ *, 10, 2, 2; 1998 KW₂₄ *, 9, 2, 2; 1998 KX₂₄ *, 10, 2, 2; 1998 KY₂₄ *, 9, 2, 2; 1998 KZ₂₄ *, 8, 2, 2; 1998 KA₂₅ *, 10, 2, 2; 1998 KB₂₅ *, 10, 2, 2; 1998 KC₂₅ *, 9, 2, 2; 1998 KD₂₅ *, 9, 2, 2; 1998 KE₂₅ *, 7, 2, 2; 1998 KF₂₅ *, 10, 2, 2; 1998 KG₂₅ *, 7, 2, 2; 1998 KH₂₅ *, 10, 2, 2; 1998 KJ₂₅ *, 10, 2, 2; 1998 KK₂₅ *, 9, 2, 2; 1998 KL₂₅ *, 10, 2, 2; 1998 KM₂₅ *, 8, 2, 2; 1998 KN₂₅ *, 10, 2, 2; 1998 KO₂₅ *, 10, 2, 2; 1998 KP₂₅ *, 9, 2, 2; 1998 KQ₂₅ *, 10, 2, 2; 1998 KR₂₅ *, 10, 2, 2; 1998 KS₂₅ *, 10, 2, 2; 1998 KT₂₅ *, 9, 2, 2; 1998 KU₂₅ *, 9, 2, 2; 1998 KV₂₅ *, 9, 2, 2; 1998 KW₂₅ *, 9, 2, 2; 1998 KX₂₅ *, 10, 2, 2; 1998 KY₂₅ *, 7, 2, 2; 1998 KZ₂₅ *, 8, 2, 2; 1998 KA₂₆ *, 8, 2, 2; 1998 KB₂₆ *, 8, 2, 2; 1998 KC₂₆ *, 9, 2, 2; 1998 KD₂₆ *, 8, 2, 2; 1998 KE₂₆ *, 8, 2, 2; 1998 KF₂₆ *, 9, 2, 2; 1998 KG₂₆ *, 9, 2, 2; 1998 KH₂₆ *, 8, 2, 2; 1998 KJ₂₆ *, 8, 2, 2; 1998 KW₂₆ *, 14, 3, 12; 1998 KY₂₆ *, 5, 1, 0; 1998 KA₂₇ *, 9, 2, 2; 1998 KB₂₇ *, 10, 2, 2; 1998 KC₂₇ *, 9, 2, 2; 1998 KD₂₇ *, 8, 2, 2; 1998 KE₂₇ *, 9, 2, 2; 1998 KF₂₇ *, 10, 2, 2; 1998 KG₂₇ *, 9, 2, 2; 1998 KH₂₇ *, 10, 2, 2; 1998 KJ₂₇ *, 10, 2, 2; 1998 KK₂₇ *, 9, 2, 2; 1998 KL₂₇ *, 8, 2, 2; 1998 KM₂₇ *, 8, 2, 2; 1998 KN₂₇ *, 9, 2, 2; 1998 KO₂₇ *, 9, 2, 2; 1998 KP₂₇ *, 8, 2, 2; 1998 KQ₂₇ *, 10, 2, 2; 1998 KR₂₇ *, 10, 2, 2; 1998 KS₂₇ *, 9, 2, 2; 1998 KT₂₇ *, 7, 2, 2; 1998 KU₂₇ *, 10, 2, 2; 1998 KV₂₇ *, 8, 2, 2; 1998 KW₂₇ *, 10, 2, 2; 1998 KX₂₇ *, 10, 2, 2; 1998 KY₂₇ *, 8, 2, 2; 1998 KZ₂₇ *, 10, 2, 2; 1998 KA₂₈ *, 8, 2, 2; 1998 KB₂₈ *, 9, 2, 2; 1998 KC₂₈ *, 8, 2, 2; 1998 KD₂₈ *, 8, 2, 2; 1998 KE₂₈ *, 8, 2, 2; 1998 KF₂₈ *, 10, 2, 2; 1998 KG₂₈ *, 9, 2, 2; 1998 KH₂₈ *, 8, 2, 2; 1998 KJ₂₈ *, 8, 2, 2; 1998 KK₂₈ *, 9, 2, 2; 1998 KL₂₈ *, 9, 2, 2; 1998 KM₂₈ *, 10, 2, 2; 1998 KN₂₈ *, 10, 2, 2; 1998 KO₂₈ *, 8, 2, 2; 1998 KP₂₈ *, 9, 2, 2; 1998 KQ₂₈ *, 10, 2, 2; 1998 KR₂₈ *, 10, 2, 2; 1998 KS₂₈ *, 8, 2, 2; 1998 KT₂₈ *, 10, 2, 2; 1998 KU₂₈ *, 8, 2, 2; 1998 KV₂₈ *, 9, 2, 2; 1998 KW₂₈ *, 10, 2, 2; 1998 KX₂₈ *, 8, 2, 2; 1998 KY₂₈ *, 7, 2, 2; 1998 KZ₂₈ *, 10, 2, 2; 1998 KA₂₉ *, 10, 2, 2;

1998 KB₂₉ *, 8, 2, 2; 1998 KC₂₉ *, 8, 2, 2; 1998 KD₂₉ *, 9, 2, 2; 1998 KE₂₉ *, 8, 2, 2; 1998 KF₂₉ *, 8, 2, 2; 1998 KG₂₉ *, 8, 2, 2; 1998 KH₂₉ *, 8, 2, 2; 1998 KJ₂₉ *, 10, 2, 2; 1998 KK₂₉ *, 8, 2, 2; 1998 KL₂₉ *, 7, 2, 2; 1998 KM₂₉ *, 12, 3, 12; 1998 KN₂₉ *, 10, 2, 2; 1998 KO₂₉ *, 10, 2, 2; 1998 KP₂₉ *, 8, 2, 2; 1998 KQ₂₉ *, 7, 2, 2; 1998 KR₂₉ *, 9, 2, 2; 1998 KS₂₉ *, 10, 2, 2; 1998 KT₂₉ *, 9, 2, 2; 1998 KU₂₉ *, 9, 2, 2; 1998 KV₂₉ *, 9, 2, 2; 1998 KW₂₉ *, 9, 2, 2; 1998 KX₂₉ *, 8, 2, 2; 1998 KY₂₉ *, 9, 2, 2; 1998 KZ₂₉ *, 9, 2, 2; 1998 KA₃₀ *, 9, 2, 2; 1998 KB₃₀ *, 8, 2, 2; 1998 KC₃₀ *, 9, 2, 2; 1998 KD₃₀ *, 8, 2, 2; 1998 KE₃₀ *, 8, 2, 2; 1998 KF₃₀ *, 10, 2, 2; 1998 KG₃₀ *, 7, 2, 2; 1998 KH₃₀ *, 10, 2, 2; 1998 KJ₃₀ *, 9, 2, 2; 1998 KK₃₀ *, 8, 2, 2; 1998 KL₃₀ *, 10, 2, 2; 1998 KM₃₀ *, 8, 2, 2; 1998 KN₃₀ *, 10, 2, 2; 1998 KO₃₀ *, 6, 2, 2; 1998 KP₃₀ *, 8, 2, 2; 1998 KQ₃₀ *, 9, 2, 2; 1998 KR₃₀ *, 9, 2, 2; 1998 KS₃₀ *, 8, 2, 2; 1998 KT₃₀ *, 8, 2, 2; 1998 KU₃₀ *, 8, 2, 2; 1998 KV₃₀ *, 10, 2, 2; 1998 KW₃₀ *, 8, 2, 2; 1998 KX₃₀ *, 8, 2, 2; 1998 KY₃₀ *, 10, 2, 2; 1998 KZ₃₀ *, 10, 2, 2; 1998 KA₃₁ *, 9, 2, 2; 1998 KB₃₁ *, 9, 2, 2; 1998 KC₃₁ *, 9, 2, 2; 1998 KD₃₁ *, 8, 2, 2; 1998 KE₃₁ *, 9, 2, 2; 1998 KF₃₁ *, 10, 2, 2; 1998 KG₃₁ *, 14, 3, 12; 1998 KH₃₁ *, 8, 2, 2; 1998 KJ₃₁ *, 8, 2, 2; 1998 KK₃₁ *, 9, 2, 2; 1998 KL₃₁ *, 14, 3, 12; 1998 KM₃₁ *, 10, 2, 2; 1998 KN₃₁ *, 10, 2, 2; 1998 KO₃₁ *, 15, 3, 12; 1998 KP₃₁ *, 10, 2, 2; 1998 KQ₃₁ *, 8, 2, 2; 1998 KR₃₁ *, 9, 2, 2; 1998 KS₃₁ *, 10, 2, 2; 1998 KT₃₁ *, 8, 2, 2; 1998 KU₃₁ *, 9, 2, 2; 1998 KV₃₁ *, 13, 3, 12; 1998 KW₃₁ *, 9, 2, 2; 1998 KX₃₁ *, 10, 2, 2; 1998 KY₃₁ *, 9, 2, 2; 1998 KZ₃₁ *, 9, 2, 2; 1998 KA₃₂ *, 10, 2, 2; 1998 KB₃₂ *, 8, 2, 2; 1998 KC₃₂ *, 9, 2, 2; 1998 KD₃₂ *, 8, 2, 2; 1998 KE₃₂ *, 7, 2, 2; 1998 KF₃₂ *, 9, 2, 2; 1998 KG₃₂ *, 9, 2, 2; 1998 KH₃₂ *, 10, 2, 2; 1998 KJ₃₂ *, 9, 2, 2; 1998 KK₃₂ *, 10, 2, 2; 1998 KL₃₂ *, 8, 2, 2; 1998 KM₃₂ *, 9, 2, 2; 1998 KN₃₂ *, 13, 3, 12; 1998 KO₃₂ *, 8, 2, 2; 1998 KQ₃₂ *, 9, 2, 2; 1998 KR₃₂ *, 8, 2, 2; 1998 KS₃₂ *, 9, 2, 2; 1998 KT₃₂ *, 9, 2, 2; 1998 KU₃₂ *, 10, 2, 2; 1998 KV₃₂ *, 10, 2, 2; 1998 KW₃₂ *, 10, 2, 2; 1998 KX₃₂ *, 10, 2, 2; 1998 KY₃₂ *, 10, 2, 2; 1998 KZ₃₂ *, 10, 2, 2; 1998 KA₃₃ *, 10, 2, 2; 1998 KB₃₃ *, 7, 2, 2; 1998 KC₃₃ *, 9, 2, 2; 1998 KD₃₃ *, 8, 2, 2; 1998 KE₃₃ *, 9, 2, 2; 1998 KF₃₃ *, 10, 2, 2; 1998 KG₃₃ *, 9, 2, 2; 1998 KH₃₃ *, 9, 2, 2; 1998 KJ₃₃ *, 9, 2, 2; 1998 KK₃₃ *, 8, 2, 2; 1998 KL₃₃ *, 14, 3, 12; 1998 KM₃₃ *, 9, 2, 2; 1998 KN₃₃ *, 9, 2, 2; 1998 KO₃₃ *, 10, 2, 2; 1998 KP₃₃ *, 10, 2, 2; 1998 KQ₃₃ *, 8, 2, 2; 1998 KR₃₃ *, 9, 2, 2; 1998 KS₃₃ *, 12, 3, 12; 1998 KT₃₃ *, 15, 3, 12; 1998 KU₃₃ *, 9, 2, 2; 1998 KV₃₃ *, 8, 2, 2; 1998 KW₃₃ *, 8, 2, 2; 1998 KX₃₃ *, 10, 2, 2; 1998 KY₃₃ *, 7, 2, 2; 1998 KZ₃₃ *, 9, 2, 2; 1998 KA₃₄ *, 7, 2, 2; 1998 KB₃₄ *, 13, 3, 12; 1998 KC₃₄ *, 7, 2, 2; 1998 KD₃₄ *, 10, 2, 2; 1998 KE₃₄ *, 9, 2, 2; 1998 KF₃₄ *, 7, 2, 2; 1998 KG₃₄ *, 7, 2, 2; 1998 KH₃₄ *, 14, 3, 12; 1998 KJ₃₄ *, 9, 2, 2; 1998 KK₃₄ *, 14, 3, 12; 1998 KL₃₄ *, 10, 2, 2; 1998 KM₃₄ *, 8, 2, 2; 1998 KN₃₄ *, 15, 3, 12; 1998 KO₃₄ *, 9, 2, 2; 1998 KP₃₄ *, 10, 2, 2; 1998 KQ₃₄ *, 13, 3, 12; 1998 KR₃₄ *, 15, 3, 12; 1998 KS₃₄ *, 10, 2, 2; 1998 KT₃₄ *, 10, 2, 2; 1998 KU₃₄ *, 7, 2, 2; 1998 KV₃₄ *, 14, 3, 12; 1998 KW₃₄ *, 15, 3, 12; 1998 KX₃₄ *, 9, 2, 2; 1998 KY₃₄ *, 8, 2, 2; 1998 KZ₃₄ *, 10, 2, 2; 1998 KA₃₅ *, 10, 2, 2; 1998 KB₃₅ *, 8, 2, 2; 1998 KC₃₅ *, 8, 2, 2; 1998 KD₃₅ *, 9, 2, 2; 1998 KE₃₅ *, 9, 2, 2; 1998 KF₃₅ *, 10, 2, 2; 1998 KG₃₅ *, 9, 2, 2; 1998 KH₃₅ *, 10, 2, 2; 1998 KJ₃₅ *, 10, 2, 2; 1998 KK₃₅ *, 14, 3, 12; 1998 KL₃₅ *, 9, 2, 2; 1998 KM₃₅ *, 10, 2, 2; 1998 KN₃₅ *, 9, 2, 2; 1998 KO₃₅ *, 13, 3, 12; 1998 KP₃₅ *, 10, 2, 2; 1998 KQ₃₅ *, 8, 2, 2; 1998 KR₃₅ *, 9, 2, 2; 1998 KS₃₅ *, 10, 2, 2; 1998 KT₃₅ *, 10, 2, 2; 1998 KU₃₅ *, 14, 3, 12; 1998 KV₃₅ *, 8, 2, 2; 1998 KW₃₅ *, 10, 2, 2; 1998 KX₃₅ *, 8, 2, 2; 1998 KY₃₅ *, 10, 2, 2; 1998 KZ₃₅ *, 9, 2, 2; 1998 KA₃₆ *, 15, 3, 12; 1998 KB₃₆ *, 8, 2, 2; 1998 KC₃₆ *, 10, 2, 2; 1998 KD₃₆ *, 8, 2, 2; 1998 KE₃₆ *, 8, 2, 2; 1998 KF₃₆ *, 15, 3, 12; 1998 KG₃₆ *, 9, 2, 2; 1998 KH₃₆ *, 8, 2, 2; 1998 KJ₃₆ *, 8, 2, 2; 1998 KK₃₆ *, 10, 2, 2; 1998 KL₃₆ *, 8, 2, 2; 1998 KM₃₆ *, 9, 2, 2; 1998 KN₃₆ *, 10, 2, 2; 1998 KO₃₆ *, 9, 2, 2; 1998 KP₃₆ *, 10, 2, 2; 1998 KQ₃₆ *, 14, 3, 12; 1998 KR₃₆ *, 9, 2, 2; 1998 KS₃₆ *, 8, 2, 2; 1998 KT₃₆ *, 14, 3, 12; 1998 KU₃₆ *, 9, 2, 2; 1998 KV₃₆ *, 8, 2, 2; 1998 KW₃₆ *, 9, 2, 2; 1998 KX₃₆ *, 9, 2, 2; 1998 KY₃₆ *, 9, 2, 2; 1998 KZ₃₆ *, 10, 2, 2; 1998 KA₃₇ *, 14, 3, 12; 1998 KB₃₇ *, 14, 3, 12; 1998 KC₃₇ *, 8, 2, 2; 1998 KD₃₇ *, 8, 2, 2; 1998 KE₃₇ *, 10, 2, 2; 1998 KF₃₇ *, 8, 2, 2; 1998 KG₃₇ *, 9, 2, 2; 1998 KH₃₇ *, 9, 2, 2; 1998 KJ₃₇ *, 9, 2, 2; 1998 KK₃₇ *, 10, 2, 2; 1998 KL₃₇ *, 15, 3, 12; 1998 KM₃₇ *, 15, 3, 12; 1998 KN₃₇ *, 9, 2, 2; 1998 KO₃₇ *, 10, 2, 2; 1998 KP₃

10, 2, 2; 1998 KK₄₀ *, 10, 2, 2; 1998 KL₄₀ *, 9, 2, 2; 1998 KM₄₀ *, 15, 3, 12; 1998 KN₄₀ *, 8, 2, 2; 1998 KO₄₀ *, 10, 2, 2; 1998 KP₄₀ *, 8, 2, 2; 1998 KQ₄₀ *, 10, 2, 2; 1998 KR₄₀ *, 10, 2, 2; 1998 KS₄₀ *, 10, 2, 2; 1998 KT₄₀ *, 9, 2, 2; 1998 KU₄₀ *, 10, 2, 2; 1998 KV₄₀ *, 14, 3, 12; 1998 KW₄₀ *, 7, 2, 2; 1998 KX₄₀ *, 8, 2, 2; 1998 KY₄₀ *, 10, 2, 2; 1998 KZ₄₀ *, 14, 3, 12; 1998 KA₄₁ *, 9, 2, 2; 1998 KB₄₁ *, 14, 3, 12; 1998 KC₄₁ *, 8, 2, 2; 1998 KD₄₁ *, 10, 2, 2; 1998 KE₄₁ *, 13, 3, 12; 1998 KF₄₁ *, 10, 2, 2; 1998 KG₄₁ *, 14, 3, 12; 1998 KH₄₁ *, 15, 3, 12; 1998 KJ₄₁ *, 8, 2, 2; 1998 KK₄₁ *, 10, 2, 2; 1998 KL₄₁ *, 8, 2, 2; 1998 KM₄₁ *, 15, 3, 12; 1998 KN₄₁ *, 10, 2, 2; 1998 KO₄₁ *, 7, 2, 2; 1998 KP₄₁ *, 10, 2, 2; 1998 KQ₄₁ *, 10, 2, 2; 1998 KR₄₁ *, 8, 2, 2; 1998 KS₄₁ *, 9, 2, 2; 1998 KT₄₁ *, 9, 2, 2; 1998 KU₄₁ *, 7, 2, 2; 1998 KV₄₁ *, 9, 2, 2; 1998 KW₄₁ *, 8, 2, 2; 1998 KX₄₁ *, 8, 2, 2; 1998 KY₄₁ *, 9, 2, 2; 1998 KB₄₂ *, 4, 1, 0; 1998 KR₄₂ *, 14, 3, 11; 1998 KQ₄₂ *, 15, 3, 12; 1998 KR₄₃ *, 10, 2, 11; 1998 KS₄₃ *, 9, 2, 10; 1998 KT₄₃ *, 10, 2, 2; 1998 KU₄₃ *, 8, 2, 2; 1998 KV₄₃ *, 8, 2, 2; 1998 KW₄₃ *, 9, 2, 2; 1998 KX₄₃ *, 9, 2, 2; 1998 KY₄₃ *, 10, 2, 2; 1998 KZ₄₃ *, 10, 2, 2; 1998 KA₄₄ *, 9, 2, 2; 1998 KB₄₄ *, 14, 3, 12; 1998 KC₄₄ *, 9, 2, 2; 1998 KD₄₄ *, 13, 3, 12; 1998 KE₄₄ *, 10, 2, 2; 1998 KF₄₄ *, 14, 3, 12; 1998 KG₄₄ *, 10, 2, 2; 1998 KH₄₄ *, 10, 2, 2; 1998 KJ₄₄ *, 9, 2, 2; 1998 KK₄₄ *, 10, 2, 2; 1998 KL₄₄ *, 13, 3, 12; 1998 KM₄₄ *, 10, 2, 2; 1998 KN₄₄ *, 8, 2, 2; 1998 KO₄₄ *, 9, 2, 2; 1998 KP₄₄ *, 9, 2, 2; 1998 KQ₄₄ *, 14, 3, 12; 1998 KR₄₄ *, 10, 2, 2; 1998 KS₄₄ *, 10, 2, 2; 1998 KT₄₄ *, 15, 3, 12; 1998 KU₄₄ *, 9, 2, 2; 1998 KV₄₄ *, 10, 2, 2; 1998 KW₄₄ *, 14, 3, 12; 1998 KX₄₄ *, 10, 2, 2; 1998 KY₄₄ *, 13, 3, 12; 1998 KZ₄₄ *, 9, 2, 2; 1998 KA₄₅ *, 10, 2, 2; 1998 KB₄₅ *, 8, 2, 2; 1998 KC₄₅ *, 8, 2, 2; 1998 KD₄₅ *, 9, 2, 2; 1998 KE₄₅ *, 10, 2, 2; 1998 KF₄₅ *, 8, 2, 2; 1998 KG₄₅ *, 8, 2, 2; 1998 KH₄₅ *, 10, 2, 2; 1998 KJ₄₅ *, 13, 3, 12; 1998 KK₄₅ *, 9, 2, 2; 1998 KL₄₅ *, 9, 2, 2; 1998 KM₄₅ *, 13, 3, 12; 1998 KN₄₅ *, 8, 2, 2; 1998 KO₄₅ *, 10, 2, 2; 1998 KP₄₅ *, 9, 2, 2; 1998 KQ₄₅ *, 9, 2, 2; 1998 KR₄₅ *, 9, 2, 2; 1998 KS₄₅ *, 10, 2, 2; 1998 KT₄₅ *, 10, 2, 2; 1998 KU₄₅ *, 14, 3, 12; 1998 KV₄₅ *, 13, 3, 12; 1998 KW₄₅ *, 14, 3, 12; 1998 KX₄₅ *, 9, 2, 2; 1998 KY₄₅ *, 8, 2, 2; 1998 KZ₄₅ *, 12, 3, 12; 1998 KA₄₆ *, 10, 2, 2; 1998 KB₄₆ *, 9, 2, 2; 1998 KC₄₆ *, 9, 2, 2; 1998 KD₄₆ *, 10, 2, 2; 1998 KE₄₆ *, 9, 2, 2; 1998 KF₄₆ *, 12, 3, 12; 1998 KG₄₆ *, 9, 2, 2; 1998 KH₄₆ *, 8, 2, 2; 1998 KJ₄₆ *, 10, 2, 2; 1998 KK₄₆ *, 10, 2, 2; 1998 KL₄₆ *, 8, 2, 2; 1998 KM₄₆ *, 15, 3, 12; 1998 KN₄₆ *, 8, 2, 2; 1998 KO₄₆ *, 10, 2, 2; 1998 KP₄₆ *, 9, 2, 2; 1998 KQ₄₆ *, 8, 2, 2; 1998 KR₄₆ *, 10, 2, 2; 1998 KS₄₆ *, 10, 2, 2; 1998 KT₄₆ *, 9, 2, 2; 1998 KU₄₆ *, 9, 2, 2; 1998 KV₄₆ *, 10, 2, 2; 1998 KW₄₆ *, 8, 2, 2; 1998 KX₄₆ *, 8, 2, 2; 1998 KY₄₆ *, 7, 2, 2; 1998 KZ₄₆ *, 9, 2, 2; 1998 KA₄₇ *, 9, 2, 2; 1998 KB₄₇ *, 8, 2, 2; 1998 KC₄₇ *, 8, 2, 2; 1998 KD₄₇ *, 9, 2, 2; 1998 KE₄₇ *, 10, 2, 2; 1998 KF₄₇ *, 13, 3, 12; 1998 KG₄₇ *, 10, 2, 2; 1998 KH₄₇ *, 14, 3, 12; 1998 KJ₄₇ *, 9, 2, 2; 1998 KK₄₇ *, 10, 2, 2; 1998 KL₄₇ *, 8, 2, 2; 1998 KM₄₇ *, 10, 2, 2; 1998 KN₄₇ *, 14, 3, 12; 1998 KO₄₇ *, 10, 2, 2; 1998 KP₄₇ *, 10, 2, 2; 1998 KQ₄₇ *, 10, 2, 2; 1998 KR₄₇ *, 10, 2, 2; 1998 KS₄₇ *, 9, 2, 2; 1998 KT₄₇ *, 12, 3, 12; 1998 KU₄₇ *, 9, 2, 2; 1998 KV₄₇ *, 11, 3, 12; 1998 KW₄₇ *, 15, 3, 12; 1998 KX₄₇ *, 9, 2, 2; 1998 KY₄₇ *, 15, 3, 12; 1998 KZ₄₇ *, 14, 3, 12; 1998 KA₄₈ *, 9, 2, 2; 1998 KB₄₈ *, 10, 2, 2; 1998 KC₄₈ *, 7, 2, 2; 1998 KD₄₈ *, 7, 2, 2; 1998 KE₄₈ *, 9, 2, 2; 1998 KF₄₈ *, 6, 2, 2; 1998 KG₄₈ *, 7, 2, 2; 1998 KH₄₈ *, 9, 2, 2; 1998 KJ₄₈ *, 13, 3, 12; 1998 KK₄₈ *, 8, 2, 2; 1998 KL₄₈ *, 8, 2, 2; 1998 KM₄₈ *, 8, 2, 2; 1998 KN₄₈ *, 8, 2, 2; 1998 KO₄₈ *, 14, 3, 12; 1998 KP₄₈ *, 8, 2, 2; 1998 KQ₄₈ *, 10, 2, 2; 1998 KR₄₈ *, 8, 2, 2; 1998 KS₄₈ *, 10, 2, 2; 1998 KT₄₈ *, 8, 2, 2; 1998 KU₄₈ *, 9, 2, 3; 1998 KV₄₈ *, 9, 2, 3; 1998 KW₄₈ *, 14, 3, 11; 1998 KX₄₈ *, 14, 3, 11; 1998 KY₄₈ *, 10, 2, 3; 1998 KZ₄₈ *, 10, 2, 3; 1998 KA₄₉ *, 15, 3, 11; 1998 KB₄₉ *, 9, 2, 3; 1998 KC₄₉ *, 8, 2, 3; 1998 KD₄₉ *, 8, 2, 3; 1998 KE₄₉ *, 8, 2, 3; 1998 KF₄₉ *, 14, 3, 11; 1998 KG₄₉ *, 8, 2, 3; 1998 KH₄₉ *, 9, 2, 3; 1998 KJ₄₉ *, 9, 2, 3; 1998 KK₄₉ *, 7, 2, 3; 1998 KL₄₉ *, 8, 2, 3; 1998 KM₄₉ *, 14, 3, 11; 1998 KN₄₉ *, 10, 2, 3; 1998 KO₄₉ *, 10, 2, 3; 1998 KP₄₉ *, 10, 2, 3; 1998 KQ₄₉ *, 8, 2, 3; 1998 KR₄₉ *, 10, 2, 3; 1998 KS₄₉ *, 13, 3, 12; 1998 KT₄₉ *, 10, 2, 3; 1998 KU₄₉ *, 10, 2, 3; 1998 KV₄₉ *, 9, 2, 3; 1998 KW₄₉ *, 9, 2, 3; 1998 KX₄₉ *, 8, 2, 3; 1998 KY₄₉ *, 13, 3, 11; 1998 KZ₄₉ *, 9, 2, 3; 1998 KA₅₀ *, 10, 2, 3; 1998 KB₅₀ *, 9, 2, 3; 1998 KC₅₀ *, 10, 2, 3; 1998 KD₅₀ *, 15, 3, 11; 1998 KE₅₀ *, 10, 2, 3; 1998 KF₅₀ *, 9, 2, 3; 1998 KG₅₀ *, 9, 2, 3; 1998 KH₅₀ *, 10, 2, 3; 1998 KI₅₀ *, 9, 2, 3; 1998 KJ₅₀ *, 8, 2, 3; 1998 KK₅₀ *, 8, 2, 3; 1998 KL₅₀ *, 10, 2, 3; 1998 KM₅₀ *, 9, 2, 3; 1998 KN₅₀ *, 10, 2, 3; 1998 KO₅₀ *, 10, 2, 3; 1998 KP₅₀ *, 12, 3, 11; 1998 KQ₅₀ *, 13, 3, 11; 1998 KR₅₀ *, 15, 3, 11; 1998 KS₅₀ *, 9, 2, 3; 1998 KT₅₀ *, 14, 3, 11; 1998 KU₅₀ *, 13, 3, 11; 1998 KV₅₀ *, 10, 2, 3; 1998 KW₅₀ *, 9, 2, 3; 1998 KX₅₀ *, 13, 3, 11; 1998 KY₅₀ *, 8, 2, 3; 1998 KZ₅₀ *, 8, 2, 3; 1998 KA₅₁ *, 9, 2, 3; 1998 KB₅₁ *, 15, 3, 11; 1998 KC₅₁ *, 9, 2, 3; 1998 KD₅₁ *, 14, 3, 11; 1998 KE₅₁ *, 13, 3, 11; 1998 KF₅₁ *, 15, 3, 11; 1998 KG₅₁ *, 9, 2, 3; 1998 KH₅₁ *, 10, 2, 3; 1998 KJ₅₁ *, 10, 2, 3; 1998 KK₅₁ *, 10, 2, 3; 1998 KL₅₁ *, 9, 2, 3; 1998 KM₅₁ *, 8, 2, 3; 1998 KN₅₁ *, 13, 3, 11; 1998 KO₅₁ *, 8, 2, 3; 1998 KP₅₁ *, 8, 2, 3; 1998 KQ₅₁ *, 14, 3, 11; 1998 KR₅₁ *, 14, 3, 11; 1998 KS₅₁ *, 10, 2, 3; 1998 KT₅₁ *, 10, 2, 3; 1998 KU₅₁ *, 15, 3, 11; 1998 KV₅₁ *, 8, 2, 3; 1998 KW₅₁ *, 10, 2, 3; 1998 KX₅₁ *, 14, 3, 11; 1998 KY₅₁ *, 15, 3, 11; 1998 KZ₅₁ *, 9, 2, 3; 1998 KA₅₂ *, 10, 2, 3; 1998 KB₅₂ *, 8, 2, 3; 1998 KC₅₂ *, 8, 2, 3; 1998 KD₅₂ *, 9, 2, 3; 1998 KE₅₂ *, 10, 2, 3; 1998 KF₅₂ *, 10, 2, 3; 1998 KG₅₂ *, 9, 2, 3; 1998 KH₅₂ *, 9, 2, 3; 1998 KJ₅₂ *, 15, 3, 11; 1998 KK₅₂ *, 10, 2, 3; 1998 KL₅₂ *, 10, 2, 3; 1998 KM₅₂ *, 9, 2, 3; 1998 KN₅₂ *, 10, 2, 3; 1998 KO₅₂ *, 10, 2, 3; 1998 KP₅₂ *, 10, 2, 3; 1998 KQ₅₂ *, 14, 3, 11; 1998 KR₅₂ *, 13, 3, 11; 1998 KS₅₂ *, 10, 2, 3; 1998 KT₅₂ *, 9, 2, 3; 1998 KU₅₂ *, 8, 2, 3; 1998 KV₅₂ *, 13, 3, 12; 1998 KW₅₂ *, 7, 2, 3; 1998 KX₅₂ *, 13,

3, 11; 1998 KY₅₂ *, 8, 2, 3; 1998 KZ₅₂ *, 9, 2, 3; 1998 KA₅₃ *, 9, 2, 3; 1998 KB₅₃ *, 15, 3, 11; 1998 KC₅₃ *, 9, 2, 3; 1998 KD₅₃ *, 10, 2, 3; 1998 KE₅₃ *, 14, 3, 11; 1998 KF₅₃ *, 15, 3, 11; 1998 KG₅₃ *, 13, 3, 11; 1998 KH₅₃ *, 10, 2, 3; 1998 KJ₅₃ *, 7, 2, 3; 1998 KK₅₃ *, 7, 2, 3; 1998 KL₅₃ *, 9, 2, 3; 1998 KM₅₃ *, 10, 2, 3; 1998 KN₅₃ *, 9, 2, 3; 1998 KO₅₃ *, 10, 2, 3; 1998 KP₅₃ *, 13, 3, 11; 1998 KQ₅₃ *, 10, 2, 3; 1998 KR₅₃ *, 10, 2, 3; 1998 KS₅₃ *, 14, 3, 11; 1998 KT₅₃ *, 8, 2, 3; 1998 KU₅₃ *, 9, 2, 3; 1998 KV₅₃ *, 8, 2, 3; 1998 KW₅₃ *, 14, 3, 11; 1998 KX₅₃ *, 10, 2, 3; 1998 KY₅₃ *, 13, 3, 11; 1998 KZ₅₃ *, 10, 2, 3; 1998 KA₅₄ *, 9, 2, 3; 1998 KB₅₄ *, 9, 2, 3; 1998 KC₅₄ *, 8, 2, 3; 1998 KD₅₄ *, 10, 2, 3; 1998 KE₅₄ *, 9, 2, 3; 1998 KF₅₄ *, 9, 2, 3; 1998 KG₅₄ *, 8, 2, 3; 1998 KH₅₄ *, 9, 2, 3; 1998 KJ₅₄ *, 8, 2, 3; 1998 KK₅₄ *, 10, 2, 3; 1998 KL₅₄ *, 10, 2, 3; 1998 KM₅₄ *, 13, 3, 11; 1998 KN₅₄ *, 8, 2, 3; 1998 KO₅₄ *, 9, 2, 3; 1998 KP₅₄ *, 14, 3, 11; 1998 KQ₅₄ *, 8, 2, 3; 1998 KR₅₄ *, 15, 3, 11; 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4306 T-2, 15, 3, 49; 1097 T-3, 9, 2, 21; 2247 T-3, 5, 1, 0; 2282 T-3, 10, 2, 1; 2372 T-3, 4, 1, 0; 2390 T-3, 5, 1, 0; 2395 T-3, 5, 1, 0; 3105 T-3, 10, 2, 2; 3109 T-3, 10, 2, 2; 3150 T-3, 4, 1, 0; 3164

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706 Salinas

J. E. Hall, 10180 County Rd. 190, Salida, CO 81201, U.S.A. [teila@rmi.net]

0.25-m $f/6$ Newtonian reflector + CCD

GSC

(3256), 4, 1, 0; (7889), 2, 1, 0; [6, 2, 0*, 1998/05/14–1998/05/20]

709 W & B Observatory, Cloudcroft

W. Offutt, P.O. Drawer 1130, Cloudcroft, NM 88317, U.S.A.

[woffutt@galileo.apo.nmsu.edu]

0.60-m $f/7$ Ritchey-Chrétien + CCD

USNO-SA1.0

1998 KY₂₆, 13, 2, 2; 1998 KK₅₆, 5, 1, 0; 1998 LD, 5, 1, 0; 1998 LE, 4, 1, 0; [27, 4, 0*, 1998/06/01–1998/06/06]

711 McDonald Observatory

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Observers J. G. Ries

Measurers J. G. Ries, P. J. Shelus

0.76-m $f/3.0$ reflector + CCD

GSC

1998 HL₄₉, 4, 2, 1; 1998 KN₃, 2, 1, 0; 1998 KH₉, 3, 1, 0; 1998 KJ₉, 3, 1, 0; 1998 KH₁₇, 3, 1, 0; 1998 KK₁₇, 3, 1, 0; (3551), 4, 2, 1; (5370), 3, 2, 1; [25, 8, 0*, 1998/05/27–1998/05/30]

713 Thornton

R. A. Koff, 1915 W. 101st Ave., Thornton, CO 80221, U.S.A.

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0.20-m $f/10$ Schmidt-Cassegrain + CCD

USNO-SA1.0

(4582), 3, 1, 0; [3, 1, 0*, 1998/05/04]

725 Fair Oaks Ranch

J. V. McClusky, McClusky Observatory, 31789 Sunland, Fair Oaks Ranch, TX

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0.46-m $f/4.5$ Newtonian reflector + CCD

USNO-SA1.0

(8618), 1, 1, 0; [1, 1, 0*, 1998/04/02]

727 Zeno Observatory, Edmond

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0.15-m $f/6$ refractor + CCD

GSC

1991 HC, 3, 1, 0; 1998 LA *, 6, 2, 1; (315), 3, 1, 0; (334), 3, 1, 0; (1984), 3, 1, 0; (5858), 2, 1, 0; [20, 6, 1*, 1998/05/21–1998/06/03]

732 Oaxaca

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0.20-m $f/3.3$ reflector + CCD

GSC

1995 PV, 3, 2, 1; 1995 UK₄, 4, 2, 1; 1995 VY, 5, 2, 1; (4368), 12, 4, 3; (6704), 5, 2, 1; [29, 5, 0*, 1998/05/05–1998/05/08]

734 Farpoint Observatory, Eskridge

G. Hug, RTE 1 Box 35c, Eskridge, KS 66423, U.S.A. [frogstar@inlandnet.net]

Observers G. Hug, G. Bell

0.30-m Schmidt-Cassegrain + CCD

GSC

1990 OH, 6, 2, 1; 1998 KH₉, 3, 1, 0; 1998 KJ₉, 4, 1, 0; 1998 KH₁₇, 3, 1, 0; 1998 KK₁₇, 3, 1, 0; 4221 T-2, 6, 2, 1; [25, 6, 0*, 1998/05/16–1998/05/30]

735 George Observatory, Needville

W. G. Dillon, 4703 Birkenhead Circle, Missouri City, TX 77459, U.S.A.

[bdillon@houston.geoquest.slb.com]

Observers W. G. Dillon, M. Eastman, R. Pepper

Measurer W. G. Dillon

0.46-m reflector + CCD

GSC

1997 SN₅, 4, 2, 3; [4, 1, 0*, 1997/10/02–1997/10/05]

740 SFA Observatory, Nacogdoches

D. Bruton, Department of Physics and Astronomy, SFASU Box 13044,

Nacogdoches, TX 75962, U.S.A. [f.bruntonwd@titan.sfasu.edu]

0.25-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC 1.1

(863), 6, 2, 1; [6, 1, 0*, 1998/05/18–1998/05/19]

749 Oakwood

J. A. Howell, 4046 Lyman Way, Gainesville, GA 30507, U.S.A.

[andyho@mindspring.com]

0.46-m $f/4.4$ Newtonian reflector + CCD

GSC

1994 AP₂, 4, 2, 4; 1994 CM₂, 7, 3, 29; 1995 WV₄₂, 4, 2, 14; 2702 P-L, 6, 2, 1; (8774), 5, 2, 2; [26, 5, 0*, 1998/05/03–1998/06/03]

755 Optec Observatory

G. Persha, Optec, Inc., 199 Smith St., Lowell, MI 49331, U.S.A.

[71267.476@compuserve.com]

0.25-m $f/6.3$ Schmidt-Cassegrain + CCD + focal reducer + Wratten 21A filter
GSC

1996 VB₆, 4, 2, 1; 1997 AK₁₉, 4, 2, 1; (3800), 4, 2, 1; (4772), 4, 2, 1; [16, 4, 0*, 1998/03/22–1998/05/18]

757 High Point

D. K. Chesney, 4210 Lauren Place, High Point, NC 27265, U.S.A.

[dkchesney@aol.com]

0.25-m Schmidt-Cassegrain + CCD
USNO-A1.0

1990 QR, 2, 1, 0; (1449), 2, 1, 0; [4, 2, 0*, 1998/05/30–1998/06/04]

758 BCC Observatory, Cocoa

I. P. Griffin, BCC Observatory, 1519 Clearlake Road, Cocoa, FL 32922, U.S.A.

[GRIFFIN.I@a1.brevard.cc.fl.us]

0.30-m $f/5$ Maksutov + CCD
GSC

1998 DT₁₀, 2, 1, 0; (6577), 5, 2, 1; [7, 2, 0*, 1998/05/15–1998/05/21]

784 Alfred University Observatory

D. R. DeGraff, Physics and Astronomy, Alfred University, Alfred, NY 14803,
U.S.A. [david@merlin.alfred.edu]

Observers D. R. DeGraff, A. M. Robbins

Measurers D. R. DeGraff, A. M. Robbins, A. R. Robbins

0.81-m $f/4$ reflector + CCD

USNO-A1.0, GSC

1998 KH₉, 6, 1, 0; 1998 KH₁₇, 4, 1, 0; 1998 KJ₁₇, 8, 2, 2; 1998 KY₂₆, 6, 1, 0; [24, 4, 0*, 1998/05/29–1998/06/02]

809 European Southern Observatory

H. Debehogne, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180

Brussels, Belgium [henri@astro.oma.be] (3)

E. W. Elst, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels,
Belgium [elst@atmos.oma.be] (4)

7 = 3 + 4

C.-I. Lagerkvist, Uppsala Observatory, Box 515, S-75120 Uppsala, Sweden

[classe@laban.uu.se] (8)

Observers H. Debehogne, C.-I. Lagerkvist, M. Lindgren, G. Pizarro, O. Pizarro

Measurers E. W. Elst, O. Hernius, C.-I. Lagerkvist

1.0-m Schmidt

(4) 1976 UG₂, 6, 2, 3; 1977 DL₄, 6, 2, 3; 1978 PV₃, 6, 2, 3; 1981 EE₁₁, 6, 2, 3; 1981 ER₄₂, 6, 2, 3; 1981 JB₂, 3, 1, 0; 1981 UD₂₃, 6, 2, 3; 1983 XG, 6, 2, 3; 1988 VZ, 3, 1, 0; 1988 VM₉, 3, 1, 0; 1989 SV₂, 6, 2, 3; 1990 TO₃, 6, 2, 3; 1991 ED, 3, 1, 0; 1991 GC₇, 6, 2, 3; 1991 RQ₁₉, 3, 1, 0; 1991 RP₂₃, 6, 2, 1; 1992 GA₄, 6, 2, 3; 1992 UY₃, 3, 1, 0; 1994 RC₁₁, 6, 2, 3; 1995 OD, 6, 2, 3; 1995 QS, 6, 2, 3; 1995 UJ₄, 6, 2, 3; 1995 UK₄, 6, 2, 3; 1995 WY₆, 6, 2, 3; 1995 XE₁, 6, 2, 3; 1996 TQ₇, 6, 2, 1; 1996 TX₂₈, 6, 2, 1; 1996 VT₄, 6, 2, 3; 1996 VQ₃₀, 6, 2, 3; 1996 WA, 6, 2, 3; 1996 XG₂, 3, 1, 0; 1997 BZ₁, 6, 2, 3; 1998 DF₉, 6, 2, 1; 1998 DR₃₃, 6, 2, 1; 1998 DO₃₄, 6, 2, 1; 1998 EX₆, 6, 2, 1; 1998 EV₁₀, 3, 1, 0; 1998 EE₁₁, 3, 1, 0; 1998 EG₁₁, 6, 2, 1; 1998 EL₁₁, 3, 1, 0; 1998 EN₁₁, 6, 2, 1; 1998 ES₁₁, 6, 2, 1; 1998 ET₁₁, 3, 1, 0; 1998 EU₁₁, 6, 2, 1; 1998 EV₁₁, 3, 1, 0; 1998 EW₁₁, 6, 2, 1; 1998 EX₁₁, 6, 2, 1; 1998 EY₁₁, 3, 1, 0; 1998 EA₁₂, 6, 2, 1; 1998 EB₁₂, 6, 2, 1; 1998 ED₁₂, 6, 2, 1; 1998 EE₁₂, 6, 2, 1; 1998 EF₁₂, 6, 2, 1; 1998 EG₁₂, 6, 2, 1; 1998 EK₁₂, 6, 2, 1; 1998 EL₁₂, 6, 2, 1; 1998 EN₁₂, 3, 1, 0; 1998 EO₁₂, 6, 2, 1; 1998 EP₁₂, 6, 2, 1; 1998 FC₁₄, 3, 1, 0; 1998 FT₇₂, 6, 2, 1; 1998 FG₈₇, 6, 2, 1; 1998 FU₈₇, 6, 2, 1; 1998 FV₈₇, 6, 2, 1; 1998 FX₈₇, 3, 1, 0; 1998 FG₈₈, 6, 2, 1; 1998 FB₉₀, 6, 2, 1; 1998 FE₉₀, 6, 2, 1; 1998 FE₉₀, 6, 2, 1; 1998 FF₉₀, 6, 2, 1; 1998 FG₉₀, 6, 2, 1; 1998 FO₉₀, 6, 2, 1; 1998 FR₉₀, 6, 2, 1; 1998 FS₉₀, 6, 2, 1; 1998 FT₉₀, 6, 2, 1; 1998 FU₉₀, 6, 2, 1; 1998 FV₉₀, 6, 2, 1; 1998 FW₉₀, 6, 2, 1; 1998 FX₉₀, 6, 2, 1; 1998 FY₉₀, 6, 2, 1; 1998 FA₉₁, 6, 2, 1; 1998 FB₉₁, 6, 2, 1; 1998 FC₉₁, 3, 1, 0; 1998 FO₉₂, 6, 2, 1; 1998 FP₉₂, 6, 2, 1; 1998 FU₉₂, 6, 2, 1; 1998 FC₁₂₄, 6, 2, 1; 1998 FE₁₂₄, 6, 2, 1; 1998 GR₁₀, 6, 2, 1; 1998 GS₁₀, 6, 2, 1; 1998 GT₁₀, 6, 2, 1; 1998 GU₁₀, 6, 2, 1; 1998 GV₁₀, 6, 2, 1; 1998 GW₁₀, 6, 2, 1;

2, 1; 1998 GX₁₀, 6, 2, 1; 1998 GY₁₀, 6, 2, 1; 1998 GZ₁₀, 6, 2, 1; 1998 GA₁₁, 6, 2, 1; 1998 GB₁₁, 6, 2, 1; 1998 HZ₁₂, 6, 2, 1; 1998 HE₂₀, 6, 2, 3; 1998 HR₂₃, 3, 1, 0; 1998 HS₂₃, 3, 1, 0; 1998 HB₅₁, 6, 2, 3; 1998 HX₁₀₁, 6, 2, 3; 1998 HY₁₀₁, 6, 2, 3; 1998 HZ₁₀₁, 6, 2, 3; 1998 HA₁₀₂, 6, 2, 3; 1998 HB₁₀₂, 6, 2, 3; 1998 HC₁₀₂, 6, 2, 3; 1998 HE₁₀₂, 6, 2, 3; 1998 HF₁₀₂, 6, 2, 3; 1998 HG₁₀₂, 6, 2, 3; 1998 HH₁₀₂, 6, 2, 3; 1998 HJ₁₀₂, 6, 2, 3; 1998 HK₁₀₂, 6, 2, 3; 1998 HL₁₀₂, 6, 2, 3; 1998 HM₁₀₂, 6, 2, 3; 1998 HN₁₀₂, 6, 2, 3; 1998 HO₁₀₂, 6, 2, 3; 1998 HP₁₀₂, 6, 2, 3; 1998 HQ₁₀₂, 6, 2, 3; 1998 HR₁₀₂, 6, 2, 3; 1998 HS₁₀₂, 6, 2, 3; 1998 HT₁₀₂, 6, 2, 3; 1998 HU₁₀₂, 6, 2, 3; 1998 HV₁₀₂, 6, 2, 3; 1998 HW₁₀₂, 6, 2, 3; 1998 HX₁₀₂, 6, 2, 3; 1998 HZ₁₀₂, 6, 2, 3; 1998 HA₁₀₃, 6, 2, 3; 1998 HB₁₀₃, 6, 2, 3; 1998 HC₁₀₃, 6, 2, 3; 1998 HD₁₀₃, 6, 2, 3; 1998 HE₁₀₃, 6, 2, 3; 1998 HF₁₀₃, 6, 2, 3; 1998 HG₁₀₃, 6, 2, 3; 1998 HL₁₀₃, 6, 2, 3; 1998 HM₁₀₃, 6, 2, 3; 1998 HN₁₀₃, 6, 2, 3; 1998 HO₁₀₃, 6, 2, 3; 1998 HP₁₀₃, 6, 2, 3; 1998 HQ₁₀₃, 6, 2, 3; 1998 HR₁₀₃, 6, 2, 3; 1998 HS₁₀₃, 6, 2, 3; 1998 HT₁₀₃, 6, 2, 3; 1998 HU₁₀₃, 6, 2, 3; 1998 HV₁₀₃, 6, 2, 3; 1998 HW₁₀₃, 6, 2, 3; 1998 HX₁₀₃, 6, 2, 3; 1998 HZ₁₀₃, 6, 2, 3; 1998 HA₁₀₄, 6, 2, 3; 1998 HB₁₀₄, 6, 2, 3; 1998 HC₁₀₄, 6, 2, 3; 1998 HD₁₀₄, 6, 2, 3; 1998 HE₁₀₄, 6, 2, 3; 1998 HF₁₀₄, 6, 2, 3; 1998 HG₁₀₄, 6, 2, 3; 1998 HL₁₀₄, 6, 2, 3; 1998 HM₁₀₄, 6, 2, 3; 1998 HN₁₀₄, 6, 2, 3; 1998 HO₁₀₄, 6, 2, 3; 1998 HP₁₀₄, 6, 2, 3; 1998 HQ₁₀₄, 6, 2, 3; 1998 HR₁₀₄, 6, 2, 3; 1998 HS₁₀₄, 6, 2, 3; 1998 HT₁₀₄, 6, 2, 3; 1998 HU₁₀₄, 6, 2, 3; 1998 HV₁₀₄, 6, 2, 3; 1998 HW₁₀₄, 6, 2, 3; 1998 HX₁₀₄, 6, 2, 3; 1998 HZ₁₀₄, 6, 2, 3; 1998 HA₁₀₅, 6, 2, 3; 1998 HB₁₀₅, 6, 2, 3; 1998 HC₁₀₅, 6, 2, 3; 1998 HD₁₀₅, 6, 2, 3; 1998 HE₁₀₅, 6, 2, 3; 1998 HF₁₀₅, 6, 2, 3; 1998 HG₁₀₅, 6, 2, 3; 1998 HL₁₀₅, 6, 2, 3; 1998 HM₁₀₅, 6, 2, 3; 1998 HN₁₀₅, 6, 2, 3; 1998 HO₁₀₅, 6, 2, 3; 1998 HP₁₀₅, 6, 2, 3; 1998 HQ₁₀₅, 6, 2, 3; 1998 HR₁₀₅, 6, 2, 3; 1998 HS₁₀₅, 6, 2, 3; 1998 HT₁₀₅, 6, 2, 3; 1998 HU₁₀₅, 6, 2, 3; 1998 HV₁₀₅, 6, 2, 3; 1998 HW₁₀₅, 6, 2, 3; 1998 HX₁₀₅, 6, 2, 3; 1998 HZ₁₀₅, 6, 2, 3; 1998 HA₁₀₆, 6, 2, 3; 1998 HB₁₀₆, 6, 2, 3; 1998 HC₁₀₆, 6, 2, 3; 1998 HD₁₀₆, 6, 2, 3; 1998 HE₁₀₆, 6, 2, 3; 1998 HF₁₀₆, 6, 2, 3; 1998 HG₁₀₆, 6, 2, 3; 1998 HL₁₀₆, 6, 2, 3; 1998 HM₁₀₆, 6, 2, 3; 1998 HN₁₀₆, 6, 2, 3; 1998 HO₁₀₆, 6, 2, 3; 1998 HP₁₀₆, 6, 2, 3; 1998 HQ₁₀₆, 6, 2, 3; 1998 HR₁₀₆, 6, 2, 3; 1998 HS₁₀₆, 6, 2, 3; 1998 HT₁₀₆, 6, 2, 3; 1998 HU₁₀₆, 6, 2, 3; 1998 HV₁₀₆, 6, 2, 3; 1998 HW₁₀₆, 6, 2, 3; 1998 HX₁₀₆, 6, 2, 3; 1998 HZ₁₀₆, 6, 2, 3; 1998 HA₁₀₇, 6, 2, 3; 1998 HB₁₀₇, 6, 2, 3; 1998 HC₁₀₇, 6, 2, 3; 1998 HD₁₀₇, 6, 2, 3; 1998 HE₁₀₇, 6, 2, 3; 1998 HF₁₀₇, 6, 2, 3; 1998 HG₁₀₇, 6, 2, 3; 1998 HL₁₀₇, 6, 2, 3; 1998 HM₁₀₇, 6, 2, 3; 1998 HN₁₀₇, 6, 2, 3; 1998 HO₁₀₇, 6, 2, 3; 1998 HP₁₀₇, 6, 2, 3; 1998 HQ₁₀₇, 6, 2, 3; 1998 HR₁₀₇, 6, 2, 3; 1998 HS₁₀₇, 6, 2, 3; 1998 HT₁₀₇, 6, 2, 3; 1998 HU₁₀₇, 6, 2, 3; 1998 HV₁₀₇, 6, 2, 3; 1998 HW₁₀₇, 6, 2, 3; 1998 HX₁₀₇, 6, 2, 3; 1998 HZ₁₀₇, 6, 2, 3; 1998 HA₁₀₈, 6, 2, 3; 1998 HB₁₀₈, 6, 2, 3; 1998 HC₁₀₈, 6, 2, 3; 1998 HD₁₀₈, 6, 2, 3; 1998 HE₁₀₈, 6, 2, 3; 1998 HF₁₀₈, 6, 2, 3; 1998 HG₁₀₈, 6, 2, 3; 1998 HL₁₀₈, 6, 2, 3; 1998 HM₁₀₈, 6, 2, 3; 1998 HN₁₀₈, 6, 2, 3; 1998 HO₁₀₈, 6, 2, 3; 1998 HP₁₀₈, 6, 2, 3; 1998 HQ₁₀₈, 6, 2, 3; 1998 HR₁₀₈, 6, 2, 3; 1998 HS₁₀₈, 6, 2, 3; 1998 HT₁₀₈, 6, 2, 3; 1998 HU₁₀₈, 6, 2, 3; 1998 HV₁₀₈, 6, 2, 3; 1998 HW₁₀₈, 6, 2, 3; 1998 HX₁₀₈, 6, 2, 3; 1998 HZ₁₀₈, 6, 2, 3; 1998 HA₁₀₉, 6, 2, 3; 1998 HB₁₀₉, 6, 2, 3; 1998 HC₁₀₉, 6, 2, 3; 1998 HD₁₀₉, 6, 2, 3; 1998 HE₁₀₉, 6, 2, 3; 1998 HF₁₀₉, 6, 2, 3; 1998 HG₁₀₉, 6, 2, 3; 1998 HL₁₀₉, 6, 2, 3; 1998 HM₁₀₉, 6, 2, 3; 1998 HN₁₀₉, 6, 2, 3; 1998 HO₁₀₉, 6, 2, 3; 1998 HP₁₀₉, 6, 2, 3; 1998 HQ₁₀₉, 6, 2, 3; 1998 HR₁₀₉, 6, 2, 3; 1998 HS₁₀₉, 6, 2, 3; 1998 HT₁₀₉, 6, 2, 3; 1998 HU₁₀₉, 6, 2, 3; 1998 HV₁₀₉, 6, 2, 3; 1998 HW₁₀₉, 6, 2, 3; 1998 HX₁₀₉, 6, 2, 3; 1998 HZ₁₀₉, 6, 2, 3; 1998 HA₁₁₀, 6, 2, 3; 1998 HB₁₁₀, 6, 2, 3; 1998 HC₁₁₀, 6, 2, 3; 1998 HD₁₁₀, 6, 2, 3; 1998 HE₁₁₀, 6, 2, 3; 1998 HF₁₁₀, 6, 2, 3; 1998 HG₁₁₀, 6, 2, 3; 1998 HL₁₁₀, 6, 2, 3; 1998 HM₁₁₀, 6, 2, 3; 1998 HN₁₁₀, 6, 2, 3; 1998 HO₁₁₀, 6, 2, 3; 1998 HP₁₁₀, 6, 2, 3; 1998 HQ₁₁₀, 6, 2, 3; 1998 HR₁₁₀, 6, 2, 3; 1998 HS₁₁₀, 6, 2, 3; 1998 HT₁₁₀, 6, 2, 3; 1998 HU₁₁₀, 6, 2, 3; 1998 HV₁₁₀, 6, 2, 3; 1998 HW₁₁₀, 6, 2, 3; 1998 HX₁₁₀, 6, 2, 3; 1998 HZ₁₁₀, 6, 2, 3; 1998 HA₁₁₁, 6, 2, 3; 1998 HB₁₁₁, 6, 2, 3; 1998 HC₁₁₁, 6, 2, 3; 1998 HD₁₁₁, 6, 2, 3; 1998 HE₁₁₁, 6, 2, 3; 1998 HF₁₁₁, 6, 2, 3; 1998 HG₁₁₁, 6, 2, 3; 1998 HL₁₁₁, 6, 2, 3; 1998 HM₁₁₁, 6, 2, 3; 1998 HN₁₁₁, 6, 2, 3; 1998 HO₁₁₁, 6, 2, 3; 1998 HP₁₁₁, 6, 2, 3; 1998 HQ₁₁₁, 6, 2, 3; 1998 HR₁₁₁, 6, 2, 3; 1998 HS₁₁₁, 6, 2, 3; 1998 HT₁₁₁, 6, 2, 3; 1998 HU₁₁₁, 6, 2, 3; 1998 HV₁₁₁, 6, 2, 3; 1998 HW₁₁₁, 6, 2, 3; 1998 HX₁₁₁, 6, 2, 3; 1998 HZ₁₁₁, 6, 2, 3; 1998 HA₁₁₂, 6, 2, 3; 1998 HB₁₁₂, 6, 2, 3; 1998 HC₁₁₂, 6, 2, 3; 1998 HD₁₁₂, 6, 2, 3; 1998 HE₁₁₂, 6, 2, 3; 1998 HF₁₁₂, 6, 2, 3; 1998 HG₁₁₂, 6, 2, 3; 1998 HL₁₁₂, 6, 2, 3; 1998 HM₁₁₂, 6, 2, 3; 1998 HN₁₁₂, 6, 2, 3; 1998 HO₁₁₂, 6, 2, 3; 1998 HP₁₁₂, 6, 2, 3; 1998 HQ₁₁₂, 6, 2, 3; 1998 HR₁₁₂, 6, 2, 3; 1998 HS₁₁₂, 6, 2, 3; 1998 HT₁₁₂, 6, 2, 3; 1998 HU₁₁₂, 6, 2, 3; 1998 HV₁₁₂, 6, 2, 3; 1998 HW₁₁₂, 6, 2, 3; 1998 HX₁₁₂, 6, 2, 3; 1998 HZ₁₁₂, 6, 2, 3; 1998 HA₁₁₃, 6, 2, 3; 1998 HB₁₁₃, 6, 2, 3; 1998 HC₁₁₃, 6, 2, 3; 1998 HD₁₁₃, 6, 2, 3; 1998 HE₁₁₃, 6, 2, 3; 1998 HF₁₁₃, 6, 2, 3; 1998 HG₁₁₃, 6, 2, 3; 1998 HL₁₁₃, 6, 2, 3; 1998 HM₁₁₃, 6, 2, 3; 1998 HN₁₁₃, 6, 2, 3; 1998 HO₁₁₃, 6, 2, 3; 1998 HP₁₁₃, 6, 2, 3; 1998 HQ₁₁₃, 6, 2, 3; 1998 HR₁₁₃, 6, 2, 3; 1998 HS₁₁₃, 6, 2, 3; 1998 HT₁₁₃, 6, 2, 3; 1998 HU₁₁₃, 6, 2, 3; 1998 HV₁₁₃, 6, 2, 3; 1998 HW₁₁₃, 6, 2, 3; 1998 HX₁₁₃, 6, 2, 3; 1998 HZ₁₁₃, 6, 2, 3; 1998 HA₁₁₄, 6, 2, 3; 1998 HB₁₁₄, 6, 2, 3; 1998 HC₁₁₄, 6, 2, 3; 1998 HD₁₁₄, 6, 2, 3; 1998 HE₁₁₄, 6, 2, 3; 1998 HF₁₁₄, 6, 2, 3; 1998 HG₁₁₄, 6, 2, 3; 1998 HL₁₁₄, 6, 2, 3; 1998 HM₁₁₄, 6, 2, 3; 1998 HN₁₁₄, 6, 2, 3; 1998 HO₁₁₄, 6, 2, 3; 1998 HP₁₁₄, 6, 2, 3; 1998 HQ₁₁₄, 6, 2, 3; 1998 HR₁₁₄, 6, 2, 3; 1998 HS₁₁₄, 6, 2, 3; 1998 HT₁₁₄, 6, 2, 3; 1998 HU₁₁₄, 6, 2, 3; 1998 HV₁₁₄, 6, 2, 3; 1998 HW₁₁₄, 6, 2, 3; 1998 HX₁₁₄, 6, 2, 3; 1998 HZ₁₁₄, 6, 2, 3; 1998 HA₁₁₅, 6, 2, 3; 1998 HB₁₁₅, 6, 2, 3; 1998 HC₁₁₅, 6, 2, 3; 1998 HD₁₁₅, 6, 2, 3; 1998 HE₁₁₅, 6, 2, 3; 1998 HF₁₁₅, 6, 2, 3; 1998 HG₁₁₅, 6, 2, 3; 1998 HL₁₁₅, 6, 2, 3; 1998 HM₁₁₅, 6, 2, 3; 1998 HN₁₁₅, 6, 2, 3; 1998 HO₁₁₅, 6, 2, 3; 1998 HP₁₁₅, 6, 2, 3; 1998 HQ₁₁₅, 6, 2, 3; 1998 HR₁₁₅, 6, 2, 3; 1998 HS₁₁₅, 6, 2, 3; 1998 HT₁₁₅, 6, 2, 3; 1998 HU₁₁₅, 6, 2, 3; 1998 HV₁₁₅, 6, 2, 3; 1998 HW₁₁₅, 6, 2, 3; 1998 HX₁₁₅, 6, 2, 3; 1998 HZ₁₁₅, 6, 2, 3; 1998 HA₁₁₆, 6, 2, 3; 1998 HB₁₁₆, 6, 2, 3; 1998 HC₁₁₆, 6, 2, 3; 1998 HD₁₁₆, 6, 2, 3; 1998 HE₁₁₆, 6, 2, 3; 1998 HF₁₁₆, 6, 2, 3; 1998 HG₁₁₆, 6, 2, 3; 1998 HL₁₁₆, 6, 2, 3; 1998 HM₁₁₆, 6, 2, 3; 1998 HN₁₁₆, 6, 2, 3; 1998 HO₁₁₆, 6, 2, 3; 1998 HP₁₁₆, 6, 2, 3; 1998 HQ₁₁₆, 6, 2, 3; 1998 HR₁₁₆, 6, 2, 3; 1998 HS₁₁₆, 6, 2, 3; 1998 HT₁₁₆, 6, 2, 3; 1998 HU₁₁₆, 6, 2, 3; 1998 HV₁₁₆, 6, 2, 3; 1998 HW₁₁₆, 6, 2, 3; 1998 HX₁₁₆, 6, 2, 3; 1998 HZ₁₁₆, 6, 2, 3; 1998 HA₁₁₇, 6, 2, 3; 1998 HB₁₁₇, 6, 2, 3; 1998 HC₁₁₇, 6, 2, 3; 1998 HD₁₁₇, 6, 2, 3; 1998 HE₁₁₇, 6, 2, 3; 1998 HF₁₁₇, 6, 2, 3; 1998 HG₁₁₇, 6, 2, 3; 1998 HL₁₁₇, 6, 2, 3; 1998 HM₁₁₇, 6, 2, 3; 1998 HN₁₁₇, 6, 2, 3; 1998 HO₁₁₇, 6, 2, 3; 1998 HP₁₁₇, 6, 2,

824 Lake Clear

K. A. Williams, RD #1 Box 277, Forest Home Road, Lake Clear, NY 12945,
U.S.A. [kenwill@NorthNet.org]

0.41-m $f/5.0$ reflector + CCD

GSC

1996 TO₉, 10, 3, 31; 1998 KU₂, 6, 2, 1; 1998 KE₃, 3, 1, 0; 1998 KF₁₀ *, 9, 3, 4; (5887), 12, 4, 4; [40, 5, 1*, 1998/04/23–1998/05/28]

828 Assonet

T. R. Perry, 2 Ken Street, Assonet MA 02702, U.S.A. [trperry@sprynet.com]

0.20-m $f/4.86$ Schmidt-Cassegrain + CCD

USNO-SA1.0

(3256), 4, 2, 2; [4, 1, 0*, 1998/05/23–1998/05/25]

834 Buenos Aires-AAAA

R. Mackintosh, Seccion Sistema Solar, Asociacion Argentina Amigos de la
Astronomia, Av. Patricias Argentinas 550, AR-1405 Capital Federal,
Argentina [robertom@aaaa.org.ar]

Observers R. Mackintosh, H. Ruggiu

Measurer R. Mackintosh, J. R. Carozza

0.25-m $f/6.3$ reflector + CCD

USNO-A1.0

(393), 7, 3, 6; (443), 2, 1, 0; (496), 2, 1, 0; (583), 4, 2, 20; (602), 2, 1, 0; (748), 2, 1, 0; (1888), 2, 1, 0; (3259), 3, 1, 0; [24, 8, 0*, 1998/02/25–1998/04/02]

844 Los Molinos

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Observers O. Mendez, R. Salvo, J. Scheck, J. C. Tulic, E. Acosta

Measurers R. Salvo, T. Gallardo

0.35-m $f/6.4$ reflector + CCD

GSC

1931 TD₃, 3, 2, 2; 1975 LT, 5, 2, 1; 1998 KN₂₄, 21, 4, 5; 3297 T-2, 4, 2, 1; (6683), 4, 2, 1; [37, 5, 0*, 1998/05/04–1998/06/05]

860 Valinhos

P. R. Holvorcem, Departamento de Matematica/IMECC, Universidade Estadual de
Campiñas, Campiñas, SP, BR-13081-970, Brazil [canis@mpc.com.br]

Observers P. R. Holvorcem, F. Girotto

0.20-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC, USNO-SA1.0

1990 VZ₄, 3, 1, 0; 1995 UR₂, 2, 1, 0; 1998 FT₁₁₇, 2, 1, 0; 1998 KH₉, 2, 1, 0; 1998 KY₂₆, 3, 1, 0; [12, 5, 0*, 1998/04/20–1998/06/01]

867 Saji Observatory

M. Yamanishi, 1071-1 Takayama, Saji, Yazu-Gun, Tottori-Ken, 689-13 Japan
[KYI03040@niftyserve.or.jp]

Observers M. Yamanishi, A. Miyamoto, M. Aimoto, T. Oribe

1.03-m $f/4.2$ reflector + CCD

GSC

1996 XS₂₅, 2, 1, 0; 1996 XN₃₂, 9, 3, 7; 1998 BK₂₅, 2, 1, 0; 1998 HP₇₉, 3, 1, 0; (2060), 3, 1, 0; [19, 5, 0*, 1998/04/26–1998/05/27]

886 Susono

M. Akiyama, 1655-23, Chabatake, Susono, Shizuoka-Ken, 410-11 Japan

0.25-m $f/6.3$ reflector + CCD

GSC

1990 AD, 2, 1, 0; 1992 YY, 2, 1, 0; 1995 QS, 2, 1, 0; 1995 QG₂, 4, 2, 21; 1995 WX₁, 2, 1, 0; 1998 HW₆, 2, 1, 0; [14, 6, 0*, 1998/04/29–1998/05/20]

888 Gekko Observatory

T. Kagawa, 1308-222, Kuwahara, Kannami-cho, Tagata-gun, Shizuoka-Ken, 419-
010, Japan

0.50-m $f/4.0$ reflector

GSC 1.1

1992 AF, 2, 1, 0; 1992 UX, 3, 1, 0; 1992 YY, 3, 1, 0; 1993 BR₃, 3, 1, 0; 1994 BY, 2, 1, 0; 1995 PV, 3, 1, 0; 1995 QG₂, 3, 1, 0; 1995 QH₂, 3, 1, 0; 1995 SL₂, 3, 1, 0; 1995 UK₃, 3, 1, 0; 1995 UB₇, 3, 1, 0; 1995 WX₁, 3, 1, 0; 1995 WZ₆, 3, 1, 0; 1996 AY₃, 3, 1, 0; 1997 AQ₆, 3, 1, 0; 1997 CN₅, 3, 1, 0; 1998 EX₈, 2, 1, 0; 1998 FQ₁₁, 3, 1, 0; 1998 HW₆, 3, 1, 0; 1998 HY₆, 3, 1, 0; 1998 HU₁₀₈, 6, 2, 3; [63, 21, 0*, 1998/05/20–1998/05/23]

900 Moriyama

Y. Ikari, Katube-Cho 626, Moriyama, Shiga-Ken 524, Japan

[ikari@gold.ocn.ne.jp]

0.25-m $f/6.3$ Schmidt-Cassegrain + CCD

GSC

1998 HU₁₀₈, 2, 1, 0; 1998 KD₃, 2, 1, 0; 1998 KE₃, 2, 1, 0; 1998 KH₁₇, 2, 1, 0; (6493), 2, 1, 0; [10, 5, 0*, 1998/05/04–1998/05/30]

910 Caussols-ODAS

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[maury@obs-azur.fr]

G. Hahn, DLR Institute of Planetary Exploration, Rudower Chaussee 5, D-12489
Berlin, Germany [Gerhard.Hahn@DLR.de]

Observers A. Maury, D. Albanese, G. Hahn, M. Hoffmann

Measurers A. Maury, G. Hahn

0.90-m Schmidt + CCD

GSC

1988 PO₂, 6, 2, 1; 1989 UW₂, 3, 1, 0; 1990 SH₁, 3, 1, 0; 1991 CR₁, 3, 1, 0; 1991 TF₇, 3, 1, 0; 1992 UW₂, 3, 1, 0; 1993 FK₃₇, 3, 1, 0; 1996 UD, 3, 1, 0; 1996 XH₆, 3, 1, 0; 1997 ST₂₃, 3, 1, 0; 1997 TL₂₁, 3, 1, 0; 1997 UF₁₃, 3, 1, 0; 1997 WC₃₁, 3, 1, 0; 1997 WK₃₅, 3, 1, 0; 1998 AZ₅, 3, 1, 0; 1998 BP₇, 3, 1, 0; 1998 BX₁₂, 3, 1, 0; 1998 BB₃₇, 9, 3, 118; 1998 DE₁₄, 3, 1, 0; 1998 DF₁₄, 3, 1, 0; 1998 EW₂, 3, 1, 0; 1998 FX₅₄, 3, 1, 0; 1998 FY₅₄, 3, 1, 0; 1998 FR₅₅, 3, 1, 0; 1998 FG₅₆, 3, 1, 0; 1998 FV₅₆, 3, 1, 0; 1998 FK₅₇, 3, 1, 0; 1998 FK₅₉, 3, 1, 0; 1998 FA₆₀, 3, 1, 0; 1998 FF₆₉, 3, 1, 0; 1998 FT₇₀, 3, 1, 0; 1998 FG₇₁, 3, 1, 0; 1998 FO₇₅, 3, 1, 0; 1998 FL₇₈, 3, 1, 0; 1998 FU₁₁₇, 3, 1, 0; 1998 FL₁₂₁, 3, 1, 0; 1998 HN₅, 3, 1, 0; 1998 HR₆, 3, 1, 0; 1998 HK₁₅, 3, 1, 0; 1998 HA₄₃, 3, 1, 0; 1998 HK₄₃, 3, 1, 0; 1998 HO₄₃, 3, 1, 0; 1998 HQ₄₆, 3, 1, 0; 1998 HT₄₆, 6, 2, 28; 1998 HT₅₀, 6, 2, 1; 1998 HN₅₂ *, 6, 2, 8; 1998 HR₆₃, 3, 1, 0; 1998 HC₇₀, 3, 1, 0; 1998 HX₇₂, 3, 1, 0; 1998 HO₇₃, 3, 1, 0; 1998 HR₇₃, 3, 1, 0; 1998 HK₈₉, 3, 1, 0; 1998 HB₁₄₃, 3, 1, 0; 1998 HU₁₅₀, 3, 1, 0; 1998 JD₂, 3, 1, 0; 1998 JF₂, 3, 1, 0; 1998 JK₃, 3, 1, 0; 1998 JL₃ *, 9, 3, 5; 1998 JM₃ *, 9, 3, 5; 1998 JN₃ *, 6, 2, 1; 1998 JO₃ *, 6, 2, 1; 1998 JP₃ *, 6, 2, 1; 1998 JQ₃ *, 9, 3, 2; 1998 JR₃ *, 6, 2, 1; 1998 JS₃ *, 9, 3, 2; 1998 JT₃ *, 6, 2, 1; 1998 JU₃ *, 9, 3, 2; 1998 JV₃ *, 6, 2, 1; 1998 JX₃ *, 6, 2, 2; 1998 JY₃ *, 6, 2, 1; 1998 JZ₃ *, 6, 2, 1; 1998 JA₄ *, 6, 2, 1; 1998 JB₄, 3, 1, 0; 1998 JM₄, 3, 1, 0; 1998 KW *, 6, 2, 3; 1998 KX₃, 3, 1, 0; 1998 KK₇, 3, 1, 0; 1998 KB₉, 3, 1, 0; 1998 KH₃₄, 3, 1, 0; 1998 KU₃₇, 6, 2, 15; 3074 T-1, 3, 1, 0; 3770 T-1, 3, 1, 0; 4300 T-1, 3, 1, 0; 1212 T-2, 3, 1, 0; 4062 T-2, 3, 1, 0; (276), 3, 1, 0; (662), 3, 1, 0; (873), 6, 2, 1; (1056), 9, 3, 5; (1589), 3, 1, 0; (1784), 3, 1, 0; (2018), 3, 1, 0; (2740), 3, 1, 0; (3716), 3, 1, 0; (3717), 3, 1, 0; (3829), 3, 1, 0; (4497), 12, 4, 6; (4798), 3, 1, 0; (6667), 3, 1, 0; [399, 99, 17*, 1997/10/01–1998/05/23]

947 Saint-Sulpice

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0.60-m $f/5.6$ relector + CCD

GSC, USNO-SA1.0

(4368), 6, 3, 2; (4582), 4, 2, 1; (4629), 2, 1, 0; (5098), 4, 2, 1; (5956), 2, 1, 0; (6497), 4, 2, 1; (6683), 5, 3, 2; (6832), 6, 3, 2; [33, 8, 0*, 1998/05/21–1998/05/23]

949 Durtal

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 0.20-m $f/6.3$ reflector + CCD
 GSC
 1998 HE₈, 3, 1, 0; [3, 1, 0*, 1998/05/17]

950 La Palma

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 Observers M. R. Burleigh, N. P. Bannister
 Measurer M. R. Burleigh
 1.0-m Jacobus Kapteyn Telescope + CCD
 1998 KL₅₆ *, 3, 3, 2; [3, 1, 1*, 1998/05/22–1998/05/24]

954 Teide Observatory

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 Observers A. Allepuz, I. Carricajo, M. N. Alvarez, S. Fernandez
 Measurers R. Casas, J. Licandro
 0.8-m $f/11.3$ Cassegrain + CCD
 APM
 (5744), 14, 2, 1; [14, 1, 0*, 1998/05/29–1998/05/30]

967 Greens Norton

R. J. Neville, 19 Bradden Way, Greens Norton, Towcester, Northamptonshire NN12
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 0.21-m $f/4.4$ reflector + CCD
 GSC
 1998 FX₂, 3, 1, 0; [3, 1, 0*, 1998/04/25–1998/04/26]

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P/1996 A1 (Jedicke)

Epoch 1995 Aug. 31.0 TT = JDT 2449960.5
T 1995 Aug. 15.8941 TT Nakano
q 4.055226 (2000.0) **P** **Q**
n 0.0510472 ω 224.1255 −0.3919478 −0.9136510
a 7.197051 Ω 249.2208 +0.8727821 −0.3322266
e 0.436543 i 6.6203 +0.2909095 −0.2342379
P 19.3
 From 315 observations 1996 Jan. 14–1998 May 31, mean residual 0".6.

P/1998 G1 (LINEAR)

T 1998 Nov. 16.6633 TT Nakano
q 2.132783 (2000.0) **P** **Q**
n 0.0234684 ω 236.3492 −0.4355319 +0.8485387
a 12.082232 Ω 341.3860 +0.7181049 +0.1262225
e 0.823478 i 109.7100 −0.5428051 −0.5138578
P 42.0
 From 151 observations 1998 Apr. 2–May 26.

C/1998 H1 (Stonehouse)

T 1998 Apr. 14.4358 TT Marsden
q 1.487469 (2000.0) **P** **Q**
 ω 1.3331 −0.7455747 −0.1529816
 Ω 222.1138 −0.6200323 −0.1975447
e 1.0 i 104.7101 −0.2442914 +0.9682834
 From 311 observations 1998 Apr. 26–June 8.

C/1998 J1 (SOHO)

T 1998 May 8.6168 TT Marsden
q 0.153217 (2000.0) **P** **Q**
 ω 110.5438 −0.2854242 −0.9496661
 Ω 351.6634 +0.1018923 +0.1038742
e 1.0 i 62.9273 +0.9529696 −0.2955411
 From 122 observations 1998 May 20–June 6.

C/1998 K1 (Mueller)

T 1998 Sept. 1.3339 TT Marsden
q 3.414742 (2000.0) **P** **Q**
z +0.016509 ω 165.3081 −0.9831582 +0.0057598
 Ω 18.2769 −0.1574812 −0.5338666
e 0.943627 i 35.6238 +0.0927340 −0.8455491
 From 123 observations 1998 May 16–June 8.

C/1998 K2 (LINEAR)

T 1998 Sept. 1.2848 TT Nakano
q 2.323032 (2000.0) **P** **Q**
 ω 221.4490 −0.0052112 +0.5408734
 Ω 68.7807 −0.4982800 +0.7278389
e 1.0 i 64.4567 −0.8670005 −0.4215525
 From 70 observations 1998 May 22–June 6.

C/1998 K3 (LINEAR)

<i>T</i>	1998 Mar. 7.2642 TT		Nakano	
<i>q</i>	3.546822	(2000.0)	P	Q
	ω	47.8382	−0.1372363	−0.9538571
	Ω	307.9470	−0.9789875	+0.0895587
<i>e</i>	1.0	<i>i</i> 160.2045	−0.1508300	+0.2865936

From 124 observations 1998 May 23–June 5.

C/1998 K5 (LINEAR)

<i>T</i>	1998 July 17.3358 TT		Marsden	
<i>q</i>	0.963791	(2000.0)	P	Q
	ω	99.2772	+0.6426106	+0.7608265
	Ω	211.2987	−0.7534393	+0.6060209
<i>e</i>	1.0	<i>i</i> 10.0352	−0.1392154	+0.2321243

From 203 observations 1998 May 26–June 9.

98P/Takamizawa

Epoch 1998 Nov. 3.0 TT = JDT 2451120.5

<i>T</i>	1998 Nov. 7.9862 TT		Nakano	
<i>q</i>	1.585223	(2000.0)	P	Q
<i>n</i>	0.1367433	ω 147.7997	+0.0521414	+0.9894306
<i>a</i>	3.731345	Ω 124.8458	−0.9476287	+0.0917720
<i>e</i>	0.575160	<i>i</i> 9.4897	−0.3150891	−0.1122715
<i>P</i>	7.21			

From 157 observations 1984–1998, mean residual 1″.0. Nongravitational parameters
 $A_1 = +1.05$, $A_2 = +0.0208$.

136P/Mueller 3

Epoch 1999 Mar. 3.0 TT = JDT 2451240.5

<i>T</i>	1999 Mar. 20.5047 TT		Marsden	
<i>q</i>	3.010484	(2000.0)	P	Q
<i>n</i>	0.1131912	ω 225.4492	+0.9917978	−0.0659048
<i>a</i>	4.232474	Ω 137.9665	+0.0944872	+0.9550573
<i>e</i>	0.288718	<i>i</i> 9.4137	−0.0860774	+0.2890018
<i>P</i>	8.71			

From 24 observations 1990–1998, mean residual 1″.0.

137P/Shoemaker-Levy 2

Epoch 2000 Feb. 26.0 TT = JDT 2451600.5

<i>T</i>	2000 Feb. 6.0494 TT		Marsden	
<i>q</i>	1.868674	(2000.0)	P	Q
<i>n</i>	0.1051024	ω 142.0314	+0.9557440	−0.2866307
<i>a</i>	4.446936	Ω 234.7521	+0.2461349	+0.9024818
<i>e</i>	0.579784	<i>i</i> 4.6570	+0.1611554	+0.3215113
<i>P</i>	9.38			

From 27 observations 1990–1998, mean residual 0″.7.

(8778)* 1931 TD₃ = 1973 GB₁ = 1977 TM₁ = 1980 EB₂ = 1995 TK₂

Discovered 1931 Oct. 10 by C. W. Tombaugh at the Lowell Observatory.
 Id. G. V. Williams (*MPC* 26393)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	332.19719	(2000.0)	Williams		P	Q
<i>n</i>	0.27816370	ω 269.75522	+0.66556920	+0.73933504		
<i>a</i>	2.3241763	Ω 42.56717	−0.61066201	+0.61803122		
<i>e</i>	0.2826856	<i>i</i> 8.67138	−0.42907990	+0.26724729		
<i>P</i>	3.54	<i>H</i> 13.7	<i>G</i> 0.15	<i>U</i> 1		

Residuals in seconds of arc

1931 10 10	690	0.8−	0.5−	1995 10 30	411	0.6+	0.1+	1998 05 06	844	0.1−	0.8+
1931 10 12	690	0.2+	0.9−	1995 10 30	411	0.1−	0.4−	1998 05 08	423	0.3−	0.1+
1931 10 14	690	1.1+	0.0	1995 10 30	411	0.2−	0.2+	1998 05 08	423	0.7−	0.4+
1973 04 01	095	1.2+	1.3−	1995 11 30	327	0.2−	0.0	1998 05 08	423	0.3−	0.2+
1977 10 06	095	(1.1+ 5.1+)		1995 11 30	327	0.1+	0.2−	1998 05 09	423	0.0	0.4+
1980 03 15	095	(3.5+ 1.1−)		1995 11 30	327	0.1+	0.5+	1998 05 09	423	0.4−	0.2+
1990 01 29	675	0.4−	0.6+	1995 12 02	327	0.1−	0.1−	1998 05 09	423	0.1−	0.5+
1990 01 29	675	0.2−	0.2+	1995 12 02	327	0.0	0.1+	1998 05 22	704	0.6+	0.1−
1995 10 14	327	0.5−	0.7+	1995 12 02	327	0.0	0.2−	1998 05 22	704	1.0+	0.3−
1995 10 14	327	0.1−	1.2+	1998 03 02	561	1.3−	1.0−	1998 05 22	704	0.9+	1.1+
1995 10 14	327	0.1+	0.6+	1998 03 02	561	1.2−	1.1−	1998 05 22	704	0.3+	1.2+
1995 10 15	327	0.7−	0.7−	1998 03 02	561	1.3−	1.6−	1998 05 22	704	0.5+	1.1+
1995 10 15	327	0.3+	0.7+	1998 04 04	561	0.7+	0.4+	1998 05 24	704	0.6−	0.5−
1995 10 15	327	0.2+	0.6−	1998 04 04	561	0.4+	0.3+	1998 05 24	704	0.0	1.1−
1995 10 27	411	0.1+	0.4−	1998 04 04	561	0.0	0.3+	1998 05 24	704	0.1−	0.4−
1995 10 27	411	0.0	0.5−	1998 04 26	423	0.2+	0.2−	1998 05 24	704	0.5+	0.7−
1995 10 28	327	0.3+	0.1−	1998 04 26	423	0.4+	0.3+	1998 05 24	704	0.7−	1.3−
1995 10 28	327	0.1−	0.1+	1998 05 04	844	0.4−	0.3+				
1995 10 28	327	0.1+	0.3+	1998 05 04	844	0.6−	0.2+				

(8779)* 1971 UH₁ = 1988 TG₃ = 1994 VA₇

Discovered 1971 Oct. 26 by L. Kohoutek at Hamburg.

Id. S. Nakano (*MPC* 24383)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	275.80457	(2000.0)	Nakano		P	Q
<i>n</i>	0.17240539	ω 255.71365	+0.94059254	+0.33599466		
<i>a</i>	3.1971928	Ω 84.63526	−0.28950009	+0.86889477		
<i>e</i>	0.1832338	<i>i</i> 2.81644	−0.17741301	+0.36349617		
<i>P</i>	5.72	<i>H</i> 12.9	<i>G</i> 0.15	<i>U</i> 2		

Residuals in seconds of arc

1971 10 26	029	0.1+	0.2+	1994 11 04	675	0.2−	0.8−	1998 04 22	704	0.9+	0.3+
1971 10 27	029	0.9−	0.6+	1994 11 04	675	0.1−	1.0−	1998 04 22	704	0.5−	0.4+
1971 10 30	029	0.7−	0.4+	1994 11 06	675	0.3+	0.1+	1998 04 22	704	1.8−	0.0
1971 11 10	029	0.8+	1.1−	1994 11 06	675	0.4+	0.0	1998 04 22	704	0.2+	0.5+
1971 11 10	029	0.5+	0.5+	1994 11 07	399	0.5−	1.2+	1998 05 01	704	0.3+	0.1+
1971 11 19	029	0.8+	0.1+	1994 11 07	399	0.2−	1.7+	1998 05 01	704	1.0+	0.1−
1971 11 19	029	0.7−	0.4−	1994 11 28	675	0.1+	0.4−	1998 05 01	704	0.9+	1.1−
1988 10 07	675	0.6−	1.6−	1994 12 03	675	(2.3+ 2.0−)		1998 05 01	704	0.6+	0.8−
1988 10 07	675	0.5−	0.5+	1994 12 03	675	0.4+	0.8−	1998 05 01	704	0.4+	0.6−
1988 10 15	071	(3.2− 0.2+)		1998 04 04	561	1.2−	0.2+	1998 05 22	704	0.5+	0.1+
1988 10 15	071	1.5+	0.2+	1998 04 04	561	1.2−	0.3−	1998 05 22	704	0.9+	1.0+
1994 10 26	399	0.6−	0.8+	1998 04 04	561	1.3−	0.0	1998 05 22	704	0.3+	1.5+
1994 10 26	399	0.0	0.6+	1998 04 22	704	0.0	0.1−	1998 05 22	704	(2.5+ 1.0+)	

(8780)* 1975 LT = 1952 QT = 1984 BR₆

Discovered 1975 June 13 by M. R. Cesco at El Leoncito.

Id. T. Kobayashi (*MPC* 25325)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	326.94364	(2000.0)	Asher		P	Q
<i>n</i>	0.29745455	ω 353.23719	+0.43713098	+0.89768773		
<i>a</i>	2.2225710	Ω 302.67007	−0.82206591	+0.37378111		
<i>e</i>	0.2054994	<i>i</i> 3.77599	−0.36486181	+0.23333328		
<i>P</i>	3.31	<i>H</i> 14.9	<i>G</i> 0.15	<i>U</i> 1		

1998 JUNE 10

M.P.C. 31895

Residuals in seconds of arc

1952 08 28	024	0.3+	0.4+	1995 08 28	801	0.0	0.3+	1998 05 22	704	0.3+	0.1-
1975 06 13	808	0.9+	0.0	1995 08 28	801	0.2+	0.2+	1998 05 22	704	0.3-	0.2+
1975 06 13	808	0.3-	0.6-	1995 09 28	801	0.4+	0.1+	1998 05 22	704	0.8-	0.1-
1975 06 15	808	0.0	0.4-	1995 09 28	801	0.2+	0.8+	1998 05 22	704	0.2-	0.6+
1975 06 15	808	0.5-	2.1+	1995 09 29	801	2.0+	0.7-	1998 05 24	704	0.6-	0.1-
1975 06 17	808	0.1+	0.7-	1995 09 29	801	0.4-	0.3-	1998 05 24	704	0.0	0.4-
1975 06 17	808	0.8-	0.0	1998 04 30	566	0.7+	0.1+	1998 05 24	704	0.6-	0.3-
1984 01 25	675	0.5-	0.0	1998 04 30	566	0.4+	0.2+	1998 05 24	704	0.2-	0.3+
1984 01 26	675	0.4-	0.4-	1998 04 30	566	0.1+	0.2+	1998 05 24	704	1.1+	0.1-
1995 07 21	033	0.0	0.0	1998 05 05	844	0.7-	0.2+	1998 05 26	704	0.1+	0.3-
1995 07 22	033	0.8-	0.9-	1998 05 05	844	0.2+	0.1-	1998 05 26	704	0.2-	0.4-
1995 07 23	033	1.1-	1.1-	1998 05 06	844	0.0	1.2+	1998 05 26	704	1.2-	1.1-
1995 07 26	033	0.7-	0.3-	1998 05 06	844	1.5+	0.5-	1998 05 26	704	0.1-	0.9-
1995 08 26	801	0.8+	0.7+	1998 05 06	844	0.8+	0.1+				
1995 08 26	801	0.2+	0.4+	1998 05 22	704	0.3+	0.7+				

(8781)* 1976 GA₂ = 1994 CD₂

Discovered 1976 Apr. 1 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. A. Milani (*MPC* 25326)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27125094	ω	29.25010	-0.98917971	+0.14605291		
<i>a</i>	2.3634979	Ω	159.13452	-0.14103019	-0.92061266		
<i>e</i>	0.1707477	<i>i</i>	2.22985	-0.04042262	-0.36213379		
<i>P</i>	3.63	<i>H</i>	14.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1976 04 01	095	1.5-	2.2-	1996 11 09	684	0.2+	0.1+	1998 05 22	699	0.3-	0.5-
1976 04 04	095	1.3+	1.3-	1996 11 09	684	0.2+	0.1+	1998 05 22	699	0.0	0.4-
1976 05 02	095	0.2-	2.0+	1996 11 09	684	0.3+	0.1+	1998 05 23	699	0.5+	0.1-
1994 02 12	411	0.5+	0.8+	1996 11 10	684	0.4+	0.4+	1998 05 23	699	0.7+	0.0
1994 02 12	411	0.3+	1.6+	1996 11 10	684	0.2+	0.5+	1998 05 23	700	0.3-	0.3+
1994 02 13	411	0.5-	0.3+	1998 05 05	699	0.2-	0.1+	1998 05 23	699	0.6+	0.0
1994 02 13	411	0.5-	0.0	1998 05 05	699	0.3+	0.4+	1998 05 23	700	0.0	0.1+
1994 02 13	411	0.2-	0.4-	1998 05 05	699	0.6+	0.0	1998 05 24	704	0.0	0.8+
1994 03 02	411	0.1+	0.1+	1998 05 22	704	0.0	0.1-	1998 05 24	704	1.1+	0.2-
1994 03 02	411	0.3-	0.3-	1998 05 22	704	0.1-	0.0	1998 05 24	704	0.7-	0.1-
1994 03 02	411	0.1+	0.4+	1998 05 22	704	0.1-	0.7+	1998 05 24	704	0.2-	0.2-
1995 07 22	691	0.5-	0.1-	1998 05 22	704	0.0	0.2-	1998 05 24	704	0.4+	0.2-
1995 07 22	691	0.5-	0.1+	1998 05 22	704	0.6-	0.5+	1998 05 25	700	0.2+	0.1+
1995 07 22	691	0.9-	0.2+	1998 05 22	699	0.7-	0.2-	1998 05 25	700	0.1+	0.6+

(8782)* 1976 UG₂ = 1976 WU = 1991 SF₂

Discovered 1976 Oct. 26 by T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. H. Oishi (d, *JAM* 1835), E. Bowell (*MPC* 20008)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.25919279	ω	23.80440	+0.98617322	+0.16434893		
<i>a</i>	2.4362439	Ω	326.71430	-0.15758326	+0.89032673		
<i>e</i>	0.2003913	<i>i</i>	2.21965	-0.05128252	+0.42462658		
<i>P</i>	3.80	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1953 10 01	675	0.0	1.1-	1991 09 16	675	0.4+	0.8-	1998 05 05	699	0.5-	0.5+
1953 10 01	675	0.5-	0.3+	1991 09 16	675	0.1-	1.1+	1998 05 05	699	0.2-	0.2+
1976 10 24	381	0.9+	1.7+	1997 02 06	691	0.9-	0.1-	1998 05 23	699	0.3+	0.2-
1976 10 24	381	0.6-	0.8+	1997 02 06	691	0.8-	0.0	1998 05 23	699	0.4-	0.5-
1976 10 26	095	1.8+	1.6+	1997 02 06	691	0.7-	0.2+	1998 05 23	699	0.0	0.2-
1976 11 18	381	0.1-	0.0	1998 04 25	809	0.3-	0.7+	1998 05 24	704	2.0+	0.2-
1976 11 18	381	1.5-	0.3+	1998 04 25	809	0.7-	0.1-	1998 05 24	704	1.0-	0.2-
1990 04 22	675	0.6+	0.8-	1998 04 25	809	0.8-	0.6+	1998 05 24	704	0.5+	0.2-

1991 09 10	675	0.4-	1.2-	1998 04 28	809	1.2+	1.4+	1998 05 24	704	0.0	1.4-
1991 09 10	675	0.7-	0.8-	1998 04 28	809	0.8+	1.2+	1998 05 24	704	0.9-	0.8+
1991 09 16	675	0.1-	1.1-	1998 04 28	809	1.4+	1.4+				
1991 09 16	675	0.3+	1.1+	1998 05 05	699	0.4+	0.1-				

(8783)* 1977 EK₁ = 1984 FU₁

Discovered 1977 Mar. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. T. Kobayashi (*MPC* 12004)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28384729	ω	5.11418	-0.94694803	+0.32067480		
<i>a</i>	2.2930466	Ω	193.64804	-0.29798629	-0.90097454		
<i>e</i>	0.1522314	<i>i</i>	5.19869	-0.12038939	-0.29225427		
<i>P</i>	3.47	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1977 03 13	095	0.4+	0.4-	1991 04 19	801	0.4+	0.2+	1998 04 22	704	0.3-	0.4+
1977 03 22	095	1.0-	0.7-	1992 09 21	033	(0.6-	4.7-)	1998 04 22	704	0.8-	0.7+
1977 03 25	095	0.5+	0.2-	1992 09 21	033	(0.2-	4.8-)	1998 05 01	704	0.4-	0.1+
1977 04 10	381	0.3-	0.5-	1992 09 22	033	1.4-	1.7-	1998 05 01	704	0.1-	0.0
1977 04 10	381	0.8-	0.6+	1992 09 24	033	0.2+	0.2+	1998 05 01	704	0.6-	0.4-
1984 03 29	095	(3.2+	4.9-)	1992 09 24	033	0.7+	0.2+	1998 05 01	704	0.2-	0.2+
1984 04 04	095	(4.1+	0.6-)	1992 09 26	033	0.9+	0.1-	1998 05 01	704	0.1-	0.1-
1984 04 29	675	0.5+	1.6+	1992 09 27	033	0.8+	0.1-	1998 05 05	699	0.1-	0.3+
1984 04 29	675	0.6-	0.2+	1992 09 28	033	0.6+	0.4-	1998 05 05	699	0.1+	0.3+
1991 03 13	801	0.1+	0.6-	1995 07 19	104	0.3-	0.4+	1998 05 05	699	0.0	0.1+
1991 03 13	801	0.1-	0.2-	1995 07 19	104	0.0	0.2+	1998 05 23	566	0.6+	0.3+
1991 03 21	801	0.7+	0.5-	1995 07 19	104	0.6-	0.1-	1998 05 23	566	0.1-	0.2-
1991 03 21	801	0.8+	0.5-	1996 11 10	684	0.1-	0.2+	1998 05 23	566	0.0+	0.7-
1991 04 09	402	1.2+	0.5+	1996 11 10	684	0.0	0.1+	1998 05 24	704	0.3+	0.3-
1991 04 09	402	0.8+	0.5+	1996 11 11	684	0.3-	0.1+	1998 05 24	704	0.4+	0.4-
1991 04 12	402	(2.4+	1.6+)	1996 11 11	684	0.1-	0.2+	1998 05 24	704	0.3+	0.2+
1991 04 12	402	(3.8+	0.0)	1996 11 11	684	0.1-	0.2+	1998 05 24	704	0.4+	0.8+
1991 04 14	801	0.6-	0.0	1998 04 22	704	0.7-	0.4-	1998 05 24	704	0.6+	0.2-
1991 04 14	801	0.4-	0.2-	1998 04 22	704	0.6-	0.8-				
1991 04 19	801	0.4+	0.0	1998 04 22	704	0.8-	0.9-				

(8784)* 1977 RQ₁₉ = 1981 UT₂₃ = 1992 UD₅

Discovered 1977 Sept. 9 by C. M. Olmstead at Palomar.

Id. A. Lowe (*MPC* 21782), G. V. Williams (*MPC* 21782)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26719068	ω	207.07129	+0.99379565	-0.10943597		
<i>a</i>	2.3873816	Ω	159.18304	+0.10945380	+0.93061172		
<i>e</i>	0.0817696	<i>i</i>	3.20171	+0.01975009	+0.34926437		
<i>P</i>	3.69	<i>H</i>	14.7	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1977 09 09	675	0.2-	1.6-	1998 03 25	704	1.3+	0.8+	1998 04 20	704	1.0-	1.2-
1977 09 10	675	0.0	0.8-	1998 03 25	704	1.1+	0.1+	1998 04 21	704	0.5+	0.9-
1981 10 24	675	1.1+	0.4+	1998 03 25	704	0.4-	0.3+	1998 04 21	704	0.3+	1.2+
1981 10 25	675	0.7+	0.3+	1998 03 25	704	1.6-	1.1+	1998 04 21	704	1.3-	1.2+
1992 10 21	372	(4.1+	0.0)	1998 03 25	704	1.3-	0.1-	1998 04 21	704	1.5+	0.5+
1992 10 21	372	0.8-	0.3+	1998 03 29	704	0.5-	0.5-	1998 04 21	704	0.3-	1.4-
1992 10 25	372	(3.8-	3.1-)	1998 03 29	704	0.7+	1.3+	1998 04 22	704	0.3-	0.5+
1992 10 25	372	(2.5-	4.1-)	1998 03 29	704	0.0	1.5-	1998 04 22	704	1.1+	1.3-
1994 03 06	691	0.2-	0.6-	1998 03 29	704	0.6+	0.2+	1998 04 22	704	0.4+	1.4+
1994 03 06	691	0.5-	0.1-	1998 03 29	704	0.1+	0.4+	1998 04 22	704	0.0	0.5-
1994 03 06	691	0.3-	0.4-	1998 04 20	704	0.1+	0.2-	1998 04 22	704	0.7-	1.2-
1994 03 10	691	1.1-	0.2-	1998 04 20	704	1.3+	1.0-				
1994 03 10	691	0.9-	0.6-	1998 04 20	704	0.7+	1.1+				

(8785)* 1978 RR₁ = 1985 UA₃ = 1997 AO₁₃

Discovered 1978 Sept. 5 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. G. V. Williams (*MPC* 28838)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	315.74202	ω	161.08117	+0.65127816	+0.75824682		
<i>a</i>	2.2715092	Ω	149.53516	−0.70362403	+0.61821043		
<i>e</i>	0.1737364	<i>i</i>	3.38939	−0.28416541	+0.20706911		
<i>P</i>	3.42	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 09 01	095	(2.3− 4.6+)	1997 01 12	566	(2.4− 0.2−)	1998 05 22	704	0.0	0.4−
1978 09 05	095	0.5− 0.3−	1998 04 22	704	0.0	0.3−	1998 05 22	704	0.5+ 0.7−
1978 09 07	095	0.2+ 1.4−	1998 04 22	704	0.5+ 0.5+	1998 05 22	704	0.5+ 0.9−	
1978 09 12	095	(0.9+ 2.8+)	1998 04 22	704	0.0	0.2+	1998 05 22	704	0.2+ 0.4−
1978 09 28	095	1.0+ 0.8−	1998 04 22	704	0.9− 0.4+	1998 05 22	704	1.6− 0.2+	
1978 10 09	095	0.2+ 0.1+	1998 04 22	704	0.9− 0.5−	1998 05 23	699	0.0	0.3−
1985 10 17	010	(7.3− 2.0−)	1998 04 27	426	0.4+ 0.2−	1998 05 23	699	0.5+ 0.6−	
1985 10 18	010	(5.9− 1.5−)	1998 04 27	426	0.5+ 0.0	1998 05 23	699	0.1− 0.5+	
1992 11 28	675	0.1+ 0.8+	1998 05 01	704	0.4+ 0.3−	1998 05 24	704	0.5+ 0.1−	
1992 11 28	675	0.1− 0.7+	1998 05 01	704	0.4+ 0.2+	1998 05 24	704	0.0	0.3−
1995 08 03	691	0.3− 0.3+	1998 05 01	704	0.1− 0.7+	1998 05 24	704	0.2+ 0.7−	
1995 08 03	691	0.3− 0.7+	1998 05 01	704	(0.4− 3.5+)	1998 05 24	704	0.7− 0.4+	
1995 08 03	691	0.0	1998 05 05	699	0.3+ 0.5+	1998 05 24	704	0.4− 0.6+	
1997 01 10	566	0.2+ 0.1−	1998 05 05	699	0.2− 0.2−	1998 05 24	699	0.8+ 0.7−	
1997 01 10	566	0.4− 0.1−	1998 05 05	699	0.1+ 0.4−	1998 05 24	699	0.0	0.2−
1997 01 10	566	0.6− 0.3−	1998 05 05	426	0.2− 0.6−	1998 05 24	699	0.1− 0.2+	
1997 01 12	566	0.0	1998 05 05	426	0.0	0.7−			
1997 01 12	566	0.2+ 0.5−	1998 05 05	426	0.3− 0.2−				

(8786)* 1978 RA₈ = 1990 WL₇ = 1995 OG₄

Discovered 1978 Sept. 2 by C.-I. Lagerkvist at the European Southern Observatory.

Id. T. Kobayashi (*MPC* 25728)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	126.00082	ω	255.93600	+0.72729838	−0.68616629		
<i>a</i>	3.1777088	Ω	147.38762	+0.63967240	+0.67000706		
<i>e</i>	0.1411967	<i>i</i>	1.55132	+0.24870924	+0.28331320		
<i>P</i>	5.66	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 09 02	809	0.7+ 1.7−	1995 07 22	691	0.6− 0.4+	1998 03 04	704	(2.5− 1.4−)
1978 09 02	809	0.0 0.6−	1995 07 27	691	0.5+ 0.7+	1998 03 20	704	(2.0+ 0.0)
1978 09 02	809	0.4− 0.9−	1995 07 27	691	0.3+ 0.6+	1998 03 20	704	1.2+ 1.7−
1978 09 02	809	0.3− 1.9−	1995 07 27	691	0.8− 0.0	1998 03 20	704	0.4− 0.2−
1978 09 06	809	0.3+ 0.9−	1998 03 03	704	(1.3− 2.7+)	1998 03 20	704	1.4+ 0.5+
1978 09 10	809	0.1− 1.7+	1998 03 03	704	(3.1+ 1.3+)	1998 03 20	704	0.9+ 1.6−
1978 09 10	809	0.1+ 0.7−	1998 03 03	704	0.4+ 0.1+	1998 03 22	704	0.4− 0.9−
1978 09 10	809	0.9+ 1.4+	1998 03 03	704	(0.6+ 2.2+)	1998 03 22	704	1.4+ 1.0+
1978 09 10	809	0.1+ 0.3+	1998 03 03	704	(4.8− 0.9+)	1998 03 22	704	(3.6+ 1.3+)
1990 11 22	071	0.4− 1.6+	1998 03 04	704	1.5− 0.8−	1998 03 22	704	(3.5+ 1.8−)
1990 11 22	071	0.2+ 1.0−	1998 03 04	704	1.2− 0.1−	1998 03 26	704	1.4− 1.1+
1995 07 22	691	0.4− 0.4+	1998 03 04	704	1.6− 0.6−	1998 03 26	704	0.0 1.3+
1995 07 22	691	0.1− 0.7+	1998 03 04	704	(2.1− 0.9−)	1998 03 26	704	1.1+ 1.5+

(8787)* 1978 TL₄ = 1978 TD₅ = 1978 VL₁₂ = 1995 UT₁

Discovered 1978 Oct. 4 by T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. T. Furuta (d, *JAM* 2030), G. V. Williams (*MPC* 26165)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	164.52042	ω	0.47508	+0.66209702	−0.73686754		
<i>a</i>	3.1556890	Ω	48.07294	+0.68697081	+0.52392877		
<i>e</i>	0.1581059	<i>i</i>	10.57804	+0.29949732	+0.42722929		
<i>P</i>	5.61	<i>H</i>	12.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 10 04	095	0.3+ 0.2−	1995 10 27	046	0.1+ 0.2+	1998 04 22	910	1.6+ 0.1−
1978 10 07	095	0.9− 0.7−	1995 11 12	046	0.1+ 0.0	1998 04 22	910	1.6+ 0.2−
1978 11 02	095	0.4+ 1.2+	1995 11 12	046	0.4− 0.7−	1998 04 22	704	0.6+ 0.1+
1994 07 13	675	0.8− 0.3−	1995 11 12	046	0.4− 0.4−	1998 04 22	704	0.2+ 0.0
1994 07 13	675	0.5+ 0.9+	1995 11 21	046	0.2− 0.2−	1998 04 22	704	0.1+ 0.4+
1995 10 23	046	(6.9+ 0.3+)	1995 11 21	046	0.2− 0.1+	1998 04 22	704	0.7− 0.1−
1995 10 23	046	0.6− 0.2+	1995 11 21	046	0.4− 0.1−	1998 04 22	704	0.5− 0.1+
1995 10 24	046	0.2+ 0.6+	1998 03 29	704	1.7− 0.6+	1998 05 16	704	0.8− 0.4−
1995 10 24	046	0.4+ 0.5+	1998 03 29	704	0.2− 0.6+	1998 05 16	704	0.0 1.4+
1995 10 24	046	0.4+ 0.6+	1998 03 29	704	0.8− 1.4+	1998 05 16	704	1.8− 0.7+
1995 10 24	046	0.1+ 0.5+	1998 03 29	704	0.8− 1.3+	1998 05 16	704	1.4+ 0.5+
1995 10 24	046	0.2+ 0.5+	1998 04 21	704	1.0+ 0.5+	1998 05 16	704	(2.4− 0.1+)
1995 10 24	046	0.2− 0.4+	1998 04 21	704	0.4+ 1.2−	1998 05 28	699	0.3− 0.5−
1995 10 24	046	0.2− 0.3+	1998 04 21	704	0.8+ 0.7−	1998 05 28	699	0.1+ 0.4+
1995 10 24	046	0.4− 0.2+	1998 04 21	704	0.3− 0.3−	1998 05 28	699	0.3− 0.0
1995 10 27	046	0.0 0.1+	1998 04 21	704	0.9+ 0.4−			
1995 10 27	046	0.0 0.1+	1998 04 21	910	1.6+ 0.2−			

(8788)* 1978 VP₂ = 1992 TW₁ = 1994 EO

Discovered 1978 Nov. 1 by K. Tomita at Caussols.

Id. G. V. Williams (*MPC* 23235)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	82.16276	ω	219.64574	−0.80379790	−0.59403305		
<i>a</i>	2.3592422	Ω	283.88132	+0.55387318	−0.72754521		
<i>e</i>	0.1827674	<i>i</i>	1.89787	+0.21710238	−0.34322398		
<i>P</i>	3.62	<i>H</i>	14.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 10 30	010	(3.1− 1.8−)	1994 03 13	560	0.2− 0.6+	1998 04 22	704	0.5− 0.2+
1978 11 01	010	0.7− 0.7−	1994 03 13	560	0.3− 0.2+	1998 04 22	704	0.1− 0.7+
1978 11 01	010	1.5+ 0.4−	1994 03 13	560	0.3+ 0.1−	1998 04 30	566	0.2− 0.6−
1978 11 30	675	0.4+ 0.1−	1994 03 16	560	0.9− 0.3−	1998 04 30	566	0.5− 1.1−
1978 12 01	675	0.2− 0.0	1994 03 16	560	1.0− 0.1+	1998 04 30	566	0.9− 1.0−
1992 10 01	691	0.8− 0.0	1994 03 16	560	0.9− 0.6−	1998 05 01	704	0.0 0.6−
1992 10 01	691	0.9− 0.1+	1994 03 18	560	0.2− 0.1+	1998 05 01	704	0.4− 0.2−
1992 10 01	691	0.8− 0.2+	1994 03 18	560	0.7− 0.6−	1998 05 01	704	0.1− 0.0
1994 02 15	675	0.1+ 0.1+	1994 03 18	560	1.4− 0.2−	1998 05 01	704	0.8+ 0.7+
1994 02 15	675	0.2− 0.6+	1994 03 27	560	2.0− 0.1−	1998 05 05	699	0.3− 0.7−
1994 03 07	560	0.5− 0.8−	1994 03 27	560	0.2− 0.0	1998 05 05	699	0.3+ 0.4−
1994 03 07	560	0.8+ 0.0	1994 03 27	560	1.0+ 0.1+	1998 05 05	699	0.7+ 0.4+
1994 03 07	560	0.2+ 0.8+	1994 03 29	560	1.0− 0.1+	1998 05 22	704	0.1+ 0.6+
1994 03 08	560	0.9+ 0.7−	1994 03 29	560	0.2− 1.1+	1998 05 22	704	0.1− 0.6+
1994 03 08	560	0.1+ 0.4−	1994 03 29	560	(3.0+ 2.4+)	1998 05 22	704	0.1+ 0.6+
1994 03 08	560	0.8+ 0.9+	1994 04 02	560	0.8+ 0.5+	1998 05 22	704	0.8− 0.2−
1994 03 09	560	1.4+ 0.5−	1994 04 02	560	0.9+ 0.6+	1998 05 22	704	1.6− 0.9−
1994 03 09	560	1.3+ 0.3−	1994 04 02	560	1.2+ 0.9+	1998 05 22	699	0.7+ 0.3+
1994 03 09	560	0.8− 0.7+	1996 11 03	385	0.7+ 0.4−	1998 05 22	699	0.1− 0.4−
1994 03 11	560	0.0 0.1+	1996 11 03	385	0.3+ 0.3+	1998 05 22	699	0.8+ 0.9+
1994 03 11	560	0.2+ 0.4+	1996 11 03	385	0.4+ 0.0	1998 05 24	704	0.9+ 0.3−
1994 03 11	560	0.1+ 0.6+	1998 04 22	704	0.1+ 0.4−	1998 05 24	704	0.6− 0.2−
1994 03 13	675	0.4+ 1.5−	1998 04 22	704	0.7+ 0.4+	1998 05 24	704	0.5+ 0.5+
1994 03 13	675	0.6− 0.8−	1998 04 22	704	1.3+ 0.7−			

(8789)* 1978 VZ₇ = 1981 EU₃₁

Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.

Id. S. J. Bus (*MPC* 10613)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	293.88718	(2000.0)	P	Q
<i>n</i>	0.18163320	ω	305.19049	+0.85556979
<i>a</i>	3.0879663	Ω	23.63849	+0.78068567
<i>e</i>	0.2096537	<i>i</i>	1.06297	+0.35012124
<i>P</i>	5.43	<i>H</i>	13.8	<i>G</i> 0.15 <i>U</i> 1

Residuals in seconds of arc

1978 11 05	675	0.3−	0.0	1988 09 12	675	0.1+	0.3−	1998 04 22	704	0.0	0.6−
1978 11 06	675	0.4−	0.2−	1988 09 12	675	0.2+	0.3+	1998 05 16	684	1.2−	0.7+
1978 11 07	675	2.3−	0.9+	1994 11 29	691	0.5−	0.2−	1998 05 16	684	1.0−	0.1−
1978 11 08	675	2.4−	0.5−	1994 11 29	691	0.6−	0.1+	1998 05 17	684	(1.8−	2.2−)
1978 11 29	675	0.2+	0.3−	1994 11 29	691	0.1−	0.1+	1998 05 17	684	(2.1−	2.2−)
1978 11 30	675	0.2+	0.2−	1994 12 03	675	1.9+	1.0−	1998 05 22	704	(1.1+	2.0+)
1981 02 13	413	0.6−	0.0	1994 12 03	675	1.2+	1.4−	1998 05 22	704	0.6−	0.4−
1981 03 02	413	(3.2−	0.5−)	1996 01 29	608	0.1−	0.0	1998 05 22	704	(2.1−	0.5−)
1981 03 06	413	1.1+	0.3+	1996 01 29	608	0.2+	0.1−	1998 05 22	704	1.2−	0.2+
1981 03 11	413	1.4+	0.8−	1996 02 15	709	0.9+	0.3−	1998 05 22	704	1.3+	1.0+
1981 03 15	413	1.5+	0.6−	1996 02 15	709	0.7+	0.2−	1998 05 24	704	0.3−	0.5+
1981 03 15	413	0.2−	0.2+	1996 02 15	709	0.7+	0.2−	1998 05 24	704	0.0	0.1+
1981 05 01	413	0.5+	1.0−	1996 02 15	709	0.5+	0.1−	1998 05 24	704	0.7−	1.9−
1988 08 16	675	0.7+	0.1+	1998 04 22	704	0.2−	0.2+	1998 05 24	704	1.3+	1.0−
1988 08 16	675	0.6+	0.1−	1998 04 22	704	1.5−	0.1+	1998 05 24	704	1.1−	0.2−
1988 09 10	675	0.2+	0.2+	1998 04 22	704	(1.4+	2.5−)				

(8790)* 1978 VN₉ = 1995 UO₃₅

Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.

Id. T. Kobayashi (*MPC* 26557)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	255.68930	(2000.0)	P	Q
<i>n</i>	0.22743938	ω	261.25268	+0.99027925
<i>a</i>	2.6580243	Ω	91.60751	+0.91417484
<i>e</i>	0.0867501	<i>i</i>	3.61568	+0.38589019
<i>P</i>	4.33	<i>H</i>	14.2	<i>G</i> 0.15 <i>U</i> 1

Residuals in seconds of arc

1978 11 05	675	0.8+	0.4+	1995 10 26	691	0.1−	0.3+	1998 05 01	704	0.2−	1.9−
1978 11 06	675	0.1+	0.4−	1997 03 04	704	0.4+	0.6+	1998 05 01	704	(0.6+	2.6−)
1978 11 07	675	(3.1+	0.2−)	1997 03 04	704	1.0+	0.6−	1998 05 22	704	1.4+	0.4−
1978 11 08	675	0.4+	0.2+	1997 03 05	704	0.1−	0.3+	1998 05 22	704	0.5−	1.3+
1978 11 29	675	0.7+	0.2−	1997 03 05	704	0.1+	0.8+	1998 05 22	704	0.0	0.7+
1978 11 30	675	1.4−	0.5−	1997 03 06	704	0.1+	1.1+	1998 05 22	704	0.2+	0.6+
1991 12 14	691	0.8−	0.3−	1997 03 06	704	0.0	0.2−	1998 05 22	704	(6.1−	0.3+)
1991 12 14	691	0.3−	0.7−	1998 04 22	704	0.0	0.2+	1998 05 24	704	1.2−	1.5+
1991 12 14	691	0.2−	1.0−	1998 04 22	704	0.1−	0.6+	1998 05 24	704	0.5−	0.7−
1995 10 21	691	0.3+	0.6+	1998 04 22	704	0.0	0.6−	1998 05 24	704	0.5−	1.3+
1995 10 21	691	0.0	0.6+	1998 04 22	704	0.1+	0.6+	1998 05 24	704	1.1+	0.8−
1995 10 21	691	0.1+	0.7+	1998 05 01	704	0.3−	0.9−	1998 05 24	704	(4.7−	1.5+)
1995 10 26	691	0.1−	0.2+	1998 05 01	704	0.1−	0.8−				
1995 10 26	691	0.5−	0.2+	1998 05 01	704	0.4+	0.4−				

(8791)* 1978 VG₁₁ = 1969 TE₁ = 1987 YE₆

Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.

Id. H. Kaneda (*MPC* 16022)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	234.37761	(2000.0)	P	Q
<i>n</i>	0.22891058	ω	311.23987	+0.95863862
<i>a</i>	2.6466233	Ω	64.32030	+0.85116990
<i>e</i>	0.2197667	<i>i</i>	6.75953	+0.02640096
<i>P</i>	4.31	<i>H</i>	14.0	<i>G</i> 0.15 <i>U</i> 2

Residuals in seconds of arc

1969 10 08	095	(9.1+	1.8+)	1995 10 05	608	1.1−	0.3−	1998 04 21	704	0.3−	0.3−
1978 11 05	675	0.1−	0.7+	1995 10 05	608	0.9−	0.9+	1998 04 21	704	(1.7−	2.1+)

1978 11 06	675	1.2−	0.5+	1995 10 23	801	0.4−	1.1−	1998 04 21	704	0.9−	0.3−
1978 11 07	675	0.4−	1.9+	1995 10 23	801	0.3−	1.0−	1998 05 01	704	0.3+	1.4+
1978 11 08	675	0.1−	0.7+	1995 10 23	046	1.6+	0.1+	1998 05 01	704	0.4+	1.4+
1978 11 29	675	0.6+	0.1+	1995 10 23	046	0.6−	1.7+	1998 05 01	704	(1.5+	2.3+)
1978 11 30	675	0.0	0.1−	1995 11 11	608	0.2+	0.5+	1998 05 01	704	0.1+	1.9+
1987 12 24	010	0.8−	1.6−	1995 11 11	608	0.5+	0.6+	1998 05 22	704	0.9+	0.4−
1987 12 24	010	1.0+	0.9−	1995 11 12	608	0.2+	0.3+	1998 05 22	704	1.6+	1.9+
1987 12 24	010	0.1+	1.2+	1995 11 12	608	0.3+	0.1+	1998 05 22	704	0.2−	0.4+
1990 04 29	413	0.5+	0.9−	1995 11 12	608	0.2+	0.1+	1998 05 22	704	1.1+	1.4+
1995 10 04	608	0.5−	0.0	1998 04 21	704	0.2+	0.3−				
1995 10 04	608	0.1−	0.0	1998 04 21	704	0.8−	0.3−				

(8792)* 1978 VH₁₁ = 1995 UM₆

Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.

Id. G. V. Williams (*MPC* 26165)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	222.40545	(2000.0)	P	Q
<i>n</i>	0.22581821	ω	305.55836	+0.95516399
<i>a</i>	2.6707306	Ω	71.18624	+0.29080459
<i>e</i>	0.0924720	<i>i</i>	4.55721	+0.05562766
<i>P</i>	4.36	<i>H</i>	14.1	<i>G</i> 0.15 <i>U</i> 2

Residuals in seconds of arc

1978 11 05	675	0.6+	0.3−	1995 10 31	104	0.1−	0.1+	1998 04 22	704	0.7−	1.6+
1978 11 06	675	0.6+	0.2+	1995 11 18	104	0.2+	0.9+	1998 04 22	704	0.6+	1.0−
1978 11 07	675	0.9−	0.9+	1995 11 18	104	0.5+	0.5+	1998 04 22	704	0.4+	0.4−
1978 11 08	675	1.8−	0.9+	1995 11 20	104	1.4+	1.5+	1998 04 22	704	(4.9−	0.7+)
1978 11 29	675	0.8+	1.4+	1995 11 20	104	(1.8+	2.6+)	1998 05 01	704	0.0	0.2−
1978 11 30	675	0.1+	0.2−	1995 11 29	104	0.1−	0.9+	1998 05 01	704	0.7+	0.2−
1995 10 16	104	0.2+	0.4+	1995 11 29	104	0.4−	0.7+	1998 05 01	704	0.1+	1.0+
1995 10 16	104	0.0	0.2−	1995 11 29	104	0.7−	0.3+	1998 05 01	704	0.1+	1.1+
1995 10 16	104	0.1+	0.0	1995 11 29	104	1.1−	0.5−	1998 05 01	704	0.2−	0.4+
1995 10 17	104	1.3+	0.4−	1995 12 09	104	0.7+	0.1+	1998 05 22	704	1.7−	0.9−
1995 10 17	104	0.7+	0.3−	1995 12 09	104	0.7+	0.3+	1998 05 22	704	0.5+	1.7+
1995 10 17	104	0.1+	0.1+	1995 12 09	104	0.6+	0.6+	1998 05 22	704	(2.1−	0.1−)
1995 10 18	104	0.1−	0.2−	1997 01 10	691	0.0	0.0	1998 05 22	704	0.8+	1.6+
1995 10 18	104	0.8−	0.1+	1997 01 10	691	0.2−	0.0	1998 05 22	704	0.3−	0.4+
1995 10 18	104	0.2+	0.4+	1997 01 10	691	0.1+	0.0	1998 05 24	704	0.9+	0.1−
1995 10 22	104	1.0−	0.5−	1998 04 21	704	0.4−	0.0	1998 05 24	704	0.6+	1.6+
1995 10 22	104	0.9−	0.3−	1998 04 21	704	0.2+	0.3+	1998 05 24	704	0.4−	0.1+
1995 10 22	104	1.3−	0.4−	1998 04 21	704	0.8+	0.8−	1998 05 24	704	(2.3−	1.1−)
1995 10 31	104	1.1−	0.4+	1998 04 21	704	0.7+	0.0				
1995 10 31	104	0.7−	0.4+	1998 04 22	704	0.2+	0.8+				

(8793)* 1979 QX = 1989 AC₁ = 1991 PS₄ = 1991 PT₃₁ = 1996 XC₆

Discovered 1979 Aug. 22 by C.-I. Lagerkvist at the European Southern

Observatory.

Id. S. Nakano (*MPC* 28838)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	154.41536	(2000.0)	P	Q
<i>n</i>	0.24437388	ω	143.70769	+0.29677091
<i>a</i>	2.5337642	Ω	288.99992	+0.86614163
<i>e</i>	0.1433656	<i>i</i>	2.36598	+0.40215134
<i>P</i>	4.03	<i>H</i>	13.7	<i>G</i> 0.15 <i>U</i> 2

Residuals in seconds of arc

1979 08 22	809	0.7+	0.8+	1991 08 05	809	0.4+	0.8+	1998 04 21	704	0.7−	0.8+
1979 08 22	809	0.3−	0.6+	1995 10 22	691	(2.7−	0.2−)	1998 04 21	704	0.8−	0.4+
1979 08 22	809	1.6+	0.6+	1995 10 22	691	(2.6−	0.2−)	1998 04 21	704	(0.2+	2.5+)
1979 08 23	809	0.4+	0.2+	1995 10 22	691	(2.4−	0.2−)	1998 04 29	566	0.3−	0.2−
1979 08 23	809	(3.4+	0.7−)	1996 12 07	411	0.4−	0.4+	1998 04 29	566	0.2+	0.4−
1979 08 26	809	(6.6+	2.6−)	1996 12 07	411	0.0	0.3+	1998 04 29	566	0.1−	0.5+
1979 08 26	809	0.3+	0.2−	1996 12 08	411	0.3+	0.2+	1998 05 22	704	0.4−	0.0
1979 08 26	809	0.2−	0.2−	1996 12 08	411	0.3+	0.4+	1998 05 22	704	0.2−	0.4−
1979 08 30	809	1.2−	0.0	1996 12 12	411	0.3−	0.2+	1998 05 22	704	0.8+	1.0−

1979 08 30	809	1.7–	0.6–	1996 12 12	411	0.3+	0.5+	1998 05 22	704	0.7+	0.7+
1989 01 04	400	(3.9–	8.1+)	1996 12 14	411	0.2+	0.4+	1998 05 22	704	0.7+	1.6+
1989 01 04	400	(0.2+	5.7+)	1996 12 14	411	0.4+	0.5+	1998 05 24	704	0.6–	0.8+
1991 08 03	809	1.2–	1.1–	1996 12 19	411	0.3+	0.8+	1998 05 24	704	1.4+	0.7–
1991 08 03	809	0.9–	0.2+	1996 12 19	411	0.1–	0.5+	1998 05 24	704	0.2+	1.3+
1991 08 03	809	1.1–	0.3+	1996 12 28	411	0.1–	0.3+	1998 05 24	704	0.7+	0.5–
1991 08 04	809	0.8+	1.1+	1996 12 28	411	0.3–	0.0	1998 05 24	704	0.5–	0.5–
1991 08 05	809	1.0+	0.3+	1998 04 21	704	0.1+	0.9+				
1991 08 05	809	0.2+	1.0+	1998 04 21	704	(2.5+	0.9+)				

(8794)* 1981 EA₇ = 1972 TO₆

Discovered 1981 Mar. 6 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. L. D. Schmadel (*MPC* 10380)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		214.53466		(2000.0)		<i>P</i>	<i>Q</i>
<i>n</i>	0.28993212	ω	89.31238	+0.99452119	–0.03401674		
<i>a</i>	2.2608504	Ω	272.63363	–0.00840840	+0.91647808		
<i>e</i>	0.2166542	<i>i</i>	5.67872	+0.10419648	+0.39863617		
<i>P</i>	3.40	<i>H</i>	14.6	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1972 10 06	095	(8.5+	6.2+)	1981 03 12	413	0.9+	0.1+	1996 11 11	689	0.1–	0.8+
1979 11 22	675	0.9+	0.1+	1981 04 09	413	1.3–	1.4+	1996 11 12	689	(3.2–	1.2–)
1979 11 24	675	0.8–	0.2–	1981 04 09	413	0.0	1.1+	1998 03 31	704	0.4+	0.4+
1979 11 25	675	0.6+	0.2+	1981 05 01	413	1.6–	1.2–	1998 03 31	704	0.4+	1.3+
1979 11 26	675	0.9–	0.5+	1981 05 03	413	(2.7–	0.6+)	1998 03 31	704	0.0	0.8–
1979 11 27	675	0.4+	0.3+	1989 08 27	688	0.1–	0.6+	1998 03 31	704	0.6–	0.4–
1981 02 09	413	0.9–	0.1+	1989 08 27	688	0.1–	0.4+	1998 04 19	704	0.3+	0.3+
1981 03 06	413	0.9+	1.4–	1989 10 24	095	0.6+	1.9–	1998 04 19	704	(3.4+	2.2–)
1981 03 08	413	0.6–	0.6–	1989 10 24	095	(1.5+	2.8–)	1998 04 19	704	0.8+	0.7+
1981 03 08	413	0.6+	0.1+	1994 01 06	675	0.4–	0.7–	1998 04 19	704	(6.1–	2.5+)
1981 03 12	413	0.5+	1.1–	1994 01 06	675	(2.6–	3.1–)				

(8795)* 1981 EO₉ = 1989 SR₁₂

Discovered 1981 Mar. 1 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. H. Kaneda (*MPC* 18107), H. Oishi (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Asher			
<i>M</i>		208.32994		(2000.0)		<i>P</i>	<i>Q</i>
<i>n</i>	0.17161681	ω	18.66279	+0.95309318	+0.28295314		
<i>a</i>	3.2069794	Ω	324.33438	–0.29583959	+0.79581047		
<i>e</i>	0.1562310	<i>i</i>	10.62216	–0.06397133	+0.53537204		
<i>P</i>	5.74	<i>H</i>	12.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1949 11 19	675	1.1+	0.6–	1989 10 03	493	(1.0+	2.2–)	1998 03 03	704	0.4+	0.8–
1949 11 19	675	0.4–	0.2–	1989 10 03	493	0.5+	1.0–	1998 03 03	704	0.5–	1.2+
1981 02 02	413	0.2–	0.2+	1992 02 26	675	0.4–	1.4–	1998 03 03	704	1.1–	0.2–
1981 02 14	413	1.0+	0.4–	1992 02 26	675	0.5–	1.4+	1998 03 03	704	(4.7–	1.0–)
1981 03 01	413	0.6–	1.2+	1992 02 28	675	0.6+	1.8+	1998 03 04	704	(2.2–	0.3–)
1981 03 01	413	0.9+	0.2–	1992 02 28	675	0.2–	0.9+	1998 03 04	704	1.5–	1.8–
1981 03 07	413	0.7–	0.1+	1992 03 04	809	0.7+	1.1+	1998 03 04	704	(2.6–	1.7–)
1981 03 07	413	0.3+	0.6+	1992 03 07	809	(5.3–	15.1–)	1998 03 04	704	(2.9–	1.0–)
1981 03 11	413	1.8+	0.9–	1994 09 08	689	0.3+	0.8+	1998 03 04	704	0.5–	0.3+
1981 03 15	413	0.8–	0.2–	1995 11 11	689	0.4+	0.1–	1998 03 29	704	0.4+	0.4–
1981 04 07	413	0.4+	0.9–	1995 11 12	689	0.0	0.1–	1998 03 29	704	0.3–	1.3–
1981 04 07	413	0.7+	1.0–	1995 11 23	801	0.2–	0.2+	1998 03 29	704	0.7–	0.7–
1981 04 08	413	1.7–	0.7+	1995 11 23	801	0.3–	0.1+	1998 03 29	704	0.7+	0.2+
1981 04 08	413	1.0+	0.2–	1995 11 25	801	0.1–	0.1–	1998 03 29	704	1.0–	0.7–
1981 04 09	413	1.2–	0.0	1995 11 25	801	0.1+	0.1+	1998 04 18	704	0.4+	0.5–
1981 04 09	413	0.1–	0.1+	1997 01 09	689	0.8–	1.0+	1998 04 18	704	1.5–	0.6–
1981 04 29	413	0.6–	0.5+	1997 01 10	689	1.6+	0.2–	1998 04 18	704	1.7+	0.2–
1989 09 28	493	(0.4–	2.8–)	1997 01 28	689	1.3+	0.4–	1998 04 18	704	(2.4–	1.1+)
1989 09 28	493	0.1+	1.5–	1998 03 03	704	(0.9+	2.1–)				

(8796)* 1981 EA₁₂

Discovered 1981 Mar. 7 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		126.97107		(2000.0)		<i>P</i>	<i>Q</i>
<i>n</i>	0.29497977	ω	244.17886	–0.28304565	–0.95876895		
<i>a</i>	2.2349847	Ω	222.28908	+0.89294713	–0.25374717		
<i>e</i>	0.0812860	<i>i</i>	2.16688	+0.35004370	–0.12796279		
<i>P</i>	3.34	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1971 03 24	675	0.7–	0.1–	1981 03 11	413	(2.6–	2.0+)	1996 11 05	691	0.1+	0.1–
1971 03 25	675	1.9–	1.0+	1981 03 11	413	1.6+	1.2+	1996 11 05	691	0.1+	0.4–
1971 03 25	675	1.8–	0.1–	1981 03 11	413	1.3–	0.5+	1996 11 05	691	0.0	0.1–
1971 03 26	675	1.1+	1.4–	1981 03 11	413	0.2+	0.0	1996 11 10	691	0.2+	0.1–
1971 03 27	675	0.2–	0.8–	1981 03 15	413	1.6–	0.4+	1996 11 10	691	0.2+	0.2–
1971 04 02	675	0.9+	1.5–	1981 03 15	413	0.3–	1.8+	1996 11 10	691	0.4+	0.2+
1971 04 16	675	0.9+	0.5–	1981 03 15	413	0.6+	0.2+	1998 04 21	704	1.4+	0.8–
1971 04 16	675	0.7+	1.9–	1981 04 05	413	(2.8–	0.1+)	1998 04 21	704	0.8+	1.6–
1971 05 13	675	1.4+	1.4+	1981 04 05	413	1.0+	1.4–	1998 04 21	704	0.2–	1.1–
1971 05 14	675	0.0	1.6+	1981 05 02	413	1.5–	0.3–	1998 04 21	704	0.2+	1.4–
1979 09 18	675	0.4–	1.0–	1981 05 03	413	0.6+	1.6+	1998 04 21	704	(5.1–	0.0)
1979 09 19	675	0.2+	0.1–	1991 02 11	675	0.6–	1.6–	1998 05 01	704	0.1+	1.1+
1981 02 12	413	0.4+	0.1+	1991 02 11	675	0.2–	1.2+	1998 05 01	704	1.3–	1.2–
1981 02 13	413	0.1–	0.1–	1991 03 12	809	0.3+	0.8+	1998 05 01	704	0.6–	1.4+
1981 03 02	413	1.0–	0.5+	1991 03 12	809	0.8+	0.2+	1998 05 01	704	0.2–	0.2–
1981 03 06	413	0.3–	0.5–	1994 01 13	691	0.1–	0.5–	1998 05 23	704	0.2–	0.6+
1981 03 06	413	2.4+	0.8–	1994 01 13	691	0.0	0.8–	1998 05 23	704	1.6–	0.3–
1981 03 07	413	0.2+	1.1+	1994 01 13	691	0.8–	0.7–	1998 05 23	704	0.6+	1.3–

(8797)* 1981 EU₁₈

Discovered 1981 Mar. 2 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		335.50717		(2000.0)		<i>P</i>	<i>Q</i>
<i>n</i>	0.18211971	ω	199.73102	+0.32010750	+0.94737383		
<i>a</i>	3.0824645	Ω	88.93855	–0.86870157	+0.29509744		
<i>e</i>	0.1585133	<i>i</i>	0.21458	–0.37800632	+0.12409808		
<i>P</i>	5.41	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1951 11 28	675	0.2–	0.9–	1981 04 11	413	1.7+	0.7–	1993 07 20	809	(3.6–	0.4–)
1981 02 02	413	0.6+	1.3–	1981 05 02	413	1.2+	1.5–	1993 07 24	809	(2.5+ 0.8–)	
1981 02 13	413	0.1+	0.1–	1981 05 03	413	0.3+	0.9–	1993 07 24	809	1.2–	1.0–
1981 03 02	413	0.7–	0.6+	1988 10 07	675	0.9–	1.7–	1995 12 21	566	0.2+ 0.3–	
1981 03 03	413	0.6–	1.0–	1988 10 07	675	0.0	1.9–	1995 12 21	566	0.5+ 0.4–	
1981 03 07	413	1.7–	0.2+	1988 10 09	675	0.1+	0.7+	1995 12 21	566	0.1– 0.2–	
1981 03 07	413	0.7–	0.6–	1988 10 09	675	0.9+	1.4–	1998 03 22	691	1.1– 1.3+	
1981 03 11	413	0.7–	0.1–	1993 07 13	809	(2.3+ 0.8–)		1998 03 22	691	0.8– 1.4+	
1981 03 11	413	0.2–	0.1–	1993 07 13	809	0.7+	1.3–	1998 03 22	691	0.2– 1.4+	
1981 03 16	413	0.8–	0.7–	1993 07 13	809	1.0+	1.7–	1998 05 22	704	1.2– 0.1–	
1981 03 16	413	(2.7+ 1.6–)		1993 07 13	809	0.3+	0.9+	1998 05 22	704	0.3– 2.3+	
1981 03 29	413	0.8–	0.4–	1993 07 13	809	0.1–	0.7+	1998 05 22	704	0.5+ 0.9+	
1981 03 29	413	0.7+	0.8–	1993 07 13	809	1.1–	1.1+	1998 05 22	704	1.0+ 1.8–	
1981 04 07	413	0.2+	0.6–	1993 07 20	809	(3.0+ 1.1–)		1998 05 24	704	0.4+ 0.5+	
1981 04 07	413	0.6+	0.7–	1993 07 20	809	1.8+	1.3–	1998 05 24	704	0.7– 0.3+	
1981 04 08	413	1.1+	0.6–	1993 07 20	809	2.0+	0.8–	1998 05 24	704	0.0	1.0–
1981 04 08	413	0.7–	0.7–	1993 07 20	809	(2.5– 1.1+)		1998 05 24	704	1.0+ 0.1–	
1981 04 11	413	1.9–	1.1+	1993 07 20	809	(2.9– 0.7+)		1998 05 24	704	0.7– 1.1–	

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Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	278.15304	(2000.0)	P		Q
<i>n</i>	0.17494446	ω	280.86053	+0.54177056	+0.83981601
<i>a</i>	3.1661823	Ω	22.05044	-0.73074453	+0.49092280
<i>e</i>	0.1665490	<i>i</i>	5.28044	-0.41532768	+0.23174097
<i>P</i>	5.63	<i>H</i>	13.8	<i>G</i>	0.15

Residuals in seconds of arc

1976 05 02	809	0.1-	0.6+	1981 04 11	413	(3.2-	0.5+)	1998 03 28	704	0.1+	0.1+
1981 02 13	413	1.5-	0.9+	1981 04 26	413	1.1+	0.5-	1998 03 29	704	1.3-	0.1+
1981 03 07	413	0.9+	1.8-	1981 05 02	413	1.7-	0.0	1998 03 29	704	0.6+	0.2+
1981 03 11	413	0.2+	1.3-	1992 04 06	809	0.8-	1.3+	1998 03 29	704	0.1-	0.3+
1981 03 11	413	1.0+	1.6-	1994 09 12	675	1.3+	0.8-	1998 03 29	704	0.6+	0.2-
1981 03 16	413	1.2-	1.1-	1994 09 12	675	0.0	1.5-	1998 03 29	704	(4.5-	3.9-)
1981 03 16	413	0.4+	0.3-	1998 03 28	704	1.1+	0.3+	1998 04 19	704	0.1-	0.9-
1981 03 29	413	0.8+	0.3-	1998 03 28	704	0.6+	0.2+	1998 04 19	704	0.9-	1.0-
1981 04 08	413	1.5-	0.9+	1998 03 28	704	1.5-	0.2+	1998 04 19	704	1.4+	0.6+
1981 04 08	413	0.3+	0.9+	1998 03 28	704	0.0	0.2+	1998 04 19	704	(1.1-	2.2-)

(8799)* 1981 ER₂₅ = 1991 RK₄₁ = 1993 BZ₁₄

Discovered 1981 Mar. 2 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. G. V. Williams (*MPC* 21932)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	182.09752	(2000.0)	P		Q
<i>n</i>	0.23844822	ω	235.46234	+0.62522356	-0.78042605
<i>a</i>	2.5755698	Ω	175.82630	+0.73866591	+0.58944772
<i>e</i>	0.1301235	<i>i</i>	4.36419	+0.25192889	+0.20853431
<i>P</i>	4.13	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

1981 02 09	413	0.8+	0.6+	1991 08 08	675	0.2+	0.6-	1998 04 21	704	(1.1+	2.1+)
1981 02 12	413	0.3-	0.6-	1991 09 09	691	0.3-	0.2-	1998 04 22	704	0.8+	0.0
1981 02 13	413	0.3+	0.3-	1991 09 09	691	0.0	0.1+	1998 04 22	704	0.7+	1.8+
1981 03 02	413	1.4-	0.0	1991 09 09	691	0.1-	0.1+	1998 04 22	704	1.7+	0.2+
1981 03 02	413	(0.1-	2.5-)	1993 01 23	809	(0.6-	2.2+)	1998 04 22	704	1.4-	1.7+
1981 03 06	413	0.1+	1.0+	1993 01 23	809	0.0	0.6+	1998 05 01	704	0.5-	1.8-
1981 03 11	413	2.0-	0.5-	1993 01 23	809	1.0+	0.7-	1998 05 01	704	1.7-	1.8-
1981 03 15	413	0.9+	1.1-	1993 01 28	809	0.0	1.1-	1998 05 01	704	0.0	0.4-
1981 04 05	413	0.1-	0.5+	1993 01 28	809	0.6-	0.3+	1998 05 01	704	1.4+	0.3+
1981 04 06	413	(3.9-	2.2+)	1993 01 28	809	0.8-	0.8-	1998 05 22	704	1.3+	0.7+
1981 04 06	413	0.2+	0.4-	1998 04 21	704	0.1-	0.3-	1998 05 22	704	(0.3+	2.0-)
1981 04 26	413	2.1+	0.6-	1998 04 21	704	0.6-	1.6+	1998 05 22	704	0.6-	1.4-
1981 05 01	413	0.8-	0.5+	1998 04 21	704	(1.9+	3.6-)	1998 05 22	704	0.6-	0.3-
1991 08 08	675	1.1+	1.7-	1998 04 21	704	0.4-	0.6-				

(8800)* 1981 EB₂₆ = 1995 QL₁₀

Discovered 1981 Mar. 2 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. G. V. Williams (*MPC* 31376)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	93.59295	(2000.0)	P		Q
<i>n</i>	0.17469396	ω	103.49779	-0.05013812	-0.99865099
<i>a</i>	3.1692083	Ω	349.34856	+0.88574621	-0.03821398
<i>e</i>	0.1575876	<i>i</i>	4.19001	+0.46145403	-0.03515538
<i>P</i>	5.64	<i>H</i>	14.3	<i>G</i>	0.15

Residuals in seconds of arc

1981 02 09	413	0.1-	0.4+	1995 09 17	809	0.1-	0.0	1998 03 29	704	0.6-	0.8+
1981 02 12	413	(1.5-	2.9-)	1995 09 18	809	0.1+	0.5-	1998 04 01	704	0.5-	0.8-
1981 02 13	413	0.2-	0.2+	1995 09 20	809	0.4-	0.5+	1998 04 01	704	0.2+	0.7-
1981 03 02	413	1.2-	0.3-	1995 09 22	809	0.4-	0.2-	1998 04 01	704	0.9+	0.7-
1981 03 02	413	1.4+	1.6-	1998 03 22	704	0.4+	0.4+	1998 04 01	704	1.2+	0.6-
1981 03 06	413	0.7-	1.0-	1998 03 22	704	1.4+	0.6-	1998 04 01	704	0.3-	0.6-

1981 03 06	413	2.2+	0.1-	1998 03 22	704	0.6+	0.4-	1998 04 19	704	0.4+	0.3+
1981 03 11	413	2.3-	0.5+	1998 03 22	704	0.2-	0.9+	1998 04 19	704	1.1-	1.1+
1981 03 11	413	1.8-	0.9+	1998 03 28	704	(2.2+	1.0+)	1998 04 19	704	1.2+	1.7+
1981 03 15	413	0.7+	1.2-	1998 03 28	704	0.4-	1.0+	1998 04 19	704	0.6-	1.4+
1981 03 15	413	1.1+	0.9-	1998 03 28	704	1.4+	0.4+	1998 04 19	704	(3.1-	1.1-)
1981 04 05	413	1.4-	1.1+	1998 03 28	704	(2.2+	3.2-)	1998 04 20	704	0.4+	0.3-
1981 05 01	413	1.4+	0.8-	1998 03 28	704	(4.4-	0.6+)	1998 04 20	704	1.8-	1.8-
1981 05 03	413	0.7-	0.6-	1998 03 29	704	0.6+	0.3-	1998 04 20	704	1.1-	1.9+
1992 03 02	809	0.2+	0.5+	1998 03 29	704	0.2-	0.5+	1998 04 20	704	0.8+	1.3-
1995 08 19	809	1.1+	0.1-	1998 03 29	704	1.4-	0.6+				

(8801)* 1981 EQ₂₉ = 1976 JD₈ = 1995 WV₄

Discovered 1981 Mar. 1 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. K. Kinoshita (*MPC* 26395)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	221.08301	(2000.0)	P		Q
<i>n</i>	0.17837464	ω	123.42108	+0.98483189	-0.16087637
<i>a</i>	3.1254603	Ω	245.91078	+0.12592656	+0.92041571
<i>e</i>	0.0580881	<i>i</i>	4.08293	+0.11936773	+0.35630566
<i>P</i>	5.53	<i>H</i>	13.1	<i>G</i>	0.15

Residuals in seconds of arc

1976 05 02	809	0.1+	0.3+	1995 11 18	365	0.6-	0.4+	1998 04 22	704	(2.3+	1.9-)
1981 02 12	413	0.6-	0.4+	1995 11 25	365	1.0+	0.4+	1998 05 01	704	0.0	1.1+
1981 03 01	413	0.4+	2.1-	1995 11 25	365	0.1-	0.9+	1998 05 01	704	0.4+	1.3+
1981 03 01	413	0.3-	0.5+	1998 04 21	704	(3.5+	0.1+)	1998 05 01	704	0.4-	0.4+
1981 03 06	413	1.8-	0.6+	1998 04 21	704	0.5-	0.6+	1998 05 01	704	0.1+	1.0+
1981 03 08	413	0.2-	0.6-	1998 04 21	704	0.9+	0.4-	1998 05 01	704	0.5+	1.2+
1981 03 08	413	0.6+	0.3+	1998 04 21	704	0.3-	1.3-	1998 05 27	691	2.0-	0.6+
1981 03 12	413	0.5-	1.2+	1998 04 21	704	0.0	0.1-	1998 05 27	691	1.0-	0.0
1981 03 12	413	0.4+	0.7+	1998 04 22	704	1.1+	0.1+	1998 05 27	691	1.0-	0.1-
1981 05 01	413	0.0	1.3-	1998 04 22	704	1.5+	0.1+	1998 06 01	691	0.2-	0.1+
1981 05 01	413	1.3+	1.9-	1998 04 22	704	0.8+	0.5-	1998 06 01	691	0.3-	0.0
1995 11 18	365	0.4-	0.0	1998 04 22	704	1.5+	1.1-	1998 06 01	691	0.4-	0.1-

(8802)* 1981 EW₃₁ = 1989 SW₁

Discovered 1981 Mar. 2 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. S. Nakano (*MPC* 15704), H. Kaneda (unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	208.69861	(2000.0)	P		Q
<i>n</i>	0.17952296	ω	212.60184	+0.92478283	-0.37920566
<i>a</i>	3.1121179	Ω	169.54088	+0.37548679	+0.89621237
<i>e</i>	0.1138866	<i>i</i>	9.92904	+0.06153367	+0.23023132
<i>P</i>	5.49	<i>H</i>	13.5	<i>G</i>	0.15

Residuals in seconds of arc

1981 02 12	413	0.1-	0.5-	1989 10 03	809	1.7-	1.7-	1997 03 11	704	0.0	0.1+
1981 02 13	413	1.1-	0.4+	1989 10 07	809	0.8+	0.1+	1997 03 12	704	0.7-	0.2+
1981 03 02	413	(2.6-	0.9-)	1989 10 07	809	1.5+	0.9-	1997 03 12	704	0.3-	0.6-
1981 03 06	413	(0.8-	3.5-)	1989 10 07	809	0.8+	0.8-	1998 04 21	704	1.0-	1.0-
1981 03 06	413	0.4+	0.9-	1989 10 08	809	0.6+	1.0+	1998 04 21	704	(1.7+	2.5-)
1981 03 11	413	1.1-	1.1-	1989 10 08	809	1.0-	0.9+	1998 04 21	704	1.4+	0.7-
1981 03 15	413	0.4+	1.2-	1989 10 08	809	0.4+	0.9+	1998 04 21	704	0.6+	1.1+
1981 05 01	413	0.5+	0.7-	1989 11 02	675	1.8+	0.1-	1998 04 23	704	1.1+	1.0-
1989 09 26	809	0.8-	1.2-	1989 11 02	675	1.7+	0.8-	1998 04 23	704	(2.7+	3.1-)
1989 09 26	809	1.1-	0.9-	1989 11 05	675	1.7+	0.2+	1998 04 23	704	1.7-	0.7+
1989 09 26	809	0.7-	1.0-	1989 11 05	675	0.5-	0.7+	1998 04 23	704	0.7+	1.6-
1989 09 28	809	1.5-	0.3-	1989 11 06	675	2.1+	0.4+	1998 05 23	704	1.0-	0.6-
1989 09 28	809	1.9-	0.4-	1989 11 06	675	0.2+	1.5-	1998 05 23	704	0.7-	1.3+
1989 09 28	809	(3.1-	0.5-)	1997 03 10	704	0.1-	0.0	1998 05 23	704	0.3-	1.4-
1989 10 03	809	0.3+	0.7-	1997 03 10	704	0.1+	0.0	1998 05 23	704	0.1+	1.2-
1989 10 03	809	0.8-	1.4-	1997 03 11	704	0.6+	0.0				

(8803)* 1981 EL₃₄ = 1972 TM₃

Discovered 1981 Mar. 2 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Id. S. Nakano (*MPC* 15704)

Epoch 1998 July 6.0 TT = JDT 2451000.5

								Nakano	
<i>M</i>	223.48227	(2000.0)		P		Q			
<i>n</i>	0.17438063	ω	102.27119	+0.93803549		+0.34612697			
<i>a</i>	3.1730035	Ω	237.48040	−0.32522467		+0.86245571			
<i>e</i>	0.1618572	<i>i</i>	1.14826	−0.11965919		+0.36927803			
<i>P</i>	5.65	<i>H</i>	13.3	<i>G</i>	0.15	<i>U</i>	2		

Residuals in seconds of arc

1972 10 05	095	0.9+	0.8−	1981 04 11	413	0.3−	0.0	1998 03 29	704	0.0	0.3+
1981 02 09	413	(3.5−	0.9+)	1981 04 30	413	0.2−	0.2+	1998 03 29	704	1.7−	2.0−
1981 03 02	413	0.0	1.7−	1981 05 02	413	0.1−	0.5+	1998 03 29	704	0.6+	0.7+
1981 03 02	413	1.8+	1.5−	1989 10 04	807	0.8−	0.8−	1998 03 29	704	0.0	0.5+
1981 03 03	413	(2.9−	0.2+)	1989 10 05	807	0.3+	0.3+	1998 04 19	704	1.1−	0.5−
1981 03 03	413	(2.8−	0.4−)	1993 04 26	691	0.4−	0.1+	1998 04 19	704	2.1+	0.1+
1981 03 11	413	0.2−	0.3−	1993 04 26	691	0.4−	0.2−	1998 04 19	704	1.6+	0.9+
1981 03 11	413	0.9−	0.8−	1993 04 26	691	0.5+	0.2−	1998 04 19	704	0.8+	1.8+
1981 03 29	413	1.6−	0.3+	1994 07 14	689	0.3+	0.2−	1998 04 19	704	(3.0−	0.4−)
1981 03 29	413	1.2−	0.1−	1994 08 02	689	0.0	0.6−				
1981 04 11	413	(3.3−	2.1+)	1998 03 29	704	(2.7+	1.1+)				

(8804)* 1981 JB₂ = 1992 FF₂

Discovered 1981 May 5 by C. S. Shoemaker at Palomar.

Id. H. Kaneda (*MPC* 20142)

Epoch 1998 July 6.0 TT = JDT 2451000.5

								Asher	
<i>M</i>	357.56912	(2000.0)		P		Q			
<i>n</i>	0.17584006	ω	203.55406	−0.38309810		+0.91020138			
<i>a</i>	3.1554224	Ω	44.36426	−0.80767894		−0.24740469			
<i>e</i>	0.0368974	<i>i</i>	13.00782	−0.44820819		−0.33215113			
<i>P</i>	5.61	<i>H</i>	12.2	<i>G</i>	0.15	<i>U</i>	1		

Residuals in seconds of arc

1981 04 11	675	1.0−	0.4+	1994 09 30	675	0.3−	0.4+	1998 05 01	704	1.7−	1.8+
1981 04 11	675	0.9+	0.7−	1994 10 03	675	0.1+	0.7−	1998 05 06	566	1.0+	0.1−
1981 05 05	675	0.1−	0.2−	1994 10 03	675	0.1+	0.6−	1998 05 06	566	0.8+	0.1−
1981 05 05	675	0.7−	1.5−	1994 10 07	808	1.8+	0.7+	1998 05 06	566	1.0+	0.1−
1981 05 06	675	0.0	0.2+	1994 10 07	808	1.5−	1.1+	1998 05 22	704	0.9−	0.7+
1981 05 06	675	0.1+	0.3+	1994 11 04	675	0.7+	0.1−	1998 05 22	704	0.1−	0.0
1981 05 10	675	0.7−	0.2−	1994 11 04	675	0.8+	0.1−	1998 05 22	704	1.7−	0.3−
1989 11 05	675	1.1−	0.2+	1995 11 29	411	0.8−	0.4−	1998 05 22	704	0.1−	1.2−
1989 11 05	675	0.1−	0.1+	1995 11 29	411	0.6−	0.9−	1998 05 22	704	0.3−	0.6−
1992 03 31	400	0.8+	0.8−	1997 02 12	689	1.5+	0.6−	1998 05 24	704	0.0	0.3−
1992 03 31	400	1.0−	0.2−	1998 04 25	809	(1.7−	5.0+)	1998 05 24	704	0.5+	0.2+
1992 04 03	400	(1.8−	2.3−)	1998 04 25	809	(2.2−	4.4+)	1998 05 24	704	0.1+	0.4+
1992 04 03	400	0.5−	0.5+	1998 04 25	809	(2.0−	4.7+)	1998 05 24	704	0.8+	0.0
1992 04 25	400	(2.6+	1.1+)	1998 05 01	704	0.3−	0.4+	1998 05 24	704	0.4+	0.1+
1992 04 25	400	1.5+	0.3−	1998 05 01	704	0.0	0.9+				
1994 09 30	675	0.6+	0.6−	1998 05 01	704	0.7−	0.7+				

(8805)* 1981 UM₁₁ = 1981 VT = 1988 TB

Discovered 1981 Oct. 22 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. T. Furuta (d, *JAM* 1953), T. Kobayashi (*MPC* 13855)

Epoch 1998 July 6.0 TT = JDT 2451000.5

								Asher	
<i>M</i>	255.18793	(2000.0)		P		Q			
<i>n</i>	0.27531606	ω	186.23262	+0.98085547		−0.19469173			
<i>a</i>	2.3401751	Ω	184.99999	+0.18068611		+0.91792211			
<i>e</i>	0.1539900	<i>i</i>	2.76459	+0.07262968		+0.34570816			
<i>P</i>	3.58	<i>H</i>	14.4	<i>G</i>	0.15	<i>U</i>	2		

Residuals in seconds of arc

1981 10 22	095	(2.4−	3.2+)	1988 10 07	697	2.1−	1.1+	1998 05 22	704	0.7−	0.5+
1981 10 24	095	0.3+	1.8+	1988 10 08	807	0.0	1.1−	1998 05 22	704	0.9−	0.7+
1981 11 05	688	(2.4−	2.6−)	1988 11 04	807	0.0	0.3+	1998 05 22	704	0.3−	1.2+
1981 11 05	688	0.4+	2.2−	1988 11 05	807	0.5+	0.2−	1998 05 22	704	0.8−	1.2+
1988 09 11	071	0.9−	0.1+	1988 11 06	807	0.3+	0.4+	1998 05 22	699	0.2−	0.2−
1988 09 11	071	0.6−	0.1−	1988 11 07	807	0.5+	0.4−	1998 05 22	699	0.6+	0.5−
1988 09 12	675	(2.5−	4.5−)	1995 08 14	292	(3.5+	1.3+)	1998 05 22	699	0.2−	0.2−
1988 09 12	071	0.4−	1.0+	1995 08 14	292	1.1+	1.1−	1998 05 23	699	0.4+	0.1+
1988 09 12	071	1.5+	1.3+	1997 02 04	566	0.6−	0.4−	1998 05 23	699	0.6+	0.1+
1988 09 15	675	0.5+	1.0−	1997 02 04	566	1.6−	0.1+	1998 05 23	699	0.5+	0.4−
1988 09 15	675	0.3−	0.4−	1997 02 04	566	0.7−	0.4−	1998 05 24	704	0.2+	0.0
1988 09 16	807	0.9+	0.2+	1997 03 05	704	0.7+	0.4−	1998 05 24	704	0.5−	0.8−
1988 09 18	807	1.1+	0.2+	1997 03 05	704	0.3+	0.2+	1998 05 24	699	0.5+	0.8+
1988 10 03	697	(0.6−	9.2+)	1997 03 06	704	0.3+	0.7−	1998 05 24	704	0.7−	0.1−
1988 10 03	697	(0.5−	9.2+)	1997 03 06	704	1.3+	0.4−	1998 05 24	699	0.1+	0.4+
1988 10 03	697	(0.6−	9.2+)	1998 05 05	699	1.4+	1.4−	1998 05 24	699	0.7−	0.9+
1988 10 03	697	(1.3−	8.4+)	1998 05 05	699	0.6+	0.7−	1998 05 24	704	0.6−	0.8−
1988 10 04	807	0.8−	0.9−	1998 05 05	699	0.6+	1.1−	1998 05 24	704	0.9−	1.0−
1988 10 05	807	0.7−	1.6−	1998 05 22	704	0.6+	0.0				

(8806)* 1981 UU₁₁ = 1981 WF = 1976 SP₈ = 1990 TC₅

Discovered 1981 Oct. 22 by N. S. Chernykh at the Crimean Astrophysical

Observatory.

Id. T. Furuta (d, *JAM* 2060), S. Nakano (*MPC* 17432)

Epoch 1998 July 6.0 TT = JDT 2451000.5

								Nakano	
<i>M</i>	181.72692	(2000.0)		P		Q			
<i>n</i>	0.20964349	ω	216.83799	+0.56022283		−0.82682528			
<i>a</i>	2.8063928	Ω	199.24946	+0.79162127		+0.55221729			
<i>e</i>	0.1329392	<i>i</i>	8.74137	+0.24389782		+0.10684575			
<i>P</i>	4.70	<i>H</i>	13.1	<i>G</i>	0.15	<i>U</i>	1		

Residuals in seconds of arc

1976 09 28	095	(2.5−	5.1+)	1995 10 01	691	0.4−	0.1−	1998 05 22	704	0.6−	0.7−
1981 10 22	095	(1.1+	6.0+)	1997 02 14	732	0.2+	1.0+	1998 05 22	704	0.5−	0.3+
1981 10 24	095	(5.9+	2.3+)	1997 02 14	732	1.0+	0.2+	1998 05 22	704	0.2−	0.5+
1981 10 25	675	0.1+	0.6+	1997 03 01	732	0.3+	0.4+	1998 05 24	704	0.1+	1.1−
1981 10 26	675	0.5+	0.1−	1997 03 01	732	0.4+	0.1−	1998 05 24	704	0.4−	0.1+
1981 10 28	095	(3.7+	1.8+)	1997 03 01	732	0.2+	0.6+	1998 05 24	704	0.2−	0.5+
1981 11 20	688	1.2−	2.1−	1998 04 22	704	0.4+	0.1−	1998 05 24	704	0.3−	0.2+
1981 11 20	688	(0.6+	4.6−)	1998 04 22	704	0.2+	0.8−	1998 05 24	704	0.7−	0.8−
1990 09 18	675	1.0+	0.7+	1998 04 22	704	0.1+	1.0−	1998 05 24	704	0.4−	0.7−
1990 09 18	675	0.1+	1.4+	1998 04 22	704	0.0	1.7−	1998 05 24	704	0.2+	0.7+
1990 10 09	413	1.1+	1.3−	1998 04 22	704	1.2−	1.3−	1998 05 24	704	1.1+	0.7+
1990 10 09	413	0.4+	0.8+	1998 05 01	704	0.2+	0.0	1998 05 24	704	0.7−	0.5+
1990 10 11	413	(2.3+	0.9+)	1998 05 01	704	0.2−	0.3−	1998 05 24	704	0.3+	1.8+
1995 09 26	691	0.1−	0.1−	1998 05 01	704	0.7+	0.9−	1998 05 24	704	0.6−	1.8+
1995 09 26	691	0.1−	0.1−	1998 05 01	704	0.6+	1.1−	1998 05 24	704	0.3−	0.8+
1995 09 26	691	0.1−	0.1−	1998 05 01	704	0.2+	0.7−	1998 05 24	704	1.2−	0.5+
1995 09 29	691	0.5−	0.7+	1998 05 05	699	1.3+	0.8−	1998 05 24	704	0.1−	1.2+
1995 09 29	691	0.5−	0.6+	1998 05 05	699	0.1−	0.1−	1998 05 24	704	0.7+	1.3+
1995 09 29	691	0.6−	0.6+	1998 05 05	699	0.0	0.4+	1998 05 25	699	0.4+	0.2−
1995 10 01	691	1.0+	0.2+	1998 05 22	704	(2.1+	2.6−)	1998 05 25	699	0.1+	0.1−
1995 10 01	691	0.9−	0.2−	1998 05 22	704	0.8−	1.0+	1998 05 25	699	0.4+	0.6+

(8807)* 1981 UD₂₃ = 1981 WU₂ = 1995 QV

Discovered 1981 Oct. 24 by S. J. Bus at Palomar.

Id. S. Nakano (d, *MPC* 20606; *MPC* 25636), T. Urata (*ibid.*)

Residuals in seconds of arc

1981 10 24	675	0.2+	0.7-	1997 02 04	566	0.6+	0.2+	1998 05 22	704	(0.1-	3.0+)
1981 10 25	675	0.5+	0.1+	1998 04 25	809	0.7-	0.1+	1998 05 22	704	0.1-	0.9-
1981 11 24	095	1.7-	0.1+	1998 04 25	809	0.4+	0.7+	1998 05 22	699	0.2+	0.3-
1981 11 24	033	0.5+	0.2+	1998 04 25	809	0.4+	1.0+	1998 05 22	699	0.2+	0.2-
1981 11 24	033	0.1+	0.1+	1998 04 25	699	0.3-	0.2+	1998 05 22	704	0.2-	0.3-
1988 10 07	675	0.8+	0.2-	1998 04 25	699	0.1-	0.2-	1998 05 22	699	0.1-	0.2-
1988 10 07	675	1.2+	0.8-	1998 04 25	699	0.7+	0.2+	1998 05 22	704	0.1+	0.2+
1992 11 24	691	0.7-	0.3-	1998 04 28	809	0.9+	0.3-	1998 05 24	704	0.4+	0.0
1992 11 24	691	0.6-	0.1-	1998 04 28	809	0.6+	0.6+	1998 05 24	704	0.4-	0.1+
1995 08 16	905	(3.9+	1.4+)	1998 04 28	809	(0.6+	2.3+)	1998 05 24	704	0.3-	0.7+
1995 08 16	905	0.1-	0.2+	1998 05 03	566	0.2+	0.2+	1998 05 24	704	(3.3+	0.2+)
1995 08 20	905	0.1-	0.5+	1998 05 03	566	0.2+	0.3+	1998 05 24	704	0.8-	1.0+
1995 08 20	905	0.0	0.7+	1998 05 03	566	0.0	0.0	1998 06 03	704	0.4+	0.3+
1995 08 26	905	0.0	0.6+	1998 05 03	360	0.2+	0.4-	1998 06 03	704	1.2-	0.5-
1995 08 26	905	0.8-	0.1+	1998 05 03	360	0.2-	0.4-	1998 06 03	704	0.1+	1.7-
1997 02 04	566	0.3+	0.2+	1998 05 03	360	0.7-	0.4-	1998 06 03	704	0.7-	0.6-
1997 02 04	566	0.4+	0.1+	1998 05 22	704	0.0	0.0				

(8808)* 1981 UH₂₈ = 1986 WB₁₀ = 1990 RP₁ = 1990 SK₁₄

Discovered 1981 Oct. 24 by S. J. Bus at Palomar.

Id. K. Kinoshita (*MPC* 23668), S. Nakano (d, *MPC* 20912)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

M	301.86348		(2000.0)	P	Q
n	0.21176206	ω	292.82777	+0.37356565	+0.92760307
a	2.7876438	Ω	359.10563	-0.82258696	+0.33071487
e	0.0429142	i	4.11481	-0.42871832	+0.17372456
P	4.65	H	13.9	G 0.15	U 1

Residuals in seconds of arc

1953 10 31	675	0.2+	0.5-	1990 09 18	675	0.6+	1.6-	1998 04 22	704	0.1-	0.4+
1953 10 31	675	0.9-	0.2-	1990 09 24	809	0.4-	0.9+	1998 04 22	704	0.5+	0.2+
1981 10 24	675	1.4+	1.4+	1990 09 24	809	0.1+	1.0+	1998 04 25	699	1.2+	0.1-
1981 10 25	675	1.1+	0.2-	1990 09 24	809	0.3+	0.8+	1998 04 25	699	0.5+	0.2-
1981 10 26	675	1.1+	0.1+	1996 12 13	691	0.8-	0.9-	1998 04 25	699	0.6+	0.0
1986 11 30	381	1.5-	0.9-	1996 12 13	691	0.9-	0.1-	1998 04 30	566	0.7-	0.7-
1986 11 30	381	0.8+	0.4+	1998 04 21	704	0.2+	0.1-	1998 04 30	566	0.7-	0.1-
1986 12 01	381	1.6-	0.5+	1998 04 21	704	1.3+	0.1+	1998 04 30	566	0.7-	0.2-
1986 12 01	381	1.9+	1.0+	1998 04 21	704	1.1+	0.5-	1998 05 16	691	0.9-	0.4+
1990 09 14	675	(2.6-	2.0-)	1998 04 21	704	0.7+	0.9-	1998 05 16	691	0.8-	0.3+
1990 09 14	675	0.0	1.0-	1998 04 21	704	0.7-	0.2+	1998 05 16	691	0.9-	0.6+
1990 09 14	675	1.4-	1.0-	1998 04 22	704	0.5+	0.1+	1998 05 24	691	0.5-	0.2+
1990 09 14	675	0.1-	0.7-	1998 04 22	704	0.1+	0.4+	1998 05 24	691	1.2-	0.5-
1990 09 18	675	0.9-	0.1-	1998 04 22	704	1.1+	0.1-				

(8809)* 1981 WE₁ = 1990 TG

Discovered 1981 Nov. 24 by E. Bowell at the Anderson Mesa Station of the

Lowell Observatory.

Id. G. V. Williams (*MPC* 17200)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	222.99829		(2000.0)	P	Q
n	0.21275237	ω	187.77858	+0.86967937	-0.48875035
a	2.7789866	Ω	201.90142	+0.46227909	+0.85555158
e	0.2847109	i	10.68254	+0.17307752	+0.17074713
P	4.63	H	13.1	G 0.15	U 1

Residuals in seconds of arc

1953 10 31	675	0.3-	0.1-	1990 09 22	095	1.5-	0.9+	1998 04 21	691	1.2-	0.4+
1953 10 31	675	0.1-	0.3-	1990 09 24	095	(0.6+	5.3+)	1998 05 01	704	0.1-	0.3+
1981 10 23	095	(1.4-	10.0+)	1990 09 24	095	0.1-	1.9+	1998 05 01	704	1.0-	1.2-
1981 10 25	330	1.3+	0.1-	1990 10 09	413	0.1+	1.7-	1998 05 01	704	0.6+	0.1-
1981 11 24	688	1.1-	1.1-	1990 10 09	413	0.8-	0.8+	1998 05 01	704	1.1+	0.2+
1981 11 24	688	0.7-	0.8-	1990 10 11	413	0.0	1.6-	1998 05 01	704	0.4+	0.8-
1981 12 02	688	0.6+	1.8-	1990 10 11	413	0.5-	1.2+	1998 05 22	704	0.5-	0.6+
1981 12 02	688	1.4+	1.7-	1990 10 16	413	0.7+	0.1+	1998 05 22	704	1.0+	1.6-

1981 12 18	688	0.7+	2.5-	1990 10 27	413	0.5+	0.6+	1998 05 22	704	0.6-	0.8-
1981 12 18	688	(0.6+	2.7-)	1990 10 27	413	0.4+	0.6+	1998 05 22	704	0.7-	1.6-
1990 09 18	675	0.4+	0.5-	1995 10 25	689	0.4-	0.1+	1998 05 24	704	0.4+	0.4-
1990 09 18	675	0.8+	1.0-	1995 10 26	689	0.5-	0.3+	1998 05 24	704	1.1+	0.9-
1990 09 18	095	0.1+	0.9+	1995 10 27	689	0.7-	0.3+	1998 05 24	704	0.7+	1.1-
1990 09 18	095	0.0	1.6-	1995 11 11	689	0.0	0.3+	1998 05 24	704	0.2+	1.8-
1990 09 20	675	0.8+	0.5-	1995 11 12	689	0.2+	1.0+	1998 05 24	704	(0.2-	2.2-)
1990 09 20	675	0.0	0.8-	1998 04 21	691	1.2-	0.2-				
1990 09 22	095	(2.2-	0.3-)	1998 04 21	691	1.4-	0.3+				

(8810)* 1982 JM₁ = 1978 TA₅ = 1994 UZ₁₁

Discovered 1982 May 15 by E. F. Helin and E. M. Shoemaker at Palomar.

Id. G. V. Williams (*MPC* 24558)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	330.06703		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$
n	0.18465005	ω	207.97865	+0.26279629	+0.96297922
a	3.0542396	Ω	77.30899	-0.87334507	+0.26387805
e	0.1641912	i	3.53054	-0.41012985	+0.05513076
P	5.34	H	13.2	G 0.15	U 1

Residuals in seconds of arc

1978 10 07	095	2.1+	0.1+	1997 02 07	552	0.3+	0.2-	1998 05 18	699	0.7+	0.0
1982 05 15	675	0.2+	0.2-	1997 02 07	552	0.2+	0.5+	1998 05 18	699	0.6+	0.2+
1982 05 16	675	0.5-	0.2+	1997 02 07	552	0.8+	0.8+	1998 05 19	104	0.3+	0.4-
1982 05 17	675	0.5-	0.2-	1997 02 08	552	0.6-	0.3-	1998 05 19	104	0.7+	0.3-
1982 05 18	675	0.1-	1.5+	1997 02 08	552	0.8-	0.1-	1998 05 19	104	0.5+	0.2-
1994 10 05	691	0.8-	0.1+	1997 02 08	552	0.5-	0.5-	1998 05 19	104	0.6+	0.3-
1994 10 05	691	0.9-	0.0	1998 04 22	704	(2.1-	0.1+)	1998 05 22	704	0.1+	0.0
1994 10 05	691	0.8-	0.3+	1998 04 22	704	0.3-	0.3-	1998 05 22	704	0.2-	0.9+
1994 10 07	400	0.1+	0.6+	1998 04 22	704	0.2-	1.1-	1998 05 22	704	0.6-	0.3-
1994 10 07	400	0.1-	0.1+	1998 04 22	704	0.9+	0.6+	1998 05 22	704	0.1+	0.1+
1994 10 26	400	0.2+	0.6-	1998 05 01	704	0.1+	0.5-	1998 05 22	704	0.0	0.1-
1994 10 26	400	0.3-	0.1-	1998 05 01	704	0.4-	0.4-	1998 05 24	704	0.2+	0.8-
1996 01 09	608	0.0	0.5+	1998 05 01	704	0.5-	0.3-	1998 05 24	704	0.0	0.3-
1996 01 09	608	0.0	0.8+	1998 05 01	704	0.3+	0.1-	1998 05 24	704	0.8-	0.0
1996 01 12	608	0.0	0.1-	1998 05 05	699	0.3-	0.9+	1998 05 24	704	0.0	0.8+
1996 01 12	608	0.1+	0.1-	1998 05 05	699	0.1+	0.5+	1998 05 24	704	1.0-	0.6+
1996 01 13	608	0.2-	0.5-	1998 05 05	699	0.4+	1.0+				
1996 01 13	608	0.4+	0.1+	1998 05 18	699	0.5+	0.4-				

(8811)* 1982 UX₅ = 1989 GJ₁

Discovered 1982 Oct. 20 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. S. Nakano (*MPC* 14784)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

M	137.58914		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$
n	0.21857545	ω	162.47234	+0.24415082	-0.96719015
a	2.7294080	Ω	273.35197	+0.88107521	+0.25150256
e	0.0939140	i	4.03466	+0.40508870	+0.03591213
P	4.51	H	13.6	G 0.15	U 2

Residuals in seconds of arc

1982 10 20	095	1.7+	1.3+	1996 12 08	327	0.1-	0.3-	1998 04 20	704	(0.8-	3.3+)
1982 10 22	095	1.2-	1.0-	1996 12 20	327	0.5+	0.2+	1998 04 20	704	0.6+	0.7+
1982 10 24	095	0.3-	1.4-	1996 12 20	327	0.3-	0.1+	1998 04 20	704	0.2+	1.1+
1989 04 03	809	0.2-	0.3-	1996 12 20	327	0.4+	0.3+	1998 04 21	704	0.5-	0.3+
1989 04 03	809	0.4+	0.7-	1998 03 25	699	0.2+	0.8+	1998 04 21	704	0.6+	0.2-
1989 04 03	809	0.1+	1.5-	1998 03 25	699	0.7-	0.8+	1998 04 21	704	0.4+	0.1+
1989 04 05	809	1.4+	1.4-	1998 03 25	699	0.7-	0.6+	1998 04 21	704	0.4-	0.4-
1989 04 05	809	0.1+	0.4-	1998 03 31	704	1.3-	0.4-	1998 04 21	704	0.5+	0.1-
1989 04 05	809	0.2-	0.7-	1998 03 31	704	1.3+	1.5+	1998 04 22	704	0.3+	0.3+
1989 04 08	809	0.6-	0.2-	1998 03 31	704	0.0	0.9+	1998 04 22	704	0.6+	1.2-
1989 04 08	809	0.8-	0.1+	1998 03 31	704	1.9-	0.3+	1998 04 22	704	0.8+	0.3-
1989 04 08	809	0.6-	0.4-	1998 03 31	704	(2.9-	2.0+)	1998 04 22	704	0.8+	0.6-
1989 04 10	809	0.4-	1.4-	1998 04 01	704	0.1+	0.3+	1998 04 22	704	(3.8-	0.9-)

1989 04 10	809	0.6−	0.2+	1998 04 01	704	0.5+	1.0+	1998 05 16	704	(0.8+	2.2−)
1989 04 10	809	0.5−	0.5+	1998 04 01	704	1.7−	0.6+	1998 05 16	704	0.1+	0.6−
1993 02 21	399	(2.8+	0.9+)	1998 04 01	704	0.8−	0.8+	1998 05 16	704	0.3−	0.1−
1993 02 21	399	0.3−	0.2−	1998 04 01	704	0.9+	0.9−	1998 05 16	704	0.1+	0.2+
1996 12 08	327	0.4+	0.0	1998 04 20	704	0.6+	0.8−				
1996 12 08	327	0.7−	0.1+	1998 04 20	704	1.0+	0.4+				

(8812)* 1982 UY₆ = 1982 VU = 1982 VE₉ = 1969 TJ₅

Discovered 1982 Oct. 20 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. T. Furuta (d, *JAM* 2031), H. Oishi (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Asher			
<i>M</i>	291.54320	(2000.0)		P		Q	
<i>n</i>	0.23074970	ω	297.18932	+0.87186443		+0.48551776	
<i>a</i>	2.6325418	Ω	33.87540	−0.39861485		+0.77968840	
<i>e</i>	0.2510328	<i>i</i>	6.61664	−0.28453227		+0.39542193	
<i>P</i>	4.27	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1969 10 14	095	(8.3+	1.0−)	1995 12 11	689	0.3+	0.3+	1998 05 01	704	0.0	0.2−
1969 10 15	095	0.3+	0.6−	1995 12 12	689	0.2+	0.6+	1998 05 01	704	0.7−	0.6+
1969 10 17	095	(0.4+	3.0−)	1998 04 21	704	0.2+	0.1−	1998 05 18	699	0.7+	0.7−
1981 05 08	675	0.0	0.2+	1998 04 21	704	0.2+	0.8−	1998 05 18	699	0.9+	1.1−
1982 10 20	095	(5.4−	0.2+)	1998 04 21	704	0.3+	1.5−	1998 05 18	699	0.8+	0.4−
1982 11 09	095	0.2−	2.1−	1998 04 21	704	0.2+	0.9−	1998 05 22	704	0.2+	0.1−
1982 11 15	688	1.1+	0.0	1998 04 21	704	0.4+	1.7+	1998 05 22	704	0.4+	0.1−
1982 11 15	688	(0.7−	3.7−)	1998 04 22	704	1.1−	0.3−	1998 05 22	704	0.0	0.8+
1986 09 10	095	0.3+	0.7−	1998 04 22	704	0.7−	0.7−	1998 05 22	699	0.9+	0.1−
1986 09 14	095	0.6+	0.5−	1998 04 22	704	1.2−	0.7−	1998 05 22	699	1.3+	0.1+
1986 10 06	095	(4.3+	2.4−)	1998 04 22	704	1.4−	1.6−	1998 05 22	704	0.6+	0.1−
1986 10 10	095	(2.3+	2.8−)	1998 04 22	704	0.0	1.4−	1998 05 22	699	0.8+	0.7+
1986 10 11	095	(3.5−	1.3+)	1998 04 28	566	1.3−	0.6−	1998 05 22	704	0.8+	0.7+
1989 03 29	675	0.7−	0.7+	1998 04 28	566	1.3−	0.3−	1998 05 31	691	0.2−	0.6+
1989 03 29	675	0.7+	0.7−	1998 04 28	566	1.4−	0.4−	1998 05 31	691	0.2+	0.4+
1995 10 21	596	0.2−	0.7−	1998 05 01	704	0.4−	0.3−	1998 05 31	691	0.3+	0.5+
1995 10 21	596	0.4−	0.7−	1998 05 01	704	0.7−	0.5+				
1995 10 22	596	0.2−	0.7−	1998 05 01	704	0.7−	0.5+				

(8813)* 1983 WF₁

Discovered 1983 Nov. 29 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	240.64952	(2000.0)		P		Q	
<i>n</i>	0.17474697	ω	275.23511	+0.91365206		−0.19415148	
<i>a</i>	3.1685673	Ω	96.31401	+0.31930756		+0.88647997	
<i>e</i>	0.3176037	<i>i</i>	21.05808	−0.25156034		+0.42006960	
<i>P</i>	5.64	<i>H</i>	11.9	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1983 11 29	688	0.4−	1.5−	1985 03 26	801	0.9+	1.5+	1998 04 23	704	(2.4+	1.6−)
1983 11 29	688	0.7+	0.3−	1993 06 25	595	1.1−	0.3−	1998 04 23	704	1.8−	0.7−
1983 12 09	688	0.6+	1.2+	1993 06 25	595	0.5−	0.3+	1998 05 23	704	0.6+	0.9+
1983 12 09	688	0.0	0.5+	1993 06 25	595	0.3−	0.5−	1998 05 23	704	0.3+	0.4−
1983 12 29	688	0.1+	1.1−	1993 06 26	595	0.2+	0.3−	1998 05 23	704	0.4+	1.0−
1983 12 29	688	0.3+	2.2−	1993 06 26	595	0.1−	0.6−	1998 05 23	704	0.9+	0.3+
1984 02 21	675	0.1+	0.2+	1993 06 26	595	0.4+	0.6−	1998 05 23	704	1.1+	0.3−
1984 03 04	801	0.2+	0.2+	1997 03 29	327	0.0	0.2−	1998 05 26	704	0.4−	0.5+
1984 03 22	675	0.0	1.1+	1997 03 29	327	1.2−	0.6−	1998 05 26	704	0.9+	0.8−
1984 12 31	675	0.0	0.3−	1997 03 29	327	(0.7+	3.5−)	1998 05 26	704	1.3+	0.8+
1985 01 01	675	0.1−	1.0+	1998 04 23	704	0.9−	0.4−	1998 05 26	704	0.1+	0.0
1985 03 14	675	0.8−	0.9−	1998 04 23	704	1.7−	0.1+				

(8814)* 1983 XG = 1988 RQ

Discovered 1983 Dec. 1 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. D. W. E. Green (*MPC* 13675)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Green			
<i>M</i>	248.67812	(2000.0)		P		Q	
<i>n</i>	0.17378191	ω	162.13376	+0.98073491		−0.19101359	
<i>a</i>	3.1802872	Ω	208.97429	+0.16733751		+0.92953131	
<i>e</i>	0.1592200	<i>i</i>	4.84338	+0.10078291		+0.31541298	
<i>P</i>	5.67	<i>H</i>	12.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1983 11 28	688	(4.3+	2.2−)	1994 10 04	801	1.9+	0.1+	1998 04 28	809	0.3−	0.8+
1983 11 28	688	(0.9+	3.3−)	1994 10 04	801	0.3−	0.4−	1998 04 28	684	0.4+	0.2+
1983 12 01	688	0.8−	2.1−	1994 10 06	596	0.1−	0.3+	1998 04 28	684	0.3+	0.2+
1983 12 01	688	(3.2−	2.1−)	1994 10 06	596	0.9−	0.1+	1998 05 05	699	0.4−	0.6−
1983 12 06	688	0.7+	1.3−	1994 10 06	596	1.3−	0.3+	1998 05 05	699	0.5−	0.1+
1983 12 06	688	1.4+	1.1−	1994 10 11	046	1.3+	0.6+	1998 05 05	699	0.0	0.3−
1984 01 02	688	(3.4+	0.6−)	1994 10 12	046	(2.2+	0.6+)	1998 05 17	684	0.9−	0.3−
1984 01 04	688	0.4−	0.6−	1994 10 14	046	0.3−	0.0	1998 05 17	684	0.8−	0.2−
1984 01 04	688	(2.8+	2.0+)	1994 10 14	046	0.1−	0.0	1998 05 18	684	0.1−	0.7−
1988 09 12	400	0.7−	0.6+	1994 10 14	046	0.2−	0.1+	1998 05 18	684	0.6−	0.4−
1988 09 12	400	1.1+	0.0	1994 10 14	046	0.4−	0.7−	1998 05 22	704	1.2−	0.4−
1988 09 12	400	0.5+	0.7+	1994 10 31	894	0.6+	0.6+	1998 05 22	704	1.4−	1.1−
1988 09 13	400	1.8−	0.5−	1994 10 31	894	(1.1+	2.7−)	1998 05 22	704	1.5−	1.1−
1988 09 13	400	0.9−	1.7−	1994 11 03	801	0.1+	0.7+	1998 05 22	704	0.0	0.5−
1988 09 13	400	0.3−	0.7+	1994 11 08	801	0.1−	0.7−	1998 05 22	699	1.0+	0.5−
1988 09 16	675	0.7+	0.2−	1994 11 08	801	0.1−	0.3−	1998 05 22	704	0.2+	0.2+
1988 09 16	675	0.6+	0.2+	1996 01 11	689	1.2−	1.0+	1998 05 22	699	0.1−	0.5−
1988 09 17	095	0.3−	0.5−	1996 01 12	689	0.3−	0.2−	1998 05 22	699	0.4+	0.0
1993 07 16	801	1.2+	0.1−	1997 03 27	689	1.7+	0.5−	1998 05 24	704	0.8−	0.1−
1993 07 16	801	0.2+	0.1+	1998 04 25	809	1.8+	0.4+	1998 05 24	704	0.1+	1.0+
1994 10 01	801	0.8−	0.3−	1998 04 25	809	(2.2+	0.2+)	1998 05 24	699	0.1−	0.2−
1994 10 01	801	0.6+	0.4−	1998 04 25	809	1.6+	1.0+	1998 05 24	704	0.5+	0.5+
1994 10 01	868	0.9+	0.3+	1998 04 27	684	0.6+	0.0	1998 05 24	699	0.1−	1.4−
1994 10 01	868	0.4+	0.5−	1998 04 27	684	0.5+	0.2−	1998 05 24	699	0.4+	0.5−
1994 10 02	868	(2.7−	0.3+)	1998 04 28	809	0.6−	0.3−	1998 05 24	704	0.4+	0.4−
1994 10 02	868	(2.6−	0.7−)	1998 04 28	809	0.8−	0.6−	1998 05 24	704	0.6−	0.6+

(8815)* 1984 DR = 1969 VX₁ = 1994 AN₁

Discovered 1984 Feb. 23 by H. Debehogne at the European Southern Observatory.

Id. S. Nakano (*MPC* 22950)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Nakano			
<i>M</i>	149.95497	(2000.0)		P		Q	
<i>n</i>	0.29156915	ω	291.52097	+0.28999731		−0.95495605	
<i>a</i>	2.2523800	Ω	141.44374	+0.91117941		+0.25539749	
<i>e</i>	0.1379529	<i>i</i>	5.79500	+0.29266643		+0.15109950	
<i>P</i>	3.38	<i>H</i>	13.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1969 11 15	095	0.3+	0.1+	1984 03 05	809	0.6−	0.3+	1996 12 12	732	1.0+	1.6−
1984 02 23	809	0.0	0.3−	1984 03 05	809	0.0	0.6+	1996 12 12	732	0.3+	0.4+
1984 02 23	809	0.0	0.1+	1984 03 05	809	0.3+	0.0	1998 03 24	704	0.0	0.3+
1984 02 23	809	0.1+	0.1−	1984 03 06	809	0.8−	0.7+	1998 03 24	704	0.2+	0.1−
1984 02 25	809	0.0	0.4+	1984 03 06	809	0.2−	0.5+	1998 03 24	704	0.2+	0.0
1984 02 25	809	0.3+	0.1−	1984 03 06	809	0.3−	0.3+	1998 03 24	704	0.3+	0.1−
1984 02 25	809	0.1+	0.5−	1984 03 07	809	1.0+	0.3+	1998 03 24	704	1.1−	0.2−
1984 02 26	809	1.0−	0.4−	1984 03 07	809	0.9+	0.2+	1998 04 21	704	0.3+	0.9−
1984 02 26	809	0.7−	0.2−	1984 03 07	809	0.7+	0.1+	1998 04 21	704	0.6+	0.4+
1984 02 26	809	0.5−	0.1−	1984 03 08	809	1.0−	0.7+	1998 04 21	704	0.4+	0.7−
1984 02 26	095	1.7+	1.4−	1984 03 08	809	1.0−	0.4+	1998 04 21	704	0.4+	0.4−
1984 02 27	809	0.2−	0.8−	1984 03 08	809	1.3−	0.9+	1998 04 21	704	0.4+	0.1−
1984 02 27	809	0.4−	0.7−	1984 03 11	809	0.8+	0.4−	1998 04 23	704	0.5+	0.5−

1984 02 27	809	0.4−	0.4−	1984 03 11	809	0.8+	0.1−	1988 04 23	704	0.4+	0.0
1984 02 28	809	0.2+	0.1−	1984 03 11	809	0.8+	0.2+	1988 04 23	704	0.0	0.1−
1984 02 29	809	0.2+	0.5−	1994 01 08	402	0.7+	0.5−	1988 04 23	704	0.3+	0.1+
1984 02 29	809	0.4+	0.4−	1994 01 08	402	1.2+	0.8−	1988 04 23	704	0.4+	0.0
1984 02 29	809	0.5+	0.6−	1994 01 08	896	0.5−	1.2+	1988 04 24	704	0.0	0.6−
1984 03 01	809	0.8+	0.1−	1994 01 08	896	0.5−	2.0+	1988 04 24	704	0.6−	0.5−
1984 03 01	809	0.8+	0.1+	1994 01 09	896	0.9+	1.9−	1988 04 24	704	0.1+	0.2−
1984 03 01	809	0.6+	0.1+	1994 01 09	402	1.3+	0.8+	1988 04 24	704	0.8−	0.5−
1984 03 02	809	2.0−	1.1+	1994 01 09	402	0.8+	1.2+	1988 04 24	704	0.4−	0.1+
1984 03 02	809	1.7−	1.2+	1994 01 09	896	0.1−	0.6+	1988 05 16	704	0.2+	0.2−
1984 03 02	809	1.5−	1.2+	1994 01 16	010	1.0−	0.8−	1988 05 16	704	0.2−	0.8+
1984 03 03	809	0.2+	0.1−	1994 01 16	010	1.3−	1.2−	1988 05 16	704	0.3+	1.0+
1984 03 03	809	0.5+	0.1−	1994 01 17	010	0.3+	0.3−	1988 05 16	704	0.7−	0.4+
1984 03 03	809	0.8+	0.3−	1994 01 17	010	0.4−	0.8−	1988 05 16	704	(3.0−	0.7−)
1984 03 04	809	0.2+	0.2+	1994 01 17	010	0.5−	0.4−	1988 05 25	699	1.0−	0.3+
1984 03 04	809	0.1−	0.0	1996 12 11	732	0.8−	0.2−	1988 05 25	699	0.5−	0.8−
1984 03 04	809	0.2+	0.3+	1996 12 11	732	0.7−	0.1−	1988 05 25	699	0.1−	0.7+

(8816)* 1984 YN₁ = 1980 US = 1995 QU₁

Discovered 1984 Dec. 17 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. T. Urata (*MPC* 25636)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.25600552	ω	359.12240	+0.90270452	−0.42958368		
<i>a</i>	2.4564230	Ω	26.36039	+0.39508718	+0.80539184		
<i>e</i>	0.1893330	<i>i</i>	3.11569	+0.17038390	+0.40841382		
<i>P</i>	3.85	<i>H</i>	13.7	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1980 10 17	095	(3.5+	1.6−)	1995 08 28	905	0.7−	0.3+	1998 05 01	704	0.1+	0.5−
1984 12 17	095	0.3+	0.1+	1995 08 28	905	0.0	0.2+	1998 05 01	704	0.3−	0.4−
1984 12 23	095	0.5−	0.9−	1997 03 04	704	0.0	0.2+	1998 05 22	704	(1.8+	4.5−)
1984 12 27	095	(1.5−	2.5−)	1997 03 04	704	0.0	0.9−	1998 05 22	704	0.2−	0.7+
1994 05 05	691	0.3+	0.5−	1997 03 05	704	0.2−	1.0+	1998 05 22	704	0.6+	1.1+
1994 05 05	691	0.7+	1.3−	1997 03 05	704	0.8+	0.6+	1998 05 22	704	(2.4+	2.1+)
1994 05 05	691	0.2+	0.5−	1997 03 06	704	0.4+	0.2+	1998 05 24	704	0.3−	0.9−
1995 08 20	905	0.1+	0.5−	1997 03 06	704	0.1−	0.3+	1998 05 24	704	0.4+	0.2−
1995 08 20	905	0.3−	0.3−	1998 05 01	704	0.8−	0.6−	1998 05 24	704	0.3−	0.5+
1995 08 24	905	0.8+	0.2+	1998 05 01	704	0.5+	0.7−	1998 05 24	704	1.2−	1.4+
1995 08 24	905	0.3+	0.7+	1998 05 01	704	0.2−	0.5+	1998 05 24	704	0.1−	0.7+

(8817)* 1985 JU₁ = 1976 UW₁₇ = 1989 TN₅

Discovered 1985 May 13 by C. S. Shoemaker at Palomar.

Id. S. Nakano (*MPC* 11426), G. V. Williams (*MPC* 21934)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.30241132	ω	180.33862	+0.01517474	+0.99595479		
<i>a</i>	2.1982176	Ω	90.53220	−0.91716808	+0.04914046		
<i>e</i>	0.1329895	<i>i</i>	5.08129	−0.39821154	−0.07522814		
<i>P</i>	3.26	<i>H</i>	14.4	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1976 10 22	381	0.6−	0.2−	1996 12 15	589	0.1+	0.4−	1998 05 01	860	0.2−	0.1−
1976 10 22	381	0.4−	0.7−	1998 04 20	860	0.5+	0.1−	1998 05 01	860	0.2−	0.3−
1976 10 24	381	0.4−	0.3+	1998 04 20	860	0.2+	0.1+	1998 05 01	704	0.2−	0.2−
1976 10 24	381	0.4+	0.1+	1998 04 20	860	0.4+	0.2+	1998 05 01	704	0.1+	1.4+
1985 05 13	675	1.3−	0.8−	1998 04 21	704	0.1+	0.7−	1998 05 01	704	0.1+	0.1+
1985 05 15	675	0.9−	0.7−	1998 04 21	704	0.4+	0.5−	1998 05 01	704	0.2−	0.1−
1985 05 24	675	1.0+	0.3−	1998 04 21	704	0.0	1.5−	1998 05 01	704	0.1−	0.2+
1985 05 24	675	1.1+	0.3−	1998 04 21	704	1.1−	0.0	1998 05 22	704	0.4−	0.1−
1988 03 16	399	1.4+	0.5−	1998 04 21	704	0.4−	0.1−	1998 05 22	704	0.2+	0.8−
1988 03 16	399	1.2+	0.5+	1998 04 23	704	0.9+	0.5+	1998 05 22	704	0.1+	1.2−
1988 03 16	399	1.8−	1.6+	1998 04 23	704	0.9+	0.4+	1998 05 22	704	(1.2−	2.6−)
1989 10 07	809	(3.0−	1.1+)	1998 04 23	704	0.8+	0.2+	1998 05 22	704	1.0−	0.1−

1989 10 07	809	(2.7−	2.0+)	1998 04 23	704	1.0+	1.5+	1998 05 24	704	0.8−	0.1−
1989 10 07	809	(3.6−	2.7+)	1998 04 23	704	0.2−	1.3+	1998 05 24	704	0.3+	0.1−
1989 10 08	809	0.1−	0.7+	1998 04 25	699	0.1−	0.4+	1998 05 24	704	0.1−	0.5+
1989 10 08	809	0.9−	2.0+	1998 04 25	699	0.2−	0.8+	1998 05 24	704	0.6+	0.1+
1989 10 08	809	0.2−	2.1+	1998 04 25	699	0.6+	0.4+	1998 05 24	704	0.3−	0.1−
1994 01 07	675	0.1−	0.3−	1998 04 27	689	0.3+	0.2+	1998 06 02	699	0.1−	0.4+
1994 01 07	675	0.4+	1.2+	1998 04 28	566	0.3+	0.2−	1998 06 02	699	0.6−	0.8+
1996 12 15	589	0.5+	0.5−	1998 04 28	566	0.1+	0.1−	1998 06 02	699	0.5−	1.1+
1996 12 15	589	0.0	0.6−	1998 04 28	566	0.0	0.2−				
1996 12 15	589	0.2−	0.0	1998 05 01	860	0.6−	0.1+				

(8818)* 1985 RW₂ = 1990 SV₂₆ = 1996 AD₈

Discovered 1985 Sept. 5 by H. Debehogne at the European Southern Observatory.

Id. K. Ichikawa (*MPC* 27709)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21205673	ω	249.81076	+0.97011487	+0.24068163		
<i>a</i>	2.7850608	Ω	96.25274	−0.20944465	+0.89471325		
<i>e</i>	0.0804070	<i>i</i>	1.77635	−0.12251560	+0.37624533		
<i>P</i>	4.65	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1985 09 05	809	0.3+	0.2+	1993 04 18	691	1.4−	0.3+	1998 05 01	704	1.2−	0.1−
1985 09 05	809	0.6+	0.3+	1993 04 18	691	1.6−	0.3+	1998 05 01	704	0.4+	0.7+
1985 09 05	809	0.4+	0.2+	1995 12 16	691	0.1+	0.1+	1998 05 01	704	0.5−	0.2+
1985 09 07	809	0.3−	0.5−	1995 12 16	691	0.0	0.0	1998 05 05	699	1.4+	0.5−
1985 09 07	809	0.2−	0.6−	1996 01 13	691	0.2−	0.9−	1998 05 05	699	1.0+	0.3+
1985 09 07	809	0.1+	0.6−	1996 01 13	691	0.2−	0.0	1998 05 05	699	1.6+	1.1−
1985 09 11	809	0.8−	0.1+	1996 01 13	691	0.2−	0.2−	1998 05 18	699	0.3−	0.1−
1985 09 11	809	0.8−	0.1−	1996 01 24	691	0.2−	0.2−	1998 05 18	699	0.5−	0.5+
1985 09 11	809	0.9−	0.2−	1996 01 24	691	0.2−	0.3−	1998 05 18	699	0.1+	0.0
1985 09 16	809	0.6−	0.1−	1996 01 24	691	0.3−	0.0	1998 05 22	704	(2.3+	0.1+)
1985 09 16	809	1.6+	0.3+	1997 01 18	327	0.5+	0.2+	1998 05 22	704	0.0	0.4−
1985 09 16	809	(3.0+	0.4+)	1997 01 18	327	0.5+	0.5−	1998 05 22	704	0.5+	0.9+
1985 09 18	809	1.0+	0.6+	1997 01 18	327	0.5+	0.6−	1998 05 22	704	(2.4−	0.1−)
1985 09 18	809	0.9+	0.6+	1997 02 01	327	0.1−	0.0	1998 05 24	704	1.5−	1.1+
1985 09 18	809	0.9+	0.4+	1997 02 01	327	0.8+	0.1−	1998 05 24	704	0.9−	1.9−
1990 09 22	095	0.5−	0.2−	1997 02 01	327	0.1−	0.1+	1998 05 24	704	0.1−	0.6−
1990 09 22	095	0.7−	0.9−	1997 02 06	327	0.3+	0.0	1998 05 24	704	0.5+	0.9+
1992 02 04	675	0.1+	0.1−	1997 02 06	327	0.5+	0.0	1998 05 24	704	0.8+	0.3−
1992 02 04	675	(0.2+	2.5−)	1997 02 06	327	0.7+	0.1−				
1993 04 18	691	1.5−	0.3+	1998 05 01	704	0.1−	0.6−				

(8819)* 1985 RR₄ = 1990 UD₄

Discovered 1985 Sept. 14 by H. Debehogne at the European Southern Observatory.

Id. B. G. Marsden (*MPC* 17436)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21238863	ω	158.86939	+0.93054579	+0.36617416		
<i>a</i>	2.7821585	Ω	179.64599	−0.35499594	+0.90280730		
<i>e</i>	0.1682726	<i>i</i>	9.39186	−0.08979097	+0.22551155		
<i>P</i>	4.64	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1985 08 23	095	0.7+	0.4−	1990 10 16	809	0.6−	1.6−	1998 04 23	704	0.1−	1.4+
1985 09 14	809	0.3−	0.4+	1990 10 16	809	1.4−	0.7−	1998 04 24	704	0.7+	0.3+
1985 09 14	809	0.3−	0.4+	1990 10 20	809	(0.6−	2.1−)	1998 04 24	704	0.3+	0.9−
1985 09 14	809	0.4−	0.2+	1990 10 20	809	0.6+	1.1−	1998 04 24	704	0.5−	0.9−
1985 09 15	809	0.2−	0.6−	1990 10 20	809	0.3+	1.4−	1998 05 05	699	0.0	0.3−
1985 09 15	809	0.3−	0.5−	1990 10 24	809	(2.6+	0.4−)	1998 05 05	699	0.5−	1.1−
1985 09 15	809	0.3−	0.3−	1990 10 24	809	0.8+	0.7−	1998 05 05	699	0.6+	1.4−
1985 09 15	095	(3.0−	3.6+)	1990 10 24	809	0.7+	1.1−	1998 05 23	704	0.0	0.2+
1985 09 17	809	0.0	0.1−	1994 06 07	595	0.2−	0.2−	1998 05 23	704	0.0	0.5+

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1985 09 17	809	0.0	0.2−	1994 06 07	595	0.1+	0.1+	1998 05 23	704	0.1+	0.2−
1985 09 17	809	0.1−	0.2−	1994 07 13	657	1.2+	0.8+	1998 05 23	704	0.3+	0.4−
1985 09 19	809	0.1−	0.2+	1994 07 13	657	0.1−	0.1−	1998 05 23	704	0.3−	0.7−
1985 09 19	809	0.2−	0.0	1994 07 13	657	0.9−	0.3−	1998 05 25	704	(2.2− 1.4−)	
1985 09 19	809	0.0	0.0	1998 04 23	704	0.5+	0.3−	1998 05 25	704	1.4−	0.3−
1985 09 20	095	1.4+	2.1+	1998 04 23	704	0.5−	0.3−	1998 05 25	704	0.9−	0.3−
1990 10 16	809	0.5+	0.7+	1998 04 23	704	0.6+	0.6−				

(8820)* 1985 VG = 1961 CE₁ = 1978 YO₁ = 1992 SG₂₄ = 1994 CS₁

Discovered 1985 Nov. 14 by P. Jensen at Brorfelde.

Id. S. Nakano (*MPC* 23236)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	208.47029		(2000.0)	P	Q
<i>n</i>	0.27346531	ω	286.09999	+0.93480272	−0.34827573
<i>a</i>	2.3507217	Ω	94.32316	+0.34667941	+0.85215456
<i>e</i>	0.0566218	<i>i</i>	4.00396	+0.07718331	+0.39055938
<i>P</i>	3.60	<i>H</i>	13.7	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1961 02 15	033	(3.7+ 0.3+)	1994 02 10	809	1.4+	1.3−	1998 04 21	704	0.4+	0.3−
1961 02 15	033	0.3+	1994 02 10	809	(1.1+ 2.3−)		1998 04 21	704	0.8+	0.6−
1961 02 15	033	(4.3− 1.4−)	1994 02 12	809	0.3+	0.9+	1998 04 21	704	0.2−	0.3+
1961 02 15	033	0.5−	1994 02 12	809	0.2+	0.6+	1998 04 22	704	0.5+	0.2−
1961 02 15	033	0.2−	1994 02 12	809	0.3−	0.7+	1998 04 22	704	1.0+	0.1+
1978 12 22	095	(1.0+ 4.3+)	1994 02 12	411	0.2−	0.3+	1998 04 22	704	0.8+	0.7+
1985 11 11	095	0.5+	1994 02 12	411	0.9−	0.3+	1998 04 22	704	0.7+	0.3−
1985 11 14	054	0.2+	1994 02 12	411	0.9−	0.1−	1998 04 22	704	0.9+	0.3+
1985 11 15	054	0.1−	1994 02 13	809	0.9+	0.2+	1998 04 23	758	0.6+	0.1+
1991 05 18	675	0.6+	1994 02 13	809	1.3+	0.1+	1998 04 23	758	0.9+	0.4−
1991 05 18	675	0.2+	1994 02 13	809	0.3+	0.6−	1998 05 16	704	0.5−	0.4−
1992 09 28	399	0.1+	1994 02 13	411	0.3−	0.4+	1998 05 16	704	0.4−	0.4−
1992 09 28	399	0.0	1994 02 13	411	0.4−	0.5−	1998 05 16	704	(2.2− 0.7−)	
1992 10 01	400	(29.4− 12.3−)	1994 02 13	411	0.4−	0.8−	1998 05 16	704	0.9−	0.3−
1992 10 01	400	(31.0− 15.2−)	1996 11 15	801	(0.0 2.6−)		1998 05 16	704	2.0−	1.4−
1994 02 07	411	0.8−	1996 12 09	801	(0.8− 2.5−)		1998 05 22	566	1.4−	0.0
1994 02 07	411	0.4−	1996 12 09	801	(0.6− 2.7−)		1998 05 22	566	1.5−	0.6−
1994 02 09	809	1.2−	1998 04 16	689	0.2+	1.7+	1998 05 22	566	(2.4− 0.2−)	
1994 02 09	809	(2.4− 0.0)	1998 04 17	689	1.0+	0.5+	1998 05 28	699	0.7−	0.2−
1994 02 09	809	1.5−	1998 04 21	704	1.4+	0.3+	1998 05 28	699	0.7−	0.3+
1994 02 10	809	1.5+	1998 04 21	704	0.8−	1.2−	1998 05 28	699	1.1−	0.6−

(8821)* 1987 DP₆ = 1990 UR₃

Discovered 1987 Feb. 23 by H. Debehogne at the European Southern

Observatory.

Id. B. G. Marsden (*MPC* 17439)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	121.02527		(2000.0)	P	Q
<i>n</i>	0.19183814	ω	325.42559	−0.33975048	−0.93845307
<i>a</i>	2.9774610	Ω	144.32095	+0.88520828	−0.34143348
<i>e</i>	0.1055887	<i>i</i>	6.12719	+0.31776707	−0.05223995
<i>P</i>	5.14	<i>H</i>	13.0	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1987 02 23	809	0.5−	0.0	1987 03 06	809	0.8+	0.1+	1998 03 26	910	0.0	0.1+
1987 02 23	809	0.5−	0.0	1987 03 10	809	1.3+	2.2−	1998 03 26	910	0.0	0.1+
1987 02 23	809	0.3−	0.0	1987 03 10	809	1.4+	2.1−	1998 03 26	910	0.1+	0.3+
1987 02 26	809	0.0	0.1+	1987 03 10	809	1.6+	1.8−	1998 04 23	704	1.0+	0.9−
1987 02 26	809	0.2+	0.2+	1990 10 16	809	(2.4+ 0.5−)		1998 04 23	704	0.0	0.2+
1987 02 26	809	0.3−	0.0	1990 10 16	809	1.5+	0.1−	1998 04 23	704	0.5+	0.6−
1987 02 27	809	0.8−	0.5+	1990 10 16	809	1.0+	0.1+	1998 04 23	704	0.1+	0.4−
1987 02 27	809	0.7−	0.6+	1990 10 16	809	0.9+	0.7−	1998 05 01	704	0.6+	0.1+
1987 02 27	809	0.6−	0.9+	1990 10 16	809	0.6+	0.9−	1998 05 01	704	0.1+	0.4+
1987 03 01	809	0.4+	0.1−	1990 10 16	809	0.7+	1.0−	1998 05 01	704	0.3−	0.1+
1987 03 01	809	0.4+	0.0	1990 10 19	809	0.2+	0.4+	1998 05 01	704	0.4−	0.9−
1987 03 01	809	0.5+	0.4+	1990 10 19	809	0.5−	1.0+	1998 05 01	699	0.6−	0.5+

1987 03 02	809	0.6−	0.6+	1990 10 19	809	1.1−	0.9+	1998 05 01	699	0.0	0.7+
1987 03 02	809	0.5−	0.7+	1990 10 20	809	0.4+	1.2−	1998 05 01	699	0.1−	0.4+
1987 03 02	809	0.4−	0.5+	1990 10 20	809	0.3−	1.4−	1998 05 05	699	0.6−	0.0
1987 03 03	809	0.6−	0.7+	1990 10 20	809	0.6−	1.8−	1998 05 05	699	0.1−	0.3+
1987 03 03	809	0.7−	0.6+	1990 10 24	809	0.5+	0.2−	1998 05 05	699	0.6+	0.4+
1987 03 03	809	0.7−	0.5+	1990 10 24	809	0.5−	0.3−	1998 05 22	704	0.4−	0.3−
1987 03 04	809	0.6−	0.7+	1990 10 24	809	1.1−	0.0	1998 05 22	704	0.3+	0.1+
1987 03 04	809	0.5−	0.6+	1992 04 04	809	1.2+	0.1+	1998 05 22	704	1.0−	1.1−
1987 03 04	809	0.5−	0.7+	1997 01 31	691	0.4−	0.0	1998 05 22	704	0.6−	1.5−
1987 03 05	809	0.1+	0.9−	1997 01 31	691	0.2−	0.3−	1998 05 24	704	0.0	1.0−
1987 03 05	809	0.0	0.9−	1997 01 31	691	0.2−	0.4−	1998 05 24	704	0.7−	0.5+
1987 03 05	809	0.1+	1.0−	1998 03 25	910	0.4+	0.9−	1998 05 24	704	0.3−	1.1−
1987 03 06	809	0.2+	0.2−	1998 03 25	910	0.4+	0.2−	1998 05 24	704	0.3−	0.2+
1987 03 06	809	0.4+	0.1+	1998 03 25	910	0.3+	0.5−	1998 05 24	704	0.1−	0.1−

(8822)* 1987 RQ₂ = 1979 SG₄ = 1991 RZ₂₄

Discovered 1987 Sept. 1 by L. G. Karachkina at the Crimean Astrophysical

Observatory.

Id. E. Bowell (*MPC* 20014), G. V. Williams (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	238.46322		(2000.0)	P	Q
<i>n</i>	0.24440319	ω	298.35585	+0.99863506	+0.02443242
<i>a</i>	2.5335616	Ω	60.27755	−0.00270767	+0.90687305
<i>e</i>	0.2632503	<i>i</i>	3.04711	−0.05216026	+0.42069505
<i>P</i>	4.03	<i>H</i>	14.2	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1955 10 25	675	0.2−	1.3−	1997 02 04	691	0.6−	0.1−	1998 04 20	704	1.1−	0.5−
1955 10 25	675	0.2+	0.1−	1997 02 04	691	0.5−	0.4−	1998 04 20	704	0.8+	1.5+
1979 09 24	095	1.0+	1.1−	1997 02 06	691	0.1+	0.7−	1998 04 20	704	(5.6− 1.4−)	
1987 09 01	095	0.3−	0.5−	1997 02 06	691	0.1+	0.4−	1998 04 21	704	1.7−	0.8+
1987 09 22	095	1.2+	0.1−	1997 02 06	691	0.2−	0.5−	1998 04 21	704	0.2+	0.3+
1987 09 24	413	1.4−	0.5−	1997 02 10	691	0.1−	0.2−	1998 04 21	704	1.1+	0.4−
1987 09 25	095	2.0+	1.3+	1997 02 10	691	0.2−	0.2−	1998 04 21	704	1.2+	1.3−
1991 09 14	675	0.5−	0.0	1997 02 10	691	0.2+	0.1−	1998 04 21	704	0.8−	1.6−
1991 09 14	675	1.0−	0.2+	1998 03 29	704	0.3−	0.2+	1998 04 22	704	0.0	0.5−
1995 08 25	801	0.0	0.6−	1998 03 29	704	0.8+	0.5−	1998 04 22	704	0.3−	0.7−
1995 08 25	801	0.0	0.4−	1998 03 29	704	(0.9− 2.6+)		1998 04 22	704	1.1+	1.1−
1995 08 28	801	0.4+	0.8−	1998 03 29	704	0.1+	2.0+	1998 04 22	704	1.7−	1.3−
1995 08 28	801	0.2+	0.6−	1998 04 20	704	0.5−	0.9−	1998 04 22	704	(4.9− 0.7+)	

(8823)* 1987 WS₃

Discovered 1987 Nov. 24 by S. McDonald at the Anderson Mesa Station of the

Lowell Observatory.

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	215.80387		(2000.0)	P	Q
<i>n</i>	0.23925545	ω	163.71301	+0.66859453	−0.71341681
<i>a</i>	2.5697734	Ω	243.78847	+0.65351849	+0.69832662
<i>e</i>	0.2418989	<i>i</i>	13.52392	+0.35481676	+0.05810666
<i>P</i>	4.12	<i>H</i>	13.0	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1987 11 22	675	0.2−	1.6+	1995 10 24	801	0.2−	0.6−	1998 05 16	426	0.5−	0.8+
1987 11 22	675	0.2−	0.0	1995 10 26	801	0.2+	0.3−	1998 05 21	426	0.0	0.1+
1987 11 24	688	2.0+	0.2−	1995 10 26	801	0.2+	0.3−	1998 05 21	426	0.1−	0.1+
1987 11 24	688	0.9−	0.1+	1995 11 23	801	0.1−	0.6−	1998 05 22	704	0.3+	0.4+
1988 01 15	688	0.5+	1.1−	1995 11 23	801	0.0	0.3−	1998 05 22	704	0.1+	0.0
1988 01 15	688	0.1−	1.6−	1995 11 24	801	0.0	0.3−	1998 05 22	704	0.0	0.0
1988 02 06	688	1.1−	1.5−	1995 11 24	801	0.0	0.2−	1998 05 22	704	0.4+	

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1993 05 17	675	0.4−	1.0+	1995 02 02	670	1.6+	1.2+	1998 05 27	704	1.6−	0.3−
1993 05 17	675	1.2−	0.6+	1996 08 11	413	0.1+	1.3−	1998 06 04	704	0.3+	0.3+
1993 05 19	675	0.8+	0.0	1996 08 11	413	0.0	0.7+	1998 06 04	704	0.7−	0.3+
1993 05 19	675	0.2+	1.0+	1998 04 30	732	(2.4+	0.1+)	1998 06 04	704	0.7−	1.2+
1993 05 22	674	0.0	0.3−	1998 04 30	732	1.5+	0.1−	1998 06 04	704	1.1+	0.1+
1993 05 22	674	0.5+	0.2−	1998 05 01	732	0.9−	1.2+	1998 06 04	704	0.5+	0.4+
1993 05 22	674	0.2+	0.2+	1998 05 01	732	1.0−	1.3+				

(8826)* 1988 PZ₁ = 1979 BN₂

Id. S. J. Bus (*MPC* 18113)

Williams

M	268.19635		(2000.0)	P	Q
n	0.17422578	ω	318.43455	+0.95507242	+0.29635160
a	3.1748833	Ω	24.32752	-0.26960984	+0.87370310
e	0.1735914	i	0.48996	-0.12307402	+0.38577016
P	5.66	H	12.9	G 0.15	U 1

Residuals in seconds of arc

1979 01 27	675	2.2−	1.2−	1998 04 21	704	0.2−	0.2−	1998 05 22	704	0.4−	0.7+
1979 01 29	675	1.6+	1.6−	1998 04 21	704	0.2−	0.1+	1998 05 22	699	1.2+	0.4−
1981 05 08	675	0.8+	1.7+	1998 04 21	704	0.4−	0.0	1998 05 22	699	1.0−	0.9+
1988 08 13	033	0.5−	0.1−	1998 04 21	704	0.2−	1.1+	1998 05 22	704	0.6−	1.7−
1988 08 13	511	0.5−	0.4−	1998 04 21	704	0.5−	1.8+	1998 05 22	699	0.6+	0.6−
1988 08 13	511	0.6−	0.6+	1998 04 22	704	0.4+	0.1−	1998 05 22	704	1.2−	0.9+
1988 08 14	033	0.7−	0.2−	1998 04 22	704	1.4+	0.0	1998 05 23	704	0.4−	0.7+
1988 08 14	033	0.8−	0.5−	1998 04 22	704	1.4+	0.8−	1998 05 23	704	0.3+	0.9−
1988 08 15	511	1.4−	0.4−	1998 04 22	704	(1.4+	2.7−)	1998 05 23	704	0.6+	0.2−
1988 08 15	511	1.6−	0.3+	1998 04 25	699	0.8−	0.1−	1998 05 23	704	0.8+	0.3+
1988 09 11	675	1.1+	0.2−	1998 04 25	699	0.0	0.4+	1998 05 23	704	0.5+	1.5−
1988 09 11	675	0.4+	0.1−	1998 04 25	699	0.4−	0.3−	1998 05 23	704	0.1+	0.9+
1988 09 16	675	0.5+	0.5+	1998 05 01	704	0.5+	0.1−	1998 05 23	704	0.3−	0.5−
1988 09 16	675	1.0+	0.1−	1998 05 01	704	0.8+	0.5−	1998 05 23	704	0.2−	0.8+
1988 10 07	675	0.1−	0.7−	1998 05 01	704	0.6+	0.8−	1998 05 23	704	1.2−	1.6−
1988 10 07	675	0.8+	1.3−	1998 05 01	704	0.8−	0.0	1998 05 23	704	0.2+	0.3+
1988 10 09	675	1.8+	0.3−	1998 05 18	699	0.9−	0.0	1998 05 24	704	0.5+	0.5+
1988 10 09	675	1.7+	0.7−	1998 05 18	699	0.1−	1.6−	1998 05 24	704	0.5−	2.8−
1994 10 10	691	0.1−	0.5+	1998 05 18	699	0.2+	1.4+	1998 05 24	704	1.7+	0.5+
1994 10 10	691	0.2−	0.5+	1998 05 22	704	0.8−	0.6−	1998 05 24	704	0.6−	0.9−
1994 10 10	691	0.1−	0.4+	1998 05 22	704	1.1+	0.5+	1998 05 24	704	2.9−	0.1+

(8827)* 1988 PO₂ = 1991 LY₆ = 1995 QR₃

Discovered 1988 Aug. 13 at Tautenburg.

Id. S. Nakano (*MPC* 25637), G. V. Williams (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5	Nakano			
M 291.40921	(2000.0)	$\mathbf{P}$	$\mathbf{Q}$	
n 0.28005078	ω 190.91517	+0.94371827	+0.32747181	
a 2.3137238	Ω 149.84122	-0.29606741	+0.89899684	
e 0.1489197	i 5.30549	-0.14744461	+0.29080387	
P 3.52	H 15.2	G 0.15	U	2

Residuals in seconds of arc

1988 08 13	033	1.4+	1.3−	1995 08 24	372	1.7−	1.2+	1998 05 08	910	1.2+	0.7−
1988 08 14	033	0.5+	1.4−	1995 08 24	372	(4.6+)	(7.1+)	1998 05 15	113	0.4+	0.3+
1988 08 14	033	1.1+	0.7−	1995 08 30	400	1.0−	0.6−	1998 05 15	113	0.0	0.2−
1988 09 11	675	1.0−	1.0+	1995 08 30	400	0.5−	0.2−	1998 05 22	704	0.1+	0.2−
1988 09 11	675	1.1−	0.2+	1995 09 01	397	0.2−	0.1+	1998 05 22	704	0.7−	0.9+
1988 09 14	511	(5.1+	4.5−)	1995 09 01	397	0.9+	1.2+	1998 05 22	704	0.0	0.3+
1988 09 14	511	0.1−	1.0−	1995 09 01	397	1.3+	0.5+	1998 05 22	704	0.4−	1.5+
1988 09 14	675	1.0+	0.6−	1995 09 03	400	0.8−	0.5−	1998 05 22	704	0.4+	0.7−
1988 09 14	675	1.7+	0.6−	1995 09 03	400	0.4−	0.6−	1998 05 24	704	0.9−	0.2−
1988 09 15	511	1.8+	0.4−	1997 01 31	691	0.2−	0.7−	1998 05 24	704	0.1−	0.7+
1988 09 15	511	(0.1−	2.7−)	1997 01 31	691	0.4−	0.6−	1998 05 24	704	0.1+	1.3+
1988 09 15	511	(1.0+	2.6−)	1997 01 31	691	0.1−	0.1−	1998 05 24	704	0.8−	0.2−
1988 09 16	675	1.3−	1.8+	1998 05 07	910	1.1+	0.2−	1998 05 24	704	1.2−	0.2+

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1988 09 16	675	0.9-	1.0+	1998 05 07	910	1.2+	0.2-	1998 05 25	699	0.4-	0.7+
1991 06 08	809	1.2-	0.5-	1998 05 07	910	1.2+	0.2-	1998 05 25	699	0.4+	0.5+
1991 06 08	809	1.4-	1.1-	1998 05 08	910	1.1+	0.6-	1998 05 25	699	0.5+	0.1-
1991 06 08	809	1.1-	0.9-	1998 05 08	910	1.1+	0.7-				

(8828)* 1988 RC₇ = 1979 FY₁

Discovered 1988 Sept. 10 by H. Debehogne at the European Southern Observatory.

Id. G. V. Williams (*MPC* 29610)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	202.58358		(2000.0)	P	Q		
<i>n</i>	0.26365874	ω	206.75695	+0.91350642	-0.40671879		
<i>a</i>	2.4086550	Ω	177.19241	+0.39885949	+0.89090490		
<i>e</i>	0.2218058	<i>i</i>	10.90368	+0.08010697	+0.20215908		
<i>P</i>	3.74	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1979 03 23	095	0.9-	0.4-	1994 03 14	675	1.1+	0.7+	1998 04 22	704	0.5+	0.4+
1988 09 05	675	1.1-	0.2+	1994 03 14	675	0.8-	0.2+	1998 04 22	704	0.2+	0.3+
1988 09 07	675	0.0	0.7-	1994 04 03	675	(0.7+	2.1+)	1998 04 22	704	0.1+	0.3+
1988 09 10	809	(2.6-	1.7-)	1994 04 03	675	0.1+	0.3+	1998 04 23	704	0.1-	0.0
1988 09 10	809	2.3-	1.6-	1994 04 04	675	1.3+	1.0+	1998 04 23	704	0.3+	0.1-
1988 09 10	809	1.8-	1.6-	1994 04 04	675	1.3+	1.8-	1998 04 23	704	0.2-	0.3-
1988 09 11	675	0.3+	0.5-	1997 03 13	688	0.5-	0.6-	1998 04 23	704	0.3+	0.1+
1988 09 11	675	0.2+	0.2-	1997 03 13	688	0.0	0.8-	1998 04 23	704	0.1-	0.4+
1988 09 14	807	0.5+	0.7-	1997 03 13	688	0.4-	0.8-	1998 04 24	704	0.3-	0.2-
1988 09 14	809	0.8-	0.5+	1997 03 13	688	0.2-	0.8-	1998 04 24	704	0.9-	0.0
1988 09 14	809	0.7-	0.5+	1998 04 20	704	0.6-	0.8+	1998 04 24	704	0.3-	0.3+
1988 09 14	809	0.5-	0.6+	1998 04 20	704	0.3-	0.6-	1998 04 24	704	0.2-	0.7-
1988 09 15	807	0.2+	0.3-	1998 04 20	704	0.5+	0.1-	1998 04 24	704	1.0-	0.1-
1988 09 16	675	1.7+	1.0+	1998 04 20	704	0.3+	0.2-	1998 05 16	704	0.0	0.5+
1988 09 16	675	1.5+	0.8+	1998 04 20	704	0.8-	0.1-	1998 05 16	704	0.3-	0.2-
1988 09 19	809	0.3+	0.1-	1998 04 21	704	0.5+	0.3+	1998 05 16	704	0.2+	0.3+
1988 09 19	809	0.4+	0.2+	1998 04 21	704	0.0	0.3+	1998 05 16	704	0.5+	1.7-
1988 09 19	809	0.4+	0.3+	1998 04 21	704	0.7+	0.0	1998 05 16	704	1.5-	1.2-
1988 09 20	809	0.2-	0.5+	1998 04 21	704	0.4+	0.3-	1998 05 23	699	1.0-	0.2-
1988 09 20	809	0.0	0.3+	1998 04 21	704	0.5+	0.7-	1998 05 23	699	0.2-	0.4+
1988 09 20	809	0.1+	0.1+	1998 04 21	104	0.1+	0.1-	1998 05 23	699	0.1-	0.1-
1988 10 07	675	0.3+	0.7-	1998 04 21	104	0.2-	0.0	1998 05 24	699	1.6+	0.6-
1988 10 07	675	1.0+	1.4-	1998 04 21	104	0.1-	0.2+	1998 05 24	699	0.4-	0.2-
1988 10 09	675	0.9+	0.1+	1998 04 22	704	0.3-	0.4-				
1988 10 09	675	0.9+	0.5-	1998 04 22	704	0.0	0.2-				

(8829)* 1988 RV₁₀ = 1993 OR₇

Discovered 1988 Sept. 14 by S. J. Bus at Cerro Tololo.

Id. B. G. Marsden (*MPC* 22684)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Marsden			
<i>M</i>	49.36881		(2000.0)	P	Q		
<i>n</i>	0.17222806	ω	35.00445	-0.99749761	+0.06574683		
<i>a</i>	3.1993870	Ω	148.73464	-0.07069704	-0.93104354		
<i>e</i>	0.1178737	<i>i</i>	2.87123	+0.00066786	-0.35893632		
<i>P</i>	5.72	<i>H</i>	13.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1988 09 14	807	0.3-	0.7-	1993 07 23	809	1.1-	0.1-	1998 05 22	704	0.3-	0.3-
1988 09 15	807	1.1+	0.5-	1993 07 24	809	(0.1-	2.7-)	1998 05 22	704	0.3+	1.1-
1988 09 16	807	1.0+	0.4-	1993 07 26	809	1.0-	0.4-	1998 05 22	704	0.3+	0.6-
1988 10 04	807	0.4+	0.2-	1993 07 26	809	(2.2-	0.8-)	1998 05 22	699	0.4+	0.6-
1988 10 07	807	0.0	0.5-	1993 07 26	809	(3.3-	0.4-)	1998 05 22	704	0.5+	0.6-
1988 10 08	807	0.7+	0.9-	1995 10 28	327	0.4+	0.6-	1998 05 22	699	0.2-	0.3-
1988 10 08	807	0.8+	0.3-	1995 10 28	327	0.0	1.1-	1998 05 22	699	0.1-	0.5-
1988 11 03	807	0.0	0.3-	1995 10 28	327	0.2+	0.5-	1998 05 22	566	0.2-	0.8+
1988 11 05	807	0.4-	0.8-	1997 01 10	689	0.8-	1.2-	1998 05 22	566	0.0	0.7-
1991 02 07	675	0.4-	0.6-	1997 01 10	691	0.4-	0.5-	1998 05 22	566	0.3+	0.3+
1991 02 07	675	0.4+	0.7+	1997 01 10	691	0.3-	0.6-	1998 05 23	699	0.2+	0.6-

1993 07 12	809	0.3-	2.0+	1997 01 10	691	0.3-	0.6-	1998 05 23	699	0.3-	0.4-
1993 07 12	809	(0.5-	2.1+)	1998 05 01	566	0.0	0.2+	1998 05 23	699	0.5+	0.3-
1993 07 12	809	0.4-	1.3+	1998 05 01	566	0.2-	0.1-	1998 05 24	704	0.1+	0.1-
1993 07 19	809	(2.5+	1.5+)	1998 05 01	566	0.6-	0.0	1998 05 24	699	0.1-	0.1+
1993 07 19	809	(2.3+	1.2+)	1998 05 02	566	0.1-	0.4+	1998 05 24	699	1.0+	1.0-
1993 07 19	809	1.5+	1.5+	1998 05 02	566	0.2-	0.3+	1998 05 24	704	0.1-	0.2+
1993 07 20	809	0.7+	1.4-	1998 05 02	566	0.5-	0.6-	1998 05 24	699	0.4+	0.6-
1993 07 20	809	0.1+	1.3-	1998 05 05	699	0.2+	0.5+	1998 05 24	704	0.5-	0.0
1993 07 20	809	0.1+	0.8-	1998 05 05	699	0.0	0.1+	1998 05 24	704	0.0	0.3-
1993 07 23	809	1.6-	0.4+	1998 05 05	699	0.4-	0.3-	1998 05 24	704	0.4-	0.5+
1993 07 23	809	1.2-	0.4+	1998 05 22	704	0.2+	0.1-				

(8830)* 1988 VZ = 1993 OZ₁₃ = 1995 AP

Discovered 1988 Nov. 7 by Y. Kushida and M. Inoue at the Yatsugatake South Base Observatory.

Id. G. V. Williams (*MPC* 24737)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	284.55102		(2000.0)	P	Q		
<i>n</i>	0.17320952	ω	313.04636	+0.98012424	+0.16946216		
<i>a</i>	3.1872898	Ω	37.54583	-0.09309867	+0.85202050		
<i>e</i>	0.2275829	<i>i</i>	9.74474	-0.17518308	+0.49532176		
<i>P</i>	5.69	<i>H</i>	11.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1988 11 02	872	1.1-	0.2-	1993 08 14	808	1.5+	1.1+	1995 01 27	104	0.3-	1.2-
1988 11 02	399	0.1-	0.1-	1993 08 14	808	0.4+	0.7-	1995 01 31	104	0.4+	0.4+
1988 11 02	399	0.3+	1.0-	1995 01 09	104	0.3+	0.5+	1995 01 31	104	0.9-	0.7-
1988 11 02	872	1.1+	0.1-	1995 01 09	104	0.1+	0.3+	1995 01 31	104	1.4-	1.8-
1988 11 02	399	0.8+	0.9+	1995 01 09	104	0.2-	0.2+	1995 02 01	104	0.5-	0.3-
1988 11 04	033	0.7-	0.2-	1995 01 09	104	0.7-	0.2-	1995 02 01	104	0.2+	0.6+
1988 11 04	033	0.9-	0.4-	1995 01 09	104	0.8-	0.3-	1995 02 05	104	0.7+	0.3+
1988 11 06	896	(8.3-	1.7+)	1995 01 09	104	0.3-	0.1-	1995 02 05	104	0.3+	0.2+
1988 11 07	896	(2.7+	1.3+)	1995 01 11	104	0.0	0.1-	1995 02 05	104	0.1+	0.3+
1988 11 07	896	0.1+	0.6+	1995 01 11	104	0.1+	0.2-	1995 02 05	104	0.3-	0.3+
1988 11 10	872	0.1-	0.7-	1995 01 11	104	0.2+	0.2-	1995 02 16	104	1.1+	0.6+
1988 11 10	872	0.1-	0.6-	1995 01 11	104	0.2+	0.2-	1995 02 16	104	0.7+	0.6+
1988 11 11	872	2.4-	1.5+	1995 01 12	104	0.6-	0.5+	1995 02 16	104	0.8+	0.5+
1988 11 11	872	(2.7-	0.8+)	1995 01 12	104	0.2-	0.5+	1995 02 16	104	0.8+	0.4+
1988 11 11	399	0.7+	0.9-	1995 01 12	104	0.7+	0.6+	1995 02 20	104	0.6-	0.4-
1988 11 11	399	0.0	0.9-	1995 01 12	104	1.2+	0.5+	1995 02 20	104	1.1-	0.4-
1988 11 11	399	0.8+	0.4-	1995 01 15	104	0.4+	0.3-	1998 04 28	809	(2.3+	0.2+)
1988 11 11	399	0.1+	0.1-	1995 01 15	104	0.1+	0.3+	1998 04 28	809	1.7+	0.8-
1988 11 12	386	0.1+	1.1-	1995 01 15	104	1.1+	0.4+	1998 04 28	809	(2.4+	0.8-)
1988 11 12	386	0.1+	0.6-	1995 01 15	104	1.0+	0.2-	1998 05 22	704	0.2+	0.5+
1988 11 13	872	0.9+	0.0	1995 01 15	104	0.7+	0.5-	1998 05 22	704	0.9-	1.2+
1988 11 14	872	(1.4-	2.8+)	1995 01 16	104	0.4-	0.2-	1998 05 22	704	0.1-	0.7+
1988 11 14	872	0.4+	1.2+	1995 01 16	104	0.3-	0.0	1998 05 22	704	0.7+	0.6+
1988 11 14	399	1.2+	1.1-	1995 01 16	104	0.3-	0.4-	1998 05 22	704	(0.5-	2.6+)
1988 11 14	399	0.7-	1.3+	1995 01 16	104	0.3-	0.5-	1998 05 24	704	0.0	0.1+
1988 11 14	399	0.9-	1.6+	1995 01 17	104	0.2-	0.0	1998 05 24	704	0.2-	0.5+
1988 12 03	386	0.2-	1.6+	1995 01 17	104	0.4-	0.0	1998 05 24	704	0.5-	0.5+
1988 12 03	386	0.4-	1.8+	1995 01 17	104	0.4-	0.3-	1998 05 24	704	0.5+	1.6-
1993 07 22	808	1.6-	1.1-	1995 01 17	104	0.9-	0.5-	1998 05 24	704	0.8-	0.1-
1993 07 22	808	(3.5-	0.5+)	1995 01 27	104	0.5+	0.6-				

Residuals in seconds of arc

1989 02 02	033	0.5+	0.5-	1996 11 12	691	0.6-	0.0	1998 05 01	704	0.2+	0.6-
1989 02 04	033	0.9+	0.4-	1998 04 21	704	(2.2+	0.9+)	1998 05 13	113	0.7-	0.5+
1989 02 10	033	0.2+	0.2-	1998 04 21	704	0.9-	0.9+	1998 05 13	113	1.5-	1.9-
1989 02 10	033	0.4+	0.0	1998 04 21	704	0.1-	0.1+	1998 05 15	113	0.3-	0.8+
1991 09 12	675	0.3+	0.1+	1998 04 21	704	0.1-	0.3+	1998 05 15	113	0.3+	0.6+
1991 09 12	675	1.1+	1.2-	1998 04 21	704	0.1-	0.1+	1998 05 22	704	0.5+	0.0
1991 09 14	675	0.1-	1.0-	1998 04 21	113	0.6-	0.2-	1998 05 22	704	1.1+	0.5-
1991 09 14	675	0.3-	1.2-	1998 04 22	704	0.2+	0.1+	1998 05 22	704	0.6+	0.0
1994 05 15	691	2.0-	0.0	1998 04 22	704	0.7+	0.2-	1998 05 22	704	1.7-	0.8-
1994 05 15	691	1.7-	0.0	1998 04 22	704	0.6+	0.3+	1998 05 22	704	(2.1-	0.3+)
1994 05 15	691	(2.4-	1.2-)	1998 04 22	704	0.3+	0.0	1998 05 24	704	1.2+	0.6+
1995 09 22	400	(2.4+	0.2-)	1998 04 22	704	0.1-	0.1+	1998 05 24	704	0.4+	0.6-
1995 09 22	400	1.5+	0.0	1998 04 22	113	0.6-	0.3-	1998 05 24	704	0.9+	0.1-
1995 09 30	400	(2.5+	2.4+)	1998 04 22	113	0.4+	0.4-	1998 05 24	704	0.9+	0.2+
1995 09 30	400	1.0-	0.5+	1998 04 25	699	0.8+	0.1-	1998 05 24	704	0.2-	1.0-
1996 09 05	691	0.8-	0.3-	1998 04 25	699	0.2+	0.2+	1998 05 28	699	0.0	0.2+
1996 09 05	691	0.8-	0.5-	1998 05 01	704	0.1-	0.3-	1998 05 28	699	0.7+	0.0
1996 09 05	691	0.8-	0.4-	1998 05 01	704	0.1-	0.8-	1998 05 28	699	0.6+	0.2+
1996 11 12	691	0.8-	0.2-	1998 05 01	704	0.1+	0.7-	1998 06 01	113	1.2-	0.1-
1996 11 12	691	0.6-	0.1+	1998 05 01	704	0.8+	0.2-	1998 06 01	113	0.8-	0.4+

(8832)* 1989 EC₃ = 1977 FE₁ = 1977 GS = 1979 UE₁

Discovered 1989 Mar. 2 by E. W. Elst at the European Southern Observatory.

Id. T. Kobayashi (*MPC* 15894), H. Kaneda (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23896422	ω	278.28769	-0.22350728	-0.97462572		
<i>a</i>	2.5718609	Ω	184.68091	+0.94280454	-0.21299607		
<i>e</i>	0.1236316	<i>i</i>	8.60858	+0.24731376	-0.06882867		
<i>P</i>	4.12	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1952 01 31	675	0.1+	0.1+	1991 09 30	691	0.6-	0.7+	1998 04 23	704	0.9+	1.1+
1952 01 31	675	0.5+	0.5+	1991 09 30	691	0.5-	0.3+	1998 05 05	699	0.1+	0.9+
1977 03 25	095	0.6+	0.3-	1994 06 10	691	1.2-	0.1-	1998 05 05	699	0.1+	1.4-
1977 04 10	381	0.2+	0.0	1994 06 10	691	1.5-	0.1+	1998 05 05	699	0.6+	1.7-
1977 04 10	381	0.4+	0.1+	1994 06 10	691	1.2-	0.0	1998 05 22	704	0.5-	1.3+
1979 10 26	033	(1.3+	7.4+)	1994 06 13	691	1.4-	0.0	1998 05 22	704	0.3-	1.0+
1979 10 26	033	(1.3+	6.8+)	1994 06 13	691	1.1-	0.4-	1998 05 22	704	0.3+	0.2-
1979 10 26	033	(0.6+	7.0+)	1995 07 19	104	0.4+	0.1+	1998 05 22	704	0.1-	0.2-
1989 02 04	809	0.7+	0.4-	1995 07 19	104	0.8+	0.4+	1998 05 22	704	0.2+	0.5-
1989 02 04	809	0.8+	0.6-	1995 07 19	104	0.9+	0.7+	1998 05 24	704	1.2+	0.4+
1989 02 04	809	1.5+	0.9-	1996 12 01	689	1.4+	0.6-	1998 05 24	704	0.3-	0.9-
1989 03 02	809	1.2-	0.9+	1998 04 22	704	0.6+	1.1-	1998 05 24	704	1.0+	0.7+
1989 03 02	809	1.1-	0.4+	1998 04 22	704	0.3+	0.4-	1998 05 24	704	1.4-	1.3+
1989 03 02	809	1.4-	0.4+	1998 04 22	704	0.7-	1.2+	1998 05 24	704	0.4-	0.4-
1989 03 03	809	0.5-	0.5+	1998 04 22	704	(3.1+	1.4-)	1998 05 25	699	0.1+	0.0
1989 03 03	809	0.8-	0.2+	1998 04 22	704	0.2-	0.1-	1998 05 25	699	0.4+	0.4-
1989 03 03	809	1.3-	0.1-	1998 04 23	704	0.7+	0.3-	1998 05 25	699	0.3+	0.2-
1991 09 14	675	0.4-	0.3-	1998 04 23	704	1.0+	0.2+				
1991 09 14	675	0.1-	1.0-	1998 04 23	704	1.6+	0.6-				

(8833)* 1989 RW = 1980 TY₁₂ = 1987 BT₃ = 1993 JB

Discovered 1989 Sept. 3 by E. W. Elst at Haute Provence.

Id. S. Nakano (*MPC* 22228)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20236807	ω	47.58166	-0.13780180	+0.98579127		
<i>a</i>	2.8732587	Ω	214.84481	-0.95093455	-0.15880177		
<i>e</i>	0.1273173	<i>i</i>	9.67823	-0.27700931	+0.05475009		
<i>P</i>	4.87	<i>H</i>	13.2	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1980 10 10	095	0.6+	1.5+	1994 09 02	801	0.2-	0.7-	1998 05 22	704	1.1-	0.2+
1987 01 30	010	0.8-	2.0+	1994 09 08	801	0.0	0.5+	1998 05 22	699	0.1-	0.5-
1987 01 31	010	(4.7-	3.6+)	1994 09 08	801	0.2-	0.5+	1998 05 22	699	0.1-	0.3-
1989 08 30	675	0.3-	1.0-	1994 10 01	801	0.0	0.4-	1998 05 22	699	0.1+	0.3-
1989 08 30	675	0.2+	0.1+	1994 10 01	801	1.0+	1.2+	1998 05 23	423	0.7+	0.6+
1989 09 01	511	0.2-	2.0+	1994 10 04	801	0.6+	0.2+	1998 05 23	423	0.2+	0.6+
1989 09 01	511	1.2-	0.5+	1994 10 04	801	0.5+	0.6+	1998 05 23	423	0.6+	0.9+
1989 09 03	511	0.3-	0.5-	1998 05 05	699	0.6-	0.6-	1998 05 23	423	0.3+	0.9+
1989 09 03	511	0.3-	1.3-	1998 05 05	699	0.7-	0.2-	1998 05 24	699	0.4+	0.4-
1989 09 05	511	0.1+	0.8-	1998 05 05	699	1.0-	0.2-	1998 05 24	704	0.1-	0.1-
1989 09 05	511	1.2+	0.3+	1998 05 15	700	0.7-	0.0	1998 05 24	699	0.1+	0.6-
1989 09 06	511	(1.0-	3.2+)	1998 05 15	700	0.7-	0.2+	1998 05 24	699	0.1+	0.6-
1989 09 06	511	(4.8-	0.6-)	1998 05 16	700	0.3-	0.5+	1998 05 24	704	0.6+	0.3+
1989 09 06	511	0.7-	0.9-	1998 05 16	700	0.6-	0.1-	1998 05 24	704	0.2+	0.1-
1989 09 29	071	(3.4-	0.2-)	1998 05 16	700	0.4-	0.2+	1998 05 24	704	0.2+	0.2+
1989 09 29	071	1.0-	0.0	1998 05 21	423	0.3+	0.9+	1998 05 24	704	0.4-	0.3+
1993 05 14	894	0.6-	1.1+	1998 05 21	423	0.5+	0.4+	1998 06 03	704	0.7+	0.9-
1993 05 14	894	1.3+	0.4-	1998 05 21	423	0.0	0.3+	1998 06 03	704	1.3+	0.5+
1993 05 15	894	0.2+	0.9-	1998 05 21	423	0.6+	0.4+	1998 06 03	704	0.9+	0.0
1993 05 15	894	0.3+	0.3+	1998 05 22	704	1.2-	0.2+	1998 06 03	704	0.1-	0.8-
1993 05 16	894	0.6+	0.7-	1998 05 22	704	0.6-	0.9+	1998 06 03	704	0.3+	0.3+
1993 05 16	894	0.6+	0.7-	1998 05 22	704	0.4-	0.2+				
1994 09 02	801	0.3+	0.2+	1998 05 22	704	0.4-	0.0				

(8834)* 1989 SX₂ = 1986 GO₁ = 1995 WN₂

Discovered 1989 Sept. 26 by E. W. Elst at the European Southern

Observatory.

Id. G. V. Williams (*MPC* 28842, *MPC* 31527)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17363972	ω	8.19175	-0.39704445	-0.91048376		
<i>a</i>	3.1820231	Ω	105.26370	+0.83512413	-0.41066527		
<i>e</i>	0.1499470	<i>i</i>	6.88514	+0.38068805	-0.04871718		
<i>P</i>	5.68	<i>H</i>	12.9	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1986 04 10	054	0.7+	1.4+	1998 03 28	910	0.7-	0.0	1998 05 22	704	0.3-	0.2+
1989 09 26	809	0.2+	1.2+	1998 03 28	910	0.6-	0.0	1998 05 23	699	0.2-	0.5+
1989 09 26	809	1.0-	0.4-	1998 03 28	910	0.5-	0.1+	1998 05 23	699	0.2-	0.3-
1989 09 26	809	1.1-	0.2-	1998 03 30	910	0.3-	0.2-	1998 05 23	699	0.8+	0.5+
1989 09 28	809	(2.7+	1.9+)	1998 03 30	910	0.5-	0.2-	1998 05 24	699	0.7+	0.4+
1989 09 28	809	1.7+	2.1+	1998 03 30	910	0.5-	0.2-	1998 05 24	704	0.3-	0.2-
1989 09 28	809	1.5+	1.3+	1998 03 31	910	0.1+	0.0	1998 05 24	699	0.4+	0.9+
1989 10 07	809	(4.1-	0.8-)	1998 03 31	910	0.6-	0.1-	1998 05 24	704	0.4+	1.0-
1989 10 07	809	(4.7-	0.3-)	1998 03 31	910	0.5-	0.2-	1998 05 24	699	0.5+	0.7+
1989 10 07	809	(5.1-	0.5+)	1998 05 05	699	0.8+	0.8+	1998 05 24	704	(0.7+	2.3-)
1989 11 06	675	1.0-	2.1-	1998 05 05	699	0.2+	0.3-	1998 05 24	704	(1.3+	2.9-)
1989 11 06	675	0.5-	2.3-	1998 05 05	699	0.7-	0.0	1998 06 03	704	0.5+	0.5+
1995 11 16	399	0.3-	0.2-	1998 05 22	704	0.9-	0.9+	1998 06 03	704	0.6-	0.2+
1995 11 16	399	0.3+	1.5+	1998 05 22	704	0.4+	0.0	1998 06 03	704	1.5-	0.2-
1995 11 17	399	0.2-	0.8+	1998 05 22	704	1.1+	0.7+	1998 06 03	704	2.0+	0.6-
1995 11 17	399	0.9-	1.7+	1998 05 22	704	1.3+	0.5-				

(8835)* 1989 SA₃ = 1984 YQ₃

Discovered 1989 Sept. 26 by E. W. Elst at the European Southern

Observatory.

Id. H. Kaneda (*MPC* 15895)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)
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Residuals in seconds of arc

1954 07 29	675	0.9+	0.0	1989 10 08	809	0.7+	0.8-	1998 04 21	704	1.0+	0.3+
1954 07 29	675	0.1+	0.9-	1989 10 08	809	(1.8+	3.1+)	1998 04 22	704	0.5+	0.2-
1978 11 30	675	0.3+	0.3-	1989 10 08	809	(0.8+	3.5+)	1998 04 22	704	0.8+	0.6-
1978 12 01	675	0.5+	0.3+	1989 10 08	809	(0.4+	3.3+)	1998 04 22	704	0.0	0.5-
1984 12 27	095	0.2+	1.9-	1992 03 26	691	2.0-	1.3-	1998 04 22	704	0.6+	0.5-
1984 12 31	095	0.3-	1.6-	1992 03 26	691	1.8-	1.1-	1998 04 22	704	1.0+	0.4-
1989 09 26	809	0.2-	0.9-	1992 03 26	691	1.5-	1.8-	1998 04 30	699	0.1+	0.3-
1989 09 26	809	0.6-	1.1-	1995 10 19	691	0.6-	0.0	1998 04 30	699	0.1+	0.0
1989 09 26	809	0.3+	1.0-	1995 10 19	691	0.5-	0.0	1998 04 30	699	0.5+	0.2-
1989 09 28	809	1.4+	1.0-	1995 10 19	691	0.4-	0.1-	1998 05 01	704	0.1-	0.5-
1989 09 28	809	1.3+	0.2-	1995 11 18	801	0.2+	0.7-	1998 05 01	704	0.2+	0.7+
1989 09 28	809	0.0	0.4-	1995 11 18	801	0.0	0.4-	1998 05 01	704	0.8+	0.6+
1989 09 29	675	0.1+	0.5+	1995 11 22	801	0.1+	0.1-	1998 05 01	704	1.3-	0.4+
1989 09 29	675	0.2+	0.0	1995 11 22	801	0.2-	0.2-	1998 05 01	704	0.1+	0.2+
1989 10 03	809	0.2-	0.9-	1995 12 18	801	0.4+	0.7+	1998 05 02	566	1.7-	1.0-
1989 10 03	809	0.4-	0.9-	1995 12 18	801	0.5+	0.7+	1998 05 02	566	0.8-	0.9-
1989 10 03	809	1.1-	1.0-	1995 12 23	801	0.6+	1.7+	1998 05 02	566	1.6-	0.9-
1989 10 07	809	(0.4+	3.1+)	1995 12 23	801	0.4+	1.7+	1998 05 22	704	0.4-	0.6-
1989 10 07	809	(1.0-	2.9+)	1998 04 21	704	1.0+	0.5-	1998 05 22	704	1.4-	0.1-
1989 10 07	809	(1.6-	3.1+)	1998 04 21	704	1.3+	0.8-	1998 05 22	704	1.3-	0.9+
1989 10 08	809	1.0+	0.7-	1998 04 21	704	0.1+	0.0	1998 05 22	704	0.4-	0.4+
1989 10 08	809	0.2+	1.3-	1998 04 21	704	1.5+	0.2-	1998 05 22	704	0.3-	0.5-

(8836)* 1989 SU₃ = 1976 GD₅ = 1992 FL

Discovered 1989 Sept. 26 by E. W. Elst at the European Southern Observatory.

Id. H. Kaneda (*MPC* 20017)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Asher			
<i>M</i>	48.10779	(2000.0)	P	Q	
<i>n</i>	0.18450854	ω	16.36052	-0.92917339	+0.36929915
<i>a</i>	3.0558010	Ω	185.39273	-0.35532393	-0.90424985
<i>e</i>	0.0367922	<i>i</i>	9.78187	-0.10189074	-0.21436033
<i>P</i>	5.34	<i>H</i>	13.0	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1976 04 02	095	0.1-	0.6+	1989 10 07	809	0.0	1.0+	1993 07 24	801	0.2-	1.1-
1989 09 26	809	0.7-	1.1-	1989 10 08	809	0.1+	0.1+	1993 07 24	801	0.6+	1.0-
1989 09 26	809	0.4-	0.8-	1989 10 08	809	0.6-	0.2-	1995 11 23	689	0.1-	0.5-
1989 09 26	809	0.5-	0.7-	1989 10 08	809	0.8-	0.5+	1998 05 06	566	1.1-	0.2+
1989 09 28	809	0.6-	0.0	1992 03 23	400	1.7-	0.6-	1998 05 06	566	0.7-	0.5+
1989 09 28	809	0.7-	0.1+	1992 03 23	400	0.6+	1.1-	1998 05 06	566	0.4-	0.1-
1989 09 28	809	0.7-	0.0	1992 03 24	400	(3.4+	3.7+)	1998 05 23	704	0.7-	0.7+
1989 09 29	675	1.1+	0.1-	1992 03 24	400	0.5+	0.9-	1998 05 23	704	0.3-	1.0+
1989 09 29	675	1.4+	1.0-	1992 03 28	400	(2.2-	2.0-)	1998 05 23	704	(0.3-	2.2+)
1989 10 03	809	0.5+	0.8+	1992 03 28	400	0.7+	0.3+	1998 05 23	704	0.7-	1.9+
1989 10 03	809	0.0	0.7+	1993 06 18	801	0.3+	0.4-	1998 05 26	704	0.5+	0.0
1989 10 03	809	0.7+	0.2+	1993 06 18	801	0.3-	0.6+	1998 05 26	704	1.2+	0.0
1989 10 07	809	0.7+	1.0+	1993 07 22	801	0.2+	0.3-	1998 05 26	704	1.9+	0.5-
1989 10 07	809	0.3+	0.5+	1993 07 22	801	0.4-	1.3-	1998 05 26	704	(1.2-	4.0-)

(8837)* 1989 TF₄ = 1968 HN = 1991 CO₅ = 1991 CA₆ = 1992 RN₃Discovered 1989 Oct. 7 by E. W. Elst at the European Southern Observatory.
Id. B. G. Marsden (*MPC* 21108, unpublished), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	26.29877	(2000.0)	P	Q	
<i>n</i>	0.29727288	ω	55.58015	-0.78816592	+0.61477218
<i>a</i>	2.2234764	Ω	162.29774	-0.59145114	-0.74346666
<i>e</i>	0.1231808	<i>i</i>	5.50092	-0.17023520	-0.26327267
<i>P</i>	3.32	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1968 04 22	095	0.6-	1.9-	1992 09 02	809	2.0+	1.9-	1998 05 01	699	0.1+	0.4+
1989 09 28	809	(3.6-	1.2+)	1992 09 02	809	(0.5+	2.8-)	1998 05 01	699	0.3+	0.0
1989 09 28	809	(3.4-	0.1-)	1992 09 02	809	(0.1+	3.3-)	1998 05 01	699	0.2+	0.1+

1989 09 28	809	(4.0-	0.6-)	1992 09 03	809	(0.1-	4.0-)	1998 05 05	699	0.6+	0.4-
1989 10 07	809	0.0	0.7+	1992 09 22	809	0.3+	0.1-	1998 05 05	699	0.1+	0.3-
1989 10 07	809	0.8-	0.0	1992 09 22	809	0.8-	0.2+	1998 05 05	699	0.9+	0.2-
1989 10 07	809	1.0-	0.4+	1992 09 22	809	0.5-	0.0	1998 05 25	699	0.3-	0.1+
1989 10 08	809	1.1+	0.0	1998 04 23	704	0.1-	0.3-	1998 05 25	699	0.1+	0.3-
1989 10 08	809	0.0	0.3+	1998 04 23	704	(2.8+	1.2+)	1998 05 25	699	0.5-	0.3-
1989 10 08	809	0.5-	0.0	1998 04 23	704	(1.1+	2.6+)	1998 06 02	699	0.0	0.2-
1991 02 07	372	(1.0-	6.0-)	1998 04 23	704	0.0	0.8+	1998 06 02	699	0.6-	0.5+
1991 02 07	372	(3.0-	3.8-)	1998 04 24	704	0.4+	0.1+	1998 06 02	699	0.4-	0.3+
1991 02 12	372	0.2+	1.2-	1998 04 24	704	1.1+	0.3+				
1991 02 12	372	0.1-	0.7+	1998 04 24	704	1.7-	1.8+				

(8838)* 1989 UW₂ = 1977 PR₁

Discovered 1989 Oct. 29 by T. Hioki and N. Kawasato at Okutama.

Id. S. Nakano (*MPC* 29297)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano			
<i>M</i>	87.39175	(2000.0)	P	Q	
<i>n</i>	0.17723342	ω	312.22809	-0.92238837	-0.37689320
<i>a</i>	3.1388626	Ω	205.97277	+0.38609106	-0.89306338
<i>e</i>	0.0135640	<i>i</i>	11.13346	+0.01154916	-0.24574235
<i>P</i>	5.56	<i>H</i>	12.1	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1977 08 14	095	1.3+	0.4+	1992 05 07	691	1.0-	0.7+	1998 05 03	566	0.5-	0.9-
1989 10 29	877	0.5-	0.4-	1992 05 07	691	0.9-	0.3+	1998 05 03	566	0.6-	0.5-
1989 10 29	877	(2.4+	1.7+)	1992 05 07	691	0.8-	0.3+	1998 05 05	699	0.1+	0.5+
1989 11 01	877	(3.7-	1.5+)	1997 02 14	376	1.1+	0.1-	1998 05 05	699	0.2+	0.1+
1989 11 01	877	(0.3-	2.5+)	1997 02 14	376	1.1+	0.3+	1998 05 05	699	0.3+	0.7+
1989 11 02	877	0.9-	0.1-	1997 03 01	376	0.6-	0.5+	1998 05 22	704	0.8+	0.6-
1989 11 02	877	1.5+	1.6+	1997 03 01	376	0.9+	1.3-	1998 05 22	704	1.4+	0.4+
1989 11 04	877	1.1-	1.0+	1998 04 30	732	1.0-	0.2+	1998 05 22	704	0.5+	0.1-
1989 11 04	877	0.8-	1.6+	1998 04 30	732	0.9-	0.2+	1998 05 22	704	0.5+	0.5+
1989 11 20	399	0.1+	1.8-	1998 05 01	732	0.8-	1.0-	1998 05 22	704	0.1+	0.1-
1989 11 20	399	1.3+	0.7-	1998 05 01	732	0.7-	0.1+	1998 05 24	704	0.2-	0.6+
1989 11 20	399	1.8+	1.2-	1998 05 02	910	0.1+	0.4-	1998 05 24	704	0.7+	0.2-
1989 11 25	399	1.8-	1.5-	1998 05 02	910	0.3+	0.5-	1998 05 24	704	0.9+	0.3+
1989 11 25	399	0.7-	0.8+	1998 05 02	910	0.2+	0.5-	1998 05 24	704	(1.6-	2.4+)
1989 11 25	399	0.1-	0.3+	1998 05 03	566	0.5-	1.0-	1998 05 24	704	0.6-	1.2+

(8839)* 1989 UB₈ = 1978 UP₃ = 1983 RW₇

Discovered 1989 Oct. 24 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. S. Nakano (*MPC* 16585), B. G. Marsden (*MPC* 24562)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano			
<i>M</i>	212.93266	(2000.0)	P	Q	
<i>n</i>	0.17993883	ω	181.67315	+0.82085681	-0.56917458
<i>a</i>	3.1073211	Ω	213.16219	+0.52500376	+0.78455368
<i>e</i>	0.1748886	<i>i</i>	4.95735	+0.22486696	+0.24599964
<i>P</i>	5.48	<i>H</i>	12.7	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1978 10 28	675	0.4+	0.5-	1994 08 13	809	1.2+	0.3-	1998 04 22	704	1.8+	0.7+
1978 10 29	675	0.5+	0.2-	1994 08 13	809	0.3+	0.1-	1998 05 18	699	1.1-	0.0
1983 09 11	095	0.5-	0.1-	1994 08 13	809	0.7+	0.0	1998 05 18	699	0.3-	0.6-
1989 10 24	095	(0.2-	2.9-)	1994 09 05	809	1.5+	0.4+	1998 05 18	699	0.2-	0.4+
1989 10 24	095	1.0-	0.9-	1994 09 05	809	1.0+	0.9+	1998 05 22	704	0.5+	1.4+
1989 10 26	095	0.9-	0.1+	1994 09 05	809	0.7+	0.9+	1998 05 22	704	0.0	0.5-
1989 10 26	095	(0.8-	2.4-)	1994 09 06	809	1.1-	0.4-	1998 05 22	704	(0.6-	2.6-)
1989 10 27	017	0.7+	1.8-	1994 09 06	809	1.1-	0.4-	1998 05 22	704	0.7-	0.7-
1989 10 27	017	(1.1+	3.6-)	1994 09 06	809	1.3-	0.7-	1998 05 22	704	1.2+	2.0-
1992 05 01	691	0.5+	0.1+	1996 04 07	046	0.6+	0.7+	1998 05 24	704	0.6-	0.3-
1992 05 01	691	0.4+	0.0	1996 04 07	046	0.8+	1.1+	1998 05 24	704	0.4+	1.4-
1992 05 01	691	0.1+	0.2+	1996 04 07	046	0.3-	0.5+	1998 05 24	704	0.9-	0.6-
1994 08 12	809	0.3+	1.0+	1998 04 22	704	0.7+	0.8+	1998 05 24	704	1.5-	1.7-

1994 08 12 809 0.3- 1.2+ 1998 04 22 704 1.2- 1.5+ 1998 05 24 704 (2.3- 0.0)
 1994 08 12 809 1.3- 0.7+ 1998 04 22 704 0.1+ 0.8+

(8840)* 1989 WT = 1984 GX = 1996 VT₇

Discovered 1989 Nov. 20 by S. Ueda and H. Kaneda at Kushiro.

Id. G. V. Williams (*MPC* 28584)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams		Williams	
<i>M</i>	103.43448	<i>P</i>	<i>Q</i>
<i>n</i>	0.28855367	ω	68.49222
<i>a</i>	2.2680449	Ω	67.24350
<i>e</i>	0.0323539	<i>i</i>	4.42865
<i>P</i>	3.42	<i>H</i>	13.9
		<i>G</i>	0.15
		<i>U</i>	1

Residuals in seconds of arc

1984 04 03	095	1.0+	1.4-	1996 12 01	385	0.2-	0.0	1998 05 02	566	0.1+	0.5-
1989 11 20	399	1.4-	0.2+	1996 12 01	369	0.6+	0.4+	1998 05 02	566	0.9+	1.0-
1989 11 20	399	0.3-	1.1+	1996 12 01	369	0.5+	0.7+	1998 05 05	699	0.5+	0.4+
1989 11 20	399	1.3-	1.0-	1996 12 02	369	0.1+	0.5+	1998 05 05	699	0.4-	0.7+
1989 11 25	399	(3.5+ 0.7+)		1996 12 02	369	0.1-	0.5+	1998 05 05	699	0.0	0.5+
1989 11 25	399	0.1+	0.5-	1996 12 19	369	0.3-	0.4-	1998 05 22	704	1.1+	0.1-
1989 11 25	399	1.8+	0.4-	1996 12 19	369	0.5-	0.3-	1998 05 22	704	0.8+	0.4+
1989 12 03	399	1.3-	1.4+	1998 04 22	704	0.9-	0.2+	1998 05 22	704	1.2+	0.1+
1989 12 03	399	0.8+	0.1+	1998 04 22	704	0.0	0.6+	1998 05 22	704	1.2+	0.1+
1989 12 03	399	2.0+	2.3-	1998 04 22	704	0.6-	0.4-	1998 05 22	704	1.6+	0.1+
1991 04 19	675	1.0-	0.3-	1998 04 22	704	0.9-	0.3-	1998 05 22	699	0.2+	0.5-
1991 04 19	675	1.8-	0.5+	1998 04 22	704	0.9-	0.5+	1998 05 22	699	0.3-	0.4-
1996 11 15	905	(2.4- 0.1-)		1998 05 01	704	0.5-	0.4+	1998 05 22	699	0.1-	0.7-
1996 11 15	905	1.7-	0.3-	1998 05 01	704	0.2+	0.0	1998 05 24	704	0.1-	0.5-
1996 11 18	905	0.1+	0.3+	1998 05 01	704	0.2+	1.3+	1998 05 24	704	0.3+	0.2-
1996 11 18	905	0.3-	0.8+	1998 05 01	704	0.3-	0.1+	1998 05 24	704	0.7+	0.7+
1996 12 01	385	0.6+	0.8+	1998 05 01	704	1.4-	1.6+	1998 05 24	704	0.3-	0.1+
1996 12 01	385	0.5+	0.7+	1998 05 02	566	0.1+	0.7-	1998 05 24	704	0.1+	0.1+

**(8841)* 1990 EA₇ = 1974 FC₂ = 1978 EW₂ = 1978 GV = 1988 XP₃
 = 1994 CU₁**

Discovered 1990 Mar. 2 by H. Debehogne at the European Southern

Observatory.

Id. S. Nakano (*MPC* 23237)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano		Nakano	
<i>M</i>	266.40877	<i>P</i>	<i>Q</i>
<i>n</i>	0.24249009	ω	286.34231
<i>a</i>	2.5468697	Ω	351.50939
<i>e</i>	0.0465295	<i>i</i>	9.30429
<i>P</i>	4.06	<i>H</i>	13.0
		<i>G</i>	0.15
		<i>U</i>	2

Residuals in seconds of arc

1953 02 15	675	0.1+	1.4-	1994 03 03	400	0.7-	0.9-	1998 03 01	699	0.4+	0.6-
1953 02 15	675	0.9-	1.3-	1994 03 04	400	0.3-	1.6+	1998 03 01	699	0.5-	0.4+
1974 03 23	805	(0.0 3.2+)		1994 03 04	400	(0.4+ 2.3+)		1998 03 01	699	0.8-	0.0
1978 03 05	095	(2.3- 7.7-)		1998 02 22	566	1.0+	1.2-	1998 03 02	900	0.6-	0.4+
1978 04 07	095	1.8-	0.9-	1998 02 22	566	0.7+	0.8-	1998 03 02	900	0.7-	0.4+
1988 12 01	054	0.1-	0.6+	1998 02 22	566	1.4+	1.4-	1998 03 03	699	0.2-	0.1+
1990 03 02	809	0.1+	0.3-	1998 02 23	732	0.5+	1.3+	1998 03 03	699	0.5-	0.3+
1990 03 02	809	0.4+	0.3-	1998 02 23	732	0.1+	0.6+	1998 03 03	699	0.4-	0.3+
1990 03 02	809	0.7+	0.3-	1998 02 23	732	0.6+	0.3+	1998 03 03	704	0.2+	0.3+
1990 03 03	809	0.1-	0.4-	1998 02 23	566	0.3+	0.9-	1998 03 03	704	0.5+	0.1-
1990 03 03	809	0.3-	0.5-	1998 02 23	566	0.4+	0.9-	1998 03 03	704	0.7+	0.4+
1990 03 03	809	0.0	0.4-	1998 02 23	566	0.2+	1.1-	1998 03 03	704	0.3-	0.0
1990 03 04	809	0.3+	0.1-	1998 02 24	732	1.3-	1.2-	1998 03 03	704	0.3+	0.5+
1990 03 04	809	0.7+	0.1-	1998 02 24	732	0.6+	1.0-	1998 03 04	704	0.8-	0.0
1990 03 04	809	1.1+	0.2-	1998 02 26	699	0.1-	0.3-	1998 03 04	704	0.3-	0.8+
1994 02 08	400	0.4+	0.0	1998 02 26	699	0.4+	0.7+	1998 03 04	704	0.2-	0.2+
1994 02 08	400	0.2+	1.2+	1998 02 26	699	0.4-	0.2+	1998 03 04	704	0.2-	0.4+
1994 02 11	400	0.4-	0.0	1998 02 28	699	1.8-	0.5+	1998 03 04	704	0.2+	0.7+

1994 02 11 400 1.1+ 1.1+ 1998 02 28 699 0.8- 0.8+ 1998 04 25 428 0.3+ 1.3+
 1994 03 03 400 (2.9- 1.9+) 1998 02 28 699 0.2+ 0.1- 1998 04 25 428 0.2+ 1.3+

(8842)* 1990 KF = 1995 WM₄₂ = 1996 CF = 1997 AT₂₂

Discovered 1990 May 20 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 29096)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams		Williams	
<i>M</i>	273.87584	<i>P</i>	<i>Q</i>
<i>n</i>	0.24377020	ω	208.01236
<i>a</i>	2.5379456	Ω	143.09383
<i>e</i>	0.2222229	<i>i</i>	11.25133
<i>P</i>	4.04	<i>H</i>	13.5
		<i>G</i>	0.15
		<i>U</i>	1

Residuals in seconds of arc

1990 05 19	413	(6.2- 0.4-)		1996 02 02	327	0.6-	0.9-	1998 04 24	704	0.5+	1.1-
1990 05 19	413	(3.1+ 0.1+)		1997 01 11	327	0.7-	0.2+	1998 04 24	704	0.2+	0.7-
1990 05 20	413	0.1+	1.6-	1997 01 11	327	0.3+	0.2+	1998 04 24	704	0.1-	0.3-
1990 05 20	413	(3.5+ 0.8-)		1997 01 11	327	1.1+	0.3+	1998 04 25	566	0.0	0.9-
1990 05 26	413	0.7-	0.8+	1997 01 18	327	0.9+	0.4+	1998 04 25	566	0.1-	1.2-
1990 05 26	413	0.8+	0.0	1997 01 18	327	1.2+	0.2-	1998 04 25	566	0.5-	1.0-
1990 05 29	413	0.3-	0.6+	1997 01 18	327	1.4+	0.1+	1998 05 18	700	0.6-	0.2-
1990 05 29	413	(2.7+ 0.1+)		1997 02 01	691	1.1-	0.3-	1998 05 18	700	0.5+	0.2-
1995 11 26	327	0.4+	0.4-	1997 02 01	691	1.1-	0.0	1998 05 22	700	0.1-	0.1+
1995 11 26	327	0.9+	0.2-	1997 02 01	691	1.1-	0.1-	1998 05 22	700	0.4-	0.2-
1995 11 26	327	0.5+	0.8-	1997 02 06	691	0.9-	0.1-	1998 05 23	704	0.2+	0.1+
1995 11 29	327	0.1-	1.1+	1997 02 06	691	0.7-	0.1+	1998 05 23	704	0.3+	0.8+
1995 11 29	327	0.1+	0.5+	1997 02 06	691	1.0-	0.0	1998 05 23	704	0.0	0.5+
1995 11 29	327	0.4-	0.9+	1997 04 06	327	0.4+	0.3+	1998 05 23	704	0.3+	0.6+
1995 11 30	327	0.7-	0.8-	1997 04 06	327	1.1+	0.5+	1998 05 23	704	0.3+	0.6+
1995 11 30	327	0.2-	0.9-	1997 04 06	327	0.7+	0.1+	1998 05 26	704	0.2+	0.4+
1995 11 30	327	0.0	0.1+	1998 03 27	596	0.8+	0.8+	1998 05 26	704	0.6-	0.4+
1996 02 01	327	0.0	0.2-	1998 03 28	596	(2.6+ 0.5-)		1998 05 26	704	0.3-	0.4+
1996 02 01	327	0.2+	0.5+	1998 04 23	704	0.2-	0.8-	1998 05 26	704	0.5-	0.2-
1996 02 01	327	0.0	0.6-	1998 04 23	704	0.4-	0.1-	1998 06 02	699	0.3+	0.0
1996 02 02	327	0.1+	0.9-	1998 04 23	704	0.2+	0.1-	1998 06 02	699	0.2+	0.1-
1996 02 02	327	0.2+	0.0	1998 04 23	704	0.6-	0.3+	1998 06 02	699	0.1+	0.0

(8843)* 1990 OH

Discovered 1990 July 22 by E. F. Helin at Palomar.

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams		Williams	
<i>M</i>	279.04381	<i>P</i>	<i>Q</i>
<i>n</i>	0.22752038	ω	132.87694
<i>a</i>	2.6573934	Ω	217.17084
<i>e</i>	0.3030628	<i>i</i>	13.26767
<i>P</i>	4.33	<i>H</i>	14.0
		<i>G</i>	0.15
		<i>U</i>	2

Residuals in seconds of arc

1990 07 22	675	0.5-	1.0+	1995 12 09	608	0.0	0.2+	1998 04 22	704	0.2-	1.5+
1990 07 22	675	1.0+	0.4-	1995 12 27	608	0.0	0.1-	1998 04 22	704	0.7-	0.1-
1990 07 23	675	0.7-	1.0+	1995 12 27	608	0.2-	0.0	1998 04 22	704	(2.3- 1.4-)	
1990 07 23	675	0.5-	1.1+	1995 12 28	608	0.1-	1.0+	1998 04 22	704	(2.6- 0.9+)	
1990 08 17	675	0.4-	0.7+	1995 12 28	608	0.3+	0.0	1998 05 16	734	1.5+	0.5-
1990 08 17	675	0.4+	0.8-	1996 01 09	608	0.0	0.5-	1998 05 16	734	0.3+	0.5-
1990 08 19	675	0.1-	0.6-	1996 01 09	608	0.3+	0.5-	1998 05 16	734	0.1-	0.4-
1990 10 23	675	0.5+	0.1-	1996 01 12	608	0.1-	0.9+	1998 05 17	734	0.2-	0.1-
1990 10 23	675	(1.1- 2.3-)		1996 01 12	608	0.0	0.8+	1998 05 17	734	0.6+	0.6-
1994 06 09	801	1.3+	0.1+	1998 04 21	704	1.1-	0.6+	1998 05 17	734	1.5+	0.5-
1994 07 13	801	1.0-	0.7-	1998 04 21	704	0.9-	1.1+	1998 05 22	704	1.6+	0.0
1994 07 13	801	0.9-	0.6-	1998 04 21	704	1.6-	0.3+	1998 05 22	704	0.1+	0.8-
1995 12 08	608	0.0	0.2-	1998 04 21	704	(2.6- 1.7+)		1998 05 22	704	1.3+	0.2+
1995 12 08	608	0.1+	0.2+	1998 04 21	704	(2.2- 1.2-)					
1995 12 09	608	0.2-	0.2-	1998 04 22	704	0.7+	0.7+				

Id. G. V. Williams (d, *MPC* 17943), S. Nakano (d, *MPC* 20912)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	302.18750		(2000.0)	P		Q	
<i>n</i>	0.21404032	ω	322.58634	+0.46988062	+0.88214361		
<i>a</i>	2.7678273	Ω	335.39115	-0.79007352	+0.40402649		
<i>e</i>	0.0610834	<i>i</i>	4.43059	-0.39369536	+0.24204388		
<i>P</i>	4.60	<i>H</i>	12.6	<i>G</i>	0.15	<i>U</i>	1
Residuals in seconds of arc							
1953 09 06	675	0.3+	0.3+	1990 09 18	095	(2.7+	0.5-)
1953 09 06	675	0.9-	0.9+	1990 09 20	675	(2.2-	3.5-)
1954 12 30	675	0.9+	0.2-	1990 09 20	675	0.8-	0.1-
1954 12 30	675	0.8-	0.5-	1990 09 22	095	1.4-	0.1+
1990 08 24	675	0.4+	0.7-	1990 09 22	095	1.1-	0.3+
1990 08 24	675	0.4-	0.3-	1990 10 22	675	0.2-	1.9-
1990 08 29	675	0.7+	0.7-	1990 10 22	675	0.3-	0.6-
1990 08 29	675	(3.2+	1.9-)	1998 04 21	704	0.1-	0.6-
1990 08 29	095	1.0+	0.2-	1998 04 21	704	0.5-	0.8-
1990 08 29	095	1.1-	0.9-	1998 04 21	704	0.2-	0.3-
1990 09 14	675	1.2+	1.5-	1998 04 21	704	0.5-	0.5+
1990 09 14	675	(2.4+	0.5-)	1998 04 21	704	0.4-	0.2-
1990 09 15	675	0.5+	1.3+	1998 04 22	704	0.2-	0.8-
1990 09 15	675	1.1-	1.3+	1998 04 22	704	0.8-	0.5-
1990 09 18	675	1.8+	0.6+	1998 04 22	704	0.3+	0.1+
1990 09 18	675	(3.1+	1.0-)	1998 04 22	704	0.5-	0.2-
1990 09 18	095	1.9+	0.8+	1998 04 22	704	0.3+	0.4-

(8845)* 1990 RD = 1992 BY₅ = 1993 FD₃₅

Discovered 1990 Sept. 14 by H. E. Holt at Palomar.

Id. G. V. Williams (*MPC* 23515)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	192.52863		(2000.0)	P		Q	
<i>n</i>	0.20222949	ω	206.40159	+0.91764507	-0.39733642		
<i>a</i>	2.8745711	Ω	176.98281	+0.38442401	+0.88296794		
<i>e</i>	0.2265056	<i>i</i>	7.81998	+0.10072588	+0.24998276		
<i>P</i>	4.87 <th><i>H</i></th> <td>12.9<th><i>G</i></th><td>0.15<th><i>U</i></th><td>1</td></td></td>	<i>H</i>	12.9 <th><i>G</i></th> <td>0.15<th><i>U</i></th><td>1</td></td>	<i>G</i>	0.15 <th><i>U</i></th> <td>1</td>	<i>U</i>	1
Residuals in seconds of arc							
1990 09 14	675	1.6+	1.8-	1992 01 28	691	0.1+	0.5-
1990 09 14	675	(1.5+	2.9-)	1992 01 28	691	1.0-	0.3-
1990 09 15	675	0.3+	0.1-	1993 03 19	809	1.1+	0.1-
1990 09 15	675	0.4+	0.2+	1993 03 20	809	0.1+	0.5+
1990 09 19	675	(1.3+	2.2-)	1993 03 24	809	0.2-	0.7+
1990 09 19	675	(1.1+	3.3-)	1995 09 27	684	0.9-	0.3+
1990 09 20	675	0.1-	0.6-	1995 09 27	684	0.9-	0.6+
1990 09 20	675	0.2-	0.3-	1995 10 01	684	1.4+	0.6-
1990 09 25	809	0.8-	0.3-	1995 10 01	684	0.2+	0.3-
1990 09 25	809	0.5-	0.1-	1997 02 12	689	1.2+	0.5-
1990 09 25	809	0.1-	0.1-	1998 03 25	704	1.2+	0.4-
1990 09 26	809	0.0	0.5+	1998 03 25	704	0.5-	0.1-
1990 09 26	809	0.1+	0.3+	1998 03 25	704	0.8-	0.2-
1990 09 26	809	0.2+	0.1+	1998 03 25	704	0.1+	0.3-
1992 01 28	691	0.3-	0.6-	1998 03 25	704	(3.8-	2.5-)

(8846)* 1990 RK₇ = 1973 AB₁ = 1981 UM₂₆ = 1983 HC₂

Discovered 1990 Sept. 13 by H. Debehogne at the European Southern Observatory.

Id. S. J. Bus (*MPC* 20507), G. V. Williams (*ibid.*, *MPC* 22813)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	127.52112		(2000.0)	P		Q	
<i>n</i>	0.20652302	ω	356.68074	-0.20860279	-0.97737048		
<i>a</i>	2.8345910	Ω	105.35757	+0.89813405	-0.20564828		
<i>e</i>	0.1346044	<i>i</i>	2.08586	+0.38709186	-0.04955540		
<i>P</i>	4.77	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1
Residuals in seconds of arc							
1952 09 15	675	0.1+	1.5-	1990 09 14	809	0.2+	0.3-
1952 09 15	675	0.4+	1.1-	1993 05 21	675	0.1+	1.1-
1973 01 01	095	(1.4-	2.7-)	1995 09 18	691	0.1-	0.0
1981 10 25	675	1.3+	0.1-	1995 09 18	691	0.3-	0.0
1981 10 26	675	0.8+	0.1+	1995 09 18	691	0.2-	0.0
1983 04 16	033	1.3-	1.7-	1997 01 30	098	0.8+	0.8-
1983 04 16	033	0.6-	1.5-	1997 01 30	098	0.6-	0.3+
1990 08 16	809	1.5+	0.5-	1997 01 31	098	0.1+	0.3-
1990 08 16	809	0.9+	1.9-	1997 01 31	098	1.4+	1.5-
1990 08 16	809	(1.8+	2.8-)	1997 02 07	691	0.4-	0.3+
1990 08 20	809	(0.3+	2.2-)	1997 02 07	691	0.4-	0.0
1990 08 20	809	(0.6+	2.8-)	1997 02 07	691	0.3-	0.2-
1990 08 20	809	(0.9+	2.2-)	1997 02 14	691	0.7-	0.3-
1990 09 13	809	0.8-	0.7-	1997 02 14	691	0.6-	0.0
1990 09 13	809	0.5-	0.3-	1997 02 14	691	0.7-	0.1-
1990 09 13	809	0.0	0.2-	1998 04 22	704	1.8+	1.5+
1990 09 14	809	0.3-	0.1-	1998 04 22	704	1.1+	0.6-
1990 09 14	809	0.1-	0.4-	1998 04 22	704	0.3-	0.8-

(8847)* 1990 TO₃ = 1995 TN₂

Discovered 1990 Oct. 12 by F. Börngen and L. D. Schmadel at Tautenburg.

Id. G. V. Williams (*MPC* 25957)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	332.64348		(2000.0)	P		Q	
<i>n</i>	0.20589324	ω	56.71844	+0.06140489	+0.99802740		
<i>a</i>	2.8403683	Ω	216.80886	-0.92285017	+0.05178257		
<i>e</i>	0.0287638	<i>i</i>	1.24966	-0.38023282	+0.03549460		
<i>P</i>	4.79	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1
Residuals in seconds of arc							
1990 10 11	033	1.1-	0.1+	1995 10 14	327	0.3-	0.1-
1990 10 12	033	0.2+	0.7+	1995 10 15	327	0.2+	0.1-
1990 10 12	033	0.5-	0.1+	1995 10 15	327	0.2-	0.1-
1990 10 13	033	1.4+	0.9+	1995 10 15	327	0.2+	0.0
1990 10 14	033	0.4-	0.2+	1995 10 28	327	0.1+	0.7-
1990 10 18	033	1.2+	0.7+	1995 10 28	327	0.2-	0.1+
1992 02 04	675	1.0+	0.7-	1995 10 28	327	0.3-	0.1+
1992 02 04	675	(2.0+	2.1+)	1997 02 11	691	1.4+	0.4-
1992 02 09	691	1.3-	0.5+	1997 02 11	691	1.5+	0.4-
1992 02 09	691	1.2-	0.5+	1998 04 22	704	1.0+	0.5+
1992 02 09	691	1.7-	0.5+	1998 04 22	704	0.5-	0.5-
1993 03 24	675	0.5+	0.7+	1998 04 22	704	0.8+	0.3-
1993 03 24	675	0.4+	0.4-	1998 04 22	704	0.2-	1.1-
1993 05 21	675	0.1-	0.7+	1998 04 22	704	0.2-	0.1+
1993 05 21	675	0.6+	1.1-	1998 04 25	809	(3.2+	3.7+)
1993 05 24	675	0.5-	1.0+	1998 04 25	809	(2.5+	3.6+)
1993 05 24	675	0.9+	1.1+	1998 04 25	809	(2.8+	3.5+)
1995 10 14	327	0.7-	1.3+	1998 04 28	809	0.4+	1.6+
1995 10 14	327	0.2-	0.1-	1998 04 28	809	1.1-	1.5+

(8848)* 1990 VK₁ = 1980 TW₁₁

Discovered 1990 Nov. 12 by S. Ueda and H. Kaneda at Kushiro.

Id. H. Kaneda (*MPC* 17459)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	225.97427		(2000.0)		P		Q
<i>n</i>	0.20026101	ω	350.73714	+0.96824261			-0.24910511
<i>a</i>	2.8933776	Ω	23.72031	+0.23263609			+0.86649863
<i>e</i>	0.1500119	<i>i</i>	3.03249	+0.09157886			+0.43258152
<i>P</i>	4.92	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1980 10 10	095	1.2+	0.3-	1995 11 16	399	0.6-	0.4+	1998 04 22	704	0.3-	0.1-
1980 10 17	095	0.9-	0.5-	1995 11 16	399	0.9+	1.5+	1998 04 22	704	1.4-	1.0+
1990 11 12	399	(3.3+	0.6-)	1995 11 17	399	0.4+	0.6+	1998 04 28	566	1.2-	0.3+
1990 11 12	399	(1.6+	2.9-)	1995 11 17	399	0.2+	1.7+	1998 04 28	566	0.8-	0.5+
1990 11 12	399	0.9+	1.4-	1995 11 25	399	(3.1-	0.2+)	1998 04 28	566	0.9-	0.0
1990 11 13	399	0.6-	2.0-	1995 11 25	399	(2.5-	0.9+)	1998 05 01	704	0.4-	0.3-
1990 11 13	399	(0.9-	2.7-)	1995 12 14	399	0.4-	0.9+	1998 05 01	704	0.3-	0.4+
1990 11 15	875	1.0+	0.1-	1995 12 14	399	1.2-	0.6+	1998 05 01	704	0.9-	0.4+
1990 11 15	875	1.0-	1.1-	1995 12 17	399	0.6-	0.5+	1998 05 01	704	0.9+	1.0-
1990 11 16	875	1.5+	1.4+	1995 12 17	399	0.9-	0.1+	1998 05 01	704	0.5-	0.7+
1990 11 21	399	0.1-	0.4-	1996 01 31	118	0.2+	0.4+	1998 05 22	704	0.5-	0.3-
1990 11 21	399	(2.9+	0.6+)	1996 01 31	118	0.2+	0.1+	1998 05 22	704	0.6+	0.5-
1990 11 24	399	0.6-	0.6-	1998 04 21	704	0.3+	0.4+	1998 05 22	704	1.2+	0.8-
1990 11 24	399	0.1+	0.7+	1998 04 21	704	0.2+	0.3-	1998 05 22	704	0.7-	0.9-
1992 02 26	691	0.4-	0.5-	1998 04 21	704	0.7-	0.1-	1998 05 24	704	1.1+	1.1-
1992 02 26	691	0.1-	0.3-	1998 04 21	704	0.4-	0.7+	1998 05 24	704	0.1+	1.4+
1992 02 26	691	0.7-	0.0	1998 04 21	704	0.9+	0.7+	1998 05 24	704	1.4+	0.5+
1992 03 06	691	0.3-	0.7-	1998 04 22	704	0.3+	0.6+	1998 05 24	704	1.7+	0.6-
1992 03 06	691	0.3-	0.5-	1998 04 22	704	1.1+	1.8+				
1992 03 06	691	0.8+	0.4-	1998 04 22	704	0.6+	1.0-				

(8849)* 1990 VZ₄ = 1989 RD

Discovered 1990 Nov. 15 by E. W. Elst at the European Southern

Observatory.

Id. H. Kaneda (*MPC* 18434)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	316.43018		(2000.0)		P		Q
<i>n</i>	0.19767775	ω	97.73091	+0.27558510			+0.96094250
<i>a</i>	2.9185302	Ω	188.39692	-0.93613494			+0.26229335
<i>e</i>	0.0995469	<i>i</i>	9.99491	-0.21841296			+0.08827072
<i>P</i>	4.99	<i>H</i>	13.3	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1989 08 02	675	0.5-	0.2-	1993 05 26	675	0.8-	1.1+	1998 05 01	704	(2.1-	2.3-)
1989 08 02	675	0.8-	0.1+	1998 04 21	704	0.3+	0.3+	1998 05 01	704	0.4-	0.7+
1989 08 30	675	0.0	0.3-	1998 04 21	704	0.2-	0.0	1998 05 01	704	0.1-	1.8+
1989 08 30	675	0.1+	0.2+	1998 04 21	704	0.5-	1.1-	1998 05 16	689	0.7-	0.2+
1989 09 01	511	1.8+	0.7+	1998 04 21	704	0.4+	0.5-	1998 05 22	704	0.4-	0.4-
1989 09 01	511	(3.1+	1.4+)	1998 04 21	704	0.7+	0.4-	1998 05 22	704	0.9+	0.9-
1989 09 03	511	0.0	1.5-	1998 04 22	704	0.0	0.0	1998 05 22	704	0.8+	0.5-
1989 09 03	511	0.3-	0.1+	1998 04 22	704	0.5+	0.2-	1998 05 22	704	(1.1+	2.2+)
1990 11 15	809	(2.9+	0.1-)	1998 04 22	704	0.2+	0.4-	1998 05 22	704	1.4-	1.8+
1990 11 15	809	0.9+	1.0-	1998 04 22	704	0.7-	0.5-	1998 05 24	704	0.7+	0.2-
1990 11 15	809	1.3-	1.4-	1998 04 22	704	0.7+	1.1-	1998 05 24	704	0.7+	0.6-
1990 11 17	809	1.0+	0.4-	1998 04 25	699	0.3-	0.1-	1998 05 24	704	0.3-	0.6+
1990 11 17	809	0.3+	0.1+	1998 04 25	699	0.1-	0.7+	1998 05 24	704	0.2+	0.5-
1990 11 17	809	1.7-	1.3-	1998 04 25	699	0.1+	0.1-	1998 05 24	704	0.1+	0.8-
1990 11 21	809	0.4+	0.2+	1998 04 28	566	0.3-	0.4-	1998 05 27	699	0.1-	0.4-
1990 11 21	809	0.4+	0.5+	1998 04 28	566	0.1+	0.6-	1998 05 27	699	0.2+	0.2-
1990 11 21	809	0.9-	0.4+	1998 04 28	566	0.6+	0.5-	1998 05 27	699	0.1-	0.2-
1990 11 23	372	0.4-	0.0	1998 05 01	860	0.2-	0.2+	1998 06 02	699	0.1-	0.5-
1990 11 23	372	1.4+	0.5+	1998 05 01	860	0.2-	0.3+	1998 06 02	699	0.4-	0.0
1993 04 17	675	0.5+	0.8+	1998 05 01	860	0.4-	0.5+	1998 06 02	699	0.3-	0.2-
1993 04 17	675	0.1-	1.2-	1998 05 01	704	0.3-	0.1-				
1993 05 26	675	0.5+	1.2+	1998 05 01	704	0.2-	0.1+				

(8850)* 1990 VQ₆ = 1996 AZ₁

Discovered 1990 Nov. 15 by E. W. Elst at the European Southern

Observatory.

Id. G. V. Williams (*MPC* 26561)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	229.77607		(2000.0)		P		Q
<i>n</i>	0.19055030	ω	237.50358	+0.98492684			+0.06071919
<i>a</i>	2.9908614	Ω	118.55073	-0.00761320			+0.95067226
<i>e</i>	0.0840860	<i>i</i>	10.62536	-0.17280384			+0.30419638
<i>P</i>	5.17	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1990 11 15	809	0.3+	0.2-	1996 01 25	589	(2.4+	0.6+)	1998 03 24	704	1.3-	0.0
1990 11 15	809	1.4-	0.1+	1996 02 07	589	1.2+	0.4-	1998 04 23	704	0.7+	0.8+
1990 11 15	809	0.5-	0.5+	1996 02 07	589	0.1+	0.6+	1998 04 23	704	0.4+	0.9-
1990 11 17	809	0.3+	0.4-	1996 02 07	589	(2.6+	0.1-)	1998 04 23	704	0.5+	1.0-
1990 11 17	809	0.9-	0.5-	1996 02 07	589	1.5+	0.6+	1998 04 23	704	0.5+	1.0-
1990 11 17	809	0.9-	0.4-	1996 02 08	589	1.0+	0.6-	1998 04 23	704	0.3+	1.3-
1990 11 23	809	1.4+	0.2+	1996 02 08	589	(0.9+	2.6+)	1998 04 23	566	0.0	1.2-
1990 11 23	809	0.1-	1.2+	1996 02 12	589	0.1-	0.8+	1998 04 23	566	0.1+	0.3-
1990 11 23	809	0.2+	1.3+	1996 02 12	589	0.4+	0.9+	1998 04 23	566	0.0	0.9-
1993 05 26	675	0.4-	0.6-	1996 02 12	589	0.2-	0.9+	1998 04 24	704	1.0+	0.1-
1993 05 26	675	0.9+	1.9-	1996 02 12	589	0.5-	0.4+	1998 04 24	704	0.2+	0.4-
1996 01 15	589	0.2-	0.0	1996 02 16	589	0.9-	0.1+	1998 04 24	704	0.5+	0.8-
1996 01 15	589	0.4+	0.3+	1996 02 16	589	0.7-	0.2-	1998 04 24	704	0.1-	0.0
1996 01 15	589	0.5-	0.2+	1996 02 16	589	0.7-	0.7-	1998 04 24	704	0.6-	0.3+
1996 01 15	589	0.6+	0.3-	1997 01 29	411	1.2+	0.3-	1998 05 16	704	0.4+	0.1+
1996 01 16	589	0.3+	0.2-	1997 01 29	411	0.6+	0.2-	1998 05 16	704	0.1+	1.3+
1996 01 16	589	0.9+	0.4-	1997 01 30	411	0.2+	0.6-	1998 05 16	704	2.2+	1.5+
1996 01 16	589	0.4+	0.0	1997 01 30	411	0.5-	0.3-	1998 05 16	704	1.9-	0.2-
1996 01 17	589	0.9-	0.7+	1997 02 03	691	0.3-	0.2-	1998 05 16	704	2.0-	1.1+
1996 01 17	589	0.0	0.0	1997 02 03	691	0.3-	0.0	1998 05 28	704	(0.2+	3.2+)
1996 01 17	589	0.2+	0.9+	1997 02 03	691	0.3-	0.2+	1998 05 28	704	1.2+	2.4+
1996 01 18	589	0.7-	0.4-	1998 03 24	704	0.5-	0.6-	1998 05 28	704	(0.8-	3.4+)
1996 01 18	589	1.0-	0.9-	1998 03 24	704	0.1-	0.2+	1998 05 28	704	0.6-	1.1+
1996 01 18	589	0.1-	0.7-	1998 03 24	704	0.8-	0.5-	1998 05 28	704	0.4+	0.3-
1996 01 25	589	(2.6-	0.8-)	1998 03 24	704	0.3-	0.0				

(8851)* 1990 XB = 1963 VE = 1992 GB

Discovered 1990 Dec. 8 by Y. Mizuno and T. Furuta at Kani.

Id. S. Nakano (*MPC* 20150)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	135.56160		(2000.0)		P		Q
<i>n</i>	0.18515771	ω	28.75409	-0.13503484			-0.97602143
<i>a</i>	3.0486544	Ω	69.44341	+0.87061920			-0.19914068
<i>e</i>	0.0752338	<i>i</i>	10.50593	+0.47306216			+0.08789289
<i>P</i>	5.32	<i>H</i>	12.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1963 11 11	760	1.8-	0.9+	1992 04 20	372	1.8+	1.8-	1998 05 22	704	0.7-	1.1+
1963 11 11	760	0.9+	1.4+	1992 04 21	372	0.5+	0.9+	1998 05 22	704	0.9-	0.8+
1990 12 08	403	0.1+	0.7+	1995 11 12	072	1.3+	0.0	1998 05 22	704	0.2-	1.0+
1990 12 08	403	0.3-	0.8-	1995 11 12	072	0.6+	0.1+	1998 05 22	704	0.9+	1.2+
1990 12 10	403	(2.0+	3.1-)	1998 04 22	704	0.2+	0.0	1998 05 23	699	0.4-	0.0
1990 12 10	403	1.2+	1.6-	1998 04 22	704	0.2+	0.2+	1998 05 23	699	0.0	0.4+
1990 12 10	875	0.6+	0.8+	1998 04 22	704	0.6+	0.4-	1998 05 23	699	0.3-	0.1+
1990 12 10	875	0.1-	1.3+	1998 04 22	704	0.1-	0.9-	1998 05 24	704	0.7+	1.5-
1990 12 13	875	0.6+	0.3-	1998 04 22	704	0.8-	0.2+	1998 05 24	704	(0.3+	3.1-)
1990 12 13	875	0.9-	0.4-	1998 05 01	704	0.5+	0.1-	1998 05 24	704	1.8-	0.3+

1992 04 05 372 0.4+ 0.9+ 1998 05 05 699 0.2- 0.3-
 1992 04 20 372 0.8+ 1.7- 1998 05 22 704 0.1- 0.3-

(8852)* 1991 GG₆ = 1975 XJ₁ = 1977 EO₄ = 1978 OL = 1978 OR
= 1994 CV₁₅

Discovered 1991 Apr. 8 by E. W. Elst at the European Southern Observatory.
 Id. T. Kobayashi (*MPC* 23977)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	220.44410		(2000.0)		P	Asher	Q
<i>n</i>	0.28496341	ω	350.74738	+0.95198870	-0.30437946		
<i>a</i>	2.2870552	Ω	27.04346	+0.28527382	+0.84326074		
<i>e</i>	0.1811531	<i>i</i>	4.12698	+0.11106918	+0.44301747		
<i>P</i>	3.46	<i>H</i>	13.9	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1975 12 01	095	0.6+	1.0-	1991 04 19	675	0.0	1.3-	1998 04 21	704	1.4+	0.5-
1977 03 15	381	0.4-	1.3-	1991 05 15	675	2.0-	1.0-	1998 04 21	704	1.3+	0.7-
1977 03 15	381	0.2+	1.3-	1991 05 15	675	0.3-	1.8-	1998 04 22	704	1.0+	0.2-
1978 07 28	323	0.3-	0.3-	1991 05 17	675	1.1-	0.5-	1998 04 22	704	0.8+	0.0
1978 07 28	323	(2.7- 30.7+)		1991 05 17	675	0.3-	0.8-	1998 04 22	704	1.0+	0.2-
1978 07 31	323	(2.8- 3.3+)		1994 02 08	809	0.8-	0.4+	1998 04 22	704	0.7+	0.1+
1978 07 31	323	(9.1- 3.1+)		1994 02 08	809	1.3-	0.3-	1998 04 22	704	0.5+	0.2-
1991 04 08	809	0.2+	1.2+	1994 02 08	809	2.1-	0.2-	1998 04 29	566	0.2+	0.3-
1991 04 08	809	1.2-	1.0+	1994 02 10	809	1.6+	0.2-	1998 04 29	566	0.3+	0.5-
1991 04 08	809	0.9-	1.2+	1994 02 10	809	0.8+	0.7-	1998 04 29	566	0.1-	0.7-
1991 04 10	809	1.1+	1.6+	1994 02 10	809	0.2+	0.4-	1998 05 16	704	0.5-	0.5+
1991 04 10	809	0.5+	1.1+	1994 02 13	809	1.4+	1.1+	1998 05 16	704	0.1-	1.8+
1991 04 10	809	0.2+	0.4+	1994 02 13	809	0.2+	1.1+	1998 05 16	704	1.5-	0.6+
1991 04 19	809	0.3+	0.2-	1994 02 13	809	0.2-	0.5+	1998 05 16	704	0.5-	0.5-
1991 04 19	809	0.1+	0.3-	1998 04 21	704	1.0+	0.3-	1998 05 20	691	2.0-	1.1+
1991 04 19	809	0.6+	0.0	1998 04 21	704	1.0+	0.7-	1998 05 20	691	2.1-	1.2+
1991 04 19	675	0.3+	0.6-	1998 04 21	704	1.5+	1.1-	1998 05 20	691	2.1-	1.0+

(8853)* 1991 GC₁₀ = 1989 TF₃

Discovered 1991 Apr. 9 by F. Börngen at Tautenburg.

Id. T. Kobayashi (*MPC* 23977)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	120.85304		(2000.0)		P	Asher	Q
<i>n</i>	0.28769664	ω	59.66178	-0.28157759	-0.95716565		
<i>a</i>	2.2725469	Ω	46.85364	+0.84557945	-0.28074352		
<i>e</i>	0.0926351	<i>i</i>	5.30349	+0.45355203	-0.07083079		
<i>P</i>	3.43	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1989 09 29	675	0.1+	0.6-	1996 11 04	540	0.3-	0.9+	1998 04 22	704	1.1-	1.2+
1989 09 29	675	1.6+	1.8-	1996 11 04	540	0.4-	1.0+	1998 04 22	113	1.9-	0.6+
1989 10 03	809	1.0+	0.6-	1996 11 09	540	0.7+	0.5-	1998 04 22	113	1.9-	1.1-
1989 10 03	809	0.3+	0.7-	1996 11 09	540	0.1-	0.8-	1998 04 23	113	(3.0- 3.1-)	
1989 10 03	809	0.5+	0.4-	1996 11 09	540	0.4-	1.2-	1998 04 23	113	(0.0 2.1-)	
1989 10 07	809	0.2+	0.1-	1996 11 19	540	0.2+	0.3-	1998 05 01	704	0.9-	0.2-
1989 10 07	809	1.1+	0.4-	1996 11 19	540	0.7+	0.4-	1998 05 01	699	0.3+	0.7+
1989 10 07	809	1.3-	0.3-	1996 11 19	540	0.1+	0.1-	1998 05 01	704	0.6-	0.1-
1989 10 08	809	1.1-	0.7+	1996 11 19	540	0.4+	0.0	1998 05 01	699	0.5-	0.3+
1989 10 08	809	0.1-	1.0+	1996 12 27	540	0.5+	1.0-	1998 05 01	704	1.0-	0.2+
1989 10 08	809	1.3-	1.0+	1996 12 27	540	0.0	0.4+	1998 05 01	699	0.1-	0.5+
1991 04 09	033	1.2-	0.2+	1996 12 27	540	0.1+	1.1-	1998 05 01	704	0.4-	0.4-
1991 04 09	033	0.4-	0.0	1998 04 21	704	0.4+	0.2-	1998 05 01	704	1.4-	0.1+
1991 04 11	033	1.2-	0.6-	1998 04 21	704	0.0	0.1-	1998 05 18	699	1.4+	0.5-
1991 04 19	809	1.1+	0.3+	1998 04 21	704	1.0+	1.4-	1998 05 18	699	0.6+	0.5-
1991 04 19	809	1.2+	0.3-	1998 04 21	704	0.9+	0.3-	1998 05 18	699	0.7+	0.3-
1991 04 19	809	0.5+	0.4+	1998 04 21	704	0.1+	0.3-	1998 05 22	704	0.8+	0.2+
1996 11 03	540	0.6-	0.4+	1998 04 22	704	0.6+	0.5-	1998 05 22	704	0.8+	0.7-
1996 11 03	540	0.1-	0.1-	1998 04 22	704	0.1-	0.7-	1998 05 22	704	0.1-	0.6+
1996 11 03	540	0.3+	0.2-	1998 04 22	704	0.5+	0.7-	1998 05 22	704	0.7-	1.3-
1996 11 03	540	0.1+	0.1-	1998 04 22	704	0.4+	0.1+	1998 05 22	704	0.4+	0.1-

(8854)* 1991 HC

Discovered 1991 Apr. 16 by N. Kawasato at Uenohara.

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	351.49463		(2000.0)		P	Williams	Q
<i>n</i>	0.28847562	ω	184.95125	+0.06670441	+0.99445826		
<i>a</i>	2.2684540	Ω	88.88987	-0.91262569	+0.09372965		
<i>e</i>	0.1432009	<i>i</i>	4.66191	-0.40331732	-0.04761843		
<i>P</i>	3.42	<i>H</i>	14.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1954 07 29	675	0.0	0.5-	1992 10 22	675	0.5+	0.3-	1998 05 22	704	0.2-	0.0
1954 07 29	675	0.1+	0.1+	1992 10 22	675	0.2-	0.4-	1998 05 22	704	0.5-	0.9-
1991 04 14	399	0.1+	0.3-	1994 02 05	376	(3.1+ 0.5+)		1998 05 24	704	(2.0+ 1.4+)	
1991 04 14	399	0.5-	0.8+	1994 02 05	376	0.3-	1.4-	1998 05 24	704	0.3+	0.7+
1991 04 14	399	0.3-	0.7-	1994 02 14	376	(2.4+ 1.2-)		1998 05 24	704	0.5+	1.0+
1991 04 16	376	0.7-	1.1+	1996 12 30	376	0.7+	1.0+	1998 05 24	704	0.6+	0.3+
1991 04 16	376	1.0+	1.1-	1996 12 30	376	0.7-	0.8+	1998 05 24	704	0.7+	0.5-
1991 04 16	399	(1.7- 2.2+)		1997 01 03	376	0.4+	0.9+	1998 05 24	426	0.1-	0.1-
1991 04 16	399	(2.3- 0.1-)		1997 01 03	376	0.6-	1.0+	1998 05 24	426	0.1+	0.0
1991 05 02	894	(1.7+ 4.7+)	Y	1998 05 03	758	0.4+	0.6+	1998 05 24	426	0.0	0.2-
1991 05 02	894	(1.5+ 2.6+)	Y	1998 05 03	758	0.0	0.6+	1998 05 25	426	0.1+	0.1+
1991 05 03	894	1.3+	0.7-	1998 05 21	727	0.0	0.1-	1998 05 25	426	0.1-	0.1-
1991 05 03	894	0.9+	0.2+	1998 05 21	727	0.1-	0.6+	1998 05 25	426	0.1-	0.1+
1991 05 07	376	1.0+	1.7-	1998 05 21	727	1.3-	0.0	1998 06 03	704	0.0	0.1-
1991 05 07	376	1.4-	0.9-	1998 05 22	704	0.5-	0.8+	1998 06 03	704	0.0	0.3-
1991 05 14	376	1.4-	0.3+	1998 05 22	704	0.3-	0.1+	1998 06 03	704	0.2+	0.5+
1991 05 14	376	1.0-	0.3+	1998 05 22	704	0.6+	0.3+	1998 06 03	704	0.4+	0.8+

(8855)* 1991 JL = 1984 GQ = 1985 RL₆

Discovered 1991 May 3 by S. Otomo and O. Muramatsu at Kiyosato.

Id. S. Nakano (*MPC* 18442)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	24.27293		(2000.0)		P	Nakano	Q
<i>n</i>	0.28642529	ω	39.70007	-0.62863947	+0.77746334		
<i>a</i>	2.2792667	Ω	191.39346	-0.73579113	-0.60252224		
<i>e</i>	0.1658230	<i>i</i>	5.53588	-0.25184090	-0.18032664		
<i>P</i>	3.44	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1984 04 04	071	0.4+	0.1-	1991 05 15	046	(0.2- 3.5-)		1998 05 22	704	0.2+	0.5+
1984 04 04	071	0.2-	1.9-	1991 05 15	046	(0.3+ 5.0-)		1998 05 24	704	0.2+	0.0
1985 09 15	095	0.3-	0.9-	1991 05 17	894	1.2-	0.4- Y	1998 05 24	704	0.7-	0.4-
1988 08 15	675	0.3-	0.2+	1991 05 17	894	1.2-	0.5- Y	1998 05 24	704	0.9+	0.8+
1988 08 15	675	0.2-	0.1-	1994 02 14	595	0.7+	1.3+	1998 05 24	704	0.0	0.9+
1988 08 16	675	0.7+	1.0-	1994 02 14	595	0.1+	0.5+	1998 05 24	704	0.2-	1.4+
1988 08 16	675	0.2+	0.2+	1994 02 15	595	0.2-	0.2+	1998 05 26	423	0.7+	0.1-
1991 05 03	894	0.8-	0.4-	1994 02 15	595	0.1+	0.5+	1998 05 26	423	0.2-	0.0
1991 05 03	894	1.4-	0.2+	1998 04 27	689	0.1-	0.1+	1998 05 26	423	0.8+	0.2-
1991 05 05	894	0.6+	0.8-	1998 05 22	704	0.9-	0.3+	1998 05 29	423	0.6+	0.5+
1991 05 05	894	0.2+	1.2-	1998 05 22	704	0.3+	1.0+	1998 05 29	423	0.3+	0.5+
1991 05 10	894	1.1+	0.7-	1998 05 22	704	0.5-	1.0-	1998 05 29	423	0.4+	0.2+
1991 05 10	894	0.3+	0.1-	1998 05 22	704	1.9-	0.5+	1998 05 29	423	1.0+	0.6+

(8856)* 1991 LH₁ = 1977 PO₂ = 1992 WM₆

Discovered 1991 June 6 by E. W. Elst at the European Southern Observatory.

Id. G. V. Williams (*MPC* 23672, unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	318.38606		(2000.0)		P	Williams	Q
<i>n</i>	0.27400342	ω	180.15650	+0.29243110	+0.95542855		
<i>a</i>	2.3476430	Ω	106.84720	-0.87732981	+0.28489705		
<i>e</i>	0.0962854	<i>i</i>	2.42533	-0.38049501	+0.07739483		
<i>P</i>	3.60	<i>H</i>	14.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1977 08 09	414	0.3-	1.2+	Y	1994 02 10	809	0.6-	2.0+	1998 05 01	704	0.4-	0.4+
1991 05 18	809	(3.6-	0.0	)	1994 02 10	809	0.5+	0.3-	1998 05 01	566	0.0	0.6-
1991 05 18	809	(4.2-	0.2+)		1994 02 13	809	0.5+	1.0-	1998 05 01	566	0.2-	0.5-
1991 05 18	809	(3.9-	0.7+)		1994 02 13	809	0.5-	0.8-	1998 05 01	566	0.5-	0.4-
1991 06 06	809	0.6+	0.1-		1994 02 13	809	1.7-	0.9-	1998 05 02	566	0.1-	0.3-
1991 06 06	809	1.0+	1.3+		1998 04 21	704	0.5+	0.3-	1998 05 02	566	0.0	0.4-
1991 06 06	809	0.2+	1.8+		1998 04 21	704	0.5+	0.9-	1998 05 02	566	0.4-	0.0
1991 06 08	809	0.2-	0.2-		1998 04 21	704	0.0	0.8-	1998 05 05	104	1.0-	0.1+
1991 06 08	809	0.4-	0.5+		1998 04 21	704	0.2+	0.6-	1998 05 05	104	0.6-	0.2+
1991 06 08	809	0.8-	0.2+		1998 04 21	704	1.0+	0.3-	1998 05 05	104	0.1-	0.1+
1992 10 21	675	0.8+	0.7+		1998 04 22	704	0.8+	0.6-	1998 05 22	704	0.1+	0.5+
1992 11 19	691	0.1-	0.2+		1998 04 22	704	0.4+	0.4-	1998 05 22	704	0.0	0.7-
1992 11 19	691	0.1-	0.2+		1998 04 22	704	1.0-	1.0-	1998 05 22	704	0.8-	1.3+
1992 11 19	691	0.1+	0.4+		1998 04 22	704	0.4-	0.6-	1998 05 22	704	0.1-	0.1+
1992 11 20	691	0.2-	0.0		1998 04 22	704	0.2+	0.5-	1998 05 22	704	0.4-	0.9+
1992 11 20	691	0.2-	0.0		1998 05 01	704	0.3+	0.1-	1998 05 22	566	(2.4-	0.3-)
1992 11 20	691	0.1-	0.2+		1998 05 01	699	0.1-	0.7+	1998 05 22	566	0.2-	0.0
1992 11 28	675	0.4-	0.8-		1998 05 01	704	0.7-	0.1-	1998 05 22	566	0.2+	0.0
1994 02 08	809	(2.3+	2.6+)		1998 05 01	699	0.4+	0.2+	1998 05 25	699	0.6+	0.5+
1994 02 08	809	0.8+	2.2+		1998 05 01	704	0.4-	0.3-	1998 05 25	699	0.3-	0.8+
1994 02 08	809	0.9+	2.0+		1998 05 01	699	0.3+	0.8+	1998 05 25	699	1.2+	0.7-
1994 02 10	809	1.8+	1.4+		1998 05 01	704	0.0	0.3-				

(8857)* 1991 PA₇ = 1995 UQ₉

Discovered 1991 Aug. 6 by E. W. Elst at the European Southern Observatory.
Id. G. V. Williams (*MPC* 26169)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	316.62946	(2000.0)		P	Q		
<i>n</i>	0.26172958	ω	311.21362	+0.46952212	+0.88287439		
<i>a</i>	2.4204763	Ω	346.78092	-0.79776973	+0.41982924		
<i>e</i>	0.1706033	<i>i</i>	2.26656	-0.37830205	+0.21041916		
<i>P</i>	3.77	<i>H</i>	14.7	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1991 08 06	809	0.7-	0.1-	1995 10 21	691	0.6-	0.1+	1998 04 22	704	0.7+	0.2+
1991 08 06	809	0.2-	0.1+	1995 10 21	691	0.2-	0.2+	1998 04 25	699	0.3+	0.3-
1991 08 06	809	0.1-	0.2+	1995 10 27	691	0.2+	0.2-	1998 04 25	699	0.5+	0.1-
1991 08 06	675	1.9+	0.4+	1995 10 27	691	0.3+	0.3+	1998 04 25	699	0.1-	0.4-
1991 08 06	675	1.9+	0.9+	1996 12 04	691	0.2+	0.2+	1998 05 01	704	0.2+	0.3-
1991 08 14	809	1.3+	0.5+	1996 12 04	691	0.1-	0.1-	1998 05 01	704	0.6+	1.1-
1991 08 14	809	0.2+	0.5+	1996 12 04	691	0.1+	0.1-	1998 05 01	704	0.7+	1.3-
1991 08 14	809	0.2+	0.2+	1996 12 11	691	1.2+	0.7+	1998 05 01	704	0.8-	0.9-
1991 09 04	809	1.1-	0.1+	1996 12 11	691	0.9+	0.6+	1998 05 01	704	0.5+	1.2-
1991 09 04	809	0.8-	0.3+	1996 12 11	691	0.8+	0.4-	1998 05 18	699	0.3-	1.1+
1991 09 04	809	0.4-	0.6+	1996 12 14	691	1.0-	0.4+	1998 05 18	699	0.3-	1.3+
1991 09 06	809	0.1+	0.9-	1996 12 14	691	0.6-	0.2+	1998 05 18	699	1.1-	1.6+
1991 09 06	809	1.2-	1.2-	1996 12 14	691	0.4-	0.1+	1998 05 22	704	0.9+	0.2+
1991 09 06	809	0.7-	0.7-	1998 04 21	704	0.1-	0.3-	1998 05 22	704	0.8+	0.0
1991 09 07	809	(1.6+	2.2+)	1998 04 21	704	0.1-	0.6-	1998 05 22	704	1.0-	0.0
1991 09 07	809	0.0	0.3+	1998 04 21	704	0.6+	0.2-	1998 05 22	704	1.1+	1.2+
1991 09 07	809	0.5-	0.9-	1998 04 21	704	1.0+	0.6+	1998 05 22	704	0.6-	0.6+
1994 03 14	675	0.6-	0.4+	1998 04 21	704	0.1+	0.7+	1998 05 23	704	0.2-	0.4-
1995 10 16	691	0.2-	0.4+	1998 04 22	704	0.3-	0.7-	1998 05 23	704	(1.5-	4.4+)
1995 10 16	691	0.1+	0.2+	1998 04 22	704	(0.0	2.6+)	1998 05 23	704	(2.3-	1.9+)
1995 10 16	691	0.1-	0.1+	1998 04 22	704	0.3-	0.1-	1998 05 23	704	1.1-	0.8+
1995 10 21	691	0.6-	0.1+	1998 04 22	704	0.3-	0.1-	1998 05 23	704	0.6-	1.4+

(8858)* 1991 PT₇ = 1950 NO₁ = 1983 EW₁

Discovered 1991 Aug. 6 by E. W. Elst at the European Southern Observatory.
Id. K. Kinoshita (*MPC* 23517)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Asher			
<i>M</i>	343.21448	(2000.0)		P	Q		
<i>n</i>	0.26605915	ω	264.88601	+0.10177935	+0.99478019		
<i>a</i>	2.3941458	Ω	10.96368	-0.89682778	+0.09492980		
<i>e</i>	0.1870312	<i>i</i>	2.20085	-0.43051237	+0.03742612		
<i>P</i>	3.70	<i>H</i>	14.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1950 07 11	839	0.2+	0.1+	1991 09 06	809	1.2-	1.3-	1998 05 01	704	0.7+	0.7-
1950 07 14	839	0.7+	0.0	1991 09 06	809	1.4-	1.1-	1998 05 05	699	0.0	0.0
1950 07 14	839	0.7+	0.4+	1991 09 07	809	0.2+	0.7+	1998 05 05	699	0.1+	0.1-
1950 07 14	839	0.3+	0.7+	1991 09 07	809	0.5-	0.0	1998 05 05	699	0.3+	0.4-
1954 08 27	675	1.7-	0.4-	1991 09 07	809	0.0	0.9-	1998 05 22	704	0.0	0.4+
1954 08 27	675	1.2-	0.7-	1994 04 03	675	0.3+	2.2-	1998 05 22	704	0.3+	0.4+
1983 03 11	381	0.7-	0.4-	1994 04 03	675	0.2+	0.7+	1998 05 22	704	0.3-	0.3+
1983 03 11	381	1.6+	1.0-	1994 04 04	675	0.6-	0.5-	1998 05 22	704	0.3-	0.6+
1991 08 06	809	2.1+	0.8-	1994 04 04	675	0.7-	1.2-	1998 05 22	704	0.4-	0.0
1991 08 06	809	1.3+	0.4-	1998 04 22	704	0.2+	0.6+	1998 05 22	699	0.0	0.6+
1991 08 06	809	1.6+	0.7-	1998 04 22	704	0.2+	1.0-	1998 05 22	699	0.1-	0.9+
1991 08 14	809	1.1+	1.3+	1998 04 22	704	0.7-	0.4-	1998 05 22	699	0.3-	0.6+
1991 08 14	809	0.2+	1.9+	1998 04 22	704	1.0-	0.8-	1998 05 24	704	0.3-	0.2-
1991 08 14	809	1.1+	1.5+	1998 04 22	704	0.2-	0.6-	1998 05 24	704	(0.6+	2.5+)
1991 09 04	809	0.5+	1.3-	1998 04 28	689	0.7+	0.4+	1998 05 24	704	0.6-	0.8+
1991 09 04	809	0.8+	0.3-	1998 05 01	704	0.2+	0.9-	1998 05 24	704	0.5-	1.7+
1991 09 04	809	1.0-	0.0	1998 05 01	704	1.0+	0.2-	1998 05 24	704	1.3-	1.4+
1991 09 06	809	0.5-	2.0-	1998 05 01	704	0.4-	1.4-				

(8859)* 1991 PQ₁₁ = 1975 TK = 1979 SY₁ = 1979 SG₁₅ = 1987 SW₁₈

Discovered 1991 Aug. 9 by H. E. Holt at Palomar.

Id. G. V. Williams (*MPC* 19507)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	260.96949	(2000.0)		P	Q		
<i>n</i>	0.24501710	ω	31.37799	+0.93621165	+0.34407330		
<i>a</i>	2.5293278	Ω	308.32628	-0.33837198	+0.82751521		
<i>e</i>	0.0859664	<i>i</i>	5.23394	-0.09493236	+0.44365769		
<i>P</i>	4.02	<i>H</i>	13.3	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1975 10 03	095	0.6-	1.7+	1991 09 14	675	0.1+	0.1+	1998 03 31	704	0.3+	1.6-
1979 09 22	095	0.5-	0.3-	1991 09 14	675	0.3+	0.4-	1998 04 01	704	0.1-	1.1-
1979 09 28	095	0.9+	1.1-	1991 09 17	675	0.2+	0.1+	1998 04 01	704	1.5+	0.5+
1987 09 16	095	0.3-	1.3+	1991 09 17	675	0.0	1.3-	1998 04 01	704	0.5-	0.6-
1991 08 09	675	0.6+	0.7+	1996 12 11	691	0.1+	0.9-	1998 04 01	704	0.2+	0.5-
1991 08 10	675	0.5+	0.0	1996 12 11	691	0.0	1.1-	1998 04 01	704	0.3-	0.2-
1991 09 06	511	1.5+	1.5-	1996 12 11	691	0.1-	0.9-	1998 05 16	704	0.5-	0.1+
1991 09 07	511	0.0	1.7-	1997 01 28	689	0.8-	0.3-	1998 05 16	704	0.5+	1.2+
1991 09 08	511	0.5-	1.2-	1998 03 31	704	0.2+	1.0-	1998 05 16	704	0.5-	1.1+
1991 09 12	808	0.1-	0.1-	1998 03 31	704	0.0	0.7-	1998 05 16	704	2.2-	0.8+
1991 09 12	808	(3.8-	2.3-)	1998 03 31	704	0.3+	1.8-				

(8860)* 1991 TE₅ = 1969 EY₁ = 1975 WF = 1979 WN₂ = 1995 UF

Discovered 1991 Oct. 5 by F. Börngen and L. D. Schmadel at Tautenburg.

Id. G. V. Williams (*MPC* 25958)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	306.03656		(2000.0)		P		Q
n	0.24281906	ω	295.99115		+0.65392226		+0.75383511
a	2.5445688	Ω	15.38532		-0.57836621		+0.55278258
e	0.0909239	i	13.99777		-0.48772760		+0.35519579
P	4.06	H	12.9	G	0.15	U	1

M.P.C. 31914

1998 JUNE 10

1979 11 16	095	1.9+	1.3+	1995 10 25	905	0.3+	0.9-	1997 02 02	611	0.1-	0.4-
1991 10 05	033	0.1-	0.3-	1995 11 26	033	1.0+	0.6+	1997 02 06	611	1.2+	0.2+
1991 10 06	033	0.0	0.5+	1995 11 26	033	0.3-	0.2-	1997 02 06	611	0.8+	0.0
1991 10 06	033	0.1-	0.0	1995 11 27	033	0.2-	0.4+	1998 05 06	566	0.5-	1.5-
1991 10 09	033	0.9-	0.3+	1995 12 18	801	0.3+	0.8-	1998 05 06	566	0.1+	1.4-
1991 10 09	033	1.1-	0.3+	1995 12 18	801	1.1+	0.5-	1998 05 06	566	0.3-	1.8-
1991 10 10	033	0.1-	0.3+	1995 12 22	801	0.5+	0.2-	1998 05 28	689	0.3-	1.0+
1995 10 16	905	0.2+	0.7-	1995 12 23	801	0.6+	0.1-				
1995 10 16	905	0.6-	0.7+	1997 02 01	113	0.8-	0.0				

(8861)* 1991 TF₇ = 1977 KS = 1994 LB₁

Discovered 1991 Oct. 3 by F. Börngen and L. D. Schmadel at Tautenburg.

Id. K. Kinoshita (*MPC* 27104)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	59.06894		(2000.0)		P		Q				
<i>n</i>	0.23515936	ω	315.69422		-0.98596992		-0.11899331				
<i>a</i>	2.5995282	Ω	217.93606		+0.14544670		-0.95654687				
<i>e</i>	0.2075293	<i>i</i>	10.97701		-0.08190586		-0.26619294				
<i>P</i>	4.19	<i>H</i>	13.5		<i>G</i>	0.15	<i>U</i>	1			

Residuals in seconds of arc

1977 05 19	095	0.3-	2.2+	1996 12 04	113	0.9-	1.3+	1998 05 16	689	0.5+	0.1-
1977 05 23	095	0.4+	0.0	1996 12 12	113	0.1-	0.1+	1998 05 22	704	0.6+	1.0-
1991 10 03	033	0.2-	0.5+	1996 12 12	113	0.2+	0.0	1998 05 22	704	0.6+	0.9+
1991 10 03	033	1.3+	0.0	1996 12 12	113	0.1+	0.0	1998 05 22	704	0.0	0.2+
1991 10 04	033	0.7-	0.2+	1996 12 28	113	0.8+	0.7+	1998 05 22	704	0.4-	0.8-
1991 10 07	033	0.8-	0.1-	1996 12 28	113	1.0+	0.3+	1998 05 22	704	1.7+	0.7+
1991 10 07	033	0.3-	0.5+	1996 12 28	113	1.0+	0.0	1998 05 23	910	0.4+	0.6-
1994 06 09	675	(0.1+	2.6-)	1998 04 21	113	0.0	0.3+	1998 05 23	910	0.4+	0.6-
1994 06 09	675	0.7+	1.1-	1998 04 22	113	0.3+	0.1-	1998 05 23	910	0.4+	0.6-
1994 06 12	675	(2.1-	3.1-)	1998 05 06	566	(0.4-	2.1-)	1998 05 24	704	0.4-	0.1-
1994 06 12	675	(1.6+	3.0-)	1998 05 06	566	0.1+	1.0-	1998 05 24	704	1.1-	0.6+
1996 11 22	113	0.3+	0.5-	1998 05 06	566	0.1-	0.5-	1998 05 24	704	0.2+	0.1+
1996 11 22	113	0.1+	0.6-	1998 05 13	113	0.7-	1.5+	1998 05 24	704	(3.3-	0.4+)
1996 11 22	113	0.3-	0.7-	1998 05 13	113	0.6-	0.6+	1998 05 24	704	1.1-	1.0-
1996 12 04	113	0.1-	0.5-	1998 05 15	689	(0.0	2.2+)	1998 06 01	113	0.7-	0.9+
1996 12 04	113	0.6-	0.1+	1998 05 15	113	0.2+	0.2+	1998 06 01	113	1.0-	0.6+
1996 12 04	113	1.1-	1.0+	1998 05 15	113	0.4+	0.2+				

(8862)* 1991 UZ = 1954 RF = 1995 SY₅₃

Discovered 1991 Oct. 18 by S. Otomo at Kiyosato.

Id. S. Otomo (*MPC* 25958), S. Nakano (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano											
<i>M</i>	238.15611		(2000.0)		P		Q				
<i>n</i>	0.24101156	ω	212.16072		+0.93456478		-0.35527435				
<i>a</i>	2.5572752	Ω	168.60102		+0.34354013		+0.88702114				
<i>e</i>	0.2157582	<i>i</i>	5.57619		+0.09256815		+0.29491292				
<i>P</i>	4.09	<i>H</i>	12.9		<i>G</i>	0.15	<i>U</i>	2			

Residuals in seconds of arc

1954 09 05	760	0.1+	1.1-	1995 10 02	894	0.3+	0.8+	1998 05 05	699	0.2+	0.2+
1954 09 05	760	0.0	0.9+	1995 10 02	894	0.3-	0.0	1998 05 05	699	(0.0	2.3-)
1991 10 18	894	0.2+	0.1+	1997 03 27	689	0.3-	0.4-	1998 05 22	704	0.1-	0.3-
1991 10 18	894	0.1+	0.4-	1998 04 22	704	0.5+	0.1+	1998 05 22	704	0.3+	0.8+
1991 10 19	894	0.4-	0.1-	1998 04 22	704	0.5+	0.2+	1998 05 22	704	0.1+	1.3-
1991 10 28	894	0.2-	0.4-	1998 04 22	704	(2.7+	1.3+)	1998 05 22	704	0.1+	0.6-
1991 10 28	894	0.1+	0.6-	1998 04 22	704	(2.7-	0.9+)	1998 05 22	704	1.8-	0.2-
1991 11 04	894	0.5+	0.1-	1998 04 22	704	0.0	0.3-	1998 05 24	704	0.1-	0.2-
1991 11 04	894	0.1-	0.1+	1998 04 29	691	0.6-	0.2+	1998 05 24	704	1.0+	0.1+
1991 11 30	894	0.2+	0.2-	1998 04 29	691	0.5-	0.1+	1998 05 24	704	0.3+	0.4+
1994 06 06	691	0.8-	0.2+	1998 04 29	691	1.0-	0.3+	1998 05 24	704	0.3+	0.3+
1994 06 06	691	0.4-	0.3-	1998 05 01	704	0.4+	0.1-	1998 05 24	704	0.2+	0.1-
1995 09 17	894	0.3+	0.8-	1998 05 01	704	0.7+	0.1+	1998 05 25	699	0.4-	0.1-
1995 09 17	894	0.5-	0.1-	1998 05 01	704	0.6+	0.5+	1998 05 25	699	0.1-	0.5-

1995 09 20	894	0.4-	0.4+	1998 05 01	704	1.5+	0.8+	1998 05 25	699	0.5-	0.5-
1995 09 20	894	0.5+	0.3+	1998 05 05	699	0.3-	0.9-				

(8863)* 1991 UV₂ = 1978 TX₆

Discovered 1991 Oct. 31 by S. Ueda and H. Kaneda at Kushiro.

Id. H. Kaneda (*MPC* 19513)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher											
<i>M</i>	214.90780		(2000.0)		P		Q				
<i>n</i>	0.22933542	ω	318.74318		+0.93500862		-0.29612381				
<i>a</i>	2.6433538	Ω	59.49398		+0.35450899		+0.79458024				
<i>e</i>	0.2840146	<i>i</i>	13.08887		-0.00906995		+0.53004994				
<i>P</i>	4.30	<i>H</i>	13.2		<i>G</i>	0.15	<i>U</i>	2			

Residuals in seconds of arc

1978 10 02	095	1.6-	0.1-	1991 12 05	399	0.7-	0.1-	1998 04 23	704	0.2+	1.0-
1978 10 08	095	0.2+	2.2+	1991 12 05	399	0.9-	0.7+	1998 04 23	704	0.2-	0.4+
1989 03 29	675	1.3+	1.5+	1991 12 07	399	1.5+	0.2-	1998 04 23	704	0.1+	0.1-
1989 03 29	675	1.3-	0.2-	1991 12 07	399	0.5+	0.1+	1998 04 23	704	1.1-	0.2-
1991 10 31	399	2.0-	0.1+	1991 12 09	399	1.2-	1.7+	1998 04 23	704	0.4-	0.3+
1991 10 31	399	1.8-	0.9+	1991 12 09	399	0.4-	0.4-	1998 04 24	704	0.4+	0.1-
1991 11 01	364	0.7-	0.7+	1995 10 12	413	0.7+	0.8+	1998 04 24	704	0.5-	0.8+
1991 11 01	364	1.8+	1.2-	1995 10 12	413	0.3-	0.6-	1998 04 24	704	0.7+	0.2+
1991 11 04	399	0.0	0.7+	1995 11 22	801	0.5-	0.4-	1998 04 24	704	(2.2+	0.3+)
1991 11 04	399	0.9+	1.6+	1995 11 22	801	0.3-	0.5-	1998 04 24	704	0.5+	1.2+
1991 11 06	877	(2.4+	1.8-)	1998 03 24	704	0.8+	0.1-	1998 05 16	704	1.2+	0.1-
1991 11 06	877	0.7-	1.2+	1998 03 24	704	1.2+	0.9+	1998 05 16	704	0.1+	1.2+
1991 11 07	877	0.1+	0.9+	1998 03 24	704	0.1+	0.9-	1998 05 16	704	0.8-	1.1+
1991 11 07	877	1.6+	0.7-	1998 03 24	704	1.8+	1.7-	1998 05 16	704	0.9+	1.4+
1991 11 10	896	0.6+	1.5-	1998 04 21	704	0.8-	0.1+	1998 05 19	620	0.2+	2.1-
1991 11 11	894	1.1+	1.2-	1998 04 21	704	0.6-	0.6-	1998 05 19	620	0.1+	1.5-
1991 11 11	894	0.1-	0.8-	1998 04 21	704	0.2-	0.0	1998 05 19	620	0.1-	0.7-
1991 11 11	896	2.0+	1.5-	1998 04 21	704	0.6-	0.4+	1998 05 19	620	0.6-	1.4+
1991 11 12	894	0.1+	0.7-	1998 04 21	704	1.0-	0.5+	1998 05 21	620	(2.7-	1.5-)
1991 11 12	885	0.5-	0.6+	1998 04 22	691	(3.1-	0.1+)	1998 05 21	620	(2.4-	0.1-)
1991 11 12	885	0.2-	0.1-	1998 04 22	691	(3.0-	0.1+)	1998 05 21	620	(2.4-	0.4-)
1991 11 12	894	0.4-	0.6-	1998 04 22	691	(3.2-	0.1-)				

(8864)* 1991 VU = 1970 XF = 1986 NM = 1987 YY = 1994 LW₃

Discovered 1991 Nov. 4 by Y. Mizuno and T. Furuta at Kani.

Id. B. G. Marsden (*MPC* 23978), G. V. Williams (unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	226.29147		(2000.0)		P		Q				
<i>n</i>	0.23353197	ω	141.44479		+0.89818932		-0.42582573				
<i>a</i>	2.6115909	Ω	244.08818		+0.36720783		+0.86332935				
<i>e</i>	0.1554194	<i>i</i>	6.97431		+0.24169063		+0.27080414				
<i>P</i>	4.22	<i>H</i>	13.2		<i>G</i>	0.15	<i>U</i>	2			

Residuals in seconds of arc

1970 12 03	095	0.5+	3.7+	1991 12 09	399	0.6-	0.8+	1998 05 22	704	0.9+	0.5-
1986 07 07	010	0.4+	1.5-	1994 06 03	809	0.1-	1.1+	1998 05 22	704	0.7-	0.2-
1986 07 08	010	0.3-	1.0-	1994 06 03	809	0.1+	0.3+	1998 05 22	704	0.4+	0.4+
1987 12 23	688	1.2-	0.6+	1994 06 03	809	0.1+	0.4+	1998 05 22	704	1.3+	0.4-
1987 12 23	688	1.2-	1.7-	1994 06 04	809	0.4+	1.3+	1998 05 23	704	0.2-	0.1+
1991 11 04	403	1.1+	1.1-	1994 06 04	809	0.6+	1.3+	1998 05 23	704	0.2+	0.0
1991 11 04	403	(3.0-	0.2-)	1994 06 04	809	0.6+	0.5+	1998 05 23	704	0.4-	1.1+
1991 11 05	403	1.3-	0.3+	1997 02 12	689	0.0	1.0-	1998 05 23	704	0.4-	1.4+
1991 11 05	403	0.5+	0.2-	1997 02 26	689	1.2+	0.1+	1998 05 23	704	0.7+	0.4-
1991 11 10	403	(3.4+	0.2-)	1998 04 22	704	1.0-	0.2-	1998 05 23	704	0.9-	0.2-
1991 11 10	403	(3.1+	0.5-)	1998 04 22	704	0.9-	1.3-	1998 05 23	704	0.6-	0.4+
1991 11 14	403	(3.1+	1.3+)	1998 04 22	704	(1.9-	2.7-)	1998 05 23	704	0.3-	1.4+
1991 11 27	691	0.0	0.2+	1998 04 22	704	0.3-	0.5-	1998 05 23	704	0.7-	0.5+
1991 11 27	691	0.5-	0.5+	1998 05 01	704	0.6+	0.9-	1998 05 23	704	0.6+	0.1+
1991 11 27	691	0.4-	0.5+	1998 05 01	704	0.4+	1.7-	1998 05 24	704	0.3+	0.3-
1991 12 05	399	0.3-	0.7-	1998 05 01	704	0.6-	0.6-	1998 05 24	704	0.1-	0.3+
1991 12 05	399	1.5+	1.5-	1998 05 01	704	0.5+	0.8+	1998 05 24	704	1.0+	1.2-

1998 JUNE 10

M.P.C. 31915

1991 12 07	399	(0.3+ 3.5-)	1998 05 05	699	1.0- 0.6-	1998 05 24	704	0.9- 0.2+
1991 12 07	399	1.4+ 0.6-	1998 05 05	699	0.4+ 0.4-	1998 05 24	704	1.3- 0.1+
1991 12 09	399	0.1+ 1.0-	1998 05 05	699	0.4+ 0.9-			

(8865)* 1992 AF = 1982 FU₁ = 1987 DQ₁

Discovered 1992 Jan. 1 by A. Natori and T. Urata at the JCPM Yakiimo Station.

Id. T. Urata (*MPC* 19686)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	79.87698	(2000.0)	P	Q
<i>n</i>	0.18912319	ω 261.71582	-0.63849577	-0.76275370
<i>a</i>	3.0058884	Ω 228.48635	+0.74901212	-0.58519484
<i>e</i>	0.2366383	<i>i</i> 7.87662	+0.17692934	-0.27523407
<i>P</i>	5.21	<i>H</i> 12.9	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1982 03 26	046	0.3+ 1.3-	1992 01 07	885	1.5- 0.5-	1998 04 22	704	0.3+ 1.1+
1982 03 27	046	0.0 1.6-	1992 01 24	385	0.1+ 0.2-	1998 04 22	704	0.1+ 0.2-
1982 03 27	046	0.6- 0.2-	1992 01 24	385	1.6- 0.4+	1998 05 01	704	0.1+ 0.2-
1982 03 27	046	0.1- 0.4+	1992 02 08	033	0.3+ 0.4+	1998 05 01	704	1.5+ 0.9-
1982 03 28	046	(3.8+ 5.8-)	1992 02 08	033	0.3- 0.1-	1998 05 01	704	0.2+ 1.1-
1982 03 28	046	(4.5+ 5.6-)	1992 02 09	033	0.8+ 0.5-	1998 05 01	704	0.0 0.2-
1987 02 22	010	(3.0+ 0.9-)	1996 12 08	886	0.2- 0.2-	1998 05 01	704	0.4+ 0.0
1987 02 22	010	0.0 1.1+	1996 12 08	886	1.1- 0.2+	1998 05 22	704	0.2- 0.3+
1987 02 22	010	0.1- 1.6+	1996 12 28	886	0.5+ 0.7-	1998 05 22	704	1.0- 0.6+
1991 12 12	033	0.4+ 0.4-	1996 12 28	886	0.5+ 0.7-	1998 05 22	704	0.2- 0.2-
1991 12 12	033	0.1- 0.6-	1997 01 03	385	0.2- 0.1+	1998 05 22	704	0.5+ 0.0
1991 12 13	033	0.1- 1.4-	1997 01 03	385	0.3- 0.3+	1998 05 22	704	0.7- 0.4+
1992 01 01	885	1.9+ 0.3- Y	1997 01 03	385	0.3- 0.4+	1998 05 22	888	0.1+ 0.9-
1992 01 01	885	0.2+ 0.6+ Y	1997 02 09	595	0.3+ 0.0	1998 05 22	888	0.0 0.2+
1992 01 02	385	(1.9- 2.2+)Y	1997 02 09	595	0.0 0.2+	1998 05 24	704	0.0 0.6+
1992 01 02	385	1.8+ 1.0+ Y	1997 02 09	595	0.3+ 0.1-	1998 05 24	704	0.8- 0.1+
1992 01 03	033	0.1- 0.3+	1998 04 22	704	0.1- 0.2-	1998 05 24	704	0.1- 0.5+
1992 01 03	033	0.9- 0.0	1998 04 22	704	0.0 0.6+	1998 05 24	704	0.5- 0.5+
1992 01 07	885	0.2+ 0.5+	1998 04 22	704	0.4+ 0.6-	1998 05 24	704	0.1+ 0.2+

(8866)* 1992 BR = 1931 AM = 1953 AB = 1996 BU₁₇ = 1998 FS₁₀₀

Discovered 1992 Jan. 26 by M. Mukai and M. Takeishi at YCPM Kagoshima Station.

Id. G. V. Williams (*MPC* 31573, *MPC* 31719)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	117.35573	(2000.0)	P	Q
<i>n</i>	0.17873270	ω 111.09300	+0.36091127	-0.92239951
<i>a</i>	3.1212847	Ω 316.94601	+0.76329935	+0.37690883
<i>e</i>	0.1669184	<i>i</i> 11.62439	+0.53583314	+0.08437350
<i>P</i>	5.51	<i>H</i> 12.5	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1931 01 11	690	(3.4- 2.1+)	1996 01 23	704	1.5+ 1.6+	1998 03 31	704	0.2+ 1.0+
1931 01 12	690	0.8+ 0.7+	1996 01 23	704	1.3+ 1.4+	1998 03 31	704	0.0 0.0
1931 01 13	690	2.1- 1.1-	1996 01 23	704	1.0- 0.1-	1998 03 31	704	0.5+ 0.0
1953 01 12	012	(4.4+ 1.9+)	1996 01 24	704	0.6- 1.1+	1998 03 31	704	0.4- 0.0
1953 01 13	012	1.4+ 1.0-	1996 01 24	704	1.2- 0.3+	1998 04 01	704	0.1+ 0.3+
1992 01 26	364	0.7+ 0.3-	1996 01 24	704	0.8- 0.2+	1998 04 01	704	0.5+ 0.6+
1992 01 26	364	0.4+ 1.5+	1996 01 27	704	0.7- 1.5-	1998 04 01	704	(0.1+ 2.1+)
1992 01 27	364	0.7- 0.8+	1996 01 27	704	0.1+ 0.1-	1998 04 01	704	0.0 0.1-
1992 01 27	364	0.5- 0.4-	1998 03 24	566	0.1+ 0.5+	1998 04 01	704	0.1- 0.2-
1992 02 02	675	0.1- 0.3+	1998 03 24	566	0.5+ 0.3+	1998 04 30	566	0.3- 0.8-
1992 02 03	675	(1.2+ 3.1+)	1998 03 24	566	0.0 0.5+	1998 04 30	566	0.3- 0.8-
1992 02 03	675	(0.7- 2.6+)	1998 03 31	704	0.5+ 0.0	1998 04 30	566	0.4- 0.7-

(8867)* 1992 BF₄ = 1978 EM₁₀Discovered 1992 Jan. 29 by Spacewatch at Kitt Peak.
Id. G. V. Williams (*MPC* 20340)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	123.75708	(2000.0)	P	Q
<i>n</i>	0.20305395	ω 75.41343	-0.41663126	-0.90870278
<i>a</i>	2.8667848	Ω 39.24134	+0.81741849	-0.38700146
<i>e</i>	0.0288080	<i>i</i> 2.35844	+0.39780071	-0.15649001
<i>P</i>	4.85	<i>H</i> 13.8	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1978 03 15	675	1.6- 0.4+	1993 05 24	675	0.9+ 0.7-	1998 05 01	704	0.0 0.2-
1978 03 16	675	0.8+ 0.6-	1993 05 24	675	0.9+ 0.5-	1998 05 01	704	0.0 0.9-
1992 01 29	691	0.2- 0.4-	1997 01 08	046	0.0 0.3+	1998 05 01	704	0.1+ 0.0
1992 01 29	691	0.2+ 0.1-	1997 01 08	046	0.2- 0.4+	1998 05 01	704	0.4- 1.1+
1992 01 29	691	0.6- 0.2-	1997 01 08	046	0.3+ 0.4+	1998 05 22	704	1.1+ 0.6+
1992 01 30	691	0.0 0.1-	1997 01 08	046	0.1+ 0.2+	1998 05 22	704	(1.6+ 2.3-)
1992 01 30	691	0.0 0.2-	1997 01 08	046	0.1+ 0.5+	1998 05 22	704	0.5- 0.8-
1992 01 30	691	1.0- 0.3+	1997 01 13	046	0.2+ 0.2-	1998 05 22	704	0.3+ 0.7+
1992 02 04	675	0.8+ 1.4-	1997 01 13	046	0.1+ 0.1-	1998 05 22	704	0.5+ 1.2+
1992 02 04	675	1.3+ 0.2-	1997 01 13	046	0.0 0.1-	1998 05 22	699	0.2+ 0.3-
1992 02 09	691	0.2- 0.1-	1997 01 15	599	0.1- 0.2+	1998 05 22	699	0.8+ 1.4+
1992 02 09	691	1.1- 0.8+	1997 01 15	599	0.2- 0.3-	1998 05 22	699	0.0 0.6-
1992 02 09	691	1.1+ 1.1+	1997 01 15	599	0.2- 0.0	1998 05 24	704	0.1+ 0.1-
1993 03 23	675	0.1- 0.1+	1998 04 22	704	0.5+ 0.5-	1998 05 24	704	1.6- 1.2-
1993 03 23	675	0.2- 1.2-	1998 04 22	704	0.4- 0.7+	1998 05 24	704	1.1- 1.2-
1993 05 21	675	0.4+ 0.4-	1998 04 22	704	1.3- 0.1+	1998 05 24	704	0.7+ 0.4+
1993 05 21	675	0.2- 0.3+	1998 04 22	704	1.8+ 0.9+	1998 05 24	704	1.8- 1.0+

(8868)* 1992 EE₇ = 1997 BP

Discovered 1992 Mar. 1 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. B. G. Marsden (*MPC* 28847)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	309.29284	(2000.0)	P	Q
<i>n</i>	0.18561422	ω 161.48415	+0.38241819	+0.91009139
<i>a</i>	3.0436536	Ω 130.66519	-0.87211066	+0.41260119
<i>e</i>	0.0911492	<i>i</i> 12.15051	-0.30525288	-0.03865122
<i>P</i>	5.31	<i>H</i> 13.0	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1992 02 27	691	0.4- 0.5-	1997 03 04	704	0.4+ 0.1-	1998 05 18	560	0.2- 0.2-
1992 02 27	691	0.5- 0.5-	1997 03 04	704	0.3+ 0.6+	1998 05 18	560	0.1- 0.1-
1992 02 27	691	0.5- 0.4-	1997 03 05	704	0.5+ 0.0	1998 05 18	560	0.2+ 0.3-
1992 03 01	809	0.7+ 0.2+	1997 03 05	704	1.2+ 0.8+	1998 05 23	704	0.2+ 0.0
1992 03 04	809	0.1+ 0.0	1997 03 06	704	1.1+ 0.6+	1998 05 23	704	0.0 0.8-
1992 03 09	809	0.3+ 0.3+	1997 03 06	704	1.8+ 0.7+	1998 05 23	704	0.8+ 0.3+
1992 04 04	809	0.2+ 0.3+	1998 04 23	704	0.0 0.1-	1998 05 23	704	0.9- 0.2+
1994 08 03	675	0.7- 1.2+	1998 04 23	704	0.1+ 0.2+	1998 05 23	704	0.8- 0.8-
1994 08 03	675	0.0 1.0+	1998 04 23	704	0.2+ 0.0	1998 05 25	704	0.6- 0.6+
1997 01 18	046	0.6- 0.0	1998 04 23	704	0.2+ 0.4+	1998 05 25	704	1.9- 0.3-
1997 01 18	046	0.5- 0.1+	1998 04 24	704	0.5- 0.2-	1998 05 25	704	1.0- 1.1+
1997 01 18	046	0.5- 0.0	1998 04 24	704	1.4+ 0.2+	1998 05 25	704	1.0+ 0.1+
1997 01 18	046	0.1- 0.0	1998 04 24	704	1.2+ 1.8+	1998 05 27	699	0.2+ 0.7+
1997 01 19	046	0.9- 0.1-	1998 04 24	704	0.3- 0.9+	1998 05 27	699	0.1- 0.1-
1997 01 19	046	0.5- 0.1+	1998 04 25	566	0.5+ 1.2-	1998 05 27	699	0.2+ 0.1-
1997 01 19	046	0.7- 0.0	1998 04 25	566	0.5+ 0.8-	1998 06 02	699	0.1- 0.2+
1997 01 19	046	0.7- 0.1+	1998 04 25	566	0.4+ 1.3-	1998 06 02	699	0.3+ 0.3+
1997 01 19	046	0.7- 0.1+	1998 05 18	560	0.3- 0.2-	1998 06 02	699	0.7- 0.8+

(8869)* 1992 EE₁₁ = 1966 PS = 1981 ES₁

Discovered 1992 Mar. 6 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. G. V. Williams (*MPC* 23862, unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	1.69046	(2000.0)	P	Q
<i>n</i>	0.17893906	ω 133.80310	−0.67973824	+0.73269955
<i>a</i>	3.1188844	Ω 93.34242	−0.68213889	−0.61485788
<i>e</i>	0.1366431	<i>i</i> 1.91018	−0.26952266	−0.29172103
<i>P</i>	5.51	<i>H</i> 13.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1954 04 08	675	0.6+	0.8−	1992 02 24	691	0.4+	1.5−	1998 04 21	704	0.7−	0.3+
1954 04 08	675	0.9−	0.9−	1992 03 06	809	0.6−	0.6+	1998 04 21	704	0.3−	0.5+
1966 08 07	074	0.0	1.5+	1992 03 08	809	0.8−	0.6+	1998 04 22	704	0.2−	0.0
1981 03 08	809	0.0	0.1+	1992 03 09	809	0.5−	1.0+	1998 04 22	704	0.2+	0.3−
1981 03 08	809	0.2+	0.0	1992 04 06	809	0.1+	0.3+	1998 04 22	704	0.1+	0.4−
1981 03 08	809	0.3+	0.2−	1995 12 22	691	0.0	0.9+	1998 04 22	704	1.9+	0.2−
1981 03 09	809	0.3−	0.3+	1995 12 22	691	0.1−	0.6+	1998 04 22	704	0.0	2.0+
1981 03 09	809	0.2+	0.4+	1995 12 22	691	0.1−	0.7+	1998 04 29	566	1.1−	0.1−
1981 03 09	809	0.5+	0.4+	1995 12 28	691	1.1−	1.4+	1998 04 29	566	1.1−	0.0
1981 03 09	809	0.7+	0.3+	1995 12 28	691	0.9−	1.1+	1998 04 29	566	1.2−	0.1+
1981 03 09	809	1.2+	0.3+	1995 12 28	691	1.0−	1.2+	1998 05 16	704	0.5−	0.4+
1981 03 09	809	1.0+	0.2+	1997 01 02	327	1.1+	0.2+	1998 05 16	704	1.1+	1.1+
1981 03 10	809	0.4−	1.0+	1997 01 02	327	0.6+	0.6−	1998 05 16	704	0.7+	0.5+
1981 03 10	809	0.2−	1.0+	1997 01 02	327	0.2+	0.3−	1998 05 16	704	1.3+	0.8−
1981 03 10	809	0.8−	0.7+	1997 01 10	566	0.4+	0.8−	1998 05 16	704	1.8+	1.4+
1981 03 10	809	1.1−	0.2+	1997 01 10	566	0.1−	0.8−	1998 05 25	699	1.0+	0.4−
1981 03 10	809	0.7−	0.1−	1997 01 10	566	0.0	0.7−	1998 05 25	699	0.2+	1.1+
1981 03 10	809	0.4−	0.3−	1998 04 21	704	0.2+	0.1−	1998 05 25	699	0.0	0.1−
1992 02 24	691	0.1+	1.2−	1998 04 21	704	1.4−	0.1−				
1992 02 24	691	0.1+	1.0−	1998 04 21	704	0.1−	0.3−				

(8870)* 1992 EQ₁₁ = 1977 DY₁₀ = 1994 OD

Discovered 1992 Mar. 6 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. K. Kinoshita (*MPC* 24392)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	241.50356	(2000.0)	P	Q
<i>n</i>	0.19603372	ω 327.46944	+0.99246569	−0.12052295
<i>a</i>	2.9348249	Ω 39.47145	+0.11852112	+0.89876786
<i>e</i>	0.1397080	<i>i</i> 1.98750	+0.03105784	+0.42153358
<i>P</i>	5.03	<i>H</i> 12.7	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1977 02 19	381	0.0	0.1−	1995 11 24	411	0.5−	0.4+	1998 05 22	704	0.0	0.8−
1992 02 29	809	0.4−	0.4−	1995 11 24	411	0.3+	1.5+	1998 05 22	704	0.9+	0.0
1992 03 06	809	0.8+	0.1−	1998 04 22	704	(0.1+ 2.4−)		1998 05 22	704	0.1+ 1.2+	
1992 03 08	809	0.8+	0.0	1998 04 22	704	0.1+	0.7−	1998 05 22	704	(1.0− 2.2−)	
1992 03 09	809	0.3+	0.8+	1998 04 22	704	(3.0+ 1.0−)		1998 05 22	704	0.8− 0.8−	
1992 04 06	809	1.4−	0.4+	1998 04 22	704	0.6+	1.0+	1998 05 24	704	0.7+ 1.0−	
1994 07 31	905	0.3−	0.7−	1998 05 01	704	0.3+	0.6+	1998 05 24	704	0.3+ 0.2+	
1994 07 31	905	1.7−	0.6−	1998 05 01	704	0.9−	1.0−	1998 05 24	704	0.7− 1.5+	
1994 08 03	905	0.4+	1.6+	Y 1998 05 01	704	0.8+	0.7−	1998 05 24	704	1.4− 0.4+	
1994 08 29	905	1.1+	0.5+	1998 05 01	704	0.9+	0.2+	1998 05 24	704	0.3− 1.3+	
1994 08 29	905	0.2+	0.4+	1998 05 01	704	0.0	0.2−				

(8871)* 1992 EA₂₂ = 1994 PC₄₀

Discovered 1992 Mar. 1 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. S. Nakano (*MPC* 28847)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	353.07336	(2000.0)	P	Q
<i>n</i>	0.18487385	ω 96.72483	−0.49096269	+0.86150139
<i>a</i>	3.0517741	Ω 142.94733	−0.85983503	−0.45527242
<i>e</i>	0.0238881	<i>i</i> 12.41113	−0.14014046	−0.22481633
<i>P</i>	5.33	<i>H</i> 12.8	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1992 03 01	809	0.6+	1.3+	1998 04 23	704	0.2+	0.2−	1998 05 23	704	0.3+	0.1+
1992 03 04	809	0.6+	0.5+	1998 04 23	704	1.7+	0.8+	1998 05 23	704	0.4+	0.2+
1992 03 07	809	0.2−	0.8+	1998 04 23	704	0.2−	0.2−	1998 05 23	704	0.6−	0.6+
1992 04 04	809	0.6−	0.1−	1998 04 23	704	0.5−	0.7+	1998 05 23	704	0.8−	1.2−
1994 08 09	675	(3.3+ 0.7−)		1998 04 24	704	0.1+	0.2−	1998 05 25	704	0.5−	0.3+
1994 08 09	675	0.2+	2.0+	1998 04 24	704	0.1−	0.2−	1998 05 25	704	(3.4− 1.7+)	
1994 08 13	809	0.4−	1.0+	1998 04 24	704	1.3−	0.8−	1998 05 25	704	1.4−	1.5+
1994 08 13	809	0.1+	0.5+	1998 04 24	704	0.8+	1.3+	1998 05 25	704	0.4−	1.4−
1994 08 13	809	0.7−	1.1+	1998 04 25	566	0.8−	1.8−	1998 05 27	699	0.3+	0.9+
1997 01 09	411	0.2−	0.0	1998 04 25	566	0.5−	1.9−	1998 05 27	699	0.7+	0.4−
1997 01 09	411	1.7−	0.6+	1998 04 25	566	0.6−	1.8−	1998 05 27	699	0.5+	0.1+
1997 01 10	411	0.5+	0.4+	1998 05 18	560	0.7−	1.1+	1998 06 02	699	0.1+	0.8+
1997 01 10	411	0.4−	0.3+	1998 05 18	560	0.5−	1.4+	1998 06 02	699	0.5+	0.1−
1997 02 17	327	1.0+	0.3+	1998 05 18	560	0.4+	1.1+	1998 06 02	699	0.2+	0.3−
1997 02 17	327	1.3+	0.9+	1998 05 18	560	1.9+	0.8+				
1997 02 17	327	0.3−	0.1+	1998 05 23	704	0.6+	0.9−				

(8872)* 1992 GA₄ = 1991 EB₇ = 1997 CJ₁₅

Discovered 1992 Apr. 4 by E. W. Elst at the European Southern Observatory.

Id. G. V. Williams (*MPC* 29100)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	2.40766	(2000.0)	P	Q
<i>n</i>	0.17163072	ω 88.14953	−0.40303645	+0.91513718
<i>a</i>	3.2068061	Ω 158.07516	−0.84920587	−0.37019353
<i>e</i>	0.0982830	<i>i</i> 1.41944	−0.34119058	−0.15962670
<i>P</i>	5.74	<i>H</i> 13.2	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1991 03 10	809	0.3+	1.1−	1997 03 16	709	0.5+	0.3−	1997 06 29	709	1.0−	0.5+
1991 03 10	809	0.8+	0.8−	1997 03 16	709	0.3+	0.4−	1998 04 25	809	1.7+	0.7−
1991 03 10	809	1.1+	0.4−	1997 03 16	709	0.6+	0.4−	1998 04 25	809	1.4+	1.0−
1992 04 04	809	0.4+	0.4+	1997 03 16	709	0.5+	0.4−	1998 04 25	809	1.4+	0.8−
1992 04 04	809	0.7−	1.0+	1997 03 19	709	0.6−	0.1+	1998 04 25	699	0.3−	0.8−
1992 04 04	809	0.2−	0.5+	1997 03 19	709	0.2−	0.3+	1998 04 25	699	0.7−	0.0
1992 04 06	809	0.2+	0.9+	1997 03 19	709	0.0	0.1+	1998 04 25	699	1.0−	0.4−
1992 04 06	809	0.3−	0.0	1997 03 19	709	0.1−	0.3+	1998 04 28	809	1.1+	1.1−
1992 04 06	809	0.0	0.6−	1997 03 19	709	0.1−	0.2+	1998 04 28	809	1.6+	0.2−
1992 04 25	809	0.3+	0.0	1997 03 22	709	0.3+	0.0	1998 04 28	809	1.5+	0.0
1992 04 25	809	0.4+	0.4−	1997 03 22	709	0.6+	0.0	1998 05 22	704	0.1−	0.4+
1992 04 25	809	0.0	0.8−	1997 03 22	709	0.0	0.0	1998 05 22	704	0.5−	0.7+
1992 05 07	691	0.2−	0.4+	1997 03 22	709	0.5+	0.0	1998 05 22	704	0.2−	0.6+
1992 05 07	691	0.3−	0.4+	1997 03 22	709	0.7+	0.1+	1998 05 22	704	1.7−	0.0
1992 05 07	691	0.6−	0.6+	1997 03 22	709	0.6+	0.1+	1998 05 22	704	0.3−	1.2+
1994 10 08	691	0.2−	1.1+	1997 04 15	709	0.2+	0.1+	1998 05 24	704	0.2−	0.5+
1994 10 08	691	0.4−	0.3+	1997 04 15	709	0.3+	0.0	1998 05 24	704	1.0−	0.6+
1994 10 08	691	0.5−	0.3+	1997 04 15	709	0.4+	0.0	1998 05 24	704	0.0	0.1+
1997 02 06	691	0.8−	0.0	1997 04 15	709	0.3+	0.1−	1998 05 24	704	0.5−	0.0
1997 02 06	691	0.7−	0.2+	1997 04 29	709	0.1−	0.2+	1998 05 24	704	1.0−	0.3+
1997 02 06	691	0.7−	0.4+	1997 04 29	709	0.1+	0.3+	1998 06 03	704	0.4+	0.8−
1997 02 10	691	1.1−	0.8+	1997 04 29	709	0.1−	0.2+	1998 06 03	704	0.6+	1.0−
1997 02 10	691	1.3−	0.1−	1997 04 29	709	0.0	0.1+	1998 06 03	704	(1.5− 2.5−)	
1997 02 10	691	1.1−	0.0	1997 04 29	709	0.1+	0.2+	1998 06 03	704	(2.4− 0.4+)	
1997 03 16	709	0.5+	0.2−	1997 06 29	709	0.6−	0.4+				
1997 03 16	709	0.5+	0.3−	1997 06 29	709	0.0	0.9+				

(8873)* 1992 UM₂ = 1977 LN₁ = 1981 RS₇

Discovered 1992 Oct. 21 by Y. Mizuno and T. Furuta at Kani.

Id. K. Ichikawa (*MPC* 23674), K. Kinoshita (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	232.06731	(2000.0)	P	Q
<i>n</i>	0.27459357	ω 293.54489	+0.99482530	-0.06436213
<i>a</i>	2.3442781	Ω 70.22079	+0.09171645	+0.90179282
<i>e</i>	0.1721953	<i>i</i> 4.79222	-0.04371171	+0.42734907
<i>P</i>	3.59	<i>H</i> 14.5	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1949 11 19	675	1.3+	0.0	1992 10 25	675	0.6+	0.5+	1998 04 21	704	0.1-	1.0+
1949 11 19	675	1.3-	0.1+	1992 10 26	403	0.3+	0.3-	Y 1998 04 21	704	0.6+	0.2-
1977 06 13	675	0.7+	0.6+	1992 10 26	403	0.6-	1.1+	Y 1998 04 21	704	0.8+	0.9-
1977 06 14	675	0.6-	0.4+	1992 10 28	399	1.3-	0.4+	1998 04 21	704	0.1+	0.0
1981 09 03	675	1.0-	0.3-	1992 10 28	399	1.3-	0.2+	1998 04 21	910	1.1+	0.3+
1981 09 04	675	0.8+	0.2+	1998 03 29	704	0.6+	1.2+	1998 04 21	910	0.6+	0.4+
1992 10 21	403	1.4-	1.7+	Y 1998 03 29	704	1.7-	0.9+	1998 04 21	910	0.7+	0.6+
1992 10 21	403	(3.3+	0.7-)	Y 1998 03 29	704	0.5-	0.2+	1998 04 22	704	0.4-	0.1-
1992 10 22	399	0.0	0.1+	1998 03 29	704	0.2-	0.2+	1998 04 22	704	0.1+	0.1-
1992 10 22	399	2.1+	0.1-	1998 03 29	704	0.8+	0.5-	1998 04 22	704	0.6-	0.0
1992 10 25	675	0.1+	0.5+	1998 04 21	704	0.9-	1.4+	1998 04 22	704	0.9+	0.0

(8874)* 1992 UY₃ = 1975 VM₃ = 1981 JF₄ = 1985 QK = 1991 HU₃

Discovered 1992 Oct. 26 by K. Endate and K. Watanabe at Kitami.

Id. S. Nakano (*MPC* 21275)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	286.21635	(2000.0)	P	Q
<i>n</i>	0.29070620	ω 313.00163	+0.95092350	+0.30628870
<i>a</i>	2.2568352	Ω 29.24397	-0.25122846	+0.84716321
<i>e</i>	0.1850941	<i>i</i> 5.16170	-0.18063431	+0.43416787
<i>P</i>	3.39	<i>H</i> 14.2	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1975 11 02	095	1.0-	1.3+	1992 10 26	400	0.2+	0.8+	1998 04 22	704	1.0+	1.1-
1975 11 07	095	(2.1-	2.9+)	1992 10 26	400	0.6-	1.7+	1998 04 22	704	0.1-	1.8-
1981 05 08	675	0.9+	0.2+	1992 10 28	400	0.4+	0.1+	1998 04 22	704	1.9+	0.1+
1981 05 09	675	(4.4+	2.3-)	1992 10 28	400	1.4-	0.6+	1998 04 22	704	0.8-	1.5-
1985 08 22	688	1.4+	0.3+	1992 10 28	399	1.3-	1.0+	1998 04 22	704	0.3+	0.8-
1985 08 22	688	1.1-	0.0	1992 10 28	399	0.6-	0.7+	1998 04 25	809	(3.3+	4.1+)
1985 09 12	688	0.8+	1.1-	1992 11 16	400	0.9-	0.7-	1998 04 25	809	(2.6+	3.6+)
1985 09 12	688	(3.0-	0.8-)	1992 11 16	400	(3.2+	0.1+)	1998 04 25	809	(2.6+	2.4+)
1991 04 15	675	1.6-	0.4-	1994 04 23	250	0.4-	0.4+	1998 05 05	699	0.3+	0.0
1991 04 15	675	0.5-	0.4+	1994 04 23	250	0.3-	0.5+	1998 05 05	699	0.8+	0.4+
1991 04 19	809	0.6+	1.1+	1994 04 23	250	0.5-	0.3+	1998 05 05	699	0.1-	0.1+
1991 04 19	809	0.9+	0.6+	1994 04 23	250	0.1-	0.3+	1998 05 22	704	0.3-	0.9+
1991 04 19	809	(2.4+	1.1+)	1997 01 30	587	0.8+	0.1-	1998 05 22	704	0.1+	1.4+
1991 04 19	675	0.1+	1.2-	1997 01 30	587	0.2-	0.2+	1998 05 22	704	0.5+	0.5+
1991 04 19	675	0.5+	1.2-	1997 01 31	587	0.7+	0.2+	1998 05 22	704	0.6+	1.8+
1991 05 15	675	0.3+	0.7+	1997 01 31	587	0.2+	1.4-	1998 05 22	704	1.1-	1.0+
1991 05 15	675	0.7-	0.6+	1998 04 22	704	(0.8+	2.9-)	1998 05 24	704	1.0-	0.7+
1991 05 17	675	1.1+	1.4+	1998 04 22	704	0.9+	0.4-	1998 05 24	704	0.4-	0.6-
1991 05 17	675	0.2-	0.7+	1998 04 22	704	(1.0-	2.5-)	1998 05 24	704	0.4-	0.1+
1992 10 21	675	0.7+	0.5-	1998 04 22	704	(2.1+	0.1-)	1998 05 24	704	0.3-	1.0+
1992 10 21	675	1.6+	0.2+	1998 04 22	704	(0.3-	2.2-)	1998 05 24	704	0.4-	0.8+

(8875)* 1992 UP₁₀ = 1971 UP₂ = 1997 AE₁₁

Discovered 1992 Oct. 22 by E. Bowell at Palomar.

Id. G. V. Williams (*MPC* 29616)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	244.10666	(2000.0)	P	Q
<i>n</i>	0.28234042	ω 287.74277	+0.97872307	-0.19327303
<i>a</i>	2.3011981	Ω 83.44366	+0.20450715	+0.89156749
<i>e</i>	0.2483437	<i>i</i> 3.97664	+0.01667295	+0.40957654
<i>P</i>	3.49	<i>H</i> 15.2	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1971 10 21	805	0.8-	1.4+	1992 11 30	675	0.4-	0.5-	1998 04 21	704	0.2-	0.5-
1971 10 21	805	0.5+	0.8-	1997 01 10	566	1.5+	0.2-	1998 04 21	704	0.9-	0.8+
1971 10 21	095	(3.8+	3.0-)	1997 01 10	566	0.3+	0.0	1998 05 22	704	1.4+	0.8-
1992 10 21	675	0.7+	0.9-	1997 01 10	566	1.7-	0.2+	1998 05 22	704	0.7+	0.8+
1992 10 21	675	0.9+	0.7-	1997 01 11	566	0.2+	0.4-	1998 05 22	704	0.4-	0.6-
1992 10 22	675	0.5+	1.0-	1997 01 11	566	0.4+	0.4-	1998 05 22	704	(3.7-	1.1-)
1992 10 22	675	0.0	0.1-	1997 01 11	566	0.8-	0.1+	1998 05 24	704	2.4+	0.4+
1992 11 27	675	0.3-	1.6+	1998 04 21	704	0.7+	0.1-	1998 05 24	704	1.0+	2.3+
1992 11 27	675	1.2-	0.5+	1998 04 21	704	0.3+	0.2-	1998 05 24	704	0.4-	0.3-
1992 11 30	675	0.0	0.0	1998 04 21	704	0.2-	0.3-	1998 05 24	704	0.8-	0.9-

(8876)* 1992 WU₃ = 1987 KO = 1988 SK

Discovered 1992 Nov. 23 by Y. Kushida and O. Muramatsu at Yatsugatake.

Id. S. Nakano (*MPC* 21595)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	199.98842	(2000.0)	P	Q
<i>n</i>	0.26446154	ω 64.75515	+0.77013381	-0.63774758
<i>a</i>	2.4037780	Ω 334.86250	+0.57357906	+0.70134656
<i>e</i>	0.2009783	<i>i</i> 1.76886	+0.27910746	+0.31841956
<i>P</i>	3.73	<i>H</i> 13.7	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1987 05 30	413	0.8+	0.3-	1992 11 26	896	1.1-	0.8-	Y 1998 04 21	704	0.7-	0.1+
1987 05 30	413	(2.4+	2.7-)	1992 11 26	896	0.6-	0.2-	1998 04 25	699	0.1-	0.0
1988 09 11	675	0.5-	0.6-	1992 12 04	896	0.1+	0.7+	1998 04 25	699	0.1+	0.2+
1988 09 11	675	0.0	1.5-	1992 12 04	896	0.6+	0.3-	1998 04 25	699	0.4+	0.1-
1988 09 15	511	(2.6-	1.5-)	1992 12 15	896	0.2-	0.3+	1998 05 01	704	0.0	0.4-
1988 09 15	511	0.6-	0.7-	1992 12 15	896	0.4+	0.3+	1998 05 01	704	(0.4+	3.6+)
1988 09 15	511	0.4+	0.6-	1992 12 29	896	0.8+	0.7-	1998 05 01	704	0.1+	1.2-
1988 09 15	675	0.6-	0.7-	1992 12 29	896	(2.3+	0.5-)	1998 05 01	704	0.5-	1.4-
1988 09 15	675	0.4-	0.7-	1994 04 16	691	1.6-	1.1-	1998 05 22	704	1.0+	0.6-
1988 09 17	511	(3.8-	1.4-)	1994 04 16	691	0.5-	1.0-	1998 05 22	704	0.1-	0.8-
1988 09 17	511	0.7+	0.5+	1997 02 04	566	0.3-	0.1-	1998 05 22	704	0.3+	1.0-
1988 09 17	511	(1.9+	2.4+)	1997 02 04	566	0.4-	0.2-	1998 05 22	704	0.3+	1.2-
1988 09 18	511	(2.7-	1.3-)	1997 02 04	566	0.2-	0.1-	1998 05 22	704	0.2-	1.4-
1988 09 18	511	1.6+	1.0+	1998 04 21	704	0.1-	0.4+	1998 05 24	704	0.4+	1.3+
1988 09 18	511	(4.9+	2.8+)	1998 04 21	704	0.2-	0.1-	1998 05 24	704	0.0	0.5-
1992 11 23	896	0.7+	1.1-	1998 04 21	704	0.0	1.1+	1998 05 24	704	0.6-	1.0+
1992 11 23	896	0.7+	0.0	Y 1998 04 21	704	0.4-	1.8+				

(8877)* 1993 BK₂ = 1977 RF₁₉ = 1998 FX₄₂

Discovered 1993 Jan. 19 by T. Seki at Geisei.

Id. S. Nakano (*MPC* 31722), G. V. Williams (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	81.38591	(2000.0)	P	Q
<i>n</i>	0.21407180	ω 141.15266	-0.38054593	-0.92450755
<i>a</i>	2.7675559	Ω 331.19585	+0.83682335	-0.33427991
<i>e</i>	0.0918919	<i>i</i> 2.58051	+0.39358794	-0.18314674
<i>P</i>	4.60	<i>H</i> 13.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1977 09 09	675	0.2+	0.5-	1996 12 27	327	0.1-	0.3-	1998 03 29	704	0.5+	0.0
1977 09 10	675	0.6+	1.1-	1996 12 27	327	0.2+	0.3-	1998 03 29	704	0.2-	0.2+
1993 01 19	372	(3.7+	0.8-)	1998 03 20	704	0.3-	0.9+	1998 03 29	704	0.2-	0.6-
1993 01 19	372	0.9+	0.8+	1998 03 20	704	0.2+	1.1+	1998 03 29	704	0.5+	0.8-
1993 01 22	399	0.5+	0.5+	1998 03 20	704	0.6+	0.4+	1998 04 01	704	0.9+	0.4-
1993 01 22	399	1.0-	1.0+	1998 03 20	704	0.3+	0.2-	1998 04 01	704	1.0-	0.4-
1993 01 22	372	(2.9+	4.2-)	1998 03 20	704	0.4+	0.1-	1998 04 01	704	(2.3-	1.4+)
1993 01 22	372	(5.1+	0.2+)	1998 03 22	704	0.1-	1.0+	1998 04 01	704	0.6-	1.9-
1993 01 25	372	(1.2+	2.8-)	1998 03 22	704	0.4+	0.6+	1998 04 18	704	0.3+	0.4-
1993 01 25	372	(3.0+	0.1+)	1998 03 22	704	0.2-	0.6+	1998 04 18	704	1.0-	0.3-
1993 01 28	372	0.0	1.2-	1998 03 22	704	0.4-	1.0+	1998 04 18	704	1.6-	0.2-
1993 01 28	372	1.7+	1.0-	1998 03 22	704	0.2+	0.4+	1998 04 18	704	1.0-	0.4-
1993 01 30	372	1.5-	1.1+	1998 03 28	704	0.2-	0.4-	1998 04 18	704	0.3-	0.3-

M.P.C. 31918

1998 JUNE 10

1993 01 30	372	(4.0+ 0.4-)	1998 03 28	704	0.1- 0.1+	1998 04 19	704	0.3+ 0.8-
1996 12 17	327	0.3+ 0.2-	1998 03 28	704	0.2- 0.2-	1998 04 19	704	0.8- 0.5-
1996 12 17	327	0.9- 0.6-	1998 03 28	704	0.6+ 1.1-	1998 04 19	704	0.8+ 0.5+
1996 12 17	327	0.6+ 0.7-	1998 03 28	704	1.0- 1.0-	1998 04 19	704	0.6+ 0.6+
1996 12 27	327	0.4+ 0.2+	1998 03 29	704	0.5+ 0.8-	1998 04 19	704	0.3+ 0.3+

(8878)* 1993 FN₁₆ = 1997 CM₅

Discovered 1993 Mar. 17 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. T. Urata (*MPC* 29103)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21402061	ω	166.36266	+0.45687026		+0.88700693	
<i>a</i>	2.7679972	Ω	130.77759	-0.82420379		+0.45044398	
<i>e</i>	0.0696480	<i>i</i>	5.07564	-0.33460077		+0.10158211	
<i>P</i>	4.61	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1990 09 28	675	0.6+ 0.1-	1997 02 06	369	0.0 0.6-	1998 05 05	699	1.2+ 0.5+
1991 12 07	691	0.4- 0.4+	1997 02 08	566	1.0- 0.6-	1998 05 22	704	0.1- 0.4-
1991 12 07	691	0.7- 0.1-	1997 02 08	566	0.7- 0.6-	1998 05 22	704	0.4- 0.6-
1991 12 07	691	0.6- 0.5+	1997 02 08	566	0.9- 0.6-	1998 05 22	704	0.3+ 1.0-
1993 03 17	809	0.4- 0.6+	1997 03 04	704	0.8+ 1.0-	1998 05 22	704	0.2- 0.3-
1993 03 18	809	0.9- 1.6+	1997 03 04	704	0.4+ 0.2-	1998 05 24	704	0.8- 0.1-
1993 03 23	809	1.6+ 0.9-	1997 03 05	704	1.4+ 0.2+	1998 05 24	704	0.2- 0.3-
1993 04 16	413	0.4+ 1.1-	1997 03 05	704	0.7+ 0.2-	1998 05 24	704	1.1- 0.4-
1997 02 01	369	1.0- 0.4+	1997 03 06	704	0.9+ 0.1+	1998 05 24	704	1.2+ 0.6-
1997 02 01	369	0.5- 0.7+	1997 03 06	704	1.6+ 0.1+	1998 05 24	704	0.1+ 0.8+
1997 02 06	369	0.0 0.6+	1998 05 05	699	0.2+ 0.9+			
1997 02 06	369	0.1- 0.3+	1998 05 05	699	0.9- 1.6+			

(8879)* 1993 FN₂₀ = 1995 UY₄₅

Discovered 1993 Mar. 19 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. B. G. Marsden (*MPC* 26173)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21999471	ω	130.38324	+0.68145979		-0.73122525	
<i>a</i>	2.7176565	Ω	276.63125	+0.66186106		+0.63346270	
<i>e</i>	0.0824168	<i>i</i>	1.75192	+0.31233393		+0.25305068	
<i>P</i>	4.48	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1993 03 19	809	1.4+ 1.1+	1997 01 31	691	0.1+ 0.0	1998 05 22	704	1.5- 0.1-
1993 03 20	809	0.6+ 1.7+	1997 01 31	691	0.0 0.1-	1998 05 22	704	0.6- 0.1+
1993 03 24	809	0.9+ 1.6+	1997 02 03	691	0.1- 0.1+	1998 05 22	704	0.0 0.1-
1993 04 17	413	0.8- 0.5+	1997 02 03	691	0.2- 0.1+	1998 05 22	704	(0.7+ 2.2+)
1995 10 20	010	0.3+ 1.6+	1997 02 03	691	0.0 0.0	1998 05 22	704	1.4+ 0.3+
1995 10 20	010	0.0 0.4+	1997 03 05	704	(2.8+ 0.2+)	1998 05 24	704	1.9+ 0.6+
1995 10 20	010	0.3- 1.0+	1997 03 05	704	(2.6+ 1.3+)	1998 05 24	704	0.2- 0.3-
1995 10 23	010	0.2+ 1.1+	1998 05 01	704	0.8+ 0.8-	1998 05 24	704	(2.8+ 0.7+)
1995 10 23	010	1.4- 0.9+	1998 05 01	704	0.7- 0.1+	1998 05 24	704	1.1- 0.8+
1995 10 23	010	1.2- 1.0+	1998 05 01	704	0.1- 0.9+	1998 05 24	704	0.9- 0.8+
1997 01 31	691	0.1- 0.4-	1998 05 01	704	1.9+ 0.2+			

(8880)* 1993 FT₃₃ = 1976 UH₇ = 1985 QS₆ = 1990 TU₁₄

Discovered 1993 Mar. 19 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. G. V. Williams (*MPC* 23526)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21070640	ω	258.58535	+0.57730192		+0.81452957	
<i>a</i>	2.7969470	Ω	46.82995	-0.71528878		+0.53822828	
<i>e</i>	0.0813056	<i>i</i>	4.49289	-0.39380764		+0.21645298	
<i>P</i>	4.68	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1976 10 22	381	0.2- 0.8+	1995 11 15	691	0.1- 0.1-	1998 05 02	566	0.1+ 0.6+
1976 10 22	381	0.9- 0.2+	1997 02 02	691	0.0 0.2-	1998 05 02	566	0.0 0.6+
1976 10 22	381	0.2- 0.5+	1997 02 02	691	0.1+ 0.2-	1998 05 18	699	0.1+ 0.4+
1976 10 22	381	0.4- 0.2-	1997 02 02	691	0.2- 0.2-	1998 05 18	699	0.7- 0.3+
1976 10 24	381	0.8+ 1.9+	1998 04 22	704	0.8- 1.1+	1998 05 18	699	0.4- 0.3+
1976 10 24	381	0.3- 0.2-	1998 04 22	704	0.4+ 0.0	1998 05 22	704	0.1+ 0.5+
1985 08 24	095	0.6- 0.6+	1998 04 22	704	0.0 0.9-	1998 05 22	704	0.7+ 0.6+
1990 10 12	413	(2.5- 0.6+)	1998 04 22	704	(0.0 2.6-)	1998 05 22	704	0.0 0.4+
1990 10 12	413	0.7+ 0.3+	1998 04 22	704	(1.3- 3.0-)	1998 05 22	704	0.3+ 0.6-
1993 03 19	809	0.6+ 0.0	1998 05 01	704	0.7- 0.2-	1998 05 22	704	0.0 0.8-
1993 03 20	809	0.2- 0.7+	1998 05 01	704	1.7+ 0.5-	1998 05 22	566	0.5+ 0.2+
1993 03 24	809	0.1- 0.7+	1998 05 01	704	(2.1- 2.6-)	1998 05 22	566	0.3+ 0.1+
1993 04 18	413	0.4- 0.2-	1998 05 01	704	0.2- 0.4-	1998 05 22	566	0.1- 0.7+
1994 07 09	675	0.3- 0.8-	1998 05 01	704	0.6- 0.6-	1998 05 24	704	0.2+ 0.0
1994 08 06	675	0.4+ 0.1-	1998 05 01	566	0.3- 0.3+	1998 05 24	704	0.5+ 0.7-
1994 08 06	675	0.3- 1.0-	1998 05 01	566	0.4- 0.5+	1998 05 24	704	0.6+ 0.5+
1995 11 15	691	0.1- 0.1-	1998 05 01	566	0.0 0.1+	1998 05 24	704	0.1+ 0.1-
1995 11 15	691	0.2- 0.2-	1998 05 02	566	0.2+ 0.5+	1998 05 24	704	0.1+ 1.0-

(8881)* 1993 FW₃₆ = 1997 ED₄₀

Discovered 1993 Mar. 19 at the European Southern Observatory in the course of the Uppsala-ESO Survey of Asteroids and Comets.

Id. G. V. Williams (*MPC* 29617)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21884761	ω	268.83928	+0.21816508		-0.97576067	
<i>a</i>	2.7271447	Ω	168.51585	+0.92619173		+0.20147101	
<i>e</i>	0.0318615	<i>i</i>	4.94993	+0.30752703		+0.08544328	
<i>P</i>	4.50	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1993 03 19	809	0.6+ 0.0	1997 03 06	704	0.5+ 0.7+	1998 05 22	699	0.7- 0.0
1993 03 20	809	0.3+ 0.1-	1997 03 15	327	0.3- 0.7+	1998 05 22	699	0.4+ 0.4+
1993 03 24	809	0.2- 0.4-	1997 03 15	327	0.4- 0.5+	1998 05 22	699	0.7+ 0.6+
1993 04 29	691	0.6- 0.7-	1997 03 15	327	0.2- 0.6+	1998 05 24	704	(2.7- 0.5+)
1993 04 29	691	0.4- 0.8-	1998 05 05	699	1.1- 0.6+	1998 05 24	704	(2.8- 1.1+)
1993 04 29	691	0.7- 0.8-	1998 05 05	699	1.3- 0.4-	1998 05 24	704	0.9+ 0.4-
1995 10 26	691	0.1+ 0.0	1998 05 05	699	1.2- 0.5+	1998 05 24	704	1.4- 1.4-
1995 10 26	691	0.1- 0.1+	1998 05 22	704	0.7+ 1.2-	1998 06 03	704	(2.1+ 1.8-)
1995 10 26	691	0.1- 0.0	1998 05 22	704	0.1- 1.2+	1998 06 03	704	1.4+ 0.0
1997 03 05	704	0.1- 0.0	1998 05 22	704	0.0 0.9-	1998 06 03	704	1.5+ 1.9+
1997 03 05	704	0.5+ 0.4-	1998 05 22	704	1.2+ 0.0	1998 06 03	704	1.9- 1.1+
1997 03 06	704	0.4+ 0.2+	1998 05 22	704	0.2+ 0.2+			

(8882)* 1994 AP₂ = 1987 GX

Discovered 1994 Jan. 10 by K. Endate and K. Watanabe at Kitami.

Id. G. V. Williams (*MPC* 25531)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27104607	ω	291.31062	+0.14521437		-0.96738084	
<i>a</i>	2.3646887	Ω	148.04464	+0.98892970		+0.13544560	
<i>e</i>	0.2085055	<i>i</i>	23.09137	+0.03050974		+0.21407662	
<i>P</i>	3.64	<i>H</i>	12.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1987 04 03	675	2.0+	0.6-	1994 03 11	098	0.6-	0.2-	1998 04 03	704	0.2+	0.3-
1987 04 03	675	(4.3+	1.3-)	1994 03 12	098	(4.4+	5.8+)	1998 04 05	758	1.1+	0.4+
1994 01 09	402	1.0+	0.4-	1995 07 22	118	0.9-	0.2+	1998 04 05	758	1.0+	0.2-
1994 01 09	402	0.7+	1.0+	1995 07 22	118	0.4-	0.2+	1998 04 05	758	1.6+	0.6-
1994 01 10	400	(2.6-	0.2+)	1995 07 22	118	0.6-	0.4+	1998 04 28	704	0.1+	0.6-
1994 01 10	400	0.3-	0.2-	1995 07 31	118	1.0-	0.6-	1998 04 28	704	0.5+	0.4+
1994 01 11	675	0.7-	1.1-	1995 07 31	118	0.7-	0.0	1998 04 28	704	0.2-	0.3+
1994 01 11	675	0.3+	0.6-	1995 08 02	118	1.1-	0.2-	1998 04 28	704	0.6-	0.7+
1994 01 13	400	0.4+	0.0	1995 08 02	118	0.6-	0.1+	1998 04 28	704	0.1-	1.2+
1994 01 13	400	1.1-	0.3+	1995 08 03	118	0.1-	1.4-	1998 04 30	704	0.2+	0.1-
1994 01 15	399	0.7+	0.4-	1995 08 03	118	0.1-	0.7-	1998 04 30	704	0.1-	0.5+
1994 01 15	399	(2.2-	0.5+)	1995 08 13	118	0.4+	1.0-	1998 04 30	704	0.1+	0.5+
1994 01 15	402	0.1+	1.5-	1995 08 15	118	0.4-	1.5-	1998 04 30	704	1.4-	1.2+
1994 01 15	402	0.5+	0.1-	1995 08 15	118	1.3-	0.4-	1998 05 05	749	0.7-	0.2-
1994 01 16	675	1.3-	1.1-	1996 08 18	801	1.0+	0.2+	1998 05 05	749	0.2-	0.1+
1994 01 16	675	0.9-	1.3-	1996 08 18	801	0.2+	0.3+	1998 05 09	749	0.4-	0.1+
1994 02 08	400	0.1-	0.8+	1996 08 19	801	0.7+	0.6+	1998 05 09	749	0.0	0.8+
1994 02 08	400	0.9-	1.2+	1998 04 02	704	0.0	0.1+	1998 05 29	704	1.6-	0.1-
1994 02 12	675	0.5+	0.2-	1998 04 02	704	0.0	0.3+	1998 05 29	704	0.6-	0.2-
1994 02 12	675	0.2-	0.3+	1998 04 02	704	1.1+	0.2-	1998 05 29	704	0.9+	0.3-
1994 02 15	675	0.2+	0.8-	1998 04 03	704	0.2+	0.1+	1998 05 29	704	0.2+	0.8+
1994 02 15	675	0.4+	0.9-	1998 04 03	704	0.1+	0.1+	1998 05 29	704	0.3-	0.9-
1994 03 11	098	0.5-	1.3+	1998 04 03	704	0.3+	0.0				
1994 03 11	098	0.5-	0.7+	1998 04 03	704	1.2+	0.3-				

(8883)* 1994 BS₄ = 1978 NO₅ = 1996 XB₁₉

Discovered 1994 Jan. 16 by T. Kobayashi at Oizumi.

Id. G. V. Williams (*MPC* 28852)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	184.39397		(2000.0)		P		Q
<i>n</i>	0.28758820	ω	342.63807	+0.55165882	-0.83304163		
<i>a</i>	2.2731182	Ω	73.86273	+0.77026922	+0.48979182		
<i>e</i>	0.0224650	<i>i</i>	2.47027	+0.31993418	+0.25718790		
<i>P</i>	3.43	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 07 10	675	(4.3+	1.9-)	Y	1996 12 08	905	0.3+	0.6-	1998 04 22	704	0.1-	1.3-
1978 07 11	675	(7.5+	1.0-)	Y	1996 12 09	905	1.3-	0.9-	1998 04 22	704	0.2+	1.7-
1978 07 13	675	(9.5+	3.7+)	Y	1996 12 09	905	1.2+	0.3-	1998 04 25	699	0.3+	0.7+
1989 11 04	675	1.5+	2.1-		1996 12 10	327	0.3+	0.2-	1998 04 25	699	0.7-	0.2+
1989 11 04	675	0.5-	0.3-		1996 12 10	327	0.1+	0.0	1998 04 25	699	0.2+	0.0
1992 09 28	691	0.5-	0.3+		1996 12 10	327	0.2-	0.0	1998 05 01	704	0.0	0.4+
1992 09 28	691	0.5-	0.3+		1996 12 12	385	0.3+	0.1-	1998 05 01	704	0.1-	0.0
1992 09 28	691	0.4+	0.3+		1996 12 12	385	0.2+	0.1-	1998 05 01	704	0.6-	0.1-
1994 01 16	411	(0.2+	2.4+)		1996 12 12	385	0.3+	0.2-	1998 05 01	704	0.3+	0.4+
1994 01 16	411	0.8-	0.8+		1996 12 14	385	0.4+	0.1+	1998 05 01	704	0.2-	0.4+
1994 01 18	411	0.7-	0.7+		1996 12 14	385	0.0	0.1+	1998 05 05	699	0.1-	0.4-
1994 01 18	411	0.2+	0.1-		1996 12 14	385	0.3+	0.2-	1998 05 05	699	0.4+	0.2-
1994 01 19	411	0.8+	1.2-		1996 12 17	566	0.5+	0.4+	1998 05 05	699	0.2+	0.0
1994 01 19	411	0.4+	0.6+		1996 12 17	566	0.5+	0.5+	1998 05 22	704	0.4+	0.1-
1994 01 19	411	0.0	0.3+		1996 12 17	566	0.6+	0.4+	1998 05 22	704	0.3-	1.0+
1994 02 02	411	1.1+	1.1+		1997 01 07	385	0.0	0.5+	1998 05 22	704	1.1+	0.5+
1994 02 02	411	0.4-	0.0		1997 01 07	385	0.3-	0.2+	1998 05 22	704	0.6+	0.8+
1994 02 02	411	0.1-	0.6+		1998 04 21	704	0.2+	0.1-	1998 05 22	704	0.0	0.8+
1996 12 04	098	0.7-	0.4+		1998 04 21	704	0.3+	0.6-	1998 05 24	704	0.6-	0.7+
1996 12 04	098	0.4-	0.6-		1998 04 21	704	0.3-	1.0-	1998 05 24	704	0.1+	1.0-
1996 12 06	098	0.1-	0.1+		1998 04 21	704	0.2-	0.2-	1998 05 24	704	0.2+	0.7-
1996 12 06	098	1.2-	0.4-		1998 04 21	704	0.8-	1.0-	1998 05 24	704	0.4-	1.4-
1996 12 08	098	(2.2-	1.2-)		1998 04 22	704	0.3+	0.3-	1998 05 24	704	0.2-	0.3-
1996 12 08	098	0.1+	1.4-		1998 04 22	704	0.3-	1.5+				
1996 12 08	905	0.6-	0.2-		1998 04 22	704	1.0-	1.3-				

(8884)* 1994 CM₂ = 1982 UH₁₂ = 1984 GM

Discovered 1994 Feb. 12 by A. C. Gilmore and P. M. Kilmartin at Mount John Observatory, Lake Tekapo.

Id. T. Kobayashi (*MPC* 23982)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	175.87510		(2000.0)		P		Q
<i>n</i>	0.28874352	ω	132.01031	+0.37881253	-0.91987615		
<i>a</i>	2.2670506	Ω	295.46532	+0.81236014	+0.38311133		
<i>e</i>	0.0420077	<i>i</i>	6.46336	+0.44336448	+0.08398562		
<i>P</i>	3.41	<i>H</i>	13.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1951 09 09	675	0.5-	0.6-	1994 02 15	474	0.3-	0.9+	1997 01 13	012	0.4-	0.1+
1951 09 09	675	0.1+	0.6-	1994 02 15	474	1.0-	0.6+	1997 01 14	012	0.5-	0.2+
1982 10 24	095	2.3+	0.0	1994 03 09	474	(2.4+	0.1-)	1997 01 14	012	0.5-	0.3+
1982 11 09	095	(4.0+	2.2+)	1994 03 09	474	(2.4+	0.4-)	1997 01 14	012	0.5-	0.3+
1982 11 11	095	(1.2+	3.1-)	1994 03 10	474	1.1+	0.1+	1998 05 03	566	0.4+	0.1-
1984 04 02	801	0.1+	0.9-	1994 03 10	474	1.0+	0.0	1998 05 03	566	0.5-	0.1-
1989 11 28	675	0.5-	0.8+	1994 03 17	474	(3.1-	0.1+)	1998 05 03	566	0.5-	0.0
1989 11 28	675	0.5+	1.1-	1994 03 17	474	1.3-	0.4+	1998 05 05	749	0.1-	0.2-
1994 02 12	675	0.2+	0.5-	1994 04 14	474	0.4+	1.2-	1998 05 05	749	0.3-	0.3-
1994 02 12	675	0.3-	0.1-	1994 04 14	474	0.0	1.0+	1998 06 02	749	0.1+	0.4-
1994 02 12	474	0.1-	1.2-	1994 04 15	474	(2.0+	1.2+)	1998 06 02	749	0.4-	0.1-
1994 02 12	474	0.1-	0.9-	1994 04 15	474	0.2+	0.1-	1998 06 02	749	0.1-	0.3-
1994 02 14	474	0.1+	0.9+	1996 11 15	801	0.1+	1.4-	1998 06 03	749	0.5+	0.6-
1994 02 14	474	0.2+	0.2+	1996 11 15	801	0.3+	2.0-	1998 06 03	749	0.6-	0.1-
1994 02 15	675	0.6+	0.7-	1997 01 13	012	0.7-	0.8+				
1994 02 15	675	0.2+	0.6-	1997 01 13	012	0.5-	0.2+				

(8885)* 1994 EL₃

Discovered 1994 Mar. 13 by M. Tombelli and V. Goretti at Cima Ekar.

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	300.02443		(2000.0)		P		Q
<i>n</i>	0.26668723	ω	147.59027	+0.69151712	+0.72028314		
<i>a</i>	2.3903852	Ω	165.89589	-0.70137251	+0.68762858		
<i>e</i>	0.0838095	<i>i</i>	12.98099	-0.17286027	+0.09142838		
<i>P</i>	3.70	<i>H</i>	13.9	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1994 03 13	098	0.9+	1.1+	1995 09 27	010	(0.2+	3.0-)	1998 05 07	104	(2.2+	0.1+)
1994 03 13	098	1.0+	0.7-	1995 09 27	010	1.5+	1.2-	1998 05 07	104	0.2-	0.3-
1994 03 14	098	0.4-	1.0-	1996 11 13	599	(1.1-	2.1+)	1998 05 07	104	0.3+	0.3-
1994 03 14	098	0.1+	0.6+	1996 11 13	599	0.1-	1.6+	1998 05 07	104	0.4-	0.1-
1994 03 19	108	0.4-	0.8-	1996 11 14	599	(1.2+	3.8+)	1998 05 19	143	1.1-	0.1+
1994 03 19	108	(0.3+	4.2-)	1996 11 14	599	0.1-	1.8+	1998 05 19	143	0.7-	0.2-
1994 03 19	108	1.1+	1.2-	1997 01 14	108	0.2+	1.1-	1998 05 19	143	0.3-	0.3-
1994 04 03	675	0.5-	0.0	1997 01 15	108	0.3+	0.6-	1998 05 20	104	0.3+	0.3+
1994 04 03	675	0.8-	1.3-	1997 01 15	108	0.7-	0.8-	1998 05 20	104	0.8+	0.1+
1994 04 06	111	0.7+	0.4+	1997 01 15	108	0.4+	1.4-	1998 05 20	104	0.3-	0.1+
1994 04 06	111	0.0	0.5+	1998 04 23	704	0.9-	0.1+	1998 05 20	104	0.7+	0.9+
1994 04 07	111	0.3-	0.1-	1998 04 23	704	0.0	0.5-	1998 05 23	704	0.1+	0.0
1994 04 07	111	1.0-	1.2-	1998 04 23	704	0.2+	0.6-	1998 05 23	704	0.2+	0.2+
1994 04 07	111	(2.2-	0.9+)	1998 04 23	704	0.9-	0.1-	1998 05 23	704	0.2-	0.1+
1994 04 29	111	1.2-	1.3+	1998 04 24	704	0.0	1.0-	1998 05 23	704	1.5+	0.9-
1994 04 29	111	0.2+	0.6+	1998 04 24	704	0.6+	0.9-	1998 05 23	704	0.5+	0.6-
1994 04 29	111	(0.5-	2.1+)	1998 04 24	704	0.3-	0.1+	1998 05 26	704	0.2-	0.1-
1994 04 30	111	1.3+	0.2+	1998 04 25	566	0.4-	0.3-	1998 05 26	704	(2.8+	0.5-)
1994 04 30	111	1.0-	0.6+	1998 04 25	566	0.1-	0.4-	1998 05 26	704	0.4-	0.6+
1995 09 02	010	(0.5+	2.3+)	1998 04 25	566	0.3-	0.3-	1998 05 26	704	0.7-	1.2+
1995 09 02	010	1.8+	1.5+	1998 04 26	108	0.7+	1.3+	1998 05 28	699	0.0	0.2+
1995 09 02	010	1.3+	0.5+	1998 04 26	108	1.4+	1.8+	1998 05 28	699	0.0	0.0
1995 09 25	691	1.3-	1.3-	1998 05 01	699	0.2-	1.0-	1998 05 28	699	0.3-	0.2+
1995 09 25	691	1.4-	1.3-	1998 05 01	699	0.2-	0.8-	1998 05 30	108	1.7+	0.1+
1995 09 25	691	1.6-	1.5-	1998 05 01	699	0.5-	0.4-	1998 05 30	108	0.8+	0.4-
1995 09 27	010	(0.5-	3.2-)	1998 05 07	104	0.4-	0.1+	1998 05 30	108	1.4-	0.6+

M.P.C. 31920

1998 JUNE 10

Id. T. Urata (*MPC* 25643)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	303.47203		(2000.0)		P		Q				
n	0.29300056	ω	212.87351		+0.87211638		+0.48001092				
a	2.2450383	Ω	118.15912		-0.42247606		+0.83654278				
e	0.1855213	i	6.17811		-0.24683397		+0.26416983				
P	3.36	H	15.0		G	0.15	U	2			
Residuals in seconds of arc											
1985 08 22	688	0.8-	1.5+	1995 08 20	905	1.4+	0.8+	1998 05 23	699	0.4+	0.8+
1985 08 22	688	0.4-	0.3-	1995 08 20	905	0.7+	1.0+	1998 05 23	699	0.3-	0.5+
1991 04 19	675	0.4-	1.6-	1995 08 24	905	0.7-	0.4-	1998 05 24	704	0.1+	0.1-
1991 04 19	675	0.0	1.6+	1995 08 24	905	0.4+	0.3-	1998 05 24	704	0.1+	0.2+
1992 11 27	675	1.2-	0.4+	1997 02 04	566	0.4-	0.6-	1998 05 24	704	0.3-	0.3+
1992 11 27	675	0.2-	0.7+	1997 02 04	566	0.4-	0.2-	1998 05 24	704	0.2-	0.6-
1994 02 08	809	1.3+	1.3+	1997 02 04	566	0.4-	0.5-	1998 05 24	699	0.2-	0.7+
1994 02 08	809	0.5-	1.4+	1997 02 04	566	(2.6-	0.3-)	1998 05 24	704	0.3-	0.4+
1994 02 08	809	0.5-	1.9+	1997 02 04	566	0.4-	0.5-	1998 05 24	699	0.1-	0.3+
1994 02 10	809	(2.7+	2.5+)	1997 02 04	566	0.9-	0.5-	1998 05 24	699	0.1-	0.5+
1994 02 10	809	(1.7+	2.4+)	1998 05 05	700	1.2+	1.0+	1998 05 26	704	2.4-	1.5-
1994 02 10	809	0.8+	0.6+	1998 05 05	700	0.5+	0.6-	1998 05 26	704	0.8-	1.7+
1994 02 13	809	1.1+	1.0-	1998 05 08	700	0.3-	1.1-	1998 05 26	704	0.7+	0.3+
1994 02 13	809	0.6+	0.5-	1998 05 08	700	1.4+	0.9+	1998 05 26	704	0.2+	0.6-
1994 02 13	809	0.2-	1.4-	1998 05 08	700	1.1-	1.0-	1998 05 26	704	0.3+	1.4+
1994 03 09	010	1.2+	0.1-	1998 05 22	704	0.4+	0.2+	1998 06 03	704	0.9-	0.6-
1994 03 09	010	1.5+	0.3-	1998 05 22	704	0.6-	0.2+	1998 06 03	704	0.2+	1.4-
1994 03 09	010	0.8+	1.1+	1998 05 22	704	0.9-	1.0-	1998 06 03	704	0.1-	0.2-
1994 03 10	010	0.9+	0.2+	1998 05 22	704	0.3-	0.4-	1998 06 03	704	0.9+	0.9-
1994 03 10	010	0.4-	0.4+	1998 05 22	704	0.0	0.5+				
1994 03 10	010	0.4+	0.4+	1998 05 23	699	0.3-	1.5+				

(8887)* 1994 LK₁

Discovered 1994 June 9 by E. F. Helin at Palomar.

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	316.98953		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$		
n	0.23998032	ω	181.05904		+0.64532651		+0.73385706		
a	2.5645960	Ω	129.17215		-0.69884358		+0.67929382		
e	0.1269334	i	15.88174		-0.30849853		-0.00370407		
P	4.11 <th>H</th> <td>13.1</td> <th>G</th> <td>0.15</td> <th>U</th> <td>2</td> <th></th> <th></th>	H	13.1	G	0.15	U	2		
Residuals in seconds of arc									
1991 12 01	675	0.8-	1.0+	1997 03 05	704	0.1-	0.8+	1998 05 23	704 0.1- 0.1+
1991 12 01	675	0.2-	1.7+	1997 03 05	704	0.4-	1.1+	1998 05 23	704 0.6+ 0.0
1993 01 23	675	0.3-	0.1+	1997 03 06	704	0.3-	0.5+	1998 05 24	704 1.3- 0.8+
1993 01 23	675	0.6+	0.3-	1997 03 06	704	0.5+	0.2+	1998 05 24	704 0.7- 0.6+
1994 06 09	675 (2.3+	1.1+)		1998 04 07	732	0.2+	0.8-	1998 05 24	704 0.3- 0.6-
1994 06 09	675	0.5-	1.2+	1998 04 07	732	0.2-	0.5-	1998 05 24	704 0.4- 0.2-
1994 06 12	675	0.8+	0.8+	1998 04 07	732	0.3-	0.1-	1998 05 24	704 0.5- 0.7-
1994 06 12	675	0.9+	0.2+	1998 04 08	732 (1.0-	4.6+)		1998 05 26	704 0.4- 1.5-
1994 07 04	675	0.7+	1.9+	1998 05 07	566 (0.7+	2.7-)		1998 05 26	704 0.6- 0.2-
1994 07 04	675	0.2+	1.3+	1998 05 07	566 (0.9+	2.3-)		1998 05 26	704 1.3+ 0.2+
1994 07 07	675	0.2+	0.9+	1998 05 07	566 (0.7+	2.5-)		1998 05 26	704 0.6+ 0.3+
1994 07 07	675	0.6-	1.3+	1998 05 23	704	0.9-	1.5-	1998 05 26	704 (3.8- 0.6-)
1997 03 04	704	0.5+	0.8+	1998 05 23	704	0.6+	0.4-		
1997 03 04	704	0.2-	0.2+	1998 05 23	704	0.4+	0.2+		

(8888)* 1994 NT₁ = 1980 KL₁ = 1988 BT₅ = 1997 AL₄

Discovered 1994 July 8 by E. W. Elst at Caussols.

Id. S. Nakano (*MPC* 28853)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	79.22725			(2000.0)		P		Q	
<i>n</i>	0.22126878			ω	46.40136	−0.97138219		−0.12974248	
<i>a</i>	2.7072142			Ω	125.16334	+0.07598659		−0.96335923	
<i>e</i>	0.0956847			<i>i</i>	14.08537	+0.22503927		−0.23474641	
<i>P</i>	4.45			<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1
Residuals in seconds of arc									
1980 05 17	095	0.5+	0.1−	1994 07 14	010	1.0+	1.4−	1998 05 02	732 (0.9− 2.8+)
1988 01 18	071 (1.8+	2.5−)		1997 01 06	411	0.3+	0.7−	1998 05 23	704 0.4+ 0.3−
1988 01 18	071 1.3−	1.2+		1997 01 06	411	0.6+	0.3−	1998 05 23	704 0.3− 0.5+
1988 01 18	071 0.0	0.9+		1997 01 07	411	0.6+	0.4−	1998 05 23	704 0.0 1.4+
1988 01 19	071 (1.4−	4.3+)		1997 01 07	411	0.6+	0.7−	1998 05 23	704 1.2+ 1.1−
1994 07 04	010 1.8−	0.6−		1997 01 11	411	0.1−	0.1−	1998 05 23	704 0.5+ 0.2+
1994 07 04	010 0.9−	0.6+		1997 01 11	411	0.4−	0.3−	1998 05 26	704 0.3− 0.5−
1994 07 04	010 0.3+	0.0		1997 01 16	411	0.2−	0.1−	1998 05 26	704 (2.6+ 2.6−)
1994 07 05	010 0.6+	0.8+		1997 01 16	411	0.6−	0.7−	1998 05 26	704 (1.6− 2.4−)
1994 07 05	010 0.7+	1.0+		1997 01 30	098	1.0+	0.7−	1998 05 26	704 0.1+ 1.6−
1994 07 05	010 1.2+	1.8−		1997 01 30	098	0.6−	0.4−	1998 05 26	704 (3.7− 2.4−)
1994 07 08	010 0.2−	0.7−		1997 01 31	098	0.8−	0.2+	1998 06 03	704 1.0− 0.5+
1994 07 08	010 1.2+	0.5−		1997 01 31	098	0.7+	0.7−	1998 06 03	704 0.5− 0.4+
1994 07 08	010 1.1+	0.5+		1997 03 27	689	0.1+	0.3−	1998 06 03	704 0.1+ 0.2−
1994 07 14	010 1.2−	0.3+		1998 05 01	732	0.5−	0.5−	1998 06 03	704 1.2− 0.5+
1994 07 14	010 1.4−	1.5−		1998 05 02	732	0.7+	1.8+		

(8889)* 1994 OC

Discovered 1994 July 31 by Y. Shimizu and T. Urata at Nachi-Katsuura

Observatory.

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	211.05596		(2000.0)		P		Q				
n	0.18609773	ω	62.72603		+0.88981119		-0.43884940				
a	3.0383793	Ω	322.92174		+0.30960912		+0.78196659				
e	0.1378726	i	11.97454		+0.33522863		+0.44265050				
P	5.30	H	11.6	G	0.15	U	1				
Residuals in seconds of arc											
1994 07 31	905	0.3+	0.4-	1995 09 29	801	0.3-	0.0	1995 12 17	905	0.2+	0.2-
1994 07 31	905	0.7-	0.1-	1995 10 23	801	0.8+	0.1-	1995 12 17	905	0.1-	0.0
1994 08 03	905	0.2-	0.0	1995 10 23	801	1.0+	0.1-	1995 12 19	905	0.1-	0.8-
1994 08 03	905	1.1-	0.2-	1995 10 27	801	0.2-	0.6+	1995 12 19	905	0.2-	0.8-
1994 08 28	905	0.1-	0.0	1995 10 27	801	0.2+	0.6+	1995 12 29	604	0.9+	1.0+
1994 08 28	905	1.4+	0.2+	1995 11 17	905	0.3-	0.0	1995 12 29	604	1.0+	0.6+
1994 09 01	905	(2.2+	0.1+)	1995 11 17	905	0.2+	0.6+	1997 01 20	385	1.0+	0.4-
1994 09 10	905	0.1+	0.3+	1995 11 18	905	0.6-	0.0	1997 01 20	385	0.1+	0.3+
1994 09 10	905	0.5-	0.3+	1995 11 18	905	0.2-	0.4+	1997 01 20	385	0.8+	0.6+
1994 10 04	801	0.5+	0.5-	1995 11 22	801	0.1-	0.6-	1997 02 11	385	0.3-	0.0
1994 10 04	801	0.6-	0.9+	1995 11 22	801	0.0	0.5-	1997 02 11	385	0.7-	0.5+
1994 10 08	801	0.2-	0.0	1995 11 25	801	0.3+	0.3-	1998 04 03	385	0.1+	0.5-
1994 10 08	801	0.1-	1.3-	1995 11 25	801	0.3+	0.6-	1998 04 03	385	0.0	0.7-
1994 10 22	385	1.1+	0.7+	1995 12 15	072	0.4-	0.3+	1998 04 20	385	1.6+	1.5+
1994 10 22	385	0.2+	0.7+	1995 12 15	072	0.6-	0.7+	1998 04 20	385	0.4-	0.7+
1994 10 22	385	0.6-	1.1+	1995 12 16	072	0.8-	0.2-	1998 05 21	385	0.7-	0.2-
1995 09 29	801	0.6-	0.2+	1995 12 16	072	0.7-	0.1-	1998 05 21	385	0.4-	0.1+

(8890)* 1994 PS₃₇ = 1975 EE₁ = 1990 VD₁₀

Discovered 1994 Aug. 10 by E. W. Elst at the European Southern

Observatory.

Id. K. Ichikawa (*MPC* 25220), G. V. Williams (*MPC* 28853)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	73.26722	(2000.0)	P	Q
<i>n</i>	0.17620345	ω 347.52604	-0.84003498	-0.54250808
<i>a</i>	3.1510825	Ω 159.61691	+0.49901826	-0.77632893
<i>e</i>	0.1605093	<i>i</i> 0.84240	+0.21288968	-0.32093359
<i>P</i>	5.59	<i>H</i> 13.2	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1975 03 06	095	0.2+	0.9+	1994 09 04	809	(0.8+	2.3-)	1998 04 25	699	0.6+	0.4-
1975 03 15	095	0.8-	0.4-	1994 09 04	809	(0.8-	3.3-)	1998 05 01	704	0.0	0.1+
1990 11 14	675	(2.2+	0.3-)	1994 09 04	809	(0.4-	3.3-)	1998 05 01	704	1.0+	0.2+
1990 11 14	675	1.2+	1.1-	1995 11 14	691	0.8-	0.2-	1998 05 01	704	0.5-	0.1-
1992 04 09	691	0.4+	1.0-	1995 11 14	691	0.6-	0.2-	1998 05 01	704	0.4-	1.1-
1992 04 09	691	0.4+	1.1-	1995 11 14	691	1.6-	0.2-	1998 05 01	704	1.2-	0.6-
1992 04 09	691	0.0	1.1-	1997 01 09	691	0.1-	0.9-	1998 05 22	704	(2.3-	0.9-)
1994 08 10	809	0.2+	0.7-	1997 01 09	691	0.0	0.8-	1998 05 22	704	0.1-	0.3+
1994 08 10	809	1.2+	0.1-	1997 01 09	691	0.1-	0.8-	1998 05 22	704	0.3+	0.9+
1994 08 10	809	1.7+	0.4+	1998 04 22	704	0.4+	0.2-	1998 05 22	704	0.3-	1.4+
1994 08 11	809	0.8+	1.1-	1998 04 22	704	0.8-	0.1-	1998 05 22	704	0.7-	0.7+
1994 08 11	809	0.1+	1.7-	1998 04 22	704	0.4+	0.2-	1998 05 24	704	0.8+	0.5+
1994 08 11	809	0.2+	0.7-	1998 04 22	704	0.1+	0.4-	1998 05 24	704	0.5+	0.3-
1994 09 03	809	(0.4+	2.5-)	1998 04 22	704	0.1+	0.6-	1998 05 24	704	0.8+	0.2-
1994 09 03	809	(0.6+	2.0-)	1998 04 25	699	0.6-	0.2-	1998 05 24	704	0.2-	0.6+
1994 09 03	809	(1.2+	2.8-)	1998 04 25	699	0.8-	0.4+	1998 05 24	704	1.5-	0.5-

(8891)* 1994 RC₁ = 1977 SB = 1983 UT

Discovered 1994 Sept. 1 by K. Endate and K. Watanabe at Kitami.

Id. G. V. Williams (*MPC* 24113)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	228.53006	(2000.0)	P	Q
<i>n</i>	0.17631557	ω 192.75604	+0.90400647	-0.42602539
<i>a</i>	3.1497465	Ω 192.64079	+0.40517490	+0.88041126
<i>e</i>	0.2240019	<i>i</i> 9.38953	+0.13640236	+0.20827477
<i>P</i>	5.59	<i>H</i> 12.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1977 09 18	095	0.7-	0.6-	1995 12 19	400	0.2+	1.2+	1998 05 22	704	0.3+	1.1-
1983 10 30	675	1.1+	0.1+	1995 12 19	400	1.0+	0.5-	1998 05 22	704	1.5+	0.2-
1983 11 04	675	0.2-	0.2+	1995 12 28	400	0.5+	1.4+	1998 05 22	704	0.9+	0.4-
1988 08 13	675	0.5-	1.0+	1995 12 28	400	(1.5+	2.3+)	1998 05 22	704	0.0	0.1-
1988 08 13	675	0.5-	1.3+	1997 04 14	691	1.1-	0.3+	1998 05 22	704	(3.5-	0.7-)
1988 08 15	675	0.9+	1.2+	1997 04 14	691	1.2-	0.4-	1998 05 24	704	0.5-	0.5-
1994 09 01	400	0.8-	1.0-	1997 04 14	691	1.2-	0.4-	1998 05 24	704	0.2+	1.2-
1994 09 01	400	1.4+	0.8-	1998 04 22	704	0.2+	0.2-	1998 05 24	704	0.2+	1.1-
1994 09 06	400	0.2+	1.1-	1998 04 22	704	0.5+	0.2-	1998 05 24	704	0.6+	0.5-
1994 09 06	400	1.1-	0.4-	1998 04 22	704	0.7-	1.2-	1998 05 24	704	0.2-	0.4+
1994 10 02	400	1.6-	1.7-	1998 04 22	704	0.1-	0.8-	1998 05 25	699	0.6-	1.9+
1994 10 02	400	0.5+	0.6+	1998 05 01	704	0.4+	1.2+	1998 05 25	699	0.4-	1.6+
1994 10 05	397	0.1+	0.1-	1998 05 01	704	0.9+	0.8+	1998 05 25	699	0.1-	1.0+
1994 10 05	397	0.4+	1.2+	1998 05 01	704	0.6-	0.4+				
1994 10 05	397	0.3+	0.6+	1998 05 01	704	(2.0+	0.0)				

(8892)* 1994 RC₁₁ = 1978 TX₈ = 1983 RU₈ = 1989 UJ₆

Discovered 1994 Sept. 11 by M. Sugano and T. Nomura at Minami-Oda.

Id. S. Nakano (*MPC* 24113)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	236.40610	(2000.0)	P	Q
<i>n</i>	0.18193129	ω 335.52571	+0.89808808	-0.43957058
<i>a</i>	3.0845924	Ω 50.55887	+0.40659074	+0.81705512
<i>e</i>	0.1968577	<i>i</i> 1.08917	+0.16769544	+0.37309333
<i>P</i>	5.42	<i>H</i> 13.1	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc (or two decimals in units of degrees)

1951 11 08	675	0.4+	1.1-	1994 10 01	410	0.3-	0.1+	1998 04 25	809	2.1-	1.3-
1951 11 08	675	0.6-	1.5-	1994 10 02	374	0.5+	1.1+	1998 04 25	809	0.9-	1.2-
1978 10 09	095	(0.00+	0.06-)	1994 10 02	374	0.8+	0.2+	1998 04 25	809	0.6-	1.0-
1978 11 01	095	0.7-	1.6-	1994 10 02	374	1.0-	0.1+	1998 04 25	684	1.2-	0.4-
1983 09 11	095	1.5+	1.8+	1994 10 06	374	1.1-	0.3+	1998 04 25	684	0.1+	0.2-
1989 10 26	033	0.1+	0.0	1994 10 06	374	0.9-	0.2-	1998 04 28	809	(3.9+	0.1-)
1989 10 26	033	0.9+	0.1-	1994 10 06	374	(0.8-	2.4-)	1998 04 28	809	2.1+	1.0+
1989 10 28	033	0.0	0.3-	1994 10 14	410	0.5+	0.9-	1998 04 28	809	1.5+	0.5+
1992 04 25	691	1.6-	0.9+	1994 10 14	410	0.0	0.9-	1998 05 22	704	0.8+	0.9+
1992 04 25	691	1.5-	1.2+	1994 10 14	410	0.7+	0.9-	1998 05 22	704	0.5-	0.5+
1992 04 25	691	(3.2-	1.3+)	1997 03 08	809	1.9+	1.1+	1998 05 22	704	0.7+	0.1+
1994 09 11	374	1.4+	0.1-	1997 03 08	809	0.6+	1.0+	1998 05 22	704	0.1-	1.1-
1994 09 13	374	(0.9-	2.4-)	1997 03 08	809	0.9+	0.4+	1998 05 24	704	0.1+	1.1-
1994 09 30	691	0.5-	0.3+	1997 03 09	809	(0.5-	3.1-)	1998 05 24	704	0.3+	0.9+
1994 09 30	691	0.7-	0.2+	1997 03 09	809	0.1-	2.1-	1998 05 24	704	(2.9-	0.1-)
1994 09 30	691	0.7-	0.1+	1997 03 09	809	(0.2-	2.9-)	1998 05 24	704	(2.7-	1.3+)
1994 10 01	410	0.1-	0.5-	1998 04 24	684	0.2-	0.5-				
1994 10 01	410	0.0	0.4-	1998 04 24	684	0.1+	0.3-				

(8893)* 1995 KZ = 1988 PH

Discovered 1995 May 23 by T. B. Spahr at the University of Arizona's

Catalina Station.

Id. G. V. Williams (*MPC* 25434)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	275.17159	(2000.0)	P	Q
<i>n</i>	0.27381818	ω 154.56721	+0.42089555	+0.86525541
<i>a</i>	2.3487017	Ω 138.73717	-0.88674103	+0.45573014
<i>e</i>	0.1929574	<i>i</i> 24.39159	-0.19114729	-0.20890935
<i>P</i>	3.60	<i>H</i> 14.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1988 08 08	675	1.2-	1.7-	1995 06 07	104	0.3+	0.0	1995 06 25	658	0.1+	0.0
1988 08 11	675	1.0+	0.7+	1995 06 09	816	0.3+	0.1+	1995 06 25	658	0.0	0.0
1995 05 23	693	0.9-	0.1-	1995 06 09	816	0.3+	0.0	1996 12 16	696	0.1-	0.3+
1995 05 23	693	0.2+	1.3-	1995 06 09	816	0.2+	0.1+	1996 12 16	696	0.3-	0.4+
1995 05 29	693	1.2-	0.2-	1995 06 09	608	0.6+	0.3+	1996 12 16	696	0.0	0.2+
1995 05 29	693	1.7-	0.2+	1995 06 09	608	0.2+	0.7+	1997 02 01	696	0.1+	0.4-
1995 05 31	658	0.0	0.0	1995 06 15	608	0.0	0.2-	1997 02 01	696	0.1-	0.3-
1995 05 31	658	0.3+	0.2-	1995 06 15	608	0.2-	0.1-	1997 02 01	696	0.3+	0.1-
1995 05 31	658	0.0	0.4+	1995 06 17	816	0.1-	0.1-	1998 02 27	566	0.1-	0.3-
1995 06 01	658	0.2-	0.0	1995 06 17	816	0.1+	0.7-	1998 02 27	566	0.4-	0.7-
1995 06 01	658	0.3-	0.0	1995 06 17	816	0.2-	0.2-	1998 02 27	566	0.4-	0.5-
1995 06 01	658	0.3-	0.0	1995 06 17	816	0.2+	0.6+	1998 03 03	699	0.6+	0.2-
1995 06 03	658	0.3+	0.2-	1995 06 19	104	0.2+	0.1+	1998 03 03	699	0.0	0.7+
1995 06 03	658	0.4+	0.2-	1995 06 19	104	0.2-	0.1+	1998 03 03	699	0.3-	0.5-
1995 06 03	658	0.3+	0.2-	1995 06 19	104	0.1-	0.7+	1998 05 19	696	0.4+	0.5+
1995 06 07	104	0.2+	0.5+	1995 06 21	608	0.1+	0.2+	1998 05 19	696	0.4+	0.5+
1995 06 07	104	0.2+	0.0	1995 06 21	608	0.3-	0.1+	1998 05 19	696	0.5+	0.5+
1995 06 07	104	0.5+	0.0	1995 06 25	658	0.1+	0.1+				

(8894)* 1995 PV

Discovered 1995 Aug. 2 by Y. Shimizu and T. Urata at Nachi-Katsuura

Observatory.

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	313.44718	(2000.0)	P	Q
<i>n</i>	0.28543015	ω 322.29709	+0.58001273	+0.81364017
<i>a</i>	2.2845613	Ω 343.03778	-0.71038879	+0.48136516
<i>e</i>	0.1737936	<i>i</i> 7.81811	-0.39866403	+0.32600192
<i>P</i>	3.45	<i>H</i> 14.2	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1994 02 15	691	0.2-	0.4-	1995 11 17	801	0.4+	0.5-	1997 02 10	118	0.2-	0.0
1994 02 15	691	0.1+	0.3-	1995 11 22	801	0.4+	1.5-	1997 02 10	118	0.0	0.1+

M.P.C. 31922

1998 JUNE 10

1994 02 15	691	0.4-	0.3-	1995 11 22	801	0.5-	0.9-	1998 04 20	385	1.0+	0.5-
1995 08 02	905	0.2+	0.0	1996 12 27	118	0.1+	0.6-	1998 04 20	385	0.8-	1.5-
1995 08 02	905	0.7+	0.6+	1996 12 27	118	0.2+	0.3-	1998 04 28	423	0.7-	0.4-
1995 08 16	905	0.4-	0.3-	1996 12 27	118	0.1+	0.7-	1998 04 28	423	0.8-	0.7-
1995 08 16	905	0.3+	0.7-	1996 12 27	118	0.0	0.7-	1998 04 28	423	0.6-	1.3-
1995 08 20	905	0.8+	0.6-	1996 12 29	118	0.3+	0.6-	1998 04 29	566	0.1+	0.3-
1995 08 20	905	1.1+	0.0	1996 12 29	118	0.0	0.6-	1998 04 29	566	0.1+	0.0
1995 09 01	905	0.5-	0.5-	1997 01 09	385	0.4-	0.5-	1998 04 29	566	0.2+	0.6-
1995 09 01	905	0.1-	0.3+	1997 01 09	385	0.3-	0.6-	1998 05 05	732	0.8-	1.3-
1995 09 18	905	0.0	0.5-	1997 01 11	905	0.7+	0.8-	1998 05 05	732	0.2-	1.0-
1995 09 18	905	0.0	0.8-	1997 01 11	905	0.1-	1.1-	1998 05 06	732	1.0-	1.3+
1995 10 23	801	0.1+	0.4-	1997 01 13	385	0.4-	0.1+	1998 05 21	888	0.2+	0.2+
1995 10 23	801	0.1+	0.7-	1997 01 13	385	0.3+	0.0	1998 05 21	888	0.8+	0.5+
1995 10 27	801	0.2-	0.1-	1997 01 28	385	1.1-	0.4+	1998 05 21	888	0.5+	1.0+
1995 10 27	801	0.5-	0.4-	1997 01 28	385	0.6-	0.2-				
1995 11 17	801	1.1+	0.3-	1997 02 06	385	0.1-	0.5+				

(8895)* 1995 QN = 1971 LG

Discovered 1995 Aug. 21 by K. Watanabe at Sapporo Science Center.

Id. G. V. Williams (*MPC* 29107)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams				P		Q	
<i>M</i>	337.70681	(2000.0)							
<i>n</i>	0.29225365	ω	135.14340			+0.40804095		+0.91262660	
<i>a</i>	2.2488617	Ω	158.90056			-0.85577223		+0.39180362	
<i>e</i>	0.1736079	<i>i</i>	3.95105			-0.31805105		+0.11663022	
<i>P</i>	3.37	<i>H</i>	14.2			<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1971 06 14	095	0.2-	0.6-	1995 09 02	010	1.8-	1.4+	1998 05 03	566	0.6+	0.1+
1991 04 19	675	0.4+	0.1-	1995 09 02	010	0.1-	1.8+	1998 05 03	566	0.3+	0.1+
1991 04 19	675	0.0	0.1+	1995 09 02	010	0.6+	1.3+	1998 05 22	704	0.3+	0.1-
1992 10 21	675	0.6+	0.0	1995 09 14	397	1.4+	1.4-	1998 05 22	704	1.4+	0.2+
1992 10 21	675	1.0+	0.1-	1995 09 14	397	0.8+	0.7-	1998 05 22	704	0.7+	0.3-
1992 10 22	675	0.9-	0.4-	1995 09 18	397	1.5+	1.0-	1998 05 22	704	0.3-	1.8-
1992 10 22	675	0.7-	0.7+	1995 09 18	397	1.4+	0.6-	1998 05 22	704	0.7-	0.1+
1992 11 30	675	0.4-	0.3-	1995 09 21	691	0.8-	0.3-	1998 05 24	704	1.9+	0.8-
1992 11 30	675	0.1+	0.5+	1995 09 21	691	0.9-	0.5-	1998 05 24	704	0.2-	0.6-
1995 08 21	397	0.2+	0.7+	1995 09 21	691	0.8-	0.5-	1998 05 24	704	0.2-	0.2+
1995 08 21	397	0.5+	0.5-	1995 09 25	691	1.1-	0.2-	1998 05 24	704	0.7-	1.2+
1995 08 22	397	0.7+	1.1+	1995 09 25	691	0.9-	0.2-	1998 05 24	704	0.3-	1.1+
1995 08 22	397	0.4+	0.1-	1995 09 25	691	0.4-	0.4-	1998 06 03	704	1.0-	0.0
1995 08 23	400	1.3+	0.1+	1995 10 01	691	1.1-	0.3+	1998 06 03	704	0.5-	0.3+
1995 08 23	400	0.1+	0.5+	1995 10 01	691	1.0-	0.0	1998 06 03	704	1.4-	0.4-
1995 09 01	397	0.1+	0.7-	1995 10 01	691	1.2-	0.0	1998 06 03	704	0.3+	0.3+
1995 09 01	397	0.7+	0.2-	1998 05 03	566	0.3+	0.3+	1998 06 03	704	0.5-	0.7+

(8896)* 1995 QG₂ = 1985 YJ₁

Discovered 1995 Aug. 24 by Y. Shimizu and T. Urata at the Nachi-Katsuura

Observatory.

Id. S. Nakano (*MPC* 25732), T. Urata (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano				P		Q	
<i>M</i>	352.89682	(2000.0)							
<i>n</i>	0.27231893	ω	177.42656			-0.29563138		+0.94749142	
<i>a</i>	2.3573143	Ω	75.35727			-0.87870759		-0.21963708	
<i>e</i>	0.0968935	<i>i</i>	7.23866			-0.37480002		-0.23242108	
<i>P</i>	3.62	<i>H</i>	13.9			<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1985 12 17	010	0.2-	0.8-	1997 02 11	385	0.2+	0.4-	1998 05 01	704	0.2-	0.0
1985 12 17	010	2.0+	1.6-	1997 02 11	385	0.4+	0.2+	1998 05 01	704	0.0	0.3-
1985 12 19	010	1.5+	1.1-	1998 04 20	886	0.8-	0.1-	1998 05 01	704	0.6-	0.6-
1992 10 21	675	0.5-	1.8-	1998 04 20	886	0.1-	0.2+	1998 05 07	138	0.1-	0.0
1992 10 21	675	0.4-	0.9-	1998 04 22	704	1.6-	0.2+	1998 05 07	138	0.9-	0.3+
1992 11 17	691	1.6-	0.2+	1998 04 22	704	1.1-	0.3+	1998 05 07	138	0.5+	0.7-
1992 11 17	691	1.6-	0.0	1998 04 22	704	0.5-	0.1-	1998 05 15	689	0.8+	0.9-

1992 11 17	691	1.5-	0.1-	1998 04 22	704	0.9-	0.1+	1998 05 16	689	0.3-	0.1-
1992 11 28	675	1.2-	0.1-	1998 04 22	704	1.3-	1.6+	1998 05 20	886	0.3-	0.1-
1992 11 28	675	1.2-	0.2-	1998 04 25	699	0.0	0.9+	1998 05 20	886	0.1+	0.4-
1995 08 24	905	1.7+	1.8-	1998 04 25	699	0.0	0.3+	1998 05 20	888	0.4+	0.5-
1995 08 24	905	0.2-	0.8+	1998 04 25	699	0.4+	0.1+	1998 05 20	888	0.3+	0.5-
1995 08 26	905	0.3-	0.4-	1998 04 26	423	0.7-	0.9-	1998 05 20	888	0.5+	0.5-
1995 08 26	905	0.2+	0.7-	1998 04 26	423	0.4-	0.4-	1998 05 22	704	0.2-	0.8-
1995 09 01	905	0.5+	0.4+	1998 04 26	423	0.4-	0.8-	1998 05 22	704	0.1-	0.2+
1995 09 01	905	0.9+	0.7+	1998 04 27	423	0.1+	0.5+	1998 05 22	704	0.3+	0.3+
1995 09 17	905	0.5+	0.3-	1998 04 27	423	0.2-	0.7+	1998 05 22	704	0.4-	0.3-
1995 09 17	905	0.7+	0.1-	1998 04 29	886	0.7+	0.7-	1998 05 22	704	1.1-	0.4-
1997 01 06	385	1.1+	0.1+	1998 04 29	886	0.4+	0.4-	1998 05 24	704	1.3+	0.1-
1997 01 06	385	1.2+	1.0+	1998 04 29	888	0.2-	0.1-	1998 05 24	704	1.0+	0.2-
1997 01 13	385	0.4+	0.8-	1998 04 29	888	0.0	0.1+	1998 05 24	704	1.2+	0.7+
1997 01 13	385	0.4+	0.8-	1998 04 29	888	0.2+	0.0	1998 05 24	704	0.4+	0.2-
1997 01 31	385	0.9+	0.2+	1998 05 01	704	0.2-	0.5+	1998 05 24	704	1.2+	0.9-
1997 01 31	385	0.4+	0.2+	1998 05 01	704	0.4-	0.7+				

(8897)* 1995 SX = 1988 VB₁₀

Discovered 1995 Sept. 22 at Stroncone.

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams				P		Q	
<i>M</i>	273.46507	(2000.0)							
<i>n</i>	0.26718568	ω	142.91188			+0.92333195		+0.38314238	
<i>a</i>	2.3874114	Ω	194.62448			-0.37219677		+0.87647739	
<i>e</i>	0.1433833	<i>i</i>	5.84016			-0.09448639		+0.29152925	
<i>P</i>	3.69	<i>H</i>	14.4			<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1988 11 04	046	0.5+	2.9+	1995 11 20	589	1.2+	1.5-	1998 04 22	704	0.0	0.8-
1988 11 04	046	1.1+	2.9+	1995 11 20	589	0.5+	0.9-	1998 04 22	704	0.0	0.9-
1994 03 14	675	0.1-	0.1+	1996 01 15	589	0.3-	0.2-	1998 04 22	704	0.1-	0.5-
1994 04 03	675	0.1-	0.8+	1996 01 15	589	0.5-	1.0-	1998 04 24	589	0.8+	0.2+
1994 04 03	675	2.2-	0.7+	1997 01 12	589	0.3+	0.0	1998 04 24	589	0.6+	0.0
1994 04 04	675	0.8-	2.5+	1997 01 12	589	0.3+	0.3+	1998 04 24	589	1.0+	0.5+
1994 04 04	675	2.9-	0.3-	1997 01 12	589	1.1-	1.0+	1998 04 24	589	0.6+	0.3+
1995 09 22	589	0.6-	0.1-	1997 01 27	589	0.3-	0.2-	1998 04 25	589	1.1+	0.3+
1995 09 22	589	0.4-	0.5-	1997 01 27	589	0.4+	0.8-	1998 04 25	589	0.8-	0.0
1995 09 22	589	0.3-	0.2-	1997 01 27	589	0.1-	0.1-	1998 05 01	699	0.9+	0.3-
1995 09 22	589	0.1-	0.3+	1997 01 30	589	0.5+	0.3-	1998 05 01	699	0.9+	0.2-
1995 09 23	589	0.6-	0.2+	1997 01 30	589	0.3-	1.3-	1998 05 01	699	0.1+	0.3-
1995 09 23	589	0.1+	0.1+	1998 04 19	589	0.3+	0.5-	1998 05 20	589	0.3-	0.7+
1995 09 23	589	0.4-	0.2+	1998 04 19	589	0.5+	0.0	1998 05 20	589	0.3+	0.3+
1995 09 23	589	0.6-	0.8+	1998 04 19	589	0.3+	0.4-	1998 05 20	589	1.1-	0.1+
1995 09 29	589	0.3+	1.4-	1998 04 19	589	0.8+	0.1-	1998 05 20	589	0.9-	1.2+
1995 09 29	589	0.7+	0.1-	1998 04 19	589	0.5+	0.1-	1998 05 22	704	0.9+	0.4-
1995 09 29	589	0.0	0.3-	1998 04 20	589	0.7+	0.3-	1998 05 22	704	0.5+	1.5+
1995 10 01	589	0.1+	0.2+	1998 04 20	589	1.0+	0.4-	1998 05 22	704	1.3-	0.6+
1995 10 01	589	0.3-	0.1+	1998 04 20	589	0.5+	0.5-	1998 05 22	704	0.3-	0.4-
1995 10 12	589	0.1-	0.1+	1998 04 21	704	0.5+	0.1+	1998 05 22	704	1.1-	2.3+
1995 10 12	589	0.4-	0.3+	1998 04 21	704	2.0+	1.1-	1998 05 24	704	0.8-	1.1+
1995 10 15	589	0.4-	0.9+	1998 04 21	704	0.8+	0.8-	1998 05 24	704	0.9-	0.1-
1995 10 15	589	0.3-	0.6-	1998 04 21	704	0.2-	2.2-	1998 05 24	704	0.6+	1.1+
1995 10 20	589	0.3+	0.6-	1998 04 21	589	1.2+	0.6-	1998 05 24	704	1.6-	0.8+
1995 10 20	589	0.3-	0.1+	1998 04 21	589	0.0	0.4-	1998 05 24	704	0.1-	0.3-
1995 10 25	589	0.1-	0.1+	1998 04 21	589	0.0	0.2-	1998 05 27	699	0.2-	1.0+
1995 10 25	589	0.1+	0.2-	1998 04 22	704	0.9+	0.2-	1998 05 27	699	0.3-	0.9+
1995 11 20	589	0.4-	0.3-	1998 04 22	704	0.7+	0.1+	1998 05 27	699	1.2-	0.1+

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	298.44665	(2000.0)	P	Q
<i>n</i>	0.25954580	ω 132.66644	+0.72376363	+0.69003975
<i>a</i>	2.4340344	Ω 183.70502	-0.64738153	+0.67731384
<i>e</i>	0.1937925	<i>i</i> 2.98929	-0.23887939	+0.25512960
<i>P</i>	3.80	<i>H</i> 15.0	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1976 09 24	095	0.0	0.1-	1995 10 14	817	0.0	0.6-	1998 04 21	704	0.5+	1.8+
1991 08 07	675	0.1-	0.1-	1995 10 14	817	0.1-	0.5-	1998 04 22	704	0.4+	0.5+
1991 08 07	675	0.7+	1.0-	1995 10 14	817	0.2-	0.4-	1998 04 22	704	(0.6+	2.5+)
1991 08 10	675	0.2-	0.4+	1995 10 14	327	0.1+	0.2-	1998 04 22	704	0.3-	0.2+
1991 08 10	675	0.2-	0.2+	1995 10 14	327	0.2+	0.1-	1998 04 22	704	0.7-	0.6+
1995 09 29	707	(3.7-	0.2+)	1995 10 14	327	0.0	0.2-	1998 04 22	704	0.0	0.0
1995 09 29	707	0.2-	0.9-	1995 10 15	327	0.1+	0.1-	1998 04 30	566	0.9-	0.4+
1995 09 29	707	(0.3+	3.9-)	1995 10 15	327	0.1-	0.3+	1998 04 30	566	0.6-	0.1+
1995 10 03	817	0.2+	0.2+	1995 10 15	327	0.0	0.2+	1998 04 30	566	0.8-	0.4+
1995 10 03	817	0.1+	0.3+	1998 03 29	910	0.6+	1.5-	1998 05 01	704	0.4-	0.5+
1995 10 03	817	0.0	0.4+	1998 03 29	910	1.1+	1.0-	1998 05 01	704	0.0	1.0-
1995 10 04	817	0.6-	0.4-	1998 03 29	910	0.8+	1.4-	1998 05 01	704	0.2+	0.9+
1995 10 04	817	0.8+	1.5+	1998 03 31	910	1.0+	1.0-	1998 05 01	704	0.7+	0.8+
1995 10 04	817	0.9+	1.8+	1998 03 31	910	1.0+	1.2-	1998 05 16	704	1.4-	0.9-
1995 10 04	817	(2.5+	1.8+)	1998 03 31	910	1.0+	1.0-	1998 05 16	704	(0.5-	2.6+)
1995 10 10	817	0.3-	0.4+	1998 04 21	704	0.6+	0.2+	1998 05 16	704	1.8-	0.0
1995 10 10	817	0.5-	0.1+	1998 04 21	704	0.7-	1.6+	1998 05 16	704	(2.3+	1.3-)
1995 10 10	817	0.1-	0.1+	1998 04 21	704	0.1-	0.2+				
1995 10 10	817	0.4-	0.5-	1998 04 21	704	0.3+	0.7+				

(8899)* 1995 SX₂₉ = 1991 XE₁

Discovered 1995 Sept. 22 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 26405)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	210.85176	(2000.0)	P	Q
<i>n</i>	0.22532227	ω 293.34892	+0.90664117	-0.36240727
<i>a</i>	2.6746480	Ω 88.47578	+0.42053729	+0.81742651
<i>e</i>	0.2766779	<i>i</i> 12.47961	-0.03391440	+0.44774420
<i>P</i>	4.37	<i>H</i> 13.2	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1982 09 24	413	0.3+	0.3+	1996 01 09	413	0.3-	0.1+	1998 04 24	704	0.8-	0.9-
1982 09 24	413	0.7-	0.3+	1998 03 24	704	0.2-	0.7+	1998 04 24	704	0.1-	0.2+
1991 12 02	675	0.4+	0.4-	1998 03 24	704	0.4-	1.6+	1998 05 16	704	0.7-	0.6-
1991 12 02	675	1.5+	1.3-	1998 03 24	704	(1.0-	2.2-)	1998 05 16	704	1.6-	0.4+
1991 12 06	675	1.3-	0.5-	1998 03 24	704	(4.2-	1.3+)	1998 05 16	704	0.4-	0.5-
1991 12 06	675	0.6+	1.0-	1998 04 23	704	0.4-	0.7-	1998 05 16	704	0.8+	0.3-
1995 07 04	413	1.3+	1.2-	1998 04 23	704	0.2-	0.4+	1998 05 28	704	1.1+	0.9-
1995 07 04	413	0.9+	1.1-	1998 04 23	704	(2.2+	1.9-)	1998 05 28	704	0.9-	0.1+
1995 09 22	413	0.1+	0.5-	1998 04 23	704	1.1+	1.9-	1998 05 28	704	1.4+	1.3-
1995 09 22	413	0.3+	0.1+	1998 04 23	704	0.1+	0.9-	1998 05 28	704	1.2+	0.7+
1995 10 01	413	0.7-	0.2-	1998 04 24	704	0.9-	0.1-				
1996 01 09	413	0.4-	0.0	1998 04 24	704	0.7-	0.9+				

(8900)* 1995 UD₂ = 1979 UV = 1987 SX₁₆ = 1989 EU₂

Discovered 1995 Oct. 24 by D. di Cicco at Sudbury.

Id. K. Kinoshita (*MPC* 26179)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	276.26012	(2000.0)	P	Q
<i>n</i>	0.24382236	ω 100.48826	+0.88087552	+0.45786149
<i>a</i>	2.5375836	Ω 232.36992	-0.47148928	+0.82624947
<i>e</i>	0.1445414	<i>i</i> 8.72154	-0.04190675	+0.32813819
<i>P</i>	4.04	<i>H</i> 12.9	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1979 10 19	046	0.1+	2.0-	1997 01 30	817	0.0	0.1-	1998 05 01	704	1.5+	1.3-
1979 10 19	046	1.3+	2.0-	1997 01 30	817	0.2+	0.0	1998 05 01	704	1.0+	1.4-
1979 10 20	046	0.9+	1.8-	1997 01 30	817	0.2+	0.2-	1998 05 01	704	1.3+	0.3-
1979 10 20	046	1.4-	1.5-	1997 03 08	817	0.0	0.5+	1998 05 16	817	0.3-	0.2-
1987 09 25	095	(0.9-	3.5+)	1997 03 08	817	0.2+	0.2+	1998 05 16	817	1.2-	0.4-
1989 03 02	809	(4.6+	1.8+)	1997 03 08	817	0.3+	0.4+	1998 05 16	817	1.1-	0.1+
1989 03 02	809	(3.9+	2.0+)	1997 03 14	817	0.9-	0.1+	1998 05 16	817	0.8-	0.5-
1989 03 02	809	(3.0+	1.9+)	1997 03 14	817	0.7-	0.4+	1998 05 16	817	0.7-	0.6-
1989 03 03	809	(4.3+	3.2+)	1998 04 21	704	0.6+	1.1-	1998 05 16	691	0.7-	1.0+
1989 03 03	809	(3.2+	2.0+)	1998 04 21	704	1.1+	0.9-	1998 05 16	691	0.7-	0.8+
1989 03 03	809	(2.6+	2.0+)	1998 04 21	704	0.4+	0.3+	1998 05 16	691	0.5-	0.7+
1995 10 24	817	0.2-	0.3-	1998 04 21	704	0.3+	0.5+	1998 05 18	817	0.6+	0.1+
1995 10 24	817	0.0	0.1+	1998 04 21	704	2.0+	0.0	1998 05 18	817	0.9+	0.0
1995 10 24	817	0.0	0.3-	1998 04 22	704	0.3+	2.1-	1998 05 18	817	0.1+	0.2+
1995 10 24	817	0.2-	0.2-	1998 04 22	704	0.7+	0.2-	1998 05 26	691	0.9-	0.1+
1995 10 25	817	0.2+	0.0	1998 04 22	704	0.5+	1.1-	1998 05 26	691	0.9-	0.5+
1995 10 25	817	0.2+	0.1-	1998 04 22	704	0.5+	0.8-	1998 05 26	691	0.4-	0.4-
1995 10 25	817	0.0	0.3-	1998 04 22	704	0.2-	0.4-	1998 05 27	691	1.1-	0.0
1995 10 27	817	0.1+	0.0	1998 04 25	699	0.4+	0.4-	1998 05 27	691	1.3-	0.4+
1995 10 27	817	0.2+	0.3-	1998 04 25	699	0.3+	1.3-	1998 05 27	691	1.2-	0.2+
1997 01 01	817	0.2+	0.8-	1998 04 25	699	0.2+	0.8-	1998 06 01	691	1.5-	0.2+
1997 01 01	817	0.4+	0.3-	1998 05 01	704	0.6-	0.7-	1998 06 01	691	1.1-	0.3+
1997 01 01	817	0.1+	0.5-	1998 05 01	704	1.1+	0.5+	1998 06 01	691	1.3-	0.4+

(8901)* 1995 UJ₄ = 1979 VV = 1984 UL = 1985 XD₁ = 1990 VD₁₄
= 1990 WH₁₃

Discovered 1995 Oct. 20 by T. Kobayashi at Oizumi.

Id. T. Kobayashi (*MPC* 26180), S. Nakano (d, *ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	56.37993	(2000.0)	P	Q
<i>n</i>	0.18954175	ω 136.03191	-0.98530095	+0.08117652
<i>a</i>	3.0014616	Ω 49.24772	-0.14748520	-0.84821461
<i>e</i>	0.0540783	<i>i</i> 11.44434	+0.08619837	-0.52339502
<i>P</i>	5.20	<i>H</i> 12.1	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1979 11 11	095	(3.9-	0.2+)	1998 04 05	732	0.8+	1.3-	1998 05 22	699	0.6-	0.1-
1984 10 23	688	0.3+	0.2+	1998 04 06	732	0.6+	0.1+	1998 05 22	704	1.0+	0.3+
1984 10 23	688	0.7-	0.7+	1998 04 06	732	0.5+	0.6-	1998 05 22	699	0.2-	0.3+
1985 12 14	010	0.4+	0.2-	1998 04 25	809	0.4+	0.5+	1998 05 22	704	1.5-	1.1+
1985 12 14	010	1.3-	2.0+	1998 04 25	809	0.5+	0.2+	1998 05 24	704	0.2-	0.6-
1990 11 14	095	(3.8+	0.9+)	1998 04 25	809	0.2+	0.5+	1998 05 24	704	1.2-	0.1+
1990 11 14	095	1.1+	0.6-	1998 04 25	423	1.0+	0.5-	1998 05 24	704	(0.9+	4.4+)
1990 11 20	095	(1.9+	2.8+)	1998 04 25	423	0.8+	0.9-	1998 05 24	704	1.6-	1.4+
1990 11 20	095	(6.5+	5.5-)	1998 04 28	809	(2.7+	1.8+)	1998 05 24	704	0.5+	0.2-
1995 10 20	411	0.4-	0.1+	1998 04 28	809	(2.7+	0.9+)	1998 05 25	699	0.3-	0.6+
1995 10 20	411	0.6-	0.4-	1998 04 28	809	(2.2+	2.4+)	1998 05 25	699	0.4-	0.8+
1995 10 25	411	0.1+	0.2+	1998 05 05	699	0.8+	0.3+	1998 05 25	699	0.2-	0.6+
1995 10 25	411	0.0	0.2-	1998 05 05	699	0.4+	0.2+	1998 05 26	367	0.4-	0.3-
1995 11 02	411	0.3+	0.4-	1998 05 05	699	0.3+	0.4+	1998 05 26	367	0.2-	0.1-
1995 11 02	411	0.5+	0.3-	1998 05 22	704	0.5+	1.8-	1998 05 28	689	0.1-	0.1+
1998 04 05	732	0.5+	0.4-	1998 05 22	704	1.4-	0.3-	1998 05 29	689	0.1+	0.2+
1998 04 05	732	0.6+	0.6-	1998 05 22	704	0.0	1.0+				
1998 04 05	732	0.3-	0.7-	1998 05 22	699	0.1-	0.1-				

(8902)* 1995 UK₄ = 1976 DS = 1981 AC₄

Discovered 1995 Oct. 20 by T. Kobayashi at Oizumi.

Id. T. Kobayashi (*MPC* 26180)

M.P.C. 31924

1998 JUNE 10

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	127.95020		(2000.0)	P	Q
<i>n</i>	0.18888907	ω	69.40716	-0.37504518	-0.91967601
<i>a</i>	3.0083718	Ω	43.19744	+0.77459842	-0.37985582
<i>e</i>	0.0427932	<i>i</i>	9.78628	+0.50925278	-0.09952686
<i>P</i>	5.22	<i>H</i>	12.9	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1976 02 28	033	0.7+	0.1-	1998 04 25	809	0.3+	0.8+	1998 05 06	566	0.1+	0.0
1976 02 29	033	1.6+	0.2+	1998 04 25	809	0.4-	1.0+	1998 05 22	704	0.4+	0.2-
1981 01 08	381	1.7-	1.8+	1998 04 25	809	0.3-	0.3+	1998 05 22	704	0.6-	0.7-
1981 01 08	381	0.8-	0.3-	1998 04 28	809	0.1+	0.2+	1998 05 22	704	0.6-	1.9-
1992 03 05	691	0.1-	0.3+	1998 04 28	809	0.0	0.7-	1998 05 22	704	0.3+	0.3-
1992 03 05	691	0.0	0.2-	1998 04 28	809	0.3+	0.1-	1998 05 22	704	2.0-	0.1-
1992 03 05	691	0.0	0.1+	1998 05 05	732	0.4-	0.5+	1998 05 23	699	0.0	0.0
1994 09 07	675	0.0	0.6+	1998 05 05	732	0.5+	0.0	1998 05 23	699	0.2-	0.1-
1994 09 07	675	1.0-	0.9+	1998 05 05	699	0.1-	0.5+	1998 05 23	699	0.3+	0.2-
1995 10 20	411	0.0	0.4+	1998 05 05	699	0.7+	0.7+	1998 05 24	704	0.4-	0.7+
1995 10 20	411	0.1-	0.7+	1998 05 05	699	0.5+	0.0	1998 05 24	704	1.9+	1.4+
1995 10 25	411	0.4-	0.0	1998 05 06	732	0.3-	0.9-	1998 05 24	704	0.3-	1.0+
1995 10 25	411	0.3+	0.3+	1998 05 06	732	(1.2-	2.3-)	1998 05 24	704	1.0+	0.3-
1995 11 02	411	0.4+	0.2-	1998 05 06	566	0.2+	0.3-	1998 05 24	704	0.6-	0.8+
1995 11 02	411	0.4+	0.1+	1998 05 06	566	0.3+	0.4-				

(8903)* 1995 UB₇ = 1978 TC₂

Discovered 1995 Oct. 26 by Y. Shimizu and T. Urata at the Nachi-Katsuura Observatory.

Id. T. Urata (*MPC* 29625)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	263.65720		(2000.0)	P	Q
<i>n</i>	0.23456800	ω	159.64336	+0.99667564	+0.00006830
<i>a</i>	2.6038954	Ω	200.86012	-0.01568585	+0.98145143
<i>e</i>	0.1572153	<i>i</i>	13.22626	+0.07994757	+0.19171093
<i>P</i>	4.20	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1953 10 10	675	0.4-	0.1-	1995 11 03	385	0.1+	0.6-	1998 05 05	699	0.5-	0.0
1953 10 10	675	0.4+	0.4+	1995 11 16	905	0.0	0.3+	1998 05 05	699	1.1+	0.7+
1978 10 03	095	0.1+	1.4-	1995 11 16	905	0.2-	0.4+	1998 05 20	888	0.4-	0.3-
1978 10 07	095	(1.7-	13.6+)	1995 11 17	905	0.1-	0.3+	1998 05 20	888	0.6-	0.0
1995 10 26	905	0.8+	0.7+	1995 11 17	905	0.6-	1.8-	1998 05 20	888	0.6-	0.2-
1995 10 26	905	0.0	0.1+	1995 12 17	385	0.3+	0.0	1998 05 23	704	0.8+	0.3+
1995 10 27	905	0.8-	0.7+	1995 12 17	385	0.4+	0.0	1998 05 23	704	0.8-	0.1-
1995 10 27	905	0.5+	0.5+	1995 12 17	385	0.4+	0.1-	1998 05 23	704	0.0	0.0
1995 10 27	399	0.2+	0.8+	1997 03 08	385	0.7+	0.2-	1998 05 23	704	0.9-	1.1-
1995 10 27	399	0.7-	1.1+	1997 03 08	385	0.9-	0.6-	1998 05 23	699	0.5+	0.1-
1995 10 28	399	(0.4+	2.3+)	1997 03 08	385	0.3-	0.2-	1998 05 23	704	0.0	0.1-
1995 10 28	399	(0.7+	2.7+)	1997 03 31	385	0.1-	1.2+	1998 05 23	699	0.1+	0.6+
1995 11 03	385	0.0	0.5-	1997 03 31	385	0.6+	0.7-	1998 05 23	699	1.3+	0.8+
1995 11 03	385	0.2-	0.5-	1998 05 05	699	0.1-	0.1+				

(8904)* 1995 VY = 1958 XK = 1970 SF = 1991 XK₂

Discovered 1995 Nov. 15 by T. Kobayashi at Oizumi.

Id. T. Kobayashi (*MPC* 26184)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	263.09419		(2000.0)	P	Q
<i>n</i>	0.23945387	ω	289.07188	+0.99714482	-0.04113190
<i>a</i>	2.5683536	Ω	73.32473	+0.06376298	+0.90789900
<i>e</i>	0.2673268	<i>i</i>	3.79045	-0.04045363	+0.41716611
<i>P</i>	4.12	<i>H</i>	13.3	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1958 12 03	330	0.0	0.7+	1995 11 24	411	0.5+	0.3-	1998 05 01	704	0.1-	0.7+
1970 09 27	095	0.4+	1.3-	1997 02 12	411	0.5-	0.8+	1998 05 01	704	0.0	0.8+

1991 12 01	675	0.6+	0.3-	1997 02 12	411	0.3+	0.7-	1998 05 05	732	1.6-	0.3-
1991 12 01	675	0.3+	1.1-	1998 04 22	704	0.2-	0.6-	1998 05 05	732	0.8+	0.3-
1991 12 03	675	0.6-	0.9-	1998 04 22	704	0.1+	0.3+	1998 05 05	732	0.9-	0.1+
1991 12 03	675	0.5-	1.2-	1998 04 22	704	0.2+	0.7+	1998 05 06	732	1.5-	1.1-
1995 10 24	033	0.2+	0.5-	1998 04 22	704	0.3-	0.0	1998 05 06	732	(3.3-	1.7+)
1995 10 25	033	0.6+	0.6-	1998 04 22	704	(2.9-	0.4+)	1998 05 22	704	0.3+	0.2+
1995 10 25	033	0.6+	0.7-	1998 04 24	684	0.0	0.3-	1998 05 22	704	0.8+	1.4-
1995 11 15	411	0.2+	0.4+	1998 04 24	684	0.3-	0.3-	1998 05 22	704	0.1+	0.2+
1995 11 15	411	0.0	0.0	1998 04 25	684	0.4-	1.0-	1998 05 22	704	1.0+	0.7-
1995 11 16	411	0.2-	0.4-	1998 04 25	684	0.8-	1.5-	1998 05 22	704	0.3+	1.3-
1995 11 16	411	0.0	0.3+	1998 04 25	699	0.2-	0.5+	1998 05 24	704	0.8+	0.0
1995 11 16	399	0.3-	0.1+	1998 04 25	699	1.0-	0.5+	1998 05 24	704	1.2+	0.8+
1995 11 16	399	1.6-	0.9+	1998 04 25	699	0.1-	0.1+	1998 05 24	704	0.0	0.6+
1995 11 17	399	1.0-	0.0	1998 05 01	704	0.3+	0.5-	1998 05 24	704	0.8+	1.0-
1995 11 17	399	0.0	0.3+	1998 05 01	704	0.3+	0.1+	1998 05 24	704	0.2-	0.5+
1995 11 24	411	1.3+	0.8+	1998 05 01	704	0.2-	0.6+				

(8905)* 1995 WJ = 1978 UR = 1982 PR₁ = 1992 AJ₄

Discovered 1995 Nov. 16 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 26407)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	266.60452		(2000.0)	P	Q
<i>n</i>	0.23405582	ω	280.17204	+0.98370866	+0.15329833
<i>a</i>	2.6076928	Ω	71.05768	-0.09957484	+0.89952072
<i>e</i>	0.2706963	<i>i</i>	5.69739	-0.14967342	+0.40909913
<i>P</i>	4.21	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1978 10 28	688	0.3+	2.1-	1995 11 25	399	0.8-	0.8+	1998 04 22	704	(2.8+	0.3+)
1982 08 15	095	0.2-	1.5+	1995 11 27	411	0.1+	0.9+	1998 04 22	704	0.8+	1.1-
1992 01 02	033	0.6+	0.1-	1995 11 27	411	0.2-	0.8+	1998 04 22	704	1.4+	1.5-
1992 01 03	033	0.5+	0.2-	1995 12 01	411	0.8-	0.3-	1998 05 01	704	1.7-	1.3+
1995 11 16	411	0.1+	0.3+	1995 12 01	411	0.4-	0.4-	1998 05 01	704	0.1+	2.0+
1995 11 16	411	0.3+	0.5-	1995 12 08	411	0.1-	0.3+	1998 05 01	704	1.4+	0.4-
1995 11 17	411	0.6+	0.3+	1995 12 08	411	0.2-	0.1+	1998 05 01	704	0.5-	0.3-
1995 11 17	411	0.7+	0.9+	1998 04 21	704	0.9+	0.6-	1998 05 22	704	1.1-	0.4+
1995 11 18	399	0.6-	0.2+	1998 04 21	704	0.5-	0.1+	1998 05 22	704	(1.6-	2.5+)
1995 11 18	399	1.0+	0.5+	1998 04 21	704	(2.6+	0.2+)	1998 05 22	704	0.6-	1.2+
1995 11 24	411	0.2-	0.2-	1998 04 21	704	0.2+	0.6+	1998 05 22	704	(3.1-	0.3-)
1995 11 24	411	0.3-	0.1+	1998 04 21	704	0.1+	0.9+				
1995 11 25	399	1.1-	0.1-	1998 04 22	704	(3.0+	0.8-)				

(8906)* 1995 WF₂ = 1977 UT = 1989 UC₈ = 1991 EA₅

Discovered 1995 Nov. 18 by T. Kobayashi at Oizumi.

Id. T. Kobayashi (*MPC* 26408)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	173.61934		(2000.0)	P	Q
<i>n</i>	0.17187718	ω	269.27232	+0.55538176	-0.83149119
<i>a</i>	3.2037398	Ω	146.97970	+0.77226574	+0.50981812
<i>e</i>	0.2000543	<i>i</i>	1.38506	+0.30847485	+0.22069862
<i>P</i>	5.73	<i>H</i>	12.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1977 10 16	675	0.0	0.2+	1995 11 18	399	0.3-	0.6-	1998 04 22	704	1.1-	0.4+
1977 10 17	675	0.2+	0.2+	1995 11 18	411	0.2-	0.1-	1998 05 01	704	0.2+	0.5-
1989 10 24	095	0.6+	1.2-	1995 11 18	411	0.3-	0.5-	1998 05 01	704	0.2+	0.3+
1989 10 24	095	0.1+	1.6-	1995 11 20	411	0.1+	0.1-	1998 05 01	704	0.9-	0.3-
1989 10 26	095	0.4+	0.5-	1995 11 20	411	0.1-	0.8-	1998 05 01	704	(0.0	2.4-)
1989 10 26	095	0.0	1.1-	1995 11 25	399	0.3-	0.4+	1998 05 22	704	0.4-	1.1-
1991 03 13	809	0.9-	0.1+	1995 11 25	399	0.5-	1.4+	1998 05 22	704	0.1+	0.1+
1991 03 13	809	0.1-	0.1-	1995 11 26	411	0.2+	0.8+	1998 05 22	704	0.0	0.6-
1991 03 13	809	0.5+	0.1-	1995 11 26	411	0.3+	0.4-	1998 05 22	704	(2.5+	1.7-)
1991 03 15	809	0.4+	0.3+	1995 12 10	411	0.2+	0.1+	1998 05 22	704	(3.8-	0.5-)
1991 03 15	809	0.2+	0.3+	1995 12 10	411	0.5+	0.0	1998 05 24	704	1.4+	1.0+
1991 03 15	809	0.5+	0.6+	1997 03 11	886	0.2+	0.8-	1998 05 24	704	0.3+	1.2-

1992 04 29	691	2.0−	1.6−	1997 03 11	886	0.5−	0.9−	1998 05 24	704	(2.4+	0.8−)
1992 04 29	691	(2.7−	1.3−)	1998 04 22	704	0.8−	0.7+	1998 05 24	704	(2.7−	2.2−)
1992 04 29	691	(2.3−	0.5−)	1998 04 22	704	0.1+	0.3−				
1995 11 18	399	0.2+	0.3+	1998 04 22	704	1.0+	0.7−				

(8907)* 1995 WM₅ = 1992 GT₅ = 1994 RC₂₉

Discovered 1995 Nov. 24 by T. Kobayashi at Oizumi.

Id. B. G. Marsden (*MPC* 27110), G. V. Williams (unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	285.31614		(2000.0)	P		Q	
<i>n</i>	0.18789633	ω	341.53222	+0.79764469		+0.60307962	
<i>a</i>	3.0189588	Ω	341.37082	−0.55031347		+0.72257548	
<i>e</i>	0.0802983	<i>i</i>	1.36517	−0.24681577		+0.33790480	
<i>P</i>	5.25	<i>H</i>	13.1	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1992 04 03	033	0.7+	1.3+	1997 02 06	691	0.3−	0.4−	1998 04 22	704	0.6−	0.9+
1992 04 03	033	0.1+	0.9+	1997 02 06	691	0.5−	0.0	1998 05 01	704	0.3+	0.1−
1994 09 01	033	0.3−	0.1+	1997 02 07	327	0.1+	0.2−	1998 05 01	704	0.9+	0.2−
1994 09 02	033	0.6−	0.2+	1997 02 07	327	0.8+	0.3+	1998 05 01	704	0.1+	1.0−
1994 09 04	033	0.8+	0.5+	1997 02 07	327	0.1+	0.0	1998 05 01	704	0.2+	0.9−
1995 11 24	411	0.0	0.0	1997 02 14	327	0.9+	0.8+	1998 05 01	704	0.5+	1.0−
1995 11 24	411	0.9+	1.1−	1997 02 14	327	0.0	0.1+	1998 05 22	704	0.4−	0.4−
1995 11 26	411	0.6−	1.0+	1997 02 14	327	0.2−	0.2+	1998 05 22	704	0.9−	0.5+
1995 11 26	411	0.3−	0.2−	1997 02 16	691	0.1−	0.3−	1998 05 22	704	0.6−	0.3+
1995 11 28	411	0.3−	0.5−	1997 02 16	691	0.2−	0.1−	1998 05 22	704	1.0+	1.4+
1995 11 28	411	0.0	0.5+	1997 02 16	691	0.0	0.2−	1998 05 22	704	0.6−	1.1+
1995 12 01	411	0.2−	0.4−	1997 02 18	327	0.3+	0.3−	1998 05 24	704	0.7−	0.3+
1995 12 01	411	1.1−	0.1−	1997 02 18	327	0.4+	0.3−	1998 05 24	704	0.8−	0.5−
1995 12 10	411	0.1+	0.2+	1997 02 18	327	0.2−	0.3−	1998 05 24	704	0.3+	0.1+
1995 12 10	411	0.1+	0.5−	1998 04 22	704	0.9+	1.1−	1998 05 24	704	0.7−	0.3+
1995 12 20	411	0.7+	0.0	1998 04 22	704	0.3−	0.3−	1998 05 24	704	0.5−	0.4−
1995 12 20	411	0.4+	0.1+	1998 04 22	704	1.4+	0.8+				
1997 02 06	691	0.5−	0.1−	1998 04 22	704	0.0	0.9−				

(8908)* 1995 WY₆ = 1974 VU₁ = 1997 CN₂₇

Discovered 1995 Nov. 18 by S. Ueda and H. Kaneda at Kushiro.

Id. S. Nakano (*MPC* 29112)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	32.25346		(2000.0)	P		Q	
<i>n</i>	0.18970872	ω	155.45427	−0.82031989		+0.54813711	
<i>a</i>	2.9997002	Ω	58.76960	−0.55117848		−0.68162586	
<i>e</i>	0.0347911	<i>i</i>	11.00004	−0.15256987		−0.48469773	
<i>P</i>	5.20	<i>H</i>	12.3	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1974 11 15	095	0.3−	0.6+	1997 02 02	399	0.7−	0.7−	1998 05 22	704	1.0−	0.6+
1995 10 24	033	0.3+	0.4−	1997 02 02	399	(1.3−	2.4−)	1998 05 22	704	0.8+	0.1+
1995 10 25	033	0.7+	1.4−	1997 02 10	399	0.5+	0.9−	1998 05 22	704	(3.8+	0.1−)
1995 10 25	033	1.4+	0.3+	1997 02 10	399	0.2−	1.1+	1998 05 24	704	(3.4−	0.9+)
1995 10 26	033	1.1+	0.4−	1998 04 25	809	(4.0+	0.6+)	1998 05 24	704	0.6−	0.3+
1995 11 16	399	1.5−	1.1+	1998 04 25	809	(3.7+	1.0+)	1998 05 24	704	0.4+	0.7+
1995 11 16	399	1.0−	1.8+	1998 04 25	809	(3.5+	1.3+)	1998 05 24	704	0.6+	0.4+
1995 11 18	399	1.3+	0.2+	1998 04 25	699	0.1−	0.2−	1998 05 24	704	(1.6−	3.5+)
1995 11 18	399	0.3+	0.2−	1998 04 25	699	0.2−	0.1−	1998 05 25	699	0.5+	0.7+
1995 11 25	399	1.1−	0.2−	1998 04 25	699	0.2−	0.0	1998 05 25	699	0.2+	0.6+
1995 11 25	399	1.2−	0.1−	1998 04 28	809	(2.3+	0.3−)	1998 05 25	699	0.8+	0.2+
1995 12 14	399	1.1−	1.6+	1998 04 28	809	(2.9+	0.3−)	1998 06 03	704	0.3+	0.4+
1995 12 14	399	0.4−	0.7+	1998 04 28	809	(2.7+	1.4+)	1998 06 03	704	0.3+	0.6+
1995 12 17	399	(2.9−	1.5+)	1998 05 22	704	0.3+	1.1+	1998 06 03	704	0.6+	0.4−
1995 12 17	399	0.8−	1.9+	1998 05 22	704	(0.7+	3.7+)	1998 06 03	704	0.3−	0.3+

(8909)* 1995 WL₇ = 1962 XU₁ = 1990 VO₁₄

Discovered 1995 Nov. 27 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 26411)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	276.12393		(2000.0)	P		Q	
<i>n</i>	0.20874220	ω	259.79782	+0.93822857		+0.32774056	
<i>a</i>	2.8144652	Ω	81.00330	−0.25683567		+0.87453063	
<i>e</i>	0.1331494	<i>i</i>	6.45065	−0.23186761		+0.35746650	
<i>P</i>	4.72	<i>H</i>	12.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1962 12 04	033	0.1+	0.8−	1995 12 21	411	0.3+	0.4+	1998 05 02	732	0.0	0.1−
1990 11 15	095	(7.5+	5.0+)	1995 12 22	566	0.1−	1.0+	1998 05 02	732	0.5−	0.2−
1990 11 15	095	(0.0	5.6−)	1995 12 22	566	0.2−	1.2+	1998 05 05	699	0.3+	0.5−
1990 11 21	095	(0.0	3.7−)	1995 12 22	566	0.3−	1.0+	1998 05 05	699	0.3+	0.0
1990 11 21	095	(0.3−	2.9−)	1997 03 11	104	0.2−	0.1+	1998 05 05	699	0.5−	0.8+
1992 01 30	691	0.7−	0.1+	1997 03 11	104	0.0	0.6−	1998 05 22	704	0.6+	0.9+
1992 01 30	691	0.2+	0.2−	1997 03 11	104	0.1−	0.2+	1998 05 22	704	0.1−	0.1−
1992 01 30	691	0.3−	0.0	1997 03 11	104	1.2+	0.0	1998 05 22	704	0.0	0.2+
1994 08 04	675	0.6+	0.5+	1997 03 12	104	0.4+	0.3−	1998 05 22	704	0.0	1.2+
1994 08 04	675	0.4−	0.3+	1997 03 12	104	0.3+	0.5−	1998 05 22	704	0.1−	1.0+
1994 08 05	675	0.3+	1.0+	1997 03 12	104	0.5+	0.3−	1998 05 23	699	0.0	0.7+
1995 11 27	411	0.8+	0.9+	1998 04 22	704	0.3−	0.5+	1998 05 23	699	0.1+	0.8+
1995 11 27	411	0.4+	1.4+	1998 04 22	704	0.1−	0.8+	1998 05 23	699	0.1−	1.0+
1995 11 28	411	0.4−	0.5−	1998 04 22	704	0.1+	0.1+	1998 05 24	704	0.0	0.0
1995 11 28	411	0.3+	0.8+	1998 04 22	704	0.9−	0.5+	1998 05 24	704	0.3+	0.1+
1995 12 01	411	0.2−	0.2+	1998 04 22	704	0.2+	0.2+	1998 05 24	704	0.7+	1.3−
1995 12 01	411	0.4−	0.7+	1998 05 01	732	0.3−	0.2−	1998 05 24	704	(3.6−	1.5+)
1995 12 02	411	1.0−	0.3+	1998 05 01	732	0.2−	0.5−	1998 05 24	704	0.6+	1.2−
1995 12 02	411	0.1+	0.0	1998 05 01	704	0.2−	0.4−	1998 05 26	367	0.1+	0.0
1995 12 09	411	0.4−	0.2+	1998 05 01	704	0.6+	0.1+	1998 05 26	367	0.3+	0.2+
1995 12 09	411	1.0−	0.4+	1998 05 01	704	0.3−	0.7+				
1995 12 21	411	0.4−	0.9−	1998 05 01	704	0.3−	0.7+				

(8910)* 1995 WV₄₂ = 1988 MD = 1989 TO₁ = 1998 GG₅

Discovered 1995 Nov. 25 by S. Ueda and H. Kaneda at Kushiro.

Id. S. Nakano (*MPC* 26412; unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	231.11170		(2000.0)	P		Q	
<i>n</i>	0.17793950	ω	234.43730	+0.92978035		+0.27701943	
<i>a</i>	3.1305535	Ω	108.38524	−0.19610957		+0.93007285	
<i>e</i>	0.2295947	<i>i</i>	14.80097	−0.31152776		+0.24129802	
<i>P</i>	5.54	<i>H</i>	12.3	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1988 06 16	675	(3.3−	0.6+)	1994 08 06	675	0.6+	1.3+	1998 04 02	704	0.5+	0.9−
1988 06 19	675	0.8−	1.0−	1995 11 25	399	0.3−	0.1+	1998 04 02	704	0.7−	0.4+
1989 10 04	675	0.1−	1.8−	1995 11 25	399	(2.4+	0.4+)	1998 04 02	704	(0.6+	2.3−)
1989 10 04	675	0.7+	0.6−	1995 12 17	399	0.1−	0.5−	1998 04 03	704	0.0	1.1+
1989 10 06	675	0.8+	0.7−	1995 12 17	399	1.4−	1.3+	1998 04 03	704	0.6−	1.5−
1989 10 06	675	0.8+	1.2−	1995 12 19	399	0.0	0.6+	1998 04 03	704	1.2−	0.2+
1991 02 07	675	0.8+	1.2+	1995 12 19	399	0.4−	0.6−	1998 04 03	704	(2.4−	0.1−)
1991 02 07	675	0.4+	0.7+	1998 03 24	566	0.4+	1.3−	1998 05 19	749	1.5+	0.5−
1993 04 18	675	0.6+	1.2+	1998 03 24	566	0.4+	1.0−	1998 05 19	749	0.7−	0.0
1993 04 18	675	1.8−	0.6−	1998 03 24	566	0.6+	1.1−	1998 06 02	749	1.1−	1.3+
1994 07 09	675	0.0	0.8+	1998 04 02	704	1.3+	0.7+	1998 06 02	749	1.0+	1.1−
1994 08 06	675	0.5+	0.5+	1998 04 02	704	1.6−	0.1−				

(8911)* 1995 YA = 1992 DL₂

Discovered 1995 Dec. 17 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 26413)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Residuals in seconds of arc

1992 02 29	033	0.1−	0.9+	1997 02 01	886	0.3−	0.0	1998 05 22	704	0.4+	0.3+
1992 02 29	033	0.4+	0.5+	1997 02 01	886	0.2−	0.0	1998 05 22	704	0.6−	0.4+
1992 03 01	033	0.1−	0.7+	1998 04 22	704	0.2−	0.2+	1998 05 22	704	0.4+	0.0
1994 09 12	675	0.8+	0.8+	1998 04 22	704	0.7+	0.1−	1998 05 22	704	0.1−	1.1+
1994 09 12	675	1.0+	0.5−	1998 04 22	704	1.2−	0.7−	1998 05 22	704	0.2+	1.7+
1995 12 17	411	0.4+	1.0−	1998 04 22	704	1.2−	1.3−	1998 05 22	699	0.3+	0.2−
1995 12 17	411	0.4+	0.2+	1998 04 22	704	0.3−	0.8−	1998 05 22	699	0.0	0.0
1995 12 19	411	0.7−	0.5−	1998 04 27	426	0.4−	0.5−	1998 05 22	699	0.2+	0.2−
1995 12 19	411	0.3−	0.1−	1998 04 27	426	0.3−	0.3−	1998 05 24	704	1.0+	0.3−
1995 12 19	411	0.0	0.4−	1998 04 27	426	0.4−	0.3−	1998 05 24	704	0.1+	1.0−
1995 12 21	411	0.7+	1.3−	1998 05 05	699	0.1+	0.1−	1998 05 24	704	0.2−	0.7−
1995 12 21	411	0.2+	1.0−	1998 05 05	699	0.1+	0.1−	1998 05 24	704	0.3−	0.2−
1995 12 24	411	0.6−	1.2−	1998 05 05	699	0.0	0.1+	1998 05 24	704	0.3−	0.6−
1995 12 24	411	0.4−	1.3−	1998 05 05	426	0.5−	0.4−	1998 05 26	367	0.0	0.5−
1997 01 30	886	1.6+	0.9−	1998 05 05	426	0.3−	0.3−	1998 05 26	367	0.1−	0.2−
1997 01 30	886	1.0+	0.4−	1998 05 05	426	0.5−	0.4−				

(8912)* 1995 YN₁ = 1983 UD = 1994 SO₈

Discovered 1995 Dec. 21 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 26573)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	245.19643		(2000.0)	P	Q
<i>n</i>	0.17723365	ω	182.21052	+0.99655620	−0.08290728
<i>a</i>	3.1388599	Ω	182.54656	+0.07657279	+0.92688295
<i>e</i>	0.1940595	<i>i</i>	1.88226	+0.03181752	+0.36607973
<i>P</i>	5.56	<i>H</i>	12.9	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1983 10 16	046	(5.2+ 0.5+)	1995 12 26	411	0.4−	0.9+	1998 04 22	704	(2.4− 1.1+)
1983 10 16	046	0.2+ 0.6−	1995 12 30	411	0.3−	0.0	1998 05 01	704	0.6− 0.5+
1994 09 28	691	0.1− 0.1+	1995 12 30	411	0.0	1.8+	1998 05 01	704	0.6− 0.7+
1994 09 28	691	0.1− 0.1+	1996 01 10	411	0.5− 0.4+	1998 05 01	704	0.3+ 0.9+	
1994 09 28	691	0.1+ 0.2+	1996 01 10	411	0.1− 0.2−	1998 05 01	704	0.0 0.7+	
1994 10 04	691	0.0 0.1+	1996 01 25	411	0.1+ 1.8−	1998 05 22	704	0.9− 0.5−	
1994 10 04	691	0.2− 0.1+	1996 01 25	411	1.0+ 0.4−	1998 05 22	704	1.2+ 0.4+	
1994 10 11	691	0.1− 0.6+	1998 04 21	704	0.0 1.1−	1998 05 22	704	0.7− 0.6−	
1994 10 11	691	0.2− 0.5+	1998 04 21	704	0.9+ 0.7−	1998 05 22	704	(1.8+ 2.3−)	
1994 10 11	691	0.3− 0.5+	1998 04 21	704	0.7− 0.3−	1998 05 22	704	0.1+ 0.2+	
1995 12 21	411	0.3+ 0.6+	1998 04 21	704	0.1+ 0.0	1998 05 24	704	0.5− 0.0	
1995 12 21	411	1.9− 1.1−	1998 04 21	704	1.5− 0.5+	1998 05 24	704	0.7− 1.9+	
1995 12 22	411	0.0 0.4+	1998 04 22	704	0.4− 0.1−	1998 05 24	704	1.5+ 1.6−	
1995 12 22	411	1.7+ 1.0−	1998 04 22	704	0.1− 0.4+	1998 05 24	704	1.4+ 0.6−	
1995 12 22	411	0.9+ 0.1−	1998 04 22	704	1.5+ 0.2+				
1995 12 26	411	0.5− 1.9+	1998 04 22	704	0.6+ 1.4+				

(8913)* 1995 YB₂ = 1997 EZ₅

Discovered 1995 Dec. 22 at Haleakala by the JPL Near-Earth Asteroid

Tracking program.

Id. G. V. Williams (*MPC* 29306)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	31.60511		(2000.0)	P	Q
<i>n</i>	0.12465412	ω	249.21340	−0.93966750	+0.34120325
<i>a</i>	3.9688524	Ω	310.72816	−0.30054909	−0.85777563
<i>e</i>	0.1260059	<i>i</i>	1.86050	−0.16338673	−0.38444935
<i>P</i>	7.91	<i>H</i>	12.4	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1993 10 10	809	0.0	0.4+	1996 01 08	608	0.6−	0.0	1998 04 22	704	0.9−	1.7+
1993 10 10	809	0.7−	0.8+	1997 01 17	599	0.6+	0.4−	1998 04 22	704	0.2−	0.5−
1993 10 10	809	0.1+	0.6+	1997 01 17	599	1.2+	0.4−	1998 05 01	704	1.5+	1.1−
1995 12 22	566	0.3−	0.1−	1997 03 05	360	0.0	0.2−	1998 05 01	704	0.1−	0.0
1995 12 22	566	0.3−	0.2−	1997 03 05	360	0.0	0.3−	1998 05 01	704	0.3−	0.3+
1995 12 22	566	0.7−	0.1−	1997 03 05	360	0.1−	0.2−	1998 05 01	704	0.9+	1.1−
1995 12 24	566	1.7+	1.8+	1997 03 07	360	0.3+	0.1+	1998 05 22	704	0.1−	0.5+

1995 12 24	566	0.6−	0.0	1997 03 07	360	0.2+	0.0	1998 05 22	704	0.1−	0.5+
1995 12 24	566	1.8+	1.8+	1997 03 07	360	0.2+	0.1−	1998 05 22	704	0.0	0.8−
1995 12 24	566	0.5−	0.1−	1997 03 09	360	0.3+	0.1−	1998 05 22	704	0.1+	0.2−
1995 12 24	566	1.3+	1.6+	1997 03 09	360	0.0	0.5−	1998 05 22	704	2.1−	1.2−
1995 12 24	566	0.2−	0.3−	1997 03 09	360	0.9+	0.2+	1998 05 22	699	0.2+	0.7+
1995 12 28	608	0.1−	0.3−	1997 03 11	360	0.2+	0.0	1998 05 22	699	0.1+	0.8+
1995 12 28	608	0.3−	0.4−	1997 03 11	360	0.0	0.2+	1998 05 22	699	0.6+	0.0
1995 12 29	608	0.3−	0.1−	1997 04 09	691	1.3−	0.1+	1998 05 24	704	0.2−	0.4+
1995 12 29	608	0.1−	0.4−	1997 04 09	691	1.5−	0.0	1998 05 24	704	0.7+	0.2+
1996 01 07	608	0.3−	0.4+	1997 04 09	691	1.7−	0.3−	1998 05 24	704	0.1+	1.3+
1996 01 07	608	0.2−	0.1+	1998 04 22	704	0.2+	0.7+	1998 05 24	704	0.0	1.1+
1996 01 08	608	0.2−	0.1−	1998 04 22	704	0.6+	1.1+				

(8914)* 1995 YP₂ = 1976 DY

Discovered 1995 Dec. 25 by B. G. W. Manning at Stakenbridge.

Id. G. V. Williams (*MPC* 29306)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	223.55727		(2000.0)	P	Q
<i>n</i>	0.18994407	ω	292.55898	+0.92817583	−0.31798306
<i>a</i>	2.9972219	Ω	86.42085	+0.37055608	+0.83762532
<i>e</i>	0.1001167	<i>i</i>	11.16923	−0.03431928	+0.44415154
<i>P</i>	5.19	<i>H</i>	12.8	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1976 02 29	033	0.1−	0.3−	1996 02 24	494	0.8−	0.0	1998 05 05	699	1.1−	0.4−
1995 12 25	494	0.5+	0.4−	1996 02 24	494	0.2−	0.0	1998 05 05	699	0.3−	0.2+
1995 12 25	494	0.5+	0.2+	1996 02 25	494	0.8−	0.4−	1998 05 05	699	0.7−	0.3+
1995 12 28	670	0.8−	0.1+	1996 03 10	494	0.3+	0.4−	1998 05 05	700	0.2−	0.4−
1995 12 28	670	0.1+	0.4+	1996 03 10	494	0.0	1.0−	1998 05 05	700	0.4−	0.1+
1995 12 28	670	0.5−	0.5+	1996 04 03	494	0.7+	0.6−	1998 05 08	700	0.2+	0.2−
1995 12 28	670	1.3−	1.9+	1996 04 03	494	1.4+	0.2−	1998 05 08	700	0.0	0.5−
1995 12 29	494	0.3+	0.0	1997 03 12	494	0.4+	1.2+	1998 05 22	704	0.4+	0.4+
1995 12 29	494	0.4+	0.5+	1997 03 12	494	0.2+	1.0+	1998 05 22	704	0.2+	0.3+
1995 12 29	494	0.2−	0.0	1998 04 03	691	1.1−	0.0	1998 05 22	704	0.7+	0.8−
1995 12 29	494	0.8+	0.0	1998 04 03	691	1.2−	0.1−	1998 05 22	704	0.6+	0.2+
1995 12 30	817	0.4+	0.3+	1998 04 03	691	1.0−	0.1−	1998 05 22	704	0.9−	0.0
1995 12 30	817	0.1+	0.1−	1998 04 23	704	0.9−	0.0	1998 05 24	704	0.4+	0.9+
1995 12 30	817	0.2+	0.0	1998 04 23	704	0.6+	0.4−	1998 05 24	704	1.2−	0.4+
1996 01 07	494	0.1−	1.3−	1998 04 23	704	0.2+	0.2−	1998 05 24	704	0.5−	1.3+
1996 01 07	494	0.8+	0.8−	1998 04 23	704	0.6+	0.4+	1998 05 24	704	0.3+	0.3+
1996 02 03	658	0.6−	0.4−	1998 04 23	704	0.1+	1.4−	1998 05 24	704	0.1−	0.1+
1996 02 03	658	0.6−	0.1−	1998 04 24	704	1.0+	1.2−	1998 05 25	699	0.0	0.2−
1996 02 03	658	0.5−	0.4−	1998 04 24	704	1.0+	1.0−	1998 05 25	699	0.5+	0.2+
1996 02 08	494	0.3+	0.3−	1998 04 24	704	0.1+	0.9−	1998 05 25	699	0.3−	0.2+
1996 02 08	494	0.0	0.5+	1998 05 01	699	0.2+	0.0	1998 05 27	699	0.4+	0.5+
1996 02 14	494	0.4+	0.0	1998 05 01	699	0.4−	0.2−	1998 05 27	699	1.2+	0.0
1996 02 14	494	0.2−	0.7−	1998 05 01	699	0.4−	0.1+	1998 05 27	699	1.0+	0.3+

(8915)* 1995 YK₃ = 1989 AY₇ = 1993 TA₂₁

Discovered 1995 Dec. 27 by T. Kobayashi at Oizumi.

Id. G. V. Williams (*MPC* 26574)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	7.49714		(2000.0)	P	Q
<i>n</i>	0.12636591	ω	341.39685	−0.67654100	+0.73409783
<i>a</i>	3.9329290	Ω	245.98306	−0.66728877	−0.64457783
<i>e</i>	0.0543697	<i>i</i>	3.65606	−0.31147709	−0.21358788
<i>P</i>	7.80	<i>H</i>	11.9	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1989 01 11	033	0.5−	0.5−	1996 01 10	411	0.3−	0.1+	1998 04 22	704	(3.4+ 1.3+)
1989 01 11	033	0.5−	0.8−	1996 01 12	900	0.2+	0.1−	1998 04 22	704	0.6− 0.7−
1993 10 10	675	0.7−	0.5+	1996 01 12	900	0.1−	0.0−	1998 04 22	704	0.2− 1.6−
1993 10 10	675	1.0+	0.7−	1997 04 28	704	0.2−	0.7−	1998 04 25	699	0.2− 1.0+
1993 10 13	675	1.1+	1.0−	1997 04 28	704	0.6+	0.2−	1998 04 25	699	0.1+ 0.6+
1993 10 13	675	0.3+	0.3−	1997 04 28	704	0.7−	0.6−	1998 04 25	699	0.6− 1.1+

1993 10 22	809	(3.6+ 2.7+)	1997 04 28	704	0.2+ 0.1-	1998 05 01	704	(0.0 3.0-)
1993 10 22	809	(4.0+ 2.5+)	1997 04 28	704	0.4- 0.3-	1998 05 01	704	2.0- 0.8-
1993 10 22	809	(4.8+ 2.1+)	1997 04 28	704	0.6- 0.0	1998 05 01	704	0.6+ 0.3-
1995 12 27	411	0.3- 0.2-	1997 04 28	704	0.1+ 0.8+	1998 05 01	704	1.5+ 1.6-
1995 12 27	411	0.1+ 0.5-	1997 04 28	704	1.0- 0.4-	1998 05 01	704	(2.4- 1.3+)
1995 12 29	411	0.2- 0.4-	1997 04 28	704	0.5- 0.3-	1998 05 22	704	0.0 0.2-
1995 12 29	411	0.1+ 0.6-	1997 04 28	704	(4.7- 0.4-)	1998 05 22	704	0.5- 0.7-
1995 12 31	411	0.2+ 0.5+	1997 04 29	704	(2.1+ 0.4-)	1998 05 22	704	0.8- 0.8+
1995 12 31	411	0.8- 1.2+	1997 04 29	704	(2.6+ 0.1-)	1998 05 22	704	0.1- 0.1-
1995 12 31	411	0.4- 1.7+	1997 04 29	704	1.6+ 0.5+	1998 05 22	704	0.8- 1.4+
1996 01 01	411	1.0- 1.0-	1997 04 29	704	(3.8+ 1.1+)	1998 05 24	704	0.4- 0.2-
1996 01 01	411	0.8+ 0.5-	1997 04 29	704	1.8+ 0.2+	1998 05 24	704	0.1- 0.4-
1996 01 02	411	0.1- 0.3+	1997 04 29	704	0.9+ 0.0	1998 05 24	704	0.2- 0.0
1996 01 10	896	0.4- 0.8-	1997 04 29	704	1.9+ 0.9+	1998 05 24	704	0.1+ 0.6-
1996 01 10	896	0.2- 0.5-	1997 04 29	704	1.4+ 1.5+	1998 05 24	704	0.3- 1.4-
1996 01 10	896	0.2- 0.4-	1997 04 29	704	0.2+ 0.3+			
1996 01 10	411	0.4- 0.3-	1998 04 22	704	1.6+ 0.3+			

(8916)* 1996 CC = 1990 JO

Discovered 1996 Feb. 1 by the Beijing Schmidt CCD Asteroid Program at Xinglong.

Id. K. Ichikawa (*MPC* 27315)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	209.71577	(2000.0)	P	Q
<i>n</i>	0.22214079	ω	328.23984	+0.84211511 -0.45253937
<i>a</i>	2.7001248	Ω	61.45720	+0.53769541 +0.66264204
<i>e</i>	0.1294110	<i>i</i>	19.50741	+0.04154261 +0.59675258
<i>P</i>	4.44	<i>H</i>	13.5	<i>G</i> 0.15 <i>U</i> 1

Residuals in seconds of arc

1990 05 03	413	0.2- 1.3-	1997 04 30	327	0.4- 0.0	1998 05 15	700	0.3- 0.6+
1990 05 04	413	0.4+ 1.1-	1997 04 30	327	0.1+ 0.9-	1998 05 15	700	0.1- 0.1+
1996 02 01	327	0.2+ 0.8+	1997 04 30	327	0.2- 0.4-	1998 05 16	700	0.1- 0.1-
1996 02 01	327	0.1- 0.1+	1997 05 03	327	0.1+ 0.1+	1998 05 16	700	0.4- 0.3+
1996 02 01	327	0.4+ 0.6-	1997 05 03	327	0.4- 0.5-	1998 05 16	700	0.3- 0.4-
1996 02 02	327	0.3- 0.2+	1997 05 03	327	0.1- 0.4+	1998 05 22	704	0.2- 0.1-
1996 02 02	327	0.8- 0.3-	1997 05 03	327	0.9- 1.3+	1998 05 22	704	(2.2+ 0.3+)
1996 02 02	327	0.7+ 0.4-	1998 02 06	327	1.2- 0.1-	1998 05 22	704	0.0 1.2+
1996 02 09	327	0.1- 0.8+	1998 02 06	327	0.2- 0.4+	1998 05 22	704	0.1- 1.0+
1996 02 09	327	0.7+ 0.2-	1998 02 06	327	0.7+ 0.6+	1998 05 22	704	0.2- 0.5+
1996 02 09	327	0.8- 0.3+	1998 02 25	327	0.4+ 0.6-	1998 05 24	704	0.1+ 0.5+
1996 02 10	327	0.3- 0.4+	1998 02 25	327	0.9+ 0.3-	1998 05 24	704	0.3+ 0.3+
1996 02 10	327	1.2- 0.4+	1998 02 25	327	0.5+ 0.3-	1998 05 24	704	(2.1- 2.9+)
1996 02 10	327	0.1+ 0.2-	1998 02 25	327	0.3+ 0.7-	1998 05 24	704	(0.3- 2.7+)
1996 12 19	327	0.5+ 0.2-	1998 03 22	327	0.5+ 0.4-	1998 05 24	704	0.2- 0.4-
1996 12 19	327	0.7+ 0.1-	1998 03 22	327	0.5+ 0.7-	1998 05 25	327	0.3+ 1.0-
1996 12 19	327	0.1- 0.2-	1998 03 22	327	0.3+ 0.7-	1998 05 25	327	0.1+ 0.4-
1997 03 14	327	0.3+ 0.2-	1998 04 17	327	0.5- 0.0	1998 05 25	327	0.5+ 0.3-
1997 03 14	327	0.3- 0.1-	1998 04 17	327	0.5- 0.0	1998 05 25	327	0.2+ 0.2-
1997 03 26	327	0.2+ 0.5-	1998 04 17	327	0.8- 0.1+	1998 06 02	699	0.3+ 0.1-
1997 03 26	327	0.3- 0.2-	1998 04 23	704	0.0 1.2+	1998 06 02	699	0.5- 0.0
1997 03 26	327	0.5+ 0.1-	1998 04 23	704	0.3+ 1.2+	1998 06 02	699	0.7+ 0.3-
1997 03 26	327	0.1+ 0.0	1998 04 23	704	0.8+ 0.9+			
1997 04 30	327	1.1- 0.4-	1998 04 23	704	(0.5+ 2.0+)			

(8917)* 1996 EU₂ = 1976 YH₇ = 1977 AG

Discovered 1996 Mar. 9 by the Beijing Schmidt CCD Asteroid Program at Xinglong.

Id. T. Kobayashi (*MPC* 27719)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	160.04789	(2000.0)	P	Q
<i>n</i>	0.15631011	ω	171.70406	+0.24204483 -0.93322963
<i>a</i>	3.4130658	Ω	263.98090	+0.87417569 +0.32848379
<i>e</i>	0.1072313	<i>i</i>	15.48488	+0.42098831 -0.14553642
<i>P</i>	6.31	<i>H</i>	11.3	<i>G</i> 0.15 <i>U</i> 1

Residuals in seconds of arc

1976 12 20	095	(1.1+ 4.2-)	1996 04 09	327	0.1+ 0.3+	1998 02 06	327	0.2+ 0.4+
1977 01 13	095	0.4+ 1.2+	1996 04 17	327	0.3+ 0.8-	1998 02 06	327	0.1+ 0.2-
1977 01 20	095	0.2+ 1.5+	1996 04 17	327	0.2- 0.8-	1998 02 06	327	0.4- 0.1-
1996 03 09	327	0.2+ 0.3+	1996 04 17	327	0.4- 0.6-	1998 04 27	689	0.8- 0.3+
1996 03 09	327	0.5- 0.1+	1997 02 07	327	0.8- 0.8-	1998 05 24	327	0.3+ 0.3+
1996 03 09	327	0.3- 0.2+	1997 02 07	327	0.1- 0.7-	1998 05 24	327	0.0 0.1+
1996 03 10	327	0.2+ 0.1+	1997 02 07	327	0.7+ 0.7-	1998 05 24	327	0.3+ 0.2+
1996 03 10	327	0.1+ 0.7+	1997 02 20	327	1.0+ 0.8-	1998 05 24	327	0.2+ 0.4+
1996 03 10	327	0.5+ 0.5-	1997 02 20	327	0.5- 0.8+	1998 06 04	327	0.2+ 0.5+
1996 04 09	327	0.0 0.4+	1997 02 20	327	0.0 0.7+	1998 06 04	327	0.2+ 0.9+
1996 04 09	327	0.0 0.4+	1997 04 08	689	0.1- 0.7-	1998 06 04	327	0.1- 0.7+
1996 04 09	327	0.1+ 0.5+	1997 04 09	689	0.9- 0.1-			

(8918)* 1996 OR₁ = 1987 AO = 1989 VQ₆

Discovered 1996 July 20 by the Beijing Schmidt CCD Asteroid Program at Xinglong.

Id. E. Bowell (*MPC* 28595), G. V. Williams (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	68.10467	(2000.0)	P	Q
<i>n</i>	0.28350155	ω	168.06270	-0.98869310 -0.14983170
<i>a</i>	2.2949105	Ω	3.33790	+0.12764002 -0.86201210
<i>e</i>	0.0764052	<i>i</i>	5.94831	+0.07870179 -0.48423713
<i>P</i>	3.48	<i>H</i>	14.2	<i>G</i> 0.15 <i>U</i> 1

Residuals in seconds of arc

1987 01 08	010	1.6+ 2.2+	1996 09 22	327	0.1- 0.1+	1998 04 30	566	0.1- 0.6-
1987 01 08	010	0.4+ 0.3+	1996 09 22	327	0.0 0.2+	1998 05 22	704	0.4- 0.3+
1987 01 08	010	0.5- 0.1-	1997 01 24	327	0.8- 0.5-	1998 05 22	704	1.1- 0.1+
1989 11 02	675	0.3- 0.1+	1997 01 24	327	0.4- 0.0	1998 05 22	704	0.1+ 0.8+
1989 11 02	675	0.9+ 0.5-	1997 01 24	327	0.9- 0.4-	1998 05 22	704	0.0 1.5+
1989 11 22	675	0.2- 1.3-	1998 03 14	327	0.8- 1.0-	1998 05 22	704	(0.8- 2.7+)
1989 11 22	675	0.0 0.5-	1998 03 14	327	0.5+ 0.6-	1998 05 24	704	(2.8- 0.6-)
1992 09 30	691	0.7- 0.5+	1998 03 14	327	0.5- 0.5-	1998 05 24	704	0.6+ 1.1-
1992 09 30	691	0.4- 0.7+	1998 03 14	327	0.8- 1.0+	1998 05 24	704	0.8+ 1.0-
1992 09 30	691	0.9- 0.9+	1998 03 22	327	0.0 0.3+	1998 05 24	704	0.6+ 1.3-
1996 07 20	327	0.6+ 0.6+	1998 03 22	327	1.3+ 0.0	1998 05 24	327	0.2+ 0.2+
1996 07 20	327	0.3- 0.4+	1998 03 22	327	0.4- 1.4-	1998 05 24	327	0.0 0.7-
1996 07 20	327	0.6+ 0.2+	1998 04 17	327	0.4+ 0.7-	1998 05 24	327	0.3+ 0.8-
1996 07 21	327	1.0+ 0.3+	1998 04 17	327	0.0 0.5+	1998 05 24	327	0.5+ 0.7-
1996 07 21	327	0.3+ 0.4-	1998 04 17	327	0.6+ 1.2+	1998 05 25	327	0.4+ 0.2+
1996 07 21	327	1.5+ 0.2+	1998 04 17	327	0.1+ 0.6-	1998 05 25	327	0.2- 0.2+
1996 07 21	327	0.5+ 0.0	1998 04 22	704	0.2- 1.2+	1998 05 25	327	0.0 0.2+
1996 09 19	327	0.8+ 0.1-	1998 04 22	704	0.6- 0.7+	1998 05 25	327	0.0 0.2+
1996 09 19	327	0.0 0.0	1998 04 22	704	0.0 0.2+	1998 05 26	327	0.4+ 0.1+
1996 09 19	327	0.2- 0.1+	1998 04 22	704	0.5- 0.6+	1998 05 26	327	0.1- 0.2+
1996 09 19	327	0.1+ 0.2-	1998 04 22	704	0.8- 0.2+	1998 05 26	327	0.3+ 0.4+
1996 09 22	327	0.4- 0.3-	1998 04 30	566	0.8- 0.0			
1996 09 22	327	0.1+ 0.2-	1998 04 30	566	0.0 0.3+			

(8919)* 1996 TU₁₃ = 1969 EB₂

Discovered 1996 Oct. 9 by the Beijing Schmidt CCD Asteroid Program at Xinglong.

Id. G. V. Williams (*MPC* 29631)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	288.87845		(2000.0)	P	Q
<i>n</i>	0.23218635	ω	206.28184	-0.74112121	+0.66844798
<i>a</i>	2.6216714	Ω	16.15979	-0.56955446	-0.57663584
<i>e</i>	0.1369531	<i>i</i>	12.99480	-0.35545332	-0.46975356
<i>P</i>	4.24	<i>H</i>	13.1	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1969 03 14	095	0.4-	0.6-	1996 11 06	709	0.7+	0.0	1997 12 21	327	0.1-	0.3+
1988 11 09	675	0.1+	0.9-	1996 11 06	709	0.6+	0.1-	1997 12 21	327	0.1+	0.2+
1988 11 09	675	0.0	0.9+	1997 11 01	327	0.6+	0.7-	1997 12 21	327	0.2+	0.1+
1996 10 09	327	1.0+	0.0	1997 11 02	327	0.1+	0.8-	1997 12 21	327	0.2+	0.2+
1996 10 09	327	0.2-	0.3-	1997 11 02	327	0.3+	1.0-	1998 02 26	327	0.1-	0.0
1996 10 09	327	0.1+	0.0	1997 11 02	327	0.0	0.7-	1998 02 26	327	0.4+	0.3-
1996 10 13	566	0.1+	0.1+	1997 11 19	327	0.1-	0.9+	1998 02 26	327	0.0	0.6-
1996 10 13	566	0.1-	0.1-	1997 11 19	327	0.4-	1.1+	1998 03 14	327	0.3-	0.2-
1996 10 13	566	0.1-	0.0	1997 11 19	327	1.1-	0.7+	1998 03 14	327	0.8-	0.1+
1996 10 14	327	0.3-	0.5-	1997 11 19	327	0.2-	0.1-	1998 03 14	327	1.2+	0.9-
1996 10 14	327	0.3-	0.5-	1997 11 30	327	0.4+	0.1-	1998 03 14	327	0.0	0.6-
1996 10 14	327	0.3-	0.9-	1997 11 30	327	0.1+	0.5-	1998 03 23	327	0.4+	0.5+
1996 11 05	817	0.5-	0.4+	1997 11 30	327	0.5+	0.2-	1998 03 23	327	0.0	0.2+
1996 11 05	817	0.2-	0.4+	1997 11 30	327	0.6+	0.2-	1998 03 23	327	0.2-	0.5+
1996 11 05	817	0.5-	0.4+	1997 12 19	327	0.0	0.2+	1998 03 23	327	0.0	0.2+
1996 11 06	817	0.0	0.2+	1997 12 19	327	0.8-	0.3+	1998 04 14	327	0.4-	0.0
1996 11 06	817	0.2-	0.2+	1997 12 19	327	0.2+	0.3+	1998 04 14	327	0.1-	0.2+
1996 11 06	709	0.7+	0.2-	1997 12 20	327	0.2+	0.1+	1998 04 14	327	0.5+	0.4-
1996 11 06	817	0.3-	0.8+	1997 12 20	327	0.1+	0.3+				
1996 11 06	709	0.6+	0.3-	1997 12 20	327	1.4-	0.5+				

(8920)* 1996 VZ₂₉ = 1978 WT₈ = 1983 CL₂

Discovered 1996 Nov. 7 by S. Ueda and H. Kaneda at Kushiro.

Id. S. Nakano (*MPC* 28867)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	104.77385		(2000.0)	P	Q
<i>n</i>	0.27226333	ω	28.18902	-0.57881956	-0.81336183
<i>a</i>	2.3576353	Ω	97.23566	+0.73666935	-0.55226455
<i>e</i>	0.1665178	<i>i</i>	3.37483	+0.34969442	-0.18288360
<i>P</i>	3.62	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1978 11 29	675	0.1-	0.3-	1996 11 15	399	0.2-	0.4+	1998 05 22	699	0.4+	1.0+
1978 11 30	675	0.4+	1.1-	1998 05 05	699	0.3-	0.6+	1998 05 22	699	0.5+	0.4-
1983 02 10	095	1.7+	0.8+	1998 05 05	699	0.0	0.4+	1998 05 24	704	1.0+	0.1+
1983 02 15	688	1.4-	0.3-	1998 05 05	699	1.5-	1.6-	1998 05 24	704	0.1+	0.5+
1983 02 15	688	0.4-	0.4-	1998 05 22	704	0.1+	0.5-	1998 05 24	704	0.3+	0.3-
1996 11 07	399	1.3-	1.4-	1998 05 22	704	0.0	0.3-	1998 05 24	699	0.6+	0.2-
1996 11 07	399	0.9+	0.6-	1998 05 22	704	0.2-	0.1-	1998 05 24	699	0.6-	0.3-
1996 11 12	399	0.3+	0.9+	1998 05 22	704	0.6-	0.3-	1998 05 24	704	0.2-	0.0
1996 11 12	399	1.6+	0.9-	1998 05 22	704	0.9-	0.8-	1998 05 24	699	0.7+	1.0-
1996 11 15	399	1.0-	0.1+	1998 05 22	699	0.2+	0.2-	1998 05 24	704	0.4-	0.1+

(8921)* 1996 VH₃₀ = 1986 CL

Discovered 1996 Nov. 7 by S. Ueda and H. Kaneda at Kushiro.

Id. S. Nakano (*MPC* 29632)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	101.59192		(2000.0)	P	Q
<i>n</i>	0.25855445	ω	73.03088	-0.57312779	-0.81181570
<i>a</i>	2.4402522	Ω	52.46831	+0.68801723	-0.55075499
<i>e</i>	0.1491809	<i>i</i>	8.09825	+0.44514810	-0.19396963
<i>P</i>	3.81	<i>H</i>	13.5	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1986 02 07	046	(4.6+	0.4-)	1996 12 25	327	0.3+	0.1+	1998 05 01	704	0.3-	0.5+
1986 02 07	046	(8.0+	1.8-)	1996 12 25	327	1.1+	0.0	1998 05 01	704	0.8+	1.5-

1986 02 14	046	0.3-	1.1-	1996 12 27	327	0.1+	0.1-	1998 05 01	704	0.9+	0.8+
1986 02 14	046	0.2-	0.2+	1996 12 27	327	0.8+	0.2-	1998 05 01	704	0.1+	1.4-
1992 10 25	675	0.5+	0.7-	1996 12 27	327	0.1+	0.2-	1998 05 22	704	0.0	0.9+
1992 10 25	675	0.7+	0.4-	1997 01 02	327	0.8+	0.2-	1998 05 22	704	0.5-	0.6+
1996 11 07	399	1.7-	1.0-	1997 01 02	327	0.0	0.0	1998 05 22	704	0.2-	0.2-
1996 11 07	399	1.5-	1.0-	1997 01 02	327	0.1+	0.0	1998 05 22	704	0.8+	1.5-
1996 11 12	399	0.7-	1.1+	1997 01 10	327	0.9+	0.2+	1998 05 22	704	0.6+	0.1+
1996 11 12	399	0.4+	0.6+	1997 01 10	327	0.6+	0.1+	1998 05 22	699	0.2-	0.0
1996 11 15	399	1.5-	0.2+	1997 01 10	327	0.5+	0.2+	1998 05 22	699	0.8-	1.1+
1996 11 15	399	0.9-	1.9+	1997 01 11	327	0.3+	0.1+	1998 05 22	699	1.0-	0.5+
1996 12 02	399	0.7-	0.3-	1997 01 11	327	0.3+	0.2+	1998 05 24	704	0.4-	0.9+
1996 12 02	399	0.3-	0.7-	1997 01 11	327	0.6+	0.1+	1998 05 24	704	0.6-	1.1+
1996 12 06	399	1.1-	1.6+	1998 04 22	704	0.7+	1.1-	1998 05 24	704	0.4+	0.2+
1996 12 06	399	1.9-	0.2+	1998 04 22	704	0.6+	0.9+	1998 05 24	704	0.9+	0.1+
1996 12 07	399	0.2-	0.6+	1998 04 22	704	0.4-	0.1+	1998 05 24	704	0.6+	0.5+
1996 12 07	399	1.9+	1.7+	1998 04 22	704	0.3-	0.0				
1996 12 25	327	0.4+	0.2+	1998 04 22	704	0.2+	1.4+				

(8922)* 1996 VQ₃₀ = 1973 DB = 1980 BL₁ = 1989 UP₈

Discovered 1996 Nov. 10 by T. Okuni at Nanyou.

Id. S. Nakano (*MPC* 28868)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	124.20461		(2000.0)	P	Q
<i>n</i>	0.28320552	ω	84.35036	-0.42102582	-0.90601399
<i>a</i>	2.2965095	Ω	30.66488	+0.79496482	-0.39157195
<i>e</i>	0.1109792	<i>i</i>	4.87157	+0.43677018	-0.16065510
<i>P</i>	3.48	<i>H</i>	13.8	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1973 02 27	029	0.0	0.3-	1998 04 25	809	(1.7+	3.3+)	1998 05 23	699	0.5+	0.1+
1973 02 27	029	1.2-	0.0	1998 04 25	809	(2.0+	3.2+)	1998 05 23	699	0.2+	0.1-
1973 03 09	029	0.3+	0.5-	1998 04 25	809	(1.7+	3.8+)	1998 05 23	426	0.4-	0.1+
1980 01 23	095	1.4+	1.4+	1998 04 28	809	(2.1+	1.1+)	1998 05 23	426	0.7-	0.1-
1989 10 23	033	0.1-	0.8+	1998 04 28	809	(2.3+	0.4+)	1998 05 23	426	0.5-	0.0
1989 10 23	033	0.0	0.9+	1998 04 28	809	1.8+	0.1+	1998 05 24	704	0.5+	0.4-
1989 11 04	675	0.5+	0.5-	1998 05 05	699	0.1+	0.7+	1998 05 24	704	0.2-	0.7+
1989 11 04	675	0.7-	1.1+	1998 05 05	699	0.3+	1.0+	1998 05 24	704	0.8+	0.5+
1996 11 10	358	0.3+	1.4+	1998 05 05	699	0.5+	0.4+	1998 05 24	704	0.3+	0.1+
1996 11 10	358	0.1+	0.4-	1998 05 22	704	0.7-	0.5+	1998 05 24	704	0.7-	0.3+
1996 11 16	358	0.7+	1.5-	1998 05 22	704	(3.4+	0.5+)	1998 05 24	426	1.0-	0.9-
1996 11 16	358	0.0	0.8-	1998 05 22	704	0.9-	0.2-	1998 05 24	426	0.0	0.6-
1996 11 19	358	0.4-	0.3-	1998 05 22	699	0.1+	1.1-	1998 05 24	426	0.4	0.6-
1996 11 19	358	0.6-	0.5-	1998 05 22	699	0.1-	0.7-	1998 05 25	699	0.4+	0.3-
1996 12 03	358	0.2-	0.1-	1998 05 22	704	0.7-	0.5-	1998 05 25	699	0.5-	0.2-
1996 12 03	358	0.3+	0.3-	1998 05 22	699	0.5+	0.0	1998 05 25	699	0.9-	0.5-
1996 12 16	358	0.6-	1.1-	1998 05 22	704	0.8-	0.6-				
1996 12 16	358	1.4+	0.7-	1998 05 23	699	1.6+	0.2+				

(8923)* 1996 WQ₁ = 1979 FC₃ = 1979 KW = 1994 GE₉

Discovered 1996 Nov. 30 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 28869), T. Kobayashi (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Nakano

<i>M</i>	57.09736		(2000.0)	P	Q
<i>n</i>	0.26241048	ω	330.98146	-0.99634046	-0.08476065
<i>a</i>	2.4162875	Ω	204.16373	+0.08269258	-0.92328516
<i>e</i>	0.1475922	<i>i</i>	1.54191	+0.02162473	-0.37464669
<i>P</i>	3.76	<i>H</i>	14.3	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1979 03 31	095	0.3-	0.2+	1996 11 30	411	0.1-	0.5-	1998 05 05	699	0.8+	0.5-
1979 05 19	809	0.7-	1.1-	1996 12 01	411	0.0	0.3-	1998 05 05	699	0.1+	0.1-
1979 05 21	809	0.3-	0.1-	1996 12 01	411	0.4-	0.1-	1998 05 05	699	0.3-	0.4-
1979 05 23	809	0.1+	0.7-	1996 12 06	411	0.1+	0.3+	1998 05 22	704	0.2+	0.4-
1979 05 23	809	0.3+	0.5-	1996 12 06	411	0.3+	0.5-	1998 05 22	704	0.1-	0.3-
1979 05 24	809	0.1-	0.6-	1996 12 06	411	0.3+	0.2-	1998 05 22	704	0.2-	0.6-

1998 JUNE 10

M.P.C. 31929

1992 10 22	675	0.5+	0.0	1996 12 14	411	0.4+	0.1+	1998 05 22	704	0.3-	0.3+
1992 10 22	675	0.1-	1.0-	1996 12 14	411	0.1+	0.4+	1998 05 22	704	0.6-	0.5+
1994 03 14	675	0.8+	0.3+	1996 12 28	411	0.7-	1.3+	1998 05 22	699	0.1-	0.3-
1994 03 14	675	0.6+	0.5+	1996 12 28	411	0.5-	1.0+	1998 05 22	699	0.1+	0.3+
1994 04 03	675	0.4-	0.4-	1998 04 22	704	0.3+	0.0	1998 05 22	699	0.5+	0.2-
1994 04 03	675	0.5-	0.1-	1998 04 22	704	0.3+	0.8+	1998 05 24	704	0.1+	0.0
1994 04 04	675	0.6+	0.1+	1998 04 22	704	0.4+	1.2+	1998 05 24	704	0.4-	0.6-
1994 04 04	675	0.4+	0.4-	1998 04 22	704	0.1+	0.5+	1998 05 24	704	0.2-	0.4+
1994 04 11	399	0.1-	0.7-	1998 04 22	704	0.0	0.1-	1998 05 24	704	0.8-	1.0+
1994 04 11	399	(2.2-	0.5-)	1998 05 01	704	0.3+	0.7-	1998 05 24	704	0.8-	1.1+
1994 04 13	399	1.6-	0.2+	1998 05 01	704	0.7+	0.3+	1998 05 26	367	0.1+	0.0
1994 04 13	399	(4.3-	0.7+)	1998 05 01	704	0.5+	0.2+	1998 05 26	367	0.2+	0.1+
1996 11 30	411	0.0	0.1+	1998 05 01	704	0.3-	0.7+				

(8924)* 1996 XA₃₂ = 9060 P-L

Discovered 1996 Dec. 14 by N. Sato at Chichibu.

Id. S. Nakano (*MPC* 28875)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27833445	ω	300.67569	-0.83603316	+0.54806424		
<i>a</i>	2.3232257	Ω	272.57042	-0.49409335	-0.77259326		
<i>e</i>	0.0753342	<i>i</i>	1.48932	-0.23857980	-0.32050780		
<i>P</i>	3.54	<i>H</i>	14.6	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1960 10 17	675	1.2-	0.6+	1998 04 21	704	0.8-	0.4-	1998 05 01	704	0.3+	0.7-
1960 10 22	675	0.5-	0.1-	1998 04 21	704	0.1-	0.4-	1998 05 01	704	(3.5-	0.8-)
1960 10 24	675	1.2+	0.7-	1998 04 21	704	0.2+	0.2-	1998 05 01	704	0.3-	0.0
1960 10 26	675	0.8+	0.1+	1998 04 21	120	1.6+	0.3-	1998 05 01	704	0.1-	1.0-
1994 02 12	675	0.2+	0.7+	1998 04 21	120	1.0+	0.4+	1998 05 01	704	0.0	0.3-
1994 02 12	675	0.1+	0.7+	1998 04 21	120	0.4+	0.6+	1998 05 01	566	0.2+	0.4-
1996 12 14	369	0.2+	0.8-	1998 04 22	704	0.3+	0.3+	1998 05 01	566	0.3+	0.3-
1996 12 14	369	0.6+	0.8-	1998 04 22	704	0.1+	0.6+	1998 05 01	566	0.1-	0.4-
1996 12 19	369	0.9+	1.0-	1998 04 22	704	0.1-	0.2-	1998 05 25	699	1.7+	0.5-
1996 12 19	369	0.3-	0.7-	1998 04 22	704	0.1-	0.4-	1998 05 25	699	0.2-	0.6-
1996 12 29	369	0.5-	0.5-	1998 04 22	704	0.1+	0.3+	1998 05 25	699	0.2+	0.4-
1996 12 29	369	0.3+	0.0	1998 04 23	120	0.7+	0.2-	1998 05 26	691	1.5-	0.0
1996 12 29	369	0.3-	0.5-	1998 04 24	120	0.4+	0.4+	1998 05 26	691	1.5-	0.1+
1997 01 02	369	0.5-	1.0+	1998 04 24	120	0.9+	0.6-	1998 05 28	691	1.9-	0.6+
1997 01 02	369	0.1+	0.1-	1998 04 25	699	0.1-	0.4+	1998 05 28	691	1.8-	0.5+
1998 04 21	704	0.1-	0.1-	1998 04 25	699	0.2+	0.4+	1998 05 28	691	1.8-	0.7+
1998 04 21	704	0.0	0.9-	1998 04 25	699	0.3+	0.4+				

(8925)* 1996 XG₃₂ = 1981 JB = 1991 CE₆

Discovered 1996 Dec. 4 by U. Munari and M. Tombelli at Cima Ekar.

Id. G. V. Williams (*MPC* 28875)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.29199181	ω	8.88481	-0.43804292	+0.89851866		
<i>a</i>	2.2502060	Ω	235.14081	-0.82685462	-0.41492647		
<i>e</i>	0.1338078	<i>i</i>	1.95377	-0.35274614	-0.14317909		
<i>P</i>	3.38	<i>H</i>	14.1	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1981 05 02	688	0.6-	1.4-	1998 01 24	104	1.2+	0.6+	1998 05 07	104	1.4+	0.0
1981 05 02	688	0.2+	1.4-	1998 04 21	704	0.1-	0.7+	1998 05 07	104	1.2+	0.9+
1991 02 10	675	0.5-	1.9+	1998 04 21	704	0.7-	1.5+	1998 05 07	104	0.2-	0.6+
1991 02 10	675	0.1+	0.8+	1998 04 21	704	1.0-	0.7+	1998 05 07	104	0.1-	0.5+
1992 09 29	691	1.4-	0.2-	1998 04 21	704	0.0	0.3+	1998 05 19	143	0.4-	0.5-
1992 09 29	691	0.6+	0.6+	1998 04 21	704	0.7-	0.7+	1998 05 19	143	1.4+	0.8-
1992 09 29	691	0.0	0.4-	1998 04 21	108	1.5-	0.5+	1998 05 19	143	0.7+	1.1-
1996 12 04	098	0.4-	0.7-	1998 04 21	108	0.5-	1.0-	1998 05 19	108	1.5+	1.4-
1996 12 04	098	0.4+	0.6+	1998 04 21	108	0.7-	1.1-	1998 05 19	108	(2.2-	0.2-)
1996 12 06	098	0.6-	0.8+	1998 04 22	704	1.4-	0.8+	1998 05 22	704	0.1+	0.1-
1996 12 06	098	0.3-	0.7+	1998 04 22	704	1.4-	0.6+	1998 05 22	704	0.6+	1.0-

1996 12 08	098	1.3-	1.8-	1998 04 22	704	1.9-	0.2-	1998 05 22	704	0.3+	0.0
1996 12 08	098	0.1+	1.4-	1998 04 22	704	1.6-	0.4+	1998 05 22	699	0.8+	0.4-
1997 01 07	098	0.5-	1.3-	1998 04 22	704	(2.1-	0.2+)	1998 05 22	699	0.6+	0.1+
1997 01 07	098	0.9+	1.3-	1998 04 25	108	1.5+	1.6-	1998 05 22	704	0.8+	0.3-
1997 01 09	327	0.6+	0.0	1998 04 25	108	0.2+	0.8-	1998 05 22	699	1.5+	0.0
1997 01 09	327	0.7+	0.2+	1998 04 26	108	0.8-	0.0	1998 05 22	704	0.8+	0.5+
1997 01 09	327	0.5+	0.2+	1998 05 01	704	0.3-	0.4+	1998 05 30	108	0.3-	1.9-
1997 01 11	327	1.2+	0.1+	1998 05 01	704	0.8-	1.5+	1998 05 30	108	1.2+	1.9-
1997 01 11	327	0.4+	0.0	1998 05 01	704	(4.6+	1.6+)				
1997 01 11	327	0.6+	0.4+	1998 05 01	704	0.1+	1.3+				

(8926)* 1996 YK = 1989 VO₅ = 1992 EX₁₄

Discovered 1996 Dec. 20 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 28876)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.16772978	ω	156.49312	+0.96282215	+0.27013389		
<i>a</i>	3.2563364	Ω	187.83488	-0.24909981	+0.88627163		
<i>e</i>	0.1188419	<i>i</i>	0.45941	-0.10451221	+0.37623167		
<i>P</i>	5.88	<i>H</i>	12.8	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1989 11 03	675	1.2-	0.3-	1997 01 02	411	0.7+	0.2+	1998 03 20	704	1.6-	1.7+
1989 11 03	675	0.0	0.8+	1997 01 02	411	0.3-	0.1-	1998 03 20	704	(2.4-	0.4+)
1989 11 04	675	1.4+	1.3-	1997 01 07	411	1.7-	0.4+	1998 03 29	704	0.3-	1.5-
1989 11 04	675	0.8+	1.7-	1997 01 07	411	0.5-	0.6+	1998 03 29	704	1.7+	1.2+
1992 03 01	809	0.6-	0.6+	1997 01 26	411	0.4-	0.5+	1998 03 29	704	0.4+	0.8-
1992 03 03	809	1.1-	0.3+	1997 01 26	411	0.4+	0.9-	1998 03 29	704	(0.4-	3.1-)
1992 03 06	809	1.8+	0.6-	1997 01 27	411	0.4-	0.7-	1998 04 19	704	0.8+	0.8+
1996 12 20	411	0.9+	0.2+	1997 01 27	411	0.7+	0.1-	1998 04 19	704	0.8-	1.6-
1996 12 20	411	0.5+	1.2+	1998 03 20	704	0.5+	0.3-	1998 04 19	704	(3.5+	0.6+)
1996 12 21	411	0.6+	0.0	1998 03 20	704	0.2-	1.2-	1998 04 19	704	0.9-	0.4-
1996 12 21	411	0.2-	0.5+	1998 03 20	704	1.0-	1.0-				

(8927)* 1996 YT = 1995 TF₈

Discovered 1996 Dec. 20 by T. Kobayashi at Oizumi.

Id. G. V. Williams (*MPC* 29633)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26394036	ω	244.21091	+0.21096319	+0.97677555		
<i>a</i>	2.4069414	Ω	38.02810	-0.87363973	+0.20560543		
<i>e</i>	0.1712066	<i>i</i>	3.48713	-0.43846112	+0.06029867		
<i>P</i>	3.73	<i>H</i>	14.7	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1994 03 14	675	1.1+	0.3-	1997 01 26	411	0.5-	1.2-	1998 05 22	704	0.7+	0.6+
1994 03 14	675	0.6-	1.2+	1998 04 22	704	0.3+	0.2-	1998 05 22	704	0.5-	0.6-
1994 04 04	675	0.4-	0.5-	1998 04 22	704	1.2+	0.6-	1998 05 22	704	0.1-	0.5+
1994 04 04	675	0.1-	0.1-	1998 04 22	704	0.5-	0.3+	1998 05 22	699	0.8-	0.5-
1995 10 01	691	0.2-	0.3+	1998 04 22	704	0.5+	1.2+	1998 05 22	699	0.3+	0.1-
1995 10 01	691	0.2-	0.3+	1998 04 22	704	0.3+	0.4+	1998 05 22	699	0.3+	0.0
1995 10 01	691	0.1-	0.3+	1998 05 01	704	0.5-	0.4-	1998 05 22	566	0.3+	0.1-
1996 12 20	411	0.6+	1.4-	1998 05 01	704	0.6-	0.4+	1998 05 22	566	0.4-	0.0
1996 12 20	411	0.3+	0.4+	1998 05 01	704	0.2+	1.2-	1998 05 22	566	0.0	0.0
1996 12 21	411	0.5+	0.1+	1998 05 01	704	0.7-	0.3-	1998 05 24	704	0.6-	0.4+
1996 12 21	411	0.7+	0.0	1998 05 01	704	1.6-	1.6+	1998 05 24	704	(3.5+	1.3-)
1996 12 29	411	0.8-	0.7+	1998 05 06	566	0.2-	0.1+	1998 05 24	704	0.5+	1.1-
1996 12 29	411	1.7-	0.1+	1998 05 06	566	0.0	0.0	1998 05 24	704	0.2-	0.6+
1997 01 07	411	0.1-	0.3+	1998 05 06	566	0.0	0.2+	1998 05 24	704	0.5-	0.1+
1997 01 07	411	1.4+	1.6+	1998 05 22	704	0.3-	0.3+				
1997 01 26	411	0.4-	0.5-	1998 05 22	704	0.1-	0.2+				

Id. T. B. Spahr (*MPC* 30671), H. Oishi (d, *JAM* 852)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	223.14258	(2000.0)	P		Q	
<i>n</i>	0.26322949	ω	353.65777	+0.67439335	-0.73552893	
<i>a</i>	2.4112728	Ω	53.91290	+0.68091467	+0.58561109	
<i>e</i>	0.0985237	<i>i</i>	4.59473	+0.28556755	+0.34067118	
<i>P</i>	3.74	<i>H</i>	13.9	<i>G</i>	0.15	<i>U</i> 1

Residuals in seconds of arc

1969 11 04	095 (43.9- 19.7+)	1996 12 24	327	0.5+	0.0	1998 05 02	327	0.3+	1.5+
1969 11 11	095 1.6- 0.8+	1996 12 24	327	0.4+	0.4-	1998 05 02	327	0.1-	0.5+
1973 12 20	095 1.4+ 1.9-	1996 12 24	327	0.2-	0.0	1998 05 25	327	1.0-	0.5-
1988 12 11	808 0.3- 1.5+	1997 01 31	411	0.6+	1.0-	1998 05 25	327	0.3-	0.5-
1988 12 11	808 1.2+ 0.6+	1997 01 31	411	0.2+	0.7+	1998 05 25	327	0.2-	0.7+
1995 08 31	809 0.6+ 0.8-	1997 02 01	411	0.4-	0.0	1998 05 25	327	0.8-	0.8-
1995 09 01	809 0.4- 1.3-	1997 02 01	411	0.6-	0.6+	1998 05 26	327	0.9+	0.2-
1995 09 29	809 (3.9- 4.2+)	1997 02 04	691	0.8-	0.1-	1998 05 26	327	(2.6+ 0.9-)	
1996 12 23	327 0.1- 0.1-	1997 02 04	691	0.7-	0.1+	1998 05 26	327	1.7+	1.4-
1996 12 23	327 0.6- 0.2-	1997 02 04	691	0.9-	0.4-				
1996 12 23	327 0.7+ 0.1+	1998 05 02	327	0.9+	1.3+				

(8929)* 1996 YQ₂ = 1991 KB₂ = 1992 SJ₂₃

Discovered 1996 Dec. 29 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29119)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	197.06317	(2000.0)	P		Q	
<i>n</i>	0.27540172	ω	315.20671	+0.65735256	-0.74698946	
<i>a</i>	2.3396898	Ω	93.42833	+0.71631891	+0.57838541	
<i>e</i>	0.1417386	<i>i</i>	5.71894	+0.23404021	+0.32783694	
<i>P</i>	3.58	<i>H</i>	14.3	<i>G</i>	0.15	<i>U</i> 2

Residuals in seconds of arc

1991 05 17	809 1.2+ 1.0+	1996 12 30	369	0.2-	1.3+	1998 04 22	704	0.3+	0.1+
1991 05 17	809 0.3- 1.3+	1996 12 30	369	0.1+	0.2-	1998 04 22	704	1.3+	1.3+
1991 05 17	809 0.0 1.2+	1996 12 30	369	0.1-	0.3+	1998 05 01	704	0.0 1.1-	
1992 09 29	675 0.4+ 0.1-	1996 12 30	369	0.1+	0.0	1998 05 01	704	0.9-	0.0
1992 09 29	675 (3.4+ 1.2+)	1996 12 30	369	0.1-	0.1-	1998 05 01	704	0.3+	0.7+
1992 10 04	675 0.7+ 0.3+	1997 01 06	411	0.2-	0.0	1998 05 01	704	0.8-	0.3-
1992 10 04	675 1.1- 0.2-	1997 01 06	411	0.1+	0.1-	1998 05 22	704	(0.8- 2.3-)	
1996 12 29	411 0.6- 0.2+	1997 01 26	411	0.6+	1.0-	1998 05 22	704	1.8+	0.3-
1996 12 29	411 0.2- 0.3-	1997 01 26	411	1.3+	0.2+	1998 05 22	704	0.5+	1.3-
1996 12 29	369 0.1+ 0.0	1998 04 20	691	1.8-	0.2-	1998 05 24	704	1.2+	1.6-
1996 12 29	369 0.2- 0.3+	1998 04 20	691	1.8-	0.0	1998 05 24	704	(0.1+ 3.2-)	
1996 12 30	411 0.3- 0.7+	1998 04 20	691	1.9-	0.1-	1998 05 24	704	0.6-	0.6-
1996 12 30	411 0.0 0.1-	1998 04 22	704	0.8+	0.1-	1998 05 24	704	(2.6+ 2.3+)	
1996 12 30	369 0.1- 0.2-	1998 04 22	704	0.3+	0.7+				

(8930)* 1997 AX₃ = 1979 WN₄ = 1989 WL₃ = 1992 PD₅

Discovered 1997 Jan. 6 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29121)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	261.10440	(2000.0)	P		Q	
<i>n</i>	0.29949802	ω	80.76446	+0.99676890	-0.03402325	
<i>a</i>	2.2124497	Ω	281.16044	+0.00121700	+0.91215120	
<i>e</i>	0.1928334	<i>i</i>	4.25317	+0.08031361	+0.40843924	
<i>P</i>	3.29	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i> 1

Residuals in seconds of arc

1979 11 17	095 0.0 0.1+	1997 01 11	411	1.3-	0.9-	1998 05 03	566	0.0 0.1-	
1989 11 26	364 (37.0+ 18.9+)	1997 01 16	411	0.8-	0.6-	1998 05 03	566	0.1-	0.2-
1989 11 26	364 (37.7+ 18.2+)	1997 01 16	411	1.2-	1.0-	1998 05 22	704	0.2-	1.7+
1989 12 01	364 (4.4+ 1.3+)	1997 01 27	411	0.3+	0.2-	1998 05 22	704	1.4-	0.8+
1989 12 01	364 (3.1+ 0.0)	1997 01 27	411	0.2+	0.1-	1998 05 22	704	0.0 0.4-	
1992 08 03	675 0.3+ 1.3-	1998 04 22	704	1.0+	0.4-	1998 05 22	704	1.1-	0.1+

1992 08 03	675 0.8- 0.7-	1998 04 22	704	0.4+	1.6-	1998 05 22	704	0.5-	0.3+
1992 08 06	675 0.9+ 0.6-	1998 04 22	704	1.4+	0.4+	1998 05 24	704	0.1-	0.9+
1992 08 06	675 0.8+ 0.3-	1998 04 22	704	1.1+	0.6+	1998 05 24	704	0.8-	0.7+
1997 01 06	411 0.7+ 0.4+	1998 05 01	704	1.2+	0.1-	1998 05 24	704	0.6-	0.9+
1997 01 06	411 0.9+ 0.2+	1998 05 01	704	1.1+	0.9-	1998 05 24	704	0.5-	0.2+
1997 01 07	411 0.5+ 0.2-	1998 05 01	704	0.1+	1.9-	1998 05 24	704	0.9-	0.8-
1997 01 07	411 0.1- 0.6-	1998 05 01	704	0.2-	0.9-				
1997 01 11	411 0.3- 0.6-	1998 05 03	566	0.1+	0.2-				

(8931)* 1997 AC₄ = 1973 QQ = 1977 UY₁

Discovered 1997 Jan. 6 by T. Kobayashi at Oizumi.

Id. G. V. Williams (*MPC* 29121)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	320.64471	(2000.0)	P		Q	
<i>n</i>	0.27160306	ω	329.66954	+0.66326910	+0.74828303	
<i>a</i>	2.3614547	Ω	341.87103	-0.67857269	+0.59449792	
<i>e</i>	0.2288658	<i>i</i>	2.23016	-0.31561560	+0.29435477	
<i>P</i>	3.63	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i> 2

Residuals in seconds of arc

1973 08 27	095 1.4+ 0.2-	1997 01 11	411	0.4-	0.2+	1998 05 01	704	0.4+	1.5+
1973 08 31	095 0.4- 0.9-	1997 01 16	411	1.1+	0.7-	1998 05 02	566	0.1+	0.1+
1973 09 03	095 (6.0- 1.5-)	1997 01 16	411	0.2-	0.2-	1998 05 02	566	0.4+	0.0
1973 09 05	095 0.2+ 2.0-	1997 01 27	411	0.3-	0.4-	1998 05 02	566	0.6+	0.5-
1977 10 20	033 0.6+ 0.2-	1997 01 27	411	0.5-	0.2-	1998 05 22	704	(8.1- 1.3+)	
1994 03 14	675 0.5+ 0.1-	1997 02 04	566	0.4-	1.2-	1998 05 22	704	0.1-	0.2-
1994 03 14	675 0.2- 0.9+	1997 02 04	566	0.2-	1.2-	1998 05 22	704	0.3+	0.7-
1994 04 03	675 0.1- 0.2-	1997 02 04	566	0.2-	0.9-	1998 05 22	704	0.5+	0.8-
1994 04 03	675 1.0+ 0.3+	1998 04 22	704	0.5+	1.1-	1998 05 24	704	0.3-	0.3-
1994 04 04	675 0.0 0.6+	1998 04 22	704	0.1+	0.0	1998 05 24	704	1.5-	0.7-
1994 04 04	675 0.1- 0.5-	1998 04 22	704	0.1+	0.6-	1998 05 24	704	0.1+	0.3-
1997 01 06	411 0.4+ 0.7+	1998 04 22	704	0.9-	0.3-	1998 05 24	704	0.3+	0.5-
1997 01 06	411 0.6- 1.0-	1998 04 22	704	1.1-	1.4-	1998 05 24	704	0.4+	0.4-
1997 01 07	411 0.3- 0.5-	1998 05 01	704	0.7+	0.2+	1998 05 26	367	0.7-	0.3+
1997 01 07	411 0.1+ 0.2+	1998 05 01	704	0.2+	0.8+	1998 05 26	367	0.5-	0.5+
1997 01 11	411 1.2- 0.3-	1998 05 01	704	0.6-	1.1+				

(8932)* 1997 AR₄ = 1975 VH₄ = 1982 BB₃ = 1990 TZ₃ = 1995 WV₂₆

Discovered 1997 Jan. 6 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29122)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	104.50973	(2000.0)	P		Q	
<i>n</i>	0.19640859	ω	269.96509	-0.60308513	-0.79755826	
<i>a</i>	2.9310894	Ω	217.13734	+0.74061735	-0.55345813	
<i>e</i>	0.0698872	<i>i</i>	1.30536	+0.29626723	-0.23996859	
<i>P</i>	5.02	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i> 1

Residuals in seconds of arc

1975 11 02	095 (0.7+ 7.1+)	1995 11 27	691	0.7-	0.4-	1998 04 25	699	0.8+	0.5+
1982 01 27	801 (13.1- 3.6+)	1995 11 27	691	0.7-	0.0	1998 04 25	699	0.4+	0.6-
1990 10 11	033 0.6- 0.7-	1997 01 06	411	0.3-	0.2+	1998 04 25	699	0.1+	0.3-
1990 10 12	033 0.5+ 0.7-	1997 01 06	411	0.1-	0.2-	1998 05 01	704	0.0 0.8-	
1990 10 12	033 0.6- 0.8-	1997 01 07	411	0.0 0.3+		1998 05 01	704	0.2+	0.4+
1990 10 13	033 0.3+ 0.1-	1997 01 07	411	0.1-	0.4+	1998 05 01	704	0.3-	0.5+
1990 10 14	033 0.2+ 0.3-	1997 01 11	411	0.1+	0.1+	1998 05 01	704	0.3-	1.7+
1990 10 18	033 1.0+ 0.6+	1997 01 11	411	0.0 0.1+		1998 05 22	704	0.4-	1.1+
1995 09 27	691 0.4- 0.2+	1997 01 16	411	0.0 0.1+		1998 05 22	704	0.8-	0.6+
1995 09 27	691 0.5+ 0.3+	1997 01 16	411	0.1-	0.6-	1998 05 22	704	1.3-	1.4-
1995 09 27	691 0.8- 0.1-	1997 01 27	411	0.2-	0.1-	1998 05 22	704	0.6-	0.7-
1995 11 10	046 0.7+ 0.8+	1997 01 27	411	0.7+	0.2-	1998 05 22	704	(4.1- 0.6-)	
1995 11 10	046 1.0+ 0.9+	1998 04 22	704	0.5+	0.8-	1998 05 22	699	0.6+	0.0
1995 11 10	046 0.9+ 0.6+	1998 04 22	704	0.2+	0.2+	1998 05 22	699	0.1+	0.3-
1995 11 17	691 0.5- 0.3+	1998 04 22	704	0.2+	0.6-	1998 05 22	699	0.2-	0.1+
1995 11 17	691 0.6- 0.4+	1998 04 22	704	0.0 0.1+					
1995 11 27	691 0.6- 0.2-	1998 04 22	704	0.9+	1.1+				

(8933)* 1997 AU₆ = 1994 NN₅

Discovered 1997 Jan. 6 by N. Sato at Chichibu.

Id. S. Nakano (*MPC* 28879)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	191.32825	ω	278.86109	+0.74227139	−0.66864156		
<i>a</i>	2.8628350	Ω	123.11506	+0.63367222	+0.67895322		
<i>e</i>	0.0697582	<i>i</i>	3.02345	+0.21792822	+0.30321773		
<i>P</i>	4.84	<i>H</i>	13.2	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1990 09 28	675	1.7−	1.0−	1997 02 06	910	1.5+	0.8−	1998 04 25	699	0.4+	0.4+
1992 02 01	691	0.1+	0.3−	1997 02 07	910	1.4+	0.8−	1998 04 25	699	0.5+	1.2−
1992 02 01	691	0.2+	0.4−	1997 02 09	369	0.0	0.2+	1998 05 01	704	0.1+	0.3+
1992 02 01	691	0.2+	0.3−	1997 02 09	369	0.1−	0.4−	1998 05 01	704	0.0	0.6+
1994 07 11	809	0.8+	2.2+	1997 03 04	369	1.0−	0.3+	1998 05 01	704	0.5−	0.5−
1994 07 11	809	(0.3+ 2.6+)		1997 03 04	369	0.1−	0.9−	1998 05 01	704	0.2−	0.2−
1994 07 11	809	1.2+	1.5+	1997 05 29	327	0.2+	0.2−	1998 05 01	704	0.1−	0.3+
1994 07 12	809	0.4+	2.1+	1997 05 29	327	0.0	0.5+	1998 05 22	704	0.0	0.2−
1994 07 12	809	(0.1+ 2.9+)		1997 05 29	327	0.5+	0.4+	1998 05 22	704	0.2−	1.2+
1994 07 12	809	(0.4− 2.7+)		1997 05 29	327	0.0	0.2−	1998 05 22	704	0.8+	0.2−
1997 01 06	369	0.6+	0.7+	1998 04 21	704	0.2+	0.6+	1998 05 22	704	1.0−	0.2+
1997 01 06	369	(2.2+ 2.9+)		1998 04 21	704	0.0	0.8+	1998 05 22	704	0.2−	1.1+
1997 01 06	369	0.9+	0.8+	1998 04 21	704	0.0	0.0	1998 05 24	704	0.6+	0.4−
1997 01 09	369	0.5+	0.5+	1998 04 21	704	0.4−	0.2−	1998 05 24	704	0.5+	0.4−
1997 01 09	369	0.4+	2.0+	1998 04 21	704	1.1+	0.3−	1998 05 24	704	0.1+	0.9+
1997 01 15	369	1.0−	2.0+	1998 04 22	704	0.2−	0.4−	1998 05 24	704	1.0−	0.5−
1997 01 15	369	0.4−	1.7+	1998 04 22	704	0.3−	0.4+	1998 05 24	704	1.0−	0.6−
1997 01 18	369	1.1−	1.6+	1998 04 22	704	0.1+	0.2−	1998 05 28	699	0.4−	0.2−
1997 01 18	369	0.0	0.3−	1998 04 22	704	1.3−	0.4−	1998 05 28	699	0.5−	0.1+
1997 01 18	369	0.8−	0.3−	1998 04 22	704	0.5−	1.0−	1998 05 28	699	0.7−	0.0
1997 02 06	910	1.5+	0.8−	1998 04 25	699	0.4+	1.5−				

(8934)* 1997 AQ₁₂ = 1978 SF₁

Discovered 1997 Jan. 10 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29124)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	150.68009	ω	302.43464	+0.51876559	−0.83211547		
<i>a</i>	3.1427377	Ω	115.09215	+0.83894033	+0.45135051		
<i>e</i>	0.1115995	<i>i</i>	12.50740	+0.16450348	+0.32228335		
<i>P</i>	5.57	<i>H</i>	12.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 09 27	095	0.1−	0.6−	1998 04 02	704	0.4−	0.2−	1998 04 24	704	0.2−	0.2+
1978 10 07	095	0.2−	1.4+	1998 04 02	704	0.2−	0.7−	1998 04 24	704	0.3+	0.0
1994 08 06	675	0.6−	0.0	1998 04 02	704	0.9−	0.0	1998 04 24	704	1.7+	0.3+
1994 08 06	675	0.5+	0.8−	1998 04 03	704	0.7−	0.5+	1998 04 24	704	1.7+	1.2+
1997 01 10	411	0.4+	0.1−	1998 04 03	704	0.3−	1.4−	1998 04 24	704	0.5+	0.0
1997 01 10	411	0.3+	0.4−	1998 04 03	704	(0.2+ 3.5−)		1998 04 24	704	0.8−	0.7+
1997 01 11	411	0.1+	0.4−	1998 04 03	704	0.8+	1.7−	1998 05 16	704	1.4−	0.5+
1997 01 11	411	0.3+	0.3−	1998 04 03	704	0.1+	1.1−	1998 05 16	704	0.7+	0.9−
1997 01 14	411	0.9−	0.2−	1998 04 23	704	0.3+	0.0	1998 05 16	704	1.7−	0.6+
1997 01 14	411	0.1−	0.1+	1998 04 23	704	0.1+	0.0	1998 05 16	704	0.9−	1.2−
1997 01 27	411	0.2+	0.6+	1998 04 23	704	0.0	0.2+	1998 05 16	704	(4.1− 0.1+)	
1997 01 27	411	0.3−	0.4+	1998 04 23	704	0.2+	0.1+	1998 05 29	704	0.2−	0.3+
1998 03 24	704	0.1−	1.3−	1998 04 23	704	0.2−	0.2+	1998 05 29	704	0.3−	0.6−
1998 03 24	704	0.5−	0.3−	1998 04 24	704	1.1+	0.6+	1998 05 29	704	1.6+	0.5+
1998 03 24	704	0.2+	0.9−	1998 04 24	704	1.4+	0.7+	1998 05 29	704	1.0−	1.8+
1998 03 24	704	0.1+	0.7+	1998 04 24	704	0.7+	0.2+	1998 05 29	704	1.5−	0.7+
1998 03 24	704	0.6−	0.3+	1998 04 24	704	0.2+	1.0+				

(8935)* 1997 AV₁₃ = 1969 TG₆ = 1987 BZ₂ = 1991 GD₁₃ = 4863 T-1

Discovered 1997 Jan. 11 by P. Sicoli and M. Cavagna at Sormano.

Id. G. V. Williams (*MPC* 29124)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	215.52440	ω	218.08454	+0.81024625	−0.58608307		
<i>a</i>	2.2294536	Ω	177.78948	+0.55377593	+0.76402123		
<i>e</i>	0.1500327	<i>i</i>	4.10886	+0.19191985	+0.26977434		
<i>P</i>	3.33	<i>H</i>	14.9	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1969 10 15	095	0.3−	0.0	1997 01 11	587	0.2−	0.2+	1998 04 22	910	0.2−	0.0
1969 10 17	095	(6.2+ 4.9−)		1997 01 11	587	0.2+	0.2−	1998 04 22	910	0.6−	0.3+
1971 04 16	675	1.3−	1.0+	1997 01 12	587	0.0	0.5−	1998 04 22	910	0.0	0.2+
1971 04 16	675	0.1+	1.8+	1997 01 12	587	0.2−	0.5−	1998 04 24	910	0.5+	0.4−
1971 05 13	675	0.5−	0.6+	1997 01 13	587	0.2+	0.5+	1998 04 24	910	0.9+	0.6−
1971 05 14	675	1.1+	0.8−	1997 01 13	587	0.0	0.3+	1998 04 24	910	0.7+	0.3−
1971 05 16	675	0.4+	1.1−	1997 01 14	587	0.5−	0.4+	1998 05 22	704	0.4−	1.8−
1987 01 30	010	1.1+	1.4+	1997 01 14	587	0.0	0.2−	1998 05 22	704	0.7−	0.5−
1987 01 30	010	1.5+	0.2+	1997 01 14	587	0.1−	0.2−	1998 05 22	704	1.0−	1.4+
1987 01 30	010	0.2+	0.1+	1997 01 28	587	0.2+	0.4+	1998 05 22	704	0.7+	0.7−
1991 04 10	809	(12.0+ 8.9−)		1997 01 28	587	0.6−	0.0	1998 05 24	704	0.2+	0.5+
1991 04 10	809	(13.4+ 7.5−)		1997 01 28	587	0.5−	0.3−	1998 05 24	704	0.6+	0.7−
1991 04 10	809	(13.0+ 8.7−)		1997 01 31	587	0.8−	0.6−	1998 05 24	704	0.6−	1.0+
1997 01 11	587	0.9+	0.9+	1997 01 31	587	0.3−	1.3−	1998 05 24	704	0.1−	0.7+
1997 01 11	587	1.1+	0.1+	1997 01 31	587	0.5+	0.8−	1998 05 24	704	0.6+	0.8−
1997 01 11	587	0.3−	0.3−	1997 02 10	587	0.4−	0.1−				
1997 01 11	587	0.6−	0.6−	1997 02 10	587	1.1−	0.0				

(8936)* 1997 AS₁₇ = 1984 BU₅ = 1988 HA₁

Discovered 1997 Jan. 14 at Farra d'Isonzo.

Id. G. V. Williams (*MPC* 29125, unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	292.32898	ω	222.21953	+0.88620824	+0.45970586		
<i>a</i>	2.2078076	Ω	110.32802	−0.40698516	+0.83178520		
<i>e</i>	0.1214203	<i>i</i>	3.51511	−0.22135499	+0.31113325		
<i>P</i>	3.28	<i>H</i>	14.6	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1984 01 25	675	0.5+	0.0	1997 01 14	595	0.0	0.4+	1998 05 22	704	0.2−	0.5−
1984 01 26	675	0.5+	0.1−	1997 01 14	595	0.5−	0.6+	1998 05 22	704	0.2+	0.1+
1988 04 23	808	(13.2− 1.0−)		1997 01 15	595	0.2+	0.5+	1998 05 22	704	1.2+	0.5+
1988 04 23	808	0.2−	2.4+	1997 01 15	595	0.2−	0.2+	1998 05 23	699	0.4+	0.1+
1992 09 02	809	0.1−	1.5+	1997 01 27	595	0.0	0.5+	1998 05 23	699	0.5+	0.2+
1992 09 02	809	0.6−	1.2+	1997 01 27	595	0.3+	0.2−	1998 05 23	699	0.6+	0.1+
1992 09 02	809	0.8−	0.8+	1997 01 28	595	0.1+	0.1−	1998 05 24	704	0.1+	0.4+
1996 11 06	327	0.4+	0.0	1997 01 28	595	0.1−	0.1−	1998 05 24	699	0.5+	0.0
1996 11 06	327	1.5+	0.3−	1998 04 26	595	1.3−	0.4+	1998 05 24	699	0.3+	0.1−
1996 11 06	327	0.7+	0.3+	1998 04 26	595	0.6−	0.7+	1998 05 24	704	0.4+	0.2+
1996 11 06	327	0.4+	0.4+	1998 05 17	595	0.2−	0.6+	1998 05 24	699	0.5+	0.4−
1997 01 12	566	0.7−	0.6+	1998 05 17	595	0.1+	0.0	1998 05 24	704	0.5−	0.5+
1997 01 12	566	0.4−	0.5+	1998 05 22	704	0.2+	0.3+	1998 05 24	704	0.4−	0.9−
1997 01 12	566	0.9−	0.7+	1998 05 22	704	0.0	0.0	1998 05 24	704	0.8−	0.7−

(8937)* 1997 AK₁₉ = 1950 NS = 1978 VU₁₂ = 1988 OQ = 1989 YA₈

Discovered 1997 Jan. 13 by T. Okuni at Nanyou.

Id. S. Nakano (*MPC* 29309)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	307.25056		(2000.0)	P	Q
n	0.28503026	ω	150.11999	+0.70715753	+0.70690283
a	2.2866976	Ω	164.86736	-0.65937156	+0.66683817
e	0.1600075	i	3.23197	-0.25525942	+0.23582883
P	3.46	H	14.0	G 0.15	U 2

Residuals in seconds of arc

1950 07 14	760	0.1+	0.1-	1998 04 22	704	0.0	0.2-	1998 05 22	704	0.8+	0.2-
1950 07 14	760	0.0	0.5-	1998 04 22	704	0.6+	0.5-	1998 05 22	704	0.1-	0.4-
1978 11 02	095	0.8-	2.2+	1998 04 22	704	0.1-	0.1+	1998 05 22	704	0.6-	0.4+
1988 07 23	046	(6.3-	5.3-)	1998 04 22	704	0.4-	1.0-	1998 05 22	704	1.1+	0.1+
1988 07 23	046	(4.2-	3.7-)	1998 05 01	704	0.7-	0.3+	1998 05 22	704	0.2-	1.0+
1989 12 26	033	0.1-	0.1+	1998 05 01	704	0.1-	0.2+	1998 05 23	566	0.2+	1.0-
1989 12 26	033	0.5+	0.2-	1998 05 01	704	0.1+	0.7-	1998 05 23	566	0.5+	0.3-
1989 12 26	033	1.4+	0.7-	1998 05 01	704	0.3-	0.0	1998 05 23	566	1.3-	1.1-
1997 01 13	358	0.9+	0.0	1998 05 01	704	0.0	0.5+	1998 05 24	704	0.5-	0.5+
1997 01 13	358	0.3+	0.9+	1998 05 05	699	1.8+	0.5+	1998 05 24	704	0.3+	0.2-
1997 01 13	358	0.8-	1.9+	1998 05 05	699	0.9-	0.9+	1998 05 24	704	0.1-	1.2+
1997 01 16	358	0.3+	0.8-	1998 05 05	699	0.3-	1.1+	1998 05 24	704	0.9-	1.4+
1997 01 16	358	0.4-	0.1-	1998 05 07	566	0.2+	0.0	1998 05 24	704	0.1+	0.1-
1997 01 18	358	1.1+	0.5+	1998 05 07	566	0.3-	0.1-	1998 05 25	699	0.3+	0.2+
1997 01 18	358	1.0-	0.8-	1998 05 07	566	0.2-	0.4-	1998 05 25	699	0.4+	0.3-
1997 01 18	358	0.7-	0.4-	1998 05 17	755	0.4+	0.6+	1998 05 25	699	0.6+	0.1-
1997 02 05	358	0.7+	1.4-	1998 05 17	755	0.5+	0.7-	1998 05 28	699	0.3+	0.6-
1997 02 05	358	2.0-	1.3+	1998 05 18	755	0.2+	0.1+	1998 05 28	699	0.1+	0.3+
1998 04 22	704	0.5-	0.2+	1998 05 18	755	0.6-	0.5+	1998 05 28	699	0.5+	0.1+

(8938)* 1997 AF₂₁ = 1939 UD = 1942 RG = 1986 RX₁₂ = 1986 SK₂
= 1989 NS

Discovered 1997 Jan. 9 by S. Ueda and H. Kaneda at Kushiro.

Id. G. V. Williams (*MPC* 29125)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	280.39436	(2000.0)	<i>P</i>	<i>Q</i>	
<i>n</i>	0.31395256	ω	339.29033	+0.94858223	+0.31652617
<i>a</i>	2.1440095	Ω	2.25879	-0.28396385	+0.85336073
<i>e</i>	0.2037778	<i>i</i>	2.48777	-0.13984375	+0.41423018
<i>P</i>	3.14	<i>H</i>	14.7	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1939 10 18	062	0.6-	1.2+	1997 01 09	399	0.4-	0.6-	1998 04 25	699	0.6+	0.8+
1939 10 20	062	0.2+	1.3-	1997 01 09	399	0.4+	1.3-	1998 04 25	699	0.1+	0.1-
1942 09 11	024	0.2+	1.1+	1997 01 12	399	0.4+	0.8+	1998 04 25	699	0.5+	0.8+
1942 09 18	024	0.0	0.6-	1997 01 12	399	(3.2+	1.5+)	1998 05 01	704	0.3-	0.3-
1986 09 09	095	(3.7-	1.7-)	1997 01 16	399	0.3-	1.0+	1998 05 01	704	0.2-	0.0
1986 09 29	095	0.8-	0.9+	1997 01 16	399	0.6+	0.7-	1998 05 01	704	0.6+	0.1+
1989 07 02	675	0.6+	1.4-	1998 04 21	704	0.2-	0.2-	1998 05 01	704	1.0+	0.2+
1989 07 02	675	0.2+	0.1+	1998 04 21	704	1.4+	0.5-	1998 05 01	704	0.6+	0.5+
1989 07 04	675	0.4-	0.7-	1998 04 21	704	(2.2-	1.7+)	1998 05 03	566	1.2-	1.0-
1989 07 04	675	0.9+	0.9-	1998 04 21	704	1.0-	0.1-	1998 05 03	566	0.5-	1.7-
1996 11 08	327	0.6+	0.7-	1998 04 21	704	0.2+	0.8-	1998 05 03	566	0.7-	1.3-
1996 11 08	327	0.5-	0.4-	1998 04 22	704	0.2-	0.2+	1998 05 22	704	0.4-	0.9+
1996 11 08	327	0.2-	0.7+	1998 04 22	704	0.8-	1.2+	1998 05 22	704	0.6-	0.8+
1996 12 02	691	0.4-	0.4-	1998 04 22	704	0.2+	0.1+	1998 05 22	704	0.2+	0.5+
1996 12 02	691	0.1-	0.2-	1998 04 22	704	0.5+	0.4-	1998 05 22	704	1.0+	0.5+
1996 12 02	691	0.4-	0.5-	1998 04 22	704	0.6-	0.1+	1998 05 22	704	0.0	1.4+

(8939)* 1997 BU₁ = 1985 UG₆ = 1987 BM = 1995 WN₂₇

Discovered 1997 Jan. 29 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29636)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano			
<i>M</i>	133.18231	(2000.0)	<i>P</i>	<i>Q</i>	
<i>n</i>	0.19764424	ω	79.29882	-0.12993258	-0.99147588
<i>a</i>	2.9188601	Ω	18.17536	+0.89718644	-0.12170761
<i>e</i>	0.0801862	<i>i</i>	1.77261	+0.42210664	-0.04650626
<i>P</i>	4.99	<i>H</i>	13.3	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1985 10 18	095	(2.6+	2.8+)	1995 11 25	691	0.1-	0.2+	1998 05 01	704	0.4+	0.4-
1987 01 26	033	0.6+	0.8+	1995 11 25	691	0.0	0.2+	1998 05 01	704	0.1-	1.6-
1987 01 27	033	1.0+	1.3+	1997 01 29	411	0.6-	0.0	1998 05 01	704	0.8+	0.2+
1987 01 28	033	0.6+	1.3+	1997 01 29	411	0.4+	0.3+	1998 05 01	704	(4.0-	0.5-)

1992 01 01	691	0.5-	0.2-	1997 01 30	411	0.1-	0.4+	1998 05 22	704	1.0+	0.2-
1992 01 01	691	0.6-	0.4-	1997 01 30	411	0.4+	0.4-	1998 05 22	704	0.3-	0.4-
1992 01 01	691	0.4-	0.4-	1997 02 04	411	0.2+	0.5-	1998 05 22	704	0.9+	0.7+
1992 02 01	691	0.8-	0.4-	1997 02 04	411	0.5+	0.1-	1998 05 22	704	0.2+	0.5+
1992 02 01	691	0.6-	0.6-	1997 02 13	411	0.2-	0.4+	1998 05 22	704	0.3-	0.7+
1995 10 28	691	0.2+	0.3+	1997 02 13	411	0.4+	0.4-	1998 05 22	699	0.2+	0.2+
1995 10 28	691	0.1+	0.5+	1997 02 26	411	(0.2-	2.1-)	1998 05 22	699	0.2+	0.5-
1995 10 28	691	0.2+	0.3+	1997 02 26	411	0.1-	0.7-	1998 05 22	699	1.4+	0.4+
1995 11 19	691	0.6-	0.4+	1998 04 25	699	0.4-	0.2-	1998 05 24	704	1.1-	1.1-
1995 11 19	691	0.6-	0.0	1998 04 25	699	0.1+	0.4+	1998 05 24	704	0.7-	0.1+
1995 11 19	691	0.3-	0.0	1998 04 25	699	1.1-	1.9+	1998 05 24	704	0.2-	1.2+
1995 11 25	691	0.1+	0.2+	1998 05 01	704	0.1-	0.3+	1998 05 24	704	(0.5-	2.2+)

(8940)* 1997 BA₂ = 1990 VT₁₅ = 1995 UZ₄₉

Discovered 1997 Jan. 29 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29636), G. V. Williams (*ibid.*)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano			
<i>M</i>	264.16994	(2000.0)	<i>P</i>	<i>Q</i>	
<i>n</i>	0.19642510	ω	227.63820	+0.87298479	+0.48487093
<i>a</i>	2.9309252	Ω	103.29426	-0.43000549	+0.81628020
<i>e</i>	0.0359539	<i>i</i>	3.11557	-0.23020172	+0.31398537
<i>P</i>	5.02	<i>H</i>	12.8	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1990 11 11	809	0.5-	1.7-	1997 02 26	411	0.8+	0.0	1998 05 17	663	(5.3+	0.2-)
1990 11 11	809	1.8+	1.1-	1997 02 26	411	0.1+	0.2-	1998 05 17	663	0.4-	0.5-
1990 11 11	809	0.0	1.4-	1998 04 21	704	0.7+	0.7-	1998 05 22	704	0.2-	0.4+
1995 10 20	691	0.1+	0.2+	1998 04 21	704	0.1-	0.9-	1998 05 22	704	0.1+	0.3-
1995 10 20	691	0.7-	0.1+	1998 04 21	704	0.1+	0.9-	1998 05 22	704	0.9-	1.1+
1995 10 20	691	0.8-	0.1+	1998 04 21	704	0.0	0.6-	1998 05 22	704	0.2+	0.2+
1995 11 16	808	0.7+	0.1-	1998 04 21	704	0.7+	0.1+	1998 05 22	704	0.4-	0.5+
1995 11 16	808	0.3+	0.8+	1998 04 22	704	0.2+	0.2-	1998 05 24	704	1.0-	0.4+
1997 01 29	411	0.9-	0.6+	1998 04 22	704	0.5+	0.1-	1998 05 24	704	1.2-	1.6-
1997 01 29	411	0.4+	0.9+	1998 04 22	704	0.3+	0.4-	1998 05 24	704	0.2-	1.0+
1997 01 30	411	0.1+	0.4-	1998 04 22	704	0.6+	1.1-	1998 05 24	704	0.2+	0.2-
1997 01 30	411	0.4-	0.0	1998 04 22	704	0.6+	0.4-	1998 05 24	704	1.7-	0.3-
1997 02 04	411	0.3-	0.2-	1998 05 01	704	0.6+	0.4-	1998 05 28	699	0.5+	0.1-
1997 02 04	411	0.7+	1.4+	1998 05 01	704	0.2+	0.0	1998 05 28	699	1.2-	1.3+
1997 02 13	411	0.5-	0.3-	1998 05 01	704	0.4+	0.1-	1998 05 28	699	0.2-	0.9+
1997 02 13	411	0.3+	0.9-	1998 05 01	704	0.2+	0.1+				

(8941)* 1997 BL₂ = 1989 VP₂ = 1991 EA₂ = 1992 JY₃

Discovered 1997 Jan. 30 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29637)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Nakano			
<i>M</i>	241.18390	(2000.0)	<i>P</i>	<i>Q</i>	
<i>n</i>	0.16829372	ω	202.26061	+0.96351812	+0.24158201
<i>a</i>	3.2490578	Ω	143.14839	-0.20736463	+0.94595120
<i>e</i>	0.0305985	<i>i</i>	11.07426	-0.16921211	+0.21636648
<i>P</i>	5.86	<i>H</i>	11.9	<i>G</i>	0.15
				<i>U</i>	1

Residuals in seconds of arc

1989 11 06	095	0.1-	0.5+	1997 02 06	411	0.3-	0.8+	1998 04 24	704	0.8+	0.1-
1991 02 11	511	0.9-	1.5-	1997 02 13	411	0.0	0.3+	1998 04 24	704	0.2+	0.7-
1991 02 11	511	1.2+	0.1+	1997 02 13	411	0.1-	0.1-	1998 04 24	704	0.1+	0.9-
1991 03 08	809	1.0-	0.9-	1997 02 26	411	0.8-	0.7+	1998 04 30	732	0.7-	0.1-
1991 03 08	809	0.3-	1.3-	1997 02 26	411	0.7-	0.5+	1998 04 30	732	0.8-	0.7-
1991 03 08	809	0.5+	1.4-	1997 03 05	704	0.4+	0.7+	1998 05 01	732	0.0	0.7+
1991 03 10	809	0.4+	1.0-	1997 03 05	704	0.3+	0.5+	1998 05 01	732	0.2-	0.3-
1991 03 10	809	0.5+	0.8-	1997 03 06	704	1.1+	0.9+	1998 05 23	699	0.4-	0.3-
1991 03 10	809	0.6+	0.7-	1997 03 06	704	1.1+	0.1+	1998 05 23	699	0.7+	0.1+
1992 05 02	399	0.1+	0.3-	1998 04 22	127	1.2-	0.1+	1998 05 23	699	0.5+	1.0-
1992 05 02	399	1.2-	1.5+	1998 04 22	127	1.1-	0.0	1998 05 28	704	0.2+	0.7+
1994 08 03	675	0.4-	0.9-	1998 04 23	704	0.7+	0.4-	1998 05 28	704	0.9+	0.8-
1994 08 03	675	0.5+	0.3-	1998 04 23	704	0.7+	0.1+	1998 05 28	704	0.6-	0.1+

1997 01 30	411	0.7−	1.1+	1998 04 23	704	0.4+	0.1+	1998 05 28	704	0.6+	0.1+
1997 01 30	411	1.1−	0.5+	1998 04 23	704	0.8+	0.4−	1998 05 28	704	1.0−	0.2+
1997 01 31	411	0.1−	0.3+	1998 04 23	704	1.0+	0.4−	1998 05 29	689	1.7−	0.5−
1997 01 31	411	0.1+	0.1+	1998 04 24	704	0.3+	0.1+				
1997 02 06	411	0.2+	0.1−	1998 04 24	704	0.6+	0.7+				

(8942)* 1997 BR₂ = 1991 YH₂ = 1993 FN₃₈ = 1993 HH₈ = 1995 VN₃

Discovered 1997 Jan. 30 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29637)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Nakano			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21794692	<i>ω</i>	225.47403	+0.94935302		−0.31225224	
<i>a</i>	2.7346530	<i>Ω</i>	152.66439	+0.30556713		+0.89150490	
<i>e</i>	0.0814286	<i>i</i>	4.37554	+0.07319547		+0.32820351	
<i>P</i>	4.52	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1991 12 30	511	1.0−	0.0	1997 02 11	411	0.2−	0.5+	1998 05 22	704	0.4+	0.9+
1991 12 30	511	(3.2−	2.7+)	1997 02 11	411	0.3−	0.2+	1998 05 22	704	1.2−	0.2−
1993 03 19	809	0.3+	0.9+	1997 02 13	411	1.3−	0.7−	1998 05 22	704	0.2−	2.1+
1993 03 20	809	0.0	0.8+	1997 02 13	411	1.4−	1.3−	1998 05 23	704	1.1−	0.7−
1993 03 24	809	1.6+	1.5−	1997 03 01	411	1.7+	1.8+	1998 05 23	704	0.6−	0.5+
1993 03 24	691	0.8−	0.5−	1997 03 01	411	(2.3+	1.2+)	1998 05 23	704	0.2+	0.6−
1993 03 24	691	0.9−	0.3−	1997 03 05	704	0.2+	1.8−	1998 05 23	704	0.8+	0.8−
1993 03 24	691	1.0−	0.4−	1997 03 05	704	1.5+	0.5+	1998 05 23	704	(5.2−	0.5−)
1993 04 16	413	1.2+	1.3−	1997 03 06	704	(2.6+	0.7−)	1998 05 24	704	0.0	0.6−
1995 11 14	691	0.3−	0.0	1997 03 06	704	1.7+	0.4+	1998 05 24	704	1.2−	0.2+
1995 11 14	691	0.3−	0.0	1998 04 21	691	1.1−	0.2−	1998 05 24	704	0.5+	0.4+
1995 11 14	691	0.1−	0.0	1998 04 21	691	1.3−	0.5+	1998 05 24	704	0.7−	0.0
1995 11 19	691	0.5+	0.5+	1998 04 21	691	1.1−	0.3+	1998 05 24	704	0.5−	0.0
1995 11 19	691	0.5+	0.0	1998 04 22	704	1.5+	0.5−	1998 05 24	704	0.9+	1.2−
1995 11 19	691	0.1+	0.0	1998 04 22	704	0.5+	0.5−	1998 05 24	704	0.2−	1.5+
1997 01 30	411	0.7+	0.1−	1998 04 22	704	0.5−	0.7−	1998 05 24	704	1.7+	0.2+
1997 01 30	411	0.3+	0.6−	1998 04 22	704	0.7−	0.7−	1998 05 24	704	0.5+	1.6−
1997 01 31	411	0.0	0.8+	1998 04 22	704	1.1−	0.7−	1998 05 24	704	0.1+	0.9−
1997 01 31	411	0.0	0.3−	1998 05 01	704	1.4+	1.4+	1998 05 24	704	0.7−	0.4−
1997 02 07	098	1.6−	1.4+	1998 05 01	704	2.0+	1.5+	1998 05 24	704	1.7+	0.4−
1997 02 07	098	0.0	0.6−	1998 05 01	704	1.6+	1.5+	1998 05 24	704	1.8−	0.2−
1997 02 07	098	0.7−	0.7+	1998 05 01	704	0.5−	1.6+				
1997 02 07	098	0.3+	0.2+	1998 05 22	704	(1.4+	2.6−)				

(8943)* 1997 BH₃ = 1995 QM₁₀

Discovered 1997 Jan. 30 at Stroncone.

Id. G. V. Williams (*MPC* 31392)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21104344	<i>ω</i>	297.68180	−0.29823577		−0.95416591	
<i>a</i>	2.7939683	<i>Ω</i>	169.57794	+0.91712279		−0.29370605	
<i>e</i>	0.1905647	<i>i</i>	7.92983	+0.26446400		−0.05748190	
<i>P</i>	4.67	<i>H</i>	14.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1991 12 02	675	0.7−	0.8+	1997 02 01	589	0.3+	0.2−	1997 03 04	589	0.0	0.1−
1991 12 02	675	0.6+	0.1−	1997 02 01	589	0.1+	0.1−	1997 03 11	589	0.8+	0.3−
1995 08 19	809	(3.3−	0.3−)	1997 02 01	589	0.2+	0.2−	1997 03 11	589	0.9−	0.1−
1995 08 20	809	(2.5−	0.7−)	1997 02 01	589	0.3−	0.1+	1997 03 11	589	0.8−	0.6−
1995 08 22	809	1.5−	0.1−	1997 02 03	589	0.1−	0.4−	1997 03 11	589	0.0	0.7+
1995 08 25	809	0.4−	0.5−	1997 02 03	589	0.1−	0.0	1997 04 12	589	0.6+	0.6−
1995 09 01	809	0.0	0.1+	1997 02 03	589	0.1+	0.1−	1997 04 12	589	1.0+	0.8+
1995 09 17	809	0.3+	0.5−	1997 02 03	589	0.1+	0.1−	1997 04 12	589	0.8+	0.8+
1995 09 18	809	0.0	0.7−	1997 02 08	589	0.1−	0.3−	1997 04 25	589	0.3+	1.1+
1995 09 18	809	0.4+	0.3−	1997 02 08	589	0.2+	1.0−	1997 04 25	589	0.9+	1.1+
1995 09 20	809	0.6+	1.1+	1997 02 08	589	0.2−	0.3−	1997 04 28	589	0.1+	0.2+
1995 09 22	809	0.0	0.6+	1997 02 08	589	0.5−	0.3−	1997 04 28	589	0.2−	0.4+
1995 09 22	809	1.1+	0.6+	1997 02 09	589	0.1−	0.1−	1997 04 28	589	0.0	0.3+

1995 09 23	809	0.2−	0.4+	1997 02 09	589	0.2+	0.4−	1998 04 25	589	0.4+	0.4−
1995 09 29	809	0.1+	1.2−	1997 02 09	589	0.1−	0.5−	1998 04 25	589	0.1−	0.7−
1997 01 17	599	0.1+	0.1+	1997 02 09	589	0.0	0.3−	1998 05 21	589	0.1−	0.2+
1997 01 17	599	0.1−	0.1−	1997 02 10	589	0.3−	0.1−	1998 05 21	589	0.3+	0.8+
1997 01 30	589	0.1+	0.9+	1997 02 10	589	0.0	0.3−	1998 05 21	589	0.1+	0.4−
1997 01 30	589	0.3+	0.9+	1997 02 10	589	0.2−	0.0	1998 05 22	609	0.7+	0.2+
1997 01 30	589	0.2+	0.6+	1997 02 28	589	0.3−	1.0−	1998 05 22	609	0.5+	0.0
1997 01 31	589	0.4−	0.3−	1997 02 28	589	0.9−	0.7−	1998 05 23	704	0.3−	1.2+
1997 01 31	589	0.5−	0.5+	1997 02 28	589	0.4+	0.7−	1998 05 23	704	0.2+	1.3+
1997 01 31	589	0.1+	0.5+	1997 02 28	589	0.2−	0.2−	1998 05 23	704	1.8−	1.9−
1997 01 31	589	0.0	0.5+	1997 03 04	589	0.7+	0.2+	1998 05 23	704	0.4−	0.8−

(8944)* 1997 BF₉ = 1993 NJ₂ = 1995 WR₃

Discovered 1997 Jan. 30 by U. Munari and M. Tombelli at Cima Ekar.

Id. G. V. Williams (*MPC* 29638)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17917138	<i>ω</i>	8.14862	−0.94940359		+0.31404905	
<i>a</i>	3.1161878	<i>Ω</i>	190.15581	−0.28892225		−0.87645266	
<i>e</i>	0.1282867	<i>i</i>	0.79752	−0.12311280		−0.36497113	
<i>P</i>	5.50	<i>H</i>	14.1	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1993 07 13	809	(0.5+	2.5+)	1995 12 01	595	0.3+	0.1−	1998 05 20	104	(2.8−	0.5+)
1993 07 13	809	(0.6+	2.1+)	1995 12 01	595	0.5+	0.4+	1998 05 20	104	1.7+	0.6−
1993 07 13	809	0.6+	1.7+	1997 01 30	098	1.4−	1.0+	1998 05 20	104	(1.9−	3.7+)
1993 07 24	809	1.4−	1.9+	1997 02 07	098	0.9−	0.3−	1998 05 22	704	1.2−	1.3−
1993 07 26	809	1.2+	1.4−	1997 02 07	098	0.4+	0.1−	1998 05 22	704	0.9−	1.1+
1993 07 26	809	0.2−	0.6−	1997 02 07	098	1.1−	0.5−	1998 05 22	704	1.3+	0.8−
1993 07 26	809	0.1+	0.4−	1997 02 07	098	0.4−	0.1−	1998 05 22	704	0.3−	0.5+
1994 09 30	691	0.6−	0.2+	1997 03 05	704	0.9+	0.8+	1998 05 22	704	0.3−	0.3−
1994 09 30	691	0.8−	0.5+	1997 03 05	704	1.5+	0.8+	1998 05 24	704	0.6+	0.3+
1994 09 30	691	0.7−	0.4+	1997 03 06	704	1.1+	0.3+	1998 05 24	704	1.3+	1.1+
1995 11 21	595	0.1−	0.1+	1997 03 06	704	0.0	1.0+	1998 05 24	704	(0.7+	3.6+)
1995 11 22	595	0.0	1.2+	1998 05 08	104	0.2+	1.4+	1998 05 24	704	(2.3+	2.1+)
1995 11 22	595	0.2+	0.3+	1998 05 08	104	0.3−	0.6+	1998 05 24	704	1.6−	0.1−
1995 11 22	595	0.2+	0.9+	1998 05 08	104	0.0	0.6+				

(8945)* 1997 CM = 1990 YC₁ = 1994 PE₄₀

Discovered 1997 Feb. 1 by P. G. Comba at Prescott.

Id. G. V. Williams (*MPC* 29638)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18180172	<i>ω</i>	169.06682	−0.70923401		−0.69540202	
<i>a</i>	3.0860578	<i>Ω</i>	325.91974	+0.63021312		−0.55181662	
<i>e</i>	0.1024483	<i>i</i>	11.92349	+0.31594074		−0.46034168	
<i>P</i>	5.42	<i>H</i>	13.1	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1990 12 23	033	0.6−	0.7−	1997 02 10
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(8946)* 1997 CO = 1980 RL₄ = 1982 BL₉ = 1985 RQ₆ = 1991 CJ₄
= 1995 SU₅₄

Discovered 1997 Feb. 1 by T. Kobayashi at Oizumi.

Id. S. Nakano (*MPC* 29639)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	208.57688	<i>ω</i>	213.47121	+0.88037979	−0.47425870		
<i>a</i>	2.8791001	<i>Ω</i>	174.83684	+0.44251867	+0.81901072		
<i>e</i>	0.1028609	<i>i</i>	2.02517	+0.17061261	+0.32295530		
<i>P</i>	4.89	<i>H</i>	12.9	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1980 09 07	095	1.2−	0.3−	1998 04 19	360	0.0	0.2−	1998 05 01	704	0.1+	0.9+
1982 01 19	095	(1.4+	3.0−)	1998 04 19	360	0.0	0.1−	1998 05 05	699	0.7+	0.4+
1985 09 15	095	(0.2+	2.7+)	1998 04 19	360	0.1−	0.2−	1998 05 05	699	0.8+	0.9+
1985 09 22	095	2.0+	0.8−	1998 04 21	704	0.2+	0.1+	1998 05 05	699	0.3+	0.1+
1991 02 15	493	0.9+	0.7+	1998 04 21	704	0.7+	0.4−	1998 05 22	704	0.5−	1.0−
1991 02 15	493	(3.2−	1.4−)	1998 04 21	704	0.7+	0.4−	1998 05 22	704	0.2+	0.6+
1995 09 23	033	0.1−	1.3−	1998 04 21	704	0.5+	0.1+	1998 05 22	704	1.6−	0.4+
1995 09 24	033	0.9−	0.2−	1998 04 21	704	0.2+	0.9−	1998 05 22	704	1.0−	0.5+
1995 09 25	033	0.5−	0.7−	1998 04 22	704	0.1+	0.5−	1998 05 22	704	0.7−	0.6−
1995 12 07	327	0.2+	0.5+	1998 04 22	704	0.2+	0.6+	1998 05 23	704	0.2−	0.1−
1995 12 07	327	0.0	0.2+	1998 04 22	704	0.9−	0.0	1998 05 23	704	1.2−	0.5−
1995 12 07	327	0.3+	1.0+	1998 04 22	704	0.2−	0.2+	1998 05 23	704	1.8−	0.0
1997 02 01	411	0.3−	0.3+	1998 04 22	704	1.2−	0.2−	1998 05 23	704	0.1+	0.3+
1997 02 01	411	0.0	0.3+	1998 04 29	566	1.3+	0.7+	1998 05 23	704	1.1−	0.2−
1997 02 03	411	0.9−	1.0−	1998 04 29	566	0.7+	0.1+	1998 05 24	704	0.5+	0.6−
1997 02 03	411	1.5−	0.3+	1998 04 29	566	0.6+	0.1+	1998 05 24	704	0.1−	0.2−
1997 02 11	411	0.3−	0.1+	1998 05 01	704	1.4+	0.6−	1998 05 24	704	0.6+	0.2−
1997 02 11	411	0.2+	0.3−	1998 05 01	704	0.3−	0.1+	1998 05 24	704	0.3−	0.0
1997 03 04	411	0.8+	0.1−	1998 05 01	704	0.5+	0.8−	1998 05 24	704	0.7−	0.6+
1997 03 04	411	1.4+	0.8−	1998 05 01	704	1.3+	0.0				

(8947)* 1997 CH₂₆ = 1986 XX₄ = 1990 RJ₁₁

Discovered 1997 Feb. 14 by T. Kobayashi at Oizumi.

Id. G. V. Williams (*MPC* 29312)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	222.34154	<i>ω</i>	271.00993	+0.88113950	−0.45229883		
<i>a</i>	2.7545285	<i>Ω</i>	115.89338	+0.47138229	+0.81719292		
<i>e</i>	0.2119430	<i>i</i>	8.81817	+0.03730838	+0.35724152		
<i>P</i>	4.57	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1986 11 30	675	1.8+	1.4+	1997 02 16	411	0.4+	0.0	1998 04 03	691	0.9−	0.5+
1986 11 30	675	(4.0+	1.7−)	1997 02 16	411	0.3−	0.2+	1998 04 03	691	1.2−	0.5+
1986 12 03	675	1.9−	1.0+	1997 02 26	411	0.8+	0.3−	1998 04 03	691	1.0−	0.3+
1986 12 03	675	0.8−	1.1+	1997 02 26	411	0.8−	0.1+	1998 04 23	704	(3.1+	0.9+)
1986 12 05	010	(9.5+	2.9−)	1997 03 07	587	(0.6−	2.7−)	1998 04 23	704	(2.3+	0.9+)
1986 12 05	010	(7.1+	1.2−)	1997 03 07	587	1.5−	0.6−	1998 04 23	704	1.7+	1.8−
1986 12 05	010	(5.3+	0.1+)	1997 03 08	587	0.1+	0.7−	1998 04 23	704	1.4+	0.9−
1990 09 14	675	0.0	0.0	1997 03 09	587	0.5−	0.1−	1998 04 24	704	(2.2+	0.0)
1990 09 14	675	0.0	0.9−	1997 03 09	587	0.2+	0.0	1998 04 24	704	0.3−	1.0+
1992 01 31	691	0.6+	0.7−	1997 03 10	587	1.1+	0.1+	1998 04 24	704	1.0−	0.4+
1992 01 31	691	0.2−	0.6−	1997 03 10	587	0.4+	0.2−	1998 05 23	704	0.4+	1.6+
1992 01 31	691	0.2+	0.4−	1997 03 12	691	0.8−	0.0	1998 05 23	704	0.8+	0.4+
1997 02 14	411	1.1+	0.5+	1997 03 12	691	0.7−	0.2−	1998 05 23	704	1.4+	1.1+
1997 02 14	411	0.1+	0.6+	1997 03 12	691	0.8−	0.2−	1998 05 23	704	0.3+	0.3+

(8948)* 1997 CW₂₇ = 1980 RX₃ = 1980 TC₁₀ = 1135 T-1

Discovered 1997 Feb. 6 by the Beijing Schmidt CCD Asteroid Program at

Xinglong.

Id. G. V. Williams (*MPC* 29312)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	242.90315	<i>ω</i>	79.47295	+0.98167177	−0.18881089		
<i>a</i>	2.4289358	<i>Ω</i>	291.40661	+0.16216174	+0.89894568		
<i>e</i>	0.1989278	<i>i</i>	1.59433	+0.10012047	+0.39528105		
<i>P</i>	3.79	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1971 03 24	675	1.0+	0.2−	1997 02 13	327	0.4−	0.6+	1998 05 01	704	1.7−	0.0
1971 03 25	675	1.3−	0.2+	1997 02 13	327	0.6+	0.3+	1998 05 17	327	1.1+	0.1+
1971 03 25	675	1.2−	0.4−	1997 02 13	327	0.1−	0.5+	1998 05 17	327	1.2+	1.0−
1971 03 26	675	0.9+	0.6−	1997 02 13	327	0.8+	0.2+	1998 05 17	327	0.2+	0.7+
1971 03 27	675	0.3+	0.3−	1997 02 13	327	0.5−	0.7+	1998 05 20	327	0.2+	0.3−
1971 04 02	675	0.8−	1.2−	1997 03 05	704	1.0+	1.3+	1998 05 20	327	0.0	0.7−
1980 09 06	095	0.6−	1.4+	1997 03 05	704	1.1+	0.5+	1998 05 20	327	0.4+	0.5−
1980 10 15	095	(0.8+	3.3+)	1998 04 22	704	0.9+	0.5+	1998 05 22	704	0.0	1.4+
1997 01 12	566	0.4−	0.1+	1998 04 22	704	0.5−	1.9+	1998 05 22	704	1.0+	0.9+
1997 01 12	566	0.2−	0.0	1998 04 22	704	1.2+	0.9+	1998 05 22	704	0.3−	0.3+
1997 01 12	566	0.3+	0.1−	1998 04 22	704	1.5−	1.9−	1998 05 22	704	0.8−	0.3−
1997 02 06	327	0.5+	0.5−	1998 04 22	704	0.1−	1.7−	1998 05 22	704	0.6+	0.6+
1997 02 06	327	0.5−	0.4−	1998 04 25	699	0.0	1.2+	1998 05 24	704	0.3−	0.3−
1997 02 06	327	0.6−	0.4−	1998 04 25	699	1.8−	0.4+	1998 05 24	704	0.1+	1.7−
1997 02 11	691	0.4−	0.0	1998 04 25	699	0.3+	0.5+	1998 05 24	704	0.5+	0.9−
1997 02 11	691	0.3−	0.2−	1998 05 01	704	0.7−	1.6+	1998 05 24	704	0.8+	0.3−
1997 02 11	691	0.4−	0.0	1998 05 01	704	0.3+	0.8+	1998 05 24	704	(0.9+	3.3−)
1997 02 13	327	0.5+	0.4+	1998 05 01	704	0.2−	0.5+				

(8949)* 1997 CM₂₈ = 1984 BQ₅ = 1995 UC₄₉

Discovered 1997 Feb. 13 by the Beijing Schmidt CCD Asteroid Program at

Xinglong.

Id. K. Ichikawa (*MPC* 29929)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	293.78996	<i>ω</i>	159.95753	+0.80577237	+0.59206566		
<i>a</i>	2.6380374	<i>Ω</i>	163.71619	−0.54982380	+0.75650870		
<i>e</i>	0.0900994	<i>i</i>	2.81142	−0.22005607	+0.27776400		
<i>P</i>	4.28	<i>H</i>	14.3	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1984 01 25	675	0.1+	0.6+	1997 03 05	704	0.5+	0.9−	1998 05 05	699	0.2−	0.1+
1984 01 26	675	0.1+	0.1+	1997 03 06	704	0.2−	0.7−	1998 05 05	699	0.6−	1.3+
1995 10 23	033	0.7+	1.1−	1997 03 06	704	0.1+	0.2+	1998 05 22	704	0.6+	0.7−
1995 10 24	033	0.5+	1.2−	1998 02 06	327	0.1+	0.3−	1998 05 22	704	0.2+	0.8−
1995 10 24	033	0.4−	0.7−	1998 02 06	327	1.0−	1.8−	1998 05 22	704	0.0	1.4−
1997 02 13	327	0.7−	0.1−	1998 04 18	327	0.7+	0.0	1998 05 22	704	0.2−	1.5−
1997 02 13	327	1.4−	0.1+	1998 04 18	327	0.1+	0.3−	1998 05 22	704	(2.9+	1.8+)
1997 02 13	327	0.9−	0.1−	1998 04 18	327	0.2−	0.8+	1998 05 24	704	0.3+	0.0
1997 02 15	327	1.1+	0.2−	1998 04 24	327	0.0	1.0+	1998 05 24	704	0.4+	0.1−
1997 02 15	327	0.2+	0.9+	1998 04 24	327	0.1−	0.6+	1998 05 24	704	0.6−	0.6−
1997 02 15	327	0.2−	0.4−	1998 04 24	327	0.8−	0.6+	1998 05 24	704	0.2+	0.1−
1997 03 05	704	1.4+	0.3−	1998 05 05	699	0.3−	0.1+	1998 05 24	704	0.1+	0.4−

(8950)* 1997 EG₄₆ = 1978 TA₃ = 1978 UE = 1989 UJ₁

Discovered 1997 Mar. 15 by the Beijing Schmidt CCD Asteroid Program at

Xinglong.

Id. G. V. Williams (*MPC* 29646)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	164.19325	<i>ω</i>	63.33275	−0.19970321	−0.97585198		
<i>a</i>	3.0878556	<i>Ω</i>	38.51729	+0.84090559	−0.21704474		
<i>e</i>	0.0856764	<i>i</i>	8.16967	+0.50298749	−0.02458637		
<i>P</i>	5.43	<i>H</i>	11.7	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1978 10 04	095	0.2−	0.6−	1997 03 15	327	0.2−	0.3+	1998 03 06	327	0.1+	0.4−
1978 10 28	688	1.3+	1.5−	1997 03 18	327	1.3−	0.9−	1998 03 06	327	1.0+	1.4−
1989 10 26	399	0.9−	1.2+	1997 03 18	327	0.2−	0.2−	1998 03 06	327	0.3−	0.9−
1989 10 26	399	0.1−	1.6−	1997 03 18	327	0.2−	0.3−	1998 03 06	327	1.6+	1.4−
1989 10 26	399	0.2−	0.5−	1997 03 28	327	0.4−	0.2−	1998 05 25	327	0.9−	0.1+
1989 10 29	399	1.5+	1.0−	1997 03 28	327	0.0	0.1−	1998 05 25	327	0.3−	0.8−
1989 10 29	399	0.4−	0.6−	1997 03 28	327	0.4+	0.3−	1998 05 25	327	0.9−	0.5−
1989 10 29	399	1.5+	0.3−	1997 03 30	327	0.4+	0.7−	1998 05 28	327	0.3+	1.1+
1997 03 15	327	0.3−	0.2+	1997 03 30	327	0.0	0.5−				
1997 03 15	327	0.2−	0.4+	1997 03 30	327	0.2−	0.7−				

(8951)* 1997 FO = 1976 GC₃ = 1984 WO₂ = 1987 KF₃

Discovered 1997 Mar. 19 by the Beijing Schmidt CCD Asteroid Program at Xinglong.

Id. K. Ichikawa (*MPC* 29930)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	30.97710		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$
n	0.18516965	ω	196.01407	−0.53330067	+0.83763108
a	3.0485233	Ω	41.95368	−0.75543371	−0.40871796
e	0.0410882	i	10.18131	−0.38067087	−0.36238626
P	5.32	H	11.8	G 0.15	U 1

Residuals in seconds of arc

1976 04 01	095	(4.5−	0.0)	1997 03 26	327	0.8−	0.3−	1997 06 01	327	0.2−	0.1−
1976 04 02	095	0.4−	0.3−	1997 03 26	327	0.0	0.2−	1997 06 14	327	0.3+	0.5+
1976 04 04	095	0.9+	1.0−	1997 03 26	327	0.0	0.1+	1997 06 14	327	0.4+	0.3−
1976 04 05	095	(2.9−	2.0−)	1997 04 06	327	0.3−	0.0	1997 06 14	327	0.5−	0.5−
1984 11 27	010	1.5−	1.8+	1997 04 06	327	0.1−	0.0	1998 03 06	327	(3.7−	1.1−)
1984 11 28	010	1.5+	2.1−	1997 04 06	327	0.0	0.2+	1998 03 06	327	0.0	0.6−
1987 05 30	413	0.6−	0.0	1997 05 24	327	0.4+	0.1+	1998 05 25	327	1.6+	0.5+
1987 05 30	413	1.5−	0.5+	1997 05 24	327	0.3+	0.1+	1998 05 25	327	0.1−	0.4+
1997 03 19	327	0.1−	0.2+	1997 05 24	327	0.8+	0.7+	1998 05 25	327	0.4+	0.7+
1997 03 19	327	0.4+	0.3+	1997 06 01	327	0.4−	0.3+	1998 05 28	327	0.4−	0.3−
1997 03 19	327	0.3+	0.3+	1997 06 01	327	0.2−	0.3−	1998 05 28	327	0.3+	0.7−
1997 03 26	327	0.1+	0.2−	1997 06 01	327	0.1−	0.0	1998 05 28	327	0.7−	0.1+

(8952)* 1998 EG₂ = 1989 AY₅ = 1994 JL₃

Discovered 1998 Mar. 2 by the OCA-DLR Asteroid Survey at Caussols.

Id. G. V. Williams (*MPC* 31743)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	338.90327		(2000.0)		$\mathbf{P}$	$\mathbf{Q}$	
n	0.23591360	ω	199.14765		−0.35810293	+0.93319517	
a	2.5939846	Ω	49.88058		−0.85141015	−0.31312390	
e	0.0643923	i	2.25964		−0.38322715	−0.17635248	
P	4.18	H	14.2	G	0.15	U	1

Residuals in seconds of arc

1989 01 04	413	0.9−	0.4+	1995 09 24	809	0.1−	0.8+	1998 04 20	704	0.1−	0.2−
1989 01 04	413	1.1+	0.1−	1998 03 02	910	0.0	0.2+	1998 04 20	704	0.3+	0.6−
1989 01 10	413	(3.2−	2.1−)	1998 03 02	910	0.2+	0.3+	1998 04 20	704	0.2−	1.3−
1989 01 10	413	(2.6+	1.6−)	1998 03 02	910	0.0	0.2+	1998 04 21	704	0.5−	0.1+
1994 05 03	691	0.4−	0.2−	1998 03 03	910	0.1+	0.2+	1998 04 21	704	0.1−	0.0
1994 05 03	691	0.3−	0.2−	1998 03 03	910	0.2+	0.2+	1998 04 21	704	0.5−	0.0
1994 05 03	691	0.4−	0.2−	1998 03 03	910	0.1+	0.2+	1998 04 21	704	0.0	0.6−
1994 05 03	691	0.2+	0.1−	1998 03 22	704	0.2−	0.3+	1998 04 21	704	0.2+	1.0−
1994 05 03	691	0.3+	0.6+	1998 03 22	704	1.3+	0.5+	1998 04 22	704	0.3−	0.2+
1994 05 03	691	0.0	0.3−	1998 03 22	704	(1.0+	2.2+)	1998 04 22	704	0.3−	0.3−
1994 05 10	691	0.0	0.1+	1998 03 22	704	(2.2+	1.3+)	1998 04 22	704	0.1+	0.8−
1994 05 10	691	0.0	0.4−	1998 03 25	704	0.3−	0.7+	1998 04 22	704	0.8+	0.4−
1994 05 10	691	0.2+	0.0	1998 03 25	704	0.2+	0.4+	1998 04 22	704	0.1+	0.8−
1995 08 25	809	0.5−	1.1+	1998 03 25	704	0.4+	0.7+	1998 04 25	699	(2.1+	0.9+)
1995 08 26	809	0.2+	0.6+	1998 03 25	704	0.6−	1.6+	1998 04 25	699	(2.4+	1.8+)
1995 08 28	809	0.5−	0.1+	1998 03 25	704	0.2−	1.0+	1998 04 25	699	0.9+	1.4+
1995 08 29	809	0.1+	0.7+	1998 03 29	704	0.6+	0.1+	1998 05 16	704	1.0−	0.5−

1995 09 01	809	(2.9−	1.1+)	1998 03 29	704	1.0+	0.7+	1998 05 16	704	0.5−	0.6−
1995 09 19	809	0.0	0.2+	1998 03 29	704	0.2+	0.8+	1998 05 16	704	0.5−	0.3+
1995 09 20	809	1.1−	0.6−	1998 03 29	704	0.1+	0.6+	1998 05 16	704	1.4−	0.3+
1995 09 22	809	0.4+	0.3+	1998 03 29	704	0.7+	0.0	1998 05 16	704	(3.5−	0.5+)
1995 09 23	809	0.1+	0.2+	1998 04 20	704	0.2−	0.2−				
1995 09 23	809	(4.2+	0.8−)	1998 04 20	704	0.9+	0.2+				

(8953)* 1998 FC₆₁ = 1990 SD₁₃ = 1993 FA₂₂

Discovered 1998 Mar. 20 by the Lincoln Laboratory Near-Earth Asteroid Research Team at Socorro.

Id. G. V. Williams (*MPC* 31753)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	115.52783		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$
n	0.19457238	ω	99.30656	+0.10319435	−0.99464215
a	2.9495013	Ω	344.76619	+0.90313646	+0.09629139
e	0.0872702	i	1.34305	+0.41676788	+0.03761611
P	5.07	H	13.4	G 0.15	U 1

Residuals in seconds of arc

1990 09 22	809	1.1−	1.1+	1995 08 24	809	0.3+	0.7+	1998 03 28	704	0.2−	0.1−
1990 09 22	809	0.6−	0.9+	1995 08 25	809	0.1−	0.1−	1998 03 28	704	0.0	0.8−
1990 09 22	809	0.1−	1.0+	1995 08 26	809	0.2+	0.4−	1998 03 28	704	0.8−	0.2−
1990 09 23	809	0.5+	0.2−	1995 08 27	809	1.1−	0.2+	1998 03 28	704	1.0−	0.6−
1990 09 23	809	0.9+	0.5−	1995 09 17	809	0.6−	0.5−	1998 04 01	704	0.2−	0.3+
1990 09 23	809	0.8+	0.6−	1995 09 18	809	0.4−	0.2−	1998 04 01	704	0.5+	0.3+
1990 09 24	809	0.3−	1.0−	1995 09 20	809	0.0	1.0+	1998 04 01	704	0.8−	0.9+
1990 09 24	809	0.2−	1.0−	1995 09 22	809	0.5−	0.2+	1998 04 01	704	0.3+	0.7+
1990 09 24	809	0.1+	0.9−	1998 03 20	704	0.1+	0.2−	1998 04 01	704	0.8+	0.8+
1990 09 24	809	0.4+	0.9−	1998 03 20	704	0.8+	0.0	1998 04 20	704	0.7+	0.6−
1990 09 24	809	0.7+	1.0−	1998 03 20	704	0.0	0.4−	1998 04 20	704	0.5+	0.8−
1990 09 24	809	1.0+	1.1−	1998 03 20	704	0.1+	0.8−	1998 04 20	704	0.6+	0.3−
1993 03 21	809	0.3+	0.5+	1998 03 20	704	0.7−	0.8−	1998 04 20	704	0.4+	0.5−
1993 03 22	809	1.1+	0.8+	1998 03 22	704	0.3+	1.0−	1998 04 20	704	1.5−	0.8−
1993 03 26	809	0.3−	1.2+	1998 03 22	704	0.1−	0.3−	1998 04 22	704	0.5+	0.2−
1993 03 27	809	0.1+	0.4+	1998 03 22	704	0.2−	0.3+	1998 04 22	704	0.9−	0.0
1995 08 19	809	0.4+	0.6+	1998 03 22	704	0.6−	0.5−	1998 04 22	704	0.1−	0.1+
1995 08 20	809	0.1+	0.4+	1998 03 22	704	(4.0−	0.5+)	1998 04 22	704	0.5−	0.0
1995 08 22	809	0.6+	0.4+	1998 03 28	704	0.2−	0.2+	1998 04 22	704	0.1+	0.5+

(8954)* 1998 FK₆₂ = 1976 YS₃ = 1979 SQ₂ = 1991 CJ₆ = 1996 TC₄₉

Discovered 1998 Mar. 20 by the Lincoln Laboratory Near-Earth Asteroid Research Team at Socorro.

Id. G. V. Williams (*MPC* 31754)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	127.38984		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$		
n	0.28953410	ω	224.42054	+0.20465065	−0.97763392		
a	2.2629219	Ω	213.85697	+0.92054920	+0.20906299		
e	0.1315358	i	4.99181	+0.33272703	+0.02290358		
P	3.40	H	14.5	G	0.15	U	1

Residuals in seconds of arc

1976 12 16	095	0.7−	0.3−	1998 03 22	704	0.6−	0.2+	1998 04 20	704	0.2−	0.1+
1976 12 20	095	0.5+	0.2+	1998 03 22	704	0.0	0.5−	1998 04 20	704	0.1+	0.5−
1979 09 22	095	0.8+	0.4−	1998 03 22	704	0.0	0.5−	1998 04 20	704	0.5−	0.6−
1979 09 28	095	0.1−	1.6−	1998 03 22	704	(1.0−	2.4+)	1998 04 20	704	0.5+	1.2−
1991 02 09	675	0.2−	0.5−	1998 03 24	566	0.5−	0.1+	1998 04 22	704	0.2−	0.5−
1991 02 09	675	0.4+	0.6−	1998 03 24	566	0.4−	0.2+	1998 04 22	704	0.2−	0.2+
1996 10 04	809	(0.8−	3.1−)	1998 03 24	566	0.2−	0.3+	1998 04 22	704	0.5−	1.0+
1996 10 04	809	(1.3−	3.1−)	1998 03 28	704	0.5+	0.6+	1998 04 22	704	0.1+	0.0
1996 10 04	809	(1.6−	3.3−)	1998 03 28	704	0.4−	0.3+	1998 04 22	704	0.3−	0.8+
1996 10 05	809	0.8+	0.6−	1998 03 28	704	0.4+	0.1+	1998 04 28	699	0.2+	0.3−
1996 10 05	809	0.1−	0.2−	1998 03 28	704	0.0	0.5+	1998 04 28	699	0.0	0.4−
1996 10 05	809	0.2−	0.4−	1998 03 28	704	0.4−	0.0	1998 04 28	699	0.1+	0.3−
1998 03 20	704	0.7−	0.6+	1998 04 01	704	0.2+	0.5−	1998 04 29	566	0.4−	0.2+
1998 03 20	704	0.2+	0.5+	1998 04 01	704	0.1+	0.4−	1998 04 29	566	0.7−	0.1−

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1998 JUNE 10

1998 03 20	704	0.7+	0.2+	1998 04 01	704	0.5-	0.3+	1998 04 29	566	1.3-	0.6-
1998 03 20	704	1.6+	0.8-	1998 04 01	704	0.8-	0.4-	1998 05 01	699	0.3-	0.7-
1998 03 20	704	0.9+	0.7-	1998 04 01	704	0.5+	0.1-	1998 05 01	699	0.1+	0.1-
1998 03 22	704	0.2+	0.1-	1998 04 20	704	0.2-	0.1+	1998 05 01	699	1.4+	0.0

(8955)* 1998 FR₇₉ = 1991 UB₅ = 1994 LT₇ = 1997 AZ₂₃

Discovered 1998 Mar. 24 by the Lincoln Laboratory Near-Earth Asteroid Research Team at Socorro.

Id. G. V. Williams (*MPC* 31764)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	53.37803			<i>P</i>		<i>Q</i>	
<i>n</i>	0.22062088	ω	80.21815	-0.97088699		-0.22343476	
<i>a</i>	2.7125118	Ω	86.83364	+0.17149508		-0.90002968	
<i>e</i>	0.0292818	<i>i</i>	4.96093	+0.16723604		-0.37419711	
<i>P</i>	4.47	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1991 10 31	399	(3.5-	0.0)	1998 03 24	704	0.5-	0.3-	1998 04 22	704	0.7+	0.0
1991 10 31	399	(4.8-	1.9-)	1998 03 24	704	1.1+	0.9-	1998 04 22	704	0.0	0.3+
1994 06 08	809	(0.5-	2.1-)	1998 03 24	704	1.0-	0.3-	1998 04 22	704	0.6+	0.0
1994 06 08	809	0.1-	1.5-	1998 03 25	704	0.3+	0.2+	1998 04 22	691	0.5-	0.8+
1994 06 08	809	0.4-	1.7-	1998 03 25	704	0.5+	0.4+	1998 04 22	704	0.0	0.0
1994 06 09	809	0.6+	0.5+	1998 03 25	704	1.0-	0.0	1998 04 22	691	0.9-	0.7+
1994 06 09	809	0.7-	0.1+	1998 03 25	704	0.0	0.5-	1998 04 22	704	0.2-	0.4+
1994 06 09	809	0.1-	0.9-	1998 03 25	704	0.4+	0.7-	1998 04 22	691	0.8-	0.7+
1995 08 31	809	0.6+	0.2+	1998 04 04	699	(0.3-	2.2+)	1998 04 25	691	(2.3-	0.0)
1995 09 01	809	0.4-	0.6-	1998 04 04	699	0.9+	0.6-	1998 04 25	691	1.9-	0.1+
1997 01 14	599	0.3+	0.4-	1998 04 04	699	0.9+	0.3+	1998 04 25	691	1.8-	0.2+
1997 01 14	599	0.3-	0.3-	1998 04 21	704	0.2+	0.2-	1998 05 16	704	0.0	0.3+
1997 01 15	599	0.1+	1.0-	1998 04 21	704	0.1+	0.7+	1998 05 16	704	0.4-	1.8+
1997 01 15	599	0.2+	1.2-	1998 04 21	704	0.8+	0.3-	1998 05 16	704	(0.7-	2.1+)
1998 03 24	704	0.8+	0.6+	1998 04 21	704	0.7+	0.3-	1998 05 16	704	0.3+	0.8-
1998 03 24	704	0.6+	0.7-	1998 04 21	704	0.5+	0.9-	1998 05 16	704	(1.8-	2.2+)

(8956)* 1998 FN₁₁₉ = 1974 VR = 1985 SF₃ = 1989 YD₈ = 1996 TF₅₅

Discovered 1998 Mar. 31 by the Lincoln Laboratory Near-Earth Asteroid Research Team at Socorro.

Id. G. V. Williams (*MPC* 31769)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	90.25348			<i>P</i>		<i>Q</i>	
<i>n</i>	0.26496623	ω	234.27065	-0.26140592		-0.96148467	
<i>a</i>	2.4007247	Ω	231.10696	+0.91708090		-0.21995762	
<i>e</i>	0.2414756	<i>i</i>	6.26504	+0.30104744		-0.16482071	
<i>P</i>	3.72	<i>H</i>	14.3	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1974 11 12	095	0.1+	2.2+	1998 03 31	704	0.0	1.2+	1998 04 22	704	0.4-	0.6-
1985 09 19	095	1.4-	0.2-	1998 03 31	704	0.3+	0.2-	1998 04 22	704	0.7-	0.6-
1989 12 25	033	0.2-	0.0	1998 03 31	704	0.1+	0.1-	1998 04 22	704	0.1+	0.9-
1989 12 25	033	0.5-	0.3-	1998 03 31	704	(2.2-	0.1+)	1998 04 22	704	0.8-	0.1-
1989 12 26	033	0.7+	0.1-	1998 04 01	704	0.7-	0.5+	1998 04 22	704	0.1+	0.8-
1996 10 02	809	0.1-	1.5+	1998 04 01	704	0.2-	1.6+	1998 05 01	699	0.5+	0.4-
1996 10 02	809	0.5+	1.7+	1998 04 01	704	0.4-	0.9+	1998 05 01	699	1.8+	0.5+
1996 10 02	809	0.3+	0.4+	1998 04 01	704	0.9-	1.8+	1998 05 01	699	0.6+	0.1-
1996 10 03	809	0.3-	0.1+	1998 04 01	704	0.2-	0.5+	1998 05 16	704	1.8+	0.3+
1996 10 03	809	0.2-	0.3-	1998 04 20	704	0.1-	0.0	1998 05 16	704	1.3+	0.1+
1996 10 03	809	0.5-	0.3+	1998 04 20	704	0.6-	0.0	1998 05 16	704	0.2+	0.9-
1998 03 25	699	1.0+	1.8+	1998 04 20	704	0.5+	0.1-	1998 05 16	704	0.7-	0.1+
1998 03 25	699	0.7+	0.9+	1998 04 20	704	0.6-	0.6-	1998 05 16	704	1.1+	0.6+
1998 03 25	699	0.7-	0.1-	1998 04 20	704	1.0-	0.5-				

(8957)* 1998 FM₁₂₅ = 1969 UH = 1976 YF₂ = 1984 BE₅ = 1986 TX₁₈

Discovered 1998 Mar. 22 by T. Seki at Geisei.

Id. G. V. Williams (*MPC* 31770)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	105.81624			<i>P</i>		<i>Q</i>	
<i>n</i>	0.28871574	ω	153.57831	-0.07927807		-0.99579096	
<i>a</i>	2.2671960	Ω	300.93720	+0.90484121		-0.05252322	
<i>e</i>	0.1564628	<i>i</i>	3.07377	+0.41830296		-0.07511114	
<i>P</i>	3.41	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1969 10 16	095	(1.9-	3.1+)	1998 03 28	704	0.6+	0.8-	1998 04 19	704	0.5-	0.3-
1976 12 16	095	0.7+	0.1+	1998 03 28	704	0.5-	0.3-	1998 04 19	704	0.7-	0.7+
1976 12 18	095	0.9-	0.5-	1998 03 28	704	0.1+	0.0	1998 04 19	704	0.9-	0.1+
1976 12 20	095	0.4+	1.0+	1998 03 28	704	0.3+	0.6-	1998 04 19	704	0.3-	0.6+
1984 01 25	675	0.1+	0.1+	1998 03 29	704	0.1+	0.2-	1998 04 20	704	0.1-	0.4-
1984 01 26	675	0.4-	0.0	1998 03 29	704	0.5+	0.2-	1998 04 20	704	0.8+	0.3+
1986 10 07	095	0.4+	1.3-	1998 03 29	704	0.6+	0.2+	1998 04 20	704	0.7+	0.4+
1998 02 27	566	0.2-	1.0-	1998 03 29	704	0.6-	0.9-	1998 04 20	704	0.9+	0.1-
1998 02 27	566	0.2-	1.1-	1998 03 29	704	0.2-	0.1+	1998 04 20	704	0.2-	0.1+
1998 02 27	566	0.0	1.3-	1998 04 01	704	0.5+	0.5-	1998 04 22	691	1.6-	0.3-
1998 03 22	704	0.7+	0.5-	1998 04 01	704	0.0	0.3+	1998 04 22	691	1.4-	0.1+
1998 03 22	704	0.7+	0.4-	1998 04 01	704	0.1-	0.1-	1998 04 22	691	1.5-	0.0
1998 03 22	704	1.2+	0.5+	1998 04 01	704	1.6+	0.1-	1998 04 28	691	1.1-	0.1+
1998 03 22	704	(3.7+	1.2+)	1998 04 01	704	1.8-	1.4+	1998 04 28	691	1.6-	0.2+
1998 03 22	704	0.7+	0.3+	1998 04 18	704	0.1+	0.3-	1998 04 28	691	1.1-	0.1+
1998 03 22	372	2.0+	1.1+	1998 04 18	704	0.2+	0.8+	1998 05 02	699	0.1+	0.3-
1998 03 22	372	1.3+	0.2+	1998 04 18	704	0.2-	0.6-	1998 05 02	699	0.2+	0.6+
1998 03 25	372	(3.8-	0.1+)	1998 04 18	704	0.0	0.7+	1998 05 02	699	0.2+	0.5+
1998 03 28	704	0.5+	0.6-	1998 04 19	704	0.6-	0.2+				

(8958)* 1998 FJ₁₂₆ = 1977 QR₃ = 1977 RB₂₀ = 1991 YF₂ = 1050 T-1

Discovered 1998 Mar. 23 by J. Broughton at Reedy Creek.

Id. G. V. Williams (*MPC* 31770)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	254.69019			<i>P</i>		<i>Q</i>	
<i>n</i>	0.22143268	ω	353.43636	+0.92166337		+0.38778198	
<i>a</i>	2.7058782	Ω	343.72924	-0.35387842		+0.82673833	
<i>e</i>	0.0751206	<i>i</i>	2.60187	-0.15908079		+0.40758908	
<i>P</i>	4.45	<i>H</i>	13.6	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1971 03 24	675	0.3+	2.3-	1998 03 24	428	0.2-	0.5+	1998 04 21	704	0.4-	0.3+
1971 03 24	675	0.0	0.4-	1998 03 25	704	0.8-	0.6+	1998 04 21	704	0.2+	0.2-
1971 03 25	675	1.1-	1.3+	1998 03 25	704	1.0-	0.4-	1998 04 21	704	0.3-	0.0
1971 03 25	675	0.1+	0.5-	1998 03 25	704	0.3-	0.3+	1998 04 21	704	0.2+	0.2-
1971 03 25	675	1.0-	0.4-	1998 03 25	704	0.4-	1.1+	1998 04 22	704	0.2+	0.1+
1971 03 25	675	0.0	1.0-	1998 03 25	428	0.4+	0.5+	1998 04 22	704	0.6+	0.4+
1971 03 26	675	0.1+	1.2-	1998 03 25	428	0.3+	0.3+	1998 04 22	704	0.8+	0.2+
1971 03 26	675	0.1+	0.5-	1998 03 25	428	0.4+	0.6+	1998 04 22	704	0.1+	0.3+
1971 03 27	675	2.3-	0.3+	1998 03 29	704	0.6+	0.0	1998 04 22	704	(2.9-	0.5+)
1971 03 27	675	1.4+	0.0	1998 03 29	704	1.6+	0.1-	1998 04 24	428	0.2-	0.4-
1977 08 23	095	1.3-	1.6-	1998 03 29	704	0.9+	0.6-	1998 04 30	428	1.2-	1.4+
1977 09 09	675	1.2+	0.2-	1998 03 29	704	0.2+	0.0	1998 04 30	428	0.6-	0.5+
1977 09 09	095	0.4+	0.2+	1998 03 29	704	(0.0	2.2-)	1998 05 16	704	0.4-	0.5+
1977 09 10	675	0.9+	0.7-	1998 03 30	428	0.7+	0.1-	1998 05 16	704	0.8-	1.9+
1991 12 28	033	0.1+	0.2+	1998 03 30	428	0.3+	0.2+	1998 05 16	704	0.5-	1.0+
1991 12 28	033	0.6-	0.2+	1998 04 01	704	0.6+	0.2-	1998 05 16	704	0.2-	0.8-
1997 01 11	566	0.6+	0.2+	1998 04 01	704	0.8+	0.3+	1998 05 16	704	1.7-	0.1-
1997 01 11	566	0.0	0.0	1998 04 01	704	0.6+	1.2-	1998 05 28	699	0.7+	1.2-
1997 01 11	566	0.2+	0.0	1998 04 01	704	0.3-	0.7-	1998 05 28	699	0.4-	0.6-
1998 03 23	428	0.4-	0.2-	1998 04 01	704	0.3+	0.7-	1998 05 28	699	0.1+	1.1-
1998 03 23	428	0.1-	0.5+	1998 04 21	704	0.5+	0.1+				

(8959)* 2550 P-L = 1978 WT₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	346.68391	(2000.0)	P	Q
<i>n</i>	0.28179221	ω 227.43882	+0.25599169	+0.96617044
<i>a</i>	2.3041817	Ω 57.41901	-0.87565300	+0.24550395
<i>e</i>	0.2056355	<i>i</i> 2.13231	-0.40951199	+0.07900948
<i>P</i>	3.50	<i>H</i> 15.3	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1960 09 24	675	0.2-	0.2-	1994 03 05	691	0.1+	0.1-	1998 05 02	732	0.3+	0.3-
1960 09 26	675	0.0	0.1+	1994 03 05	691	0.2+	0.2-	1998 05 22	704	0.5+	1.0+
1960 09 28	675	0.7+	1.0+	1994 03 05	691	0.4-	0.1-	1998 05 22	704	1.1-	0.6+
1960 10 17	675	0.7-	0.0	1996 12 11	691	0.1-	0.5+	1998 05 22	704	0.1+	1.7+
1960 10 22	675	0.7-	0.5-	1996 12 11	691	0.0	0.3+	1998 05 22	704	0.4-	0.1-
1960 10 25	675	0.6+	0.1-	1996 12 11	691	0.3-	0.3+	1998 05 22	704	0.1+	0.2+
1960 10 26	675	0.4+	0.0	1996 12 14	691	0.1+	0.1+	1998 05 24	704	1.6+	1.1+
1978 11 29	675	0.2-	0.5+	1996 12 14	691	0.2+	0.2+	1998 05 24	704	0.5-	1.3+
1978 11 30	675	1.0-	1.0+	1996 12 14	691	0.4+	0.0	1998 05 24	704	0.5-	0.2-
1992 11 28	691	0.2+	0.9+	1998 05 01	732	1.8+	0.1-	1998 05 24	704	0.1+	0.6+
1992 11 28	691	0.0	0.9+	1998 05 01	732	0.2+	0.5-	1998 05 24	704	0.0	0.1+
1992 11 28	691	0.2+	0.6+	1998 05 02	732	1.4-	1.7-				

(8960)* 2575 P-L = 1978 GH₅ = 1995 XT₂

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 26414)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	23.66540	(2000.0)	P	Q
<i>n</i>	0.19989006	ω 145.46879	-0.79887462	+0.59887101
<i>a</i>	2.8969562	Ω 71.41847	-0.56435976	-0.71398376
<i>e</i>	0.0820003	<i>i</i> 3.39609	-0.20808027	-0.36274054
<i>P</i>	4.93	<i>H</i> 13.6	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1960 09 24	675	0.1-	0.9-	1995 12 07	327	0.1+	0.8+	1998 04 30	566	0.4+	0.1-
1960 09 26	675	0.7+	0.1-	1995 12 07	327	0.5-	0.2-	1998 05 05	699	0.2-	0.9-
1960 09 28	675	0.1+	0.2-	1995 12 19	691	0.9-	0.2+	1998 05 05	699	0.1-	0.2-
1960 09 29	675	0.6+	0.7-	1995 12 19	691	0.6-	0.0	1998 05 05	699	0.8+	1.0+
1960 10 17	675	0.5-	1.3+	1995 12 19	691	1.0-	0.0	1998 05 22	704	0.4+	0.5-
1960 10 22	675	0.9+	1.0+	1996 01 15	327	0.2+	0.4-	1998 05 22	704	0.6-	0.4-
1960 10 25	675	1.1+	1.4-	1996 01 15	327	0.3+	0.1+	1998 05 22	704	0.1+	0.4-
1960 10 26	675	0.6-	0.8-	1996 01 15	327	0.6-	0.4-	1998 05 22	704	0.2+	0.2+
1978 04 07	095	0.7-	1.4+	1997 01 14	566	0.9+	0.1-	1998 05 22	704	0.0	0.2-
1992 01 30	691	0.8-	0.1+	1997 01 14	566	1.1+	0.3-	1998 05 22	699	0.5+	0.5-
1992 01 30	691	0.8-	0.6-	1997 01 14	566	0.7+	0.3-	1998 05 22	699	0.4+	0.3-
1992 01 30	691	0.8-	0.2-	1998 04 22	704	0.1+	0.2-	1998 05 22	699	0.3+	0.3-
1992 02 04	675	0.3+	0.5-	1998 04 22	704	0.0	0.5-	1998 05 24	704	0.4+	0.9-
1992 02 04	675	0.3+	1.0-	1998 04 22	704	0.4+	1.1+	1998 05 24	704	1.3-	1.8-
1995 12 02	327	0.2+	0.3-	1998 04 22	704	1.0-	1.6+	1998 05 24	704	0.7-	0.2+
1995 12 02	327	0.1+	0.3-	1998 04 22	704	0.1+	0.8+	1998 05 24	704	0.2-	0.4+
1995 12 02	327	0.6-	0.3+	1998 04 30	566	0.5+	0.6-	1998 05 24	704	1.2-	1.1+
1995 12 07	327	0.6+	0.7+	1998 04 30	566	0.3+	0.8-				

(8961)* 2702 P-L = 1978 WN₁₅

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. E. Bowell (*MPC* 19035)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	40.80379	(2000.0)	P	Q
<i>n</i>	0.17249755	ω 152.08838	-0.98213854	+0.18774866
<i>a</i>	3.1960538	Ω 38.73941	-0.17611850	-0.89404482
<i>e</i>	0.1482337	<i>i</i> 1.13750	-0.06622808	-0.40673615
<i>P</i>	5.71	<i>H</i> 13.7	<i>G</i> 0.15	<i>U</i> 1

Residuals in seconds of arc

1960 09 24	675	0.2+	0.1+	1998 04 22	704	1.1+	0.0	1998 05 22	704	1.3+	0.7-
1960 09 26	675	0.7+	0.2-	1998 04 22	704	1.7-	0.2-	1998 05 22	704	0.1+	1.0-
1960 09 28	675	0.1-	0.0	1998 04 22	704	0.1-	0.9+	1998 05 22	704	1.5+	1.4-
1960 10 17	675	0.5-	2.5-	1998 04 22	704	1.1-	0.2+	1998 05 22	704	0.7+	1.5-
1960 10 22	675	1.1-	0.8-	1998 04 22	704	1.4-	0.5+	1998 05 22	699	0.1-	0.2+
1960 10 25	675	0.2+	0.4-	1998 04 24	684	0.1+	0.1-	1998 05 22	699	0.4+	0.1-
1978 11 30	675	2.1+	0.4-	1998 04 24	684	0.1+	0.0	1998 05 22	699	0.7+	0.6-
1978 12 01	675	2.3+	0.5-	1998 04 25	809	(3.3+ 3.4+)		1998 05 24	704	0.8-	1.0-
1993 07 13	809	0.2-	1.0-	1998 04 25	809	(1.6+ 2.9+)		1998 05 24	704	0.6-	0.4+
1993 07 13	809	0.7-	0.6-	1998 04 25	809	(2.4+ 3.5+)		1998 05 24	704	(0.4+ 2.1-)	
1993 07 13	809	0.6-	1.1-	1998 04 25	684	0.3+	0.1-	1998 05 24	704	1.1+	0.5-
1993 07 26	809	0.5+	1.1+	1998 04 25	684	0.5+	0.1-	1998 05 24	704	0.1+	0.3-
1993 07 26	809	0.7-	1.8+	1998 04 28	809	(3.5+ 3.4+)		1998 06 02	749	0.5-	0.4+
1993 07 26	809	(1.4- 3.0+)		1998 04 28	809	(2.1+ 3.0+)		1998 06 02	749	0.6+	0.1+
1997 02 01	691	0.8-	0.3+	1998 04 28	809	(2.7+ 2.3+)		1998 06 02	749	0.1+	0.5+
1997 02 01	691	0.4-	0.4-	1998 05 01	704	0.1-	0.1+	1998 06 03	749	0.6-	0.4-
1997 02 01	691	0.6-	0.3-	1998 05 01	704	0.0	0.3+	1998 06 03	749	0.7-	0.4-
1997 02 06	691	0.5-	0.2-	1998 05 01	704	0.3-	0.7+	1998 06 03	749	0.7+	0.9-
1997 02 06	691	0.4-	0.1-	1998 05 01	704	1.6-	1.6+				
1997 02 06	691	0.3-	0.4-	1998 05 22	704	0.8+	1.4-				

(8962)* 2771 P-L

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	160.66311	(2000.0)	P	Q
<i>n</i>	0.17233956	ω 28.71544	+0.37338257	-0.92617665
<i>a</i>	3.1980070	Ω 39.42528	+0.83446604	+0.31048185
<i>e</i>	0.0724556	<i>i</i> 4.76431	+0.40528001	+0.21400428
<i>P</i>	5.72	<i>H</i> 12.5	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1960 09 24	675	0.8+	0.4+	1995 11 16	399	2.0-	0.3-	1998 05 22	699	0.6+	0.2-
1960 09 26	675	0.5-	0.0	1995 11 18	399	0.1+	0.8+	1998 05 22	704	1.5-	0.1-
1960 09 28	675	0.5-	0.1+	1995 11 18	399	0.7+	0.2+	1998 05 22	699	1.1+	0.8-
1960 09 29	675	0.7-	0.1-	1998 04 21	704	1.0+	0.1+	1998 05 22	704	1.9-	0.0
1960 10 26	675	0.3+	0.8+	1998 04 21	704	0.7+	0.2+	1998 05 23	704	0.3+	0.9+
1991 02 10	675	0.2-	0.7-	1998 04 21	704	0.2+	1.7+	1998 05 23	704	0.0	0.9-
1991 02 10	675	0.2+	0.1-	1998 04 21	704	0.8+	1.2+	1998 05 23	704	0.5+	0.2+
1992 04 05	691	0.6+	0.0	1998 04 21	704	0.1+	1.1+	1998 05 23	704	0.1+	0.6+
1992 04 05	691	0.5-	0.3+	1998 04 25	699	0.2-	0.6+	1998 05 23	704	0.3+	0.7+
1992 04 05	691	0.5-	0.2-	1998 04 25	699	0.1+	0.3+	1998 05 23	704	0.2-	0.0
1995 10 24	033	0.9+	0.7+	1998 04 25	699	0.1+	0.9+	1998 05 23	704	0.3+	0.2-
1995 10 25	033	1.5-	0.4-	1998 05 01	704	0.0	0.2+	1998 05 23	704	0.1+	1.3+
1995 10 25	033	0.2+	1.4+	1998 05 01	704	0.3+	0.1+	1998 05 23	704	2.1-	0.4+
1995 10 26	033	0.9+	0.4+	1998 05 01	704	1.2+	0.6-	1998 05 23	704	0.6-	0.4+
1995 10 26	411	0.4-	0.7-	1998 05 01	704	0.5-	0.8-	1998 05 24	704	0.9+	0.2-
1995 10 26	411	0.1+	0.2-	1998 05 22	704	0.3+	1.9-	1998 05 24	704	0.1-	0.6-
1995 10 27	411	0.4-	0.4+	1998 05 22	704	0.4+	0.2+	1998 05 24	704	0.2+	0.3-
1995 10 27	411	0.2+	0.1+	1998 05 22	704	0.5-	1.7+	1998 05 24	704	0.3+	0.5-
1995 11 16	399	0.1+	1.4+	1998 05 22	699	0.4+	0.3-	1998 05 24	704	0.4-	0.5-

(8963)* 4651 P-L = 1994 PW₉

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. B. G. Marsden (*MPC* 24402)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	350.39301	(2000.0)	P	Q
<i>n</i>	0.17147142	ω 9.45277	-0.82960022	+0.55835139
<i>a</i>	3.2087919	Ω 204.48968	-0.51270546	-0.76366587
<i>e</i>	0.1230020	<i>i</i> 0.37106	-0.22112573	-0.32412679
<i>P</i>	5.75	<i>H</i> 13.1	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1960 09 24	675	0.0	0.2+	1994 09 03	809	0.9+	1.1+	1998 03 28	704	0.2+	0.4-
1960 09 25	675	0.6-	0.5+	1994 09 03	809	0.3+	0.5+	1998 03 28	704	0.2-	0.4+
1960 09 26	675	0.0	0.8+	1994 09 03	809	0.0	1.0+	1998 03 28	704	0.2+	0.0
1960 09 26	675	0.4-	0.2-	1994 09 04	809	1.1+	0.4+	1998 03 28	704	0.3-	0.3-
1960 09 28	675	0.2-	0.2+	1994 09 04	809	0.7+	0.9+	1998 03 28	704	0.2+	0.3-
1960 10 22	675	0.6+	1.4-	1994 09 04	809	0.7+	1.3+	1998 03 29	704	0.1-	0.2+
1960 10 25	675	0.5+	1.3-	1998 03 20	704	0.0	0.1+	1998 03 29	704	0.1-	0.5+
1960 10 26	675	1.1+	1.3-	1998 03 20	704	0.6+	0.6-	1998 03 29	704	0.9-	0.3+
1992 03 02	809	0.2+	0.3+	1998 03 20	704	0.1+	0.1-	1998 03 29	704	0.6-	0.1+
1992 04 06	809	0.1+	0.1-	1998 03 20	704	0.6-	0.4+	1998 03 29	704	1.2-	0.5-
1994 08 10	809	1.4-	1.6-	1998 03 20	704	0.4+	0.1-	1998 04 19	704	1.3+	0.0
1994 08 10	809	1.5-	1.8-	1998 03 22	704	0.0	0.6-	1998 04 19	704	0.5+	0.3-
1994 08 10	809	1.3-	1.8-	1998 03 22	704	0.0	0.4-	1998 04 19	704	0.1-	0.1-
1994 08 11	809	0.5+	0.2-	1998 03 22	704	0.7-	0.2-	1998 04 19	704	1.7+	0.4+
1994 08 11	809	0.5+	0.1+	1998 03 22	704	0.1-	0.0	1998 04 19	704	0.1-	0.5-
1994 08 11	809	0.2-	0.5-	1998 03 22	704	1.1-	0.6-				

(8964)* 7643 P-L = 4118 T-2

Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. D. W. E. Green (*MPC* 14962)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		164.60058		(2000.0)		P		Q	
<i>n</i>		0.30363549	ω	287.65933		+0.20200385		-0.97868081	
<i>a</i>		2.1923053	Ω	150.60811		+0.92480336		+0.17813101	
<i>e</i>		0.1047501	<i>i</i>	4.33836		+0.32238670		+0.10224098	
<i>P</i>		3.25	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1960 10 17	675	0.4+	0.8-	1973 10 04	675	0.1+	0.9+	1998 04 28	691	1.1-	0.3+
1960 10 22	675	1.1+	0.6+	1973 10 05	675	0.8+	1.0-	1998 04 28	691	1.3-	0.3+
1960 10 25	675	0.1+	0.5+	1973 10 05	675	0.7+	0.6+	1998 05 05	699	(0.2- 2.7+)	
1960 10 26	675	2.4-	1.8+	1991 02 13	675	1.0-	0.6-	1998 05 05	699	0.3-	1.1+
1973 09 19	675	0.7+	2.1-	1991 02 13	675	0.8-	0.2+	1998 05 05	699	0.6+	1.0-
1973 09 19	675	(1.0+ 2.7-)		1991 03 11	809	0.2+	0.7+	1998 05 22	704	0.1-	0.3+
1973 09 20	675	1.8-	0.9-	1991 03 11	809	0.6+	0.2+	1998 05 22	704	0.0	0.3-
1973 09 24	675	0.1-	0.1-	1991 03 11	809	1.2+	0.3-	1998 05 22	704	0.7-	1.2-
1973 09 24	675	0.6-	0.8-	1991 03 13	809	0.6-	1.5-	1998 05 22	704	0.4+	1.1-
1973 09 25	675	1.5-	0.2+	1991 03 13	809	0.5-	1.5-	1998 05 24	704	0.7+	0.2+
1973 09 25	675	0.9+	0.3+	1991 03 13	809	0.5-	1.4-	1998 05 24	704	1.1-	1.8-
1973 09 29	675	0.0	0.9-	1998 04 22	704	0.2-	0.4+	1998 05 24	704	1.4+	0.3+
1973 09 29	675	0.5+	0.5-	1998 04 22	704	0.2+	0.4+	1998 05 24	704	0.8+	1.2-
1973 09 30	675	1.3+	0.6-	1998 04 22	704	0.4+	0.9+	1998 05 24	704	0.3+	0.1-
1973 09 30	675	1.2+	0.8-	1998 04 22	704	0.5+	0.4+				
1973 10 04	675	0.2-	0.4-	1998 04 28	691	1.0-	0.6+				

(8965)* 9511 P-L = 1978 VK₁₁

Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. T. Kobayashi (*MPC* 14630)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		344.56332		(2000.0)		P		Q	
<i>n</i>		0.17534778	ω	101.56233		-0.13562068		+0.99074855	
<i>a</i>		3.1613253	Ω	160.64108		-0.91470776		-0.12329499	
<i>e</i>		0.1289743	<i>i</i>	0.85291		-0.38067933		-0.05670681	
<i>P</i>		5.62	<i>H</i>	13.3		<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1954 07 03	675	0.7-	0.7+	1991 01 16	675	(2.2-	0.6-)	1994 10 26	691	0.4-	0.9+
1954 07 03	675	0.0	0.3+	1991 01 18	511	(0.8+	2.3-)	1994 10 26	691	1.3-	0.7+
1960 10 17	675	0.2+	0.4-	1991 01 18	511	1.3+	1.7-	1998 04 22	704	1.1+	0.4-
1960 10 22	675	0.3-	0.1+	1991 01 19	511	(4.9-	1.1-)	1998 04 22	704	2.0+	1.0-
1960 10 24	675	0.7+	0.0	1991 01 19	511	(3.2-	0.1-)	1998 04 22	704	(0.3-	3.1-)

1960 10 26	675	0.4-	0.1+	1991 01 20	511	0.2+	0.8-	1998 04 22	704	(0.4- 2.2-)	
1978 11 05	675	(2.9- 0.5-)		1991 01 20	511	0.5-	1.6-	1998 05 01	704	0.5+	0.6-
1978 11 06	675	1.8-	0.4-	1993 07 13	809	(4.4+ 3.0+)		1998 05 01	704	0.7-	1.0+
1978 11 07	675	(2.9- 1.0+)		1993 07 13	809	(3.6+ 2.9+)		1998 05 01	704	1.9-	0.4-
1988 09 12	675	(2.8- 1.4-)		1993 07 13	809	(3.5+ 2.6+)		1998 05 01	704	0.8-	1.7-
1988 09 12	675	1.0-	2.3-	1993 07 13	809	0.3-	0.3-	1998 05 22	704	0.3-	0.3-
1988 09 14	807	0.9+	0.5+	1993 07 13	809	0.0	0.4-	1998 05 22	704	0.3-	0.1+
1988 09 15	807	1.5+	0.5+	1993 07 13	809	1.3-	0.4-	1998 05 22	704	0.5+	0.8-
1988 09 15	675	0.4+	1.3-	1993 07 20	809	1.1+	0.5-	1998 05 22	704	0.0	0.3+
1988 09 15	675	1.1+	1.4-	1993 07 20	809	0.2+	0.8-	1998 05 22	704	(0.0 2.2-)	
1988 09 16	807	1.3+	0.1-	1993 07 20	809	0.2+	0.2-	1998 05 22	699	0.5+	0.0
1988 09 16	675	1.2-	0.7-	1993 07 20	809	0.0	0.1+	1998 05 22	699	0.1-	0.1+
1988 09 16	675	0.9-	1.3-	1993 07 20	809	0.9-	0.5+	1998 05 22	699	0.2+	0.2+
1988 10 04	807	1.0+	0.9+	1993 07 20	809	0.6-	0.8+	1998 05 24	704	0.0	0.0
1988 10 05	807	1.6+	0.9+	1993 07 24	809	(3.5+ 0.5+)		1998 05 24	704	0.0	0.2-
1988 10 08	807	1.7+	0.6+	1993 07 24	809	1.1-	0.2+	1998 05 24	704	0.8-	0.4+
1988 11 03	807	1.3+	0.7-	1994 10 08	691	1.0-	0.4+	1998 05 24	704	0.1-	0.6+
1988 11 06	807	1.0+	0.5-	1994 10 08	691	0.9-	0.5+	1998 05 24	704	0.9+	0.3+
1991 01 16	675	0.7-	0.1+	1994 10 08	691	1.2-	0.4+				

(8966)* 3287 T-1 = 1954 CJ = 1990 TZ₇

Discovered 1971 Mar. 26 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. T. Kobayashi (*MPC* 23987)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		80.74540		(2000.0)		P		Q	
<i>n</i>		0.18484755	ω	279.17656		-0.70245795		-0.71169036	
<i>a</i>		3.0520636	Ω	215.45138		+0.65767325		-0.64529325	
<i>e</i>		0.1471016	<i>i</i>	0.69612		+0.27206383		-0.27765708	
<i>P</i>		5.33	<i>H</i>	13.8		<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1954 02 03	711	0.6-	0.9+	1990 10 13	033	0.7-	0.1+	1998 04 25	699	0.1-	1.0-
1954 02 04	711	0.7-	0.4-	1990 10 13	033	0.9+	0.4+	1998 05 01	704	0.1+	0.7-
1954 02 05	711	1.0+	0.1-	1990 10 14	033	0.1+	0.1+	1998 05 01	704	0.1+	1.0+
1954 02 06	711	0.3+	0.1+	1990 10 18	033	0.3-	0.8-	1998 05 01	704	0.0	0.7+
1971 03 24	675	1.0+	0.7+	1998 04 21	704	0.0	0.3-	1998 05 01	704	0.1-	0.4+
1971 03 25	675	(6.9+ 4.9-)		1998 04 21	704	0.2-	0.3-	1998 05 22	704	0.3+	0.4+
1971 03 26	675	(3.9+ 3.8-)		1998 04 21	704	0.3-	0.4-	1998 05 22	704	0.6+	1.3+
1971 03 26	675	(4.3+ 4.6-)		1998 04 21	704	1.5+	0.6-	1998 05 22	704	(0.6+ 2.2+)	
1971 03 27	675	1.2-	1.3-	1998 04 22	704	0.1-	0.5-	1998 05 22	704	0.6+	1.4-
1971 04 02	675	1.4-	0.4-	1998 04 22	704	0.2+	0.6+	1998 05 22	704	(4.9- 1.9+)	
1971 04 16	675	0.0	0.6-	1998 04 22	704	0.3+	0.5-	1998 05 24	704	(2.7- 0.2-)	
1971 04 16	675	0.0	1.1-	1998 04 22	704	0.3+	1.7-	1998 05 24	704	1.9-	0.7+
1971 05 14	675	1.8+	1.2+	1998 04 22	704	(6.4- 1.7+)		1998 05 24	704	1.3-	0.1-
1971 05 14	675	0.3+	1.3+	1998 04 25	699	0.1-	0.6+				
1971 05 16	675	0.1+	1.0+	1998 04 25	699	0.0	1.1+				

(8967)* 4878 T-1 = 1978 RM₁₁ = 1992 EH₁₅

Discovered 1971 May 13 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 30466)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		247.31414		(2000.0)		P		Q	
<i>n</i>		0.18405518	ω	173.19818		+0.96286876		+0.26869622	
<i>a</i>		3.0608169	Ω	171.08340		-0.25497229		+0.93697618	
<i>e</i>		0.1066470	<i>i</i>	9.72924		-0.08872922		+0.22333381	
<i>P</i>		5.35	<i>H</i>	12.6		<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1971 05 13	675	0.7-	0.7+	1998 03 24	704
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1998 JUNE 10

1978 09 10	809	0.3+	1.9-	1998 04 21	704	0.0	0.2-	1998 04 24	704	0.6+	0.4+
1978 09 10	809	0.2-	0.1+	1998 04 21	704	0.2-	0.4+	1998 04 24	704	0.1+	0.2+
1978 09 10	809	0.6+	0.4-	1998 04 21	704	0.2-	0.3-	1998 04 24	704	0.8+	0.7+
1992 03 01	809	0.2+	0.4-	1998 04 21	704	0.5-	0.6+	1998 04 25	684	0.2-	0.3-
1992 03 03	809	1.3-	0.0	1998 04 23	704	0.5-	0.9+	1998 04 25	684	0.2-	0.1-
1992 03 06	809	1.2+	0.7-	1998 04 23	704	0.5-	0.7-	1998 05 24	699	0.4+	0.7+
1992 04 07	809	0.3-	0.3+	1998 04 23	704	0.7-	0.5+	1998 05 24	699	1.0+	0.2-
1998 03 24	704	0.7-	0.5-	1998 04 23	704	0.5-	0.3+	1998 05 24	699	0.2+	0.3-

(8968)* 1212 T-2 = 1978 SX₁ = 1989 UU₆

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. H. Kaneda (*MPC* 16037)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
<i>M</i>	280.81682	(2000.0)		<i>P</i>	<i>Q</i>		
<i>n</i>	0.18841157	ω	142.06521	+0.94029794	+0.33612591		
<i>a</i>	3.0134524	Ω	198.51123	-0.33865251	+0.90830069		
<i>e</i>	0.1147663	<i>i</i>	9.69585	-0.03397441	+0.24901653		
<i>P</i>	5.23	<i>H</i>	12.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1955 03 24	675	1.6-	1.5+	1994 09 04	411	1.3-	0.2+	1998 05 22	704	0.5-	1.1+
1955 03 24	675	0.9-	1.2+	1997 04 28	704	0.5-	0.1-	1998 05 22	704	0.2-	0.5-
1973 09 29	675	0.8+	0.1-	1997 04 28	704	0.4-	0.3-	1998 05 22	704	0.3-	0.1-
1973 09 29	675	0.0	0.8+	1997 04 28	704	0.0	0.3-	1998 05 23	699	0.0	0.2+
1973 09 30	675	0.1+	0.9+	1997 04 28	704	1.0-	0.9+	1998 05 23	699	0.5-	0.0
1973 09 30	675	0.0	2.4+	1997 04 28	704	1.8-	0.2-	1998 05 23	699	0.0	0.2-
1973 10 04	675	1.7+	0.3-	1997 04 29	704	1.4+	0.4-	1998 05 24	704	0.4+	0.1+
1973 10 04	675	0.6+	1.2-	1997 04 29	704	1.7+	0.3+	1998 05 24	704	0.3-	0.2-
1973 10 05	675	0.3-	1.4-	1997 04 29	704	1.5+	0.3-	1998 05 24	704	0.1-	0.3+
1973 10 05	675	0.8+	1.1-	1997 04 29	704	1.4+	0.7-	1998 05 24	704	0.8+	0.3-
1978 09 26	095	(2.3-	5.5+)	1997 04 29	704	1.7+	0.0	1998 05 24	699	0.3+	0.2+
1989 09 30	675	(2.9+	0.3-)	1998 05 02	910	0.4+	0.4-	1998 05 24	704	0.5-	0.8+
1989 10 21	364	0.9+	1.5+	Y 1998 05 02	910	0.3+	0.4-	1998 05 24	699	0.2+	0.5-
1989 10 21	364	(1.0+	2.8-)	Y 1998 05 02	910	0.3+	0.4-	1998 05 24	699	0.1+	0.1+
1989 10 23	364	0.2-	2.2+	1998 05 05	699	0.4-	0.1-	1998 06 03	704	0.3-	1.1+
1989 10 23	364	(1.5-	3.2+)	1998 05 05	699	0.3-	0.2+	1998 06 03	704	0.3+	0.3+
1989 11 02	046	1.3-	0.2-	1998 05 05	699	0.6-	0.1+	1998 06 03	704	0.2-	0.4+
1989 11 02	046	1.7-	1.4+	1998 05 22	704	0.4+	0.5-	1998 06 03	704	0.7-	1.3+
1994 09 04	411	1.1-	0.6-	1998 05 22	704	0.9+	1.0+	1998 06 03	704	(1.3-	2.0+)

(8969)* 1218 T-2 = 1981 YJ₁ = 1990 ET₅

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 17220)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
<i>M</i>	162.14584	(2000.0)		<i>P</i>	<i>Q</i>		
<i>n</i>	0.26402852	ω	283.50789	+0.21158156	-0.97733327		
<i>a</i>	2.4064056	Ω	154.27358	+0.90306819	+0.19264659		
<i>e</i>	0.0790282	<i>i</i>	0.96031	+0.37376609	+0.08778936		
<i>P</i>	3.73	<i>H</i>	14.1	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1955 12 12	675	2.1+	0.6-	1988 10 07	675	1.8+	0.4+	1998 04 22	704	0.2+	0.6-
1955 12 12	675	1.1-	0.1+	1988 10 07	675	0.3+	0.6+	1998 04 22	704	0.3-	0.6-
1973 09 19	675	1.6-	0.8-	1990 03 04	809	0.2-	0.0	1998 04 22	704	0.8-	1.7-
1973 09 19	675	2.2-	0.0	1990 03 04	809	0.2+	0.1-	1998 04 22	704	0.5-	0.2-
1973 09 20	675	1.7-	0.5-	1990 03 04	809	0.5+	0.2-	1998 05 18	699	0.4-	0.1+
1973 09 24	675	0.4-	0.0	1990 03 06	809	0.4-	0.1-	1998 05 18	699	1.1+	0.8-
1973 09 24	675	0.2+	1.4-	1990 03 06	809	0.4-	0.1-	1998 05 18	699	1.1+	0.0
1973 09 25	675	(2.9-	3.0-)	1990 03 06	809	0.4-	0.1-	1998 05 22	704	1.5+	2.1-
1973 09 25	675	1.3-	0.3+	1992 10 25	675	0.0	0.3+	1998 05 22	704	0.7+	1.5+
1973 09 29	675	0.1-	0.5-	1992 10 25	675	0.3+	0.4+	1998 05 22	704	0.2-	0.1-
1973 09 29	675	0.8+	0.8-	1992 11 16	399	0.0	0.7-	1998 05 22	704	(2.2-	3.7+)
1973 09 30	675	1.5+	0.1-	1992 11 16	399	0.1+	0.6+	1998 05 22	704	2.0-	1.3+

M.P.C. 31939

1973 09 30	675	1.5+	0.0	1992 11 18	399	1.3-	1.4+	1998 05 24	704	0.3+	0.5-
1973 10 04	675	0.8+	0.5+	1992 11 18	399	(2.5-	1.0-)	1998 05 24	704	0.7+	0.3-
1973 10 04	675	0.3+	0.4+	1992 11 28	675	(1.1-	2.2-)	1998 05 24	704	0.3-	0.3+
1973 10 05	675	0.5+	1.1-	1992 11 28	675	1.5+	0.1+	1998 05 24	704	0.6+	0.5+
1973 10 05	675	(2.5+	1.1-)	1996 12 30	689	1.9-	0.5-	1998 05 24	704	0.6+	1.1-
1981 12 20	801	0.5+	0.7-	1998 04 22	704	0.2+	1.0-				

(8970)* 1355 T-2 = 1992 CX₁

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. K. Ichikawa (*MPC* 24404)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
<i>M</i>	58.17286	(2000.0)		<i>P</i>	<i>Q</i>		
<i>n</i>	0.18172077	ω	89.91969	-0.92336201	-0.38389739		
<i>a</i>	3.0869742	Ω	67.50500	+0.35004408	-0.84718374		
<i>e</i>	0.1229006	<i>i</i>	0.31252	+0.15770777	-0.36729077		
<i>P</i>	5.42	<i>H</i>	13.8	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1973 09 19	675	0.0	0.6-	1973 10 05	675	0.0	2.1-	1996 12 19	327	0.1+	0.2-
1973 09 19	675	0.2+	0.2+	1973 10 05	675	1.0-	1.4-	1996 12 22	327	1.1+	0.7-
1973 09 24	675	0.2-	0.1+	1973 10 05	675	1.1-	0.3-	1996 12 22	327	0.4-	0.2+
1973 09 24	675	1.3-	0.6+	1973 10 05	675	0.4+	1.1-	1996 12 22	327	0.9+	0.0
1973 09 25	675	0.0	2.3-	1973 10 05	675	(2.8-	1.1+)	1998 04 21	704	0.5+	0.1+
1973 09 29	675	(1.4+	4.0-)	1992 02 04	675	1.0-	1.2-	1998 04 21	704	0.2+	0.1-
1973 09 29	675	0.8-	0.4+	1992 02 12	303	(3.1-	0.6-)	1998 04 21	704	0.2-	0.1-
1973 09 29	675	0.7+	1.8-	1992 02 13	303	1.5-	1.2-	1998 04 21	704	0.1-	0.2-
1973 09 29	675	0.6+	1.0+	1992 02 27	675	0.3+	0.6+	1998 04 21	704	0.6-	0.3+
1973 09 29	675	(1.0+	3.0-)	1992 02 27	675	(2.4-	0.2+)	1998 04 22	704	0.2+	0.5-
1973 09 30	675	1.4+	0.2-	1992 02 28	675	0.0	0.3-	1998 04 22	704	0.1-	0.4-
1973 09 30	675	1.0+	0.4+	1992 02 28	675	0.9-	0.2+	1998 04 22	704	0.1+	0.4-
1973 09 30	675	1.2+	2.0+	1995 10 15	691	0.1+	0.1+	1998 04 22	704	0.5+	0.5-
1973 09 30	675	0.2-	0.6+	1995 10 15	691	0.2-	0.3+	1998 04 22	704	1.2+	1.1-
1973 09 30	675	0.4-	2.2-	1995 10 15	691	0.2-	0.2-	1998 04 30	699	0.3-	0.8+
1973 09 30	675	1.9+	1.4+	1995 10 21	691	1.1-	0.7+	1998 04 30	699	0.4+	0.6-
1973 10 04	675	1.0+	0.1+	1995 10 21	691	0.7-	0.6+	1998 04 30	699	0.5+	0.1+
1973 10 04	675	2.0+	0.2-	1995 10 21	691	0.8-	0.5+	1998 05 01	699	0.3-	1.0+
1973 10 04	675	0.6-	0.4-	1995 10 27	691	0.0	0.8+	1998 05 01	699	0.6+	0.1+
1973 10 04	675	0.2-	0.6-	1995 10 27	691	0.6-	0.7+	1998 05 01	699	0.8+	0.2-
1973 10 04	675	0.8+	0.8-	1995 10 27	691	0.0	0.7+	1998 05 20	691	0.8-	0.2+
1973 10 04	675	0.9-	0.8+	1996 12 19	327	0.4+	0.2+	1998 05 20	691	1.2-	0.3+
1973 10 05	675	0.1-	0.8-	1996 12 19	327	0.2+	0.2+	1998 05 20	691	1.0-	0.5+

(8971)* 2256 T-2 = 1995 UX₄

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 25970)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
<i>M</i>	109.38964	(2000.0)		<i>P</i>	<i>Q</i>		
<i>n</i>	0.18051311	ω	329.76680	-0.27800576	-0.96053610		
<i>a</i>	3.1007271	Ω	136.37261	+0.88394095	-0.25953052		
<i>e</i>	0.1484936	<i>i</i>	0.75745	+0.37598031	-0.10007152		
<i>P</i>	5.46	<i>H</i>	13.4	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1973 09 19	675	0.2+	1.1-	1997 02 04	691	0.8-	0.5-	1998 04 22	704	1.1+	0.4-
1973 09 19	675	1.2-	0.2-	1997 02 04	691	0.8-	0.6-	1998 04 22	704	0.3-	0.6-
1973 09 20	675	0.1-	1.5-	1997 02 04	691	0.9-	0.8-	1998 05 01	704	0.4+	0.3-
1973 09 24	675	1.2+	0.1-	1997 02 07	610	1.5+	0.2-	1998 05 01	704	0.5-	0.2+
1973 09 24	675	0.6-	0.4-	1997 02 07	610	1.2+	0.2+	1998 05 01	704	0.2+	0.2+
1973 09 25	675	(1.9+	3.0-)	1997 02 07	610	0.9+	0.5+	1998 05 01	704	0.6+	0.8-
1973 09 25	675	(0.9+	2.6-)	1997 02 07	610	0.7+	0.7+	1998 05 03	566	0.4-	1.7-
1973 09 29	675	1.2+	0.5-	1997 02 08	610	0.3-	0.3+	1998 05 03	566	1.6-	1.5-
1973 09 29	675	0.4+	0.1+	1997 02 08	610	0.1-	0.2+	1998 05 03	566	0.6-	0.9-
1973 09 30	675	1.2+	0.4-	1997 02 08	610	0.0	0.1+	1998 05 22	704	0.1+	1.4+

1973 09 30	675	1.2+	1.9-	1997 02 09	691	0.3-	0.8-	1998 05 22	704	0.7-	0.4+
1973 10 04	675	0.4-	0.2+	1997 02 09	691	0.2-	0.6-	1998 05 22	704	1.3-	0.4-
1973 10 04	675	0.6-	0.5-	1997 02 09	691	0.3-	0.8-	1998 05 22	704	0.7+	0.7-
1973 10 05	675	0.2+	0.7-	1997 02 09	610	0.8+	0.3+	1998 05 22	704	0.5-	1.0+
1973 10 05	675	1.1+	2.2-	1997 02 09	610	0.7+	0.0	1998 05 23	704	0.7-	0.1-
1995 10 24	587	0.5-	0.1-	1997 02 09	610	0.3+	0.4-	1998 05 23	704	0.6-	0.8+
1995 10 24	587	0.5+	0.5+	1997 02 14	691	1.0-	0.5-	1998 05 23	704	0.3-	0.9+
1995 10 26	587	1.2-	1.8-	1997 02 14	691	1.1-	0.9-	1998 05 23	704	0.7-	0.4-
1995 10 26	587	0.1-	0.4-	1997 02 14	691	1.1-	0.6-	1998 05 23	704	1.0+	1.0-
1995 10 27	587	0.0	0.5-	1998 04 21	704	0.2+	1.0-	1998 05 24	704	0.0	0.1+
1995 10 27	587	0.3+	0.3+	1998 04 21	704	0.5+	0.7-	1998 05 24	704	0.6+	0.1+
1995 10 27	587	0.3+	0.1-	1998 04 21	704	1.0+	0.9-	1998 05 24	704	1.7-	1.5+
1995 10 31	587	0.5+	0.8+	1998 04 21	704	1.2+	0.7-	1998 05 24	704	1.4-	0.5-
1995 10 31	587	0.2+	0.0	1998 04 21	704	0.6-	0.6-	1998 05 24	704	0.5-	0.1-
1995 11 14	587	0.3-	1.1+	1998 04 22	704	0.9+	0.3-				
1995 11 14	587	0.1-	1.2+	1998 04 22	704	1.2+	0.5+				

(8972)* 2319 T-2 = 1986 WC₄ = 1992 OM₁

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. T. Kobayashi (*MPC* 21125)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		295.75785		(2000.0)		P		Q	
<i>n</i>		0.30767024	ω	109.47413		+0.83632906		+0.54770455	
<i>a</i>		2.1730967	Ω	217.32699		-0.51663820		+0.77277345	
<i>e</i>		0.1327989	<i>i</i>	2.26332		-0.18340849		+0.32068821	
<i>P</i>		3.20	<i>H</i>	15.1		<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1973 09 29	675	0.2-	0.1+	1992 07 26	010	0.6+	1.2+	1998 05 06	120	0.2-	0.7-
1973 09 29	675	0.3+	2.3+	1994 01 12	691	0.0	0.5-	1998 05 06	120	0.6+	0.6-
1973 09 30	675	0.7-	0.8-	1994 01 12	691	0.0	0.5-	1998 05 07	120	0.6-	0.2-
1973 09 30	675	0.8-	2.0-	1994 01 12	691	0.4-	0.1+	1998 05 07	120	0.3+	0.3+
1973 10 04	675	1.5+	1.8-	1994 02 14	675	0.1-	0.1-	1998 05 22	704	0.2-	0.4-
1973 10 04	675	0.7+	1.0-	1994 02 14	675	0.0	0.6+	1998 05 22	704	0.1-	0.3+
1973 10 05	675	0.5+	0.6-	1998 04 22	704	0.7+	0.1+	1998 05 22	704	0.1+	1.1-
1973 10 05	675	0.7+	1.5-	1998 04 22	704	0.6-	0.9+	1998 05 22	704	0.7-	0.7+
1986 11 25	010	0.9-	1.1-	1998 04 22	704	(0.9+	2.6-)	1998 05 22	704	0.2-	0.4+
1986 11 25	010	(3.1+	0.3+)	1998 04 22	704	0.8+	0.3+	1998 05 22	699	0.0	0.2-
1986 11 25	010	0.6-	0.8-	1998 04 22	704	0.2-	0.7+	1998 05 22	699	0.3-	0.2+
1986 11 25	010	2.3+	0.1-	1998 05 01	704	0.6-	1.6-	1998 05 22	699	0.4+	0.1+
1992 07 25	010	0.6-	0.2+	1998 05 01	704	0.4-	0.4-	1998 05 24	704	0.3+	0.7-
1992 07 25	010	1.0-	0.2+	1998 05 01	704	0.8-	0.4-	1998 05 24	704	0.6+	1.4-
1992 07 25	010	1.4-	0.9+	1998 05 01	704	0.8-	1.2-	1998 05 24	704	(2.3-	1.4-)
1992 07 26	010	0.8+	0.4+	1998 05 06	120	0.1-	0.1-	1998 05 24	704	(0.6+	2.2+)
1992 07 26	010	0.5+	0.2-	1998 05 06	120	0.1-	0.8-	1998 05 24	704	0.4+	1.8-

(8973)* 3297 T-2 = 1977 UF₅

Discovered 1973 Sept. 30 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. E. Bowell (*MPC* 18133)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		28.00606		(2000.0)		P		Q	
<i>n</i>		0.26610760	ω	173.98626		-0.82430567		+0.56391948	
<i>a</i>		2.3938551	Ω	40.47500		-0.52259445		-0.72383516	
<i>e</i>		0.1591103	<i>i</i>	4.43099		-0.21775033		-0.39756443	
<i>P</i>		3.70	<i>H</i>	14.7		<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1954 06 30	675	0.5-	0.6+	1977 10 18	675	0.7+	0.8+	1998 04 25	809	1.6+	1.0-
1954 06 30	675	0.1+	0.4+	1977 10 19	675	1.6-	0.8+	1998 04 28	809	1.1+	0.8-
1973 09 19	675	1.3+	2.1-	1988 10 07	675	0.7+	2.0-	1998 04 28	809	0.7+	1.2-
1973 09 19	675	0.2-	1.3-	1988 10 07	675	1.1-	0.9-	1998 04 28	809	1.2+	1.0-
1973 09 20	675	1.2-	0.9-	1988 10 13	675	0.7+	1.3+	1998 05 01	566	0.3+	1.1-
1973 09 24	675	0.8+	0.6+	1988 10 13	675	0.5+	0.0	1998 05 01	566	0.4+	0.9-

1973 09 24	675	1.7+	0.5-	1992 10 21	675	(1.3+	2.3-)	1998 05 01	566	0.2+	1.4-
1973 09 25	675	0.4+	0.2+	1992 10 21	675	(1.8+	2.3-)	1998 05 06	844	0.1-	0.0
1973 09 25	675	0.1+	0.3-	1992 11 27	691	0.3-	0.6+	1998 05 06	844	0.1+	0.0
1973 09 29	675	0.6+	0.3-	1992 11 27	691	0.3-	0.1+	1998 05 06	566	1.4-	0.4-
1973 09 29	675	0.1-	0.7-	1992 11 27	691	0.4-	1.7+	1998 05 06	566	0.9-	0.1-
1973 09 29	675	0.4-	0.4-	1992 11 27	675	0.8+	0.9-	1998 05 06	566	0.4-	0.1+
1973 09 29	675	0.2+	0.3+	1992 11 27	675	0.4+	0.6-	1998 05 07	844	1.4-	0.7+
1973 09 30	675	(0.5+	4.4-)	1994 02 15	675	0.1+	1.3-	1998 05 07	844	1.2-	0.3+
1973 09 30	675	0.2+	0.9-	1994 02 15	675	0.0	1.4-	1998 05 22	704	0.2-	0.8+
1973 09 30	675	(1.6+	3.4-)	1994 03 04	399	1.5-	0.4+	1998 05 22	704	0.4-	1.1+
1973 09 30	675	0.6+	0.8-	1994 03 04	399	(3.8-	1.1+)	1998 05 22	704	0.3-	0.7+
1973 10 04	675	0.1+	0.4-	1994 04 09	801	0.2-	0.6-	1998 05 22	704	0.3-	0.2+
1973 10 04	675	0.3+	0.7+	1994 04 15	801	0.1+	0.1-	1998 05 22	704	1.4-	1.9+
1973 10 04	675	0.1-	0.0	1994 04 15	801	0.0	0.4-	1998 05 24	704	0.5-	0.4+
1973 10 04	675	0.5+	0.2+	1996 12 17	566	0.2+	1.3-	1998 05 24	704	0.6+	0.6-
1973 10 05	675	(3.1+	1.9-)	1996 12 17	566	0.3+	1.4-	1998 05 24	704	0.8-	0.3-
1973 10 05	675	0.5-	0.8-	1996 12 17	566	0.3-	1.3-	1998 05 24	704	0.6-	0.1+
1973 10 05	675	(2.3+	2.8-)	1998 04 25	809	1.8+	1.3-	1998 05 24	704	0.4-	0.6-
1973 10 05	675	0.2+	1.0-	1998 04 25	809	1.2+	1.4-				

(8974)* 3357 T-2 = 1991 EY₂

Discovered 1973 Sept. 25 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. T. Kobayashi (*MPC* 24237)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		149.57543		(2000.0)		P		Q	
<i>n</i>		0.30401079	ω	50.15248		-0.08389850		-0.99639341	
<i>a</i>		2.1905007	Ω	44.66527		+0.90864258		-0.08172803	
<i>e</i>		0.1150588	<i>i</i>	1.03496		+0.40905952		-0.02281905	
<i>P</i>		3.24	<i>H</i>	15.1		<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1973 09 19	675	0.4+	1.2-	1994 01 05	399	0.0	0.1-	1998 04 28	809	0.7+	1.2+
1973 09 19	675	0.1-	0.3+	1994 01 07	675	1.4-	1.3-	1998 05 22	704	0.7-	0.2+
1973 09 19	675	0.3-	0.1-	1996 11 09	691	0.0	0.2+	1998 05 22	704	0.1+	1.2-
1973 09 19	675	0.1+	0.8+	1996 11 09	691	0.0	0.2+	1998 05 22	704	(2.4-	0.2-)
1973 09 20	675	1.8+	0.5-	1996 11 09	691	0.0	0.3+	1998 05 22	704	0.3-	1.4-
1973 09 24	675	0.4-	0.4+	1996 11 17	816	0.7+	0.8+	1998 05 22	704	1.4-	1.6+
1973 09 24	675	0.6-	0.2+	1996 11 17	816	0.8+	0.8+	1998 05 23	699	0.0	0.9-
1973 09 25	675	0.2+	2.1-	1996 11 17	816	0.6+	0.9+	1998 05 23	699	0.5-	0.6+
1973 09 25	675	0.5-	0.1-	1997 02 10	691	0.6-	0.3-	1998 05 23	699	0.2-	0.5+
1991 03 11	809	0.8-	0.2-	1997 02 10	691	0.5-	0.0	1998 05 24	704	1.3+	1.8+
1991 03 11	809	0.1+	0.2-	1997 02 10	691	0.7-	0.1-	1998 05 24	704	(2.5-	1.3-)
1991 03 11	809	0.7+	0.3-	1998 04 25	809	0.3+	1.6-	1998 05 24	704	1.7-	0.6-
1991 03 13	809	0.5+	0.7-	1998 04 25	809	(1.2+	2.2-)	1998 05 24	704	0.8-	0.2+
1991 03 13	809	0.8+	0.3-	1998 04 25	809	(2.6+	1.0-)	1998 05 24	704	0.0	1.2+
1991 03 13	809	1.1+	0.2-	1998 04 28	809	1.1+	0.7+				
1994 01 05	399	1.9-	0.6+	1998 04 28	809	1.4+	1.0-				

(8975)* 4076 T-2 = 1996 VJ₃₉

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 28609)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	38.23582		(2000.0)	P	Q
n	0.26351001	ω	159.77556	-0.98384976	+0.17721362
a	2.4095612	Ω	30.46617	-0.17030171	-0.88339601
e	0.1292855	i	2.84871	-0.05510876	-0.43382811
P	3.74	H	15.2	G 0.15	U 2

1998 JUNE 10

1973 09 20	675	0.6+	1.1+	1996 11 13	327	0.8-	0.0	1998 04 25	120	0.3+	0.7+
1973 09 20	675	0.0	1.0+	1996 11 13	327	0.2-	0.1-	1998 04 29	120	1.1+	1.4-
1973 09 24	675	0.2-	1.9-	1996 11 13	327	0.5+	0.7+	1998 04 29	120	0.2-	0.9-
1973 09 24	675	0.5-	0.1+	1996 12 08	327	0.4-	0.6-	1998 05 01	704	0.0	0.0
1973 09 24	675	0.5-	1.4-	1996 12 08	327	0.1+	0.0	1998 05 01	704	(3.3+	0.2-)
1973 09 25	675	2.2+	1.6+	1996 12 08	327	0.3-	0.5-	1998 05 01	704	0.8-	0.9+
1973 09 25	675	0.9+	1.4+	1998 04 20	120	1.1-	0.4+	1998 05 01	704	0.6+	0.3-
1973 09 29	675	(3.2+	2.7-)	1998 04 20	120	1.4-	0.5-	1998 05 01	704	1.0+	0.6+
1973 09 29	675	(1.7+	3.0-)	1998 04 20	120	0.5-	0.8+	1998 05 01	566	0.0	0.9-
1973 09 30	675	2.3+	1.7-	1998 04 21	704	0.1-	0.3+	1998 05 01	566	0.2+	0.8-
1973 09 30	675	(2.9+	3.5-)	1998 04 21	704	0.2-	0.2+	1998 05 01	566	0.1-	0.9-
1973 10 04	675	0.3+	0.3+	1998 04 21	704	0.8-	0.0	1998 05 25	699	1.3+	0.7+
1973 10 04	675	0.6-	0.5+	1998 04 21	704	0.9-	0.3+	1998 05 25	699	0.0	0.4-
1973 10 05	675	0.7+	1.0+	1998 04 21	704	0.9-	0.1-	1998 05 25	699	0.3-	0.8-
1973 10 05	675	1.8-	1.0-	1998 04 22	704	0.3-	0.4+				
1994 03 06	691	0.0	0.7-	1998 04 22	704	0.2-	0.1+				

(8976)* 4221 T-2 = 1975 BG = 1995 SP₂₉

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. S. Nakano (*MPC* 26186)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	124.07280		(2000.0)	<i>P</i>		Nakano	<i>Q</i>
<i>n</i>	0.18118075	ω	343.74456	-0.09157293			-0.99521745
<i>a</i>	3.0931051	Ω	111.49953	+0.91764887			-0.09759958
<i>e</i>	0.1487223	<i>i</i>	2.09477	+0.38669748			-0.00406734
<i>P</i>	5.44	<i>H</i>	13.1	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1973 09 19	675	1.6-	0.3+	1995 09 29	114	0.2-	0.1-	1998 04 22	704	1.0-	0.1+
1973 09 19	675	0.0	1.2-	1995 10 16	114	0.9+	0.3-	1998 04 22	704	0.6-	0.1-
1973 09 19	675	1.0+	0.3+	1995 10 17	114	(3.4+	2.3+)	1998 05 01	704	0.4-	0.8+
1973 09 19	675	0.6+	0.2-	1995 10 18	114	0.0	1.8+	1998 05 01	704	0.4+	0.8-
1973 09 20	675	1.1+	0.4+	1995 10 19	114	1.7-	0.5-	1998 05 01	704	0.3-	0.0
1973 09 20	675	0.4+	0.6-	1995 10 19	114	(3.9+	1.4+)	1998 05 01	704	1.1+	0.7+
1973 09 24	675	0.5+	0.1-	1995 10 21	399	1.9-	1.8+	1998 05 01	704	0.7+	1.1+
1973 09 24	675	0.3+	0.7-	1995 10 21	399	0.7-	1.1+	1998 05 16	734	1.3+	0.4-
1973 09 25	675	0.1-	1.5+	1995 10 27	399	(0.6+	2.2+)	1998 05 16	734	0.4+	0.0
1973 09 25	675	0.5-	0.9+	1995 10 27	399	0.6-	1.5+	1998 05 16	734	0.8+	0.1+
1973 09 29	675	(0.3+	2.8-)	1997 01 28	886	1.3+	1.1+	1998 05 17	734	(0.4-	3.0-)
1973 09 29	675	(0.3-	2.7-)	1997 01 28	886	0.7-	0.7+	1998 05 17	734	0.5-	1.1-
1973 09 30	675	1.1+	0.6+	1997 01 29	886	0.2+	1.0-	1998 05 17	734	0.4+	0.0
1973 09 30	675	1.0+	0.6+	1997 01 29	886	0.3+	0.2+	1998 05 22	704	0.3+	0.8-
1973 10 04	675	1.4-	0.9-	1998 04 21	704	0.5-	1.2+	1998 05 22	704	(1.1+	2.5+)
1973 10 04	675	0.5-	0.6-	1998 04 21	704	0.8-	0.6+	1998 05 22	704	0.4+	0.3-
1973 10 05	675	0.1+	0.3-	1998 04 21	704	0.5-	0.4+	1998 05 22	704	1.5+	0.7-
1973 10 05	675	1.1-	0.2-	1998 04 21	704	0.4-	0.7+	1998 05 24	704	0.3+	1.1+
1975 01 17	095	0.5-	0.5+	1998 04 21	704	1.6-	1.3+	1998 05 24	704	0.9-	0.1-
1995 09 26	114	1.6+	0.4+	1998 04 22	704	0.0	0.8+	1998 05 24	704	0.1-	1.6+
1995 09 26	114	0.4+	0.1+	1998 04 22	704	1.0+	1.1+	1998 05 24	704	1.1+	1.1-
1995 09 28	114	0.8-	0.7+	1998 04 22	704	0.5+	0.4-	1998 05 24	704	0.6-	0.8+

(8977)* 4272 T-2 = 1991 DC₁

Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 17978)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	110.51715		(2000.0)	<i>P</i>		Williams	<i>Q</i>
<i>n</i>	0.30208137	ω	2.71206	-0.52661617			-0.84918955
<i>a</i>	2.1998180	Ω	119.06788	+0.77910348			-0.50065854
<i>e</i>	0.1175151	<i>i</i>	2.58377	+0.34010758			-0.16798255
<i>P</i>	3.26	<i>H</i>	15.2	<i>G</i>	0.15	<i>U</i>	1

M.P.C. 31941

Residuals in seconds of arc

1954 12 22	675	0.8+	0.0	1991 02 07	675	0.0	0.1-	1998 05 01	704	0.4-	0.1-
1954 12 22	675	0.1+	0.2+	1991 02 17	372	(5.0+	1.2+)	1998 05 01	704	0.6-	0.0
1973 09 20	675	0.8+	1.2+	1991 02 17	372	(2.9+	1.4+)	1998 05 01	704	0.3-	0.3-
1973 09 24	675	2.1+	2.3+	1991 02 22	372	0.1-	0.4-	1998 05 22	704	1.2-	1.0+
1973 09 24	675	0.3-	1.4+	1991 02 22	372	1.2-	0.9+	1998 05 22	704	0.4+	1.3+
1973 09 25	675	0.5-	1.0+	1996 10 16	566	0.6+	0.3+	1998 05 22	704	0.2-	0.4-
1973 09 25	675	1.9-	0.8-	1996 10 16	566	0.3+	0.2+	1998 05 22	704	0.9+	1.1+
1973 09 29	675	0.3+	1.7-	1996 10 16	566	0.3+	0.5+	1998 05 22	704	1.1+	0.7-
1973 09 29	675	0.1+	1.3-	1998 03 30	360	0.0	0.2-	1998 05 24	704	0.7+	0.5-
1973 09 30	675	1.3+	0.3-	1998 03 30	360	0.5-	0.2-	1998 05 24	704	1.2-	1.1+
1973 09 30	675	1.9+	0.6-	1998 03 30	360	0.3-	1.2-	1998 05 24	704	0.6+	0.6+
1973 10 04	675	0.1+	1.3-	1998 04 22	704	0.3-	1.5-	1998 05 24	704	0.9+	0.3+
1973 10 04	675	1.3-	1.0-	1998 04 22	704	1.8-	0.8-	1998 05 28	699	1.4+	0.7+
1973 10 05	675	1.9-	1.3-	1998 04 22	704	0.6+	1.5-	1998 05 28	699	1.4+	0.5+
1973 10 05	675	1.2-	0.5-	1998 04 22	704	0.0	1.1-				
1991 02 07	675	0.1-	0.5-	1998 05 01	704	0.9-	0.1-				

(8978)* 3109 T-3 = 1992 GA₃

Discovered 1977 Oct. 16 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. B. G. Marsden (*MPC* 20833)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	30.40330		(2000.0)	<i>P</i>		Marsden	<i>Q</i>
<i>n</i>	0.17125299	ω	211.52847	-0.88479365			+0.46598292
<i>a</i>	3.2115198	Ω	356.24533	-0.42642254			-0.80997714
<i>e</i>	0.1074636	<i>i</i>	0.30328	-0.18789363			-0.35608561
<i>P</i>	5.76	<i>H</i>	14.2	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1977 10 07	675	1.5+	1.1-	1992 04 06	809	0.1-	1.2-	1998 05 02	566	0.0	0.2-
1977 10 11	675	1.8-	0.8-	1992 04 25	809	0.4-	0.9-	1998 05 02	566	0.2+	0.0
1977 10 11	675	0.2+	2.0+	1992 04 25	809	0.2+	1.1-	1998 05 02	566	0.6-	0.6+
1977 10 12	675	0.1+	0.0	1992 04 25	809	0.4+	1.0-	1998 05 22	704	0.5-	0.4-
1977 10 12	675	0.3-	0.3-	1992 05 01	809	0.7+	0.4+	1998 05 22	704	0.7-	0.5-
1977 10 16	675	1.0+	2.1-	1992 05 01	809	0.7+	0.8+	1998 05 22	704	1.9+	1.2-
1977 10 16	675	0.3+	2.0-	1992 05 01	809	0.9+	1.2+	1998 05 22	704	1.3-	0.2+
1977 10 17	675	0.7-	0.1+	1993 07 19	691	0.1-	1.1+	1998 05 22	704	1.8-	1.5+
1977 10 17	675	(3.5-	0.7+)	1993 07 19	691	0.4-	1.1+	1998 05 23	699	0.3+	0.5+
1977 10 21	675	0.4+	1.1-	1993 07 19	691	0.4-	0.3+	1998 05 23	699	0.3+	1.0+
1977 10 21	675	1.8+	0.3-	1994 10 11	691	1.2+	0.5+	1998 05 23	699	0.8-	0.1+
1977 10 22	675	0.0	0.6-	1994 10 11	691	0.6+	1.0+	1998 05 24	704	0.0	0.8-
1977 10 22	675	0.4-	2.4-	1994 10 11	691	0.3+	1.2+	1998 05 24	704	0.3-	0.2-
1991 01 16	675	1.8-	0.1+	1997 03 05	704	0.0	0.1+	1998 05 24	704	1.2-	0.6+
1991 01 16	675	2.0-	0.7+	1997 03 05	704	0.3+	0.6-	1998 05 24	704	0.0	0.6-
1992 04 04	809	1.1+	0.5+	1997 03 06	704	1.0+	0.7-	1998 05 24	704	0.2-	1.1-
1992 04 04	809	0.0	0.7+	1997 03 06	704	1.0+	0.0	1998 05 25	699	0.1-	1.1-
1992 04 04	809	0.5+	0.0	1998 05 01	566	0.6-	0.4-	1998 05 25	699	0.2-	1.1-
1992 04 06	809	0.3+	0.3-	1998 05 01	566	0.2-	0.0	1998 05 25	699	0.3+	1.2-
1992 04 06	809	0.0	1.5-	1998 05 01	566	0.7-	0.2-				

(8979)* 3476 T-3 = 1993 YM

Discovered 1977 Oct. 16 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 23346)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	261.04976		(2000.0)	<i>P</i>		Williams	<i>Q</i>
<i>n</i>	0.31709686	ω	258.30130	+0.98977307			+0.14048838
<i>a</i>	2.1298127	Ω	93.61899	-0.11931253			+0.91037082
<i>e</i>	0.1277179	<i>i</i>	1.42073	-0.07819073			+0.38921458
<i>P</i>	3.11	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	1

M.P.C. 31942

1998 JUNE 10

Residuals in seconds of arc

1977 10 07	675	0.4+	0.7-	1996 12 27	046	0.2+	0.3+	1998 05 01	704	1.0+	0.6-
1977 10 11	675	0.7-	1.4+	1996 12 27	046	0.3+	0.2+	1998 05 01	704	0.4+	0.3-
1977 10 11	675	0.1-	0.2-	1996 12 29	046	0.1-	0.2+	1998 05 05	699	0.7+	1.0-
1977 10 12	675	1.4+	1.3-	1996 12 29	046	0.3-	0.2-	1998 05 05	699	0.1-	0.4-
1977 10 12	675	1.5+	1.0-	1996 12 29	046	0.2-	0.4+	1998 05 05	699	0.5-	0.0
1977 10 16	675	0.3+	0.4-	1998 04 19	360	0.5-	0.2-	1998 05 18	699	0.5-	1.2+
1977 10 16	675	0.3-	0.4+	1998 04 19	360	0.2-	0.2-	1998 05 18	699	0.6-	0.9+
1977 10 17	675	1.9-	0.2-	1998 04 19	360	0.6-	0.3-	1998 05 18	699	0.3-	0.3+
1977 10 17	675	0.5-	0.2+	1998 04 21	704	0.2+	0.0	1998 05 22	704	0.7-	0.4+
1977 10 21	675	0.0	0.5-	1998 04 21	704	0.5+	0.2+	1998 05 22	704	0.6-	1.0+
1977 10 21	675	0.2+	1.5+	1998 04 21	704	0.1-	0.1-	1998 05 22	704	0.8+	1.4+
1977 10 22	675	(2.7+	0.7+)	1998 04 21	704	0.2-	0.3-	1998 05 22	699	0.7-	0.6-
1977 10 22	675	(3.6+	0.1+)	1998 04 21	704	0.7-	0.5-	1998 05 22	699	0.2-	0.4+
1993 12 17	411	0.7-	0.9+	1998 04 22	704	0.6+	0.4-	1998 05 22	704	0.1-	1.3+
1993 12 17	411	1.8-	0.8+	1998 04 22	704	0.0	1.1+	1998 05 22	699	0.4+	0.1-
1993 12 18	411	0.1+	0.5-	1998 04 22	704	0.9-	0.4-	1998 05 22	704	0.8+	1.2+
1993 12 18	411	(0.6-	2.2-)	1998 04 22	704	0.8-	0.4-	1998 05 24	704	0.3+	0.8+
1993 12 18	411	0.9+	0.9-	1998 04 22	704	0.2+	1.4-	1998 05 24	704	0.1+	0.3-
1994 01 07	675	1.0+	0.7-	1998 04 29	566	0.7+	0.6-	1998 05 24	704	0.4-	0.3+
1994 01 19	411	0.2-	1.2+	1998 04 29	566	0.7+	0.4-	1998 05 24	704	0.1-	0.2-
1994 01 19	411	0.2-	0.6+	1998 04 29	566	0.3+	0.6-	1998 05 24	704	0.4+	0.0
1994 01 19	411	0.7+	1.8-	1998 05 01	704	0.0	0.6-				
1996 12 27	046	0.0	0.2+	1998 05 01	704	0.8+	0.6-				

(8980)* 4190 T-3 = 1968 UJ₃ = 1991 VM₁₆ = 1993 FF₅₇

Discovered 1977 Oct. 16 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 23681)

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	137.38990	(2000.0)	P	Q	
<i>n</i>	0.21420543	ω	21.45981	+0.14808465	-0.97992256
<i>a</i>	2.7664048	Ω	60.24305	+0.88351825	+0.07042867
<i>e</i>	0.1992188	<i>i</i>	8.84600	+0.44437195	+0.18652499
<i>P</i>	4.60	<i>H</i>	13.6	<i>G</i>	0.15 <i>U</i> 2

Residuals in seconds of arc

1968 10 26	095	(1.1-	3.2-)	1977 10 22	675	1.2+	0.4-	1998 04 22	704	0.9+	1.8+
1977 10 07	675	0.2-	0.9-	1977 10 22	675	0.4+	1.6-	1998 04 22	704	0.3+	0.3-
1977 10 11	675	0.4-	0.2-	1991 11 05	691	0.4-	0.9+	1998 04 22	704	1.1+	1.3+
1977 10 11	675	0.7+	0.1-	1991 11 05	691	0.2-	0.9+	1998 05 01	704	0.6+	0.5-
1977 10 12	675	0.9+	0.2+	1991 11 05	691	1.4-	1.0+	1998 05 01	704	0.3+	0.5-
1977 10 12	675	0.4+	0.4-	1993 03 17	809	0.3-	0.0	1998 05 01	704	(2.4+	1.3-)
1977 10 16	675	0.9-	0.7+	1993 03 18	809	0.7-	0.1-	1998 05 01	704	0.4+	1.3-
1977 10 16	675	0.3+	0.4+	1997 02 12	689	1.0+	1.0-	1998 05 22	704	0.8-	0.6-
1977 10 16	675	1.1-	0.8+	1997 03 10	689	0.4-	0.3+	1998 05 22	704	1.8-	0.4-
1977 10 16	675	1.4+	0.7+	1997 03 27	689	(2.4+	1.5-)	1998 05 22	704	2.0-	1.7+
1977 10 17	675	0.8-	1.2-	1998 04 21	704	1.1+	0.9+	1998 05 22	704	0.2+	0.8+
1977 10 17	675	0.4-	0.1+	1998 04 21	704	0.1+	1.4-	1998 05 24	704	1.5-	0.9+
1977 10 17	675	1.3-	0.3-	1998 04 21	704	1.2+	0.9+	1998 05 24	704	0.3+	1.4+
1977 10 17	675	1.0-	1.4+	1998 04 21	704	0.7-	1.3-	1998 05 24	704	1.5+	1.5-
1977 10 21	675	0.8+	0.1+	1998 04 21	704	1.0+	0.8+	1998 05 24	704	(2.1-	1.8+)
1977 10 21	675	1.1+	0.6-	1998 04 22	704	0.6-	0.5-				

A908 SA = 1992 SU₁ = 1992 UW₆

Id. J. Schubart

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Marsden			
<i>M</i>	154.19669	(2000.0)	P	Q	
<i>n</i>	0.23543843	ω	134.45635	+0.65197308	+0.75820649
<i>a</i>	2.5974736	Ω	176.21207	-0.72343547	+0.62491856
<i>e</i>	0.4521669	<i>i</i>	6.38753	-0.22709519	+0.18601000
<i>P</i>	4.19	<i>H</i>	14.0	<i>G</i>	0.15 <i>U</i> 4

Residuals in seconds of arc

1908 09 22	045	0.4+	1.0+	1908 10 05	045	0.4-	1.3-	1992 09 25	675	0.4-	0.4+
1908 09 22	045	0.5+	1.1+	1908 10 06	045	0.8+	0.3+	1992 09 29	095	0.2-	0.6+
1908 09 22	045	(2.7-	0.1+)	1992 09 03	095	0.4-	0.1+	1992 09 29	095	1.7-	2.0-
1908 09 24	045	1.0-	2.0+	1992 09 03	095	(0.5+	2.2+)	1992 10 31	033	0.2-	0.1-
1908 09 28	045	1.9-	1.4-	1992 09 22	675	1.2+	0.9-	1992 10 31	033	0.3+	1.2+
1908 09 30	045	1.0+	0.0	1992 09 22	675	1.2+	0.3-	1992 11 01	033	(3.0-	0.2+)
1908 10 02	045	0.5+	1.2-	1992 09 25	675	0.3+	0.7+				

1975 TU₃ = 1975 VK₁₀ = 1982 VY = 1998 KY₃₈Id. B. G. Marsden (d, *MPC* 9064), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	202.80743	(2000.0)	P	Q	
<i>n</i>	0.28827615	ω	11.22581	+0.55872826	-0.82226572
<i>a</i>	2.2695003	Ω	44.91833	+0.74855876	+0.44383767
<i>e</i>	0.0506636	<i>i</i>	8.81248	+0.35704694	+0.35621231
<i>P</i>	3.42	<i>H</i>	14.0	<i>G</i>	0.15 <i>U</i> 4

Residuals in seconds of arc

1975 10 03	095	1.4+	1.7-	1998 05 22	704	0.5+	0.3+	1998 05 24	704	0.0	0.9-
1975 10 13	095	1.3-	1.1+	1998 05 22	704	0.3+	0.5-	1998 05 24	704	0.6-	0.1+
1975 11 06	095	0.4-	1.2+	1998 05 22	704	0.9+	2.1-	1998 05 24	704	0.5-	0.3+
1982 11 15	688	0.8+	0.8+	1998 05 22	704	0.4+	0.3+	1998 05 24	704	0.5-	0.3+
1982 11 15	688	0.4-	1.9-	1998 05 22	704	0.7+	1.3+	1998 05 24	704	1.2-	0.4+

1976 QK₁ = 1998 HM₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	275.54816	(2000.0)	P	Q	
<i>n</i>	0.25811035	ω	123.60026	+0.80652786	+0.59101277
<i>a</i>	2.4430505	Ω	200.18318	-0.55556720	+0.74917320
<i>e</i>	0.2016127	<i>i</i>	2.44539	-0.20213334	+0.29907092
<i>P</i>	3.82	<i>H</i>	14.5	<i>G</i>	0.15 <i>U</i> 4

Residuals in seconds of arc

1976 08 26	095	0.7-	0.3-	1998 04 01	704	0.3-	0.2+	1998 04 22	704	0.3+	0.1-
1976 09 24	095	0.2+	0.6-	1998 04 01	704	0.5-	0.6+	1998 04 22	704	0.3-	0.0
1976 09 28	095	0.6+	0.4+	1998 04 01	704	0.2+	0.4-	1998 04 22	704	2.2+	2.3+
1998 03 22	704	0.4+	0.7-	1998 04 01	704	0.9+	0.6+	1998 04 22	704	1.9-	0.1-
1998 03 22	704	0.8+	0.1+	1998 04 18	704	0.2-	0.9+	1998 04 22	704	1.3-	0.5+
1998 03 22	704	0.3+	1.9+	1998 04 18	704	2.8+	1.7-	1998 04 28	699	1.2-	0.4-
1998 03 22	704	0.6+	2.5-	1998 04 18	704	1.4+	0.2+	1998 04 28	699	1.6-	0.5+
1998 03 22	704	0.2+	1.2-	1998 04 18	704	0.6-	2.2-	1998 04 28	699	1.6-	0.3+
1998 03 25	704	0.9-	0.2-	1998 04 19	704	0.6-	0.4+	1998 04 30	699	0.0	1.2-
1998 03 25	704	0.6-	0.6+	1998 04 19	704	1.0-	0.0	1998 04 30	699	0.1+	0.9+
1998 03 25	704	0.3+	0.3+	1998 04 19	704	0.0	0.0	1998 04 30	699	0.8+	0.5-
1998 03 25	704	1.4-	0.9-	1998 04 19	704	0.5+	0.7+	1998 05 16	704	0.4-	0.0
1998 03 25	566	0.1+	0.3+	1998 04 20	704	1.2-	1.5+	1998 05 16	704	0.6+	0.7+
1998 03 25	566	0.4+	0.3+	1998 04 20	704	0.8+	0.6-	1998 05 16	704	1.2+	0.4-
1998 03 25	566	0.4+	0.6-	1998 04 20	704	1.1-	0.4+	1998 05 16	704	2.3+	1.0+
1998 04 01	704	0.6-	0.1+	1998 04 20	704	2.1+	0.8-	1998 05 16	704	1.4-	1.7-

1977 ED₁ = 1977 GP = 1969 TV = 1975 XX₄ = 1985 VU₂ = 1985 VX₄
= 1990 SU₂₈ = 1998 JDId. S. Nakano (d, *MPC* 9751), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

		Williams			
<i>M</i>	117.28405	(2000.0)	P	Q	
<i>n</i>	0.19003518	ω	270.55862	-0.09513721	-0.99533813
<i>a</i>	2.9962638	Ω	184.98441	+0.97039040	-0.08918027
<i>e</i>	0.0798676	<i>i</i>	10.50443	+0.22201663	-0.03672706
<i>P</i>	5.19	<i>H</i>	12.0	<i>G</i>	0.15 <i>U</i> 1

Residuals in seconds of arc

1969 10 07	095	0.4+	1.1-	1998 04 21	704	1.4+	0.7-	1998 05 02	691	1.6-	0.8+
1969 10 16	095	0.5+	0.7-	1998 04 21	704	0.3+	0.1-	1998 05 02	691	(2.3-	0.5+)

1998 JUNE 10

M.P.C. 31943

1975 12 03	095	(4.8− 1.9−)	1998 04 21	704	1.3+ 0.9+	1998 05 16	704	0.3− 0.9−
1977 03 13	095	0.3− 0.1+	1998 04 21	704	0.1+ 0.2−	1998 05 16	704	0.6− 0.1−
1977 03 25	095	1.2+ 0.3−	1998 04 22	704	0.6+ 0.0	1998 05 16	704	0.9− 0.7−
1977 03 26	095	(3.4+ 0.1+)	1998 04 22	704	1.4+ 0.0	1998 05 16	704	0.5− 0.1−
1977 04 10	381	1.5− 0.6−	1998 04 22	704	0.8+ 1.0+	1998 05 16	704	0.2+ 0.1+
1977 04 10	381	0.4− 0.0	1998 04 22	704	0.8+ 0.5−	1998 05 23	699	1.0− 0.5−
1985 11 09	095	1.5+ 0.1+	1998 04 22	704	0.8+ 0.1+	1998 05 23	699	0.8− 0.8−
1985 11 11	095	0.4− 1.4−	1998 05 01	691	0.6− 0.4+	1998 05 23	699	0.6− 1.0−
1990 09 24	095	1.7− 1.6+	1998 05 01	691	0.2− 1.5+	1998 05 24	699	0.9+ 0.1−
1990 09 24	095	(2.9+ 1.5−)	1998 05 01	691	1.4− 0.3+	1998 05 24	699	0.4+ 0.9−
1998 04 21	704	0.9+ 0.3+	1998 05 02	691	1.0− 0.3+			

1977 JA = 1991 KR₁ = 1998 KM₂

Id. G. V. Williams, T. B. Spahr

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	13.07613		(2000.0)		P		Q	
<i>n</i>	0.28110526	ω	0.68790		−0.50220765		+0.79237028	
<i>a</i>	2.3079341	Ω	239.22390		−0.79530247		−0.58046482	
<i>e</i>	0.2007164	<i>i</i>	23.77111		−0.33953123		+0.18764309	
<i>P</i>	3.51	<i>H</i>	16.0		<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 05 15	809	0.5+ 0.3−	1977 06 09	809	1.2− 0.4+	1998 05 22	704	0.9− 0.5−
1977 05 16	809	(5.0− 3.7−)	1991 05 17	809	0.1− 2.1+	1998 05 22	704	0.0 0.3−
1977 05 16	809	1.1− 0.6−	1991 05 17	809	0.3+ 1.1−	1998 05 24	704	0.2− 0.4−
1977 05 16	809	3.3+ 2.4+	1991 05 17	809	0.7− 1.0+	1998 05 24	704	1.4+ 0.2−
1977 05 17	809	0.4− 1.6−	1998 05 22	704	1.0+ 0.2−	1998 05 24	704	0.3+ 1.0+
1977 05 18	809	0.6+ 3.2−	1998 05 22	704	0.0 1.1+	1998 05 24	704	2.2− 1.1+
1977 05 20	809	1.1− 0.8+	1998 05 22	704	0.5− 0.7−	1998 05 24	704	1.1+ 0.5−

1978 NF = 1998 KL₅₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	319.57836		(2000.0)		P		Q	
<i>n</i>	0.24171224	ω	193.96473		+0.57775721		+0.78306712	
<i>a</i>	2.5523308	Ω	111.82099		−0.72303558		+0.62189415	
<i>e</i>	0.1648235	<i>i</i>	14.35868		−0.37870326		+0.00731729	
<i>P</i>	4.08	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1978 07 10	675	0.1+ 0.3−	1978 08 09	323	0.1+ 0.5−	1998 05 23	704	0.4+ 0.5+
1978 07 11	675	0.2+ 0.4−	1978 08 11	323	1.8− 1.2−	1998 05 23	699	0.5+ 0.8−
1978 07 12	675	0.1+ 0.3−	1978 08 11	323	0.6+ 0.3+	1998 05 23	699	0.4+ 0.1−
1978 07 13	675	0.4− 0.3−	1998 04 19	691	0.4+ 0.3−	1998 05 23	699	0.1+ 0.5−
1978 07 28	323	0.2+ 0.8+	1998 04 23	691	0.6− 0.1−	1998 05 26	704	0.4+ 0.2+
1978 07 28	323	0.8− 0.1−	1998 04 23	691	0.7− 0.3−	1998 05 26	704	0.6− 0.8+
1978 07 31	323	0.1+ 1.0+	1998 04 23	691	1.2− 0.5−	1998 05 26	704	0.6− 0.3+
1978 07 31	323	0.2− 0.6−	1998 05 23	704	0.3+ 0.0	1998 05 26	704	0.0 0.5−
1978 08 06	323	0.4+ 0.4+	1998 05 23	704	0.6+ 0.3+	1998 05 26	704	1.3− 0.6+
1978 08 06	323	1.2+ 1.1+	1998 05 23	704	1.2+ 0.4+			
1978 08 09	323	0.2+ 0.5−	1998 05 23	704	0.5+ 0.1−			

1978 RD₂ = 1998 KF₃₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	269.37856		(2000.0)		P		Q	
<i>n</i>	0.23701714	ω	329.15290		+0.99698082		−0.06176869	
<i>a</i>	2.5859267	Ω	34.48497		+0.07650523		+0.88500734	
<i>e</i>	0.2304746	<i>i</i>	4.76693		−0.01327413		+0.46146141	
<i>P</i>	4.16	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 09 07	095	1.0+ 1.0−	1998 05 22	704	0.6− 0.7+	1998 05 24	704	1.3− 1.2+
1978 09 12	095	0.2+ 0.4−	1998 05 22	704	1.4− 1.1−	1998 05 24	704	0.6+ 0.2−
1978 09 28	095	0.1+ 0.5+	1998 05 22	704	(0.9− 2.2−)	1998 05 24	704	0.0 1.1+
1978 10 04	095	0.7− 2.1+	1998 05 22	704	(4.6− 0.5+)	1998 05 25	699	1.8+ 0.1−

1978 10 09	095	0.6− 1.1−	1998 05 24	704	0.6+ 0.2+	1998 05 25	699	0.6+ 1.5+
1998 05 22	704	0.3+ 0.9−	1998 05 24	704	0.3− 1.1−	1998 05 25	699	0.1− 1.0−

1978 SF₅ = 1998 HN₁₄₉

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	294.71577		(2000.0)		P		Q	
<i>n</i>	0.28700742	ω	307.80967		+0.93792877		+0.34151393	
<i>a</i>	2.2761837	Ω	32.34929		−0.27195849		+0.83241047	
<i>e</i>	0.1983309	<i>i</i>	6.49004		−0.21523987		+0.43641843	
<i>P</i>	3.43	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1978 09 27	095	0.6− 0.8+	1998 04 25	809	1.1+ 0.7+	1998 04 28	809	0.5− 0.3−
1978 10 03	095	0.1+ 0.3+	1998 04 25	809	0.9+ 0.7+	1998 05 24	704	1.6− 0.8+
1978 10 07	095	0.7+ 1.0−	1998 04 25	809	1.1+ 0.5+	1998 05 24	704	1.3− 0.0
1978 11 28	675	0.9− 0.4−	1998 04 28	809	1.0+ 0.1+	1998 05 24	704	0.6− 0.8−
1978 11 29	675	0.4+ 0.6+	1998 04 28	809	0.6+ 1.0−			

1978 VD₄ = 1997 EO₃₃ = 1998 KN₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	318.26693		(2000.0)		P		Q	
<i>n</i>	0.22911490	ω	251.92946		+0.52019813		+0.85283875	
<i>a</i>	2.6450496	Ω	49.50259		−0.75926975		+0.48614873	
<i>e</i>	0.0886849	<i>i</i>	3.42176		−0.39102858		+0.19059244	
<i>P</i>	4.30	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 11 05	675	0.3− 0.2−	1997 03 04	704	0.9+ 0.3−	1998 05 22	704	0.4− 0.3+
1978 11 06	675	1.1− 0.4+	1997 03 05	704	0.1− 0.4+	1998 05 22	704	0.0 0.5+
1978 11 07	675	1.3+ 1.0+	1997 03 05	704	1.0− 0.5+	1998 05 22	704	0.8+ 0.2+
1978 11 08	675	0.0 0.0	1997 03 06	704	(6.1+ 0.5+)	1998 05 24	704	0.2− 0.8−
1978 11 29	675	0.1+ 0.0	1997 03 06	704	0.4+ 1.3−	1998 05 24	704	0.1− 0.1+
1978 11 30	675	0.1− 0.7−	1998 05 22	704	0.1− 0.5−	1998 05 24	704	0.0 0.9+
1997 03 04	704	0.1− 0.8+	1998 05 22	704	0.9− 0.2−	1998 05 24	704	1.1+ 0.0

1978 VH₄ = 1998 HB₃₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

					Williams			
<i>M</i>	80.88616		(2000.0)		P		Q	
<i>n</i>	0.26939402	ω	259.05973		−0.62267596		−0.78219791	
<i>a</i>	2.3743464	Ω	229.47295		+0.72827050		−0.56951277	
<i>e</i>	0.1450628	<i>i</i>	1.58329		+0.28617603		−0.25262944	
<i>P</i>	3.66	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 11 05	675	0.9− 0.1−	1998 03 25	704	0.7+ 1.3+	1998 04 20	704	0.3+ 0.3+
1978 11 06	675	0.6+ 0.2−	1998 03 25	704	0.9+ 0.1+	1998 04 20	704	1.0− 0.3−
1978 11 07	675	0.1+ 0.8+	1998 03 25	704	0.0 0.2−	1998 04 21	704	0.8+ 0.8−
1978 11 08	675	0.2− 0.2−	1998 03 25	704	0.7− 1.8+	1998 04 21	704	0.4+ 1.0+
1978 11 29	675	0.9+ 0.2+	1998 03 25	704	0.0 0.9+	1998 04 21	704	0.2+ 0.9+
1978 11 29	675	1.5+ 0.3−	1998 04 01	704	1.5+ 0.1+	1998 04 21	704	0.9+ 0.1+
1978 11 30	675	0.2− 0.3−	1998 04 01	704	1.0− 1.3+	1998 04 21	704	0.4− 0.4−
1978 11 30	675	1.7− 0.2−	1998 04 01	704	0.0 2.5+	1998 04 22	704	1.1− 0.8+
1998 03 22	704	0.0 0.5+	1998 04 01	704	0.0 0.9−	1998 04 22	704	0.8+ 0.2−
1998 03 22	704	0.5+ 0.2−	1998 04 01	704	0.9− 2.0−	1998 04 22	704	0.5+ 2.3−
1998 03 22	704	0.2+ 0.8−	1998 04 20	704	0.4− 0.3−	1998 04 22	704	0.1− 0.3+
1998 03 22	704	0.4− 1.4−	1998 04 20	704	0.6− 1.3+	1998 04 22	704	0.3− 1.5−
1998 03 22	704	1.1− 0.4−	1998 04 20	704	0.4+ 1.3−			

M.P.C. 31944

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1978 VF₅ = 1998 HD₅₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	86.35084		(2000.0)		P		Q				
<i>n</i>	0.27148343	ω	65.78977		−0.67433460		−0.72889561				
<i>a</i>	2.3621483	Ω	67.15423		+0.62237571		−0.64720479				
<i>e</i>	0.0755379	<i>i</i>	7.37255		+0.39739316		−0.22324237				
<i>P</i>	3.63	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1978 11 05	675	0.5+	0.3−	1998 04 21	704	0.5−	0.5+	1998 04 22	704	0.6−	0.2−
1978 11 06	675	0.5−	0.4+	1998 04 21	704	0.8+	0.1+	1998 04 22	704	0.1−	0.7+
1978 11 08	675	0.1−	0.2−	1998 04 21	704	0.2+	0.4+	1998 04 22	704	0.1+	0.2+
1978 11 29	675	0.3+	0.5+	1998 04 21	704	0.3−	1.1−	1998 04 22	704	0.7−	0.3−
1978 11 30	675	0.2−	0.5−	1998 04 21	704	1.3+	0.7−	1998 04 22	704	0.2−	0.4+

1978 VM₈ = 1998 HK₇₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	101.66520		(2000.0)		P		Q				
<i>n</i>	0.27035800	ω	243.93446		−0.39558280		−0.91505777				
<i>a</i>	2.3686991	Ω	229.59620		+0.87523285		−0.34964341				
<i>e</i>	0.1537093	<i>i</i>	5.92718		+0.27835536		−0.20104417				
<i>P</i>	3.65	<i>H</i>	15.5		<i>G</i>	0.15	<i>U</i>	6			
Residuals in seconds of arc											
1978 11 05	675	1.7+	1.4+	1998 04 21	704	0.4−	0.6+	1998 04 22	704	1.5−	2.3−
1978 11 06	675	0.2+	0.1−	1998 04 21	704	1.4−	0.6+	1998 04 22	704	0.4−	0.0
1978 11 07	675	1.5−	1.0−	1998 04 21	704	1.6−	1.8+	1998 04 22	704	0.9+	1.0−
1978 11 08	675	1.1−	1.0−	1998 04 21	704	1.5+	1.5+	1998 04 22	704	0.3+	1.5−
1978 11 29	675	0.1+	0.3−	1998 04 21	704	0.8+	0.9+				
1978 11 30	675	0.5+	0.9+	1998 04 22	704	1.8+	0.7−				

1978 VP₉ = 1998 HH₂₉

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	274.03037		(2000.0)		P		Q				
<i>n</i>	0.27659000	ω	83.68299		+0.77407660		+0.62614821				
<i>a</i>	2.3329839	Ω	237.50845		−0.61581551		+0.71042484				
<i>e</i>	0.1342282	<i>i</i>	6.36498		−0.14689001		+0.32130198				
<i>P</i>	3.56	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1978 11 05	675	(4.5+	1.3+)	1998 03 25	704	0.3+	0.9+	1998 04 20	704	0.7+	0.1+
1978 11 06	675	0.6−	1.8−	1998 04 01	704	0.9−	0.3−	1998 04 20	704	1.0+	1.6−
1978 11 07	675	1.9+	0.5+	1998 04 01	704	0.6−	0.5+	1998 04 20	704	(1.5+	2.4−
1978 11 08	675	0.6−	0.1−	1998 04 01	704	(2.7+	0.9+)	1998 04 20	704	(2.3+	1.1−
1978 11 29	675	0.1+	0.4+	1998 04 01	704	0.3+	1.0+	1998 04 22	704	0.6+	1.6−
1978 11 30	675	0.8−	0.5+	1998 04 19	704	0.6+	0.3+	1998 04 22	704	1.0−	0.3+
1998 03 25	704	0.4+	1.6+	1998 04 19	704	0.2+	1.6+	1998 04 22	704	1.6+	1.8−
1998 03 25	704	0.4−	0.4−	1998 04 19	704	1.2−	0.6+	1998 04 22	704	1.6−	1.6−
1998 03 25	704	0.4−	1.0−	1998 04 19	704	0.4+	1.0+				

1979 MM₄ = 1998 HE₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	329.80796		(2000.0)		P		Q				
<i>n</i>	0.30329070	ω	55.26072		−0.20788850		+0.97797009				
<i>a</i>	2.1939665	Ω	202.76285		−0.91264155		−0.20087812				
<i>e</i>	0.1671978	<i>i</i>	2.79854		−0.35194854		−0.05676687				
<i>P</i>	3.25	<i>H</i>	16.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1979 06 23	413	0.3+	0.1+	1998 03 20	704	(2.5−	1.4+)	1998 04 18	704	0.4−	1.7+
1979 06 24	413	1.0−	0.2+	1998 03 20	704	0.2−	0.0	1998 04 18	704	0.3−	1.5−
1979 06 25	413	0.9−	0.5+	1998 03 20	704	0.2+	0.3−	1998 04 18	704	0.0	0.2−
1979 06 29	413	2.1+	0.8+	1998 03 20	704	0.1−	0.8+	1998 04 19	704	0.2−	0.4+

1979 07 24	413	0.5−	0.8−	1998 04 01	704	1.1−	1.0+	1998 04 19	704	0.4+	0.1−
1979 07 26	675	0.2−	0.4+	1998 04 01	704	0.2+	0.5+	1998 04 19	704	0.9−	0.7−
1979 07 26	675	0.3−	0.1+	1998 04 01	704	0.1+	0.6−	1998 04 19	704	0.9+	0.2−
1979 07 27	675	0.2−	0.4+	1998 04 01	704	1.6+	1.6+	1998 04 19	704	1.7−	0.1−
1979 07 28	413	0.3+	1.0−	1998 04 01	704	0.3−	1.1−				
1979 08 23	675	0.4+	0.6−	1998 04 18	704	1.5+	1.8−				

1981 DL = 1998 HH₆₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	81.08880		(2000.0)		P		Q				
n	0.17680468	ω	257.48652		−0.64281087		−0.75505351				
a	3.1439349	Ω	233.28465		+0.75041244		−0.58681634				
e	0.0879256	i	9.27389		+0.15386799		−0.29247357				
P	5.57	H	13.5		G	0.15	U	5			
Residuals in seconds of arc											
1981 02 09	413	1.4−	0.7−	1981 04 08	413	1.5+	1.0−	1998 04 21	704	0.6−	0.9+
1981 02 09	413	0.4+	0.4+	1981 04 09	413	1.6−	1.4+	1998 04 21	704	1.2−	1.3+
1981 02 28	413	0.4+	0.7+	1981 04 09	413	0.0	0.3+	1998 04 22	704	0.5−	0.8−
1981 02 28	413	1.2+	0.0	1981 05 01	413	0.2+	0.8−	1998 04 22	704	0.8+	0.3−
1981 03 08	413	0.1+	0.7+	1981 05 03	413	0.2+	0.4−	1998 04 22	704	0.9+	0.2+
1981 03 08	413	0.7+	1.1−	1998 04 21	704	0.9+	1.0+	1998 04 22	704	0.3+	0.0
1981 03 12	413	2.1−	0.6+	1998 04 21	704	0.3+	1.9−	1998 04 22	704	0.6−	0.6−
1981 03 12	413	0.4+	0.4−	1998 04 21	704	0.1−	0.5+				

1981 EY₂ = 1998 KP₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	272.24218		(2000.0)		P		Q				
<i>n</i>	0.18291690	<i>ω</i>	119.97292		+0.94957391		+0.29357044				
<i>a</i>	3.0735020	<i>Ω</i>	223.22189		−0.31313171		+0.90590743				
<i>e</i>	0.0961653	<i>i</i>	9.25310		+0.01605990		+0.30520178				
<i>P</i>	5.39	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1981 02 02	413	(3.8−	3.9−)	1981 04 09	413	1.0+	0.3+	1998 05 22	699	0.4−	1.4+
1981 03 02	413	1.4−	1.3+	1981 04 29	413	0.0	0.7−	1998 05 22	699	(0.5−	2.6+)
1981 03 02	413	1.3+	0.5−	1998 05 22	704	0.4+	0.9−	1998 05 24	704	0.8−	0.1+
1981 03 07	413	1.2−	0.9+	1998 05 22	704	0.1−	0.1−	1998 05 24	704	1.0−	1.1+
1981 03 07	413	1.6+	0.9−	1998 05 22	704	(2.1+	0.3+)	1998 05 24	704	1.3+	0.4+
1981 03 10	413	1.2−	0.0	1998 05 22	704	1.3+	1.1−	1998 05 24	704	0.9−	1.0−
1981 03 10	413	0.9+	1.2−	1998 05 22	699	0.1+	0.3+				
1981 04 09	413	0.9−	1.0+	1998 05 22	704	(3.8−	0.5−)				

1981 EA₃ = 1998 KE₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	348.32664		(2000.0)			P		Q			
<i>n</i>	0.29579944	ω	352.23453			−0.03121056		+0.99450846			
<i>a</i>	2.2308540	Ω	275.93799			−0.91155260		−0.06931763			
<i>e</i>	0.0873133	<i>i</i>	5.76410			−0.40999727		+0.07840906			
<i>P</i>	3.33	<i>H</i>	16.0			<i>G</i>	0.15	<i>U</i>	5		
Residuals in seconds of arc											
1981 02 02	413	0.0	0.5−	1981 03 10	413	0.3−	0.5+	1998 05 22	704	0.3+	0.5−
1981 02 14	413	0.2+	1.0+	1981 03 12	413	0.8−	0.1−	1998 05 22	704	0.2−	1.5−
1981 03 02	413	2.8+	0.3−	1981 03 12	413	1.2−	0.2−	1998 05 22	704	0.7−	0.3−
1981 03 02	413	2.3+	0.5−	1981 04 09	413	2.1−	0.3−	1998 05 24	704	1.4+	0.4+
1981 03 07	413	1.7−	1.7+	1981 04 09	413	1.2+	3.2−	1998 05 24	704	0.2+	1.2+
1981 03 07	413	0.8+	0.1−	1981 04 29	413	0.1+	0.4+	1998 05 24	704	0.1+	1.8+
1981 03 10	413	1.5−	1.4+	1998 05 22	704	1.2+	0.7+	1998 05 24	704	2.2−	1.2−

1981 EJ₄ = 1998 HW₈₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17929917	ω	166.52329	+0.92463647	-0.36706664		
<i>a</i>	3.1147070	Ω	215.54774	+0.33123275	+0.90664833		
<i>e</i>	0.0339450	<i>i</i>	10.05803	+0.18796879	+0.20796848		
<i>P</i>	5.50	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 02 02	413	1.0-	1.2-	1981 03 12	413	0.7+	0.4-	1998 04 22	704	0.2-	0.9-
1981 02 14	413	0.1-	0.5-	1981 04 09	413	1.2-	0.7+	1998 04 22	704	0.0	0.5+
1981 03 02	413	(3.1-	1.1+)	1981 04 09	413	0.5+	0.5-	1998 04 22	704	0.6-	1.4-
1981 03 02	413	1.2+	0.1-	1981 05 03	413	0.0	1.0-	1998 04 22	704	0.2+	0.6+
1981 03 07	413	0.4-	1.6+	1998 04 21	704	0.2+	1.0+	1998 04 22	704	0.4-	0.9-
1981 03 07	413	0.9+	0.2-	1998 04 21	704	1.0+	1.2-	1998 05 22	704	0.2-	1.2-
1981 03 10	413	1.7-	1.6+	1998 04 21	704	0.5-	0.1+	1998 05 22	704	0.1+	1.8+
1981 03 10	413	2.1+	0.2-	1998 04 21	704	0.8+	1.6+	1998 05 22	704	0.4+	0.5+
1981 03 12	413	0.9-	0.1-	1998 04 21	704	1.0-	0.3+	1998 05 22	704	0.2+	0.8-

1981 EQ₄ = 1976 JQ₅

Id. L. D. Schmadel, E. Bowell (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18002163	ω	274.86664	-0.79564508	-0.59549252		
<i>a</i>	3.1063682	Ω	228.63560	+0.59771506	-0.74197346		
<i>e</i>	0.1475186	<i>i</i>	8.51084	+0.09841549	-0.30800008		
<i>P</i>	5.47	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1976 05 03	809	0.1+	0.4+	1981 03 12	413	1.9+	1.1-	1998 05 22	704	0.7+	0.1+
1981 02 02	413	0.1+	0.7-	1981 04 07	413	2.4-	0.6+	1998 05 22	704	0.5+	1.3-
1981 02 14	413	1.0+	2.3-	1981 04 07	413	1.1+	0.9-	1998 05 22	699	0.8-	0.3+
1981 03 02	413	0.4-	0.5+	1981 04 08	413	1.5-	1.0+	1998 05 22	699	1.4-	0.2-
1981 03 02	413	0.7+	0.4+	1981 04 08	413	0.3-	0.3+	1998 05 22	699	0.4+	0.3+
1981 03 07	413	0.0	1.1+	1981 04 09	413	0.9-	0.2-	1998 05 24	704	0.2-	0.3+
1981 03 07	413	1.6+	0.1-	1981 04 09	413	0.3-	1.1-	1998 05 24	704	0.5-	1.0-
1981 03 10	413	0.2-	0.8+	1981 05 03	413	0.3-	0.3+	1998 05 24	704	0.3-	0.7+
1981 03 10	413	0.3-	1.3+	1998 05 22	704	0.7+	1.7-	1998 05 24	704	0.1+	0.6+
1981 03 12	413	(3.3-	0.6+)	1998 05 22	704	0.8+	1.4+				

1981 EH₅ = 1998 KP₄₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18330237	ω	125.58268	+0.98802091	-0.07647089		
<i>a</i>	3.0691916	Ω	239.15517	+0.02996617	+0.94712641		
<i>e</i>	0.0606585	<i>i</i>	8.98192	+0.15138269	+0.31161478		
<i>P</i>	5.38	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 09	413	1.0+	1.4-	1981 03 12	413	3.7+	1.1-	1998 05 22	704	2.0-	0.4-
1981 02 09	413	1.7-	1.1+	1981 04 09	413	3.3-	2.3+	1998 05 22	704	0.8+	1.0+
1981 02 14	413	0.8+	0.7-	1981 04 09	413	0.0	0.5-	1998 05 24	704	1.1-	1.4-
1981 03 02	413	2.0+	1.1+	1981 05 03	413	0.9-	0.3-	1998 05 24	704	0.8-	1.8+
1981 03 07	413	1.0-	0.2-	1998 05 22	704	0.4+	0.0	1998 05 24	704	0.8+	3.0-
1981 03 10	413	0.7-	0.3-	1998 05 22	704	0.6+	1.6+	1998 05 24	704	1.2+	0.3+

1981 ET₅ = 1998 HU₁₀₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23847141	ω	143.45588	+0.99257977	+0.06501150		
<i>a</i>	2.5754029	Ω	213.26446	-0.08877327	+0.96493623		
<i>e</i>	0.0539030	<i>i</i>	10.79756	+0.08309457	+0.25430606		
<i>P</i>	4.13	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 02 02	413	0.1-	0.7-	1981 04 29	413	0.4+	0.8-	1998 05 22	704	1.8+	0.2+
1981 03 07	413	1.4-	1.3+	1998 04 21	704	1.2+	0.5-	1998 05 22	704	1.0-	0.3-
1981 03 07	413	0.4+	0.4-	1998 04 21	704	0.5-	0.0	1998 05 22	704	0.6+	0.5-
1981 03 10	413	1.5-	1.1+	1998 04 21	704	(2.1-	0.9-)	1998 05 22	704	0.5-	0.9+
1981 03 12	413	0.2+	1.1+	1998 04 21	704	0.4-	0.9+	1998 05 24	704	(2.6+	0.1-)
1981 03 12	413	0.9+	0.7-	1998 04 22	704	0.2-	0.9+	1998 05 24	704	(1.1+	3.0-)
1981 04 12	413	(1.8-	3.7+)	1998 04 22	704	(1.7-	2.6+)	1998 05 24	704	0.8+	0.1-
1981 04 12	413	1.2+	1.3-	1998 04 22	704	1.8-	1.4-				

1981 EM₆ = 1998 HO₆₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23632106	ω	131.60056	+0.96074893	+0.24556993		
<i>a</i>	2.5910021	Ω	214.76391	-0.26899149	+0.93841284		
<i>e</i>	0.1277487	<i>i</i>	13.08204	+0.06786069	+0.24305708		
<i>P</i>	4.17	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 09	413	1.3+	1.1-	1981 04 09	413	1.6-	2.3+	1998 04 21	704	0.0	0.9-
1981 02 09	413	1.4+	0.0	1981 04 09	413	1.8+	1.1-	1998 04 21	704	1.3+	0.0
1981 03 06	413	1.3-	0.8+	1981 05 01	413	0.3-	0.2-	1998 04 22	704	1.3-	0.9+
1981 03 06	413	1.1-	0.2-	1981 05 03	413	1.0-	1.5+	1998 04 22	704	0.6-	0.2-
1981 03 08	413	0.5-	0.1+	1998 04 21	704	0.4-	0.6-	1998 04 22	704	0.0	1.3+
1981 03 08	413	1.0+	1.3-	1998 04 21	704	1.3+	2.1-	1998 04 22	704	0.6+	0.9-
1981 03 12	413	0.5+	0.3-	1998 04 21	704	1.6-	0.7+	1998 04 22	704	0.5+	1.1+

1981 EM₇ = 1998 HF₅₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23688040	ω	73.70642	+0.43091859	+0.89984418		
<i>a</i>	2.5869218	Ω	222.02906	-0.86175194	+0.38807503		
<i>e</i>	0.2061404	<i>i</i>	5.80764	-0.26775503	+0.19919392		
<i>P</i>	4.16	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 02 09	413	1.8+	0.6+	1981 04 12	413	(4.4+	2.4-)	1998 04 30	699	0.2+	0.0
1981 03 01	413	0.0	1.0-	1981 04 30	413	0.1+	0.3+	1998 05 01	699	0.3-	0.2-
1981 03 07	413	0.5+	0.1-	1998 04 21	704	0.1+	0.6+	1998 05 01	699	0.3+	0.5-
1981 03 11	413	1.2-	0.8+	1998 04 21	704	0.1-	0.3+	1998 05 01	699	0.4+	0.6-
1981 03 11	413	0.2-	0.8-	1998 04 21	704	0.3-	1.2+	1998 05 16	704	0.2-	0.5-
1981 03 15	413	1.7-	0.8+	1998 04 21	704	0.3+	0.2-	1998 05 16	704	0.6-	0.6+
1981 03 15	413	1.5+	0.9-	1998 04 21	704	0.6-	0.5+	1998 05 16	704	0.5-	0.1-
1981 04 05	413	0.4+	1.8-	1998 04 22	704	0.1+	0.0	1998 05 16	704	0.5+	1.1-
1981 04 06	413	1.0-	0.5+	1998 04 22	704	0.8-	0.7-	1998 05 16	704	0.6-	0.3-
1981 04 06	413	0.6+	1.1-	1998 04 22	704	0.2+	0.0	1998 05 25	699	0.2-	1.1+
1981 04 07	413	0.5-	0.3+	1998 04 22	704	0.3+	0.3+	1998 05 25	699	0.7+	0.2-
1981 04 10	413	0.1-	1.5+	1998 04 22	704	0.4-	0.6+	1998 05 25	699	0.6+	0.5-
1981 04 10	413	0.9+	0.6-	1998 04 30	699	0.4+	0.1+				
1981 04 12	413	0.9-	1.5+	1998 04 30	699	0.5+	0.3-				

1981 EW₇ = 1998 FW₁₂₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23218126	ω	38.28008	-0.61876173	+0.78412415		
<i>a</i>	2.6217097	Ω	193.71366	-0.76126031	-0.61351420		
<i>e</i>	0.1338070	<i>i</i>	11.62806	-0.19395014	-0.09353955		
<i>P</i>	4.24	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 02	413	1.2+	0.1+	1981 05 02	413	1.4+	0.4-	1998 03 24	704	0.7-	0.4-
1981 03 01	413	1.1-	0.9+	1998 03 22	704	1.0+	0.7+	1998 03 24	704	0.5+	0.0
1981 03 01	413	0.1-	1.4-	1998 03 22	704	0.1-	0.2+	1998 04 01	704	1.4-	1.5-
1981 03 07	413	0.5-	1.8+	1998 03 22	704	1.3+	0.3-	1998 04 01	704	0.3-	0.0
1981 03 11	413	0.4-	0.1+	1998 03 22	704	2.0+	0.7+	1998 04 01	704	0.7+	1.6-

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1981 03 11	413	0.2−	1.2−	1998 03 22	704	(2.1+ 1.2+)	1998 04 01	704	0.2+ 0.8−
1981 03 15	413	1.1−	0.5+	1998 03 24	704	0.0 0.2+	1998 04 01	704	1.5− 0.4−
1981 03 15	413	1.8+	2.0−	1998 03 24	704	0.3+ 0.8+	1998 04 19	704	1.5+ 0.5−
1981 04 05	413	0.5+	1.6−	1998 03 24	704	0.4− 0.6+	1998 04 19	704	0.6− 1.4+
1981 04 06	413	1.6−	1.8+	1998 03 24	704	0.5− 0.7+	1998 04 19	704	1.4− 0.3−
1981 04 06	413	0.3+	0.5−	1998 03 24	704	0.1+ 0.1−	1998 04 19	704	0.5− 1.0+
1981 04 12	413	0.5−	1.7+	1998 03 24	704	0.0 0.5+	1998 04 19	704	0.1− 0.1−
1981 04 12	413	(2.9+ 1.8−)		1998 03 24	704	0.1− 0.5−			
1981 04 30	413	0.4+	0.6−	1998 03 24	704	0.1+ 0.3+			

1981 EK₉ = 1998 KN₄₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 297.31539 (2000.0)				Williams <i>P</i> <i>Q</i>			
<i>n</i>	0.18329221	<i>ω</i>	33.72494	+0.79520143	+0.60447853		
<i>a</i>	3.0693049	<i>Ω</i>	289.01215	−0.56682667	+0.71324118		
<i>e</i>	0.0726894	<i>i</i>	2.88243	−0.21531885	+0.35481365		
<i>P</i>	5.38	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 09	413	0.0	0.7+	1981 03 15	413	1.2−	0.3+	1998 05 22	704	2.1+ 0.4+
1981 02 13	413	0.8+	0.5+	1981 03 15	413	0.2+	0.3+	1998 05 22	704	1.8− 2.1+
1981 03 01	413	1.1−	0.6+	1981 04 05	413	1.4−	0.1+	1998 05 22	704	1.3− 0.8+
1981 03 01	413	1.7+	0.3−	1981 04 05	413	1.3+	0.6−	1998 05 22	704	0.7− 0.7+
1981 03 07	413	0.9−	0.5+	1981 04 12	413	1.3−	0.7−	1998 05 24	704	1.0+ 2.3−
1981 03 07	413	0.3+	0.6+	1981 04 12	413	1.9+	1.5−	1998 05 24	704	1.8+ 0.7−
1981 03 11	413	1.2+	0.4+	1981 04 30	413	1.2−	0.9−	1998 05 24	704	0.9− 0.3−
1981 03 11	413	0.1−	0.3+	1981 05 02	413	0.3−	0.4−	1998 05 24	704	0.1− 0.1−

1981 EE₁₀ = 1998 KP₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 315.44171 (2000.0)				Williams <i>P</i> <i>Q</i>			
<i>n</i>	0.29536738	<i>ω</i>	3.34562	+0.50849025	+0.85983656		
<i>a</i>	2.2330290	<i>Ω</i>	297.22233	−0.79121098	+0.44547759		
<i>e</i>	0.1198032	<i>i</i>	2.96715	−0.33973939	+0.24946104		
<i>P</i>	3.34	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 09	413	0.1+	0.0	1981 05 02	413	0.2+	0.2−	1998 05 01	566	0.9− 0.2+
1981 02 13	413	(3.8− 0.3+)		1998 04 22	704	0.3+	0.2−	1998 05 22	704	0.4− 0.7−
1981 03 01	413	0.6−	0.6+	1998 04 22	704	0.8+	0.8+	1998 05 22	704	0.4− 1.7+
1981 03 01	413	1.7+	0.2−	1998 04 22	704	(1.4− 2.5−)		1998 05 22	704	0.9+ 0.2−
1981 03 07	413	(3.5+ 0.2−)		1998 04 22	704	0.5+	1.5−	1998 05 22	704	(2.2+ 2.0−)
1981 03 11	413	0.8−	0.8+	1998 05 01	704	0.3−	0.7−	1998 05 22	704	0.5+ 0.4+
1981 03 15	413	0.3+	0.2−	1998 05 01	704	0.2−	0.7−	1998 05 24	704	0.3− 0.3+
1981 03 15	413	(3.8+ 1.7−)		1998 05 01	704	0.1−	0.3−	1998 05 24	704	0.7+ 1.5−
1981 04 12	413	(5.4− 1.2+)		1998 05 01	704	1.3+	0.3+	1998 05 24	704	0.1− 1.1+
1981 04 12	413	0.3−	0.4−	1998 05 01	566	1.2−	0.1−	1998 05 24	704	0.0 0.4−
1981 04 30	413	0.6−	0.3−	1998 05 01	566	1.1−	0.2+	1998 05 24	704	0.2+ 1.4+

1981 EF₁₄ = 1998 HL₃₇ = 1998 HY₁₅₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 349.12895 (2000.0)				Williams <i>P</i> <i>Q</i>			
<i>n</i>	0.29168844	<i>ω</i>	338.69879	−0.40739557	+0.91219199		
<i>a</i>	2.2517659	<i>Ω</i>	267.23779	−0.83140041	−0.39038079		
<i>e</i>	0.1091662	<i>i</i>	2.52387	−0.37789178	−0.12453360		
<i>P</i>	3.38	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1979 11 22	675	1.1−	2.3−	1998 03 20	327	0.2−	0.2−	1998 04 01	704	0.6+ 0.8−
1979 11 24	675	0.7+	1.0−	1998 03 20	327	0.0	0.1+	1998 04 01	704	0.5− 0.7+
1979 11 25	675	2.0+	2.1+	1998 03 20	327	0.1−	0.1+	1998 04 01	704	0.4− 0.3−
1981 02 12	413	0.7+	0.6−	1998 03 20	327	0.1−	0.0	1998 04 20	704	0.0 0.4−
1981 02 12	413	0.5+	0.4−	1998 03 22	704	0.0	0.5+	1998 04 20	704	2.1− 1.3+
1981 03 01	413	0.9−	0.5+	1998 03 22	704	0.8+	1.1−	1998 04 20	704	0.1+ 1.7+
1981 03 01	413	0.1+	0.8+	1998 03 22	704	0.6+	0.6−	1998 04 20	704	0.0 0.2−

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1981 03 06	413	0.2−	0.9+	1998 03 22	704	1.2+	0.8−	1998 04 20	704	0.5− 0.2−
1981 03 06	413	0.8+	0.2−	1998 03 22	704	0.3+	1.2−	1998 04 21	704	0.5− 0.3−
1981 03 08	413	0.6−	0.5+	1998 03 25	704	0.7−	0.7−	1998 04 21	704	0.5− 0.4−
1981 03 08	413	0.6+	0.5+	1998 03 25	699	0.1−	1.3+	1998 04 21	704	0.1+ 0.1−
1981 03 12	413	1.5−	0.7+	1998 03 25	699	0.4+	0.6+	1998 04 21	704	0.4− 0.5+
1981 03 12	413	0.7+	0.5−	1998 03 25	704	0.2+	0.6+	1998 04 21	704	0.2− 0.8+
1981 04 06	413	1.8−	1.5+	1998 03 25	699	0.2+	1.4+	1998 04 22	704	0.3− 1.0−
1981 04 08	413	0.5−	0.1+	1998 03 25	704	0.2−	0.6+	1998 04 22	704	0.1+ 1.2−
1981 04 09	413	0.3−	0.1+	1998 03 25	704	0.3+	0.2+	1998 04 22	704	1.3+ 1.4−
1981 04 09	413	0.8+	1.0−	1998 03 25	704	0.6+	0.7+	1998 04 22	704	0.1+ 1.3−
1981 05 01	413	0.2−	1.3−	1998 03 29	704	0.3−	0.1+	1998 04 22	704	1.4+ 1.7−
1981 05 03	413	0.5+	1.3−	1998 03 29	704	1.0−	0.4+	1998 04 25	699	0.4+ 1.4−
1984 01 25	675	0.8+	0.3−	1998 03 29	704	0.4−	1.1+	1998 04 25	699	0.7+ 0.5−
1984 01 26	675	0.6+	0.7−	1998 03 29	704	0.1−	1.4+	1998 04 25	699	0.5+ 0.3+
1997 02 04	691	0.8−	0.6−	1998 03 29	704	1.1−	0.8+	1998 04 30	699	0.0 0.3−
1997 02 04	691	1.2−	0.4−	1998 04 01	704	1.1−	0.7+	1998 04 30	699	0.9+ 1.3−
1997 02 04	691	0.8−	0.3−	1998 04 01	704	0.1−	0.9+	1998 04 30	699	0.6+ 0.9−

1981 EB₁₈ = 1998 KY₄₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 20.01767 (2000.0)				Williams <i>P</i> <i>Q</i>			
<i>n</i>	0.23815159	<i>ω</i>	56.62404	−0.61668502	+0.78718891		
<i>a</i>	2.5777080	<i>Ω</i>	175.28919	−0.74355458	−0.58006684		
<i>e</i>	0.1495057	<i>i</i>	4.02344	−0.25850757	−0.20941844		
<i>P</i>	4.14	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 02	413	0.9+	0.5+	1981 03 29	413	2.2−	1.9+	1998 05 22	704	0.8− 0.7+
1981 02 09	413	0.5−	0.5+	1981 04 08	413	0.6−	0.1+	1998 05 22	704	0.1− 0.0
1981 03 02	413	1.9−	1.0+	1981 04 08	413	0.7−	0.1+	1998 05 22	704	1.8+ 0.7+
1981 03 03	413	0.3+	0.2+	1981 04 11	413	0.4−	0.9+	1998 05 24	704	0.7− 0.3−
1981 03 07	413	0.7−	0.0	1981 04 11	413	2.1+	1.8−	1998 05 24	704	0.1− 0.1−
1981 03 07	413	1.0+	1.2−	1981 05 02	413	0.8+	0.1−	1998 05 24	704	0.6− 0.3+
1981 03 11	413	0.4−	0.1−	1981 05 03	413	0.6−	0.0	1998 05 24	704	0.2+ 0.2−
1981 03 16	413	2.9+	2.0−	1998 05 22	704	0.6+	0.3−	1998 05 24	704	0.3− 0.6−

1981 EN₁₈ = 1998 HR₇₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 64.03094 (2000.0)				Williams <i>P</i> <i>Q</i>			
<i>n</i>	0.17763062	<i>ω</i>	310.15941	−0.86165935	−0.50649030		
<i>a</i>	3.1341816	<i>Ω</i>	199.47535	+0.48977322	−0.81354253		
<i>e</i>	0.1156696	<i>i</i>	5.47188	+0.13291109	−0.28568537		
<i>P</i>	5.55	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 02 09	413	1.5+	0.1−	1981 03 11	413	1.9−	2.0+	1998 03 31	910	0.7− 0.2−
1981 02 13	413	0.0	0.1−	1981 03 11	413	1.1+	0.3−	1998 04 21	704	0.2+ 0.5−
1981 03 01	413	0.7−	0.1+	1981 03 15	413	0.7−	1.1−	1998 04 21	704	0.5+ 1.4+
1981 03 01	413	0.1−	1.1−	1981 03 15	413	1.6−	0.1−	1998 04 21	704	0.2+ 0.6−
1981 03 02	413	0.3−	0.3−	1981 03 29	413	0.5−	1.3+	1998 04 22	704	0.4+ 0.4+
1981 03 03	413	0.2−	1.8+	1981 03 29	413	2.3+	0.6−	1998 04 22	704	0.6+ 0.3+
1981 03 07	413	0.6+	0.7+	1981 04 30	413	0.8+	0.9−	1998 04 22	704	0.3− 1.6−
1981 03 07	413	1.4+	0.2−	1981 05 02	413	0.1−	0.0	1998 04 22	704	0.3+ 1.0+
1981 03 07	413	0.9−	0.7+	1998 03 31	910	0.6−	0.0			
1981 03 11	413	0.3−	1.7−	1998 03 31	910	0.7−	0.2−			

1981 EB₂₂ = 1998 HW₈₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	60.65706		(2000.0)		P		Q
n	0.17767436	ω	42.79348		-0.90014091		-0.43413821
a	3.1336672	Ω	111.44418		+0.38859277		-0.83728549
e	0.1282519	i	2.19456		+0.19682987		-0.33238085
P	5.55	H	14.0	G	0.15	U	5

Residuals in seconds of arc

1981 02 02	413	0.2+	0.0	1981 04 08	413	0.5−	0.4+	1998 04 21	704	0.0	0.1+
1981 02 13	413	0.2−	0.2+	1981 04 11	413	0.6−	0.1−	1998 04 21	704	0.6−	0.1−
1981 03 02	413	0.4−	0.3−	1981 04 11	413	2.6−	0.3+	1998 04 22	704	0.4+	0.5−
1981 03 07	413	0.7−	0.6+	1981 04 26	413	0.8+	0.4−	1998 04 22	704	0.4+	1.9+
1981 03 07	413	1.7+	0.0	1981 05 02	413	0.7+	0.0	1998 04 22	704	0.4+	0.4−
1981 03 11	413	0.2+	0.1−	1998 04 21	704	0.0	0.7+	1998 04 22	704	0.4+	0.4−
1981 03 11	413	3.4+	1.7−	1998 04 21	704	0.0	0.3+	1998 04 22	704	0.6−	1.7−
1981 04 08	413	2.2−	0.8+	1998 04 21	704	0.5−	0.2+				

1981 EU₂₈ = 1975 NM = 1998 KQ₁₄

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Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	308.62230		(2000.0)	P	Q		
<i>n</i>	0.29659415	ω	19.43554	+0.72341080	+0.68745398		
<i>a</i>	2.2268672	Ω	296.96464	−0.64255778	+0.63651173		
<i>e</i>	0.1937332	<i>i</i>	4.11162	−0.25257934	+0.34965675		
<i>P</i>	3.32	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1975 07 11	095	0.2+	1.1−	1981 04 30	413	0.2−	2.0−	1998 05 22	704	0.1−	0.9+
1981 02 09	413	0.5+	0.7−	1998 05 01	566	0.6+	0.2+	1998 05 24	704	0.8−	0.2−
1981 02 13	413	1.5−	1.7−	1998 05 01	566	1.0+	0.1−	1998 05 24	704	0.4−	0.0
1981 03 01	413	1.1−	0.9+	1998 05 01	566	0.5+	0.0	1998 05 24	704	0.7−	0.1−
1981 03 07	413	0.6+	0.6+	1998 05 22	704	0.3+	0.7−	1998 05 24	704	0.3−	0.7−
1981 03 07	413	0.7+	0.1−	1998 05 22	704	0.4+	0.6+	1998 05 24	704	0.7−	0.1+
1981 03 11	413	0.9−	1.0+	1998 05 22	704	0.1+	0.9+				
1981 03 11	413	1.1+	0.0	1998 05 22	704	0.6+	0.8+				

1981 EN₃₀ = 1998 HE₆₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	260.04485		(2000.0)	P	Q		
<i>n</i>	0.17962666	ω	279.71595	+0.93212469	+0.36096351		
<i>a</i>	3.1109201	Ω	59.12980	−0.31752482	+0.85333050		
<i>e</i>	0.1715422	<i>i</i>	1.94526	−0.17413082	+0.37620791		
<i>P</i>	5.49	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1981 02 09	413	1.4−	0.1+	1981 04 26	413	2.0+	1.8−	1998 04 21	704	1.4+	0.8−
1981 02 13	413	0.5−	0.4−	1981 05 02	413	1.9−	0.6+	1998 04 22	704	0.0	0.8+
1981 03 02	413	0.6−	0.1+	1998 04 21	704	0.7+	1.0−	1998 04 22	704	0.4−	0.0
1981 03 02	413	3.1+	0.5−	1998 04 21	704	0.5−	0.2+	1998 04 22	704	0.3+	0.3+
1981 03 07	413	1.1−	1.8+	1998 04 21	704	0.0	1.0+	1998 04 22	704	0.0	0.8−
1981 03 11	413	0.1+	0.1−	1998 04 21	704	0.5−	0.9+	1998 04 22	704	1.0−	0.7−

1981 EQ₃₀ = 1978 TL₃ = 1998 HY₅₀

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Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	296.46868		(2000.0)	P	Q		
<i>n</i>	0.23634651	ω	316.92493	+0.75001550	+0.66138792		
<i>a</i>	2.5908161	Ω	1.70972	−0.53155757	+0.60861193		
<i>e</i>	0.2640330	<i>i</i>	12.66018	−0.39360297	+0.43835777		
<i>P</i>	4.17	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1978 10 04	095	1.2+	1.7−	1981 04 05	413	(5.0+	1.4−)	1998 04 25	699	0.9−	1.0−
1981 02 09	413	0.2+	0.7−	1981 04 06	413	0.3−	1.1+	1998 04 25	699	0.1+	1.0+
1981 02 12	413	1.6−	0.6−	1981 04 06	413	2.0+	0.9−	1998 04 30	699	0.0	0.1+
1981 03 02	413	0.1−	1.8−	1981 04 10	413	1.1−	0.7+	1998 04 30	699	1.9−	0.8−
1981 03 11	413	(3.1−	0.0)	1981 04 26	413	(3.1+	0.4+)	1998 04 30	699	0.6+	0.4−
1981 03 15	413	1.2+	0.9−	1981 05 02	413	0.5+	1.2+				
1981 04 05	413	1.3−	1.1+	1998 04 25	699	0.9+	0.5−				

1981 EG₃₁ = 1998 HT₉₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	283.97839		(2000.0)	P	Q		
<i>n</i>	0.23763651	ω	1.95815	+0.86810110	+0.49536158		
<i>a</i>	2.5814315	Ω	328.28439	−0.45624727	+0.77093977		
<i>e</i>	0.1672139	<i>i</i>	3.47851	−0.19554773	+0.40033583		
<i>P</i>	4.15	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 12	413	0.7−	0.7−	1981 04 09	413	0.9+	0.0	1998 04 21	704	0.1+	1.7+
1981 03 02	413	0.9+	1.0+	1981 05 01	413	0.8−	0.6−	1998 04 22	704	0.1−	0.6−
1981 03 02	413	1.4−	0.6−	1981 05 03	413	0.2+	0.3−	1998 04 22	704	1.1−	0.4+
1981 03 06	413	1.1+	0.1−	1998 04 21	704	1.4+	1.7−	1998 04 22	704	0.6+	1.1+
1981 03 06	413	(5.3+	2.4−)	1998 04 21	704	1.1+	0.7−	1998 04 22	704	1.9−	1.2−
1981 03 11	413	(7.2+	0.2−)	1998 04 21	704	0.4+	0.1+				
1981 03 15	413	0.4−	1.1+	1998 04 21	704	0.5−	0.9+				

1981 EL₃₇ = 1998 HT₆₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	281.41316		(2000.0)	P	Q		
<i>n</i>	0.17911041	ω	111.18223	+0.74912736	+0.65647382		
<i>a</i>	3.1168950	Ω	208.01728	−0.65591086	+0.71638144		
<i>e</i>	0.1472989	<i>i</i>	10.87227	−0.09267766	+0.23630437		
<i>P</i>	5.50	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 02	413	0.4+	0.1−	1981 03 15	413	0.9−	0.1+	1998 04 21	704	0.2−	1.0+
1981 03 01	413	2.0−	1.8+	1981 05 02	413	0.0	0.2+	1998 04 22	704	1.1+	0.3−
1981 03 01	413	0.9+	1.0−	1998 04 21	704	0.0	0.9+	1998 04 22	704	0.2−	0.2+
1981 03 07	413	1.3+	0.8−	1998 04 21	704	0.2−	1.6+	1998 04 22	704	1.1+	1.5+
1981 03 07	413	0.4+	0.2−	1998 04 21	704	0.4−	1.6−	1998 04 22	704	0.7−	1.7−
1981 03 11	413	(7.4−	3.0+)	1998 04 21	704	0.5−	0.9−	1998 04 22	704	0.1+	0.6−

1981 ET₄₀ = 1998 FN₁₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	310.22700		(2000.0)	P	Q		
<i>n</i>	0.23018493	ω	293.09584	−0.39156184	+0.91940514		
<i>a</i>	2.6368462	Ω	313.79790	−0.82432250	−0.36839495		
<i>e</i>	0.0302030	<i>i</i>	2.94322	−0.40886642	−0.13776558		
<i>P</i>	4.28	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1981 02 12	413	0.5+	0.0	1981 05 03	413	0.7+	0.6−	1998 03 26	704	0.5−	0.2−
1981 03 02	413	(9.7+	2.4−)	1998 03 22	704	0.2+	0.1−	1998 03 26	704	0.3−	0.4−
1981 03 11	413	1.1+	0.4−	1998 03 22	704	0.6−	0.8−	1998 03 26	704	1.1−	0.5−
1981 03 15	413	0.4−	2.4+	1998 03 22	704	0.7+	0.9+				
1981 05 02	413	1.3−	0.3−	1998 03 22	704	0.9+	0.2−				

1982 JD₂ = 1998 KM₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	42.31989		(2000.0)	P	Q		
<i>n</i>	0.30758517	ω	92.73142	−0.93797199	+0.33997015		
<i>a</i>	2.1734974	Ω	107.15068	−0.33962688	−0.86147807		
<i>e</i>	0.0690731	<i>i</i>	4.08301	−0.06972890	−0.37719468		
<i>P</i>	3.20	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1982 05 15	675	0.1+	0.1+	1998 05 22	704	0.3−	0.3+	1998 05 24	704	0.9+	0.5−
1982 05 16	675	0.5+	0.6−	1998 05 22	704	0.2−	0.2−	1998 05 24	704	0.5−	0.1−
1982 05 16	675	1.7−	0.0	1998 05 22	704	0.0	0.1−	1998 05 24	704	0.5−	0.7−
1982 05 17	675	0.2+	0.2+	1998 05 22	704	0.5+	0.6+	1998 05 24	704	0.4−	0.8+
1982 05 18	675	0.9+	0.1+	1998 05 22	704	0.0	0.4−	1998 05 24	704	0.4+	0.5+

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**1982 UV₆ = 1982 VV = 1982 XT₄ = 1991 RP₃₅ = 1991 VB₁₆
= 1998 HE₅₃**

Id. S. Nakano (d, *MPC* 10752), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	148.57483		(2000.0)	P		Q	
<i>n</i>	0.21557451	ω	189.71609	+0.60538870		−0.79102191	
<i>a</i>	2.7546798	Ω	223.09660	+0.73864904		+0.59965958	
<i>e</i>	0.2875752	<i>i</i>	7.42177	+0.29648292		+0.12121358	
<i>P</i>	4.57	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1982 10 20	095	(3.1− 3.0+)	1991 09 13	675	0.8− 0.2+	1998 04 21	704	1.4+ 1.1+
1982 10 25	095	1.7+ 1.4+	1991 11 10	881	0.2− 0.6+	1998 04 22	704	2.9− 1.4−
1982 11 15	688	0.2+ 2.1−	1991 11 10	881	1.1+ 0.7−	1998 04 22	704	0.5+ 0.6+
1982 11 15	688	(1.3− 5.9−)	1998 04 21	704	0.2+ 0.6+	1998 04 22	704	0.1− 1.8−
1982 12 06	330	1.9− 1.2+	1998 04 21	704	0.6+ 1.6+	1998 04 22	704	0.4− 0.3+
1991 09 13	675	0.2− 0.1+	1998 04 21	704	0.9+ 0.3−			

1982 VY₃ = 1998 HR₁₃₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	322.81550		(2000.0)	P		Q	
<i>n</i>	0.28425653	ω	197.86364	−0.08393268		+0.99091915	
<i>a</i>	2.2908452	Ω	67.42742	−0.89980295		−0.03007401	
<i>e</i>	0.1353877	<i>i</i>	6.53212	−0.42814712		−0.13105265	
<i>P</i>	3.47	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1982 11 14	381	0.0 0.1+	1998 04 19	704	0.1− 0.6−	1998 04 20	704	0.0 0.3+
1982 11 14	381	0.9+ 0.2−	1998 04 19	704	0.3− 0.0	1998 04 20	704	0.1− 1.0+
1982 12 13	381	1.4− 0.1+	1998 04 19	704	1.1+ 0.7−	1998 04 20	704	0.5− 0.1+
1982 12 13	381	1.0+ 0.0	1998 04 19	704	0.3+ 0.8−	1998 04 29	566	0.1+ 0.1−
1982 12 14	381	0.1+ 0.4+	1998 04 20	704	0.1+ 0.0	1998 04 29	566	0.1− 0.2−
1982 12 14	381	0.7− 0.5−	1998 04 20	704	0.6− 0.8+	1998 04 29	566	0.2+ 0.1+

1985 PC = 1998 KY₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	347.17157		(2000.0)	P		Q	
<i>n</i>	0.29366483	ω	86.63542	+0.02378300		+0.99970636	
<i>a</i>	2.2416515	Ω	184.73485	−0.93810870		+0.02071207	
<i>e</i>	0.1098935	<i>i</i>	3.22422	−0.34552341		+0.01257755	
<i>P</i>	3.36	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1985 08 14	688	0.9− 0.2+	1998 05 22	704	0.3− 0.7−	1998 05 24	704	0.0 1.1+
1985 08 14	688	0.6− 1.8+	1998 05 22	704	0.8− 0.1+	1998 05 24	699	0.0 0.4+
1985 08 20	688	0.6+ 2.0−	1998 05 22	699	0.5+ 0.4+	1998 05 24	699	0.2+ 0.1+
1985 08 20	688	0.1− 1.5+	1998 05 22	699	0.0 0.0	1998 05 24	704	0.4− 0.6−
1985 08 22	688	0.9+ 1.1−	1998 05 22	699	0.4+ 0.1+	1998 05 24	704	(2.2− 2.5−)
1985 08 22	688	0.6+ 0.2−	1998 05 23	699	0.4+ 0.1−	1998 06 03	704	0.1+ 0.5−
1985 09 12	688	(6.5− 0.1−)	1998 05 23	699	0.0 0.2−	1998 06 03	704	0.4− 0.2−
1985 09 12	688	0.4− 0.1−	1998 05 23	699	0.1+ 0.0	1998 06 03	704	0.2− 0.4+
1998 05 22	704	0.2− 0.5+	1998 05 24	704	0.2+ 0.4−	1998 06 03	704	0.6+ 0.6−
1998 05 22	704	0.6− 0.4−	1998 05 24	704	0.8+ 0.4−			
1998 05 22	704	0.7− 0.2−	1998 05 24	699	0.4+ 0.8+			

1985 TO₃ = 1998 KC₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	271.72265		(2000.0)	P		Q	
<i>n</i>	0.28776005	ω	82.66880	+0.99496370		+0.02174606	
<i>a</i>	2.2722131	Ω	276.04985	−0.05980194		+0.91219833	
<i>e</i>	0.1902823	<i>i</i>	5.64685	+0.08044227		+0.40917151	
<i>P</i>	3.43	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1985 09 15	675	0.4+ 1.2+	1998 05 05	699	0.2+ 0.3+	1998 05 24	704	0.8− 0.1+
1985 09 15	675	0.1+ 1.7−	1998 05 05	699	(0.1+ 2.9+)	1998 05 24	704	0.3− 0.4−
1985 10 11	675	0.4− 0.1−	1998 05 22	704	0.1+ 0.2−	1998 05 24	704	1.1+ 1.6+
1985 10 13	675	0.1− 0.7+	1998 05 22	704	0.1+ 0.4−	1998 05 24	704	0.1+ 0.3−
1998 05 05	699	0.4+ 0.8−	1998 05 22	704	0.1+ 0.9−	1998 05 24	704	0.8− 1.1+

1986 QR₂ = 1992 CG₆ = 1998 HD₁₂₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	270.14815		(2000.0)	P		Q	
<i>n</i>	0.23199333	ω	213.33324	+0.99180850		+0.00698486	
<i>a</i>	2.6231254	Ω	145.56889	+0.02100918		+0.97598476	
<i>e</i>	0.2947101	<i>i</i>	13.03660	−0.12599408		+0.21772680	
<i>P</i>	4.25	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1986 08 01	413	1.3− 1.6−	1986 09 03	809	0.4+ 0.3+	1998 04 23	704	0.7− 1.3−
1986 08 01	413	1.2− 1.6+	1986 09 03	809	0.3+ 0.1−	1998 04 23	704	0.7− 0.5−
1986 08 06	095	0.3+ 2.0−	1986 09 09	809	0.3+ 0.6+	1998 04 24	704	0.7+ 0.0
1986 08 28	809	0.2− 0.1−	1986 09 09	809	0.3+ 0.4+	1998 04 24	704	0.3− 0.2+
1986 08 28	809	0.1− 0.2−	1986 09 09	809	0.4+ 0.1+	1998 04 24	704	0.1− 0.0
1986 08 28	809	0.2− 0.3−	1986 09 12	809	0.5− 0.0	1998 04 24	566	0.1− 0.0
1986 09 01	809	0.2+ 0.1−	1986 09 12	809	0.7− 0.2−	1998 04 24	566	0.3+ 0.4−
1986 09 01	809	0.2+ 0.3−	1986 09 12	809	0.7− 0.4−	1998 04 24	566	0.2+ 0.3+
1986 09 01	809	0.4+ 0.2−	1992 02 02	809	0.4+ 1.0−	1998 06 02	699	0.1+ 0.7+
1986 09 02	809	0.7+ 0.1+	1992 02 02	809	0.3− 1.2−	1998 06 02	699	0.1+ 0.5+
1986 09 02	809	0.6+ 0.3+	1992 02 02	809	(0.5− 3.1−)	1998 06 02	699	0.8+ 0.8+
1986 09 02	809	0.6+ 0.2+	1998 04 23	704	0.5+ 1.5−			
1986 09 03	809	0.2+ 0.3+	1998 04 23	704	0.9− 0.2+			

1986 QY₂ = 1998 GM₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	262.01798		(2000.0)	P		Q	
<i>n</i>	0.22741583	ω	190.83066	+0.92845387		+0.34353607	
<i>a</i>	2.6582078	Ω	147.92593	−0.31781173		+0.93155859	
<i>e</i>	0.2257337	<i>i</i>	15.42828	−0.19227354		+0.11908634	
<i>P</i>	4.33	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1986 08 28	809	0.1+ 0.9−	1986 09 05	809	0.1+ 0.2−	1998 04 03	704	1.1+ 1.2−
1986 08 28	809	0.2+ 1.0−	1986 09 07	809	0.0 0.5−	1998 04 03	704	0.4− 0.7+
1986 08 28	809	0.1+ 1.0−	1986 09 07	809	0.3+ 0.5−	1998 04 03	704	0.4+ 0.2+
1986 08 31	809	0.5+ 0.3+	1986 09 07	809	0.3+ 0.4−	1998 04 03	704	1.0+ 0.8−
1986 08 31	809	0.7+ 0.2+	1986 09 08	809	0.8− 0.0	1998 04 03	704	0.6+ 0.4−
1986 08 31	809	0.7+ 0.0	1986 09 08	809	0.7− 0.1−	1998 04 23	704	0.2+ 0.2+
1986 08 31	095	(3.2− 0.0)	1986 09 08	809	0.5− 0.2−	1998 04 23	704	0.1+ 0.4−
1986 09 01	809	0.6+ 1.0+	1986 09 11	809	0.3− 0.4−	1998 04 23	704	0.1− 1.1+
1986 09 01	809	0.8+ 0.7+	1986 09 11	809	0.2− 0.5−	1998 04 23	704	0.1+ 0.1+
1986 09 01	809	0.7+ 0.5+	1986 09 11	809	0.3− 0.4−	1998 04 23	704	0.6+ 1.2+
1986 09 02	809	0.1− 0.8+	1986 09 13	809	0.8− 0.7−	1998 04 24	704	0.7− 0.2−
1986 09 02	809	0.2− 0.8+	1986 09 13	809	1.0− 0.7−	1998 04 24	704	0.6+ 0.6+
1986 09 02	809	0.1− 0.7+	1986 09 13	809	0.7− 0.9−	1998 04 24	704	0.2+ 0.1+
1986 09 03	809	0.1− 0.9+	1998 03 24	704	0.2− 0.7+	1998 04 24	704	0.5− 1.0+
1986 09 03	809	0.2− 1.0+	1998 03 24	704	0.4+ 0.2+	1998 04 24	704	0.7− 0.2+
1986 09 03	809	0.2− 1.1+	1998 03 24	704	(0.4+ 2.5−)	1998 05 16	704	0.0 0.6+
1986 09 04	809	0.2− 0.1+	1998 03 24	704	(3.4− 0.2+)	1998 05 16	704	0.0 0.0
1986 09 04	809	0.1+ 0.1+	1998 03 24	704	0.6− 0.5−	1998 05 16	704	0.3− 0.4−
1986 09 04	809	0.5+ 0.1+	1998 04 02	704	0.4+ 0.6−	1998 05 16	704	0.4− 1.1−
1986 09 05	809	0.1+ 0.0	1998 04 02	704	0.2+ 0.1+	1998 05 16	704	1.0− 1.4−
1986 09 05	809	0.1+ 0.1−	1998 04 02	704	0.9− 0.5−			

1986 TR₁ = 1998 FG₇₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	282.31907		(2000.0)			P		Q		
<i>n</i>	0.30955938	ω	218.57223			+0.75965188		+0.64722801		
<i>a</i>	2.1642465	Ω	100.97414			−0.57949199		+0.71795299		
<i>e</i>	0.1748861	<i>i</i>	3.70527			−0.29515770		+0.25620191		
<i>P</i>	3.18	<i>H</i>	14.5		<i>G</i>	0.15		<i>U</i>	4	
Residuals in seconds of arc										
1986 09 14	095	0.7+	0.4−	1998 03 22	704	0.0	0.6−	1998 04 22	704	0.4+ 0.3−
1986 10 06	688	2.0−	0.6−	1998 03 25	704	0.4−	0.1−	1998 04 22	704	(0.6− 2.9+)
1986 10 07	688	(6.5+ 1.1−)		1998 03 25	704	0.0	0.2−	1998 04 22	704	0.6+ 0.1+
1986 10 07	688	1.5+ 0.5+		1998 03 25	704	0.9−	0.1−	1998 04 29	691	0.9− 0.2+
1998 03 20	704	0.0 0.5−		1998 03 25	704	0.4−	0.6+	1998 04 29	691	1.1− 0.5+
1998 03 20	704	0.3− 0.2+		1998 03 25	704	0.0 0.4+		1998 04 29	691	1.1− 0.4+
1998 03 20	704	0.2+ 0.5−		1998 04 20	704	0.2− 0.7+		1998 05 16	704	0.7+ 0.7+
1998 03 20	704	0.7+ 0.3+		1998 04 20	704	1.2+ 0.2−		1998 05 16	704	1.1+ 0.1−
1998 03 20	704	0.2− 0.4−		1998 04 20	704	0.4+ 0.8−		1998 05 16	704	0.3− 0.9−
1998 03 22	704	0.0 0.0		1998 04 20	704	0.3− 1.0+		1998 05 16	704	1.4+ 1.0−
1998 03 22	704	0.6− 0.1+		1998 04 20	704	(0.7+ 4.1−)		1998 05 16	704	1.5− 0.4+
1998 03 22	704	0.2+ 0.1−		1998 04 22	704	0.1− 0.0				
1998 03 22	704	0.3+ 0.8−		1998 04 22	704	0.8+ 0.3+				

1988 CY₃ = 1981 SJ₂ = 1998 HD₇₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	194.50789		(2000.0)		P		Q				
<i>n</i>	0.21455488	ω	168.57787		+0.83637420		−0.53786426				
<i>a</i>	2.7634002	Ω	224.49651		+0.49029407		+0.82029617				
<i>e</i>	0.1604418	<i>i</i>	8.67710		+0.24513247		+0.19446398				
<i>P</i>	4.59	<i>H</i>	13.5		<i>G</i>	0.15	<i>U</i>	3			
Residuals in seconds of arc											
1981 09 23	033	0.2−	0.1+	1988 02 21	809	1.0−	0.2−	1998 04 21	704	0.2+	0.0
1981 09 23	033	0.2+	0.1−	1988 02 21	809	1.9−	0.2−	1998 04 21	704	0.6−	1.0−
1988 02 13	809	1.6+	0.7−	1988 02 23	809	1.2+	0.1+	1998 04 22	704	0.1−	0.1+
1988 02 15	809	0.3+	0.6−	1988 02 23	809	0.7+	0.5+	1998 04 22	704	0.7−	1.2+
1988 02 16	809	0.3−	0.4+	1988 02 23	809	0.8+	0.2+	1998 04 22	704	0.9−	0.6+
1988 02 16	809	0.0	0.1+	1998 04 21	704	0.6+	0.7−	1998 04 22	704	0.6−	0.9+
1988 02 16	809	0.3−	0.2+	1998 04 21	704	1.1+	0.4+	1998 04 22	704	0.8−	0.0
1988 02 21	809	1.1−	0.3+	1998 04 21	704	2.0+	1.6−				

1988 CL₄ = 1998 HR₁₄₈

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	114.42200		(2000.0)			P		Q	
<i>n</i>	0.21351756	ω	240.40174			−0.45920253		−0.88136448	
<i>a</i>	2.7723432	Ω	237.34713			+0.85382342		−0.40340185	
<i>e</i>	0.1541753	<i>i</i>	7.57839			+0.24519095		−0.24589346	
<i>P</i>	4.62	<i>H</i>	14.0			<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc									
1988 02 13	809	1.4+	1.3−	1988 02 23	413	0.4+	0.9−	1998 04 28	809 (2.1+ 0.4+)
1988 02 15	809	0.3+	0.9+	1988 02 23	413	0.4+	0.3−	1998 05 22	704 0.8+ 0.7+
1988 02 16	809	1.3+	0.5+	1988 02 25	413	0.2−	0.6−	1998 05 22	704 0.6− 0.4+
1988 02 16	809	1.5+	0.3−	1988 02 25	413	0.8+	0.7−	1998 05 22	704 0.9+ 0.7+
1988 02 16	809	0.8+	0.3−	1988 03 10	413	1.5−	0.6+	1998 05 22	704 (4.1− 1.5+)
1988 02 21	809	1.1−	0.2+	1988 03 10	413	0.6−	0.2+	1998 05 24	704 0.6− 0.9+
1988 02 21	809	1.5−	0.4+	1998 04 25	809	0.9+	0.1−	1998 05 24	704 1.1− 0.4−
1988 02 21	809	1.5−	0.0	1998 04 25	809	0.9+	0.5−	1998 05 24	704 (0.0 2.7+)
1988 02 23	809	0.3−	1.1+	1998 04 25	809	0.8+	0.0	1998 05 24	704 0.9− 0.1−
1988 02 23	809	0.1−	0.4+	1998 04 28	809	0.1−	0.4−	1998 05 24	704 1.9− 0.3−
1988 02 23	809	0.1−	0.3+	1998 04 28	809	1.2+	0.8−		

1988 PP₂ = 1977 SE₂ = 1998 JN₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	231.15057		(2000.0)		P		Q				
<i>n</i>	0.26811286	ω	11.76386		+0.99462351		−0.10346400				
<i>a</i>	2.3819042	Ω	354.16946		+0.09116233		+0.89490201				
<i>e</i>	0.1711337	<i>i</i>	2.47698		+0.04912743		+0.43410320				
<i>P</i>	3.68	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1977 09 19	095	0.8−	1.6+	1988 10 07	675	0.6+	0.4−	1998 04 22	704	0.4+	1.3+
1988 08 13	033	0.8+	0.4−	1988 10 09	675	0.2+	0.3+	1998 04 22	704	0.9+	0.4−
1988 08 14	033	0.0	0.4−	1988 10 09	675	0.8+	0.3−	1998 04 22	704	0.9+	0.5+
1988 08 14	033	0.2−	0.2−	1998 04 21	704	0.5−	0.1+	1998 04 22	704	0.9−	0.2−
1988 09 11	675	0.1−	0.3−	1998 04 21	704	0.4−	0.3−	1998 05 03	701	0.7−	0.3+
1988 09 11	675	0.7−	0.4+	1998 04 21	704	1.4+	1.3−	1998 05 03	701	1.1−	0.3+
1988 09 16	675	0.8+	0.5+	1998 04 21	704	(2.2−	2.3−)	1998 05 05	701	1.5−	0.3+
1988 09 16	675	0.2+	0.0	1998 04 21	704	1.6+	0.7−	1998 05 05	701	(3.8−	0.7+)
1988 10 07	675	1.8−	0.4−	1998 04 22	704	0.3+	0.8+				

1988 PQ₂ = 1998 HO₈₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	285.43169		(2000.0)		P		Q				
<i>n</i>	0.27754885	ω	244.17454		+0.89881475		+0.43732699				
<i>a</i>	2.3276076	Ω	89.87983		−0.39080997		+0.83014117				
<i>e</i>	0.2314086	<i>i</i>	1.69717		−0.19849337		+0.34584785				
<i>P</i>	3.55	<i>H</i>	15.5		<i>G</i>	0.15	<i>U</i>	6			
Residuals in seconds of arc											
1988 08 13	033	0.2+	0.4+	1988 09 16	675	0.7−	0.4+	1998 04 22	704	1.7+	0.5+
1988 08 14	033	0.1−	0.7−	1998 04 21	704	0.2−	1.6−	1998 04 22	704	0.2−	1.9−
1988 08 14	033	0.1−	0.4−	1998 04 21	704	0.1+	1.6+	1998 04 22	704	0.5+	0.8+
1988 09 14	675	1.3+	0.0	1998 04 21	704	0.6−	0.2+	1998 04 22	704	1.8+	0.6+
1988 09 14	675	0.9+	0.4−	1998 04 21	704	0.1−	1.1+	1998 04 22	704	1.0+	0.4−
1988 09 16	675	1.6−	0.9+	1998 04 21	704	3.8−	0.4−				

1988 RX₁₀ = 1998 HU₄₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	239.54085		(2000.0)		P		Q				
<i>n</i>	0.16906591		ω	324.63704	+0.97801978		+0.20776679				
<i>a</i>	3.2391571		Ω	23.39012	−0.17963516		+0.88245379				
<i>e</i>	0.1402411		<i>i</i>	2.54305	−0.10587029		+0.42202875				
<i>P</i>	5.83		<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1988 09 11	675	0.9+	1.2+	1988 10 08	807	0.4+	0.2−	1998 04 20	704	0.3−	0.4−
1988 09 14	807	0.2+	1.1−	1988 10 08	807	0.1+	0.2−	1998 04 21	704	1.0+	0.7+
1988 09 15	807	0.3−	0.4−	1988 11 03	807	0.8−	0.6−	1998 04 21	704	0.0	0.7+
1988 09 16	807	0.0	0.0	1988 11 05	807	0.9+	0.5+	1998 04 21	704	(0.1−	3.6−)
1988 10 04	807	0.9−	0.4+	1998 04 20	704	0.3+	0.6−	1998 04 21	704	1.3−	0.3+
1988 10 05	807	0.2−	0.4+	1998 04 20	704	0.3+	0.4−				
1988 10 07	807	0.3−	0.0	1998 04 20	704	0.1+	0.3−				

1988 VH₂ = 1998 HS₁₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	238.92379			(2000.0)			P			Q					
n	0.26241612			ω	289.85416			+0.98296912			−0.08899443				
a	2.4162528			Ω	75.51430			+0.15096700			+0.88994085				
e	0.2155166			i	9.55904			−0.10478872			+0.44730894				
P	3.76			H	14.0			G	0.15			U	4		
Residuals in seconds of arc															
1988 11 08	877	0.7+	1.6−	1989 01 05	888	1.0−	1.1+	1998 04 24	704	0.3−	0.0				
1988 11 08	877	1.0+	1.7−	1989 01 05	888	1.3−	0.2+	1998 04 24	704	0.3−	0.6+				
1988 11 12	877	(3.1−	0.2−)	1998 04 23	704	0.4−	0.5+	1998 05 16	704	0.9−	0.1−				

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1988 11 12	877	1.5−	1.4+	1988 04 23	704	0.2−	0.2−	1988 05 16	704	0.0	0.3−
1988 12 06	877	0.1−	1.0+	1988 04 23	704	0.2+	0.2−	1988 05 16	704	0.4+	0.0
1988 12 06	877	(5.5−	2.9+)	1988 04 23	704	0.1+	0.0	1988 05 16	704	1.5+	1.1−
1988 12 07	877	0.8+	0.2−	1988 04 23	704	0.6+	0.0	1988 05 25	699	1.3−	0.5+
1988 12 07	877	1.3+	0.7+	1988 04 24	704	0.1−	0.2+	1988 05 25	699	0.5−	1.1−
1989 01 03	888	0.1+	1.9−	1988 04 24	704	0.1−	0.6+	1988 05 25	699	0.8+	0.7−
1989 01 03	888	(0.7+	3.1−)	1988 04 24	704	0.1−	0.0				

1989 AR = 1998 HW₁₀₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	104.33263		(2000.0)		P		Q
<i>n</i>	0.23566734	ω	354.63361	−0.02089094	−0.99057343		
<i>a</i>	2.5957913	Ω	96.51377	+0.92227643	−0.07136899		
<i>e</i>	0.2539442	<i>i</i>	7.83149	+0.38596599	+0.11692202		
<i>P</i>	4.18	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1988 12 07	033	0.7−	0.1−	1988 03 24	704	1.0−	1.0+	1988 04 23	704	0.3+	0.4−
1988 12 08	033	0.3−	0.1−	1988 03 24	704	1.2−	1.6+	1988 04 24	704	0.3−	0.4−
1989 01 04	399	0.4+	1.1−	1988 04 21	704	1.0+	0.2+	1988 04 24	704	0.2−	0.9−
1989 01 04	399	0.2−	0.4+	1988 04 21	704	0.1+	0.1−	1988 04 24	704	0.4+	0.5−
1989 01 04	399	0.6−	0.7+	1988 04 21	704	0.9−	0.8−	1988 04 24	704	0.3−	0.4−
1989 01 04	399	1.3+	0.5+	1988 04 21	704	0.2−	0.4−	1988 04 24	704	0.2+	0.3+
1989 01 06	399	1.1+	1.3−	1988 04 21	704	0.6−	0.8+	1988 05 16	704	1.2−	0.1−
1989 01 06	399	1.2−	1.0+	1988 04 23	704	0.0	0.9−	1988 05 16	704	1.8+	1.0+
1988 03 24	704	0.6−	0.9−	1988 04 23	704	1.0+	0.0	1988 05 16	704	0.7+	1.0+
1988 03 24	704	0.5+	0.2+	1988 04 23	704	0.5+	0.0	1988 05 16	704	0.9+	0.1−
1988 03 24	704	0.4−	0.9+	1988 04 23	704	0.1−	0.8−				

1989 AZ₆ = 1998 KU₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	96.78733		(2000.0)		P		Q
<i>n</i>	0.23553484	ω	352.16521	−0.63941154	−0.76681683		
<i>a</i>	2.5967648	Ω	137.55904	+0.70984900	−0.61678358		
<i>e</i>	0.1032958	<i>i</i>	4.76680	+0.29541035	−0.17767939		
<i>P</i>	4.18	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1989 01 10	033	0.4+	0.1−	1988 04 22	704	1.6−	0.7−	1988 05 24	704	0.0	1.7−
1989 01 11	033	0.7+	1.2−	1988 04 22	704	0.5−	1.0+	1988 05 24	704	0.5−	0.1+
1989 01 12	033	0.7+	0.2−	1988 04 22	704	0.2+	0.8+	1988 05 24	704	1.3−	1.2−
1989 02 02	033	0.9−	0.0	1988 04 22	704	1.7−	1.4+	1988 05 24	704	(2.2+	0.8−)
1989 02 04	033	0.3−	0.0	1988 05 22	704	1.5+	1.7−	1988 05 24	704	0.7+	0.9−
1989 02 10	033	0.5−	0.3−	1988 05 22	704	1.4+	0.4+	1988 05 27	699	0.4−	0.8+
1989 02 10	033	0.5−	0.5+	1988 05 22	704	0.7+	0.8+	1988 05 27	699	0.1−	0.7−
1989 03 10	033	0.1−	0.6+	1988 05 22	704	0.6+	0.3+	1988 05 27	699	0.1−	0.6+
1989 03 10	033	0.7+	0.5+	1988 05 22	704	1.0+	0.3+				

1989 CS₁ = 1980 BV₁ = 1998 FD₁₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	60.22690		(2000.0)		P		Q
<i>n</i>	0.22543206	ω	171.07936	−0.89025500	−0.45003888		
<i>a</i>	2.6737796	Ω	341.67209	+0.40292776	−0.70645392		
<i>e</i>	0.1117115	<i>i</i>	12.87695	+0.21235644	−0.54624891		
<i>P</i>	4.37	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1980 01 23	095	0.3+	0.3−	1989 03 09	888	0.2+	0.4−	1988 04 01	704	0.6+	0.3−
1989 02 05	888	0.3+	1.3+	1989 03 09	888	0.4−	0.6−	1988 04 01	704	0.3+	0.3−
1989 02 05	888	0.3+	0.5+	1988 03 31	704	0.9−	0.3−	1988 04 01	704	0.3+	0.9−
1989 02 10	888	0.3−	0.5+	1988 03 31	704	0.2+	0.8+	1988 04 01	704	0.6−	0.8−
1989 02 10	888	0.9−	0.1+	1988 03 31	704	0.2−	0.6+	1988 04 01	704	(1.1−	1.9−)
1989 02 13	888	0.3+	0.6−	1988 03 31	704	0.6+	1.3+				
1989 02 13	888	0.0	0.4−	1988 03 31	704	(2.1+	2.3+)				

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1989 GU₆ = 1998 KE₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	38.77172		(2000.0)		P		Q
<i>n</i>	0.21981632	ω	104.40557	−0.96461129	−0.10862775		
<i>a</i>	2.7191266	Ω	69.80647	−0.01632373	−0.88484563		
<i>e</i>	0.3635437	<i>i</i>	14.83261	+0.26317028	−0.45304328		
<i>P</i>	4.48	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1989 04 05	809	0.7−	0.2−	1988 05 05	699	0.9+	0.1+	1988 05 24	704	0.1+	0.1+
1989 04 07	809	0.2+	0.2+	1988 05 22	704	0.2+	0.6−	1988 05 24	704	1.0+	0.1−
1989 04 11	809	0.3+	0.1−	1988 05 22	704	0.7−	0.8+	1988 05 24	704	0.3−	0.3−
1989 04 13	809	0.2+	0.1+	1988 05 22	704	0.4−	0.0	1988 05 24	704	0.3+	0.5−
1988 05 05	699	0.3−	0.2−	1988 05 22	704	0.7+	1.0+	1988 05 24	704	0.2+	0.8−
1988 05 05	699	0.3−	0.3−	1988 05 22	704	1.4−	0.6+				

1989 QH = 1998 HU₉₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	280.66708		(2000.0)		P		Q
<i>n</i>	0.30794634	ω	28.77078	+0.91116690	+0.41020190		
<i>a</i>	2.1717976	Ω	306.95965	−0.38673510	+0.81887262		
<i>e</i>	0.1501069	<i>i</i>	2.78676	−0.14216487	+0.40147482		
<i>P</i>	3.20	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1989 08 29	400	(4.7−	1.0+)	1989 09 26	400	(5.4+	2.9−)	1988 04 22	704	0.3+	0.5−
1989 08 29	400	(4.2−	1.4+)	1989 10 02	071	0.3−	0.6−	1988 04 22	704	0.1+	0.6−
1989 08 31	400	0.1+	0.8−	1989 10 02	071	1.0−	1.9−	1988 04 22	704	0.0	0.3−
1989 08 31	400	2.0−	0.6+	1988 04 21	704	1.2−	0.3−	1988 04 22	704	(0.1−	2.6+)
1989 09 23	400	0.9+	1.0+	1988 04 21	704	0.5−	0.1−	1988 04 25	699	1.3+	0.4−
1989 09 23	400	0.9+	0.2+	1988 04 21	704	1.1−	0.1−	1988 04 25	699	0.0	0.7+
1989 09 23	400	1.3+	1.1+	1988 04 21	704	0.0	1.8+	1988 04 25	699	0.6+	0.7−
1989 09 26	400	(6.5+	2.0−)	1988 04 21	704	0.2+	0.1+				

1989 SY₂ = 1998 FU₁₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	296.41696		(2000.0)		P		Q
<i>n</i>	0.17185596	ω	132.91639	−0.16494915	+0.98295289		
<i>a</i>	3.2040035	Ω	127.41219	−0.93208809	−0.12843002		
<i>e</i>	0.1065981	<i>i</i>	5.86848	−0.32249586	−0.13156495		
<i>P</i>	5.74	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1989 09 26	809	0.5−	0.3−	1989 10 07	809	0.5−	0.3−	1989 10 08	809	(0.2+	4.5+)
1989 09 26	809	0.2−	0.8+	1989 10 07	809	0.5−	0.1+	1989 11 06	675	1.0+	1.2+
1989 09 26	809	0.1+	0.5+	1989 10 07	809	1.0−	0.4+	1989 11 06	675	0.3−	0.0
1989 09 28	809	1.1+	0.4−	1989 10 07	809	(0.7−	4.4+)	1988 03 22	704	0.8+	0.2+
1989 09 28	809	1.0+	0.5+	1989 10 07	809	(0.9−	5.0+)	1988 03 22	704	0.5−	0.3+
1989 09 28	809	1.6+	0.0	1989 10 07	809	(1.7−	4.6+)	1988 03 22	704	0.9+	0.7−
1989 09 29	675	0.8−	0.6+	1989 10 08	809	1.2+	0.1+	1988 03 22	704	0.4+	0.6−
1989 09 29	675	0.5−	0.7+	1989 10 08	809	0.6+	0.4−	1988 03 22	704	0.6−	0.6−
1989 10 03	809	0.4−	0.6−	1989 10 08	809	0.1−	0.2+	1988 03 26	704	0.1+	0.2+
1989 10 03	809	0.6−	1.4−	1989 10 08	809	(1.6+	4.8+)	1988 03 26	704	0.9−	0.6+
1989 10 03	809	1.4−	1.6−	1989 10 08	809	(0.6+	4.5+)	1988 03 26	704	0.2−	0.7+

1989 UA₁ = 1998 HW₉₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	249.97574		(2000.0)		P		Q
<i>n</i>	0.30075485	ω	359.93953	+0.99708245	−0.07600106		
<i>a</i>	2.2062817	Ω	4.43797	+0.07007174	+0.87444473		
<i>e</i>	0.1866509	<i>i</i>	5.26507	+0.03027427	+0.47913490		
<i>P</i>	3.28	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1989 10 04	807	0.8+	0.1-	1989 10 30	392	2.1-	0.6+	1989 04 21	704	(4.9-	1.3-)
1989 10 05	807	2.0+	0.3-	1989 10 30	399	0.5+	0.4-	1989 04 22	704	0.3+	0.5+
1989 10 21	095	1.4+	0.9+	1989 04 21	704	0.6+	0.1+	1989 04 22	704	0.2-	0.6+
1989 10 24	400	3.5-	0.1-	1989 04 21	704	0.8-	0.3+	1989 04 22	704	0.4-	0.5+
1989 10 24	400	1.2-	0.2+	1989 04 21	704	0.9+	0.2+				
1989 10 24	400	1.4+	0.3+	1989 04 21	704	0.3+	0.6-				

1989 UU₅ = 1998 KW₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	138.21350		(2000.0)		P		Q
<i>n</i>	0.17406559	ω	251.64222	-0.01353634			-0.99604349
<i>a</i>	3.1768309	Ω	199.76459	+0.98713876			+0.00068135
<i>e</i>	0.0720694	<i>i</i>	15.05417	+0.15929168			-0.08886446
<i>P</i>	5.66	<i>H</i>	13.0	<i>G</i>	0.15		<i>U</i> 5

Residuals in seconds of arc

1989 09 30	675	0.0	0.2-	1989 05 22	704	0.7-	0.1+	1989 05 24	704	0.2-	0.8+
1989 10 04	807	0.2-	0.2+	1989 05 22	704	1.5+	0.5-	1989 05 24	704	0.9-	0.2+
1989 10 30	807	0.1+	0.0	1989 05 22	704	0.1-	0.8+	1989 05 24	704	0.5-	0.2-
1989 11 01	807	0.0	0.0	1989 05 24	704	0.3+	0.0				
1989 05 22	704	1.0+	0.3-	1989 05 24	704	0.4-	0.7-				

1989 YC₆ = 1998 KH₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	233.46240		(2000.0)		P		Q
<i>n</i>	0.28634594	ω	223.30294	+0.91491310			-0.40228770
<i>a</i>	2.2796877	Ω	160.34379	+0.39199760			+0.86591085
<i>e</i>	0.1709799	<i>i</i>	5.65497	+0.09629075			+0.29725917
<i>P</i>	3.44	<i>H</i>	14.5	<i>G</i>	0.15		<i>U</i> 5

Residuals in seconds of arc

1989 12 29	511	0.0	0.1+	1990 01 24	033	0.1+	0.0	1998 05 24	704	0.1-	0.4-
1989 12 29	511	0.5-	1.2+	1990 01 24	033	0.2+	0.2-	1998 05 24	704	0.6+	0.1+
1990 01 02	511	1.0+	2.9-	1998 05 22	704	1.5+	0.6-	1998 05 24	704	0.3-	0.6+
1990 01 02	511	2.0+	1.6-	1998 05 22	704	0.0	1.0-	1998 05 24	704	1.3-	1.1+
1990 01 04	511	0.8-	0.7+	1998 05 22	704	0.1-	0.0				
1990 01 04	511	2.1-	2.6+	1998 05 22	704	0.3-	0.2+				

1990 FQ

Id. E. Bowell (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Bowell

<i>M</i>	37.26383		(2000.0)		P		Q
<i>n</i>	0.24256728	ω	58.54466	-0.78786421			-0.57067907
<i>a</i>	2.5463293	Ω	85.65959	+0.45623295			-0.79335934
<i>e</i>	0.2295163	<i>i</i>	13.42502	+0.41366832			-0.21191118
<i>P</i>	4.06	<i>H</i>	14.1	<i>G</i>	0.15		<i>U</i> 2

Residuals in seconds of arc

1990 03 23	675	0.5-	0.1-	1990 04 29	413	0.3-	0.7-	1998 04 19	699	0.2+	1.2+
1990 03 23	675	0.9-	0.2+	1990 04 29	413	1.1+	1.7+	1998 05 22	688	0.3+	0.9+
1990 03 25	675	1.2-	1.0-	1990 05 26	413	(3.6+	6.4-)	1998 05 22	688	0.2+	0.8+
1990 03 25	675	0.3-	1.2-	1990 05 26	413	1.2+	0.7-	1998 05 22	688	0.3+	0.9+
1990 04 27	413	0.2+	1.2-	1998 04 19	699	0.7+	0.7+				
1990 04 27	413	(2.7+	2.8+)	1998 04 19	699	0.6-	0.4-				

1990 KR = 1998 HL₁₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	345.02714		(2000.0)		P		Q
<i>n</i>	0.24306340	ω	83.33104	-0.08085510			+0.99669883
<i>a</i>	2.5428632	Ω	182.07420	-0.97574075			-0.08065407
<i>e</i>	0.2274021	<i>i</i>	11.70290	-0.20345134			-0.00929321
<i>P</i>	4.05	<i>H</i>	15.0	<i>G</i>	0.15		<i>U</i> 4

Residuals in seconds of arc

1990 05 21	675	0.3+	0.6+	1998 04 23	704	0.8+	0.1-	1998 04 24	704	0.1+	0.3+
1990 05 21	675	0.1+	0.3-	1998 04 23	704	0.2+	0.1+	1998 04 24	704	0.1-	0.2-
1990 05 23	675	0.1+	0.7+	1998 04 23	704	0.5-	0.0	1998 04 24	704	0.0	0.2+
1990 05 23	675	0.1+	0.0	1998 04 23	704	0.0	0.8-	1998 04 24	704	0.2-	0.1+
1990 06 14	413	1.3-	0.0	1998 04 23	566	0.3-	0.5-	1998 05 27	699	0.2-	0.6+
1990 06 14	413	0.8-	0.4+	1998 04 23	566	0.6-	0.3-	1998 05 27	699	0.1-	0.2+
1990 06 15	413	1.6+	1.6-	1998 04 23	566	0.4+	0.0	1998 05 27	699	0.1-	0.4+
1998 04 23	704	0.6+	0.3+	1998 04 24	704	0.1+	0.2-				

1990 KD₁ = 1998 HP₁₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	54.20430		(2000.0)		P		Q
<i>n</i>	0.24258084	ω	346.45755	-0.99128727			-0.12963325
<i>a</i>	2.5462345	Ω	186.23655	+0.13169822			-0.97241301
<i>e</i>	0.0948508	<i>i</i>	12.40682	+0.00226234			-0.19392822
<i>P</i>	4.06	<i>H</i>	14.5	<i>G</i>	0.15		<i>U</i> 6

Residuals in seconds of arc

1990 05 20	413	0.8-	0.5+	1998 04 23	704	0.4+	0.2+	1998 04 24	704	0.2-	0.1+
1990 05 20	413	(4.6+	0.3+)	1998 04 23	704	0.2+	0.1-	1998 04 24	704	0.1-	0.2+
1990 05 26	413	0.3+	0.0	1998 04 23	704	0.5-	0.1+	1998 04 24	704	0.2-	0.7-
1990 05 26	413	1.4+	0.5-	1998 04 23	704	0.2-	0.4-	1998 05 27	699	0.1+	0.6-
1990 05 29	413	1.9-	1.5+	1998 04 23	704	0.6-	0.0	1998 05 27	699	0.5+	0.4-
1990 05 29	413	1.1+	0.9-	1998 04 23	704	0.2+	0.7-	1998 05 27	699	0.1+	0.4-
1998 04 23	704	0.5-	0.6+	1998 04 24	704	0.4+	0.7+				
1998 04 23	704	0.1+	0.4+	1998 04 24	704	0.2+	0.4+				

1990 QJ₃ = 1995 UE₂₅ = 1998 FU₁₁₂

Id. A. Gnädig, G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	151.31187		(2000.0)		P		Q
<i>n</i>	0.19916655	ω	71.97067	+0.47617647			-0.87841523
<i>a</i>	2.9039677	Ω	349.31516	+0.70123905			+0.40713439
<i>e</i>	0.1543804	<i>i</i>	12.62672	+0.53058436			+0.25025640
<i>P</i>	4.95	<i>H</i>	13.0	<i>G</i>	0.15		<i>U</i> 3

Residuals in seconds of arc

1990 08 22	675	0.3+	1.2+	1990 09 19	675	0.6+	2.5-	1998 03 31	704	0.7+	0.0
1990 08 22	675	0.3-	1.2+	1995 10 20	691	1.0-	0.2+	1998 03 31	704	0.6+	0.9+
1990 08 28	675	0.1+	0.4+	1995 10 20	691	1.0-	0.2+	1998 03 31	704	0.7-	0.8+
1990 08 28	675	0.7-	1.0+	1995 10 20	691	0.6-	0.2-	1998 04 01	704	0.0	0.0
1990 09 14	675	0.4+	1.1-	1995 10 23	691	0.1+	1.0+	1998 04 01	704	0.4+	0.0
1990 09 14	675	0.7+	0.2+	1995 10 23	691	0.6+	0.2+	1998 04 01	704	1.4-	0.4+
1990 09 14	675	0.6+	1.0-	1995 10 23	691	0.6+	0.3+	1998 04 01	704	1.1-	1.6-
1990 09 14	675	0.7-	0.7-	1998 03 31	704	0.3+	0.2+	1998 04 01	704	1.2+	0.4-

1990 QD₇ = 1998 HO₇₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	276.15845		(2000.0)		P		Q
<i>n</i>	0.21766370	ω	171.74029	+0.83255218			+0.55257488
<i>a</i>	2.7370247	Ω	154.59518	-0.51328462			+0.79597776
<i>e</i>	0.1588509	<i>i</i>	5.21039	-0.20831650			+0.24714450
<i>P</i>	4.53	<i>H</i>	15.5	<i>G</i>	0.15		<i>U</i> 5

Residuals in seconds of arc

1990 08 16	809	0.5+	0.2+	1990 08 26	809	0.8+	0.0	1998 04 22	704	0.5+	1.2+
1990 08 16	809	0.1-	0.1+	1990 08 26	809	1.4-	0.9-	1998 04 22	704	1.2-	0.3-
1990 08 16	809	0.2-	0.3+	1998 04 21	704	0.5+	0.9+	1998 04 22	704	0.4+	0.4+
1990 08 20	809	0.3-	0.3-	1998 04 21	704	0.4+	1.2-	1998 04 22	704	0.8-	0.8+
1990 08 20	809	0.5+	0.2+	1998 04 21	704	1.7-	0.4-	1998 04 24	910	0.5-	1.4-
1990 08 20	809	0.1-	0.4+	1998 04 21	704	(3.2-	1.7+)	1998 04 24	910	1.0+	0.1-
1990 08 26	809	0.4+	0.1-	1998 04 22	704	(0.3-	2.9+)	1998 04 24	910	1.4+	0.1+

1990 QZ₁₇ = 1990 QE₁₈ = 1990 RE₁₁ = 1956 TG = 3328 T-2
= 1993 FM₈₄ = 1998 KB₅₆

Id. S. Nakano (d, *MPC* 20912), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	329.43084		(2000.0)	P		Q			
<i>n</i>	0.22941821	ω	130.31122	+0.46510033		+0.88452756			
<i>a</i>	2.6427178	Ω	167.25997	-0.85361147		+0.45886597			
<i>e</i>	0.0814309	<i>i</i>	9.38314	-0.23458292		+0.08398227			
<i>P</i>	4.30	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	2		

Residuals in seconds of arc

1956 10 09	760	1.1-	0.3+	1990 08 28	095	0.2-	0.8+	1998 05 26	704	0.7+	0.1-
1956 10 09	760	0.5-	2.0+	1990 08 28	095	(12.3+ 2.5+)		1998 05 26	704	0.6+	0.4-
1973 09 19	675	0.4+	0.8+	1990 09 14	675	0.2-	0.2+	1998 05 26	704	0.4-	0.3+
1973 09 19	675	0.5+	0.7+	1990 09 14	675	0.8-	0.5+	1998 05 26	704	0.6+	0.1-
1973 09 20	675	0.9+	0.5+	1993 03 21	675	(0.1- 4.5-)		1998 05 26	704	0.0	0.1+
1973 09 24	675	0.6-	0.2-	1993 03 21	675	(5.7- 0.2-)		1998 06 03	704	0.4+	0.5-
1973 09 24	675	0.3-	0.4+	1993 03 22	675	0.2+	0.5+	1998 06 03	704	1.3+	0.2+
1973 09 25	675	1.2+	2.4-	1998 05 23	704	1.1-	0.9+	1998 06 03	704	0.6-	0.6+
1973 09 25	675	0.3+	1.7-	1998 05 23	704	0.4-	0.8-	1998 06 03	704	0.6-	0.0
1990 08 26	095	0.1-	1.6-	1998 05 23	704	1.1-	0.2+				
1990 08 26	095	0.0	0.8+	1998 05 23	704	0.7+	0.1+				

1990 SU₁₅ = 1990 QD₁ = 1998 HH₄₈

Id. S. Nakano (d, *MPC* 18398), A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	284.79195		(2000.0)	P		Q			
<i>n</i>	0.22180317	ω	142.35657	+0.78288017		+0.62216418			
<i>a</i>	2.7028641	Ω	179.14861	-0.61042102		+0.76908440			
<i>e</i>	0.2194526	<i>i</i>	12.51926	-0.12035286		+0.14635888			
<i>P</i>	4.44	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1990 08 16	675	(22.2- 14.8-)	Y	1990 09 20	675	1.4-	0.6-	1998 04 23	704	1.1-	0.3-
1990 08 18	675	0.6+	0.6+	1998 04 20	704	(2.2+ 1.0+)		1998 04 23	704	0.9+	0.4+
1990 08 18	675	0.1+	1.2+	1998 04 20	704	0.0	0.4+	1998 04 23	704	0.9+	0.4+
1990 08 20	675	0.8+	1.2-	1998 04 20	704	0.3+	0.9+	1998 04 23	704	0.3+	0.4+
1990 08 20	675	1.2-	0.3-	1998 04 20	704	(2.8- 2.4+)		1998 04 23	704	0.0	0.8+
1990 09 16	675	0.3+	0.0	1998 04 21	704	0.2-	0.3-	1998 04 24	704	0.6-	0.2+
1990 09 16	675	0.1-	0.5-	1998 04 21	704	0.6-	0.4-	1998 04 24	704	(2.5- 1.2-)	
1990 09 19	675	0.9+	0.3+	1998 04 21	704	0.6+	0.0	1998 04 24	704	0.3+	0.4-
1990 09 19	675	1.2+	0.5+	1998 04 21	704	0.6+	0.7-	1998 04 24	704	0.1-	0.6-
1990 09 20	675	1.3-	0.1-	1998 04 21	704	1.4-	0.7-	1998 04 24	704	0.3+	0.4-

1990 VE₆ = 1998 HK₇₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	179.21422		(2000.0)	P		Q			
<i>n</i>	0.18793145	ω	202.44184	+0.71386994		-0.69688193			
<i>a</i>	3.0185827	Ω	202.20490	+0.66699176		+0.70660717			
<i>e</i>	0.0891846	<i>i</i>	10.50240	+0.21333471		+0.12272687			
<i>P</i>	5.24	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1990 11 15	809	0.1-	0.1+	1990 11 23	809	0.0	0.1-	1998 04 22	704	0.4+	0.5+
1990 11 15	809	0.5+	0.5-	1990 11 23	809	0.3-	0.3+	1998 04 22	704	1.7-	0.1+
1990 11 15	809	0.7-	0.3-	1998 04 21	704	0.4-	0.5+	1998 04 22	704	0.3+	0.5-
1990 11 17	809	0.8-	0.1-	1998 04 21	704	1.0+	0.3-	1998 04 22	704	0.4+	0.5+
1990 11 17	809	0.3+	0.6-	1998 04 21	704	0.6+	0.6+	1998 04 22	704	0.6+	2.2-
1990 11 17	809	0.9+	1.1+	1998 04 21	704	0.7-	0.3-				
1990 11 23	809	0.2+	0.1-	1998 04 21	704	0.6-	1.1+				

1990 VU₈ = 1998 KM₄₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	303.51083		(2000.0)	P		Q			
<i>n</i>	0.21141432	ω	188.18394	+0.75744021		+0.64007058			
<i>a</i>	2.7906997	Ω	131.19407	-0.58891730		+0.75496130			
<i>e</i>	0.1436281	<i>i</i>	9.85702	-0.28188781		+0.14262918			
<i>P</i>	4.66	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1990 11 12	809	0.4-	0.1-	1990 11 19	809	(3.5- 0.8+)		1998 05 24	699	0.4-	0.4+
1990 11 12	809	0.5-	0.4+	1998 05 05	699	0.2+	0.9-	1998 05 26	704	0.6+	0.6-
1990 11 12	809	0.7+	0.2-	1998 05 05	699	0.4+	0.1+	1998 05 26	704	0.7+	1.7+
1990 11 15	675	0.1-	0.7-	1998 05 05	699	0.3-	0.2-	1998 05 26	704	0.2-	0.1+
1990 11 15	675	0.1-	0.6+	1998 05 23	704	0.1-	0.2-	1998 05 26	704	0.2+	0.5-
1990 11 16	675	1.2-	0.3+	1998 05 23	704	0.2-	0.5+	1998 05 26	704	0.2+	0.6-
1990 11 18	809	0.1+	0.3-	1998 05 23	704	0.0	0.4+	1998 06 03	704	0.1+	0.8-
1990 11 18	809	0.6+	0.3-	1998 05 23	704	0.6-	0.0	1998 06 03	704	0.3-	0.1+
1990 11 18	809	1.0+	0.2+	1998 05 23	704	0.6-	1.5+	1998 06 03	704	0.0	0.1-
1990 11 19	809	(8.6- 2.4-)		1998 05 24	699	0.7+	0.0	1998 06 03	704	0.2+	0.9-
1990 11 19	809	(6.6- 1.0-)		1998 05 24	699	0.5-	0.2-				

1990 XU

Id. E. Bowell (1994 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	222.87015		(2000.0)	P		Q			
<i>n</i>	0.19026240	ω	263.74671	+0.79526770		-0.59031968			
<i>a</i>	2.9938777	Ω	132.33243	+0.60336244		+0.74842234			
<i>e</i>	0.1174318	<i>i</i>	10.76683	+0.05918659		+0.30230228			
<i>P</i>	5.18	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1990 12 10	372	1.0+	0.4-	1991 01 09	372	(1.5- 2.6-)		1998 05 22	688	0.1+	0.1+
1990 12 10	372	0.5+	0.1-	1991 01 09	372	0.3-	0.1-	1998 05 22	688	0.1+	0.0
1990 12 19	372	0.1+	1.1-	1991 02 07	675	0.5-	1.2+	1998 05 22	688	0.0	0.1-
1990 12 19	372	0.9+	1.0+	1991 02 07	675	0.1+	0.0	1998 05 25	699	0.1-	0.5-
1990 12 21	372	1.1-	0.7-	1994 09 11	675	0.4-	0.7+	1998 05 25	699	0.2-	0.1+
1990 12 21	372	0.6-	0.8+	1994 09 11	675	0.3+	0.2-	1998 05 25	699	0.1+	0.7+

1991 AH₂ = 1998 KZ₅₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	306.89981		(2000.0)	P		Q			
<i>n</i>	0.21478139	ω	214.91237	+0.88656584		+0.36814083			
<i>a</i>	2.7614570	Ω	121.08531	-0.31365468		+0.92347430			
<i>e</i>	0.1786983	<i>i</i>	19.09304	-0.34003199		+0.10801645			
<i>P</i>	4.59	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1991 01 07	413	0.9+	0.2-	1998 05 23	704	0.1+	0.2-	1998 05 26	704	0.2+	0.3-
1991 01 08	413	0.1+	0.2+	1998 05 23	704	0.5-	0.7-	1998 06 03	704	0.5+	0.0
1991 01 12	413	0.6-	0.3-	1998 05 23	704	1.4-	0.1-	1998 06 03	704	0.5-	0.4+
1991 02 04	413	0.1-	0.2+	1998 05 26	704	0.8+	0.0	1998 06 03	704	0.5-	0.8+
1991 02 04	413	0.4-	0.2+	1998 05 26	704	0.4+	0.1-	1998 06 03	704	0.2-	0.7+
1998 05 23	704	0.6-	0.3+	1998 05 26	704	0.4+	0.1+	1998 06 03	704	0.2+	0.8-
1998 05 23	704	0.9+	0.1-	1998 05 26	704	0.2+	0.1+				

1991 EF₂ = 1998 KN₄₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams					
<i>M</i>	63.98559		(2000.0)	P		Q			
<i>n</i>	0.30279856	ω	17.31791	-0.97327600		+0.22954062			
<i>a</i>	2.1963431	Ω	175.93428	-0.22029534		-0.92503789			
<i>e</i>	0.0565198	<i>i</i>	5.42484	-0.06483663		-0.30268135			
<i>P</i>	3.25	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1991 02 09	675	0.2−	0.5−	1991 03 15	809	0.4−	1.0+	1998 05 24	704	0.9−	0.2−
1991 02 09	675	0.8+	0.9−	1991 03 15	809	0.1−	0.9+	1998 05 24	704	0.4−	0.1+
1991 03 10	809	0.7−	0.1−	1991 03 15	809	0.2+	0.9+	1998 05 24	704	0.2−	0.4+
1991 03 10	809	0.2−	0.6−	1991 03 16	809	0.2−	0.6+	1998 05 24	704	0.2−	0.3−
1991 03 10	809	0.4+	0.7−	1991 03 16	809	0.5+	0.6+	1998 05 24	704	1.2−	0.1−
1991 03 12	809	0.2+	0.4−	1991 03 16	809	0.9+	0.6+	1998 06 03	704	1.2+	0.7+
1991 03 12	809	0.6+	0.4−	1998 05 22	704	0.2+	0.7−	1998 06 03	704	0.8+	0.5+
1991 03 12	809	0.9+	0.4−	1998 05 22	704	0.5+	0.3−	1998 06 03	704	0.5+	0.2−
1991 03 14	809	1.1−	0.1−	1998 05 22	704	0.2−	0.1+	1998 06 03	704	0.0	0.6+
1991 03 14	809	0.8−	0.3−	1998 05 22	704	0.7−	0.3−				
1991 03 14	809	0.7−	0.2−	1998 05 22	704	0.4+	0.8−				

1991 GV₃ = 1998 HT₉₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28698493	ω	270.25018	+0.53590769	+0.84263836		
<i>a</i>	2.2763026	Ω	32.33124	−0.73024191	+0.49387476		
<i>e</i>	0.1719388	<i>i</i>	5.64099	−0.42373305	+0.21458872		
<i>P</i>	3.43	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 04 08	809	1.6−	1.2−	1991 04 19	809	1.1−	0.9+	1998 04 25	699	0.6−	0.2+
1991 04 08	809	0.0	1.2−	1998 04 21	704	0.5+	0.7+	1998 04 25	699	0.3−	0.1−
1991 04 08	809	1.3+	0.1−	1998 04 21	704	0.1+	0.1+	1998 04 25	699	0.5−	0.0
1991 04 10	809	0.3+	1.1+	1998 04 21	704	0.1+	0.3+	1998 04 28	566	0.4−	0.1−
1991 04 10	809	1.1+	0.3−	1998 04 21	704	0.3−	1.3+	1998 04 28	566	0.4−	0.1+
1991 04 10	809	0.4−	0.3+	1998 04 21	704	0.7+	1.0+	1998 04 28	566	0.9−	0.1+
1991 04 15	675	(2.4+	1.0−)	1998 04 22	704	0.5+	0.7−	1998 05 18	699	0.7+	0.2+
1991 04 15	675	(2.6+	0.5−)	1998 04 22	704	0.2+	1.3−	1998 05 18	699	0.0	0.3−
1991 04 19	809	0.4+	0.7+	1998 04 22	704	(0.5−	3.6−)	1998 05 18	699	0.2+	0.1−
1991 04 19	809	(3.5−	1.7+)	1998 04 22	704	0.3+	1.4−				

1991 JC = 1998 HF₁₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27445853	ω	193.01284	−0.11424816	+0.99181591		
<i>a</i>	2.3450470	Ω	70.44930	−0.90597164	−0.08047553		
<i>e</i>	0.1902359	<i>i</i>	3.46755	−0.40763065	−0.09912062		
<i>P</i>	3.59	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 05 02	385	(7.6+	1.3−)	1991 05 17	385	(0.7−	3.8+)	1998 04 19	704	0.2−	0.8+
1991 05 02	385	1.4+	0.3+	1998 04 04	699	0.9+	0.0	1998 04 20	704	0.5−	0.4−
1991 05 03	385	1.1−	1.2−	1998 04 04	699	0.3−	0.2−	1998 04 20	704	0.1+	0.0
1991 05 05	385	1.0+	1.0+	Y 1998 04 04	699	1.0−	0.2+	1998 04 20	704	0.0	0.8−
1991 05 05	385	1.2−	1.7+	Y 1998 04 19	704	0.5−	0.5−	1998 04 20	704	0.5+	0.1+
1991 05 07	385	1.0+	0.5−	1998 04 19	704	0.3+	0.5+	1998 04 20	704	0.7+	0.4−
1991 05 17	385	1.1−	1.1−	1998 04 19	704	0.3−	0.7+				

1991 JD = 1998 FQ₅₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27353818	ω	239.80219	+0.15683787	+0.98709376		
<i>a</i>	2.3503042	Ω	39.26274	−0.88763544	+0.15525371		
<i>e</i>	0.2065842	<i>i</i>	2.93177	−0.43301871	+0.03927080		
<i>P</i>	3.60	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 05 03	385	0.4−	0.8+	1998 03 08	699	0.8+	0.6+	1998 04 19	704	0.2+	0.0
1991 05 03	385	0.8+	0.1+	1998 03 20	704	0.5+	0.3−	1998 04 19	704	0.4+	0.2+
1991 05 05	385	0.3−	0.7+	1998 03 20	704	0.4−	0.2+	1998 04 19	704	0.5+	0.6−
1991 05 13	675	0.5+	0.5−	1998 03 20	704	0.7+	0.0	1998 04 19	704	0.6−	0.3+
1991 05 13	675	1.5+	0.4+	1998 03 20	704	0.3+	0.5−	1998 04 20	704	0.1+	0.4−
1991 05 15	675	0.4+	0.3+	1998 03 20	704	0.3−	0.1+	1998 04 20	704	0.5+	0.1+

1991 05 15	675	0.9+	0.3−	1998 03 22	704	0.7+	0.0	1998 04 20	704	0.2+	0.5+
1991 05 17	385	3.0−	0.7−	1998 03 22	704	0.3+	0.3−	1998 04 20	704	0.1+	0.5+
1991 05 17	385	0.4−	0.8−	1998 03 22	704	1.4+	2.5−	1998 04 20	704	0.6−	0.5+
1998 03 08	699	1.0−	0.2+	1998 03 22	704	3.7−	0.6+				
1998 03 08	699	0.2−	1.1+	1998 03 22	704	0.1+	0.3−				

1991 PG₁ = 1998 HZ₁₀₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26038819	ω	194.46011	+0.78555134	+0.59486533		
<i>a</i>	2.4287820	Ω	127.74332	−0.54417661	+0.79521943		
<i>e</i>	0.2751466	<i>i</i>	12.44597	−0.29458600	+0.11730853		
<i>P</i>	3.79	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 08 06	675	0.1−	0.6−	1991 09 09	675	(2.1+	0.5−)	1998 04 24	704	0.1+	1.0−
1991 08 06	675	0.4+	1.0−	1991 09 09	675	0.6−	0.3+	1998 04 24	704	0.8+	0.2−
1991 08 10	675	0.4−	0.5+	1991 09 15	675	(3.0−	1.0−)	1998 04 24	704	0.4−	0.5+
1991 08 10	675	0.5+	0.0	1991 09 15	675	(3.4−	2.9−)	1998 04 24	704	0.7−	0.1+
1991 08 15	675	0.3+	1.2+	1998 04 23	704	0.1−	0.3+	1998 05 16	704	1.4−	0.8+
1991 08 15	675	0.9−	0.6+	1998 04 23	704	1.3+	0.5+	1998 05 16	704	0.7+	1.1+
1991 08 16	675	0.1+	0.4−	1998 04 23	704	1.2−	0.5−	1998 05 16	704	0.4+	0.5−
1991 09 07	675	0.0	0.2−	1998 04 23	704	0.2−	0.0	1998 05 16	704	(3.3−	0.6−)
1991 09 07	675	0.6+	0.5−	1998 04 23	704	0.5+	0.9−				

1991 PE₂ = 1998 KC₄₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26057617	ω	328.14883	+0.94504641	+0.32684037		
<i>a</i>	2.4276137	Ω	12.78135	−0.29194663	+0.85455550		
<i>e</i>	0.2337974	<i>i</i>	2.05051	−0.14715451	+0.40362144		
<i>P</i>	3.78	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 08 02	809	0.0	0.9−	1991 08 07	809	0.3+	0.2+	1998 05 27	691	0.2−	0.3+
1991 08 02	809	0.2−	0.0	1991 08 14	809	0.5−	0.6+	1998 05 27	691	0.1+	0.2−
1991 08 02	809	1.2−	1.1−	1991 08 14	809	0.5−	0.5+	1998 06 01	691	0.5+	0.0
1991 08 07	809	1.5+	0.0	1991 08 14	809	0.8−	0.2+	1998 06 01	691	0.0	0.2+
1991 08 07	809	1.5+	0.4+	1998 05 27	691	0.3−	0.5−	1998 06 01	691	0.0	0.3+

1991 PL₅ = 1998 HA₆₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26284780	ω	348.39742	+0.33478056	+0.94211775		
<i>a</i>	2.4136066	Ω	301.15938	−0.86281674	+0.29866410		
<i>e</i>	0.1867403	<i>i</i>	1.22763	−0.37877334	+0.15236108		
<i>P</i>	3.75	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 08 03	809	0.3−	1.0−	1991 09 05	809	0.6+	0.8−	1998 04 21	704	0.6−	0.8+
1991 08 03	809	0.3−	1.0−	1991 09 05	809	0.3+	1.0+	1998 04 22	704	0.2+	0.3−
1991 08 03	809	0.7−	0.2−	1991 09 06	809	1.2+	0.3−	1998 04 22	704	0.6−	0.1−
1991 08 05	809	1.7+	0.2−	1991 09 06	809	0.1+	0.3+	1998 04 22	704	0.7+	0.1+
1991 08 05	809	0.5+	0.5−	1991 09 06	809	0.2−	0.8+	1998 04 22	704	0.3+	0.1−
1991 08 05	809	0.1+	0.1−	1991 09 07	809	0.0	0.8−	1998 04 22	704	0.5+	1.0+
1991 09 04	809	0.8−	1.8+	1991 09 07	809	(2.5−	0.0)	1998 05 16	704	0.3+	0.1+
1991 09 04	809	0.9−	1.2+	1998 04 21	704	0.2−	1.0−	1998 05 16	704	0.9+	1.3−
1991 09 04	809	0.8−	0.6+	1998 04 21	704	0.8−	0.3+	1998 05 16	704	(2.2+	0.7−)
1991 09 05	809	0.7−	0.3−	1998 04 21	704	0.4−	1.2+	1998 05 16	704	(2.6−	1.2−)

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1991 PX₆ = 1998 KJ₃₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26769911	ω	250.66205	+0.37625177	+0.92626932		
<i>a</i>	2.3843578	Ω	41.45991	-0.83744559	+0.34989002		
<i>e</i>	0.1822492	<i>i</i>	1.85583	-0.39638300	+0.14000756		
<i>P</i>	3.68	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1991 08 06	809	0.4+	0.1-	1991 09 04	809	0.6+	0.1-
1991 08 06	809	0.2-	0.3-	1991 09 04	809	0.2-	1.2-
1991 08 06	809	0.9-	0.3-	1991 09 06	809	0.4+	0.2+
1991 08 14	809	0.7+	0.4+	1991 09 06	809	0.3-	1.1+
1991 08 14	809	0.2+	0.4+	1991 09 06	809	1.6-	0.2+
1991 08 14	809	0.1-	0.0	1998 05 22	704	0.8-	0.1+
1991 09 04	809	0.8+	0.3-	1998 05 22	704	0.1+	0.3+

1991 PF₁₂ = 1998 KW₂₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26451428	ω	37.74263	+0.75420361	+0.64585738		
<i>a</i>	2.4034586	Ω	281.59901	-0.62806996	+0.65688263		
<i>e</i>	0.2363612	<i>i</i>	6.94883	-0.19158562	+0.38906740		
<i>P</i>	3.73	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1991 08 07	675	0.6+	0.8-	1991 09 10	675	0.2-	0.1-
1991 08 07	675	0.5-	0.1-	1998 05 22	704	0.0	1.3+
1991 08 10	675	0.3-	0.0	1998 05 22	704	0.3+	1.6-
1991 08 10	675	0.5+	0.9+	1998 05 22	704	0.3+	0.5-
1991 09 10	675	0.0	0.2+	1998 05 22	704	0.6+	0.6+

1991 PH₁₈ = 1998 HU₁₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.25835198	ω	150.28404	+0.59935978	+0.79580886		
<i>a</i>	2.4415269	Ω	156.20899	-0.77015160	+0.60269812		
<i>e</i>	0.2133943	<i>i</i>	12.35990	-0.21825298	+0.05867916		
<i>P</i>	3.81	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1991 08 08	675	0.1+	0.5-	1998 04 23	704	0.5-	0.3-
1991 08 08	675	0.1-	0.5+	1998 04 23	704	0.3+	0.2+
1991 09 12	675	0.5-	0.1+	1998 04 23	704	0.4-	1.5-
1991 09 12	675	0.7-	0.0	1998 04 23	704	0.8+	0.7-
1991 09 16	675	0.7+	0.5-	1998 04 24	704	0.1+	0.3+
1991 09 16	675	0.5+	0.3+	1998 04 24	704	0.6-	0.4+
1998 04 23	704	0.3+	0.3+	1998 04 24	704	0.5-	0.4+

1991 RC₆ = 1998 HP₇₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24115988	ω	339.46522	+0.99646352	+0.00480689		
<i>a</i>	2.5562265	Ω	20.79869	+0.04570662	+0.80673229		
<i>e</i>	0.1950517	<i>i</i>	13.66530	-0.07050782	+0.59089754		
<i>P</i>	4.09	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1991 09 12	675	0.2+	0.2+	1991 09 14	675	1.0-	0.9+
1991 09 12	675	0.0	0.8+	1991 09 15	675	0.3-	0.1-
1991 09 12	675	0.3-	1.1-	1991 09 15	675	1.5+	1.1-
1991 09 12	675	0.2-	0.0	1991 09 16	675	0.0	0.6+
1991 09 13	675	1.0-	0.6+	1991 09 16	675	0.0	0.6-

1991 09 13	675	0.3-	0.9-	1998 04 21	704	0.7-	0.4+	1998 04 22	704	1.2-	0.3-
1991 09 14	675	1.4+	0.5+	1998 04 21	704	2.7+	0.7-	1998 04 22	704	0.1+	0.3+

1991 RP₉ = 1998 HM₁₄₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24529386	ω	20.54847	+0.33504566	-0.91727909		
<i>a</i>	2.5274249	Ω	50.52858	+0.82083917	+0.17199738		
<i>e</i>	0.1086177	<i>i</i>	16.19308	+0.46256617	+0.35918793		
<i>P</i>	4.02	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1991 09 05	413	0.1-	0.5+	1998 04 21	704	0.5-	0.1-
1991 09 07	413	0.1-	0.4-	1998 04 21	704	0.3-	0.0
1991 09 07	413	0.3-	0.6+	1998 04 21	704	0.2+	1.3+
1991 10 05	413	0.6+	0.1-	1998 04 22	704	0.9+	0.1-
1991 10 05	413	0.0	0.8-	1998 04 22	704	0.2+	0.2-
1998 04 21	704	0.2-	0.0	1998 04 22	704	0.6+	0.2-
1998 04 21	704	0.2-	0.0	1998 04 22	704	0.4+	1.6-

1991 RQ₉ = 1998 KB_s

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26180116	ω	4.37062	+0.75777294	+0.65219397		
<i>a</i>	2.4200351	Ω	314.89963	-0.59955078	+0.68347305		
<i>e</i>	0.2223946	<i>i</i>	1.66420	-0.25752481	+0.32788353		
<i>P</i>	3.76	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1991 09 10	675	1.2+	0.2+	1998 05 22	704	0.1+	0.1-
1991 09 10	675	0.9-	0.6-	1998 05 22	704	0.4+	0.2-
1991 09 13	675	0.5+	0.3+	1998 05 22	704	0.3-	0.5-
1991 09 13	675	0.5-	0.2-	1998 05 22	704	0.4-	0.0
1991 09 15	675	0.1-	0.0	1998 05 22	704	0.6-	1.6-
1991 09 15	675	0.0	0.4-	1998 05 23	699	0.8+	0.5+
1991 09 17	675	0.1-	0.4+	1998 05 23	699	0.2-	0.4+
1991 09 17	675	0.1-	0.4+	1998 05 23	699	0.2+	0.7-

1991 RV₁₇ = 1998 HP₁₄₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26107782	ω	16.06544	+0.95378588	+0.29984244		
<i>a</i>	2.4245030	Ω	326.46620	-0.27946324	+0.86109221		
<i>e</i>	0.2191496	<i>i</i>	2.04079	-0.11042098	+0.41062724		
<i>P</i>	3.78	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1991 08 08	675	0.2-	0.2-	1991 09 16	675	0.4-	0.0
1991 08 08	675	0.4+	0.0	1991 09 16	675	0.1+	0.2+
1991 09 13	675	0.3+	0.8-	1991 09 17	675	0.0	0.1+
1991 09 13	675	0.4-	0.2-	1991 09 17	675	0.2+	0.4+
1991 09 15	675	0.0	0.2+	1991 09 17	675	0.1+	0.5-
1991 09 15	675	0.3+	0.6+	1991 09 17	675	0.4-	0.2+

1991 RB₂₄ = 1972 KK = 1998 JM₄

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Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26502592	ω	143.62660	+0.27057713	+0.96173085		
<i>a</i>	2.4003642	Ω	142.01856	-0.89897398	+0.26844851		
<i>e</i>	0.2124976	<i>i</i>	4.02052	-0.34443258	+0.05485587		
<i>P</i>	3.72	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	2

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Residuals in seconds of arc

1972 05 18	095	0.2+	1.5+	1991 09 12	691	0.5-	0.5+	1998 05 05	699	0.1+	0.0
1991 08 08	675	0.2+	0.9-	1991 09 12	691	0.6-	0.6+	1998 05 05	699	0.3+	0.4+
1991 08 08	675	0.3+	0.4-	1991 09 12	675	0.5+	1.1-	1998 05 24	699	0.1-	0.2+
1991 09 08	691	0.9-	0.5+	1998 05 02	910	0.3-	0.1-	1998 05 24	699	0.2+	0.3+
1991 09 08	691	0.8-	0.1-	1998 05 02	910	0.3-	0.3-	1998 05 24	699	0.3+	0.4+
1991 09 08	691	0.7-	0.3+	1998 05 02	910	0.3-	0.2-	1998 06 03	704	0.4+	0.0
1991 09 11	675	1.1+	0.4-	1998 05 03	566	0.3-	0.7-	1998 06 03	704	0.1-	0.7+
1991 09 11	675	1.0+	0.6-	1998 05 03	566	0.2-	0.6-	1998 06 03	704	0.5-	0.4+
1991 09 12	691	0.5-	0.6+	1998 05 03	566	0.6+	1.4-	1998 06 03	704	0.4+	0.0
1991 09 12	675	1.2+	0.1+	1998 05 05	699	0.5-	0.8-	1998 06 03	704	(0.8-	2.7-)

1991 RC₂₇ = 1998 HU₂₄

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23023214	ω	343.69424	+0.97464319	-0.19398375		
<i>a</i>	2.6364857	Ω	28.23960	+0.22244111	+0.78579258		
<i>e</i>	0.1769655	<i>i</i>	13.63480	+0.02430239	+0.58728216		
<i>P</i>	4.28	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 09 13	675	0.6+	0.5-	1998 03 25	699	0.2+	0.2-	1998 04 22	704	1.2-	0.4-
1991 09 13	675	1.5+	0.9-	1998 03 25	699	0.1-	0.5+	1998 04 27	132	0.7+	0.6-
1991 09 15	675	0.6+	0.7-	1998 03 25	699	0.7-	0.4-	1998 04 27	132	1.7-	0.8-
1991 09 15	675	0.7+	0.5-	1998 03 25	704	0.5-	0.3+	1998 04 27	132	0.2-	0.8+
1991 10 06	691	1.3-	0.7+	1998 03 25	704	0.4+	1.5+	1998 04 28	132	1.8+	0.7-
1991 10 06	691	1.1-	1.0+	1998 03 25	704	0.7-	0.1-	1998 04 28	132	(2.6+	0.8+)
1991 10 06	691	1.3-	0.3+	1998 03 25	704	0.2-	0.6+	1998 04 30	699	1.5+	0.4-
1991 10 07	691	0.5-	1.0+	1998 03 25	704	1.2-	0.5-	1998 04 30	699	1.2+	0.2-
1991 10 07	691	0.3-	0.7+	1998 04 20	704	0.4-	0.5+	1998 04 30	699	1.1+	0.1+
1991 10 07	691	0.3-	0.8+	1998 04 20	704	0.2-	1.1-	1998 05 01	699	1.3+	0.4+
1991 11 08	675	1.5+	1.6-	1998 04 20	704	0.2-	1.1-	1998 05 01	699	1.3+	1.4+
1991 11 08	675	(0.1+	2.9-)	1998 04 20	704	0.0	0.6-	1998 05 01	699	0.3+	0.0
1998 03 22	704	0.5+	0.4-	1998 04 20	704	1.4-	0.5-	1998 05 16	704	(0.3-	2.2-)
1998 03 22	704	0.4-	0.1+	1998 04 22	704	1.4-	0.8+	1998 05 16	704	1.0-	1.5+
1998 03 22	704	0.4+	0.1+	1998 04 22	704	1.0-	0.3-	1998 05 16	704	1.3+	0.5-
1998 03 22	704	0.1+	0.2+	1998 04 22	704	0.7+	1.0-	1998 05 16	704	1.0-	0.6+
1998 03 22	704	1.1+	0.6+	1998 04 22	704	0.3+	0.6+				

1991 SZ

Id. F. B. Zoltowski (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26545677	ω	261.88394	+0.69895138	+0.70807002		
<i>a</i>	2.3977663	Ω	52.96512	-0.59652389	+0.65473884		
<i>e</i>	0.1501986	<i>i</i>	7.23386	-0.39449489	+0.26448799		
<i>P</i>	3.71	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 09 05	413	0.0	0.1-	1991 10 02	413	0.1+	0.1-	1998 05 17	426	0.3+	0.3-
1991 09 05	413	0.8+	0.0	1991 10 02	413	0.9+	0.9-	1998 05 17	426	0.1-	0.2-
1991 09 14	675	0.5-	0.5+	1991 10 05	413	0.5-	0.9+	1998 05 19	426	0.4+	0.5+
1991 09 14	675	0.2-	0.6-	1991 10 09	413	0.6-	0.6+	1998 05 19	426	0.1-	0.1+
1991 09 30	413	0.7+	0.5-	1991 10 12	413	0.3-	0.1-	1998 05 19	426	0.5-	0.4+
1991 10 01	413	0.5-	0.3+	1998 05 17	426	0.7+	0.1-	1998 05 19	426	0.6-	0.2-

1991 TX₂ = 1998 HP₉₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22947895	ω	190.15002	+0.04741498	-0.99804413		
<i>a</i>	2.6422515	Ω	257.14089	+0.91935452	+0.05955128		
<i>e</i>	0.0888385	<i>i</i>	2.39497	+0.39056252	-0.01901486		
<i>P</i>	4.29	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1991 10 03	033	0.3+	0.5-	1998 04 21	704	0.4-	1.7-	1998 04 22	704	0.9-	0.2+
1991 10 04	033	0.6-	0.6+	1998 04 21	704	(2.1+	3.2-)	1998 04 22	704	2.0+	0.6+
1991 10 04	033	0.5-	0.3+	1998 04 21	704	1.3+	0.0	1998 04 29	566	0.1+	0.1-
1991 10 07	033	0.8+	0.0	1998 04 21	704	0.5-	0.1-	1998 04 29	566	0.4-	0.2-
1991 10 07	033	0.1-	0.3-	1998 04 21	704	0.8-	0.7-	1998 04 29	566	0.0	0.1-
1991 10 08	033	0.6-	0.1+	1998 04 22	704	0.1-	0.5+				
1991 10 09	033	0.7+	0.1-	1998 04 22	704	0.4-	1.5+				

1991 TB₆ = 1987 VS₁ = 1998 FF₇₈

Id. G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23694966	ω	303.16479	+0.92510483	+0.34001399		
<i>a</i>	2.5864176	Ω	37.74869	-0.18446878	+0.79153598		
<i>e</i>	0.1561724	<i>i</i>	16.02787	-0.33189203	+0.50780043		
<i>P</i>	4.16	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1987 11 15	327	0.2+	0.3+	1998 03 25	704	0.4+	0.5+	1998 04 22	704	0.9+	0.1+
1987 11 15	327	0.0	0.4-	1998 03 25	704	1.1+	0.2-	1998 04 22	704	0.4-	0.2-
1991 09 11	675	0.1+	0.4+	1998 03 25	704	0.9+	0.7+	1998 04 22	704	0.1+	0.4-
1991 09 11	675	0.4-	0.7-	1998 03 25	704	0.3-	0.2-	1998 04 22	704	0.2+	0.4-
1991 09 13	675	0.6-	0.8-	1998 04 20	704	0.1-	0.2-	1998 05 16	704	0.3+	0.1+
1991 10 06	046	1.7+	1.9+	1998 04 20	704	0.3+	0.7-	1998 05 16	704	0.1+	0.3+
1991 10 06	046	0.0	0.4+	1998 04 20	704	0.6-	0.5+	1998 05 16	704	0.4+	0.4+
1991 10 07	046	0.9-	0.2+	1998 04 20	704	0.5-	0.2+	1998 05 16	704	0.3-	0.2+
1991 10 07	046	0.8-	0.4-	1998 04 20	704	0.5-	0.4-	1998 05 16	704	1.0-	0.5-
1998 03 24	704	0.5+	0.7+	1998 04 21	704	0.1-	0.0	1998 05 27	046	0.2+	0.3+
1998 03 24	704	0.2-	0.4+	1998 04 21	704	0.0	0.1+	1998 05 27	046	0.0	0.5+
1998 03 24	704	0.4+	0.2-	1998 04 21	704	0.5+	0.1-	1998 05 27	046	0.1+	0.4+
1998 03 24	704	0.7-	0.1-	1998 04 21	704	0.1-	0.4-	1998 05 28	046	0.5-	0.2-
1998 03 24	704	0.3-	0.2-	1998 04 21	704	0.4+	1.1-	1998 05 28	046	0.2-	1.1+
1998 03 25	704	0.4+	0.3+	1998 04 22	704	0.0	0.1-	1998 05 28	046	1.1-	0.2+

1991 UH₃ = 1998 HG₈₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20434751	ω	65.21571	+0.02853891	-0.99782513		
<i>a</i>	2.8546737	Ω	23.38169	+0.85451793	-0.00648792		
<i>e</i>	0.2881782	<i>i</i>	8.61089	+0.51863728	+0.06559667		
<i>P</i>	4.82	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1991 10 31	399	0.2-	0.1+	1991 11 09	399	1.0+	0.1-	1998 04 22	704	1.0+	0.1-
1991 10 31	399	0.2+	0.0	1998 04 21	704	0.6+	0.4+	1998 04 22	704	0.3-	0.4+
1991 11 04	399	0.4-	0.1-	1998 04 21	704	0.1-	0.9-	1998 04 22	704	0.7+	0.2-
1991 11 04	399	1.3-	0.4+	1998 04 21	704	0.5-	0.1+	1998 04 22	704	0.1+	0.7-
1991 11 05	399	(2.4-	0.1+)	1998 04 21	704	0.3+	0.6-	1998 05 24	691	1.0-	0.6+
1991 11 05	399	1.1-	0.6-	1998 04 21	704	0.0	0.4+	1998 05 24	691	0.9-	0.0
1991 11 09	399	1.7+	0.3+	1998 04 22	704	0.1-	0.7+				

1991 UL₃

Id. E. Bowell (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23538079	ω	146.34007	+0.99419438	-0.00500574		
<i>a</i>	2.5978977	Ω	214.43835	-0.02179399	+0.96884367		
<i>e</i>	0.2068828	<i>i</i>	10.95627	+0.10536865	+0.24762246		
<i>P</i>	4.19	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 10 31	399	0.2-	0.2+	1991 12 04	399	0.4+	0.1-	1998 05 01	699	0.6+	0.4+
1991 10 31	399	1.1+	0.1-	1991 12 05	399	0.3+	0.4+	1998 05 01	699	0.7+	0.4+
1991 11 04	399	0.3+	0.5+	1991 12 05	399	0.3+	0.5+	1998 05 01	699	0.0	0.7+

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1991 11 04	399	0.7−	0.3+	1998 04 30	699	0.1−	0.5+	1998 05 16	704	0.0	0.0
1991 11 05	894	0.5−	0.8+	1998 04 30	699	0.4+	0.1+	1998 05 16	704	0.0	1.4+
1991 11 05	894	0.8−	0.3−	1998 04 30	699	0.1−	0.6+	1998 05 16	704	(2.6+	1.7−)
1991 11 11	894	0.3−	1.6−	1998 04 30	566	0.8−	1.1−	1998 05 16	704	0.2−	0.3−
1991 11 11	894	0.1−	0.6−	1998 04 30	566	0.4−	1.1−	1998 05 16	704	0.1+	0.2+
1991 12 04	399	0.3+	0.2+	1998 04 30	566	0.2−	1.8−				

1991 US₃ = 1998 HL₁₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	270.38049		(2000.0)	P	Q		
<i>n</i>	0.23801787	ω	273.48215	+0.89762899	+0.36746868		
<i>a</i>	2.5786734	Ω	65.08267	−0.21459473	+0.84667689		
<i>e</i>	0.1622384	<i>i</i>	15.56604	−0.38498220	+0.38484414		
<i>P</i>	4.14	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 10 31	400	1.2+	0.4+	1998 04 23	704	0.3−	0.1+	1998 05 22	704	0.7+	0.4−
1991 10 31	400	(2.5+	0.2+)	1998 04 23	704	0.2+	0.8+	1998 05 22	704	0.2−	0.3−
1991 11 02	400	(3.8+	2.2+)	1998 04 24	704	0.1−	0.1−	1998 05 22	704	0.0	1.0−
1991 11 02	400	0.5+	0.4+	1998 04 24	704	0.3+	0.4−	1998 05 22	704	0.7+	0.4−
1991 11 04	894	0.2−	1.5−	1998 04 24	704	0.2+	0.2−	1998 05 24	704	0.5−	0.3−
1991 11 04	894	0.9+	0.7−	1998 04 24	704	0.6+	0.4+	1998 05 24	704	0.2+	0.7−
1991 11 12	894	0.6+	0.9+	1998 04 24	566	0.7−	0.4+	1998 05 24	704	0.5+	0.4+
1991 11 12	894	1.3−	0.7+	1998 04 24	566	0.4−	0.0	1998 05 24	704	0.2+	0.8−
1991 11 26	400	1.5−	1.2−	1998 04 24	566	0.9−	0.1+	1998 05 24	704	0.7−	0.4−
1991 11 26	400	0.4+	0.1−	1998 05 01	699	0.3−	0.1+	1998 05 27	699	0.1+	0.4+
1998 04 23	704	0.0	0.1−	1998 05 01	699	0.1−	0.3+	1998 05 27	699	0.0	0.3+
1998 04 23	704	0.4−	0.5+	1998 05 01	699	0.8+	0.1−	1998 05 27	699	0.2+	0.5−
1998 04 23	704	0.6−	0.4+	1998 05 22	704	0.4−	0.1+				

1991 VT = 1998 HV₁₄₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	238.07450		(2000.0)	P	Q		
<i>n</i>	0.23504260	ω	301.25376	+0.96206894	−0.11729938		
<i>a</i>	2.6003891	Ω	66.49226	+0.22649131	+0.84670156		
<i>e</i>	0.1928502	<i>i</i>	15.58054	−0.15206922	+0.51897719		
<i>P</i>	4.19	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 10 31	400	1.9−	0.0	1991 12 07	675	1.2+	0.2+	1998 04 28	566	0.2−	0.1−
1991 10 31	400	0.5+	0.3−	1998 04 21	704	0.5+	0.4−	1998 04 28	566	0.4−	0.1−
1991 11 02	400	1.4−	0.3+	1998 04 21	704	0.1+	0.1−	1998 05 22	704	0.1−	0.5+
1991 11 02	400	(6.2+	2.3−)	1998 04 21	704	0.7+	0.9−	1998 05 22	704	0.6−	0.6+
1991 11 02	400	1.0−	0.3+	1998 04 21	704	0.2+	0.8−	1998 05 22	704	0.3−	0.4+
1991 11 04	403	(0.5+	3.3−)	1998 04 21	704	0.0	1.6−	1998 05 22	704	0.1+	0.3−
1991 11 04	403	0.7−	1.9−	1998 04 23	704	0.2+	0.3−	1998 05 22	704	0.8−	1.1+
1991 11 05	403	(4.3+	2.1+)	1998 04 23	704	0.7+	1.6+	1998 05 24	704	0.1−	0.9+
1991 11 05	403	(1.1−	2.0+)	1998 04 23	704	0.7−	0.3+	1998 05 24	704	0.4−	0.1−
1991 11 10	403	1.2+	0.8+	1998 04 23	704	0.4+	0.5+	1998 05 24	704	0.9+	0.3+
1991 11 13	691	0.5+	0.3+	1998 04 23	704	(4.4−	2.6−)	1998 05 24	704	0.5+	0.7−
1991 11 13	691	0.4+	0.2+	1998 04 24	704	0.1+	0.0	1998 05 24	704	0.6−	1.0−
1991 11 13	691	0.2+	0.4+	1998 04 24	704	0.2+	0.2+	1998 05 27	699	0.1−	0.2−
1991 11 14	403	(3.2+	3.9−)Y	1998 04 24	704	0.6+	0.7+	1998 05 27	699	0.4+	0.3+
1991 11 14	403	(3.9+	2.1−)Y	1998 04 24	704	(0.6+	2.1+)	1998 05 27	699	0.5−	0.0
1991 12 07	675	0.6+	0.4+	1998 04 28	566	0.4−	0.0				

1991 VT₅ = 1998 KR₅₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	261.68149		(2000.0)	P	Q		
<i>n</i>	0.23746939	ω	205.84165	+0.99853707	−0.02174098		
<i>a</i>	2.5826425	Ω	155.25259	+0.03547770	+0.95439105		
<i>e</i>	0.0708220	<i>i</i>	6.79201	−0.04080518	+0.29776679		
<i>P</i>	4.15	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

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Residuals in seconds of arc

1991 11 02	809	1.0+	0.7+	1991 11 12	809	0.3−	0.0	1998 05 26	704	0.5−	0.9−
1991 11 02	809	0.5+	0.5+	1991 11 12	809	0.0	0.1−	1998 05 26	704	0.9+	1.0+
1991 11 06	809	1.0+	0.9+	1991 11 12	809	1.0+	0.0	1998 05 26	704	1.7+	1.6−
1991 11 06	809	1.2−	0.7−	1998 05 23	704	1.6−	0.4−	1998 05 26	704	0.3−	0.3+
1991 11 06	809	0.4−	0.9−	1998 05 23	704	0.3+	0.8+	1998 06 03	704	0.6+	0.7+
1991 11 09	809	(1.7+	2.3+)	1998 05 23	704	(1.6+	2.4+)	1998 06 03	704	(4.3+	0.4−)
1991 11 09	809	1.6−	0.4−	1998 05 23	704	0.0	0.1+	1998 06 03	704	0.4−	1.0−
1991 11 09	809	(2.2−	0.3+)	1998 05 23	704	0.7−	0.9+	1998 06 03	704	(2.9+	0.5−)

1991 VU₅ = 1998 HM₈₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	242.56872		(2000.0)	P	Q		
<i>n</i>	0.23394672	ω	165.47508	+0.99763899	−0.03885394		
<i>a</i>	2.6085034	Ω	197.05796	+0.02542755	+0.97494971		
<i>e</i>	0.1921566	<i>i</i>	11.13078	+0.06379572	+0.21900558		
<i>P</i>	4.21	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1991 11 02	809	1.1+	1.0+	1991 11 09	809	2.8−	2.0−	1998 04 21	704	1.0+	0.3+
1991 11 02	809	0.6−	0.9−	1991 11 12	809	0.9+	1.2+	1998 04 22	704	1.0+	0.2+
1991 11 02	809	1.4−	0.5−	1991 11 12	809	0.8−	0.3−	1998 04 22	704	1.6+	0.8+
1991 11 06	809	2.0+	1.3+	1991 11 12	809	0.8−	0.2+	1998 04 22	704	1.4−	1.4+
1991 11 06	809	0.1+	0.0	1998 04 21	704	0.2+	0.3+	1998 04 22	704	0.1+	2.1−
1991 11 06	809	0.0	0.3−	1998 04 21	704	0.2+	0.3+	1998 04 22	704	0.6−	1.6−
1991 11 09	809	1.5+	1.0+	1998 04 21	704	1.8−	0.2+				
1991 11 09	809	0.9+	0.7−	1998 04 21	704	0.4−	0.2+				

1992 AV₁ = 1998 KD₅₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	165.21301		(2000.0)	P	Q		
<i>n</i>	0.36300333	ω	329.16708	+0.13219820	−0.91042163		
<i>a</i>	1.9462366	Ω	110.67766	+0.97325092	+0.04425533		
<i>e</i>	0.0735678	<i>i</i>	24.77020	+0.18789968	+0.41130757		
<i>P</i>	2.72	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 01 09	675	0.9+	0.9+	1992 02 01	675	0.2+	0.2−	1998 05 27	704	0.3+	0.4−
1992 01 09	675	1.8−	0.2+	1992 02 05	675	0.4−	0.8+	1998 06 04	704	0.1+	0.0
1992 01 10	675	0.3+	0.9+	1992 02 05	675	0.7−	0.1−	1998 06 04	704	0.1−	0.5+
1992 01 11	675	0.0	1.5−	1998 05 27	704	0.6+	0.1+	1998 06 04	704	0.1−	0.1−
1992 01 11	675	0.3−	0.3−	1998 05 27	704	0.0	0.1+	1998 06 04	704	0.3+	0.4+
1992 01 30	675	0.7+	0.1+	1998 05 27	704	0.8−	0.2+				
1992 01 30	675	1.2+	0.6−	1998 05 27	704	0.5−	0.7−				

1992 AT₃ = 1995 UN₁₂ = 1998 HV₅₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	190.31744		(2000.0)	P	Q		
<i>n</i>	0.19982984	ω	149.99029	+0.84365275	−0.53666702		
<i>a</i>	2.8975381	Ω	242.47465	+0.48905640	+0.78004150		
<i>e</i>	0.0795095	<i>i</i>	0.99795	+0.22152625	+0.32175110		
<i>P</i>	4.93	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1992 01 11	303	1.2−	0.6+	1995 10 17	691	0.1+	0.0	1998 04 21	704	0.4+	0.2−
1992 01 12	303	1.4+	0.7−	1995 10 17	691	0.2+	0.2−	1998 04 21	704	0.0	0.4−
1992 02 04	675	2.3+	1.1−	1995 10 27	691	0.2−	0.3−	1998 04 21	704	0.1−	0.5−
1992 02 04	675	0.2−	0.9+	1995 10 27	691	0.0	0.0	1998 04 22	704	0.5−	0.0
1992 02 09	691	1.3−	0.1−	1995 10 27	691	0.2+	0.0	1998 04 22	704	0.7−	0.3−
1992 02 09	691	1.1−	0.3+	1998 04 21	704	0.3−	0.1+	1998 04 22	704	0.3+	0.6+
1995 10 17	691	0.2−	0.1+	1998 04 21	704	0.3−	0.1+	1998 04 22	704	1.0+	0.2+

1992 BD = 1975 RP₂ = 1998 KK₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 153.33863 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.37737535	ω	21.28846	-0.13716344	-0.86869061						
<i>a</i>	1.8965037	Ω	79.18806	+0.82437685	-0.36652016						
<i>e</i>	0.0654140	<i>i</i>	28.98551	+0.54917119	+0.33322604						
<i>P</i>	2.61	<i>H</i>	15.5	<i>G</i> 0.15	<i>U</i> 3						
Residuals in seconds of arc											
1975 09 10	413	1.1-	0.0	1992 02 09	691	0.1-	0.4-	1998 05 26	704	1.0+	0.3-
1975 09 10	413	0.9+	0.3+	1992 02 09	691	0.0	0.2-	1998 05 26	704	0.9+	0.0
1992 01 29	691	0.1-	0.7+	1992 02 09	691	0.3+	0.3+	1998 05 26	704	0.1-	0.5+
1992 01 29	691	0.8-	0.6+	1992 03 07	691	0.1+	0.8-	1998 05 26	704	0.8+	0.5-
1992 01 29	691	0.4-	0.4+	1992 03 07	691	0.4-	0.9-	1998 05 26	704	1.5-	0.3-
1992 01 30	691	0.0	0.1+	1992 03 07	691	0.8+	0.1-	1998 06 03	704	0.1+	0.2-
1992 01 30	691	0.0	0.5+	1998 05 23	704	0.4+	0.5+	1998 06 03	704	0.1-	0.2+
1992 01 30	691	0.4-	0.1+	1998 05 23	704	0.1-	1.0+	1998 06 03	704	0.0	0.0
1992 01 31	691	0.2-	0.3+	1998 05 23	704	0.7-	0.4-	1998 06 03	704	0.3+	0.2+
1992 01 31	691	0.1-	0.0	1998 05 23	704	0.5-	0.6-	1998 06 03	704	(2.2-	2.2-)
1992 01 31	691	0.1-	0.1+	1998 05 23	704	0.3+	1.0+				

1992 DQ₇ = 1998 HS₁₃₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 239.20433 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.18137122	ω	280.79503	+0.96736041	+0.24928187						
<i>a</i>	3.0909392	Ω	64.78265	-0.20836679	+0.88472711						
<i>e</i>	0.1309126	<i>i</i>	2.88428	-0.14421202	+0.39384831						
<i>P</i>	5.43	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 7						
Residuals in seconds of arc											
1992 02 29	809	0.3+	0.4-	1998 04 21	704	1.3-	0.3-	1998 04 22	704	1.2-	0.9+
1992 03 03	809	0.6-	0.2+	1998 04 21	704	1.9+	0.1-	1998 04 22	704	0.2+	1.2+
1992 03 07	809	0.3+	0.2+	1998 04 21	704	0.2+	0.1+	1998 04 22	704	0.9+	0.0
1998 04 21	704	0.2-	0.5-	1998 04 21	704	0.4-	0.5+	1998 04 22	704	0.1-	1.9-

1992 DU₇ = 1998 KR₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 309.55735 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.19429799	ω	268.88016	+0.65997112	+0.75074175						
<i>a</i>	2.9522776	Ω	42.46414	-0.67127109	+0.60641506						
<i>e</i>	0.0887748	<i>i</i>	2.43826	-0.33739183	+0.26200688						
<i>P</i>	5.07	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 6						
Residuals in seconds of arc											
1992 02 29	809	0.0	0.2-	1998 05 22	704	0.7+	0.9+	1998 05 24	704	0.5-	0.1-
1992 03 03	809	0.1-	0.0	1998 05 22	704	0.0	0.5+	1998 05 24	704	0.1+	1.0-
1992 03 07	809	0.1+	0.3+	1998 05 22	704	0.8-	1.2-	1998 05 24	704	0.3+	1.0+
1998 05 22	704	0.0	0.4-	1998 05 24	704	0.2+	0.9+	1998 05 24	704	0.0	0.7-

1992 DN₈ = 1998 HJ₆₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 69.04807 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.18104940	ω	335.26246	-0.84934231	-0.52747786						
<i>a</i>	3.0946010	Ω	172.80759	+0.50661415	-0.82505382						
<i>e</i>	0.0497229	<i>i</i>	9.01353	+0.14818822	-0.20261612						
<i>P</i>	5.44	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 5						
Residuals in seconds of arc											
1992 02 25	675	0.8+	0.3+	1992 04 06	809	0.1-	0.3+	1998 04 22	704	0.5-	1.1+
1992 02 25	675	1.9+	0.7-	1998 04 21	704	0.3+	0.6+	1998 04 22	704	0.3-	1.0-
1992 02 29	809	0.7-	0.2+	1998 04 21	704	0.1-	0.5+	1998 04 22	704	0.4+	0.4-
1992 03 03	809	0.2-	0.8-	1998 04 21	704	0.1+	0.5-	1998 04 22	704	0.4+	0.7-
1992 03 05	809	1.1-	1.1+	1998 04 21	704	0.3+	0.9-	1998 04 22	704	0.7-	1.0+
1992 03 08	809	0.7-	0.3-	1998 04 21	704	0.9+	0.3+				

1992 DD₁₀ = 1998 FG₁₂₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 232.93546 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.16882495	ω	104.56130	+0.76791367	+0.63898886						
<i>a</i>	3.2422386	Ω	215.75435	-0.61322953	+0.71317857						
<i>e</i>	0.1065109	<i>i</i>	4.39155	-0.18508955	+0.28821791						
<i>P</i>	5.84	<i>H</i>	12.5	<i>G</i> 0.15	<i>U</i> 5						
Residuals in seconds of arc											
1992 02 29	809	0.5+	0.1-	1992 04 07	809	0.0	0.4-	1998 03 22	704	1.5+	2.0-
1992 03 03	809	0.2+	0.1-	1998 03 22	704	0.6+	1.1+	1998 03 26	704	0.3-	1.3+
1992 03 05	809	0.8-	0.8+	1998 03 22	704	0.5+	0.1-	1998 03 26	704	0.1-	0.1-
1992 03 08	809	0.0	0.4-	1998 03 22	704	0.9-	0.9+	1998 03 26	704	1.2-	0.8-

1992 EV₄ = 1997 AB₂₀ = 1998 HP₁₀₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 246.59035 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.18621114	ω	202.05476	+0.94037977	+0.32129987						
<i>a</i>	3.0371456	Ω	138.67032	-0.28134340	+0.91916719						
<i>e</i>	0.0685064	<i>i</i>	9.72826	-0.19113289	+0.22781148						
<i>P</i>	5.29	<i>H</i>	13.0	<i>G</i> 0.15	<i>U</i> 3						
Residuals in seconds of arc											
1992 03 01	809	0.2+	0.6+	1998 04 04	699	0.2+	1.2-	1998 04 24	704	0.8-	0.5+
1992 03 04	809	0.2+	0.3-	1998 04 04	699	0.1-	0.4-	1998 05 16	704	1.4+	0.5-
1992 03 06	809	0.9-	1.0+	1998 04 23	704	0.1+	0.2+	1998 05 16	704	0.2+	0.6+
1992 04 04	809	0.5+	1.3-	1998 04 23	704	0.3-	0.2-	1998 05 16	704	(2.1-	1.3+)
1997 01 10	691	0.0	0.1+	1998 04 23	704	0.4+	0.1-	1998 05 16	704	(2.3+	0.1+)
1997 01 10	691	0.1+	0.0	1998 04 23	704	1.0-	0.6+	1998 05 16	704	0.2-	1.0-
1997 01 10	691	0.2+	0.1-	1998 04 23	704	1.2-	0.4+	1998 05 23	699	1.1+	0.6-
1997 01 17	691	0.2-	0.3+	1998 04 24	704	0.0	0.4+	1998 05 23	699	0.9+	0.3-
1997 01 17	691	0.0	0.2-	1998 04 24	704	0.5-	0.8+	1998 05 23	699	0.2-	0.0
1997 01 17	691	0.0	0.1-	1998 04 24	704	0.3-	0.5+				
1998 04 04	699	0.7+	0.7-	1998 04 24	704	0.5-	0.9+				

1992 EU₅ = 1996 YS₃ = 1998 HN₇₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i> 103.13299 (2000.0)			Williams			<i>P</i>			<i>Q</i>		
<i>n</i>	0.18149355	ω	4.01149	-0.19958429	-0.97701192						
<i>a</i>	3.0895502	Ω	97.51275	+0.89690683	-0.21294279						
<i>e</i>	0.1611073	<i>i</i>	4.33421	+0.39461911	-0.01015256						
<i>P</i>	5.43	<i>H</i>	12.5	<i>G</i> 0.15	<i>U</i> 4						
Residuals in seconds of arc											
1992 03 02	809	0.1+	0.1-	1998 04 21	704	0.7-	0.6-	1998 04 22	704	0.2+	0.1+
1992 03 05	809	0.3-	0.4+	1998 04 21	704	0.1-	0.3+	1998 05 16	704	0.3+	0.3-
1992 03 07	809	0.3+	0.0	1998 04 21	704	0.5-	0.0	1998 05 16	704	0.9+	0.3-
1992 04 04	809	0.1-	0.2-	1998 04 21	704	0.4-	0.7+	1998 05 16	704	1.2+	1.3-
1996 12 18	327	0.3-	0.1-	1998 04 22	704	0.2+	0.2+	1998 05 16	704	1.4-	0.5-
1996 12 18	327	0.0	0.0	1998 04 22	704	0.3+	0.1-	1998 05 25	699	0.2+	0.4+
1996 12 18	327	0.3+	0.1-	1998 04 22	704	0.1-	0.5+	1998 05 25	699	0.5-	0.4-
1998 04 21	704	0.2-	0.0	1998 04 22	704	1.1+	0.6+	1998 05 25	699	0.6-	0.5+

1992 EG₆ = 1998 KW₈

Id. G. V. Williams, E. Howell (1994 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	347.71071		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$
n	0.18917911	ω	129.91768	-0.13078571	+0.98346962
a	3.0052961	Ω	132.09528	-0.95330339	-0.09006698
e	0.0930502	i	9.71613	-0.27222737	-0.15708419
P	5.21	H	13.0	G 0.15	U 2

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Residuals in seconds of arc

1992 03 01	809	0.4−	0.3−	1998 05 23	704	0.5−	0.5−	1998 05 26	704	0.1+	0.3+
1992 03 02	809	0.1−	0.0	1998 05 23	704	0.3−	0.6−	1998 05 26	704	0.0	0.1−
1992 03 05	809	0.1−	0.6+	1998 05 23	699	0.2−	0.2−	1998 05 26	704	0.3−	0.7+
1992 03 07	809	0.2+	0.1+	1998 05 23	699	0.3−	0.1−	1998 06 03	704	0.1−	0.3+
1992 04 04	809	0.5+	0.3−	1998 05 23	699	0.6−	0.1−	1998 06 03	704	1.1+	1.3+
1994 09 10	675	0.4−	0.5+	1998 05 24	699	0.1−	0.6−	1998 06 03	704	0.4+	0.7−
1994 09 10	675	0.4+	0.5−	1998 05 24	699	0.7−	1.2−	1998 06 03	704	0.1−	0.3+
1998 05 23	704	0.0	0.3−	1998 05 24	699	0.1+	0.1−	1998 06 04	699	0.4+	0.2−
1998 05 23	704	0.5+	0.0	1998 05 26	704	0.7−	0.7−	1998 06 04	699	0.6+	0.1−
1998 05 23	704	0.2−	0.2+	1998 05 26	704	1.2+	1.6+	1998 06 04	699	0.4−	0.7+

1992 EX₂₅ = 1998 HA₅₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	61.43475		(2000.0)		P		Q
<i>n</i>	0.17617318	ω	45.33630	−0.82613949	−0.56195065		
<i>a</i>	3.1514435	Ω	100.43066	+0.50436466	−0.77017094		
<i>e</i>	0.1117936	<i>i</i>	2.40631	+0.25121672	−0.30174194		
<i>P</i>	5.59	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1992 02 29	809	0.4+	0.4−	1992 04 06	809	0.6+	0.7+	1998 04 22	704	1.0+	0.0
1992 03 03	809	0.1+	0.2+	1998 04 21	704	0.1+	0.2−	1998 04 22	704	0.4−	0.6−
1992 03 08	809	0.1+	0.1+	1998 04 21	704	0.1+	0.9+	1998 05 16	704	0.1−	0.3−
1992 03 09	809	0.1+	0.0	1998 04 21	704	1.2+	0.7+	1998 05 16	704	1.4−	1.0−
1992 03 11	691	0.5−	0.1−	1998 04 21	704	0.0	1.2+	1998 05 16	704	0.9−	0.2−
1992 03 11	691	0.3−	0.4−	1998 04 21	704	0.3+	0.6+	1998 05 16	704	0.0	1.2−
1992 03 11	691	0.5−	0.2−	1998 04 22	704	(0.3−	2.4+)				

1992 PE₃ = 1998 HU₅₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	251.84043		(2000.0)		P		Q
<i>n</i>	0.29200812	ω	112.53543	+0.98529655	+0.14967797		
<i>a</i>	2.2501222	Ω	238.94448	−0.16923719	+0.92117685		
<i>e</i>	0.1957508	<i>i</i>	5.51858	+0.02344105	+0.35920707		
<i>P</i>	3.38	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 08 02	675	0.4−	1.3+	1992 08 21	675	0.3+	0.0	1998 04 22	704	0.5+	0.4+
1992 08 02	675	1.3+	0.4+	1992 08 27	675	0.2+	0.0	1998 04 22	704	1.7+	1.9−
1992 08 06	675	0.1−	0.9−	1992 08 27	675	0.0	0.6−	1998 04 22	704	0.4+	0.7−
1992 08 06	675	0.6+	0.6+	1998 04 21	704	1.7−	0.2+	1998 05 16	704	0.3+	0.2−
1992 08 06	675	0.3−	1.0−	1998 04 21	704	0.6+	0.9+	1998 05 16	704	0.3−	0.0
1992 08 06	675	1.2+	0.3+	1998 04 21	704	1.3−	0.3+	1998 05 16	704	0.7−	0.8−
1992 08 07	675	1.7−	0.7−	1998 04 21	704	0.1+	0.2+	1998 05 16	704	0.4−	0.1+
1992 08 07	675	1.2−	0.3+	1998 04 21	704	0.1+	0.2+				
1992 08 21	675	0.1+	0.3+	1998 04 22	704	0.6+	1.2+				

1992 RU₃ = 1991 EF₈ = 1998 HB₁₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	346.83276		(2000.0)		P		Q
<i>n</i>	0.28822480	ω	271.13056	−0.46823564	+0.88294622		
<i>a</i>	2.2697698	Ω	330.87215	−0.78029927	−0.43128172		
<i>e</i>	0.0774426	<i>i</i>	4.01463	−0.41459430	−0.18547790		
<i>P</i>	3.42	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1991 03 09	675	0.5+	0.4−	1998 03 25	704	0.1−	0.3+	1998 04 19	704	(2.1−	0.1+)
1991 03 09	675	0.8−	0.2−	1998 03 25	704	0.1+	1.0+	1998 04 19	704	(2.2+	0.0)
1992 09 02	809	1.2+	0.1−	1998 03 25	704	0.4−	0.8+	1998 04 20	704	0.3+	0.1−
1992 09 02	809	1.2+	0.1−	1998 03 25	704	0.2−	0.1+	1998 04 20	704	0.3+	0.2−
1992 09 02	809	0.8+	0.6−	1998 03 25	704	0.2+	1.2+	1998 04 20	704	0.2+	0.0
1992 09 03	809	0.7−	1.3−	1998 03 26	566	0.7−	1.1−	1998 04 20	704	0.3+	0.6−
1992 09 22	809	0.2−	0.8+	1998 03 26	566	0.7−	1.0−	1998 04 20	704	0.9+	0.3−
1992 09 22	809	0.8−	0.3+	1998 03 26	566	0.2−	1.1−	1998 04 22	704	0.6+	0.8+

1992 09 22	809	0.8−	0.5+	1998 04 18	704	0.9+	0.6+	1998 04 22	704	0.1−	0.0
1992 09 23	809	0.1−	0.0	1998 04 18	704	0.2+	0.2−	1998 04 22	704	0.3−	0.2−
1992 09 23	809	0.1−	0.1+	1998 04 18	704	0.2+	0.2+	1998 04 22	704	0.3−	0.6+
1992 09 23	809	0.4−	0.1−	1998 04 18	704	0.0	0.0	1998 04 22	704	0.5−	0.1−
1998 03 24	699	0.1+	0.4+	1998 04 18	704	(2.6−	3.7+)	1998 04 30	699	1.3−	0.3+
1998 03 24	699	0.3−	0.6−	1998 04 19	704	0.1+	0.8−	1998 04 30	699	0.3+	0.1+
1998 03 24	699	0.4−	0.3−	1998 04 19	704	0.6+	0.4+	1998 04 30	699	0.1+	0.2+

1992 ST₂ = 1998 HQ₄₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	190.53090		(2000.0)		P		Q
<i>n</i>	0.27136537	ω	196.33191	+0.85988421	−0.49918183		
<i>a</i>	2.3628334	Ω	195.08134	+0.50215821	+0.86477506		
<i>e</i>	0.1332879	<i>i</i>	24.24607	+0.09184922	−0.05460393		
<i>P</i>	3.63	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 09 22	675	0.4+	1.5−	1998 03 22	704	2.3+	0.5+	1998 04 21	704	0.7−	0.9+
1992 09 22	675	2.2+	1.8+	1998 03 22	704	2.3−	0.8−	1998 04 21	704	0.2−	0.5−
1992 09 26	675	1.5−	0.2−	1998 03 24	704	0.4+	0.8−	1998 04 21	704	1.4−	1.2−
1992 09 26	675	0.3−	1.6−	1998 03 24	704	1.2+	1.3+	1998 04 21	704	0.5−	0.7−
1992 09 29	675	0.2−	0.4+	1998 03 24	704	0.9−	0.3−	1998 04 22	704	1.4−	0.9−
1992 09 29	675	0.9−	0.9+	1998 03 24	704	0.2+	0.3−	1998 04 22	704	0.5−	0.4−
1992 09 30	675	0.5−	0.6−	1998 03 24	704	0.8+	0.7+	1998 04 22	704	1.4−	0.7−
1992 09 30	675	0.4+	0.7+	1998 04 20	704	0.3−	0.8+	1998 04 22	704	0.9−	0.7+
1992 10 03	675	0.2+	0.1−	1998 04 20	704	1.3−	0.6+	1998 04 22	704	0.7−	1.3−
1992 10 03	675	0.4+	0.1+	1998 04 20	704	1.4−	0.7+	1998 05 16	704	2.1+	0.5+
1998 03 22	704	1.7+	0.9+	1998 04 20	704	0.3+	1.5−	1998 05 16	704	0.1+	0.8+
1998 03 22	704	1.8+	2.2+	1998 04 20	704	0.8−	1.4−	1998 05 16	704	2.2+	1.0+
1998 03 22	704	2.8+	0.7−	1998 04 21	704	0.6−	0.9−	1998 05 16	704	0.0	1.2+

1992 SG₁₃ = 1998 HG₆₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	227.53182		(2000.0)		P		Q
<i>n</i>	0.27572412	ω	355.53063	+0.96994484	−0.24129618		
<i>a</i>	2.3378656	Ω	18.52374	+0.22619398	+0.84664386		
<i>e</i>	0.2539025	<i>i</i>	5.66407	+0.08968439	+0.47431037		
<i>P</i>	3.57	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 09 23	675	0.7−	0.6−	1992 11 01	033	0.0	0.0	1998 04 21	704	2.6−	0.1−
1992 09 23	675	0.7−	0.8−	1992 12 21	801	0.2−	0.6−	1998 04 21	704	(4.7−	1.5+)
1992 09 25	675	1.1+	2.0+	1992 12 21	801	0.1−	0.3−	1998 04 22	704	0.0	0.8−
1992 09 25	675	0.5+	0.7−	1992 12 23	801	0.0	0.5+	1998 04 22	704	0.7+	0.8−
1992 10 26	400	0.6+	0.8−	1992 12 23	801	0.1+	0.4+	1998 04 22	704	0.2−	0.6−
1992 10 26	400	0.7−	0.1+	1998 04 21	704	0.0	1.2+	1998 04 22	704	0.5+	0.6−
1992 10 31	033	0.4+	0.3+	1998 04 21	704	0.1−	0.1−	1998 04 22	704	0.6+	0.5−
1992 10 31	033	0.2−	0.1+	1998 04 21	704	0.8+	1.7+				

1992 US = 1998 HN₉₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	193.32782		(2000.0)		P		Q
<i>n</i>	0.26806691	ω	358.64855	+0.76903232	−0.63214157		
<i>a</i>	2.3821763	Ω	41.06984	+0.58780898	+0.64110595		
<i>e</i>	0.2381171	<i>i</i>	8.29623	+0.25113720	+0.43517834		
<i>P</i>	3.68	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1992 10 19	364	1.8+	0.3+	1992 10 22	675	0.1+	0.2+	1992 11 02	010	0.2−	0.6−
1992 10 19	364	0.9+	0.4+	1992 10 22	399	0.5−	0.8−	1998 04 21	704	1.2−	1.1−
1992 10 20	675	1.3−	0.4+	1992 10 22	399	1.2−	0.2+	1998 04 21	704	0.2−	1.8+
1992 10 20	675	0.1−	0.4−	1992 10 24	402	1.1−	0.4−	1998 04 21	704	0.2+	0.4+
1992 10 20	364	0.5+	0.8−	1992 10 24	402	1.2+	0.2−	1998 04 21	704	0.3+	0.2+
1992 10 20	364	0.7+	0.8+	1992 10 24	894	0.1−	1.6−	1998 04 22	704	0.2+	0.3−
1992 10 21	402	0.1−	0.1+	1992 10 24	894	0.4+	1.6−	1998 04 22	704	0.3−	0.9−

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1992 10 21	402	1.3+	1.7+	1992 10 28	402	0.2+	0.1−	1998 04 22	704	0.9−	1.3−
1992 10 21	894	0.5−	0.3+	1992 10 28	402	0.2+	0.1+	1998 04 22	704	0.0	0.9−
1992 10 21	894	0.1−	0.4−	1992 11 02	010	0.2−	0.8−	1998 04 22	704	0.2−	2.0−
1992 10 22	675	0.0	0.6+	1992 11 02	010	0.3−	0.2−				

1992 UF₁ = 1998 FB₁₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	194.67983		(2000.0)		P		Q
<i>n</i>	0.26262315	ω	349.07445		+0.93623522		−0.34367607
<i>a</i>	2.4149828	Ω	31.33656		+0.33205391		+0.79729676
<i>e</i>	0.2206069	<i>i</i>	8.08537		+0.11490784		+0.49619012
<i>P</i>	3.75	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 10 19	400	0.5+	1.5−	1992 11 15	400	0.4−	0.5−	1998 03 25	704	0.4+	0.0
1992 10 19	400	1.1+	0.9+	1992 11 15	400	(3.2−	1.7−)	1998 03 25	704	0.6+	0.0
1992 10 20	675	0.2+	0.6+	1992 11 17	400	0.2−	0.5+	1998 03 25	704	0.9+	0.1+
1992 10 20	675	0.1+	0.4−	1992 11 17	400	0.8+	0.1−	1998 03 25	704	0.1+	0.1+
1992 10 22	675	0.2+	0.4+	1998 03 22	704	1.1−	0.8−	1998 03 25	704	0.2+	0.3+
1992 10 22	400	0.8−	1.1+	1998 03 22	704	(2.5−	0.6−)	1998 04 20	704	0.5−	0.1−
1992 10 22	400	1.3−	0.2+	1998 03 22	704	0.5+	0.4−	1998 04 20	704	0.0	1.2+
1992 10 26	400	1.0−	0.2−	1998 03 22	704	1.0−	0.1−	1998 04 20	704	(2.5+	2.0−)
1992 10 26	400	0.8+	0.8−	1998 03 22	704	1.1−	0.5+	1998 04 20	704	1.2+	0.6−

1992 US₁ = 1964 PS

Id. E. Bowell

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	252.50916		(2000.0)		P		Q
<i>n</i>	0.28536197	ω	317.59482		+0.99236242		−0.07318351
<i>a</i>	2.2849252	Ω	46.88992		+0.11215927		+0.87041762
<i>e</i>	0.1342217	<i>i</i>	7.81778		−0.05135286		+0.48684427
<i>P</i>	3.45	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1964 08 08	675	0.0	0.0	1992 11 18	399	(0.0	2.7+)	1998 05 22	704	0.1+	1.5+
1992 09 30	675	0.0	0.5−	1992 11 18	399	(1.5+	3.7+)	1998 05 22	704	0.4−	0.3+
1992 09 30	675	0.7+	0.7−	1992 12 13	010	0.6−	1.4−	1998 05 22	704	0.7−	0.1+
1992 10 03	675	0.5+	0.0	1992 12 14	010	0.6−	0.6+	1998 05 22	704	0.0	1.2−
1992 10 03	675	0.4+	0.5+	1998 04 22	704	0.0	0.9−	1998 05 22	704	0.2−	0.2+
1992 10 21	894	0.5+	0.2+	1998 04 22	704	1.9+	1.1−	1998 05 24	704	0.6+	1.2+
1992 10 21	894	0.5+	0.1−	1998 04 22	704	0.1−	0.9−	1998 05 24	704	0.4+	0.3+
1992 10 25	894	1.4+	0.6+	1998 04 22	704	0.5−	0.8−	1998 05 24	704	0.2+	0.2−
1992 10 25	894	0.9+	0.3+	1998 05 01	704	0.3+	1.2−	1998 05 24	704	0.3−	1.1+
1992 10 30	894	0.7−	0.3+	1998 05 01	704	0.8+	1.0−	1998 05 24	704	1.2−	1.0+
1992 10 30	894	(2.5+	0.5−)	1998 05 01	704	0.6−	0.6+	1998 05 27	701	0.4−	0.4+
1992 10 31	894	1.2−	0.8−	1998 05 01	704	0.5+	0.3+	1998 05 27	701	1.0−	0.5+
1992 10 31	894	0.4−	0.7−	1998 05 18	699	0.3+	0.3+	1998 05 27	701	0.1−	0.4+
1992 11 16	399	(0.1−	2.9+)	1998 05 18	699	0.1+	0.2−				
1992 11 16	399	2.0−	1.6+	1998 05 18	699	0.4+	0.4−				

1992 UX₂ = 1978 NE₄ = 1998 HV₉₈

Id. G. V. Williams, E. Bowell (1988 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	289.21662		(2000.0)		P		Q
<i>n</i>	0.29192001	ω	124.65420		+0.91172903		+0.40720732
<i>a</i>	2.2505749	Ω	211.41685		−0.40264155		+0.85971201
<i>e</i>	0.2208702	<i>i</i>	5.96296		−0.08142454		+0.30834634
<i>P</i>	3.38	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1978 07 10	095	0.5+	0.2+	1998 04 18	327	0.6+	0.5+	1998 05 18	699	0.2+	0.3−
1988 05 10	675	1.3−	0.6+	1998 04 21	704	0.0	0.4+	1998 05 18	699	0.3+	0.5−
1988 05 10	675	0.1+	0.6+	1998 04 21	704	0.4−	0.1+	1998 05 18	699	0.4−	0.2−
1992 10 21	675	1.0+	1.4+	1998 04 21	704	0.1+	0.1−	1998 05 22	704	0.0	0.7−
1992 10 21	675	1.0−	0.6+	1998 04 21	704	0.8−	0.4−	1998 05 22	704	1.2+	0.8−

1992 10 25	376	(1.0−	2.2+)	1998 04 21	704	0.1+	0.2−	1998 05 22	704	1.0−	0.2−
1992 10 25	376	0.9−	1.6−	1998 04 22	704	0.1−	0.6+	1998 05 22	704	1.5−	1.0+
1992 10 27	376	0.7−	1.3+	1998 04 22	704	0.2+	0.9+	1998 05 22	704	0.9−	0.0
1992 10 27	376	1.0+	0.3−	1998 04 22	704	0.6−	0.5+	1998 05 24	704	0.5+	0.0
1992 11 14	376	0.3+	0.5+	1998 04 22	704	1.5−	0.2+	1998 05 24	704	0.6−	0.9−
1992 11 14	376	0.7−	1.7+	1998 04 22	704	0.5−	0.1+	1998 05 24	704	0.1−	0.6+
1992 11 21	376	1.6+	0.3+	1998 05 04	566	0.7+	0.3+	1998 05 24	704	0.6+	0.3+
1992 11 21	376	(2.4+	0.3−)	1998 05 04	566	1.1+	0.2+	1998 05 24	704	1.1+	0.7−
1992 11 29	376	0.3+	0.6+	1998 05 04	566	0.4+	0.6+	1998 05 28	699	0.4+	0.2−
1992 11 29	376	1.6−	1.4−	1998 05 05	699	0.9+	0.5−	1998 05 28	699	0.6−	0.2−
1998 04 18	327	0.1−	0.9+	1998 05 05	699	0.8+	0.2+	1998 05 28	699	0.1−	0.1−
1998 04 18	327	0.0	0.7+	1998 05 05	699	0.9+	0.1+				

1992 UA₆ = 1998 KH₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	219.45577		(2000.0)		P		Q
<i>n</i>	0.27064569	ω	102.69209		+0.90180883		−0.42955731
<i>a</i>	2.3670202	Ω	282.76327		+0.37535683		+0.83268881
<i>e</i>	0.1100015	<i>i</i>	2.76991		+0.21412164		+0.34944223
<i>P</i>	3.64	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 10 25	675	0.1−	1.0−	1998 04 22	704	0.7−	0.2−	1998 05 01	704	1.0+	1.4+
1992 10 28	399	0.3+	0.1+	1998 04 22	704	0.4+	0.0	1998 05 22	704	1.4−	0.4−
1992 10 28	399	0.2+	0.7+	1998 04 22	704	1.2−	0.2−	1998 05 22	704	0.8−	0.6+
1992 11 02	399	1.1−	0.8−	1998 04 22	704	0.8+	0.4+	1998 05 22	704	0.4−	0.5+
1992 11 02	399	0.2−	0.5+	1998 04 25	699	0.1−	0.5+	1998 05 22	704	0.6+	1.5−
1992 11 18	399	0.5−	0.9+	1998 04 25	699	1.3+	0.4−	1998 05 22	704	0.3−	1.2+
1992 11 18	399	0.8+	0.3+	1998 04 25	699	0.4−	0.3−	1998 05 24	704	0.2−	0.3+
1992 11 21	399	(3.3−	2.0−)	1998 05 01	704	0.6−	0.1−	1998 05 24	704	0.6+	1.0−
1992 11 21	399	(2.3−	1.0−)	1998 05 01	704	0.8+	0.2−	1998 05 24	704	0.2−	0.2+
1992 11 27	399	0.9+	1.6−	1998 05 01	704	0.1+	0.4+	1998 05 24	704	1.0+	1.5−
1992 11 27	399	(3.9+	3.0−)	1998 05 01	704	(2.1+	2.3−)	1998 05 24	704	0.5−	0.7−

1992 UU₆ = 1998 FT₁₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	107.65108		(2000.0)		P		Q
<i>n</i>	0.23988460	ω	269.59886		+0.36812600		−0.92589528
<i>a</i>	2.5652782	Ω	158.19446		+0.91777361		+0.34723973
<i>e</i>	0.1592203	<i>i</i>	13.20588		+0.14891220		+0.14880358
<i>P</i>	4.11	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 09 30	675	0.1+	0.1+	1992 10 20	675	0.3+	0.2+	1998 03 22	704	0.6+	0.2+
1992 09 30	675	0.1+	0.1+	1992 10 24	675	0.3−	0.4+	1998 03 22	704	0.8−	0.2+
1992 10 03	675	0.2+	0.3+	1998 03 22	704	0.5+	0.2−	1998 03 26	704	0.3+	0.3−
1992 10 03	675	0.3−	0.1−	1998 03 22	704	0.0	0.1+	1998 03 26	704	0.2−	0.2−
1992 10 20	675	0.1−	0.9−	1998 03 22	704	0.2−	0.0	1998 03 26	704	0.1−	0.1+

1992 YD = 1998 GP₅

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	86.99988		(2000.0)		P		Q
<i>n</i>	0.23135463	ω	17.50344		−0.38518966		−0.87894468
<i>a</i>	2.6279510	Ω	95.91200		+0.80926056		−0.46818022
<i>e</i>	0.0764186	<i>i</i>	16.42288		+0.44353836		+0.09090394
<i>P</i>	4.26	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 12 18	885	0.7+	1.1−	1998 04 02	704	0.7−	0.1−	1998 04 23	566	0.1+	0.7+
1992 12 18	885	0.3+	0.5+	1998 04 02	704	0.5−	0.8−	1998 04 23	566	0.2+	0.8+
1992 12 21	885	0.7+	0.4+	1998 04 03	704	0.1−	0.3−	1998 04 23	566	0.1+	0.6+
1992 12 21	885	0.1+	0.3−	1998 04 03	704	0.3−	0.6−	1998 05 16	704	1.2+	0.3+
1992 12 24	885	0.3−	1.0+	1998 04 03	704	0.1+	0.3−	1998 05 16	704	0.0	1.0−
1992 12 30	885	0.4−	0.4−	1998 04 03	704	0.3−	0.6−	1998 05 16	704	0.6+	0.9+

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1992 12 30	885	1.3−	0.4+	1998 04 03	704	0.5+	0.3+	1998 05 16	704	0.8+	0.6+
1998 04 02	704	0.3−	0.0	1998 04 22	566	0.0	0.1+	1998 05 16	704	0.3+	0.2+
1998 04 02	704	0.4−	0.3−	1998 04 22	566	0.1+	0.2+				
1998 04 02	704	0.7−	0.3−	1998 04 22	566	0.2−	0.0				

1993 BD₆ = 1998 HV₆₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22986117	ω	329.87393	+0.56259560	+0.82654242		
<i>a</i>	2.6393216	Ω	334.34895	−0.75010771	+0.50132563		
<i>e</i>	0.0540498	<i>i</i>	2.34538	−0.34759836	+0.25593017		
<i>P</i>	4.29	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1993 01 27	010	0.7−	0.7+	1993 02 20	010	0.5−	0.1+	1998 04 21	704	0.8+	0.2+
1993 01 27	010	0.3+	0.6−	1993 02 20	010	0.1−	0.6+	1998 04 21	704	0.3+	0.2+
1993 01 27	010	0.0	0.7−	1993 02 22	010	1.0+	0.9−	1998 04 22	704	0.4−	0.1−
1993 01 28	010	0.8+	0.2−	1993 02 23	010	0.4+	0.1+	1998 04 22	704	0.1+	0.0
1993 01 28	010	0.0	0.6+	1998 04 21	704	0.2−	0.2+	1998 04 22	704	0.1−	0.1−
1993 01 28	010	0.5−	0.1+	1998 04 21	704	0.4−	0.1−	1998 04 22	704	0.3+	0.4−
1993 02 20	010	0.7−	0.3+	1998 04 21	704	0.1−	0.1+	1998 04 22	704	0.4−	0.0

1993 FB₅ = 1998 KF₂₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21467051	ω	159.03994	−0.99811668	−0.05384435		
<i>a</i>	2.7624078	Ω	17.94879	+0.03320293	−0.87707128		
<i>e</i>	0.0947666	<i>i</i>	5.47299	+0.05158161	−0.47733297		
<i>P</i>	4.59	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1993 03 17	809	0.5+	1.3+	1993 06 25	691	0.2−	0.1+	1998 05 22	704	1.5+	0.5−
1993 03 18	809	1.9+	0.7+	1993 06 25	691	0.1−	0.8−	1998 05 24	704	1.0+	0.0
1993 03 23	809	1.1+	0.3+	1993 06 25	691	0.6−	0.8−	1998 05 24	704	0.3−	1.5−
1993 03 23	691	0.6−	0.8−	1998 05 22	704	1.0−	0.9−	1998 05 24	704	0.8−	0.3+
1993 03 23	691	0.9−	0.8−	1998 05 22	704	0.6+	1.5+	1998 05 24	704	0.1+	2.5+
1993 03 23	691	0.7−	1.2−	1998 05 22	704	0.7−	0.6−	1998 05 24	704	0.2−	0.3+
1993 04 16	413	0.9−	1.2+	1998 05 22	704	0.1+	0.3−				

1993 FN₇ = 1998 FJ₁₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18413503	ω	218.67360	+0.99760766	−0.01240889		
<i>a</i>	3.0599320	Ω	141.86934	+0.03332742	+0.94821735		
<i>e</i>	0.1505299	<i>i</i>	6.32344	−0.06056606	+0.31737971		
<i>P</i>	5.35	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1993 03 17	809	1.2+	0.3−	1993 03 23	809	0.5+	0.1−	1998 03 22	704	0.9−	1.0+
1993 03 18	809	0.0	0.6+	1993 04 16	413	0.4−	0.2−	1998 03 22	704	0.2−	0.2+
1993 03 20	691	0.4−	0.1+	1998 03 22	704	0.8+	0.3−	1998 03 26	704	0.7+	0.4−
1993 03 20	691	0.5−	0.0	1998 03 22	704	1.7−	1.5−	1998 03 26	704	0.8+	0.6−
1993 03 20	691	0.4−	0.1+	1998 03 22	704	0.0	1.1+	1998 03 26	704	0.5+	0.4+

1993 FB₈ = 1998 KC₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21307625	ω	210.54794	+0.29647850	+0.95284728		
<i>a</i>	2.7761698	Ω	76.76387	−0.86225180	+0.29617572		
<i>e</i>	0.1837103	<i>i</i>	3.80940	−0.41063648	+0.06604550		
<i>P</i>	4.63	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

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Residuals in seconds of arc

1993 03 17	809	1.2+	1.3−	1993 04 16	413	0.4+	0.7+	1998 05 24	704	0.7+	0.3−
1993 03 18	809	0.2+	0.2+	1998 05 22	704	0.9+	0.1+	1998 05 24	704	0.0	0.5−
1993 03 19	691	0.8−	0.1−	1998 05 22	704	0.8+	0.0	1998 05 24	704	0.4+	0.3+
1993 03 19	691	0.8−	0.2+	1998 05 22	704	1.1−	0.2+	1998 05 24	704	0.7−	0.8+
1993 03 19	691	0.8−	0.1−	1998 05 22	704	0.7+	0.4+	1998 05 24	704	0.3+	0.8−
1993 03 23	809	0.7+	0.4+	1998 05 22	704	2.2−	0.4−				

1993 FY₈ = 1998 HK₈₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21146857	ω	254.91335	+0.66479742	+0.74436106		
<i>a</i>	2.7902225	Ω	56.92938	−0.65325479	+0.62019602		
<i>e</i>	0.0831648	<i>i</i>	4.31260	−0.36235695	+0.24755505		
<i>P</i>	4.66	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1993 03 17	809	1.5−	0.8+	1998 03 29	910	1.0+	0.6+	1998 04 21	704	0.0	0.5−
1993 03 18	809	0.0	1.4−	1998 03 29	910	1.0+	1.2+	1998 04 22	704	0.9−	0.6+
1993 03 18	809	0.6+	0.5+	1998 04 21	704	0.2+	0.9−	1998 04 22	704	0.4+	1.7+
1993 03 23	809	0.5+	0.4−	1998 04 21	704	0.2−	0.7−	1998 04 22	704	0.0	0.2−
1993 04 16	413	0.2+	0.1+	1998 04 21	704	0.7+	0.3+	1998 04 22	704	1.3−	0.8−
1998 03 29	910	0.7+	0.7+	1998 04 21	704	0.1−	0.3+	1998 04 22	704	1.1−	1.9−

1993 FC₉ = 1998 FZ₁₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20177308	ω	213.01872	+0.77807989	+0.62548626		
<i>a</i>	2.8789043	Ω	108.15439	−0.56230348	+0.73465461		
<i>e</i>	0.0446255	<i>i</i>	3.49663	−0.28001158	+0.26277281		
<i>P</i>	4.88	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	7

Residuals in seconds of arc

1993 03 17	809	2.0−	1.3+	1998 03 20	704	0.3−	2.1−	1998 04 22	704	0.3−	2.4+
1993 03 18	809	0.5−	0.0	1998 03 22	704	1.4−	0.3+	1998 04 22	704	1.2−	1.1−
1993 03 23	809	1.6+	2.4−	1998 03 22	704	1.2+	0.5−	1998 04 22	704	1.7+	0.9−
1993 04 16	413	1.7+	3.0+	1998 03 25	704	0.3+	0.1+	1998 04 22	704	0.4+	0.3−
1998 03 20	704	0.4−	0.5+	1998 03 25	704	1.0−	1.0+	1998 04 22	704	0.8−	0.3+
1998 03 20	704	0.3−	1.5+	1998 03 25	704	0.4+	0.6−				
1998 03 20	704	0.9+	0.4−	1998 03 25	704	0.0	1.9−				

1993 FN₁₀ = 1998 FC₁₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20127984	ω	269.32800	+0.97873790	+0.19788740		
<i>a</i>	2.8836056	Ω	79.25754	−0.15946663	+0.89959471		
<i>e</i>	0.1004876	<i>i</i>	3.14897	−0.12900590	+0.38931983		
<i>P</i>	4.90	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1993 03 17	809	0.1+	0.8+	1998 03 22	704	0.0	0.5−	1998 04 20	704	1.5−	0.8+
1993 03 18	809	0.3+	0.4−	1998 03 22	704	0.4−	1.6−	1998 04 20	704	(5.7−	1.1+)
1993 03 23	809	0.0	0.4+	1998 03 25	704	0.4+	0.4+	1998 04 22	704	(2.5−	0.6+)
1993 03 23	691	0.5−	0.0	1998 03 25	704	0.3+	0.6−	1998 04 22	704	0.3−	0.7−
1993 03 23	691	0.4−	0.3−	1998 03 25	704	0.9−	1.2+	1998 04 22	704	0.8−	0.1−
1993 03 23	691	0.1−	0.4−	1998 03 25	704	(2.5−	0.2+)	1998 04 22	704	1.0+	0.6+
1993 04 16	413	0.7+	0.1+	1998 04 20	704	0.9+	0.6−				
1998 03 22	704	1.2+	0.6+	1998 04 20	704	0.1+	0.2+				

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1993 FY₁₂ = 1998 FS₇₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	358.21150		(2000.0)		P		Q		
<i>n</i>	0.20511943	ω	66.96747		−0.61642413		+0.78622545		
<i>a</i>	2.8475073	Ω	164.73709		−0.76913997		−0.58944348		
<i>e</i>	0.0751503	<i>i</i>	9.45686		−0.16865644		−0.18548835		
<i>P</i>	4.81	<i>H</i>	13.0		<i>G</i>	0.15	<i>U</i>	4	
Residuals in seconds of arc									
1993 03 17	809	(4.2− 1.5+)	1998 03 25	704	(2.0− 2.1+)	1998 04 24	704	0.9− 0.4+	
1993 03 17	809	0.8+ 1.4+	1998 03 25	704	(1.8− 4.5+)	1998 05 16	704	0.3+ 0.2+	
1993 03 18	809	(3.6− 1.3+)	1998 04 04	699	0.1+ 0.4−	1998 05 16	704	0.6+ 0.2−	
1993 03 23	809	0.3− 0.9−	1998 04 04	699	0.5+ 0.1+	1998 05 16	704	0.6− 0.8−	
1993 04 16	413	0.5− 0.8−	1998 04 04	699	0.3+ 0.2−	1998 05 16	704	0.2− 0.9−	
1998 03 24	704	0.7+ 0.3−	1998 04 23	704	0.3− 0.0	1998 05 16	704	1.4− 1.3−	
1998 03 24	704	0.3+ 0.7+	1998 04 23	704	0.9+ 1.4+	1998 05 23	699	0.1+ 0.7+	
1998 03 24	704	0.3+ 0.1+	1998 04 23	704	0.2+ 0.3−	1998 05 23	699	0.1+ 0.1+	
1998 03 24	704	0.3+ 0.3+	1998 04 23	704	0.4+ 0.1−	1998 05 23	699	0.3+ 0.6+	
1998 03 24	704	0.3+ 0.1+	1998 04 23	704	0.3+ 0.7+	1998 05 24	699	0.3+ 0.5−	
1998 03 25	704	0.8+ 0.8−	1998 04 24	704	0.4− 0.1−	1998 05 24	699	0.2+ 0.5−	
1998 03 25	704	1.9− 0.2−	1998 04 24	704	0.3+ 0.9+	1998 05 24	699	0.4+ 0.5+	
1998 03 25	704	1.6− 0.8−	1998 04 24	704	0.7− 0.6+				

1993 FA₁₃ = 1996 XU₂₇ = 1998 HA₆₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	222.30875		(2000.0)			P		Q		
n	0.20243280	ω	192.12214			+0.99894382		-0.04559922		
a	2.8726461	Ω	170.48598			+0.04449559		+0.92931592		
e	0.0447876	i	1.96008			+0.01146266		+0.36645960		
P	4.87	H	13.0		G	0.15		U	4	
Residuals in seconds of arc										
1993 03 21	809	0.2- 0.2+	1996 12 15	691	0.1- 0.1+	1998 04 22	704	0.5+ 0.3-		
1993 03 22	809	0.8+ 0.4-	1996 12 15	691	0.2- 0.1+	1998 04 22	704	0.8+ 0.7-		
1993 03 26	809	0.6- 0.0	1998 04 21	704	0.3- 0.2+	1998 04 22	704	1.1+ 0.0		
1993 03 27	809	0.1+ 0.2+	1998 04 21	704	0.2- 1.1+	1998 05 16	704	0.4- 1.8-		
1993 04 18	413	0.6- 1.4-	1998 04 21	704	0.3- 0.4+	1998 05 16	704	1.0- 0.5-		
1996 12 11	691	0.0 0.0	1998 04 21	704	0.2- 0.8+	1998 05 16	704	1.0- 0.7+		
1996 12 11	691	0.3+ 0.3-	1998 04 21	704	0.3- 1.2+	1998 05 16	704	(0.5- 2.5-)		
1996 12 11	691	0.2+ 0.0	1998 04 22	704	0.5+ 0.2+					
1996 12 15	691	0.2- 0.1+	1998 04 22	704	0.9+ 0.1-					

1993 FH₁₉ = 1998 KP₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	147.87974		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$				
n	0.21493701	ω	348.14958		+0.07098259		-0.99055392				
a	2.7601239	Ω	97.69778		+0.92456664		+0.02119557				
e	0.0959644	i	6.79912		+0.37435010		+0.13547577				
P	4.59	H	14.5		G	0.15	U	6			
Residuals in seconds of arc											
1993 03 17	809	0.3-	1.0+	1998 05 22	704	0.8+	0.7-	1998 05 24	704	0.3+	0.6-
1993 03 18	809	0.1+	0.3-	1998 05 22	704	0.2-	0.2+	1998 05 24	704	0.6-	0.9+
1993 03 23	809	0.4+	0.1-	1998 05 22	704	1.4-	1.1-	1998 05 24	704	1.1-	0.6+
1993 04 16	413	0.2-	0.7-	1998 05 24	704	1.2+	0.7+	1998 05 24	704	2.0-	0.2-
1998 05 22	704	1.3+	0.2-	1998 05 24	704	1.3+	0.6-				
1998 05 22	704	0.3-	1.2+	1998 05 24	704	0.6+	0.2-				

1993 FQ₂₄ = 1985 QB₁ = 1998 HM₇₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	244.10605		(2000.0)		P		Q	
n	0.20944607	ω	151.78708		+0.99220095		+0.11364649	
a	2.8081561	Ω	201.86703		-0.12343958		+0.95292404	
e	0.1229763	i	7.90174		+0.01731873		+0.28110540	
P	4.71	H	13.5		G	0.15	U	4
Residuals in seconds of arc								
1985 08 16	675	0.8- 0.2-	1993 03 26	809	0.5- 0.3-	1998 04 22	704	1.0+ 0.4+
1985 08 16	675	0.8+ 0.2+	1998 04 21	704	0.4+ 0.5+	1998 04 22	704	0.4+ 0.6+
1985 08 17	675(16.8+ 1.6-)		1998 04 21	704	0.7- 0.0	1998 04 22	704	0.1- 0.1+
1985 08 17	675(20.3+ 0.6+)		1998 04 21	704	0.4+ 1.2-	1998 04 22	704	0.2+ 0.3+
1993 03 21	809	0.1+ 0.3+	1998 04 21	704	0.0 0.1+	1998 04 22	704	0.8- 1.2-
1993 03 22	809	0.4+ 0.0	1998 04 21	704	0.8- 0.5+			

1993 FZ₂₆ = 1998 KZ₁₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	294.06136		(2000.0)		P		Q				
n	0.21240812	ω	88.63252		+0.67225551		+0.73905642				
a	2.7819884	Ω	223.71364		-0.70167446		+0.61746060				
e	0.0592724	i	3.58589		-0.23606245		+0.26932880				
P	4.64	H	13.5		G	0.15	U	6			
Residuals in seconds of arc											
1993 03 21	809	0.0	0.0	1998 05 22	704	0.4+	1.4-	1998 05 24	704	0.4+	0.9-
1993 03 22	809	0.3+	0.3-	1998 05 22	704	0.2+	0.2-	1998 05 24	704	0.5+	0.1-
1993 03 26	809	0.4-	0.1+	1998 05 22	704	0.1+	1.7+	1998 05 24	704	1.0-	1.1+
1993 04 18	413	0.2+	0.2+	1998 05 22	704	(4.5- 1.2-)		1998 05 24	704	1.6-	1.5+
1998 05 22	704	0.6+	0.7-	1998 05 24	704	0.5+	0.9-				

1993 FG₃₃ = 1998 HZ₆₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	162.24258		(2000.0)		P		Q				
n	0.20433427	ω	322.99586		+0.48270075		−0.87433887				
a	2.8547971	Ω	98.09181		+0.81519407		+0.42756535				
e	0.0245070	i	2.91304		+0.32009156		+0.22960707				
P	4.82	H	14.0		G	0.15	U	7			
Residuals in seconds of arc											
1993 03 19	809	0.7+	0.2+	1998 04 21	704	1.4+	0.4+	1998 04 22	704	1.2−	0.7−
1993 03 20	809	0.0	0.6+	1998 04 21	704	1.4−	0.3+	1998 04 22	704	0.0	0.3+
1993 03 24	809	0.1−	1.8−	1998 04 21	704	1.9+	0.7+	1998 04 22	704	1.0+	0.9−
1993 04 18	413	0.5−	1.3+	1998 04 21	704	1.0+	0.6−	1998 04 22	704	3.4−	0.6+
1998 04 21	704	0.2−	0.8+	1998 04 22	704	0.9+	1.0−				

1993 FR₃₄ = 1972 YL = 1976 SK₄ = 1978 EL₁ = 1981 UW₁₆ = 1998 HY₆₃

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Epoch 1998 July 6.0 TT = JDT 2451000.5

M	131.01473		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$				
n	0.20520591	ω	283.65621		+0.14499911		−0.98909150				
a	2.8467073	Ω	157.95603		+0.93241368		+0.12782244				
e	0.1247965	i	3.96427		+0.33102868		+0.07320816				
P	4.80	H	13.0		G	0.15	U	2			
Residuals in seconds of arc											
1972 12 29	095	0.3−	0.3−	1993 03 24	809	1.4−	0.1+	1998 04 22	704	0.1−	0.3−
1976 09 24	095	0.8−	0.2−	1993 04 21	413	(9.9−	4.7+)	1998 04 22	704	0.0	0.3+
1976 09 29	095	2.0+	3.0−	1998 04 21	704	0.0	0.5−	1998 04 22	704	0.1+	0.2+
1978 03 05	095	0.8+	0.6−	1998 04 21	704	0.0	0.0	1998 04 22	704	0.7+	1.0−
1981 10 24	095	0.1−	0.1−	1998 04 21	704	0.2−	0.4−	1998 04 22	704	0.5+	0.3+
1993 03 19	809	0.1−	0.4−	1998 04 21	704	0.4−	0.3−				
1993 03 20	809	0.9−	0.6−	1998 04 21	704	0.2+	0.7−				

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1993 FB₃₅ = 1998 FY₁₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19708866	ω	9.78416	−0.82234845	−0.56850884		
<i>a</i>	2.9243429	Ω	135.54303	+0.51976281	−0.76720908		
<i>e</i>	0.3396316	<i>i</i>	1.90266	+0.23149438	−0.29696454		
<i>P</i>	5.00	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1993 03 19	809	0.6+	0.7−	1998 03 20	704	0.6+	1.3+
1993 03 20	809	0.1−	0.4−	1998 03 20	704	0.2−	0.4−
1993 03 24	809	1.0−	0.6+	1998 03 22	704	1.7+	0.4+
1993 04 18	413	0.5+	0.5+	1998 03 22	704	1.4−	0.2−
1998 03 20	704	0.2−	0.7+	1998 03 22	704	(1.4+ 2.4+)	1998 03 25 704 0.9− 0.9−
1998 03 20	704	0.2+	1.5+	1998 03 22	704	1.4+	0.6+

1993 FF₃₅ = 1998 HP₅₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19740356	ω	350.02449	−0.52092751	−0.85298761		
<i>a</i>	2.9212321	Ω	131.36189	+0.78610371	−0.49416254		
<i>e</i>	0.0940328	<i>i</i>	2.47047	+0.33267925	−0.16797475		
<i>P</i>	4.99	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1993 03 19	809	1.4+	0.8−	1998 03 25	704	0.8+	0.7−
1993 03 20	809	0.2+	0.0	1998 03 25	704	0.1+	0.8−
1993 03 24	809	0.2−	0.1−	1998 03 25	704	0.3+	0.2−
1993 04 18	413	1.7−	0.3+	1998 03 25	704	0.0	0.1−
1998 03 20	704	0.7+	0.4+	1998 04 19	704	0.1+	0.2−
1998 03 20	704	1.2−	0.4+	1998 04 19	704	0.2−	0.0
1998 03 20	704	0.7−	0.7+	1998 04 19	704	1.2−	0.6−
1998 03 20	704	0.8−	0.2+	1998 04 19	704	1.0+	0.6+
1998 03 20	704	0.1−	0.5+	1998 04 22	704	0.3+	0.6+
1998 03 25	704	0.1+	0.1+	1998 04 22	704	0.0	0.8+

1993 FA₃₇ = 1998 KW₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22805566	ω	283.52465	+0.39998724	−0.91571157		
<i>a</i>	2.6532336	Ω	142.82331	+0.86361113	+0.36249642		
<i>e</i>	0.1562724	<i>i</i>	3.65330	+0.30689742	+0.17340320		
<i>P</i>	4.32	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1993 03 19	809	0.1+	0.0	1998 05 22	704	0.0	0.6+
1993 03 20	809	0.3+	0.0	1998 05 22	704	2.5−	1.1−
1993 03 24	809	0.5−	0.1+	1998 05 22	704	0.8−	0.4+
1993 04 21	413	0.1+	0.1−	1998 05 22	704	1.9+	1.5−

1993 FN₄₀ = 1975 VJ₄ = 1998 FR₁₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19613736	ω	269.87938	+0.74520242	+0.66586686		
<i>a</i>	2.9337910	Ω	48.37161	−0.59106784	+0.68454669		
<i>e</i>	0.0834106	<i>i</i>	2.75917	−0.30872667	+0.29667686		
<i>P</i>	5.03	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1975 11 02	095	0.5+	1.2−	1998 02 25	566	0.1+	0.6+
1993 03 19	809	0.4+	0.6+	1998 03 20	704	(2.1− 3.0+)	1998 04 19 704 0.4− 1.1−
1993 03 20	809	0.5+	0.2−	1998 03 20	704	0.6−	1.3+
1993 03 24	809	1.0+	1.1+	1998 03 20	704	(0.9− 2.3+)	1998 04 20 704 0.2− 0.6−
1993 04 21	413	0.3−	2.0+	1998 03 22	704	0.3+	0.2−

1998 01 31	910	0.3+	0.5+	1998 03 22	704	0.4−	0.6−	1998 04 20	704	0.1+	0.1−
1998 01 31	910	0.8+	0.4+	1998 03 22	704	0.3+	0.6−	1998 04 20	704	0.2−	0.9−
1998 01 31	910	0.5+	0.8+	1998 03 22	704	0.7+	1.8−	1998 05 02	699	1.2−	0.2−
1998 02 25	566	0.2+	0.0	1998 04 19	704	0.2−	0.7−	1998 05 02	699	0.2−	0.6+
1998 02 25	566	0.1+	0.4+	1998 04 19	704	0.6−	0.3−	1998 05 02	699	1.7−	0.4−

1993 FV₈₀ = 1998 HT₁₄₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22459177	ω	282.10464	+0.84548310	+0.53302314		
<i>a</i>	2.6804446	Ω	45.69578	−0.47069357	+0.77246629		
<i>e</i>	0.1813088	<i>i</i>	2.58858	−0.25220208	+0.34522769		
<i>P</i>	4.39	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1993 03 18	809	2.1+	0.9+	1998 04 25	809	0.3−	0.6−
1993 03 23	809	1.3+	0.9+	1998 04 25	809	0.6−	1.0−
1993 03 23	691	0.9−	0.4−	1998 04 25	809	0.3−	0.3−
1993 03 23	691	0.9−	0.1−	1998 04 28	809	0.9+	0.2+
1993 03 23	691	0.7−	0.1−	1998 04 28	809	0.2+	0.2+
1993 04 24	691	0.4−	0.6−	1998 04 28	809	0.4+	1.3+
1993 04 24	691	0.1−	0.5−	1998 05 22	704	0.3+	0.2−
1993 04 24	691	0.5−	0.3−	1998 05 22	704	0.9−	1.3+

1993 HZ₅ = 1998 KW₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.39106080	ω	68.01050	−0.63259826	−0.65694919		
<i>a</i>	1.8519952	Ω	68.14309	+0.43995440	−0.74067767		
<i>e</i>	0.1019596	<i>i</i>	26.22741	+0.63738495	−0.14076348		
<i>P</i>	2.52	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1993 04 19	675	0.7−	0.5−	1998 04 28	704	0.6−	0.3−
1993 04 19	675	0.6−	0.8+	1998 04 28	704	0.5+	0.1−
1993 05 21	675	0.1−	1.0−	1998 05 23	704	0.0	0.1+
1993 05 21	675	0.5−	0.7−	1998 05 23	704	0.4−	0.6+
1993 05 24	675	0.1+	0.2−	1998 05 23	704	0.4+	0.1−
1993 05 26	675	0.8+	0.5+	1998 05 23	704	0.4−	0.5−
1998 04 28	704	0.2−	0.6+	1998 05 23	704	0.2+	0.5−
1998 04 28	704	0.2+	0.3+	1998 05 25	704	0.1−	1.2+
1998 04 28	704	0.4+	0.4−	1998 05 25	704	0.5−	0.7+

1993 TA₁₅ = 1998 FJ₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	89.40675	ω	75.88624	−0.28709473	−0.95683060		
<i>a</i>	2.1901269	Ω	30.91396	+0.84133653	−0.27448424		
<i>e</i>	0.1159387	<i>i</i>	5.05829	+0.45796230	−0.09556990		
<i>P</i>	3.24	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1993 10 09	809	0.5−	0.7+	1998 03 20	704	1.0−	0.1−
1993 10 09	809	0.2−	0.1+	1998 03 20	704	1.0−	0.2−
1993 10 09	809	0.2−	0.3−	1998 03 20	704	0.7+	1.0+
1993 10 11	809	0.9+	1.1+	1998 03 20	704	0.5−	0.4−
1993 10 11	809	0.1+	0.7+	1998 03 22	704	1.8−	0.1−
1993 10 11	809	0.4−	1.9+	1998 03 22	704	(2.2− 0.2−)	1998 03 26 704 0.6− 0.4+
1993 10 20	809	0.3−	1.3−	1998 03 22	704	(2.7− 0.6+)	1998 03 26 704 0.1+ 1.3+
1993 10 20	809	0.5+	0.8−	1998 03 22	704	1.7−	0.5+
1993 10 20	809	0.5−	0.9−	1998 03 22	704	(2.6− 1.3+)	1998 04 24 327 0.3+ 0.1−
1998 02 23	566	0.9+	0.6−	1998 03 24	704	0.4+	0.3+
1998 02 23	566	0.7+	0.6−	1998 03 24	704	0.5+	0.1−
1998 02 23	566	0.5+	0.7−	1998 03 24	704	0.6+	0.3+
1998 03 20	704	0.3−	1.7−	1998 03 24	704	0.8+	0.6−

1994 AN₂ = 1998 FN₁₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	12.42098		(2000.0)	P		Q	
<i>n</i>	0.28252706	ω	270.56252	−0.80082296	+0.59159509		
<i>a</i>	2.3001845	Ω	305.71151	−0.49359578	−0.74015419		
<i>e</i>	0.0639911	<i>i</i>	6.59553	−0.33918401	−0.31966704		
<i>P</i>	3.49	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 01 07	691	0.3−	0.4+	1994 01 15	411	0.4+	0.8+	1998 03 31	704	0.2+	1.3−
1994 01 07	691	0.8−	0.2−	1994 01 19	411	0.7−	0.1−	1998 03 31	704	0.5+	0.3−
1994 01 07	691	1.1−	0.4+	1994 01 19	411	0.2−	0.8−	1998 03 31	704	0.2−	1.1−
1994 01 09	411	1.0+	0.6+	1994 01 19	411	0.1+	1.6−	1998 03 31	704	0.4−	1.3+
1994 01 09	411	1.1+	0.3+	1994 01 21	411	0.0	0.5−	1998 03 31	704	0.4−	1.0+
1994 01 14	411	0.9−	0.3−	1994 01 21	411	0.2+	0.4−	1998 04 01	704	0.1+	0.8−
1994 01 14	411	0.6+	0.3+	1994 01 21	411	0.6−	0.4+	1998 04 01	704	0.2−	0.3+
1994 01 14	411	0.8+	0.4−	1994 02 10	411	1.0−	0.2−	1998 04 01	704	0.2−	0.8−
1994 01 15	411	0.6+	1.2+	1994 02 10	411	0.5−	0.9+	1998 04 01	704	0.5+	1.1+
1994 01 15	411	0.7+	0.5−	1994 02 10	411	0.4+	0.2−	1998 04 01	704	0.1+	0.8+

1994 AY₁₀ = 1998 HG₈₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	335.16412		(2000.0)	P		Q	
<i>n</i>	0.29146809	ω	234.55426	+0.17224136	+0.98428250		
<i>a</i>	2.2529006	Ω	45.41454	−0.88509857	+0.17201895		
<i>e</i>	0.2066908	<i>i</i>	3.13892	−0.43235800	+0.03996788		
<i>P</i>	3.38	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1994 01 08	691	0.3−	0.4+	1994 01 16	691	0.1+	0.8−	1998 04 22	704	0.0	0.2−
1994 01 08	691	0.5−	0.4+	1998 04 21	704	0.5+	0.3+	1998 04 22	704	1.0+	0.5−
1994 01 08	691	0.4−	0.4+	1998 04 21	704	0.4−	0.4+	1998 04 22	704	0.5+	0.3−
1994 01 11	691	0.2−	0.2−	1998 04 21	704	0.1−	0.6−	1998 05 16	704	0.3−	0.8−
1994 01 11	691	0.0	0.3−	1998 04 21	704	0.1−	0.4+	1998 05 16	704	0.1+	0.1+
1994 01 11	691	0.5+	0.0	1998 04 21	704	0.8−	0.2+	1998 05 16	704	(0.2+ 2.8+)	
1994 01 16	691	0.2+	0.1−	1998 04 22	704	0.2−	0.1+	1998 05 16	704	0.3+	1.2+
1994 01 16	691	0.6+	0.0	1998 04 22	704	0.4−	0.0	1998 05 16	704	0.3−	0.5−

1994 BN₃ = 1998 EW₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	96.19066		(2000.0)	P		Q	
<i>n</i>	0.26063335	ω	270.38922	+0.25270735	−0.96746528		
<i>a</i>	2.4272586	Ω	164.95589	+0.90541178	+0.23199882		
<i>e</i>	0.1689272	<i>i</i>	2.70388	+0.34112829	+0.10093308		
<i>P</i>	3.78	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1994 01 16	010	0.8−	0.1+	1994 01 30	010	0.3−	0.1+	1998 03 04	809	0.1+	0.8+
1994 01 16	010	0.4+	0.0	1994 01 30	010	0.3+	0.1−	1998 03 04	809	0.2+	0.5−
1994 01 17	010	0.4+	0.4−	1998 03 03	809	0.3+	0.8+	1998 03 04	809	0.6−	0.0
1994 01 17	010	0.1+	0.4+	1998 03 03	809	0.2−	1.1−				
1994 01 17	010	0.1−	0.1−	1998 03 03	809	0.2+	0.1+				

1994 BP₃ = 1977 DM₂ = 1998 FY₈₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	230.28182		(2000.0)	P		Q	
<i>n</i>	0.28378646	ω	195.67892	+0.88975724	+0.43516713		
<i>a</i>	2.2933743	Ω	137.65040	−0.39371816	+0.88436289		
<i>e</i>	0.2492984	<i>i</i>	11.79495	−0.23090705	+0.16891375		
<i>P</i>	3.47	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 02 18	381	0.5−	1.3−	1994 01 17	010	0.1+	1.2−	1998 03 24	704	0.0	1.3−
1977 02 18	381	0.6+	0.1−	1994 01 30	010	(8.1+ 4.1−)		1998 03 24	704	0.4−	0.0

1977 02 19	381	0.2−	1.0−	1994 01 30	010	(9.6+ 5.9−)		1998 03 25	704	0.3−	0.4+
1977 02 19	381	0.4−	1.2−	1994 01 31	010	0.5−	1.1+	1998 03 25	704	0.3+	1.2+
1994 01 16	010	1.1+	0.7+	1994 01 31	010	0.4−	2.3+	1998 03 25	704	1.1+	0.1−
1994 01 16	010	0.4−	0.6−	1994 01 31	010	0.3+	1.1+	1998 03 25	704	0.1−	0.5+
1994 01 17	010	0.0	1.4−	1998 03 24	704	0.5−	0.5−	1998 03 25	704	0.7+	1.5+
1994 01 17	010	0.1−	0.5−	1998 03 24	704	0.5−	0.6+				

1994 CO₁ = 1998 KN₃₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	17.87144		(2000.0)	P		Q	
<i>n</i>	0.28498007	ω	53.63553	−0.57089243	+0.82102313		
<i>a</i>	2.2869661	Ω	181.55496	−0.77183462	−0.53738975		
<i>e</i>	0.1111638	<i>i</i>	3.57413	−0.27991633	−0.19269999		
<i>P</i>	3.46	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1994 02 10	595	0.4+	0.5+	1994 02 15	675	0.4−	0.6−	1998 05 22	704	0.2−	0.3−
1994 02 10	595	0.8−	0.3+	1994 02 15	595	0.5−	0.2+	1998 05 22	704	0.8−	1.3+
1994 02 10	595	0.1+	0.4+	1994 02 15	595	0.6−	0.3+	1998 05 24	704	0.7+	0.6+
1994 02 10	595	0.1+	0.6+	1994 03 05	595	0.1+	0.2+	1998 05 24	704	0.0	0.8−
1994 02 11	595	0.1+	0.5+	1994 03 05	595	0.2+	0.4−	1998 05 24	704	0.6−	0.3−
1994 02 12	675	0.9+	1.1−	1998 05 22	704	0.2−	0.7−	1998 05 24	704	0.1+	0.1+
1994 02 12	675	0.1+	0.6−	1998 05 22	704	0.1+	0.5+				
1994 02 15	675	0.2+	0.2−	1998 05 22	704	0.9+	0.4−				

1994 CV₉ = 1998 JV₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	348.90639		(2000.0)	P		Q	
<i>n</i>	0.27824110	ω	121.41750	−0.10953671	+0.99147132		
<i>a</i>	2.3237453	Ω	142.09357	−0.94652661	−0.08235462		
<i>e</i>	0.1146842	<i>i</i>	6.59996	−0.30346184	−0.10100664		
<i>P</i>	3.54	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1994 02 07	809	1.0+	0.9−	1994 02 16	691	0.3+	0.1+	1998 05 01	699	0.0	0.1−
1994 02 07	809	0.6−	0.3−	1994 02 16	691	0.4+	0.1+	1998 05 01	699	0.2−	0.2−
1994 02 07	809	1.3−	1.5−	1994 02 16	691	0.4+	0.2+	1998 05 05	699	0.2−	0.4+
1994 02 09	809	0.1−	1.3+	1998 04 23	704	0.0	0.3−	1998 05 05	699	0.5+	0.0
1994 02 09	809	0.3−	1.8+	1998 04 23	704	0.5−	0.8−	1998 05 05	699	1.0+	0.6+
1994 02 09	809	0.2+	0.7+	1998 04 23	704	0.4−	1.2+	1998 05 25	699	0.2−	0.1+
1994 02 12	809	0.1+	0.4−	1998 04 23	704	0.0	0.0	1998 05 25	699	0.4−	0.9−
1994 02 12	809	0.6−	0.4+	1998 04 24	704	0.2−	0.5−	1998 05 25	699	0.2−	0.1−
1994 02 12	809	0.2−	0.5+	1998 04 24	704	0.1+	0.1+	1998 06 02	699	0.2+	0.4−
1994 02 15	675	(2.3+ 2.3−)		1998 04 24	704	0.2−	0.6+	1998 06 02	699	0.3−	0.9+
1994 02 15	675	0.6+	1.8−	1998 05 01	699	0.8+	0.7−	1998 06 02	699	0.1+	0.2+

1994 CX₁₂ = 1976 GK₇ = 1987 HR₁ = 1998 HG₅₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	44.68506		(2000.0)	P		Q	
<i>n</i>	0.26941335	ω	145.33892	−0.99468983	+0.09250376		
<i>a</i>	2.3742328	Ω	40.04370	−0.10291165	−0.88907229		
<i>e</i>	0.0653760	<i>i</i>	4.02087	−0.00115241	−0.44832300		
<i>P</i>	3.66	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1976 04 04	095	(0.8+ 6.6−)		1994 02 12	809	0.8−	1.5+	1998 04 30	699	0.0	0.2+
1987 04 27	046	(0.2+ 3.4−)		1998 04 21	704	0.2−	0.6+	1998 04 30	699	0.1+	0.6−
1987 04 27	046	0.8−	1.8−	1998 04 21	704	(4.3+ 0.6+)		1998 04 30	699	0.2+	0.2+
1994 02 07	809	1.4+	1.0−	1998 04 21	704	(5.9− 2.3−)		1998 05 01	699	0.3−	0.2−
1994 02 07	809	1.5+	0.9−	1998 04 21	704	0.5+	0.7+	1998 05 01	699	0.3+	0.1−
1994 02 07	809	1.3+	0.8−	1998 04 21	704	0.2−	1.6+	1998 05 01	699	0.0	0.1−
1994 02 09	809	0.9−	0.2−	1998 04 22	704	0.1−	0.4+	1998 05 16	704	0.2+	0.0
1994 02 09	809	1.7−	0.2+	1998 04 22	704	1.7+	1.3−	1998 05 16	704	0.2−	1.5+
1994 02 09	809	1.0−	0.1+	1998 04 22	704	1.3−	1.1−	1998 05 16	704	1.4+	0.4−

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1994 02 12	809	0.7+	0.9+	1998 04 22	704	0.2-	0.8+	1998 05 16	704	0.2+	1.4-
1994 02 12	809	0.3-	0.3+	1998 04 22	704	0.3-	0.1-	1998 05 16	704	1.0-	1.0+

1994 CL₁₈ = 1994 EX₅ = 1998 HH₁₁₀Id. S. Nakano (d, *MPC* 27543), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	186.20554		(2000.0)		P		Q
n	0.27308827	ω	282.25422		+0.74129052		-0.66250775
a	2.3528849	Ω	119.34546		+0.65374831		+0.67640516
e	0.0791477	i	7.08884		+0.15199183		+0.32180669
P	3.61	H	15.0	G	0.15	U	5

Residuals in seconds of arc

1994 02 08	809	0.5+	1.0-	1994 03 09	010	1.2+	0.6+	1998 04 23	704	3.7-	0.2+
1994 02 08	809	0.1+	0.1+	1994 03 09	010	0.4-	2.2+	1998 04 23	704	0.1+	0.5-
1994 02 08	809	1.2-	0.9+	1994 03 10	010	0.3+	0.9-	1998 04 23	704	0.3+	1.2-
1994 02 10	809	0.5+	0.1-	1994 03 10	010	1.5-	0.9-	1998 04 24	704	1.1+	0.6-
1994 02 10	809	0.2+	0.2-	1994 03 10	010	1.2-	1.5-	1998 04 24	704	0.9-	0.4-
1994 02 10	809	0.1-	0.2+	1998 04 23	704	0.4+	0.4+	1998 04 24	704	0.7+	2.1+
1994 03 09	010	1.6+	0.6+	1998 04 23	704	2.2+	0.7-	1998 04 24	704	0.2-	0.8+

1994 EV₆ = 1998 HV₁₃₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	68.51079		(2000.0)		P		Q
n	0.25417388	ω	69.83999		-0.68354531		-0.72514225
a	2.4682100	Ω	63.56793		+0.63014556		-0.64384146
e	0.0922789	i	5.33595		+0.36835091		-0.24420667
P	3.88	H	15.0	G	0.15	U	5

Residuals in seconds of arc

1994 02 10	809	0.6-	1.0+	1994 03 09	010	(0.2-	2.9-)	1998 04 19	704	0.2+	0.3-
1994 02 10	809	0.3-	0.7+	1994 03 10	010	0.2-	1.7-	1998 04 19	704	0.7+	0.2-
1994 02 10	809	0.7-	0.9+	1994 03 10	010	0.7-	0.8-	1998 04 19	704	1.1-	0.3+
1994 02 13	809	1.3+	0.0	1994 03 10	010	0.3+	1.2-	1998 04 20	704	0.1-	0.2-
1994 02 13	809	0.5+	0.4+	1998 04 04	699	0.1-	0.4-	1998 04 20	704	0.3+	1.6+
1994 02 13	809	0.2+	0.3+	1998 04 04	699	0.5-	0.7-	1998 04 20	704	1.3-	0.5+
1994 03 09	010	(0.2+	2.4-)	1998 04 04	699	0.0	0.0	1998 04 20	704	0.8+	0.7+
1994 03 09	010	(0.1+	2.8-)	1998 04 19	704	0.6+	0.5-	1998 04 20	704	0.8+	0.1+

1994 FC = 1998 HP₁₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	111.88621		(2000.0)		P		Q
n	0.24605420	ω	34.98225		+0.40613191		-0.90517843
a	2.5222155	Ω	31.60128		+0.77436675		+0.26808034
e	0.2592588	i	13.83855		+0.48519379		+0.32982562
P	4.01	H	13.5	G	0.15	U	5

Residuals in seconds of arc

1994 03 11	413	0.6-	0.3-	1998 04 19	704	0.3+	1.3-	1998 04 20	704	0.8+	2.4+
1994 03 11	413	1.6+	0.7+	1998 04 19	704	0.3+	1.3+	1998 04 20	704	0.4+	0.8+
1994 03 19	413	0.2+	0.0	1998 04 19	704	0.1+	0.6-	1998 04 20	704	0.3-	0.9-
1994 03 19	413	1.5-	0.6-	1998 04 19	704	0.1+	2.2-	1998 04 20	704	0.7-	1.2+
1994 05 04	413	0.1+	0.1-	1998 04 19	704	0.0	0.3+				
1994 05 04	413	0.1-	0.3-	1998 04 20	704	0.5-	0.3-				

1994 GE = 1998 KZ₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	63.72043		(2000.0)		P		Q
n	0.26251668	ω	114.49350		-0.99122008		+0.06404262
a	2.4156358	Ω	69.34925		-0.10849491		-0.89400355
e	0.0687897	i	7.10110		+0.07557516		-0.44345934
P	3.75	H	15.0	G	0.15	U	5

Residuals in seconds of arc

1994 04 03	411	0.1-	0.2+	1994 04 14	411	0.5+	0.4+	1998 05 22	704	0.3+	0.6-
1994 04 03	411	0.6+	0.2+	1994 04 17	411	0.2+	0.6+	1998 05 22	704	0.9-	1.1-
1994 04 05	411	0.3-	0.0	1994 04 17	411	0.5-	0.2+	1998 05 24	704	1.2+	0.4+
1994 04 05	411	0.2-	0.1-	1994 04 17	411	0.1+	0.3-	1998 05 24	704	1.5+	0.6-
1994 04 05	411	0.1-	0.3-	1998 05 22	704	0.3+	0.1-	1998 05 24	704	0.7-	0.4+
1994 04 14	411	0.2+	0.1+	1998 05 22	704	0.2-	0.0	1998 05 24	704	0.1+	0.1-
1994 04 14	411	0.1-	1.0-	1998 05 22	704	0.4-	1.2+	1998 05 24	704	1.2-	0.4+

1994 GW₁₀ = 1990 FC = 1996 XE₃₆Id. G. V. Williams (*MPC* 28853, unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	74.22336		(2000.0)		P		Q
n	0.25910602	ω	97.44571		-0.92873448		-0.35130428
a	2.4367878	Ω	62.05046		+0.26461197		-0.85194130
e	0.1873784	i	7.70799		+0.25967820		-0.38830571
P	3.80	H	14.5	G	0.15	U	2

Residuals in seconds of arc

1990 03 21	402	1.4-	0.9+	1996 12 13	691	0.5-	0.1+	1998 05 22	704	0.2-	0.1-
1990 03 21	402	1.0+	0.4-	1996 12 13	691	0.6-	0.1-	1998 05 22	704	0.0	0.2+
1990 03 22	402	1.1+	1.2+	1996 12 13	691	0.4-	0.0	1998 05 24	704	0.3+	0.1+
1990 03 22	402	1.3+	1.1+	1996 12 14	369	0.5+	0.2+	1998 05 24	704	0.5+	0.2+
1990 03 26	402(39.4-	41.3-)		1996 12 14	369	0.6+	0.7+	1998 05 24	704	0.0	0.3-
1990 03 26	402(30.8-	38.8-)		1996 12 17	691	0.5-	0.1-	1998 05 24	704	0.5+	0.3-
1994 04 14	675	1.9-	1.4-	1996 12 17	691	0.4-	0.1-	1998 05 24	704	0.1-	0.3+
1994 04 14	675	0.1-	1.8-	1996 12 17	691	0.9+	0.1+	1998 05 24	426	0.0	0.1-
1994 04 15	675	1.6-	2.6-	1998 05 21	426	0.1-	0.1+	1998 05 24	426	0.2-	0.4-
1994 04 15	675	1.9-	0.6-	1998 05 21	426	0.0	0.4+	1998 05 25	426	0.2+	0.6-
1994 05 05	675	1.5+	0.8+	1998 05 22	704	1.0+	0.8+	1998 05 25	426	0.0	0.2-
1994 05 05	675	0.7+	1.4+	1998 05 22	704	0.1-	3.5+	1998 05 25	426	0.1+	0.2-

1994 JQ = 1998 HU₈₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	184.10624		(2000.0)		P		Q
n	0.24391369	ω	6.60327		+0.68666118		-0.72650514
a	2.5369501	Ω	40.03518		+0.66511162		+0.61326658
e	0.0510279	i	2.33476		+0.29346712		+0.30999093
P	4.04	H	15.0	G	0.15	U	5

Residuals in seconds of arc

1994 04 13	691	0.6-	0.1-	1994 05 11	589	0.4-	0.1+	1998 04 21	704	0.8-	0.0
1994 04 13	691	0.6-	0.2-	1994 05 14	589	0.6+	0.3-	1998 04 22	704	0.0	1.3+
1994 04 13	691	0.5-	0.3-	1994 05 14	589	0.9+	1.0-	1998 04 22	704	(2.3+	3.1+)
1994 05 10	589	0.3-	0.0	1994 05 15	589	1.2+	0.5-	1998 04 22	704	0.3+	0.0
1994 05 10	589	0.7-	0.4-	1994 05 15	589	1.0-	0.5+	1998 04 22	704	0.6+	0.8-
1994 05 10	589	0.8+	1.0+	1994 05 15	589	0.6+	0.1-	1998 04 22	704	0.6-	0.5-
1994 05 10	589	0.4+	0.7+	1998 04 21	704	0.2+	0.1+	1998 06 02	691	0.1-	0.1+
1994 05 11	589	0.4-	0.4-	1998 04 21	704	0.5+	0.2+	1998 06 02	691	0.2+	0.3-
1994 05 11	589	0.6-	0.7+	1998 04 21	704	0.2+	0.2+	1998 06 02	691	0.3-	0.1-
1994 05 11	589	0.3+	0.2-	1998 04 21	704	0.1-	0.2+				

1994 LC₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

M	293.65399		(2000.0)		P		Q
n	0.20846468	ω	316.21118		+0.87797013		+0.47518417
a	2.8169625	Ω	15.71285		-0.35861417		+0.73316372
e	0.5252191	i	12.37499		-0.31711879		+0.48648840
P	4.73	H	16.5	G	0.15	U	1

Residuals in seconds of arc

1994 06 15	413	(4.5-	1.4+)	1994 08 28	413	0.3+	0.6-	1994 10 09	675	0.8+	1.2-
1994 06 15	413	1.6-	1.0+	1994 08 28	413	0.3+	0.5-	1994 10 13	689	0.9-	0.1-
1994 06 17	413	0.1-	0.1-	1994 08 29	809	0.8+	0.4-	1994 10 13	608	0.2+	0.3+
1994 06 17	413	0.2-	0.1+	1994 08 29	809	0.4-	0.7-	1994 10 13	608	0.1+	0.2+

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1994 06 17	413	0.5−	0.1+	1994 08 31	809	0.1+	0.9−	1994 10 13	608	0.2+	0.6+
1994 06 18	413	1.1+	0.4+	1994 08 31	809	0.0	0.3−	1994 10 13	608	0.1+	0.4+
1994 06 18	413	0.4+	0.4+	1994 09 01	360	0.2−	0.9−	1994 10 14	360	0.4−	0.1+
1994 06 18	413	0.0	0.2+	1994 09 01	360	0.2−	0.6−	1994 10 14	360	0.2−	0.5+
1994 06 18	413	0.0	0.1+	1994 09 13	360	0.0	0.0	1994 10 14	360	0.3−	0.4+
1994 06 20	413	0.2+	0.1+	1994 09 13	360	0.0	0.1−	1994 10 28	608	0.9+	0.1+
1994 06 20	413	0.1−	0.1−	1994 09 17	413	0.6−	0.2+	1994 10 28	608	0.1−	0.2−
1994 06 20	413	0.1−	0.1−	1994 09 17	413	0.4−	0.1+	1994 10 29	658	0.1−	0.7−
1994 06 20	413	0.2−	0.1−	1994 09 18	413	0.9−	0.7+	1994 10 29	658	0.3−	0.6−
1994 06 20	413	0.2−	0.2+	1994 09 18	413	0.8−	0.7+	1994 10 29	658	0.3−	0.2−
1994 06 20	413	0.4−	0.2−	1994 09 25	360	0.5−	0.1−	1994 10 29	587	0.3−	0.1−
1994 07 25	413	0.3+	0.2+	1994 09 25	360	0.4−	0.2−	1994 10 29	587	0.5−	0.5−
1994 07 25	413	0.2+	0.3+	1994 10 02	474	0.3+	0.2−	1994 10 29	587	0.0	0.4+
1994 07 25	413	0.2+	0.2+	1994 10 02	474	0.2+	0.4+	1994 10 29	360	0.5+	0.2−
1994 07 25	413	0.0	0.2+	1994 10 03	658	0.1−	0.4+	1994 10 30	360	0.5+	0.1−
1994 07 25	413	0.0	0.2+	1994 10 03	658	0.2−	0.4+	1994 11 11	413	0.3−	0.0
1994 07 26	413	0.0	0.2+	1994 10 04	801	1.1+	0.1+	1994 11 11	413	0.4−	0.2−
1994 07 26	413	0.2−	0.1−	1994 10 04	658	0.3−	0.7+	1994 11 12	292	(3.0−	1.0+)
1994 08 15	413	0.0	0.5+	1994 10 04	658	0.2−	0.9+	1994 11 12	292	1.6−	0.1−
1994 08 15	413	0.1+	0.5+	1994 10 04	658	0.5−	0.6+	1994 11 24	360	0.2+	0.2−
1994 08 16	413	0.0	0.6+	1994 10 06	104	(1.2+	4.6+)	1994 11 24	360	0.1−	0.3+
1994 08 16	413	0.0	0.5+	1994 10 06	104	(0.8+	2.8+)	1998 05 02	696	1.1−	0.2+
1994 08 17	413	0.3+	0.2+	1994 10 06	104	0.3+	0.6+	1998 05 02	696	0.7−	0.3−
1994 08 17	413	0.3+	0.3+	1994 10 06	104	0.1−	0.8−	1998 05 02	696	0.0	0.1−
1994 08 26	413	0.1+	0.6−	1994 10 07	801	1.0+	0.3−	1998 05 19	696	0.3−	1.2−
1994 08 26	413	0.2+	0.5−	1994 10 07	675	1.5+	0.1+	1998 05 19	696	0.8−	1.1−
1994 08 27	413	0.2+	0.6−	1994 10 07	675	(3.8+	0.2+)	1998 05 19	696	0.4−	1.7−
1994 08 27	413	0.3+	0.6−	1994 10 09	675	1.8+	1.8−				

1994 PH₁ = 1985 PK₂ = 1985 QJ₆ = 1998 HY₁₀₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	322.30496		(2000.0)	P	Q
<i>n</i>	0.21688588	ω	160.79774	+0.44177249	+0.88506939
<i>a</i>	2.7435646	Ω	135.09649	−0.84787772	+0.46530406
<i>e</i>	0.3107711	<i>i</i>	11.98540	−0.29315600	−0.01201283
<i>P</i>	4.54	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	3

Residuals in seconds of arc

1985 08 13	095	0.2−	1.0+	1994 09 17	413	0.1+	0.3−	1998 04 24	704	0.7−	0.5−
1985 08 24	095	(3.9+	5.9−)	1994 09 17	413	0.1+	0.1−	1998 04 27	566	0.1+	0.4+
1994 08 14	413	0.5−	0.3+	1998 04 23	704	0.9−	0.5−	1998 04 27	566	0.3+	0.2+
1994 08 16	413	0.4+	0.0	1998 04 23	704	0.3+	0.1+	1998 04 27	566	0.3−	0.2+
1994 08 16	413	0.3+	0.0	1998 04 23	704	0.7−	0.1+	1998 05 16	704	0.2+	0.1+
1994 08 17	413	0.1+	0.5−	1998 04 23	704	0.8−	0.7+	1998 05 16	704	0.3+	0.4−
1994 08 17	413	0.2+	0.4−	1998 04 23	704	0.1+	0.2+	1998 05 16	704	1.6+	0.0
1994 08 26	413	0.0	0.0	1998 04 24	704	0.5+	0.2+	1998 05 16	704	1.2−	0.0
1994 08 26	413	0.0	0.1−	1998 04 24	704	0.6+	0.0	1998 05 16	704	0.3+	0.0
1994 08 28	413	0.3−	0.2+	1998 04 24	704	0.0	0.5−				
1994 08 28	413	0.3−	0.3+	1998 04 24	704	0.4+	0.1−				

1994 PK₁ = 1990 US₆ = 1998 JT₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	303.93564		(2000.0)	P	Q
<i>n</i>	0.22142196	ω	264.50735	+0.86167921	+0.42834668
<i>a</i>	2.7059655	Ω	69.88523	−0.26833604	+0.83969170
<i>e</i>	0.3297256	<i>i</i>	16.84325	−0.43070257	+0.33382176
<i>P</i>	4.45	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	3

Residuals in seconds of arc

1990 10 21	675	0.8+	0.8−	1998 04 23	704	0.3−	0.4+	1998 05 22	704	1.1−	0.6+
1990 10 21	675	0.2+	1.3−	1998 04 23	704	0.3+	0.3+	1998 05 22	704	0.8+	0.3−
1994 08 15	413	0.5+	1.1−	1998 04 23	704	1.1+	0.0	1998 05 22	704	1.0+	0.7+
1994 08 15	413	1.5+	0.0	1998 04 23	704	0.8+	0.3−	1998 05 22	704	0.6−	0.8+
1994 08 16	413	0.1−	0.1+	1998 04 23	704	0.1−	0.5−	1998 05 22	704	0.5−	0.0
1994 08 16	413	0.0	0.0	1998 04 24	704	0.2+	0.2−	1998 05 24	704	0.0	0.0
1994 08 17	413	0.2−	0.1+	1998 04 24	704	0.8−	0.1+	1998 05 24	704	0.8+	0.2+

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1994 08 17	413	0.2−	0.1+	1998 04 24	704	0.1−	0.2−	1998 05 24	704	0.9−	0.3−
1994 08 26	413	0.2−	0.4+	1998 05 01	699	1.0−	0.6+	1998 05 24	704	1.0+	0.7+
1994 08 26	413	0.2−	0.5+	1998 05 01	699	0.2+	0.4−	1998 05 24	704	1.5−	0.9−
1994 08 28	413	0.3−	0.2+	1998 05 01	699	0.5+	1.4−	1998 05 25	699	0.1−	0.1−
1994 08 28	413	0.2−	0.3+	1998 05 05	699	0.1−	1.0−	1998 05 25	699	0.0	0.2−
1994 09 17	413	0.2−	0.3−	1998 05 05	699	0.3−	0.8−	1998 05 25	699	0.1−	0.3+
1994 09 17	413	0.4−	0.6−	1998 05 05	699	0.3−	0.1−				

1994 PE₃ = 1998 KT₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	357.63010		(2000.0)	P	Q
<i>n</i>	0.21274248	ω	101.37166	−0.18106309	+0.98007783
<i>a</i>	2.7790727	Ω	157.68904	−0.96519857	−0.16115984
<i>e</i>	0.1476335	<i>i</i>	12.41704	−0.18870051	−0.11608168
<i>P</i>	4.63	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1994 08 10	809	1.7−	0.4−	1994 09 04	809	0.7+	0.0	1998 05 27	699	1.6+	1.0+
1994 08 10	809	2.2−	1.6−	1994 09 04	809	0.9+	1.9+	1998 05 27	699	0.3+	0.4−
1994 08 10	809	1.6−	1.5−	1994 09 04	809	1.1+	1.2+	1998 05 27	691	0.4−	0.4+
1994 08 11	809	1.4+	0.8+	1994 09 04	809	0.6+	1.4+	1998 05 27	691	0.4−	0.0
1994 08 11	809	1.8+	1.0+	1994 09 08	691	1.1−	1.7−	1998 05 27	691	0.5−	0.1−
1994 08 11	809	1.6+	1.1+	1994 09 08	691	0.9−	1.4−	1998 05 31	691	0.6−	0.0
1994 09 03	809	0.3−	0.1−	1994 09 08	691	1.1−	1.6−	1998 05 31	691	0.1+	0.7+
1994 09 03	809	0.6−	0.1+	1998 05 19	691	0.6−	0.1+	1998 05 31	691	0.6−	0.1+
1994 09 03	809	0.9−	0.7−	1998 05 19	691	1.0−	1.0−	1998 06 02	699	0.1+	0.0
1994 09 04	809	1.8+	1.4+	1998 05 19	691	0.7−	0.2+	1998 06 02	699	0.7+	0.8−
1994 09 04	809	0.5+	0.0	1998 05 27	699	0.7+	0.5+	1998 06 02	699	1.4+	0.7−

1994 PU₄ = 1998 HO₁

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	354.60538		(2000.0)	P	Q
<i>n</i>	0.19008742	ω	99.98852	−0.51912701	+0.85427261
<i>a</i>	2.9957148	Ω	138.70146	−0.79928922	−0.47407042
<i>e</i>	0.0649041	<i>i</i>	2.33892	−0.30272743	−0.21324997
<i>P</i>	5.19	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1994 08 10	809	0.1−	0.5−	1998 04 19	589	0.4−	0.3−	1998 04 25	589	0.8+	0.6+
1994 08 10	809	0.9−	0.5−	1998 04 19	589	0.6+	1.2−	1998 04 25	589	0.6−	0.0
1994 08 10	809	0.0	0.7−	1998 04 19	589	0.2+	0.1+	1998 04 25	589	1.0+	0.2−
1994 08 11	809	0.4+	0.6+	1998 04 19	589	0.2−	0.6−	1998 04 26	589	0.7−	0.7−
1994 08 11	809	0.1−	0.6+	1998 04 20	589	0.5−	0.6+	1998 04 26	589	1.6−	0.9+
1994 08 11	809	0.9+	0.6+	1998 04 20	589	0.5−	1.0−	1998 04 26	589	0.5+	0.1−
1994 09 03	809	0.7+	1.0+	1998 04 20	589	0.1−	0.7−	1998 04 30	589	0.5+	0.4−
1994 09 03	809	0.2−	0.5+	1998 04 21	589	0.4+	0.4−	1998 04 30	589	0.4−	0.2+
1994 09 03	809	0.3−	1.1−	1998 04 21	589	0.5−	0.2−	1998 04 30	589	1.3+	0.3−
1994 09 04	809	1.2+	0.4−	1998 04 24	589	0.2−	0.5+	1998 05 18	589	(6.2+	3.8−)
1994 09 04	809	1.3−	1.0−	1998 04 24	589	0.6−	0.5+	1998 05 18	589	(5.9+	3.2−)
1994 09 04	809	0.4−	1.0+	1998 04 24	589	1.8+	1.6+	1998 05 18	589	(7.9+	3.9−)
1998 04 19	589	0.9−	0.7+	1998 04 24	589	0.1−	0.5+				

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1994 08 11	809	0.4−	0.6−	1994 09 04	809	0.2−	1.2+	1997 03 11	691	0.1+	0.9+
1994 08 11	809	0.6−	0.4−	1994 09 04	809	0.6+	0.3+	1997 03 11	691	0.1+	0.7+
1994 08 11	809	0.6−	0.4+	1994 09 04	809	1.0−	0.1+	1997 03 11	691	0.5−	0.7+

1994 PN₁₇ = 1998 HX₇₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	233.60664	(2000.0)	P		Q	
<i>n</i>	0.17649024	ω	19.83235	+0.99734117	+0.06574182	
<i>a</i>	3.1476680	Ω	336.33159	−0.07282704	+0.88369094	
<i>e</i>	0.0689861	<i>i</i>	4.49218	−0.00261188	+0.46343105	
<i>P</i>	5.58	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1994 08 10	809	0.8+	0.1+	1994 09 03	809	0.0	0.5+	1998 04 21	704	0.4−	0.1+
1994 08 10	809	0.1−	0.5+	1994 09 04	809	(2.2+	1.3+)	1998 04 21	704	0.1+	0.5+
1994 08 10	809	1.8−	0.7+	1994 09 04	809	1.5+	1.4+	1998 04 21	704	(3.7−	0.9+)
1994 08 11	809	0.2+	1.5−	1994 09 04	809	0.2+	0.6+	1998 04 22	704	0.8−	0.5+
1994 08 11	809	0.5−	0.5−	1998 03 25	910	0.9+	0.0	1998 04 22	704	0.1−	0.4−
1994 08 11	809	1.0−	0.3−	1998 03 25	910	1.1+	0.4−	1998 04 22	704	1.1+	0.1+
1994 09 03	809	0.2+	0.5−	1998 03 25	910	0.4+	0.3+	1998 04 22	704	1.2−	0.1−
1994 09 03	809	0.4+	0.9−	1998 04 21	704	0.8−	0.4−				

1994 PO₃₀ = 1998 KF₄₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	274.40454	(2000.0)	P		Q	
<i>n</i>	0.20505752	ω	151.12901	+0.99690895	+0.07099311	
<i>a</i>	2.8480804	Ω	204.86780	−0.07813218	+0.94078160	
<i>e</i>	0.1225125	<i>i</i>	4.59005	+0.00824035	+0.33149655	
<i>P</i>	4.81	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1994 08 12	809	0.8+	0.2−	1994 09 01	691	0.8+	1.0+	1998 05 22	704	0.9+	1.5−
1994 08 12	809	0.3−	0.6−	1994 09 05	809	0.1−	0.4+	1998 05 22	704	1.0−	0.6−
1994 08 12	809	0.3−	0.6−	1994 09 05	809	0.7−	0.2+	1998 05 22	704	1.9−	0.3+
1994 08 13	809	0.4+	0.1+	1994 09 05	809	0.9−	0.6−	1998 05 24	704	0.8+	0.1−
1994 08 13	809	0.4−	0.0	1994 09 06	809	0.1+	0.9−	1998 05 24	704	0.5+	0.9+
1994 08 13	809	0.1−	0.6+	1994 09 06	809	0.4−	1.1−	1998 05 24	704	1.5+	1.8+
1994 09 01	691	0.4+	1.2+	1994 09 06	809	0.1+	1.1−	1998 05 24	704	0.0	1.7−
1994 09 01	691	0.5+	1.4+	1998 05 22	704	0.7−	0.8+				

1994 PN₃₆ = 1998 KK₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	144.69013	(2000.0)	P		Q	
<i>n</i>	0.18389939	ω	296.74566	−0.03083197	−0.99665425	
<i>a</i>	3.0625453	Ω	154.67561	+0.96837236	−0.04854488	
<i>e</i>	0.0650920	<i>i</i>	10.19293	+0.24759716	+0.06575482	
<i>P</i>	5.36	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1994 08 10	809	0.4+	0.5−	1994 09 03	809	0.7+	0.8−	1998 05 19	691	0.0	0.0
1994 08 10	809	1.0+	0.1+	1994 09 03	809	0.2+	1.4+	1998 05 28	691	0.1+	0.1+
1994 08 10	809	1.2+	0.1−	1994 09 04	809	0.6−	0.3+	1998 05 28	691	0.2+	0.0
1994 08 11	809	2.2−	0.8−	1994 09 04	809	2.1−	0.5+	1998 05 28	691	0.2+	0.1−
1994 08 11	809	0.8−	0.1−	1994 09 04	809	0.6−	0.8−	1998 06 02	691	0.1−	0.0
1994 08 11	809	0.1+	1.4+	1998 05 19	691	0.0	0.1+	1998 06 02	691	0.3−	0.0
1994 09 03	809	2.7+	0.7−	1998 05 19	691	0.0	0.0	1998 06 02	691	0.2−	0.2−

1994 PG₃₉ = 1998 FL₁₂₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	317.42721	(2000.0)	P		Q	
<i>n</i>	0.17836888	ω	28.01988	−0.36172728	+0.93225643	
<i>a</i>	3.1255275	Ω	220.77494	−0.85739042	−0.33567613	
<i>e</i>	0.1524723	<i>i</i>	0.62847	−0.36610796	−0.13497957	
<i>P</i>	5.53	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1994 08 10	809	1.2+	1.1+	1994 09 03	809	0.7+	0.3+	1998 03 22	704	0.5+	0.8+
1994 08 10	809	0.0	0.6+	1994 09 04	809	0.6+	0.6−	1998 03 22	704	0.7+	1.0+
1994 08 10	809	0.3+	0.4+	1994 09 04	809	0.7+	1.6−	1998 03 22	704	0.8+	1.8−
1994 08 11	809	1.9−	1.6−	1994 09 04	809	0.5+	1.2−	1998 03 22	704	3.7−	0.5−
1994 08 11	809	0.4+	1.9−	1994 09 08	691	0.8−	1.7+	1998 03 26	704	1.5+	0.9+
1994 08 11	809	0.6+	0.1−	1994 09 08	691	1.0−	1.5+	1998 03 26	704	0.6+	0.2+
1994 09 03	809	0.0	0.3+	1994 09 08	691	0.9−	1.4+	1998 03 26	704	0.7−	0.4−
1994 09 03	809	0.6−	0.2+	1998 03 22	704	0.5+	0.3+				

1994 RU₁ = 1998 HT₁₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	235.17151	(2000.0)	P		Q	
<i>n</i>	0.17559743	ω	194.63356	+0.99103908	−0.12784013	
<i>a</i>	3.1583284	Ω	172.38815	+0.13149617	+0.98466383	
<i>e</i>	0.2378344	<i>i</i>	16.99178	−0.02345857	+0.11871836	
<i>P</i>	5.61	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1994 08 31	691	0.8−	0.1−	1994 09 04	675	0.0	0.5+	1998 04 23	704	0.1+	0.6+
1994 08 31	691	0.6−	0.2−	1994 09 11	691	1.4−	0.5+	1998 04 23	704	0.4−	1.3−
1994 08 31	691	0.7−	0.0	1994 09 11	691	1.5−	0.5+	1998 04 23	704	0.1+	0.3−
1994 09 01	675	0.9+	1.0−	1994 09 11	691	1.2−	0.2+	1998 04 23	704	0.5+	1.1−
1994 09 01	675	0.7+	0.7−	1994 10 07	675	0.9+	1.2+	1998 04 24	704	1.0+	0.0
1994 09 01	033	0.5+	0.3+	1994 10 07	675	0.4+	2.0+	1998 04 24	704	0.3−	2.3+
1994 09 02	033	1.2+	0.6+	1994 10 09	675	0.0	2.8−	1998 04 24	704	0.6+	0.1+
1994 09 04	033	0.5+	0.4+	1994 10 09	675	0.2+	0.5−	1998 04 24	704	0.2+	0.1−
1994 09 04	675	1.0+	0.9−	1998 04 23	704	0.3−	0.6−	1998 04 24	704	1.3−	0.4+

1994 UT₁₁

Id. B. A. Skiff (1997 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	231.26923	(2000.0)	P		Q	
<i>n</i>	0.21743896	ω	232.21878	−0.21179478	−0.95013428	
<i>a</i>	2.7389103	Ω	231.59702	+0.96311959	−0.16314387	
<i>e</i>	0.0633882	<i>i</i>	16.98192	+0.16596269	−0.26576105	
<i>P</i>	4.53	<i>H</i>	12.1	<i>G</i>	0.15	<i>U</i> 3

Residuals in seconds of arc

1994 10 03	675	0.8+	0.1+	1994 11 03	400	1.3−	0.2−	1998 05 22	688	0.0	0.5+
1994 10 03	675	0.5+	0.7−	1994 11 29	400	0.4+	0.3+	1998 05 22	688	0.1−	0.4+
1994 10 28	400	0.4+	1.0−	1994 11 29	400	1.3−	1.2−	1998 05 22	688	0.2−	0.4+
1994 10 28	400	0.4−	0.4+	1997 08 01	688	0.4+	0.8−				
1994 11 03	400	1.0+	1.2+	1997 08 01	688	0.2−	0.6−				

1994 WB₁ = 1998 KO₈

Id. G. V. Williams, E. Bowell (1955 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	82.35415	(2000.0)	P		Q	
<i>n</i>	0.39009797	ω	88.07540	−0.83978736	−0.37377365	
<i>a</i>	1.8550413	Ω	69.79628	+0.14956947	−0.85648992	
<i>e</i>	0.1519527	<i>i</i>	24.80814	+0.52190629	−0.35597510	
<i>P</i>	2.53	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 1

Residuals in seconds of arc

1955 03 27	675	0.7−	0.0	1994 12 04	098	1.1+	3.1−	1994 12 22	411	0.4+	0.2+
1955 03 27	675	0.1−	0.7−	1994 12 09	411	0.3+	0.1+	1994 12 23	587	0.2−	0.8+
1994 11 27	411	0.0	0.6−	1994 12 09	411	1.0+	0.1+	1994 12 23	587	0.2−	0.4+
1994 11 27	411	0.0	0.7−	1994 12 10	589	0.3+	0.6+	1994 12 23	587	0.1−	0.1−
1994 11 28	411	0.6+	0.6−	1994 12 10	589	0.1+	0.7+	1995 01 02	411	0.1−	0.9−
1994 11 28	411	1.2+	0.2+	1994 12 10	589	0.9+	0.5+	1995 01 02	411	0.6+	1.1−
1994 11 28	411	0.1+	0.5+	1994 12 10	589	0.5+	0.6+	1995 01 02	411	0.6+	0.9−
1994 11 29	411	0.1−	0.6+	1994 12 10	108	0.4+	0.3+	1995 01 05	411	0.4−	0.5−
1994 11 29	411	0.2+	0.1−	1994 12 10	108	0.6−	1.3+	1995 01 05	411	0.1−	0.3−
1994 11 29	411	0.4−	0.4−	1994 12 10	108	0.3−	1.9+	1995 01 05	411	0.1−	0.4−

1998 JUNE 10

1994 12 03	411	0.1−	0.3+	1994 12 11	108	0.3+	0.8+	1995 01 19	411	0.3+	0.4+
1994 12 03	411	0.4−	0.5+	1994 12 11	108	0.0	0.1+	1995 01 19	411	0.2−	0.2−
1994 12 03	411	0.4−	0.3+	1994 12 11	108	0.2−	0.4−	1998 05 23	699	0.1+	0.2+
1994 12 04	098	1.6−	0.9+	1994 12 11	108	0.1+	0.2+	1998 05 23	699	0.3+	0.3+
1994 12 04	098	1.7−	0.7−	1994 12 11	108	0.4−	1.0−	1998 05 23	699	0.5+	0.1+
1994 12 04	098	1.6−	0.3−	1994 12 14	411	0.7+	0.3+	1998 05 24	699	0.5+	0.7+
1994 12 04	411	1.1−	0.0	1994 12 14	411	0.1+	1.2+	1998 05 24	699	0.3+	0.6+
1994 12 04	411	0.1−	0.5−	1994 12 22	411	0.1−	0.4+	1998 05 24	699	0.3+	0.7+
1994 12 04	411	0.3−	0.2+	1994 12 22	411	0.0	0.4+				

1995 DA₃ = 1998 KW₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	340.08715		(2000.0)	P	Q
n	0.36311474	ω	41.61939	-0.04847378	+0.96522167
a	1.9458385	Ω	227.36559	-0.98361193	-0.09084789
e	0.0401339	i	20.43810	-0.17366019	+0.24514035
P	2.71	H	16.0	G 0.15	U 3

Residuals in seconds of arc

1995 02 24	413	1.0+	0.7−	1995 06 02	413	0.3+	0.0	1998 05 22	704	1.3−	0.7+
1995 02 24	413	1.4+	1.2−	1998 04 22	704	0.3+	1.0−	1998 05 24	704	0.1+	0.6−
1995 02 25	413	(3.6−	1.3+)	1998 04 22	704	0.6+	0.2+	1998 05 24	704	1.1−	0.7−
1995 02 25	413	0.2+	0.8−	1998 04 22	704	0.9+	0.6−	1998 05 24	704	0.3−	0.4+
1995 03 07	413	0.6−	0.4+	1998 04 22	704	(1.0−	3.3−)	1998 05 24	704	1.1+	0.0
1995 03 07	413	0.6−	0.3+	1998 05 22	704	0.6+	0.6−	1998 05 24	704	0.1−	0.1+
1995 03 21	413	0.6−	1.1+	1998 05 22	704	0.2+	0.5+	1998 05 28	699	0.3+	0.8−
1995 03 21	413	0.7−	1.1+	1998 05 22	704	0.9−	0.5+	1998 05 28	699	0.1+	0.2−
1995 06 02	413	0.0	0.4+	1998 05 22	704	0.1+	1.6+	1998 05 28	699	0.5−	0.0

1995 OB = 1998 FJ₁₁₉

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	306.70218		(2000.0)	P	Q
n	0.28438722	ω	37.76322	+0.47648810	+0.87523617
a	2.2901433	Ω	260.83330	−0.82576932	+0.41305437
e	0.1792244	i	4.83388	−0.30176831	+0.25168976
P	3.47	H	15.0	G 0.15	U 5

Residuals in seconds of arc

1995 07 19	107	0.9+	1.3−	1998 03 31	704	3.6−	1.8−	1998 04 20	704	2.6+	0.9−
1995 07 19	107	0.6+	0.5+	1998 04 01	704	0.3+	0.9+	1998 04 22	704	0.4−	0.5−
1995 07 20	107	0.1−	0.4−	1998 04 01	704	0.5+	1.6−	1998 04 22	704	0.7+	0.2−
1995 07 20	107	0.5−	0.2−	1998 04 01	704	0.2+	1.0+	1998 04 22	704	0.4+	0.1−
1995 07 26	107	0.4−	0.8+	1998 04 01	704	0.9+	0.1+	1998 04 22	704	0.5−	0.2+
1995 07 26	107	0.3−	0.4+	1998 04 01	704	1.6−	1.4+	1998 05 16	704	0.4+	0.9+
1998 03 31	704	0.4−	0.5+	1998 04 20	704	1.0+	0.7+	1998 05 16	704	0.1−	0.1−
1998 03 31	704	0.7−	0.9−	1998 04 20	704	0.4+	0.6−	1998 05 16	704	0.3−	0.3+
1998 03 31	704	1.6+	0.1−	1998 04 20	704	0.6−	0.0	1998 05 16	704	1.1−	1.1+

1995 OA₁ = 1991 KR₂ = 1998 KL₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams					
<i>M</i> 289.98898 (2000.0)			P		Q
<i>n</i>	0.27512267	<i>ω</i>	105.44467	+0.86718261	+0.49276851
<i>a</i>	2.3412716	<i>Ω</i>	225.09681	−0.48691964	+0.80872814
<i>e</i>	0.1700476	<i>i</i>	5.82837	−0.10442021	+0.32115103
<i>P</i>	3.58	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1991 05 18	809	0.1−	0.2+	1995 08 18	358	0.9−	1.5+	1998 05 01	704	0.9+	0.5−
1991 05 18	809	0.2+	0.2+	1995 08 18	358	0.4−	0.0	1998 05 22	704	0.0	0.3−
1991 05 18	809	0.1−	0.0	1998 04 22	704	0.2−	0.0	1998 05 22	704	0.8+	0.1−
1995 07 28	358	0.2+	0.3+	1998 04 22	704	0.1+	0.6+	1998 05 22	704	0.3−	1.3−
1995 07 28	358	0.1−	0.0	1998 04 22	704	1.8−	0.9+	1998 05 22	704	0.4+	0.3+
1995 07 29	358	0.9+	0.9−	1998 04 22	704	0.6−	0.1−	1998 05 22	704	0.6−	0.6−
1995 07 29	358	0.1−	1.4−	1998 04 22	704	0.0	0.7+	1998 05 24	704	0.8+	0.3+

M.P.C. 31967

1995 07 30	358	0.0	1.0+	1998 04 25	699	0.3+	0.0	1998 05 24	704	0.4−	1.1−
1995 07 30	358	0.8+	0.2−	1998 04 25	699	0.0	0.3+	1998 05 24	704	1.1+	0.6+
1995 08 08	358	(3.9+	2.2+)	1998 04 25	699	0.2−	0.2+	1998 05 24	704	0.6+	0.4+
1995 08 08	358	1.1−	1.6−	1998 05 01	704	0.2+	0.5+	1998 05 24	704	1.1−	0.2+
1995 08 17	358	0.7+	1.3+	1998 05 01	704	0.0	0.7−				
1995 08 17	358	(0.5+	3.0+)	1998 05 01	704	(2.3+	1.3−)				

1995 OS₁ = 1998 HA₇₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	182.31691		(2000.0)		P	Q
n	0.25324309	ω	67.43888		+0.68935694	−0.72420484
a	2.4742542	Ω	338.94990		+0.64519389	+0.62490955
e	0.0729463	i	2.82946		+0.32941138	+0.29157402
P	3.89	H	14.5	G	0.15	U 5

Residuals in seconds of arc

1995 07 19	327	0.8−	0.1−	1995 08 23	327	0.7+	0.1−	1998 04 22	704	0.5+	0.2+
1995 07 19	327	0.1−	0.2−	1998 04 21	704	0.0	0.8−	1998 04 22	704	0.3−	0.0
1995 07 19	327	0.4−	0.1+	1998 04 21	704	0.5+	0.1+	1998 04 22	704	1.3−	0.3+
1995 07 19	327	0.9+	0.0	1998 04 21	704	0.1+	0.5+	1998 05 18	691	0.1+	0.3−
1995 07 21	327	0.4+	0.1+	1998 04 21	704	0.2+	1.7+	1998 05 18	691	0.0	0.1+
1995 07 21	327	0.6−	0.3−	1998 04 21	704	0.1+	0.1−	1998 05 18	691	0.4−	1.1−
1995 08 23	327	0.3−	0.4+	1998 04 22	704	0.1+	0.2−				
1995 08 23	327	0.2+	0.3+	1998 04 22	704	0.4+	0.4−				

1995 OC₈ = 1998 HT₁₀₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	319.56444		(2000.0)	P	Q
n	0.29275754	ω	109.48814	+0.53921164	+0.84202527
a	2.2462805	Ω	193.17625	−0.79610750	+0.50357817
e	0.1914550	i	3.93146	−0.27470649	+0.19339719
P	3.37	H	16.0	G 0.15	U 4

Residuals in seconds of arc

1995 06 24	691	0.6+	0.1+	1995 08 17	966	0.1+	1.0+	1998 04 30	566	0.1−	0.7+
1995 06 24	691	0.3+	0.0	1998 04 21	704	0.2+	0.7+	1998 05 22	704	0.6−	0.1−
1995 06 24	691	0.1−	0.2−	1998 04 21	704	0.6+	0.4−	1998 05 22	704	0.3+	0.5+
1995 07 25	691	0.9−	0.6−	1998 04 21	704	0.6−	0.6−	1998 05 22	704	0.5+	1.0−
1995 07 25	691	0.5−	0.5−	1998 04 21	704	0.0	0.4−	1998 05 22	704	(0.8+	2.6−)
1995 07 25	691	0.5−	0.4−	1998 04 21	704	0.6−	0.6+	1998 05 22	704	1.0+	0.2+
1995 07 30	691	0.7−	0.3−	1998 04 22	704	0.0	0.3−	1998 05 24	704	0.6+	0.3−
1995 07 30	691	0.6−	0.3−	1998 04 22	704	0.8−	0.4+	1998 05 24	704	1.3+	1.6−
1995 07 30	691	0.4−	0.4−	1998 04 22	704	0.1+	0.3−	1998 05 24	704	0.3−	1.1+
1995 08 16	966	0.0	0.4+	1998 04 22	704	0.1+	1.8+	1998 05 24	704	0.4−	0.3−
1995 08 16	966	0.3+	0.1+	1998 04 22	704	0.8−	0.7−	1998 05 24	704	0.2−	0.9−
1995 08 16	966	1.3+	0.1+	1998 04 30	566	0.1−	0.7+				
1995 08 17	966	1.2+	1.1+	1998 04 30	566	0.1−	0.6+				

M.P.C. 31968

1995 10 21	385	0.4−	0.1−	1998 05 06	620	1.0+	0.3−	1998 05 24	704	0.5+	0.9−
1995 10 21	385	0.2+	0.2+	1998 05 06	620	0.0	0.0	1998 05 24	704	1.6−	0.1−
1995 10 21	385	0.3−	0.4+	1998 05 06	620	0.8−	0.2+	1998 05 24	704	1.0−	0.2−
1998 04 25	809	(1.2+	3.8+)	1998 05 20	886	0.8+	0.3+	1998 05 24	704	0.4−	0.3+

1995 QE₃ = 1998 KK₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	290.32742			<i>P</i>		<i>Q</i>	
<i>n</i>	0.26960070	ω	11.59746	+0.91089614		+0.41224931	
<i>a</i>	2.3731328	Ω	324.03961	−0.38097547		+0.82359837	
<i>e</i>	0.2295133	<i>i</i>	1.74217	−0.15851155		+0.38953335	
<i>P</i>	3.66	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 08 31	411	0.6+	0.1+	1995 09 21	411	0.1+	0.7−	1995 12 17	327	0.3+	0.4−
1995 08 31	411	0.1+	0.7+	1995 09 21	411	0.3+	0.1+	1995 12 17	327	0.2+	0.1−
1995 09 01	411	1.1−	0.8−	1995 09 28	411	1.0+	0.4+	1995 12 18	327	0.3−	0.4+
1995 09 01	411	0.2−	1.0−	1995 09 28	411	0.4+	0.2+	1995 12 18	327	0.1+	0.3+
1995 09 01	411	0.8−	0.4−	1995 09 28	411	0.1+	0.1−	1995 12 18	327	0.2+	0.1+
1995 09 06	557	0.3−	0.0	1995 10 13	411	0.4−	0.8−	1998 05 22	704	1.0−	0.7+
1995 09 06	557	0.5−	0.1+	1995 10 13	411	1.0−	0.2−	1998 05 22	704	1.5+	0.4+
1995 09 06	557	0.1−	0.2−	1995 10 13	411	0.7+	0.1+	1998 05 22	704	0.0	0.9+
1995 09 06	557	0.1+	0.2−	1995 10 24	801	0.1−	0.3−	1998 05 22	704	0.8−	0.1+
1995 09 06	557	0.2−	0.1−	1995 10 24	801	0.1−	0.2−	1998 05 22	704	0.2−	0.9−
1995 09 12	557	0.0	0.5+	1995 10 27	801	0.1−	0.4−	1998 05 24	704	0.4+	0.0
1995 09 12	557	0.2+	0.3+	1995 10 27	801	0.0	0.6−	1998 05 24	704	1.9−	0.5−
1995 09 12	557	0.3+	0.2+	1995 11 18	801	0.3−	0.1−	1998 05 24	704	1.5+	1.2−
1995 09 17	557	1.8+	1.1+	1995 11 18	801	0.0	0.3−	1998 05 24	704	0.4−	0.2+
1995 09 17	557	1.7+	1.1+	1995 11 22	801	0.5+	0.6−	1998 05 24	704	0.6+	0.9−
1995 09 17	411	1.4−	1.2+	1995 11 22	801	0.4+	0.2−				
1995 09 17	411	1.6−	0.4−	1995 12 17	327	0.4−	0.0				

1995 QC₁₀ = 1998 HQ₆₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	296.61808			<i>P</i>		<i>Q</i>	
<i>n</i>	0.25975766	ω	80.51409	+0.60293251		+0.79455734	
<i>a</i>	2.4327108	Ω	226.81735	−0.76513711		+0.55043385	
<i>e</i>	0.1348794	<i>i</i>	5.64860	−0.22591500		+0.25632248	
<i>P</i>	3.79	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 08 31	704	1.1+	1.3−	1995 10 27	704	0.7−	2.9−	1998 04 22	704	1.1+	0.0
1995 09 01	704	0.5+	0.2+	1995 10 28	704	1.4+	1.3+	1998 04 22	704	0.9−	0.3+
1995 09 27	704	1.0−	0.5+	1998 04 21	704	1.1+	0.7+	1998 04 22	704	1.1+	1.6−
1995 09 27	704	0.6−	0.2+	1998 04 21	704	1.8−	2.1+	1998 04 22	704	0.8−	1.4−
1995 09 28	704	0.1−	1.4+	1998 04 21	704	0.2+	1.1+	1998 04 22	704	1.0+	1.3−
1995 09 29	704	0.6−	0.5+	1998 04 21	704	1.0−	0.3+				

1995 SK₂ = 1998 HR₇₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	265.42321			<i>P</i>		<i>Q</i>	
<i>n</i>	0.25993061	ω	355.48684	+0.96645684		+0.25664169	
<i>a</i>	2.4316315	Ω	349.62648	−0.23389814		+0.86374946	
<i>e</i>	0.1948001	<i>i</i>	3.12279	−0.10607940		+0.43367259	
<i>P</i>	3.79	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 09 17	905	0.4+	0.6−	1995 09 25	691	0.1−	0.2−	1998 04 21	704	1.2+	2.5−
1995 09 17	905	0.7−	0.8+	1995 09 25	691	0.0	0.5+	1998 04 22	704	0.1−	1.0−
1995 09 17	905	1.8+	0.7+	1995 09 25	691	0.2−	0.5+	1998 04 22	704	1.5+	0.5+
1995 09 19	691	0.4−	0.5−	1995 10 02	905	1.1+	0.1−	1998 04 22	704	1.1+	0.2+
1995 09 19	691	0.2−	0.5−	1995 10 02	905	0.4−	0.2−	1998 04 22	704	0.1−	0.1+
1995 09 19	691	0.3−	0.1−	1998 04 21	704	0.6−	0.3−	1998 04 22	704	1.2−	0.1−
1995 09 24	905	1.3−	0.3+	1998 04 21	704	3.1−	2.9+				
1995 09 24	905	0.3+	0.6−	1998 04 21	704	1.4+	0.2+				

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1995 SK₃ = 1998 HP₇₁

Id. G. V. Williams, E. Bowell (1991 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	332.46628			<i>P</i>		<i>Q</i>	
<i>n</i>	0.25530360	ω	177.79637	+0.04326441		+0.99713686	
<i>a</i>	2.4609234	Ω	94.67902	−0.91757210		+0.06421494	
<i>e</i>	0.1630001	<i>i</i>	3.56758	−0.39520834		−0.03993158	
<i>P</i>	3.86	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1991 08 07	675	0.4−	0.0	1995 10 26	104	0.3+	0.7−	1998 05 16	704	(0.4−	2.2+)
1991 08 07	675	0.0	0.8+	1998 04 21	704	0.3−	0.2+	1998 05 16	704	0.4+	0.2+
1995 09 23	598	0.7−	0.8−	1998 04 21	704	1.5−	0.0	1998 05 16	704	0.6+	0.2+
1995 09 23	598	0.0	0.3−	1998 04 21	704	0.5−	0.1−	1998 05 16	704	(3.4−	0.8−)
1995 09 24	598	0.7−	0.7+	1998 04 21	704	0.3−	0.2+	1998 05 22	688	0.3−	0.2+
1995 09 24	598	0.7−	0.4+	1998 04 21	704	1.0−	1.2−	1998 05 22	688	0.0	0.2+
1995 10 17	104	0.5+	0.3−	1998 04 22	704	0.4−	0.9+	1998 05 22	688	0.2−	0.0
1995 10 17	104	0.6+	0.3−	1998 04 22	704	0.1+	0.4+	1998 05 25	699	1.1+	1.0−
1995 10 17	104	0.3+	0.0	1998 04 22	704	0.1−	0.3+	1998 05 25	699	0.4+	0.0
1995 10 26	104	0.7+	0.3−	1998 04 22	704	0.3+	0.5−	1998 05 25	699	0.2+	0.5−
1995 10 26	104	0.5+	0.4−	1998 04 22	704	0.2−	0.1+				
1995 10 26	104	0.5+	0.5−	1998 05 16	704	1.3+	1.2−				

1995 SS₅ = 1995 UZ₇ = 1998 HK₉₉Id. G. V. Williams (d, *MPC* 26379; unpublished)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	315.22029			<i>P</i>		<i>Q</i>	
<i>n</i>	0.24049564	ω	91.88788	+0.48116216		+0.86999227	
<i>a</i>	2.5609312	Ω	207.70274	−0.86782997		+0.45535994	
<i>e</i>	0.1654589	<i>i</i>	13.39375	−0.12391177		+0.18910518	
<i>P</i>	4.10	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 09 25	327	0.2+	0.1−	1995 10 25	046	0.3−	0.9+	1998 04 22	704	0.5−	0.8+
1995 09 25	327	0.8−	0.6−	1995 10 25	046	0.0	1.0+	1998 04 22	704	0.6+	0.5+
1995 09 25	327	0.3+	0.3+	1995 10 25	046	0.1−	0.8+	1998 04 22	704	(0.1−	3.5+)
1995 09 25	327	0.7−	0.0	1995 11 26	691	0.1+	0.0	1998 04 22	704	0.2−	1.0+
1995 09 25	327	0.1−	0.1+	1995 11 26	691	0.4−	0.7+	1998 05 22	704	0.8−	0.9+
1995 09 25	327	0.2−	0.3−	1995 11 26	691	0.3−	0.2−	1998 05 22	704	0.4+	0.4+
1995 09 27	327	0.7−	0.0	1995 11 27	691	0.3−	0.2−	1998 05 22	704	0.4+	0.1−
1995 09 27	327	0.1+	0.2+	1995 11 27	691	0.0	0.1−	1998 05 22	704	1.1−	0.6−
1995 09 27	327	0.4−	0.7−	1995 11 27	691	0.1−	0.5−	1998 05 22	704	(3.1−	3.2+)
1995 09 27	327	0.2+	0.2−	1998 04 21	704	1.6+	0.5−	1998 05 24	704	0.2+	0.8−
1995 10 15	327	1.2+	0.2+	1998 04 21	704	0.1+	0.5−	1998 05 24	704	1.4+	0.8−
1995 10 15	327	0.6+	0.2+	1998 04 21	704	0.9+	0.4+	1998 05 24	704	0.8−	0.6+
1995 10 15	327	0.5+	0.5+	1998 04 21	704	0.6−	1.5+	1998 05 24	704	0.4+	0.9+
1995 10 25	046	0.3+	0.5+	1998 04 21	704	0.3−	0.7+	1998 05 24	704	1.0−	0.5−
1995 10 25	046	0.2+	1.2+	1998 04 22	704	0.4+	0.3−				

1995 SY₁₄ = 1998 HC₇₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	324.56350		(2000.0)	P	Q
n	0.25215269	ω	352.80420	+0.08374977	+0.99638196
a	2.4813821	Ω	281.99916	-0.91352085	+0.07097373
e	0.0975522	i	0.84677	-0.39807741	+0.04675165
P	3.91	H	16.0	G 0.15	U 6

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1995 SU₁₅ = 1998 HO₅₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24759925	ω	39.18602	−0.29617747	+0.95510625		
<i>a</i>	2.5117120	Ω	213.58757	−0.87952850	−0.27563991		
<i>e</i>	0.1012772	<i>i</i>	0.73935	−0.37243593	−0.10860337		
<i>P</i>	3.98	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1995 09 18	691	0.2−	0.4+	1995 09 27	691	0.1−	0.5−	1998 04 21	704	0.5+	1.4+
1995 09 18	691	0.1−	0.3+	1995 09 27	691	0.1+	0.1−	1998 04 22	704	0.1−	0.8−
1995 09 18	691	0.2−	0.3+	1995 09 27	691	0.1+	0.5−	1998 04 22	704	2.1+	0.2−
1995 09 23	691	0.2+	0.1−	1998 04 21	704	0.1−	0.3+	1998 04 22	704	0.3−	0.4+
1995 09 23	691	0.1+	0.1−	1998 04 21	704	1.5−	0.6−	1998 04 22	704	0.5−	0.3−
1995 09 23	691	0.0	0.2+	1998 04 21	704	0.6+	1.1+	1998 04 22	704	0.7−	1.3−

1995 SV₁₆ = 1998 HQ₁₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20407015	ω	337.45988	−0.85385685	−0.52050741		
<i>a</i>	2.8572598	Ω	171.17372	+0.47827315	−0.78512168		
<i>e</i>	0.0871354	<i>i</i>	0.27031	+0.20538568	−0.33564265		
<i>P</i>	4.83	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1995 09 18	691	0.3+	0.2+	1995 09 28	327	0.1+	0.6−	1998 04 18	704	0.1+	0.8+
1995 09 18	691	0.2+	0.2+	1995 09 28	327	0.2+	0.3−	1998 04 18	704	0.7+	0.2+
1995 09 18	691	0.2+	0.0	1995 09 28	327	0.0	0.8−	1998 04 22	704	0.3+	0.3+
1995 09 23	691	0.2−	0.2+	1995 09 29	327	0.6+	1.4+	1998 04 22	704	1.0+	0.0
1995 09 23	691	0.2−	0.3+	1995 09 29	327	0.4+	0.6+	1998 04 22	704	0.8−	0.4−
1995 09 23	691	0.3−	0.1−	1995 09 29	327	0.3+	0.2+	1998 04 22	704	0.4+	0.8−
1995 09 27	691	0.4−	0.3−	1998 04 18	704	0.1−	0.4−	1998 04 22	704	1.1−	1.1−
1995 09 27	691	0.7−	0.2−	1998 04 18	704	0.2−	0.3+				
1995 09 27	691	0.6−	0.6−	1998 04 18	704	0.2−	1.1+				

1995 SH₂₆ = 1998 KL₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24489205	ω	310.99857	+0.57677978	+0.81689391		
<i>a</i>	2.5301888	Ω	354.22332	−0.74003518	+0.52091353		
<i>e</i>	0.1279892	<i>i</i>	1.74806	−0.34593787	+0.24765588		
<i>P</i>	4.02	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 09 19	691	0.3+	0.1−	1995 10 20	010	0.4+	2.4+	1998 05 24	691	0.3−	0.6+
1995 09 19	691	0.2+	0.3−	1995 10 20	010	0.2−	2.0+	1998 05 24	691	0.2−	0.1+
1995 09 19	691	0.3+	0.0	1995 10 20	010	0.6−	1.2+	1998 05 31	691	0.5+	0.1+
1995 09 30	691	0.1−	0.1−	1995 10 23	010	0.3+	1.5−	1998 05 31	691	0.0	0.2−
1995 09 30	691	0.2−	0.2−	1995 10 23	010	0.6−	1.9−	1998 05 31	691	0.1+	0.3−
1995 09 30	691	0.3−	0.3−	1995 10 23	010	0.6+	0.8−				

1995 SR₂₉ = 1991 RK₃₇ = 1998 KN₂₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26130891	ω	267.61506	+0.89731043	+0.43991887		
<i>a</i>	2.4230734	Ω	66.28435	−0.38767397	+0.82458515		
<i>e</i>	0.2010930	<i>i</i>	2.26163	−0.21105187	+0.35571156		
<i>P</i>	3.77	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 09 15	675	0.5+	1.9−	1995 10 17	114	0.4−	0.4−	1998 05 22	704	0.1+	1.7+
1991 09 15	675	0.4+	0.7−	1995 10 17	114	1.5−	0.3−	1998 05 22	704	0.5−	1.0+
1995 09 26	114	0.1−	1.0+	1995 10 18	114	3.0+	0.6+	1998 05 22	704	0.4+	0.0
1995 09 26	114	1.3−	0.2−	1995 10 19	114	2.2+	0.7+	1998 05 22	704	0.8+	0.3+

1995 09 28	114	1.1−	1.6+	1995 10 19	114	1.4+	0.7−	1998 05 24	704	0.5−	0.7+
1995 09 28	114	0.8+	0.5+	1995 10 21	399	0.3+	0.5+	1998 05 24	704	1.3+	0.3+
1995 10 01	114	2.4−	0.4−	1995 10 21	399	0.2−	0.4+	1998 05 24	704	0.1+	1.5+
1995 10 01	114	0.1+	1.3+	1995 10 27	399	0.2−	0.4+	1998 05 24	704	0.1−	0.6−
1995 10 16	114	1.3−	0.4−	1995 10 27	399	0.4−	0.3+	1998 05 24	704	1.2−	0.2−
1995 10 16	114	0.8−	0.4−	1998 05 22	704	0.7+	1.4−				

1995 UZ = 1998 HC₇₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21749946	ω	317.30103	+0.99793091	+0.05041980		
<i>a</i>	2.7384024	Ω	39.86130	−0.02770351	+0.89715593		
<i>e</i>	0.0846962	<i>i</i>	3.56885	−0.05802083	+0.43882694		
<i>P</i>	4.53	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 10 21	557	0.0	0.3+	1995 11 21	557	0.4−	0.5+	1998 04 21	704	1.0+	0.2+
1995 10 22	557	0.3+	0.2+	1995 11 21	557	0.2−	0.8+	1998 04 21	704	1.0−	0.7+
1995 10 22	557	0.3+	0.1−	1995 11 21	557	0.6−	0.8+	1998 04 21	704	(1.4+)	3.4−)
1995 10 22	557	0.4+	0.2−	1995 11 21	557	0.4−	0.1−	1998 04 21	704	0.5−	0.2+
1995 10 22	557	0.2+	0.2−	1998 03 31	910	0.3−	0.3+	1998 04 22	704	0.9+	0.6−
1995 10 22	557	0.3−	0.2−	1998 03 31	910	0.5−	0.1+	1998 04 22	704	0.7+	0.1+
1995 10 26	557	0.1−	0.2+	1998 03 31	910	0.2−	0.1+	1998 04 22	704	0.6−	0.1+
1995 10 26	557	0.3−	0.2+	1998 04 21	704	0.5+	0.3−	1998 04 22	704	1.0+	1.2+

1995 UC₉ = 1998 HM₄₉

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19629183	ω	84.17776	−0.57428773	−0.81819036		
<i>a</i>	2.9322517	Ω	40.91234	+0.73348138	−0.52918594		
<i>e</i>	0.0578254	<i>i</i>	2.40961	+0.36359136	−0.22478162		
<i>P</i>	5.02	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 10 14	369	0.6+	0.7−	1995 10 27	369	(1.0−	2.1+)	1998 04 22	704	0.2+	0.3−
1995 10 14	369	1.0+	0.6−	1995 10 30	369	0.2+	0.4−	1998 04 22	704	(2.1−	2.3+)
1995 10 14	369	0.6+	0.7+	1995 10 30	369	0.1+	0.9+	1998 04 22	704	(5.2−	0.5−)
1995 10 15	691	0.8−	0.3−	1995 11 16	369	1.3+	1.1−	1998 04 24	046	0.2+	0.1+
1995 10 15	691	0.8−	0.2−	1995 11 16	369	0.3−	0.8+	1998 04 24	046	0.3+	0.2−
1995 10 20	369	0.3−	0.9+	1995 11 16	369	0.2+	0.2+	1998 04 24	046	0.4+	0.3−
1995 10 20	369	0.2+	0.3−	1998 04 21	704	0.3+	0.4−	1998 04 24	046	0.2+	0.1−
1995 10 20	369	0.4+	0.4+	1998 04 21	704	1.6+	1.3−	1998 05 01	046	0.1−	0.1−
1995 10 21	369	(2.3−	0.1−)	1998 04 21	704	1.8−	0.1−	1998 05 01	046	0.6−	0.2+
1995 10 21	369	0.4−	0.3−	1998 04 21	704	0.2−	0.6+	1998 05 01	046	0.6−	0.1+
1995 10 21	369	2.0−	0.2−	1998 04 21	704	0.8+	1.1+	1998 05 01	046	0.3−	0.1+
1995 10 27	369	(2.6−	1.1−)	1998 04 22	704	0.5+	0.8−	1998 05 01	046	0.3−	0.4+
1995 10 27	369	(2.9−	1.5+)	1998 04 22	704	0.6−	1.0+				

1995 UE₁₅ = 1992 EV₃₃ = 1998 HP₆₇

Id. G. V. Williams, A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17808955	ω	307.95870	−0.98711520	+0.14732807		
<i>a</i>	3.1287949	Ω	240.59325	−0.11487120	−0.92410351		
<i>e</i>	0.0922928	<i>i</i>	4.10981	−0.11139205	−0.35260054		
<i>P</i>	5.53	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 03 05	809	0.7−	0.8+	1995 11 17	691	0.1−	1.0+	1998 04 21	704	0.7+	0.3+
1992 03 09	809	0.5+	1.3−	1995 11 17	691	0.0	0.9+	1998 04 21	704	1.1+	0.4+
1995 10 17	691	0.1−	0.0	1995 11 17	691	0.1+	1.0+	1998 04 21	704	0.6−	0.7+
1995 10 17	691	0.0	0.5−	1995 11 28	691	0.2−	0.1+	1998 04 22	704	0.3+	0.1+
1995 10 17	691	0.0	0.2−	1995 11 28	691	0.2−	0.1+	1998 04 22	704	0.1−	0.9−
1995 10 23	691	0.0	0.2−	1995 11 28	691	0.1−	0.2−	1998 04 22	704	0.6−	0.7+

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1995 10 23 691 0.1+ 0.1- 1998 04 21 704 0.0 0.4+ 1998 04 22 704 0.5- 0.1-
 1995 10 23 691 0.2+ 0.4- 1998 04 21 704 0.6+ 0.9- 1998 04 22 704 0.3- 0.8+

1995 UQ₁₆ = 1998 KQ₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 335.59046 (2000.0) Williams *P* *Q*
n 0.23778714 ω 200.86090 +0.27429132 +0.95797431
a 2.5803412 Ω 85.13409 -0.86992789 +0.28439530
e 0.1658103 *i* 4.83376 -0.40986551 +0.03747724
P 4.14 *H* 14.0 *G* 0.15 *U* 4

Residuals in seconds of arc

1995 10 17 691 0.4- 0.0 1998 05 22 704 0.5- 0.2- 1998 05 24 704 0.0 0.0
 1995 10 17 691 0.0 0.0 1998 05 22 704 0.6- 0.8- 1998 05 24 704 0.8+ 0.3-
 1995 10 17 691 0.0 0.0 1998 05 22 699 0.5+ 0.3+ 1998 05 24 704 0.2+ 0.5-
 1995 10 23 691 0.2+ 0.1+ 1998 05 22 704 1.1- 0.5- 1998 05 24 704 1.1+ 0.7+
 1995 10 23 691 0.2+ 0.1- 1998 05 22 699 0.0 0.3+ 1998 05 24 704 0.3- 0.4-
 1995 10 28 691 0.3- 0.2+ 1998 05 22 699 0.7+ 0.3- 1998 06 03 704 0.0 0.0
 1995 10 28 691 0.3+ 0.2- 1998 05 23 699 0.1+ 0.8+ 1998 06 03 704 1.0- 0.3+
 1998 05 22 704 0.1- 0.2+ 1998 05 23 699 0.1- 0.2+ 1998 06 03 704 0.1- 0.8-
 1998 05 22 704 0.2- 0.1+ 1998 05 23 699 0.0 0.4+ 1998 06 03 704 0.6+ 0.4+

1995 UV₁₆ = 1998 HK₉₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 326.43794 (2000.0) Williams *P* *Q*
n 0.23578923 ω 211.89522 +0.31137138 +0.94490145
a 2.5948967 Ω 76.41450 -0.84856792 +0.32432697
e 0.2091791 *i* 5.96659 -0.42776203 +0.04442145
P 4.18 *H* 15.0 *G* 0.15 *U* 4

Residuals in seconds of arc

1995 10 17 691 0.9- 0.3- 1998 04 21 704 0.4- 0.4- 1998 05 22 704 0.2+ 0.7-
 1995 10 17 691 0.6- 0.3- 1998 04 21 704 0.1- 0.3+ 1998 05 22 704 0.0 0.2-
 1995 10 17 691 0.4- 0.2- 1998 04 21 704 0.0 0.6+ 1998 05 22 704 0.6- 0.6-
 1995 10 25 691 0.2+ 0.2+ 1998 04 22 704 0.7+ 0.7- 1998 05 22 704 1.6- 0.7+
 1995 10 25 691 0.0 0.2+ 1998 04 22 704 0.4+ 0.4+ 1998 05 24 704 0.4+ 0.9+
 1995 10 25 691 0.0 0.1+ 1998 04 22 704 0.2- 0.2- 1998 05 24 704 (0.8- 2.7-)
 1995 10 28 691 0.6+ 0.6+ 1998 04 22 704 0.1- 0.2- 1998 05 24 704 1.1+ 1.3+
 1995 10 28 691 0.7+ 0.5+ 1998 04 22 704 (2.4- 0.3+) 1998 05 24 704 0.4- 0.4-
 1995 10 28 691 0.1+ 0.1- 1998 04 25 699 0.1+ 0.9+ 1998 05 24 704 0.1+ 0.1-
 1998 04 21 704 0.2- 0.4+ 1998 04 25 699 0.4+ 0.7-
 1998 04 21 704 0.2+ 0.5- 1998 04 25 699 0.3+ 0.3-

1995 UB₂₁ = 1991 TZ₃ = 1998 KM₄₀

Id. G. V. Williams, D. Asher

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 354.16813 (2000.0) Williams *P* *Q*
n 0.25556293 ω 58.70580 -0.05026540 +0.99672750
a 2.4592583 Ω 208.61896 -0.95536929 -0.06646164
e 0.1498791 *i* 7.59490 -0.29110634 +0.04601239
P 3.86 *H* 15.0 *G* 0.15 *U* 4

Residuals in seconds of arc

1991 10 04 033 0.6+ 0.4+ 1995 10 27 691 0.3- 0.2- 1998 05 27 358 (3.2- 0.7-)
 1991 10 04 033 0.3+ 0.3+ 1998 05 22 704 0.1+ 0.5- 1998 05 27 358 0.4- 0.3-
 1991 10 05 033 1.2- 0.1+ 1998 05 22 704 0.4- 0.4+ 1998 05 27 358 (3.2- 0.7-)
 1995 10 19 691 0.5+ 0.0 1998 05 22 704 0.1- 0.4- 1998 05 30 358 (0.5+ 2.3+)
 1995 10 19 691 0.3+ 0.0 1998 05 22 704 0.2+ 1.0- 1998 05 30 358 (0.4+ 2.2+)
 1995 10 19 691 0.2+ 0.2+ 1998 05 22 704 0.4+ 0.2+ 1998 05 30 358 (2.3- 5.5+)
 1995 10 22 691 0.2+ 0.3- 1998 05 24 704 0.1- 0.3- 1998 06 03 704 0.6+ 0.3+
 1995 10 22 691 0.1- 0.1- 1998 05 24 704 0.5- 0.5+ 1998 06 03 704 0.4+ 0.4+
 1995 10 22 691 0.0 0.5- 1998 05 24 704 0.5- 0.2+ 1998 06 03 704 0.3+ 0.1+
 1995 10 27 691 0.5- 0.2- 1998 05 24 704 0.1+ 1.1- 1998 06 03 704 0.3+ 0.5+
 1995 10 27 691 0.0 0.2- 1998 05 24 704 0.2- 0.6+ 1998 06 03 704 0.3- 0.0

1995 UF₂₄ = 1998 HV₈₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 288.72928 (2000.0) Williams *P* *Q*
n 0.23192384 ω 34.02175 +0.77264500 +0.63393140
a 2.6236493 Ω 286.60059 -0.59004724 +0.69739007
e 0.1496324 *i* 2.02853 -0.23423058 +0.33433227
P 4.25 *H* 15.5 *G* 0.15 *U* 4

Residuals in seconds of arc

1995 10 19 691 0.2- 0.8- 1995 11 28 691 0.0 0.8+ 1998 05 16 691 0.5- 0.9+
 1995 10 19 691 0.0 0.6- 1998 04 21 704 0.5+ 0.1+ 1998 05 24 691 0.4- 0.5+
 1995 10 19 691 0.1- 0.5- 1998 04 21 704 1.1- 0.2+ 1998 05 24 691 0.5- 0.4+
 1995 10 24 691 0.0 0.5- 1998 04 21 704 1.3+ 0.8- 1998 05 27 691 0.7+ 0.4+
 1995 10 24 691 0.0 0.5- 1998 04 21 704 (4.1- 0.4-) 1998 05 27 691 0.6+ 0.2+
 1995 10 24 691 0.1+ 0.5- 1998 04 22 704 0.7+ 0.7- 1998 05 27 691 0.6+ 0.1+
 1995 11 17 691 0.3- 0.6+ 1998 04 22 704 1.4- 1.2- 1998 05 31 691 0.4+ 0.1-
 1995 11 17 691 0.3- 0.7+ 1998 04 22 704 0.3+ 1.7- 1998 05 31 691 1.4- 1.3+
 1995 11 17 691 0.2- 0.6+ 1998 04 22 704 (2.0+ 0.0) 1998 05 31 691 0.9+ 0.3+
 1995 11 28 691 0.4+ 0.9+ 1998 04 22 704 (1.0- 2.7-) 1998 05 31 691 0.9+ 0.3+
 1995 11 28 691 0.4+ 0.4+ 1998 05 16 691 0.6- 0.6+

1995 UK₂₈ = 1998 HH₁₀₂

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 288.43929 (2000.0) Williams *P* *Q*
n 0.25772642 ω 294.01086 +0.89977579 +0.43155114
a 2.4454761 Ω 40.50618 -0.35547288 +0.81073154
e 0.1425226 *i* 5.70374 -0.25306631 +0.39557297
P 3.82 *H* 14.5 *G* 0.15 *U* 4

Residuals in seconds of arc

1995 09 21 033 0.9+ 0.3- 1998 04 25 809 0.7- 0.0 1998 05 22 704 0.0 0.6+
 1995 09 21 033 0.6- 0.5- 1998 04 25 809 1.1- 1.3- 1998 05 22 704 0.2- 0.5-
 1995 09 23 033 0.3+ 0.2+ 1998 04 25 809 0.5- 1.1- 1998 05 22 699 0.0 0.1-
 1995 10 20 691 0.2- 0.2+ 1998 04 28 809 1.6+ 2.0+ 1998 05 22 699 0.2- 1.4+
 1995 10 20 691 0.3- 0.2+ 1998 04 28 809 0.0 0.2+ 1998 05 22 699 0.4+ 0.0
 1995 10 20 691 0.4- 0.1+ 1998 04 28 809 0.4- 0.9+ 1998 05 24 704 0.3- 0.8+
 1995 10 26 691 0.2+ 0.2+ 1998 05 22 704 0.1+ 0.1+ 1998 05 24 704 0.6- 0.8-
 1995 10 26 691 0.0 0.0 1998 05 22 704 1.5+ 1.3- 1998 05 24 704 0.0 0.6-
 1995 10 26 691 0.0 0.0 1998 05 22 704 0.8+ 0.1+ 1998 05 24 704 0.2- 0.1-

1995 UJ₃₁ = 1998 HH₆₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

M 166.20825 (2000.0) Williams *P* *Q*
n 0.19094524 ω 40.04044 +0.60687362 -0.79477414
a 2.9867359 Ω 12.59986 +0.72174330 +0.54780673
e 0.1243945 *i* 1.62947 +0.33285285 +0.26123142
P 5.16 *H* 13.0 *G* 0.15 *U* 5

Residuals in seconds of arc

1995 10 02 691 0.2+ 0.1- 1995 10 27 691 0.3+ 0.1+ 1998 04 21 704 1.1+ 0.2+
 1995 10 02 691 0.0 0.1+ 1995 10 27 691 0.3+ 0.2+ 1998 04 22 704 0.3- 0.3-
 1995 10 02 691 0.0 0.2+ 1995 10 27 691 0.1+ 0.0 1998 04 22 704 0.4- 0.7-
 1995 10 21 691 0.3- 0.0 1998 04 21 704 0.6- 0.7- 1998 04 22 704 0.4- 0.2-
 1995 10 21 691 0.5- 0.2- 1998 04 21 704 0.2+ 1.5+ 1998 04 22 704 1.1+ 0.4-
 1995 10 21 691 0.2- 0.1- 1998 04 21 704 0.3- 0.9+ 1998 04 22 704 0.4- 0.4-

1995 UQ₄₄ = 1998 HS₁₄₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	286.34368	ω	303.64950	+0.77018220	+0.63431694		
<i>a</i>	2.5775640	Ω	17.29264	-0.48505586	+0.65049321		
<i>e</i>	0.1688691	<i>i</i>	12.98547	-0.41417412	+0.41773270		
<i>P</i>	4.14	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 10 22	408	1.3+	0.7+	1998 04 21	704	0.0	0.3-	1998 04 28	566	0.8-	0.1-
1995 10 22	408	0.5-	0.0	1998 04 21	704	0.4+	0.3-	1998 04 28	566	0.8-	0.2-
1995 10 26	408	0.2-	0.7-	1998 04 21	704	0.4+	0.1+	1998 04 28	566	0.9-	0.1+
1995 10 26	408	1.4-	0.3-	1998 04 21	704	1.0+	0.8-	1998 05 16	704	(0.5+ 2.1+)	
1995 10 27	408	0.5+	0.1+	1998 04 22	704	0.1+	0.9+	1998 05 16	704	1.4+	1.3+
1995 10 27	408	0.1+	0.3+	1998 04 22	704	0.0	0.1+	1998 05 16	704	0.0	0.7-
1998 04 19	428	1.2-	0.6-	1998 04 22	704	0.2-	0.1+	1998 05 16	704	0.7-	0.8-
1998 04 19	428	0.4-	0.4-	1998 04 22	704	0.7+	0.2-	1998 05 16	704	(2.7- 1.9-)	
1998 04 21	704	0.4+	0.2+	1998 04 22	704	0.6+	1.8+				

1995 VV = 1998 HC₅₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	227.82919	ω	324.38518	+0.99115721	-0.04906780		
<i>a</i>	3.0039501	Ω	38.99621	+0.10754545	+0.84129470		
<i>e</i>	0.0487504	<i>i</i>	11.29855	-0.07772618	+0.53834522		
<i>P</i>	5.21	<i>H</i>	13.1	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 11 11	608	0.3-	1.3-	1995 11 24	691	0.6-	0.5-	1998 04 22	704	0.6-	2.0-
1995 11 11	608	1.0-	1.7-	1995 11 24	691	0.2+	0.6-	1998 04 22	704	0.2-	0.3+
1995 11 12	608	0.9+	0.9+	1995 11 24	691	0.1-	0.6-	1998 04 22	704	0.1+	0.1-
1995 11 12	608	0.7+	1.2+	1998 04 21	704	0.3+	0.2+	1998 04 30	699	0.6+	0.2+
1995 11 12	608	0.9+	1.1+	1998 04 21	704	0.7-	0.1-	1998 04 30	699	0.2-	0.2+
1995 11 17	608	0.7+	0.9+	1998 04 21	704	0.1-	1.0+	1998 04 30	699	0.2+	0.3-
1995 11 17	608	0.9+	0.6+	1998 04 21	704	0.4-	0.4+	1998 05 01	699	0.9+	0.8-
1995 11 18	691	0.6-	0.1+	1998 04 21	704	0.2-	1.1+	1998 05 01	699	0.4-	0.6+
1995 11 18	691	0.6-	0.1-	1998 04 22	704	0.2+	0.1+	1998 05 01	699	0.1-	0.3-
1995 11 18	691	1.1-	0.1-	1998 04 22	704	0.7+	0.5-				

1995 VG₁₃ = 1998 HD₉₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	271.95465	ω	209.03385	+0.79405513	+0.60524470		
<i>a</i>	2.8331235	Ω	113.61117	-0.54518423	+0.75001536		
<i>e</i>	0.0326393	<i>i</i>	3.51467	-0.26879472	+0.26675045		
<i>P</i>	4.77	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1995 11 15	691	0.3+	0.2+	1995 11 26	691	0.3-	0.3-	1998 04 21	704	0.4-	0.8+
1995 11 15	691	0.2+	0.1+	1995 11 26	691	0.3-	0.1+	1998 04 21	704	0.6-	0.4+
1995 11 15	691	0.1+	0.0	1995 11 26	691	0.2+	0.3-	1998 04 22	704	0.1+	1.2-
1995 11 20	691	0.1-	0.0	1998 04 21	704	0.9+	1.1+	1998 04 22	704	0.4-	0.9-
1995 11 20	691	0.3-	0.1-	1998 04 21	704	0.2+	1.4+	1998 04 22	704	0.5+	0.9-
1995 11 20	691	0.3+	0.0	1998 04 21	704	0.8+	1.1+	1998 04 22	704	1.2-	1.9-

1995 WO = 1991 RH₃₄ = 1998 KQ₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	308.09282	ω	138.85259	+0.91821257	+0.39359545		
<i>a</i>	2.3802630	Ω	198.11822	-0.39039058	+0.88038013		
<i>e</i>	0.2782265	<i>i</i>	8.20204	-0.06693934	+0.26460056		
<i>P</i>	3.67	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1991 09 12	675	0.1+	1.3+	1995 11 20	887	0.8+	0.1-	1998 05 22	704	0.4+	0.4-
1991 09 12	675	0.1-	1.4-	1995 11 24	887	1.5+	0.0	1998 05 22	704	0.1+	0.2-
1995 11 16	385	0.8-	0.1-	1995 11 24	887	1.5+	0.5-	1998 05 22	704	0.4+	0.3-
1995 11 16	385	0.6-	0.2+	1995 11 24	887	0.9+	0.4-	1998 05 22	704	0.3+	1.0-
1995 11 16	385	0.9-	0.1-	1995 11 26	887	0.5-	0.6-	1998 05 22	704	0.3-	0.3-
1995 11 17	385	0.5-	0.5-	1995 11 26	887	1.9+	0.8+	1998 05 24	704	0.2+	1.0+
1995 11 17	385	0.7-	0.8-	1995 11 26	887	0.8+	0.0	1998 05 24	704	0.3-	0.3+
1995 11 17	385	0.9-	0.1+	1995 11 27	887	0.2+	0.9-	1998 05 24	704	0.3+	0.9+
1995 11 18	385	0.0	0.2+	1995 11 27	887	0.6-	1.5+	1998 05 24	704	0.9+	0.2+
1995 11 18	385	0.3+	0.0	1995 11 27	887	0.2-	1.0+	1998 05 24	704	1.3-	1.3-
1995 11 18	385	0.7-	0.3-	1995 12 12	887	0.7-	0.5-	1998 06 03	704	(0.3+ 2.3+)	
1995 11 20	887	0.2+	0.9+	1995 12 12	887	0.8-	0.5-	1998 06 03	704	0.9-	0.0
1995 11 20	887	0.3+	0.1+	1995 12 12	887	0.7-	0.2+	1998 06 03	704	0.1+	0.9+

1995 WY = 1998 KA₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	131.23306	ω	40.78344	-0.35679329	-0.91851372		
<i>a</i>	3.0509041	Ω	70.74235	+0.80334903	-0.39476533		
<i>e</i>	0.0569337	<i>i</i>	10.39796	+0.47679019	-0.02220092		
<i>P</i>	5.33	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 11 16	411	0.0	0.2+	1995 12 01	411	1.2+	0.5-	1998 05 23	699	0.0	0.3+
1995 11 16	411	1.3-	1.3-	1995 12 08	411	0.5+	0.4-	1998 05 24	704	0.3+	0.1-
1995 11 18	411	0.4+	1.6+	1995 12 08	411	0.3+	0.3+	1998 05 24	704	0.1-	0.3-
1995 11 18	411	0.3+	0.0	1998 05 22	704	0.2+	0.0	1998 05 24	699	0.2+	0.4+
1995 11 18	399	0.7+	1.2-	1998 05 22	704	0.3+	0.0	1998 05 24	704	0.5+	0.8+
1995 11 18	399	0.5+	0.1-	1998 05 22	704	0.9-	0.2-	1998 05 24	699	0.4+	0.4+
1995 11 24	411	0.4+	0.1+	1998 05 22	704	0.2-	0.9-	1998 05 24	699	0.4-	0.2+
1995 11 24	411	0.1+	0.7+	1998 05 22	704	0.0	0.4+	1998 05 24	704	0.1-	0.3+
1995 11 25	399	1.1-	0.7+	1998 05 22	699	0.3+	0.1+	1998 05 24	704	0.8-	0.7+
1995 11 25	399	(3.1- 1.5+)		1998 05 22	699	0.3+	0.2-	1998 06 03	704	0.3-	1.0-
1995 11 27	411	0.4-	0.5-	1998 05 22	699	0.3-	0.4-	1998 06 03	704	2.0+	0.7-
1995 11 27	411	0.2-	0.5-	1998 05 23	699	0.0	0.3-	1998 06 03	704	1.8-	0.9-
1995 12 01	411	0.6-	0.4-	1998 05 23	699	0.1+	0.2-	1998 06 03	704	0.2-	0.2+

1995 WW₂ = 1984 UD₁ = 1998 HE₈₆

Id. G. V. Williams, S. Nakano, A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	205.59185	ω	166.81196	+0.89659420	-0.43364600		
<i>a</i>	3.0602856	Ω	219.28440	+0.39234721	+0.87190308		
<i>e</i>	0.1695756	<i>i</i>	8.15655	+0.20538380	+0.22745587		
<i>P</i>	5.35	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1984 10 28	046	(4.9+ 11.3-)		1995 11 26	411	0.4-	0.9+	1998 04 21	704	0.6+	0.5-
1984 10 28	046	(0.5- 5.7-)		1995 11 26	411	0.3+	0.3+	1998 04 21	704	0.4+	0.9+
1984 10 29	046	0.4+	1.5-	1995 11 28	411	0.1+	0.1+	1998 04 21	704	(4.7- 2.9+)	
1984 10 29	046	0.8-	3.0+	1995 11 28	411	0.6+	0.3-	1998 04 22	704	0.1-	1.0+
1984 10 30	046	1.0-	1.1+	1995 12 01	411	0.2+	0.3-	1998 04 22	704	1.2-	0.0
1984 10 30	046	0.8+	0.7+	1995 12 01	411	0.4+	0.2+	1998 04 22	704	1.0+	0.2+
1995 11 20	411	0.2-	0.1-	1995 12 09	411	0.7-	1.2+	1998 04 22	704	1.3+	0.6+
1995 11 20	411	0.2+	0.1+	1995 12 09	411	0.6-	0.5+	1998 04 22	704	1.0-	0.1-
1995 11 21	411	0.4+	0.9-	1998 04 21	704	0.2-	1.1+				
1995 11 21	411	0.2-	2.1-	1998 04 21	704	0.1-	0.3+				

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1995 WM₄ = 1998 KK₄₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23665096	ω	236.32717	+0.91538353	+0.39586665		
<i>a</i>	2.5885936	Ω	100.25837	-0.34033013	+0.85809318		
<i>e</i>	0.1575835	<i>i</i>	4.26786	-0.21505439	+0.32705610		
<i>P</i>	4.16	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 11 20	411	1.3-	1.1-	1995 12 01	411	0.0	0.4+	1998 05 22	704	2.3-	2.4-
1995 11 20	411	1.8-	0.2-	1995 12 10	411	0.8-	0.2+	1998 05 22	704	0.8-	1.1+
1995 11 24	411	1.5+	0.9+	1995 12 10	411	0.8+	1.0-	1998 05 24	704	0.2+	0.6+
1995 11 24	411	1.0+	1.0+	1995 12 20	411	0.7-	0.9+	1998 05 24	704	0.2+	1.3+
1995 11 28	411	0.6+	0.3-	1995 12 20	411	0.5-	0.5-	1998 05 24	704	0.7+	1.1+
1995 11 28	411	0.5+	0.2+	1998 05 22	704	1.3+	0.1+	1998 05 24	704	1.0+	0.7+
1995 12 01	411	0.6+	0.5-	1998 05 22	704	0.8+	0.3-	1998 05 24	704	1.0-	2.2-

1995 WQ₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27400009	ω	283.61747	+0.91043795	-0.20400015		
<i>a</i>	2.3476621	Ω	89.07827	+0.34173098	+0.86111327		
<i>e</i>	0.4125523	<i>i</i>	21.09339	-0.23307227	+0.46569075		
<i>P</i>	3.60	<i>H</i>	17.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1995 11 24	413	0.4-	1.2+	1995 12 05	817	0.5-	1.2+	1995 12 28	046	0.1+	0.5+
1995 11 24	413	1.6+	1.8-	1995 12 05	817	(1.7+	2.4-)	1995 12 28	046	0.2+	0.3+
1995 11 27	896	1.8+	0.3-	1995 12 05	817	0.1-	0.8-	1995 12 28	046	0.1+	0.1-
1995 11 27	896	0.8-	1.0+	1995 12 08	413	0.4+	0.1+	1995 12 28	046	0.2+	0.0
1995 11 27	896	0.4-	0.1+	1995 12 08	413	0.3+	0.2+	1996 01 09	413	0.1-	0.0
1995 11 27	897	0.0	0.3-	1995 12 08	413	0.2+	0.4+	1996 01 09	413	0.0	0.2+
1995 11 27	897	0.3+	0.5+	1995 12 13	360	0.1+	0.4+	1996 01 09	413	0.4-	0.2+
1995 11 27	897	0.4+	0.2+	1995 12 13	360	0.8+	1.1+	1996 01 17	658	0.5-	0.4-
1995 11 27	411	0.0	0.8-	1995 12 14	608	0.9+	1.2-	1996 01 17	658	0.2+	0.3-
1995 11 27	897	0.3-	0.4+	1995 12 14	608	0.9+	0.8-	1996 01 17	658	0.5+	0.6-
1995 11 27	411	1.0-	0.1-	1995 12 14	400	0.1+	0.3-	1996 01 17	046	0.7+	0.7-
1995 11 27	411	0.9-	0.1-	1995 12 14	400	1.3+	0.1+	1996 01 17	046	0.6+	0.6-
1995 11 27	887	0.8-	0.8+	1995 12 19	400	0.1-	0.0	1996 01 17	046	0.0	0.3-
1995 11 27	887	1.1-	0.1+	1995 12 19	400	1.9+	1.1+	1996 01 18	587	0.5+	0.0
1995 11 28	896	0.0	1.0+	1995 12 19	897	1.5-	0.1+	1996 01 25	658	1.2+	0.4+
1995 11 28	896	0.8-	0.7-	1995 12 19	897	0.9-	0.3-	1996 01 25	658	0.7-	0.9-
1995 11 28	896	1.2+	1.2-	1995 12 19	108	1.1+	0.3-	1996 01 25	658	0.8-	0.7-
1995 11 28	897	0.3-	0.5+	1995 12 19	108	0.7-	0.9+	1996 02 02	658	1.4-	0.2+
1995 11 28	897	0.4-	0.2-	1995 12 19	108	0.2+	0.9-	1996 02 02	658	0.9-	0.5-
1995 11 28	372	1.2-	0.3+	1995 12 19	108	0.3-	1.5-	1996 02 02	658	0.3-	0.8+
1995 11 28	372	0.8-	0.2+	1995 12 22	608	0.8+	1.1+	1996 02 16	658	0.5-	0.7+
1995 11 28	587	0.5+	1.2-	1995 12 22	608	0.6+	0.8+	1996 02 16	658	0.9-	0.6-
1995 11 28	587	0.6-	0.0	1995 12 23	658	0.0	0.3+	1996 02 16	658	0.2+	0.1+
1995 11 29	360	0.1-	0.3-	1995 12 23	658	0.2+	0.3+	1998 05 15	568	0.6-	0.1-
1995 11 29	360	0.1+	0.5-	1995 12 23	658	0.3+	0.3+	1998 05 15	568	0.3-	0.0
1995 11 29	360	0.1-	0.2-	1995 12 24	658	0.4+	0.8+	1998 05 29	568	0.3+	0.0
1995 11 29	587	0.3-	0.5-	1995 12 24	658	0.0	1.0+	1998 05 29	568	0.7+	0.1-
1995 11 29	587	0.1-	0.7-	1995 12 24	658	0.3+	0.8+				

1995 WT₁₅ = 1998 HC₆₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20093911	ω	351.45318	+0.94703867	-0.32063441		
<i>a</i>	2.8868645	Ω	27.26845	+0.29685130	+0.85319009		
<i>e</i>	0.0850939	<i>i</i>	2.20711	+0.12246250	+0.41141250		
<i>P</i>	4.91	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1995 11 17	691	0.2-	0.6+	1995 11 28	691	0.2+	0.1-	1998 04 21	704	0.8-	0.5+
1995 11 17	691	0.2-	0.5+	1995 11 28	691	0.4+	0.5-	1998 04 22	704	1.5+	1.1-
1995 11 17	691	0.1-	0.7+	1995 11 28	691	0.1+	0.6-	1998 04 22	704	0.4+	0.2-
1995 11 23	691	0.3-	0.1-	1998 04 21	704	0.2-	1.0-	1998 04 22	704	0.9-	0.2+
1995 11 23	691	0.0	0.1-	1998 04 21	704	0.4+	0.6+	1998 04 22	704	0.6+	0.9+
1995 11 23	691	0.1-	0.0	1998 04 21	704	0.2+	0.0	1998 04 22	704	0.9-	0.5+

1995 YB = 1998 KA₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22852095	ω	239.37540	+0.89390478	+0.38815662		
<i>a</i>	2.6496308	Ω	96.96985	-0.29327572	+0.88469897		
<i>e</i>	0.2364032	<i>i</i>	13.05439	-0.33900382	+0.25815147		
<i>P</i>	4.31	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 12 17	411	1.1-	0.4+	1995 12 30	411	0.1+	0.6+	1998 05 27	691	0.4-	0.0
1995 12 17	411	0.5-	0.1+	1995 12 30	411	1.0+	0.4+	1998 05 27	691	0.1-	0.1+
1995 12 19	411	0.0	0.2-	1996 01 09	411	0.1+	0.5+	1998 05 27	691	0.3-	0.0
1995 12 19	411	0.4-	0.6-	1996 01 09	411	0.6+	0.4-	1998 05 29	691	0.1-	0.1-
1995 12 24	411	0.4+	0.5-	1998 05 01	699	0.6+	0.4-	1998 05 29	691	0.2-	0.2+
1995 12 24	411	0.2-	0.1-	1998 05 01	699	0.3+	0.4+	1998 05 29	691	0.2+	0.0
1995 12 26	411	0.1+	0.2-	1998 05 01	699	0.0	0.2-				

1995 YH = 1998 KY₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19102775	ω	94.48990	+0.96341452	+0.22449049		
<i>a</i>	2.9858758	Ω	252.58918	-0.26276178	+0.89877467		
<i>e</i>	0.1266892	<i>i</i>	8.82646	+0.05280829	+0.37657418		
<i>P</i>	5.16	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 12 17	411	0.4-	0.2+	1998 04 22	704	0.2+	0.4+	1998 05 22	704	0.1-	0.1-
1995 12 17	411	0.5-	0.0	1998 04 22	704	0.4+	1.0+	1998 05 22	704	0.7-	0.0
1995 12 19	411	0.1-	0.1+	1998 04 22	704	0.4-	0.8+	1998 05 22	704	1.3+	0.6+
1995 12 19	411	0.4-	0.4+	1998 04 22	704	0.6+	0.3-	1998 05 22	704	0.1+	0.1-
1995 12 23	411	0.6+	0.1-	1998 04 22	704	(3.1-	1.7-)	1998 05 22	704	0.0	0.3+
1995 12 23	411	0.2+	0.6-	1998 05 01	704	0.5-	0.3-	1998 05 24	704	0.6-	0.0
1995 12 26	411	0.3+	0.4-	1998 05 01	704	0.1+	0.8-	1998 05 24	704	0.2+	0.3-
1995 12 26	411	0.2+	0.3-	1998 05 01	704	0.5+	0.5-	1998 05 24	704	0.5+	0.0
1995 12 30	411	0.1+	0.9+	1998 05 01	704	0.1-	0.7-	1998 05 24	704	0.3-	0.1-
1995 12 30	411	0.2+	0.1+	1998 05 01	566	0.2-	0.1-	1998 05 24	704	0.3-	0.3+
1996 01 09	411	0.2-	0.3+	1998 05 01	566	0.3-	0.0				
1996 01 09	411	0.1-	0.7-	1998 05 01	566	0.2-	0.1-				

1995 YE₅ = 1998 HG₇₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19406427	ω	205.67055	+0.45112617	+0.89068675		
<i>a</i>	2.9546474	Ω	91.18944	-0.80881886	+0.43466733		
<i>e</i>	0.0789199	<i>i</i>	3.22439	-0.37722306	+0.13319696		
<i>P</i>	5.08	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1995 12 16	691	0.1+	0.0	1995 12 28	691	0.1-	0.5+	1998 04 22	704	0.5+	0.3+
1995 12 16	691	0.2+	0.1-	1995 12 28	691	0.1-	0.1+	1998 04 22	704	0.2-	1.0-
1995 12 16	691	0.1-	0.3-	1998 04 21	704	0.1-	1.5+	1998 04 22	704	0.5+	1.0-
1995 12 22	691	0.0	0.2+	1998 04 21	704	1.2+	1.2-	1998 04 22	704	1.2+	0.1+
1995 12 22	691	0.1+	0.3-	1998 04 21	704	1.6-	0.9+	1998 04 22	704	2.2-	0.7-
1995 12 22	691	0.2+	0.2-	1998 04 21	704	0.0	0.7+				
1995 12 28	691	0.3-	0.0	1998 04 21	704	0.8+	0.4+				

1996 KV₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	341.50413		(2000.0)		P		Q
<i>n</i>	0.00324357	ω	186.59573	+0.15932307	+0.97719496		
<i>a</i>	45.1981447	Ω	92.63796	-0.89922083	+0.20233314		
<i>e</i>	0.1044801	<i>i</i>	8.07838	-0.40745314	-0.06443064		
<i>P</i>	304	<i>H</i>	7.0	<i>G</i>	0.15	<i>U</i>	7
Residuals in seconds of arc							
1996 05 21	568	0.1+	0.2+	1996 05 22	568	0.0	0.4+
1996 05 21	568	0.2+	0.1+	1996 05 22	568	0.2-	0.3+
1996 05 21	568	0.0	0.0	1996 05 24	568	0.1-	0.8-
1996 05 22	568	0.1+	0.4+	1996 05 24	568	0.2-	0.9-
1996 05 22	568	0.1-	0.3+	1996 08 15	950	0.1+	0.1-

1996 RG₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Urata

<i>M</i>	154.40353		(2000.0)		P		Q
<i>n</i>	0.28691644	ω	273.96569	+0.77861623	-0.61511255		
<i>a</i>	2.2766648	Ω	124.04137	+0.61858746	+0.71919753		
<i>e</i>	0.1965054	<i>i</i>	8.61118	+0.10538654	+0.32309668		
<i>P</i>	3.44	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1996 09 03	905	0.4-	0.4-	1996 09 18	385	0.0	0.6+
1996 09 03	905	0.3+	0.1+	1996 10 05	905	0.8-	0.8-
1996 09 14	905	0.3-	0.8+	1996 10 05	905	1.2-	1.5-
1996 09 14	905	1.5+	0.6+	1996 11 14	385	0.2+	0.7+
1996 09 18	385	0.5+	0.0	1996 11 14	385	1.1+	0.1+
1996 09 18	385	0.2+	0.0	1996 11 14	385	1.0-	1.0-

1996 SH₄ = 1998 GR₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	88.73171		(2000.0)		P		Q
<i>n</i>	0.23111010	ω	73.18645	-0.30808711	-0.90078723		
<i>a</i>	2.6298043	Ω	39.36123	+0.57930651	-0.43280689		
<i>e</i>	0.0438361	<i>i</i>	28.85311	+0.75464317	-0.03550431		
<i>P</i>	4.26	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1996 09 19	327	0.0	0.7-	1996 10 05	327	0.2-	0.4+
1996 09 19	327	0.0	0.5+	1996 10 05	327	0.0	0.2+
1996 09 19	327	0.5-	0.4-	1996 10 07	327	0.3+	0.4+
1996 09 19	327	0.0	0.4-	1996 10 07	327	0.2+	0.3-
1996 09 21	327	0.2+	0.4+	1996 10 07	327	0.1-	0.5-
1996 09 21	327	0.0	0.4+	1998 04 02	704	0.3-	0.5-
1996 09 21	327	0.2+	0.3+	1998 04 02	704	0.3+	0.9+
1996 10 05	327	0.4-	0.2-	1998 04 02	704	1.0-	0.2+

1996 SJ₆ = 1998 FY₁₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	185.92084		(2000.0)		P		Q
<i>n</i>	0.27566853	ω	350.35629	+0.98917481	-0.14130189		
<i>a</i>	2.3381799	Ω	17.91288	+0.14174812	+0.85031422		
<i>e</i>	0.1341383	<i>i</i>	7.39458	+0.03795598	+0.50695118		
<i>P</i>	3.58	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1996 09 18	327	0.7+	0.1-	1996 09 21	327	0.0	0.2-
1996 09 18	327	0.4+	0.0	1996 09 22	327	0.2-	0.0
1996 09 18	327	0.2+	0.1-	1996 09 22	327	0.3-	0.1+
1996 09 20	327	0.5-	0.1-	1996 09 22	327	0.1-	0.1-
1996 09 20	327	0.0	0.0	1996 10 29	327	0.2-	0.1+
1996 09 20	327	0.3+	0.4+	1996 10 29	327	0.1-	0.3+

1996 09 20	327	0.4-	0.2+	1996 10 29	327	0.0	0.0	1998 03 26	704	0.2-	1.8-
1996 09 21	327	0.0	0.1-	1996 10 29	327	0.4+	0.3-				
1996 09 21	327	0.1-	0.0	1998 03 25	704	0.9+	0.3-				

1996 SC₇ = 1998 HN₁₃₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	150.11165		(2000.0)		P		Q
<i>n</i>	0.23406350	ω	14.78644	+0.71738913	-0.68787798		
<i>a</i>	2.6076357	Ω	29.63534	+0.61438997	+0.54999830		
<i>e</i>	0.1859271	<i>i</i>	12.89475	+0.32844756	+0.47363039		
<i>P</i>	4.21	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1996 09 21	327	0.6-	0.2+	1996 11 01	327	0.2+	0.2-
1996 09 21	327	0.2-	0.2+	1996 11 01	327	0.5+	0.2-
1996 09 21	327	0.1-	0.4-	1998 03 25	566	0.5+	0.3-
1996 09 22	327	0.3-	0.1-	1998 03 25	566	0.2+	0.2-
1996 09 22	327	0.4-	0.2+	1998 03 25	566	0.6+	0.8+
1996 09 22	327	0.5+	0.3+	1998 04 19	704	0.0	0.9+
1996 11 01	327	0.0	0.2+	1998 04 19	704	0.3+	0.0
1996 11 01	327	0.0	0.2-	1998 04 19	704	1.8-	1.0-

1996 TO₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	68.88051		(2000.0)		P		Q
<i>n</i>	0.22850226	ω	84.85575	-0.09108324	-0.99320225		
<i>a</i>	2.6497753	Ω	11.17645	+0.69923162	-0.11560671		
<i>e</i>	0.0827485	<i>i</i>	21.95795	+0.70906910	-0.01357866		
<i>P</i>	4.31	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1996 09 15	566	0.6-	0.3+	1996 10 16	824	0.2+	0.1+
1996 09 15	566	0.4-	0.3+	1996 10 16	824	0.3-	0.3-
1996 09 15	566	0.4-	0.3+	1996 10 17	824	0.1+	0.0
1996 10 12	824	0.3-	0.6-	1996 10 17	824	0.1+	0.4+
1996 10 12	824	0.6+	0.3-	1996 10 17	824	0.3+	0.1+
1996 10 12	824	0.3+	0.0	1996 10 17	824	0.2+	0.1+
1996 10 12	824	0.2+	0.2-	1996 10 18	824	0.0	0.5+
1996 10 15	824	0.1+	0.0	1996 10 18	824	0.2+	0.1+
1996 10 15	824	0.3-	0.9-	1996 10 18	824	0.0	0.1-
1996 10 15	824	0.2+	0.2-	1996 10 18	824	0.0	0.2-
1996 10 16	824	0.1+	0.2-	1997 02 01	696	0.0	0.2+
1996 10 16	824	0.1+	0.4-	1997 02 01	696	0.3+	1.2+

1996 TC₁₀ = 1988 GO₁ = 1998 HP₇₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	92.29081		(2000.0)		P		Q
<i>n</i>	0.29784491	ω	109.88777	-0.66843255	-0.74229513		
<i>a</i>	2.2206286	Ω	22.26947	+0.62775428	-0.59683529		
<i>e</i>	0.0979959	<i>i</i>	7.10299	+0.39890160	-0.30460725		
<i>P</i>	3.31	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1988 04 10	046	1.3-	0.0	1996 11 03	358	1.7+	0.6+
1988 04 10	046	0.1+	2.2-	1996 11 10	358	0.2-	1.4-
1996 10 08	358	0.3-	0.0	1996 11 10	358	(3.8-	0.5-)
1996 10 08	358	0.4-	1.3-	1998 04 21	704	0.8+	0.2+
1996 10 09	358	1.2+	0.2-	1998 04 21	704	0.9+	0.4+
1996 10 09	358	(0.3-	2.3-)	1998 04 21	704	0.4+	0.5+
1996 10 22	358	1.5+	1.8+	1998 04 21	704	0.6+	0.5-
1996 10 22	358	1.0-	0.4-	1998 04 21	704	0.4+	0.9-
1996 10 29	327	0.2-	0.5-	1998 04 22	704	0.2+	0.3+
1996 10 29	327	0.9-	0.5-	1998 04 22	704	0.5+	0.1+
1996 10 29	327	0.6-	0.5-	1998 04 22	704	0.2+	0.6-

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1996 10 29	327	0.3+	0.0	1998 04 22	704	0.5+	0.4+	1998 05 30	691	0.8+	0.3-
1996 11 03	358	0.5+	0.6-	1998 04 22	704	0.5+	0.5-				

1996 TD₁₅ = 1989 WH₇ = 1998 KY₅₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	139.27139	(2000.0)		P	Q		
<i>n</i>	0.28211795	ω	258.94604	-0.14448515	-0.98060654		
<i>a</i>	2.3024077	Ω	200.81854	+0.98904462	-0.13902816		
<i>e</i>	0.2069230	<i>i</i>	21.87496	+0.03024545	-0.13813753		
<i>P</i>	3.49	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1989 11 22	675	0.4-	0.5-	1998 05 23	704	0.1+	0.1-	1998 05 26	704	0.1-	0.7+
1989 11 22	675	0.4+	0.3+	1998 05 23	704	0.1-	0.2-	1998 06 03	704	0.1-	1.0-
1996 10 14	372	0.9-	0.9-	1998 05 23	704	0.5+	0.0	1998 06 03	704	0.3+	0.2-
1996 10 15	372	0.0	0.4-	1998 05 23	704	0.1-	0.1-	1998 06 03	704	0.4-	0.5+
1996 10 16	372	0.8+	0.4+	1998 05 26	704	0.5-	0.1+	1998 06 03	704	0.3-	1.1+
1996 10 19	372	1.4+	1.0+	1998 05 26	704	0.1+	0.0	1998 06 03	704	0.5+	0.4+
1996 10 20	372	1.4-	0.1-	1998 05 26	704	0.7+	0.4+				
1998 05 23	704	0.3+	1.0-	1998 05 26	704	0.9-	0.8-				

1996 TS₂₅ = 1998 HH₇₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	42.90848	(2000.0)		P	Q		
<i>n</i>	0.28683450	ω	143.82225	-0.99595064	+0.04792323		
<i>a</i>	2.2770984	Ω	39.13761	-0.07873287	-0.87337855		
<i>e</i>	0.1240277	<i>i</i>	6.92149	+0.04339872	-0.48467853		
<i>P</i>	3.44	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 06	691	0.5+	0.1+	1996 10 15	691	0.3-	0.1-	1998 04 22	704	0.1+	0.5-
1996 10 06	691	0.2+	0.1+	1996 10 15	691	0.1-	0.0	1998 04 22	704	0.8-	0.4+
1996 10 06	691	0.6+	0.1+	1996 10 15	691	0.2-	0.2+	1998 04 28	566	0.0	0.2-
1996 10 08	691	0.4+	0.1-	1998 04 21	704	0.1+	0.1+	1998 04 28	566	0.5+	0.3-
1996 10 08	691	0.0	0.1+	1998 04 21	704	0.2+	0.3-	1998 04 28	566	0.3-	0.7+
1996 10 08	691	0.2-	0.1+	1998 04 21	704	0.0	0.2+	1998 05 16	704	0.5-	1.1-
1996 10 14	691	0.3-	0.1+	1998 04 22	704	0.2+	0.2+	1998 05 16	704	1.4+	1.0+
1996 10 14	691	0.2-	0.2+	1998 04 22	704	0.1+	0.1+	1998 05 16	704	0.9-	0.0
1996 10 14	691	0.5-	0.2-	1998 04 22	704	0.2+	0.4-	1998 05 16	704	0.1+	0.5+

1996 TM₃₆ = 1995 DB₁₀

Id. K. Ichikawa, D. Asher

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Asher			
<i>M</i>	226.22171	(2000.0)		P	Q		
<i>n</i>	0.25804667	ω	292.92611	+0.16348610	+0.98519173		
<i>a</i>	2.4434523	Ω	346.18084	-0.80724325	+0.10348262		
<i>e</i>	0.2129857	<i>i</i>	12.49244	-0.56712488	+0.13670624		
<i>P</i>	3.82	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 02 25	691	0.8-	0.6-	1996 10 03	809	0.8+	0.2+	1996 10 18	691	0.0	0.0
1995 02 25	691	0.9-	0.4-	1996 10 03	809	1.0+	0.8+	1996 10 18	691	0.1+	0.0
1995 02 25	691	0.7-	0.5-	1996 10 03	809	0.3+	0.5+	1996 10 18	691	0.0	0.0
1995 03 02	691	1.3+	0.8+	1996 10 12	691	1.1-	0.8-				
1995 03 02	691	1.2+	0.8+	1996 10 12	691	1.3-	0.7-				

1996 TN₄₆ = 1998 FU₁₀₆

Id. A. Gnädig

1998 JUNE 10

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	107.79594	(2000.0)		P	Q		
<i>n</i>	0.23461031	ω	90.62710	+0.26224153	-0.96347748		
<i>a</i>	2.6035823	Ω	343.85264	+0.78955740	+0.24653303		
<i>e</i>	0.2789136	<i>i</i>	11.24378	+0.55482294	+0.10455916		
<i>P</i>	4.20	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 10 03	809	1.6+	2.6+	1996 10 16	691	1.7-	0.9-	1998 04 19	704	1.0-	1.2-
1996 10 03	809	2.1+	2.5+	1998 03 31	704	0.5-	0.3-	1998 04 19	704	0.3+	0.5-
1996 10 03	809	2.6+	2.4+	1998 03 31	704	1.3+	1.5+	1998 04 19	704	1.0+	0.3-
1996 10 04	809	1.0+	0.2-	1998 03 31	704	0.4+	2.4+	1998 04 19	704	0.6+	0.3-
1996 10 04	809	0.7+	0.6-	1998 03 31	704	0.3-	0.3-	1998 04 19	704	0.2-	0.2-
1996 10 04	809	0.9+	0.2-	1998 03 31	704	0.7+	0.1+	1998 04 20	704	1.0-	1.0-
1996 10 10	691	1.5-	0.9-	1998 04 01	704	0.5+	0.4-	1998 04 20	704	1.0+	0.4-
1996 10 10	691	1.5-	1.0-	1998 04 01	704	0.1-	1.0+	1998 04 20	704	0.3+	0.2+
1996 10 10	691	1.5-	0.9-	1998 04 01	704	1.2-	0.0	1998 04 20	704	0.5+	0.7+
1996 10 16	691	2.0-	0.9-	1998 04 01	704	0.7-	0.0	1998 04 20	704	0.2-	0.3+
1996 10 16	691	1.6-	0.9-	1998 04 01	704	0.6-	0.1-				

1996 UZ = 1998 KD₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	123.65514	(2000.0)		P	Q		
<i>n</i>	0.28331139	ω	249.88349	-0.32744570	-0.94387978		
<i>a</i>	2.2959373	Ω	219.31449	+0.89039959	-0.29292978		
<i>e</i>	0.1095845	<i>i</i>	3.91394	+0.31617700	-0.15258800		
<i>P</i>	3.48	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 20	411	0.1+	0.6-	1996 11 30	411	0.4-	0.1+	1998 05 22	704	0.1+	0.2-
1996 10 20	411	1.2-	0.5-	1996 11 30	411	0.3+	0.1-	1998 05 22	704	0.7-	0.3+
1996 10 21	411	0.4+	0.8-	1998 04 22	704	0.7+	0.6+	1998 05 22	704	0.3-	0.2-
1996 10 21	411	0.0	1.2-	1998 04 22	704	1.5-	0.7-	1998 05 22	704	0.0	0.0
1996 10 22	411	(1.7-	2.7-)	1998 04 22	704	0.0	1.1-	1998 05 22	704	0.6-	0.5-
1996 10 22	411	0.2+	1.5-	1998 04 22	704	1.3+	0.0	1998 05 22	699	1.1-	0.2+
1996 11 06	411	0.7+	0.1-	1998 04 22	704	(4.8-	0.2+)	1998 05 22	699	0.8+	0.2-
1996 11 06	411	0.2-	0.4+	1998 05 01	704	0.1-	0.3+	1998 05 22	699	0.0	0.6-
1996 11 06	411	0.4+	0.1+	1998 05 01	704	0.2+	1.4-	1998 05 24	704	0.6-	0.4+
1996 11 08	560	0.6-	0.8-	1998 05 01	704	0.1-	0.7-	1998 05 24	704	0.4-	0.3-
1996 11 08	560	1.0+	0.7-	1998 05 01	704	0.3-	1.6-	1998 05 24	704	0.2+	0.4+
1996 11 08	560	0.5-	0.3+	1998 05 18	699	0.9+	0.1+	1998 05 24	704	0.3-	0.7+
1996 11 13	411	0.3-	1.2+	1998 05 18	699	0.7+	0.2-	1998 05 24	704	0.3-	0.6+
1996 11 13	411	0.8+	0.1-	1998 05 18	699	0.3+	0.3-				

1996 UB₁ = 1998 HS₇₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	193.07129	(2000.0)		P	Q		
<i>n</i>	0.30567345	ω	354.67731	+0.76428652	-0.64054068		
<i>a</i>	2.1825502	Ω	45.44680	+0.59546163	+0.65653124		
<i>e</i>	0.1393674	<i>i</i>	6.01380	+0.24757132	+0.39833952		
<i>P</i>	3.22	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 20	411	0.2+	0.6-	1996 11 13	411	0.3-	0.2+	1998 04 22	704	0.6+	0.1+
1996 10 20	411	0.1-	1.0+	1996 11 13	411	0.3-	0.5+	1998 04 22	704	0.5+	0.2-
1996 10 21	411	0.8-	0.4+	1996 11 30	411	0.7+	0.5-	1998 04 22	704	0.2+	0.2+
1996 10 21	411	1.1-	0.7+	1996 11 30	411	0.2+	0.1-	1998 05 16	704	1.4+	0.1-
1996 10 22	411	0.9-	1.5+	1998 04 21	704	0.7+	0.2-	1998 05 16	704	0.7-	1.0+
1996 10 22	411	1.4-	0.1+	1998 04 21	704	(3.6+	0.4+)	1998 05 16	704	1.0-	1.2+
1996 11 06	691	0.2+	0.1-	1998 04 21	704	0.9+	0.4-	1998 05 16	704	0.5-	0.7-
1996 11 06	691	0.1+	0.2+	1998 04 21	704	0.7+	1.4-	1998 05 23	691	0.2-	0.4+
1996 11 06	691	0.1+	0.0	1998 04 21	704	0.8-	0.5+	1998 05 23	691	1.4-	0.4+
1996 11 06	411	1.0+	0.4-	1998 04 22	704	0.4+	1.1+	1998 05 23	691	0.5-	0.5+
1996 11 06	411	1.5+	0.9-	1998 04 22	704	0.5+	0.2+				

1996 UH₅ = 1998 HP₉₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24538175	ω	199.33797	+0.59192252	-0.79411065		
<i>a</i>	2.5268214	Ω	214.76588	+0.76768092	+0.60759510		
<i>e</i>	0.1707450	<i>i</i>	13.99469	+0.24554782	+0.01471327		
<i>P</i>	4.02	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 29	327	0.1-	0.6+	1996 11 07	327	0.1+	0.0	1998 04 18	704	0.7+	1.6-
1996 10 29	327	0.7+	0.4+	1996 11 07	327	0.1+	0.5-	1998 04 18	704	0.9-	0.5+
1996 10 29	327	0.7+	0.0	1996 11 27	327	0.1-	0.0	1998 04 18	704	0.6-	0.5+
1996 10 29	327	0.2+	0.3-	1996 11 27	327	0.1+	0.2+	1998 04 18	704	1.0+	0.4+
1996 11 06	691	1.0-	0.2-	1996 11 27	327	0.2+	0.1+	1998 04 19	704	0.1-	1.1-
1996 11 06	691	0.9-	0.5-	1996 11 29	327	0.1-	0.1-	1998 04 19	704	0.5+	0.7+
1996 11 06	691	1.1-	0.6-	1996 11 29	327	0.1+	0.5+	1998 04 19	704	0.2-	0.2-
1996 11 07	327	0.5+	0.5-	1996 11 29	327	0.6+	0.8+	1998 04 19	704	0.5-	0.4+

1996 VB₁ = 1991 GV₁₂ = 1998 HL₅₄

Id. G. V. Williams, A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28160746	ω	210.69123	+0.17336208	-0.98180626		
<i>a</i>	2.3051894	Ω	229.44299	+0.92303008	+0.18940807		
<i>e</i>	0.0734571	<i>i</i>	5.85265	+0.34345459	-0.01345557		
<i>P</i>	3.50	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1991 04 08	809	0.2+	0.3+	1996 11 08	587	0.2+	0.6-	1998 04 21	704	0.4-	0.6+
1991 04 08	809	0.4+	1.2-	1996 11 20	587	0.7-	0.4-	1998 04 21	704	1.8+	0.1-
1991 04 08	809	0.4-	1.4+	1996 11 20	587	0.7-	0.0	1998 04 21	704	0.5+	0.8-
1996 11 03	587	0.3+	0.8+	1996 11 28	587	0.2-	0.7-	1998 04 21	704	1.1-	1.4-
1996 11 03	587	1.0+	0.2+	1996 11 28	587	0.6-	0.8-	1998 04 22	704	0.2-	0.1-
1996 11 06	587	0.3-	0.1-	1996 12 29	587	1.0+	0.1-	1998 04 22	704	1.5+	0.1-
1996 11 06	587	0.2-	0.0	1996 12 29	587	0.1-	0.1+	1998 04 22	704	1.0-	0.0
1996 11 08	587	0.4+	0.5+	1996 12 29	587	0.6-	1.3+	1998 04 22	704	0.6+	0.2-
1996 11 08	587	0.6+	0.3-	1998 04 21	704	0.1+	1.4+	1998 04 22	704	2.2-	0.1-

1996 VE₂ = 1998 HT₁₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24110507	ω	42.59466	-0.23761248	-0.95146642		
<i>a</i>	2.5566139	Ω	62.02809	+0.82091363	-0.30433436		
<i>e</i>	0.1432950	<i>i</i>	12.79430	+0.51926979	+0.04574103		
<i>P</i>	4.09	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 06	411	0.7+	0.6+	1996 12 04	691	0.3-	0.5+	1998 04 23	704	1.2+	0.1+
1996 11 06	411	0.2+	0.7-	1996 12 04	691	0.3-	0.2+	1998 04 23	704	1.3+	1.2-
1996 11 10	411	0.3-	0.1-	1996 12 04	691	0.3-	0.1+	1998 04 24	704	1.2-	0.4+
1996 11 10	411	0.4-	0.1-	1996 12 11	411	0.5+	0.6-	1998 04 24	704	0.0	0.6-
1996 11 15	411	0.2-	0.1+	1996 12 11	411	0.7+	0.3-	1998 04 24	704	0.7-	0.6-
1996 11 15	411	0.3-	0.0	1998 04 23	704	0.4-	0.2+	1998 04 24	704	0.2-	0.5-
1996 11 30	411	0.1-	0.0	1998 04 23	704	0.7+	0.1-	1998 04 24	704	1.6-	1.8+
1996 11 30	411	0.1+	0.5+	1998 04 23	704	0.8+	0.5+				

1996 VF₃ = 1981 SG₂ = 1998 HX₉₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26660093	ω	33.22033	+0.20970883	-0.97162604		
<i>a</i>	2.3909011	Ω	44.94775	+0.85995583	+0.13004645		
<i>e</i>	0.2207890	<i>i</i>	8.90721	+0.46529365	+0.19756202		
<i>P</i>	3.70	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1981 09 26	688	2.2+	1.3-	1996 11 17	817	0.2-	0.3-	1997 03 14	817	0.6+	0.0
1981 09 26	688	0.3-	2.2-	1996 11 17	817	0.1-	0.2-	1998 04 21	704	0.1+	0.1-
1996 11 12	817	0.4-	0.4-	1996 11 18	817	0.1-	0.1-	1998 04 21	704	0.4+	0.6-
1996 11 12	817	0.0	0.1-	1996 11 18	817	0.0	0.1-	1998 04 21	704	0.4-	0.5-
1996 11 12	817	0.4-	0.5-	1996 11 22	817	0.3-	0.0	1998 04 21	704	0.4+	0.3-
1996 11 12	817	0.2-	0.2-	1996 11 22	817	0.2-	0.1-	1998 04 21	704	0.3+	0.7-
1996 11 12	817	0.0	0.3+	1996 11 28	817	1.0+	0.1-	1998 04 22	704	0.5+	0.8-
1996 11 12	817	0.0	0.5+	1996 11 28	817	1.0+	0.1-	1998 04 22	704	1.1-	0.0
1996 11 13	817	0.3+	0.2-	1996 12 09	817	0.5-	0.0	1998 04 22	704	0.1-	0.1+
1996 11 13	817	0.4+	0.1-	1996 12 09	817	0.7-	0.1-	1998 04 22	704	0.7-	1.2-
1996 11 13	817	0.1+	0.2-	1997 01 07	817	0.0	0.4-	1998 04 22	704	0.2+	0.3-
1996 11 13	817	0.3+	0.2-	1997 01 07	817	0.1+	0.3-	1998 04 28	566	0.8-	0.8-
1996 11 14	817	0.1+	0.3+	1997 01 07	817	0.0	0.8-	1998 04 28	566	1.0-	0.7-
1996 11 14	817	0.1+	0.2+	1997 01 07	817	0.3+	0.6-	1998 04 28	566	1.6-	0.5-
1996 11 14	817	0.1+	0.3+	1997 01 24	817	0.1-	1.4-	1998 05 18	699	0.2+	0.4+
1996 11 14	817	0.3+	0.2+	1997 01 24	817	0.1+	0.2-	1998 05 18	699	0.0	0.2-
1996 11 15	817	0.1+	0.1+	1997 01 24	817	0.3+	0.4-	1998 05 18	699	0.1+	0.2+
1996 11 15	817	0.2+	0.2+	1997 02 26	817	0.1+	0.2-	1998 05 22	704	0.7+	0.3+
1996 11 15	817	0.0	0.2+	1997 02 26	817	0.2-	1.3-	1998 05 22	704	0.1+	0.0
1996 11 16	817	0.1-	0.4+	1997 03 14	817	0.2+	0.1+	1998 05 22	704	0.6+	0.1+
1996 11 16	817	0.1-	0.4+	1997 03 14	817	0.1-	0.4+	1998 05 22	704	0.3-	0.8-
1996 11 16	817	0.1-	0.4+	1997 03 14	817	0.7+	0.2+	1998 05 22	704	1.1-	0.3-

1996 VH₄ = 1996 XE₅ = 1998 HD₁₄₇Id. S. Nakano (d, *MPC* 28813), G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22349900	ω	93.60744	-0.96034797	-0.15566929		
<i>a</i>	2.6891746	Ω	77.53835	+0.04155770	-0.90026543		
<i>e</i>	0.1242424	<i>i</i>	13.70240	+0.27568955	-0.40655777		
<i>P</i>	4.41	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1996 11 08	327	0.2+	0.4-	1996 12 03	112	0.6+	0.0	1997 01 12	112	1.5+	0.0
1996 11 08	327	0.1+	0.3-	1996 12 03	112	0.4+	0.8-	1998 04 23	704	0.1+	0.6-
1996 11 08	327	0.0	0.3+	1996 12 03	112	0.3+	0.3+	1998 04 23	704	0.5-	0.2+
1996 11 09	327	0.4-	0.1+	1996 12 26	112	0.3-	0.6+	1998 04 23	704	0.2+	0.6+
1996 11 09	327	0.4+	0.3-	1996 12 26	112	0.5+	0.2-	1998 04 23	704	0.2+	0.6+
1996 11 09	327	1.1+	0.1+	1996 12 26	112	1.4-	0.8-	1998 04 23	704	1.0-	0.3+
1996 11 20	327	0.2-	0.1-	1996 12 27	112	1.4-	1.2-	1998 04 24	704	0.2+	0.4-
1996 11 20	327	0.0	0.2-	1996 12 27	112	1.2-	0.2+	1998 04 24	704	0.7+	0.3-
1996 11 20	327	0.3-	0.4+	1996 12 27	112	0.1-	0.2+	1998 04 24	704	0.4+	1.2-
1996 12 01	112	0.0	0.8+	1996 12 29	411	0.5+	0.2-	1998 05 27	699	0.1+	0.1+
1996 12 01	112	0.9-	0.1+	1996 12 29	411	0.2+	0.4-	1998 05 27	699	0.1-	0.9+
1996 12 01	112	0.1-	1.2+	1996 12 30	411	0.1-	0.1+	1998 05 27	699	0.2-	0.2+
1996 12 02	112	0.6-	0.4-	1996 12 30	411	0.0	0.2+				
1996 12 02	112	0.1+	0.4+	1997 01 11	112	1.5+	0.2+				

1996 VK₄ = 1998 HK₁₅₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22470836	ω	277.26277	-0.90329992	-0.42577986		
<i>a</i>	2.6795172	Ω	237.55030	+0.41407677	-0.83326205		
<i>e</i>	0.1854306	<i>i</i>	3.56982	+0.11220377	-0.35268382		
<i>P</i>	4.39	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 06	369	0.5+	0.6+	1996 11 28	369	1.2-	1.0+	1998 04 19	691	0.5-	0.4+
1996 11 06	369	0.9-	0.1-	1996 12 06	369	0.9+	0.2+	1998 04 21	704	0.0	0.4-
1996 11 06	369	0.5-	0.3-	1996 12 06	369	0.3+	0.1-	1998 04 21	704	1.1+	0.9-
1996 11 13	369	0.2+	0.3+	1996 12 29	369	0.1-	0.5-	1998 04 21	704	0.6-	0.0
1996 11 13	369	0.6+	0.1-	1996 12 29	369	0.5-	0.2-	1998 04 21	704	0.1-	0.3-
1996 11 13	369	0.0	0.7-	1996 12 29	369	0.0	0.2+	1998 04 21	704	0.3-	0.6-
1996 11 13	369	0.4-	0.1-	1998 04 01	704	0.7+	1.7-	1998 04 22	704	0.7+	0.7-
1996 11 15	369	0.4+	0.9-	1998 04 01	704	0.7+	0.4+	1998 04 22	704	0.3-	0.6+

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1996 11 19	369	0.2−	0.1+	1998 04 01	704	(2.1−	3.1+)	1998 04 22	704	0.2−	1.3+
1996 11 19	369	0.4+	0.6−	1998 04 19	691	0.5−	1.2+	1998 04 22	704	(0.6−	4.6−)
1996 11 28	369	0.6+	1.3+	1998 04 19	691	0.6−	0.8+				

1996 VO₄ = 1998 KJ₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	285.01592		(2000.0)		P		Q
<i>n</i>	0.36841731	ω	289.24392		+0.89021899		+0.33248442
<i>a</i>	1.9271227	Ω	52.60445		−0.09653511		+0.80574315
<i>e</i>	0.0870933	<i>i</i>	23.07601		−0.44518662		+0.49013476
<i>P</i>	2.68	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 06	369	0.6+	0.9−	1996 11 19	369	0.2+	0.2+	1997 01 28	369	0.2−	0.2+
1996 11 06	369	0.5−	0.0	1996 11 28	369	0.5+	0.1+	1997 01 28	369	0.8−	0.7−
1996 11 06	369	1.9+	1.9−	1996 11 28	369	0.2+	1.0+	1998 05 22	704	0.3+	0.4−
1996 11 13	369	0.3−	0.2+	1996 12 06	369	0.1−	0.3+	1998 05 22	704	0.3−	0.1+
1996 11 13	369	0.5−	0.0	1996 12 06	369	0.3+	0.1+	1998 05 22	704	0.3+	0.5+
1996 11 13	369	0.5−	0.4+	1996 12 14	369	0.5−	0.0	1998 05 22	704	0.4+	0.3−
1996 11 14	385	0.3−	0.3+	1996 12 14	369	0.2−	0.4+	1998 05 22	704	0.1−	1.7+
1996 11 14	385	0.1−	0.5+	1996 12 29	369	0.1+	0.4−	1998 05 24	704	0.1−	0.2+
1996 11 14	385	0.1−	0.3+	1996 12 29	369	0.3−	0.1+	1998 05 24	704	0.4−	0.4−
1996 11 15	369	0.4−	0.5+	1996 12 29	369	0.1−	0.5−	1998 05 24	704	0.2−	0.1−
1996 11 15	369	0.6−	0.2+	1997 01 09	369	0.2+	0.6−	1998 05 24	704	0.2+	0.5−
1996 11 15	369	0.4−	0.5+	1997 01 09	369	0.1+	0.7−	1998 05 24	704	1.0+	0.4+
1996 11 19	369	0.2+	0.2+	1997 01 09	369	0.3+	0.6+				

1996 VG₅ = 1991 RD₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	198.02156		(2000.0)		P		Q
<i>n</i>	0.21488798	ω	283.80155		+0.79144186		+0.60838260
<i>a</i>	2.7605438	Ω	38.77389		−0.51802842		+0.71890905
<i>e</i>	0.1450801	<i>i</i>	5.41327		−0.32444774		+0.33621481
<i>P</i>	4.59	<i>H</i>	13.2	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1991 09 14	675	0.3+	0.6−	1996 11 03	400	0.1+	0.1+	1996 11 13	400	0.5+	0.3−
1991 09 14	675	0.1−	0.2−	1996 11 03	400	0.7−	0.9−	1996 11 13	400	0.2−	0.2−
1991 09 16	675	0.2−	0.5+	1996 11 07	400	0.2+	0.6+				
1991 09 16	675	0.0	0.3+	1996 11 07	400	0.1+	0.7+				

1996 VW₇ = 1998 HW₇₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	111.54001		(2000.0)		P		Q
<i>n</i>	0.23511302	ω	259.53850		+0.02601614		−0.99947819
<i>a</i>	2.5998698	Ω	189.03672		+0.95823299		+0.03038952
<i>e</i>	0.2570040	<i>i</i>	7.00106		+0.28480290		−0.01094679
<i>P</i>	4.19	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 11 03	399	1.9−	0.3+	1998 04 21	704	0.4−	0.8−	1998 04 22	704	0.4−	0.2−
1996 11 03	399	1.5−	2.0−	1998 04 21	704	0.4−	0.7−	1998 04 22	704	0.7+	0.9+
1996 11 06	399	1.3+	0.9+	1998 04 21	704	0.1−	0.4−	1998 04 28	566	0.3−	0.4+
1996 11 06	399	0.7+	1.4+	1998 04 21	704	0.3−	0.4+	1998 04 28	566	0.4−	0.4+
1996 11 15	399	1.0+	0.1−	1998 04 22	704	0.2+	0.2−	1998 04 28	566	0.3+	0.6+
1996 11 15	399	0.4+	0.2−	1998 04 22	704	0.2+	0.7+				
1998 04 21	704	0.7+	0.3−	1998 04 22	704	0.3+	0.2−				

1996 VY₈ = 1964 WB₁ = 1971 VK = 1984 JT₂ = 1998 FD₇₇
= 1998 HM₃₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	172.27272		(2000.0)		P		Q
<i>n</i>	0.27639467	ω	334.85136		+0.75344627		−0.65191503
<i>a</i>	2.3340829	Ω	66.10995		+0.61797198		+0.65765592
<i>e</i>	0.1440841	<i>i</i>	5.37128		+0.22456482		+0.37748574
<i>P</i>	3.57	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1964 11 27	330	(6.5−	2.0+)	1996 11 16	400	2.1−	0.2+	1998 04 20	704	0.0	1.1−
1971 11 10	029	0.4−	0.1−	1998 03 24	704	0.2+	0.6+	1998 04 20	704	1.0−	0.3+
1971 11 10	029	0.7+	0.6+	1998 03 24	704	1.1+	1.2+	1998 04 20	704	0.1+	0.8−
1971 11 19	029	0.6−	0.3+	1998 03 24	704	0.1+	0.0	1998 04 22	704	0.3+	0.2−
1984 05 05	095	(12.1+	19.0+)	1998 03 24	704	0.7+	0.6+	1998 04 22	704	0.4+	0.8−
1996 11 07	400	1.9+	1.1−	1998 03 25	704	0.4−	0.5−	1998 04 22	704	1.8+	0.3+
1996 11 07	400	0.3+	0.4−	1998 03 25	704	0.2−	0.1−	1998 04 22	704	0.1+	1.2+
1996 11 08	400	1.1+	1.3−	1998 03 25	704	0.3−	0.4+	1998 04 22	704	0.6+	1.5−
1996 11 08	400	0.6+	0.1−	1998 03 25	704	0.3−	3.2+	1998 05 03	691	0.9−	0.2−
1996 11 13	400	0.7+	0.4+	1998 03 25	704	1.7−	0.3−	1998 05 03	691	1.0−	0.4−
1996 11 13	400	0.2+	0.5+	1998 04 20	704	0.9−	1.4−	1998 05 03	691	1.1−	0.1−
1996 11 16	400	2.1−	0.0	1998 04 20	704	1.7+	1.3−				

1996 VV₁₈ = 1998 FH₁₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	314.78630		(2000.0)		P		Q
<i>n</i>	0.28560249	ω	231.58449		−0.15149738		+0.98826037
<i>a</i>	2.2836422	Ω	29.71967		−0.89402499		−0.12847485
<i>e</i>	0.1168928	<i>i</i>	2.28292		−0.42162526		−0.08267798
<i>P</i>	3.45	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 11 06	691	0.9−	0.2+	1996 12 08	735	0.7−	0.4+	1998 03 20	704	0.2+	0.0
1996 11 06	691	0.5−	0.0	1996 12 08	735	0.2−	0.1−	1998 03 20	704	0.5−	0.9−
1996 11 06	691	0.8−	0.0	1996 12 09	735	0.1−	0.0	1998 03 26	704	0.4−	0.7+
1996 11 09	691	0.5+	0.3+	1996 12 09	735	0.0	0.3+	1998 03 26	704	1.8−	0.9+
1996 11 09	691	0.4+	0.3+	1996 12 09	735	2.2+	0.0	1998 03 26	704	0.1+	0.8+
1996 11 09	691	0.4+	0.0	1998 03 20	704	0.0	0.2−				
1996 12 08	735	0.4−	1.4−	1998 03 20	704	2.4+	1.3−				

1996 VX₂₉ = 1998 HS₈₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	91.80623		(2000.0)		P		Q
<i>n</i>	0.30666719	ω	80.35973		−0.77363517		−0.62661421
<i>a</i>	2.1778327	Ω	60.77692		+0.53086055		−0.72200692
<i>e</i>	0.0360441	<i>i</i>	6.18579		+0.34594175		−0.29336094
<i>P</i>	3.21	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 07	399	0.8−	0.7+	1998 04 21	704	0.3−	0.3−	1998 05 01	699	0.4−	0.6+
1996 11 07	399	0.5−	0.4+	1998 04 21	704	0.1+	0.4−	1998 05 01	699	0.7−	0.4+
1996 11 12	399	(4.0−	0.5−)	1998 04 21	704	1.0+	0.3+	1998 05 01	699	0.5−	0.8+
1996 11 12	399	(2.5−	1.4+)	1998 04 22	704	0.5−	0.4+	1998 05 25	699	0.1−	1.7+
1996 11 15	399	0.5+	1.5+	1998 04 22	704	0.4+	0.6−	1998 05 25	699	(0.7+	2.7+)
1996 11 15	399	0.0	0.5−	1998 04 22	704	0.4+	0.1+	1998 05 25	699	0.7+	0.2+
1998 04 21	704	0.2+	0.2−	1998 04 22	704	0.2+	0.6−				
1998 04 21	704	0.0	0.0	1998 04 22	704	0.4+	0.1−				

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1996 VL₃₀ = 1998 HC₆₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	198.82558		(2000.0)		P		Q				
<i>n</i>	0.30474724	ω	150.87053		+0.85565038		−0.50996964				
<i>a</i>	2.1869702	Ω	240.05398		+0.45293406		+0.82037642				
<i>e</i>	0.1870339	<i>i</i>	5.84754		+0.25042598		+0.25867644				
<i>P</i>	3.23	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1996 11 07	399	1.5+	2.6+	1996 11 28	369	0.0	0.5+	1996 12 06	369	0.4−	0.1+
1996 11 07	399	0.1+	1.0+	1996 11 30	369	0.2+	0.1−	1998 04 21	704	1.7+	0.1−
1996 11 12	399	0.1−	1.2−	1996 11 30	369	0.2+	0.1−	1998 04 21	704	1.2+	1.8−
1996 11 12	399	2.1−	2.1−	1996 11 30	369	0.2+	0.2−	1998 04 21	704	1.2−	0.5+
1996 11 15	399	0.5−	1.0−	1996 12 01	369	0.1−	0.3+	1998 04 21	704	(4.9−	2.6+)
1996 11 15	399	0.3+	1.2−	1996 12 01	369	0.1+	0.1+	1998 04 22	704	0.2−	1.3+
1996 11 28	369	0.2+	0.7+	1996 12 01	369	0.2+	0.3−	1998 04 22	704	0.7−	0.6−
1996 11 28	369	0.2−	0.4+	1996 12 02	369	0.1−	0.4+	1998 04 22	704	0.2+	0.2−
1996 11 28	369	0.5+	0.3+	1996 12 02	369	0.1+	0.1−	1998 04 22	704	1.1−	0.9+

1996 VX₃₀ = 1998 HG₈₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	83.10261		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$				
n	0.24338646	ω	80.53809		−0.59461014		−0.79433015				
a	2.5406125	Ω	46.70347		+0.65419394		−0.56793912				
e	0.1932025	i	9.84245		+0.46740676		−0.21560328				
P	4.05	H	15.0		G	0.15	U	4			
Residuals in seconds of arc											
1996 11 02	327	0.4−	0.2+	1996 11 28	327	0.2−	0.3−	1998 04 22	704	0.9+	0.7−
1996 11 02	327	0.2+	0.3+	1996 11 28	327	0.3−	0.1−	1998 04 22	704	1.4+	0.7−
1996 11 02	327	0.3−	0.6+	1996 11 29	327	1.1+	0.1+	1998 04 22	704	0.7−	0.7−
1996 11 02	327	0.6+	0.7+	1996 11 29	327	0.1+	0.2−	1998 04 22	704	0.8−	0.7+
1996 11 09	327	0.4−	0.3+	1996 11 29	327	0.1−	0.2+	1998 04 30	699	0.8+	0.3+
1996 11 09	327	0.1−	0.4+	1998 04 21	704	0.1+	0.2+	1998 04 30	699	0.4+	0.2+
1996 11 09	327	0.5−	0.4+	1998 04 21	704	0.2−	0.1+	1998 04 30	699	0.6+	0.3+
1996 11 27	327	0.1+	0.6−	1998 04 21	704	0.1+	0.1+	1998 05 22	691	0.4−	0.9+
1996 11 27	327	0.2−	0.5+	1998 04 21	704	0.4+	0.2−	1998 05 22	691	0.1−	0.9+
1996 11 27	327	0.0	0.3−	1998 04 21	704	1.7−	1.0+				
1996 11 28	327	0.7−	0.3−	1998 04 22	704	0.4+	0.1−				

1996 WC

Id. E. Bowell (1993 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	132.51949		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$				
n	0.23278020	ω	42.83317		+0.17984681		−0.98247866				
a	2.6172107	Ω	36.88499		+0.87905968		+0.13820960				
e	0.2519983	i	4.67275		+0.44148523		+0.12503513				
P	4.23 <th>H</th> <td>14.5<th>G</th><td>0.15<th>U</th><td>3</td><td></td><td></td></td></td>	H	14.5 <th>G</th> <td>0.15<th>U</th><td>3</td><td></td><td></td></td>	G	0.15 <th>U</th> <td>3</td> <td></td> <td></td>	U	3				
Residuals in seconds of arc											
1993 01 28	675	0.7+	0.8+	1996 12 06	411	0.4−	0.4−	1998 04 22	704	1.0+	0.8−
1993 01 28	675	0.4−	0.1−	1996 12 06	411	0.5−	0.5−	1998 04 22	704	1.1+	0.7−
1996 11 16	411	0.0	0.4+	1996 12 11	411	0.4−	0.1−	1998 04 22	704	0.8−	1.0−
1996 11 16	411	0.0	0.4−	1996 12 11	411	0.2−	0.1+	1998 04 22	704	(4.0−	0.3−)
1996 11 17	411	0.0	0.2+	1996 12 12	411	0.4−	0.0	1998 05 01	704	1.5−	1.7−
1996 11 17	411	0.5+	0.8−	1996 12 12	411	0.2−	0.1+	1998 05 01	704	1.7−	0.3+
1996 11 19	411	0.3−	0.6−	1996 12 19	411	0.2+	0.2−	1998 05 01	704	0.8+	1.1+
1996 11 19	411	0.4−	0.2−	1996 12 19	411	0.0	0.1+	1998 05 01	704	1.6−	1.2+
1996 12 02	411	0.5+	0.0	1996 12 20	411	0.0	0.0	1998 05 22	688	0.4+	0.3−
1996 12 02	411	0.4+	0.1+	1996 12 20	411	0.3+	0.2−	1998 05 22	688	0.8+	0.0
1996 12 03	411	0.6+	0.3−	1996 12 28	411	0.1−	0.6+	1998 05 22	688	1.1+	0.2+
1996 12 03	411	0.6+	0.3−	1996 12 28	411	0.1−	0.9+				

1996 WS₁ = 1998 HK₁₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	117.00440		(2000.0)			P		Q		
<i>n</i>	0.24094651	ω	194.70459			−0.14587595		−0.98660195		
<i>a</i>	2.5577354	Ω	263.72294			+0.91492694		−0.10645027		
<i>e</i>	0.0470742	<i>i</i>	4.21470			+0.37633614		−0.12363224		
<i>P</i>	4.09	<i>H</i>	14.5			<i>G</i>	0.15	<i>U</i>	4	
Residuals in seconds of arc										
1996 11 30	411	0.0	0.4+	1996 12 28	411	0.5−	0.3−	1998 04 22	704	0.5− 0.0
1996 11 30	411	1.0+	0.4−	1998 04 18	704	1.4+	1.5−	1998 04 22	704	0.9− 0.2+
1996 12 01	411	0.3−	0.0	1998 04 18	704	0.4−	0.4+	1998 05 16	704	1.7+ 0.5+
1996 12 01	411	0.4+	0.9+	1998 04 18	704	1.6−	0.2−	1998 05 16	704	0.4+ 0.3+
1996 12 06	411	0.2−	0.8+	1998 04 18	704	0.5+	0.6−	1998 05 16	704	(2.7+ 0.0)
1996 12 06	411	0.2−	0.4+	1998 04 18	704	(0.0	2.4−)	1998 05 16	704	1.5+ 1.3+
1996 12 14	411	1.2−	0.6−	1998 04 22	704	0.2+	0.5+	1998 05 16	704	1.5− 0.4−
1996 12 14	411	0.1−	0.6+	1998 04 22	704	0.0	0.7+			
1996 12 28	411	1.2+	1.5−	1998 04 22	704	0.2−	0.6−			

1996 WU₁

Id. M. W. Buie (1997–98 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	80.69005		(2000.0)		P		Q				
n	0.18191030	ω	13.90872		−0.24579796		−0.95230192				
a	3.0848297	Ω	90.55468		+0.87114751		−0.29883910				
e	0.0523795	i	10.41939		+0.42507103		+0.06177572				
P	5.42	H	13.0	G	0.15	U	3				
Residuals in seconds of arc											
1996 11 30	411	0.6+	1.1−	1996 12 19	411	0.0	0.6−	1998 03 25	704	0.9+	0.4+
1996 11 30	411	1.2+	0.7+	1996 12 19	411	0.8+	0.8−	1998 03 25	704	0.3−	0.2+
1996 12 01	411	0.7−	0.1+	1996 12 28	411	0.3−	0.6+	1998 03 25	704	0.8−	0.3−
1996 12 01	411	1.5−	1.6+	1996 12 28	411	0.2+	0.3−	1998 05 22	688	0.2−	0.6−
1996 12 06	411	0.1+	0.1−	1997 12 27	688	0.1−	0.3+	1998 05 22	688	0.1−	0.0
1996 12 06	411	0.0	0.9−	1997 12 27	688	0.1+	0.2+	1998 05 22	688	0.4−	0.1−
1996 12 14	411	0.6−	0.3+	1998 03 25	704	0.2+	0.3−				
1996 12 14	411	0.5+	0.4+	1998 03 25	704	0.7+	0.1+				

1996 XU = 1998 FY₉₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	264.97290		(2000.0)		P		Q				
n	0.27819116	ω	61.89368		+0.67154351		+0.73771242				
a	2.3240234	Ω	250.46715		−0.70302813		+0.60479886				
e	0.1069132	i	4.22004		−0.23405291		+0.29999786				
P	3.54 <th>H</th> <td>16.0<th>G</th><td>0.15<th>U</th><td>5</td></td></td>	H	16.0 <th>G</th> <td>0.15<th>U</th><td>5</td></td>	G	0.15 <th>U</th> <td>5</td>	U	5				
Residuals in seconds of arc											
1996 12 01	369	0.5+	0.6+	1998 03 24	704	0.3+	0.4+	1998 03 25	566	0.2+	0.4+
1996 12 01	369	0.1+	0.6+	1998 03 24	704	0.7−	0.1−	1998 03 25	566	0.6+	0.0
1996 12 02	369	0.8−	0.7+	1998 03 24	704	0.5−	0.7−	1998 03 25	566	0.2+	0.9−
1996 12 02	369	0.0	0.2+	1998 03 24	704	(1.9−	0.9−)	1998 03 31	704	(0.9+	2.0−)
1996 12 06	369	0.1−	0.0	1998 03 24	704	(1.5−	1.7−)	1998 03 31	704	0.3+	1.3+
1996 12 06	369	0.3+	0.2−	1998 03 24	704	(0.1−	2.3−)	1998 03 31	704	1.1+	0.6−
1996 12 14	369	0.5+	0.4−	1998 03 24	704	(3.4−	0.8−)	1998 03 31	704	0.1+	0.1+
1996 12 14	369	0.2+	1.4−	1998 03 25	704	0.2+	0.7−	1998 04 01	704	(2.2−	3.1−)
1997 01 02	369	0.2−	1.3−	1998 03 25	704	0.6−	0.6−	1998 04 01	704	(0.0	2.2−)
1997 01 02	369	0.6−	1.1+	1998 03 25	704	0.4−	0.5+	1998 04 01	704	0.3−	0.7−
1998 03 24	704	0.3−	0.4+	1998 03 25	704	(0.5−	1.6+)	1998 04 01	704	0.4+	0.1+
1998 03 24	704	0.3−	0.2+	1998 03 25	704	0.1−	0.9+				

1996 XL₁ = 1998 KG₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.27771934	ω	337.83749	+0.40550785	−0.90436065				
<i>a</i>	2.3266549	Ω	88.02912	+0.85736910	+0.32583064				
<i>e</i>	0.0751580	<i>i</i>	7.64888	+0.31698835	+0.27561967				
<i>P</i>	3.55	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1996 12 02	411	0.2+	0.2−	1998 05 05	699	0.1+	0.1−	1998 05 24	699
1996 12 02	411	0.0	0.1−	1998 05 05	699	0.3+	0.2−	1998 05 24	704
1996 12 03	411	0.3−	0.5−	1998 05 05	699	0.2+	0.3−	1998 05 24	704
1996 12 03	411	0.1+	0.2−	1998 05 22	704	0.5−	0.3+	1998 05 24	704
1996 12 08	411	0.0	0.4+	1998 05 22	704	0.7−	0.9+	1998 06 03	704
1996 12 08	411	0.0	0.3+	1998 05 22	704	0.1−	0.9+	1998 06 03	704
1996 12 28	411	0.0	0.0	1998 05 22	704	0.3+	0.1+	1998 06 03	704
1996 12 28	411	0.1+	0.1+	1998 05 24	704	0.3+	0.0	1998 06 03	704
1998 05 03	566	0.6+	0.1+	1998 05 24	699	0.5−	0.3−	1998 06 03	704
1998 05 03	566	0.0	0.2−	1998 05 24	699	0.7+	0.2−		
1998 05 03	566	0.9−	0.2−	1998 05 24	704	0.6+	0.4+		

1996 XW₂ = 1994 LJ₉ = 1998 HU₁₂₂

Id. G. V. Williams, S. Nakano, A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.22633699	ω	52.47789	−0.57888735	−0.78541247				
<i>a</i>	2.6666480	Ω	74.31528	+0.65775407	−0.60861277				
<i>e</i>	0.1265737	<i>i</i>	13.15594	+0.48192221	−0.11277300				
<i>P</i>	4.35	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3		
Residuals in seconds of arc									
1994 06 08	809	(1.8+	2.9−)	1996 12 19	411	0.5−	0.7+	1998 05 22	704
1994 06 08	809	(0.2+	3.7−)	1996 12 28	411	1.2+	0.1−	1998 05 22	704
1994 06 08	809	(4.1+	0.9−)	1996 12 28	411	0.8−	0.7−	1998 05 22	704
1994 06 09	809	1.1+	0.5+	1998 04 23	704	0.1+	0.2−	1998 05 22	704
1994 06 09	809	0.4+	0.7+	1998 04 23	704	0.2−	0.3+	1998 05 22	704
1994 06 09	809	1.4−	0.6−	1998 04 23	704	0.5+	0.8−	1998 05 24	704
1996 12 03	411	0.6+	0.2−	1998 04 23	704	0.2+	0.9−	1998 05 24	704
1996 12 03	411	0.8+	1.0−	1998 04 24	704	0.2+	0.1−	1998 05 24	704
1996 12 06	411	0.3+	0.4+	1998 04 24	704	0.6+	0.7+	1998 05 24	704
1996 12 06	411	0.3−	0.6+	1998 04 24	704	0.8−	0.1−	1998 05 24	704
1996 12 12	411	0.0	1.1−	1998 04 25	699	0.8−	0.3+	1998 06 02	699
1996 12 12	411	0.0	0.2−	1998 04 25	699	0.5−	1.3+	1998 06 02	699
1996 12 19	411	1.3−	1.8+	1998 04 25	699	0.5−	0.5+	1998 06 02	699

1996 XZ₂ = 1998 HT₁₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.17313893	ω	73.21376	−0.96021709	−0.12032390				
<i>a</i>	3.1881560	Ω	99.32972	+0.02653097	−0.93763694				
<i>e</i>	0.1992099	<i>i</i>	14.79615	+0.27799147	−0.32612747				
<i>P</i>	5.69	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3		
Residuals in seconds of arc									
1996 12 03	411	0.6+	0.5+	1996 12 19	411	1.1−	0.2+	1998 04 24	704
1996 12 03	411	0.3+	0.3+	1996 12 19	411	0.0	0.1+	1998 04 24	704
1996 12 06	411	0.6−	0.2−	1996 12 28	411	0.3+	0.0	1998 04 24	704
1996 12 06	411	0.2+	0.2−	1996 12 28	411	0.7+	0.8−	1998 06 02	699
1996 12 12	411	0.3+	0.1+	1998 04 23	704	0.6−	0.3−	1998 06 02	699
1996 12 12	411	0.1+	0.2−	1998 04 23	704	0.0	0.2−	1998 06 02	699
1996 12 13	411	0.2−	0.1+	1998 04 23	704	0.1+	0.0		
1996 12 13	411	0.6−	0.3+	1998 04 23	704	0.0	0.1+		

1996 XG₅ = 1998 KC₂₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.27224530	ω	24.49849	+0.06982251	−0.99635771				
<i>a</i>	2.3577393	Ω	61.53020	+0.90581278	+0.04276869				
<i>e</i>	0.1065478	<i>i</i>	3.19212	+0.41788518	+0.07377092				
<i>P</i>	3.62	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1996 12 02	112	0.6+	0.0	1996 12 29	112	0.2−	0.4−	1998 05 22	704
1996 12 02	112	0.5+	0.6−	1996 12 29	112	0.0	0.3+	1998 05 22	704
1996 12 02	112	1.1−	0.8−	1996 12 29	112	0.8+	0.0	1998 05 22	704
1996 12 02	112	0.3+	0.5−	1997 01 11	112	0.1+	0.7−	1998 05 22	704
1996 12 03	112	0.1+	0.3+	1997 01 11	112	0.3+	0.5+	1998 05 22	704
1996 12 03	112	0.6+	0.9+	1997 01 11	112	0.1+	0.3−	1998 05 24	704
1996 12 03	112	1.1−	0.9−	1997 01 28	112	0.6−	1.1+	1998 05 24	704
1996 12 29	112	0.1+	0.5−	1997 01 28	112	1.0+	0.3+	1998 05 24	704
1996 12 29	112	0.4−	0.7−	1997 01 29	112	1.3−	1.5+	1998 05 24	704

1996 XL₅ = 1998 HU₁₀₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.23204433	ω	309.00113	+0.71618688	−0.65497354				
<i>a</i>	2.6227410	Ω	93.34109	+0.69137703	+0.61870234				
<i>e</i>	0.1575687	<i>i</i>	13.97041	+0.09525836	+0.43383992				
<i>P</i>	4.25	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1996 12 07	411	0.1−	0.0	1996 12 28	411	0.4+	0.3+	1998 04 23	704
1996 12 07	411	0.2−	0.7+	1996 12 28	411	0.0	0.3+	1998 04 24	704
1996 12 08	411	0.3−	0.4+	1997 01 12	411	0.4−	0.2−	1998 04 24	704
1996 12 08	411	0.4−	0.0	1997 01 12	411	0.2−	0.3+	1998 04 24	704
1996 12 12	411	0.1+	0.1−	1998 04 23	704	0.8+	0.3−	1998 04 24	704
1996 12 12	411	0.2+	0.7−	1998 04 23	704	0.9+	0.4+	1998 04 24	704
1996 12 19	411	0.3+	0.4−	1998 04 23	704	0.1+	1.3−		
1996 12 19	411	0.5+	0.4−	1998 04 23	704	0.3+	1.5+		

1996 XB₆ = 1998 KK₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.24476830	ω	59.61582	−0.79168708	−0.56512875				
<i>a</i>	2.5310415	Ω	85.00445	+0.44937875	−0.79603607				
<i>e</i>	0.0780093	<i>i</i>	13.47168	+0.41387234	−0.21669349				
<i>P</i>	4.03	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1996 11 07	327	0.4+	0.2−	1996 12 28	411	0.4−	1.0+	1998 05 24	704
1996 11 07	327	0.1+	0.1+	1996 12 28	411	1.0−	0.3+	1998 05 24	704
1996 11 07	327	0.9+	0.6+	1998 05 22	704	0.5+	0.3−	1998 05 24	704
1996 12 07	411	0.5−	0.3+	1998 05 22	704	0.6−	0.2−	1998 06 03	704
1996 12 07	411	0.3−	0.4−	1998 05 22	704	0.5−	0.1+	1998 06 03	704
1996 12 08	411	0.1−	1.0−	1998 05 22	704	0.6−	0.9−	1998 06 03	704
1996 12 08	411	0.0	0.5−	1998 05 22	704	0.3−	1.6−	1998 06 03	704
1996 12 14	411	0.9+	0.3+	1998 05 24	704	0.7−	0.3+		
1996 12 14	411	0.2+	0.3−	1998 05 24	704	0.3+	0.1−		

1996 XK₁₂ = 1998 HZ₁₄₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.19279916	ω	121.22741	−0.73264060	+0.63823182				
<i>a</i>	2.9675585	Ω	99.55156	−0.67700011	−0.64760940				
<i>e</i>	0.0935826	<i>i</i>	13.87185	−0.07006140	−0.41624778				
<i>P</i>	5.11	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4		

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Residuals in seconds of arc

1996 12 04	691	0.4+	0.1-	1996 12 14	691	0.0	0.0	1998 04 23	704	0.4+	1.9+
1996 12 04	691	0.1+	0.3-	1997 01 11	566	0.3-	0.3+	1998 04 23	704	1.3+	0.9-
1996 12 04	691	0.0	0.2+	1997 01 11	566	0.2-	1.0+	1998 04 23	704	0.3+	0.8+
1996 12 09	691	0.0	0.2+	1997 01 11	566	0.1+	0.3-	1998 04 23	704	0.2+	1.5-
1996 12 09	691	0.0	0.0	1997 01 12	566	0.5-	0.6-	1998 04 24	704	1.4-	0.8-
1996 12 09	691	0.1-	0.3-	1997 01 12	566	0.6+	0.3-	1998 04 24	704	0.8-	1.0+
1996 12 14	691	0.4-	0.1+	1997 01 12	566	0.4+	0.0	1998 04 24	704	0.3-	0.7-
1996 12 14	691	0.2-	0.1+	1998 04 23	704	0.2+	0.2+				

1996 XT₁₄

Id. M. Tichý (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Marsden			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	292.25176	<i>ω</i>	265.45285	+0.89074839	+0.18332523		
<i>a</i>	1.9029473	<i>Ω</i>	83.56187	+0.00053633	+0.91461732		
<i>e</i>	0.0938474	<i>i</i>	24.74137	-0.45449645	+0.36037067		
<i>P</i>	2.63	<i>H</i>	16.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1996 12 11	046	0.1+	0.0	1996 12 15	709	0.1+	0.0	1997 01 13	046	0.2+	0.2-
1996 12 11	046	0.0	0.2-	1996 12 15	709	0.4+	0.1+	1997 01 13	046	0.2+	0.0
1996 12 11	046	0.2+	0.1-	1996 12 15	709	0.1+	0.3+	1997 01 13	046	0.1+	0.0
1996 12 11	046	0.1+	0.2+	1996 12 15	709	0.5+	0.2-	1997 01 14	046	0.0	0.2-
1996 12 11	046	0.5+	0.0	1996 12 15	709	0.1+	0.2-	1997 01 14	046	0.1-	0.9-
1996 12 11	046	0.2+	0.0	1996 12 15	709	0.1+	0.5+	1997 01 14	046	0.8-	0.3+
1996 12 12	046	0.2+	0.3-	1996 12 16	046	0.7-	0.7-	1997 01 15	046	0.5+	0.5-
1996 12 12	046	0.2+	0.1+	1996 12 16	046	0.1+	0.2+	1997 01 15	046	0.7+	0.2+
1996 12 12	709	0.2+	0.1-	1996 12 16	046	0.2-	0.3+	1997 01 15	046	0.4+	0.0
1996 12 12	709	0.2+	0.1-	1996 12 21	046	1.2-	0.5-	1997 02 01	046	0.0	0.2-
1996 12 12	709	0.1+	0.2-	1996 12 27	046	1.6-	1.3+	1997 02 01	046	0.1-	0.4-
1996 12 12	709	0.2+	0.2-	1996 12 27	046	0.4+	0.5+	1997 02 06	046	0.0	0.2+
1996 12 12	709	0.1+	0.2-	1996 12 27	046	1.3-	0.9+	1997 02 06	046	0.2-	0.3+
1996 12 12	684	0.2+	0.1-	1996 12 28	046	0.5-	0.0	1997 02 06	046	0.2+	0.2-
1996 12 12	684	0.4+	0.2-	1996 12 28	046	0.4-	0.2-	1998 05 29	046	0.6+	0.2+
1996 12 12	684	0.4+	0.0	1996 12 28	046	0.8-	0.0	1998 05 29	046	0.1-	0.2+
1996 12 12	046	0.2+	0.1-	1996 12 29	046	0.4-	0.2+	1998 05 29	046	0.9-	0.7-
1996 12 12	046	0.0	0.1+	1996 12 29	046	0.4-	0.2+	1998 05 29	046	0.0	0.4+
1996 12 12	046	0.1+	0.1+	1996 12 29	046	0.4-	0.4+	1998 05 29	046	0.5+	0.4-
1996 12 12	046	0.2+	0.0	1997 01 08	046	0.4+	1.0-	1998 06 01	046	0.1-	0.0
1996 12 13	684	0.3+	0.1-	1997 01 08	046	0.2+	0.2+	1998 06 01	046	0.0	0.1-
1996 12 13	684	0.1+	0.0	1997 01 08	046	0.8+	0.5-	1998 06 01	046	0.4-	0.4-
1996 12 13	684	0.1+	0.1-	1997 01 08	046	0.3-	0.2+				

1996 XV₁₈ = 1998 KL₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Marsden			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24338081	<i>ω</i>	223.35733	+0.17439172	-0.98395490		
<i>a</i>	2.5406519	<i>Ω</i>	216.64698	+0.91978981	+0.17644413		
<i>e</i>	0.0379603	<i>i</i>	3.62000	+0.35153125	+0.02646160		
<i>P</i>	4.05	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 12 12	046	0.3-	0.2-	1996 12 17	046	0.2-	0.6-	1998 05 19	046	1.1+	0.1-
1996 12 12	046	0.5-	0.3-	1996 12 17	046	0.3+	0.3+	1998 05 19	046	0.3+	0.4+
1996 12 12	046	0.4-	0.1+	1996 12 17	046	0.3+	0.5-	1998 05 19	046	0.2-	0.0
1996 12 12	046	0.5-	0.1+	1997 01 08	046	0.3+	0.2+	1998 05 26	046	0.1+	0.5-
1996 12 13	046	0.1+	0.6-	1997 01 08	046	0.2+	0.5+	1998 05 26	046	0.9-	0.6+
1996 12 13	046	0.2+	0.2-	1997 01 08	046	0.1+	0.5+	1998 05 26	046	0.9-	0.1+
1996 12 13	046	0.0	0.1-	1997 01 12	046	0.1+	0.2+	1998 05 26	046	0.1+	0.6-
1996 12 13	046	0.4+	1.0-	1997 01 12	046	0.1-	0.9+	1998 05 26	046	0.3+	0.3-
1996 12 13	046	0.2-	0.0	1997 01 12	046	0.0	0.1+				

1996 XY₁₈ = 1998 HO₉₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.25771099	<i>ω</i>	210.15798	+0.14788414	-0.98821819		
<i>a</i>	2.4455737	<i>Ω</i>	231.36668	+0.91718392	+0.15195308		
<i>e</i>	0.1666922	<i>i</i>	2.89365	+0.37000532	+0.01830480		
<i>P</i>	3.82	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 12 06	905	0.7+	0.3-	1997 01 03	385	0.6+	0.2+	1998 04 25	699	1.2-	0.7-
1996 12 06	905	0.4+	1.2-	1997 01 03	385	0.6+	0.0	1998 04 25	699	1.0-	0.9-
1996 12 06	399	1.2-	1.1-	1997 02 04	385	0.4-	0.5+	1998 04 25	699	0.6+	0.2-
1996 12 06	399	0.7-	1.2+	1997 02 04	385	0.0	0.6-	1998 05 22	704	(1.9+	2.2-)
1996 12 07	905	0.4+	0.0	1998 04 21	704	0.7+	0.2+	1998 05 22	704	0.3-	1.5+
1996 12 07	905	0.3-	0.0	1998 04 21	704	0.0	0.0	1998 05 22	704	0.5+	0.7+
1996 12 07	399	0.2+	0.0	1998 04 21	704	0.6+	0.3+	1998 05 22	704	0.1-	0.2-
1996 12 07	399	1.2-	1.5+	1998 04 21	704	0.3+	0.7-	1998 05 22	704	1.6-	0.8-
1996 12 12	385	0.7+	0.1-	1998 04 21	704	0.0	1.1+	1998 05 24	704	(0.1-	2.7-)
1996 12 12	385	0.5+	0.1-	1998 04 22	704	0.3-	0.1+	1998 05 24	704	0.8+	1.1-
1996 12 12	385	0.3+	0.0	1998 04 22	704	(1.0-	3.3+)	1998 05 24	704	1.6+	0.7+
1996 12 15	399	0.5-	0.0	1998 04 22	704	0.1+	0.2-	1998 05 24	704	0.1+	0.1+
1996 12 15	399	(2.3-	0.3+)	1998 04 22	704	0.5+	0.4+	1998 05 24	704	1.4-	0.3-

1996 XF₁₉ = 1998 HW₇₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28206849	<i>ω</i>	143.02328	+0.90138321	-0.42832434		
<i>a</i>	2.3026769	<i>Ω</i>	242.45379	+0.37814647	+0.85018949		
<i>e</i>	0.1510058	<i>i</i>	4.11427	+0.21098236	+0.30613085		
<i>P</i>	3.49	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 12 08	411	0.7-	0.7+	1996 12 28	411	0.1-	0.8+	1998 04 21	704	1.4-	0.1-
1996 12 08	411	0.9-	0.9+	1996 12 28	411	1.2-	0.4-	1998 04 22	704	0.6+	0.1-
1996 12 11	411	0.1+	0.2-	1997 01 13	411	0.4+	0.2+	1998 04 22	704	0.3+	1.9+
1996 12 11	411	0.5+	0.4-	1997 01 13	411	0.4-	0.5+	1998 04 22	704	0.6+	0.0
1996 12 14	411	0.3+	0.2+	1998 04 21	704	0.2+	0.2-	1998 04 22	704	0.5+	2.1-
1996 12 14	411	0.7+	0.4-	1998 04 21	704	0.2+	0.3+	1998 04 22	704	0.6+	0.6-
1996 12 19	411	0.1+	0.5-	1998 04 21	704	0.9-	1.5+				
1996 12 19	411	1.2+	1.4-	1998 04 21	704	0.6-	0.8-				

1996 XH₁₉ = 1998 KR₅₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23127151	<i>ω</i>	110.95529	-0.83799523	+0.47433722		
<i>a</i>	2.6285805	<i>Ω</i>	98.23679	-0.54409419	-0.76395650		
<i>e</i>	0.1513726	<i>i</i>	15.81711	+0.04153934	-0.43746391		
<i>P</i>	4.26	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 12 08	411	0.2+	0.6-	1997 01 13	411	0.7-	0.1-	1998 05 26	704	0.4+	0.2+
1996 12 08	411	0.6-	0.9+	1998 05 23	704	0.0	0.1-	1998 05 26	704	0.2+	1.2+
1996 12 11	411	0.5+	0.3-	1998 05 23	704	0.7-	0.1+	1998 05 27	699	0.0	0.0
1996 12 11	411	1.0+	0.3+	1998 05 23	704	0.2+	0.5-	1998 05 27	699	0.5+	0.2-
1996 12 18	411	0.5-	0.3+	1998 05 23	704	1.0-	0.5-	1998 05 27	699	0.4+	0.1-
1996 12 18	411	0.0	0.1+	1998 05 23	704	1.2-	0.6-	1998 06 03	704	0.2+	0.5-
1996 12 28	411	0.3+	0.0	1998 05 26	704	0.2+	0.9-	1998 06 03	704	1.2+	0.8+
1996 12 28	411	0.2+	0.3-	1998 05 26	704	0.4-	0.0	1998 06 03	704	0.8-	1.1+
1997 01 13	411	0.3-	0.2-	1998 05 26	704	0.4+	0.3+	1998 06 03	704	0.4-	0.2-

M.P.C. 31980

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1996 XY₂₈ = 1991 PR₂₆ = 1998 HW₉₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	67.57510		(2000.0)		P		Q				
<i>n</i>	0.25640321	ω	92.01032		−0.92847338		−0.37031623				
<i>a</i>	2.4538824	Ω	66.25551		+0.32726008		−0.85182178				
<i>e</i>	0.1142092	<i>i</i>	1.77412		+0.17560760		−0.37049365				
<i>P</i>	3.84	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	2			
Residuals in seconds of arc											
1991 08 05	809	1.1+	1.3−	1997 02 10	691	0.3−	0.5−	1998 05 18	699	0.4−	0.0
1991 08 05	809	0.4−	1.9−	1997 02 10	691	0.2−	0.7−	1998 05 18	699	1.1−	1.0+
1991 08 05	809	(3.0−	3.7−)	1998 04 21	704	0.4+	0.5−	1998 05 22	704	0.4+	0.4+
1996 12 12	691	0.2−	0.0	1998 04 21	704	0.4+	1.2−	1998 05 22	704	0.7−	0.6−
1996 12 12	691	0.1−	0.2−	1998 04 21	704	0.7+	1.6−	1998 05 22	704	0.6+	0.2+
1996 12 12	691	0.4−	0.3−	1998 04 21	704	0.6+	1.1−	1998 05 22	704	0.3+	0.5−
1996 12 17	691	0.7+	0.3−	1998 04 21	704	0.5+	0.8−	1998 05 22	704	0.0	1.1+
1996 12 17	691	0.6+	0.1−	1998 04 22	704	0.2+	0.1−	1998 05 24	704	0.1+	0.5+
1996 12 17	691	0.3+	0.4−	1998 04 22	704	1.0+	0.0	1998 05 24	704	1.2−	0.8−
1997 02 04	691	0.4+	0.4−	1998 04 22	704	0.3−	0.5−	1998 05 24	704	0.5−	1.1+
1997 02 04	691	0.4+	0.6−	1998 04 22	704	0.1−	0.8−	1998 05 24	704	1.1−	0.0
1997 02 04	691	0.3+	0.7−	1998 04 22	704	0.2+	1.1−	1998 05 24	704	0.7−	1.6+
1997 02 10	691	0.4−	0.9−	1998 05 18	699	0.4−	1.5+				

1996 XK₂₉ = 1985 VY₃ = 1998 HJ₈₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	155.65311		(2000.0)		P		Q				
<i>n</i>	0.27109069	ω	0.28450		+0.41338648		−0.89873913				
<i>a</i>	2.3644292	Ω	65.30146		+0.83510029		+0.31020553				
<i>e</i>	0.1479010	<i>i</i>	9.26150		+0.36293130		+0.30990403				
<i>P</i>	3.64	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	3			
Residuals in seconds of arc											
1985 11 11	095	0.8+	1.7−	1997 01 14	327	0.5−	0.5−	1998 04 22	704	0.9−	1.2−
1996 12 13	691	0.6+	0.5+	1997 01 14	327	0.8−	0.2−	1998 05 16	704	0.1−	0.2−
1996 12 13	691	0.4+	0.2+	1998 04 21	704	1.9−	1.5−	1998 05 16	704	0.2+	0.1−
1996 12 13	691	1.0+	0.4+	1998 04 21	704	0.0	0.4+	1998 05 16	704	1.8+	1.9+
1996 12 15	691	0.3−	0.4+	1998 04 21	704	0.5−	0.2−	1998 05 16	704	0.2+	0.8+
1996 12 15	691	0.5−	0.7+	1998 04 21	704	0.1−	0.5+	1998 05 16	704	0.2−	1.3+
1996 12 15	691	0.5−	0.3+	1998 04 21	704	0.6−	0.7+	1998 05 25	699	1.9+	0.2+
1997 01 10	327	0.3+	0.2+	1998 04 22	704	0.4+	0.3−	1998 05 25	699	1.1+	0.6−
1997 01 10	327	0.2+	0.2−	1998 04 22	704	0.6−	0.5−	1998 05 25	699	0.8+	0.5+
1997 01 10	327	0.1+	0.1−	1998 04 22	704	0.0	1.2−				
1997 01 14	327	1.0−	0.4−	1998 04 22	704	1.2−	0.9−				

1996 XJ₃₁ = 1998 HR₁₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	100.35002		(2000.0)		P		Q				
n	0.21551197	ω	20.84618		−0.61835566		−0.76724918				
a	2.7552126	Ω	107.74879		+0.69338831		−0.63455653				
e	0.0642977	i	10.29385		+0.36993097		−0.09309519				
P	4.57	H	13.5	G	0.15	U	4				
Residuals in seconds of arc											
1996 12 14	411	0.1+	0.2−	1997 01 10	905	1.2+	0.4−	1998 04 24	704	0.1−	0.3+
1996 12 14	411	0.4−	0.7−	1997 01 13	411	0.2−	0.1+	1998 04 24	704	0.5−	0.1+
1996 12 16	411	0.2−	0.1−	1997 01 13	411	0.1−	0.2−	1998 05 27	699	1.1+	1.2−
1996 12 16	411	0.1+	0.2+	1998 04 23	704	0.0	0.0	1998 05 27	699	0.6−	1.5+
1996 12 29	411	0.3−	0.1+	1998 04 23	704	0.4+	0.3+	1998 05 27	699	0.3−	0.6−
1996 12 29	411	0.5−	0.1+	1998 04 23	704	0.6+	0.6+	1998 06 02	699	0.2−	0.7−
1997 01 09	905	0.0	0.3−	1998 04 23	704	0.2−	0.1+	1998 06 02	699	0.0	0.1−
1997 01 09	905	0.2+	0.8+	1998 04 23	704	(2.5−	0.3−)	1998 06 02	699	0.7−	0.6−
1997 01 10	905	0.1−	0.2+	1998 04 24	704	0.3+	0.1+				

1996 XD₃₂ = 1998 KO₄₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	88.10282		(2000.0)		P		Q				
<i>n</i>	0.22720257	ω	78.56496		−0.85053980		−0.46319953				
<i>a</i>	2.6598709	Ω	73.41845		+0.32083490		−0.83224031				
<i>e</i>	0.1060255	<i>i</i>	15.06182		+0.41670974		−0.30466747				
<i>P</i>	4.34	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1996 12 14	369	0.2+	0.3+	1997 02 09	369	0.6+	0.1−	1998 05 24	704	0.6+	0.5−
1996 12 14	369	0.1−	0.6−	1997 03 01	369	0.6−	0.5+	1998 05 24	699	0.6−	0.4+
1996 12 19	369	0.1−	0.4+	1997 03 01	369	0.6−	1.0−	1998 05 24	704	0.8+	1.1+
1996 12 19	369	0.1−	0.1+	1997 03 09	369	(0.0	3.1+)	1998 05 24	699	1.8+	0.3+
1996 12 19	369	0.3−	0.2+	1997 03 09	369	0.9+	1.2−	1998 05 24	699	(2.8+	0.2−)
1996 12 19	369	0.6−	0.2+	1998 05 22	704	0.2+	0.3−	1998 05 24	704	1.0−	0.8−
1996 12 30	369	0.5+	0.6−	1998 05 22	704	(3.4+	1.0−)	1998 05 24	704	0.4−	0.6−
1996 12 30	369	0.0	1.2+	1998 05 22	704	0.5−	0.1+	1998 06 03	704	1.6−	1.5−
1997 01 30	369	0.1−	0.1−	1998 05 22	704	1.2+	0.8−	1998 06 03	704	0.4+	1.1+
1997 01 30	369	0.2−	0.3+	1998 05 22	704	0.8−	0.1+	1998 06 03	704	(0.6+	2.1+)
1997 02 09	369	0.4+	0.4+	1998 05 24	704	0.4+	0.2+	1998 06 03	704	0.1−	1.8+

1996 XN₃₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	160.32790		(2000.0)		P		Q			
<i>n</i>	0.26694416	ω	16.85141		−0.00960668		−0.99244160			
<i>a</i>	2.3888512	Ω	73.82897		+0.90212539		−0.06138058			
<i>e</i>	0.0792600	<i>i</i>	7.31829		+0.43136701		+0.10626430			
<i>P</i>	3.69	<i>H</i>	16.3		<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc										
1996 12 15	867	0.0	0.1−	1997 02 09	867	0.1+	0.3+	1998 05 20	867	0.2+ 1.2+
1996 12 15	867	0.1+	0.2−	1997 02 09	867	0.2−	0.0	1998 05 26	867	0.9+ 0.4−
1996 12 20	867	0.2+	0.3+	1997 02 09	867	0.2+	0.0	1998 05 26	867	1.5+ 0.4−
1996 12 20	867	0.3+ 0.4+		1997 03 04	867	0.3−	0.8−	1998 05 26	867	1.2+ 0.3−
1997 01 12	867	0.0	0.6−	1997 03 04	867	0.6+	0.1+	1998 05 27	867	0.8− 0.3−
1997 01 12	867	0.5−	0.3+	1998 05 20	867	2.0−	0.7+	1998 05 27	867	0.1− 0.4−
1997 01 12	867	0.3−	0.3+	1998 05 20	867	0.5−	0.5+	1998 05 27	867	0.4− 0.4−

1996 YB = 1986 VM₂ = 1998 KZ₄₄

Id. G. V. Williams, S. Nakano, E. Bowell (1994 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	83.12698		(2000.0)		P		Q
n	0.21232159	ω	56.73657	−0.89008886		−0.43143812	
a	2.7827442	Ω	97.32248	+0.35313903		−0.85666453	
e	0.1640674	i	8.52193	+0.28815732		−0.28281977	
P	4.64	H	14.0	G	0.15	U 2	
Residuals in seconds of arc							
1986 11 03	010	2.1−	0.3+	1996 12 29	411	0.2− 0.2+ 1997 01 26 411 0.3+ 0.6−	
1986 11 03	010	0.3+	0.9−	1996 12 29	369	0.3+ 0.1+ 1998 05 22 704 0.0 0.0	
1986 11 03	010	2.2+	0.5−	1996 12 29	369	0.0 0.6− 1998 05 22 704 0.7− 0.1+	
1994 07 09	675	0.0	1.8−	1996 12 30	411	0.1− 0.1− 1998 05 22 704 0.1+ 0.7+	
1994 07 09	675	0.4+	0.7−	1996 12 30	411	0.0 0.0 1998 05 22 704 0.4− 0.7+	
1996 12 20	411	0.5−	1.0−	1996 12 30	369	0.1− 0.0 1998 05 24 704 0.3− 0.1+	
1996 12 20	411	0.4−	0.0	1996 12 30	369	0.1− 0.2− 1998 05 24 704 0.1+ 0.6−	
1996 12 21	411	0.5+	0.3−	1997 01 06	411	0.5+ 0.1+ 1998 05 24 704 1.1+ 0.1−	
1996 12 21	411	0.4+	0.6+	1997 01 06	411	0.0 0.2− 1998 05 24 704 0.4+ 1.2−	
1996 12 29	411	0.2−	0.4−	1997 01 26	411	0.4− 1.1− 1998 05 24 704 0.8− 1.7−	

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M.P.C. 31981

1996 YG = 1998 HP₈₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	71.30997		(2000.0)		P		Q				
<i>n</i>	0.18929675	ω	176.35681		−0.84889671		−0.52723142				
<i>a</i>	3.0040508	Ω	331.72486		+0.48292384		−0.74486775				
<i>e</i>	0.1037075	<i>i</i>	4.53262		+0.21484632		−0.40889981				
<i>P</i>	5.21	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1996 12 20	411	0.3+	1.4−	1997 01 07	411	0.3−	1.4+	1998 04 22	704	0.2−	0.6−
1996 12 20	411	(0.4+	2.6−)	1997 01 26	411	0.5+	0.5−	1998 04 22	704	0.4+	0.0
1996 12 21	411	0.0	0.3+	1997 01 26	411	0.4−	0.6−	1998 04 22	704	0.6−	0.0
1996 12 21	411	0.0	0.7−	1998 04 21	704	0.3+	0.5−	1998 04 22	704	0.3+	1.2−
1996 12 29	411	1.4−	0.4−	1998 04 21	704	0.2−	0.7+	1998 04 25	699	0.5−	1.1+
1996 12 29	411	0.1+	0.1−	1998 04 21	704	0.9+	0.2−	1998 04 25	699	0.0	1.3+
1997 01 06	411	0.1+	0.7+	1998 04 21	704	0.4−	0.8−	1998 04 25	699	0.2+	0.3+
1997 01 06	411	0.5+	0.7+	1998 04 21	704	(2.7−	2.7−)				
1997 01 07	411	0.7+	0.5+	1998 04 22	704	0.2−	0.3−				

1996 YA₁ = 1998 HG₅₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	150.77840		(2000.0)			P		Q			
<i>n</i>	0.19797592	ω	326.55872			+0.37011129		−0.92711409			
<i>a</i>	2.9155990	Ω	101.65839			+0.86498376		+0.32076460			
<i>e</i>	0.0207059	<i>i</i>	3.45181			+0.33885207		+0.19382861			
<i>P</i>	4.98	<i>H</i>	14.0			<i>G</i>	0.15	<i>U</i>	5		
Residuals in seconds of arc											
1996 12 20	411	0.8−	0.1−	1997 01 07	411	1.3+	0.3+	1998 04 21	704	1.0+	0.2+
1996 12 20	411	0.8−	1.7+	1997 01 07	411	0.8+	0.3−	1998 04 22	704	0.3−	1.5−
1996 12 21	411	0.3−	0.8+	1997 01 26	411	1.2−	0.6+	1998 04 22	704	0.7−	1.4−
1996 12 21	411	0.3−	1.2−	1997 01 26	411	0.4−	0.0	1998 04 22	704	0.2+	0.9+
1997 01 02	411	1.1+	0.5−	1998 04 21	704	0.0	0.1+	1998 04 22	704	0.7+	1.1+
1997 01 02	411	0.1+	0.3−	1998 04 21	704	0.3−	0.3+	1998 04 22	704	0.7−	0.6−
1997 01 02	411	0.2+	0.9−	1998 04 21	704	0.0	1.0+				

1996 YL₂ = 1998 HS₁₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	40.13133		(2000.0)			P		Q			
n	0.26474603	ω	94.66120			−0.97129152		+0.20338801			
a	2.4020557	Ω	97.11058			−0.23560069		−0.89423761			
e	0.0643642	i	7.14325			+0.03294081		−0.39871346			
P	3.72	H	14.5	G	0.15	U	4				
Residuals in seconds of arc											
1996 12 28	411	1.5−	0.6−	1998 04 23	704	0.9−	0.6+	1998 05 22	704	1.0−	0.4−
1996 12 28	411	0.4−	0.5−	1998 04 23	704	0.1−	0.9+	1998 05 22	704	0.2−	0.3+
1996 12 29	411	0.1−	0.3−	1998 04 23	704	0.1+	1.3+	1998 05 24	704	0.2+	0.3−
1996 12 29	411	0.1+	0.1+	1998 04 23	704	0.5+	1.4+	1998 05 24	704	0.5+	1.2−
1997 01 03	411	0.1+	0.4+	1998 04 24	704	0.6+	0.9−	1998 05 24	704	0.1−	0.7−
1997 01 03	411	1.1+	0.6−	1998 04 24	704	0.4+	0.0	1998 05 24	704	0.4+	1.2−
1997 01 06	411	0.2−	0.1+	1998 04 24	704	0.4−	0.6−	1998 05 24	704	0.6−	0.9−
1997 01 06	411	0.6+	1.1+	1998 04 24	704	0.2+	0.9−	1998 05 27	699	0.2−	0.1−
1997 01 06	411	0.5+	0.2−	1998 04 24	704	0.2+	0.6−	1998 05 27	699	0.6+	0.9+
1998 04 23	704	0.0	0.7+	1998 05 01	699	0.1−	0.4−	1998 05 27	699	0.3+	0.7+
1998 04 23	704	0.0	0.0	1998 05 01	699	0.4−	0.2+	1998 06 02	699	0.3−	0.5+
1998 04 23	704	0.1−	0.2+	1998 05 01	699	0.4−	0.2+	1998 06 02	699	0.4+	0.3+
1998 04 23	704	0.6+	0.2−	1998 05 22	704	0.1+	0.7−	1998 06 02	699	0.2+	0.0
1998 04 23	704	0.8+	0.2−	1998 05 22	704	0.8−	0.7−				
1998 04 23	704	0.2−	0.1+	1998 05 22	704	0.3−	1.0+				

1997 AE = 1998 FS₁₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	279.23207		(2000.0)		P		Q				
n	0.21977724		ω	356.42206	+0.61921760		+0.77923252				
a	2.7194489		Ω	311.80824	−0.71716329		+0.51104623				
e	0.1234064		i	7.46028	−0.31975986		+0.36280633				
P	4.48 <th>H</th> <td>13.5<th>G</th><td>0.15<th>U</th><td>4<td colspan="2"></td></td></td></td>		H	13.5 <th>G</th> <td>0.15<th>U</th><td>4<td colspan="2"></td></td></td>	G	0.15 <th>U</th> <td>4<td colspan="2"></td></td>	U	4 <td colspan="2"></td>			
Residuals in seconds of arc											
1997 01 02	411	0.5−	0.6+	1998 03 24	566	0.8+	0.4−	1998 04 01	704	0.2+	0.8+
1997 01 02	411	0.2+	0.2−	1998 03 24	566	0.4+	1.0−	1998 04 19	704	0.2+	0.7−
1997 01 03	411	0.7−	0.8−	1998 03 31	704	0.5+	0.5−	1998 04 19	704	0.7+	0.8+
1997 01 03	411	0.3+	0.5+	1998 03 31	704	0.4−	0.0	1998 04 19	704	0.1−	0.6+
1997 01 07	411	0.7+	0.5−	1998 03 31	704	0.1−	0.5−	1998 04 19	704	0.4−	0.3−
1997 01 07	411	0.5+	0.5−	1998 03 31	704	0.1+	0.4+	1998 04 19	704	0.3−	0.1+
1997 01 14	411	0.8−	0.3−	1998 03 31	704	1.4−	0.3−	1998 04 20	704	0.5+	0.1−
1997 01 14	411	0.4−	0.2+	1998 04 01	704	0.2−	0.2+	1998 04 20	704	0.2−	0.6+
1997 01 26	411	0.5−	0.2+	1998 04 01	704	0.3−	0.6+	1998 04 20	704	0.5+	0.3−
1997 01 26	411	1.4+	0.8+	1998 04 01	704	0.3−	0.6−	1998 04 20	704	0.0	0.6+
1998 03 24	566	0.8+	0.1−	1998 04 01	704	0.9−	0.1+	1998 04 20	704	0.0	0.0

1997 AF = 1998 HG₁₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	187.94778		(2000.0)		P		Q				
n	0.24127928	ω	281.24006		+0.92890680		−0.34706997				
a	2.5553832	Ω	99.16918		+0.36974720		+0.84999098				
e	0.3098749	i	7.51591		+0.02047379		+0.39630515				
P	4.08	H	13.5	G	0.15	U	4				
Residuals in seconds of arc											
1997 01 02	411	0.6−	0.3−	1997 01 14	411	0.0	0.2+	1998 04 20	704	0.9−	1.1−
1997 01 02	411	0.3+	0.3+	1997 01 14	411	0.0	0.0	1998 04 20	704	0.3−	0.3−
1997 01 03	411	0.2−	0.6−	1997 01 15	411	0.2−	0.3+	1998 04 20	704	0.8+	0.3+
1997 01 03	411	0.1−	0.1−	1997 01 15	411	0.1+	0.8+	1998 04 24	704	0.8−	2.4+
1997 01 07	411	0.1+	0.2−	1997 01 26	411	0.1+	0.3+	1998 04 24	704	0.0	0.5+
1997 01 07	411	0.2+	0.4−	1997 01 26	411	0.4+	0.2+	1998 04 24	704	1.8+	0.6+
1997 01 08	411	0.1−	0.4−	1997 03 12	688	0.4−	0.1−	1998 04 24	704	0.9+	1.7−
1997 01 08	411	0.3+	0.1+	1998 04 20	704	1.3−	0.5−	1998 04 24	704	0.1−	0.3−

1997 AP = 1998 KJ₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	300.86926		(2000.0)		P		Q				
n	0.28490318	ω	30.67938		+0.81574334		+0.57687675				
a	2.2873775	Ω	294.03074		−0.53960968		+0.73275770				
e	0.1674183	i	2.64469		−0.20828872		+0.36094234				
P	3.46	H	14.5	G	0.15	U	5				
Residuals in seconds of arc											
1997 01 02	411	0.2−	0.8−	1997 01 14	411	0.4+	0.1−	1998 05 22	704	0.0	0.5−
1997 01 02	411	0.1+	0.2+	1997 01 26	411	0.9−	0.1−	1998 05 22	704	0.3−	0.8+
1997 01 03	411	0.3+	0.1−	1997 01 26	411	0.9+	0.8+	1998 05 22	704	0.8+	0.3+
1997 01 03	411	1.3−	0.1+	1997 02 04	691	0.2−	0.5−	1998 05 24	704	0.5+	0.1+
1997 01 09	411	0.7+	0.3+	1997 02 04	691	0.2−	0.1−	1998 05 24	704	0.3−	0.5−
1997 01 09	411	1.1−	0.1+	1997 02 04	691	0.3−	0.1+	1998 05 24	704	0.1−	0.3+
1997 01 09	411	0.5+	0.8+	1998 05 22	704	0.2+	0.2+	1998 05 24	704	0.5−	1.0−
1997 01 14	411	1.2+	0.7−	1998 05 22	704	0.2−	0.3+				

1997 AS = 1998 KL₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	336.45921	<i>ω</i>	174.72666	+0.32628041	+0.94095217				
<i>a</i>	2.4472157	<i>Ω</i>	114.29154	−0.87085186	+0.33636236				
<i>e</i>	0.1916362	<i>i</i>	5.68431	−0.36763860	+0.03833240				
<i>P</i>	3.83	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5		
Residuals in seconds of arc									
1997 01 02	411	0.6−	0.6−	1998 05 22	704	0.1−	0.2+	1998 05 24	704
1997 01 02	411	0.6+	0.6+	1998 05 22	704	0.8+	0.4+	1998 05 24	704
1997 01 03	411	0.6−	0.5+	1998 05 22	704	1.0−	0.4−	1998 05 24	699
1997 01 03	411	0.2+	1.3−	1998 05 22	704	0.1+	1.1−	1998 05 24	704
1997 01 09	411	0.5+	0.2+	1998 05 22	704	1.0−	0.3−	1998 05 24	699
1997 01 09	411	0.2−	0.3+	1998 05 23	699	0.6+	0.2+	1998 05 24	699
1997 01 14	411	0.2−	0.3−	1998 05 23	699	0.4+	0.7+	1998 06 03	704
1997 01 14	411	0.0	0.4+	1998 05 23	699	0.7+	0.5+	1998 06 03	704
1997 01 26	411	0.7−	0.2+	1998 05 24	704	0.2+	0.2+	1998 06 03	704
1997 01 26	411	0.9+	0.1−	1998 05 24	704	0.1−	0.3+	1998 06 03	704

1997 AT = 1980 TN₁₃ = 1998 HE₁₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	233.38917	<i>ω</i>	250.01495	+0.99016358	−0.00512666				
<i>a</i>	2.4537818	<i>Ω</i>	110.07385	+0.05377331	+0.93651983				
<i>e</i>	0.2357435	<i>i</i>	8.56110	−0.12916855	+0.35057713				
<i>P</i>	3.84	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3		
Residuals in seconds of arc									
1980 10 12	095	0.1+	0.2−	1997 01 26	411	0.1−	0.3−	1998 04 24	704
1997 01 02	411	0.5−	0.2−	1997 01 26	411	0.6+	0.9−	1998 04 24	704
1997 01 02	411	0.1−	0.1+	1998 04 21	704	0.1+	0.2+	1998 04 24	704
1997 01 03	411	0.2+	0.4+	1998 04 21	704	0.2+	0.4−	1998 05 16	704
1997 01 03	411	0.2−	0.1−	1998 04 21	704	0.5+	0.5−	1998 05 16	704
1997 01 09	411	0.5−	0.1+	1998 04 21	704	0.5+	0.8−	1998 05 16	704
1997 01 09	411	0.3+	0.8+	1998 04 21	704	0.1+	1.1−	1998 05 16	704
1997 01 14	411	0.1−	0.1−	1998 04 24	704	0.1−	0.3−	1998 05 16	704
1997 01 14	411	0.3+	0.1+	1998 04 24	704	0.4−	1.1+		

1997 AC₁ = 1998 KE₈

Id. E. Bowell

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	314.38602	<i>ω</i>	260.67335	+0.52921897	+0.84798877				
<i>a</i>	2.4741442	<i>Ω</i>	41.32189	−0.76019911	+0.48906814				
<i>e</i>	0.0814632	<i>i</i>	2.51924	−0.37686151	+0.20427285				
<i>P</i>	3.89	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5		
Residuals in seconds of arc									
1997 01 02	369	1.2−	0.3−	1997 02 01	369	0.5−	0.3−	1998 05 22	704
1997 01 02	369	1.1+	0.7−	1997 02 01	369	0.4+	0.2−	1998 05 23	699
1997 01 03	369	0.7−	0.4+	1997 02 04	566	1.0+	0.3−	1998 05 23	699
1997 01 03	369	0.4+	0.2+	1997 02 04	566	0.5−	0.3−	1998 05 23	699
1997 01 06	369	0.5+	0.7−	1997 02 04	566	0.0	0.2−	1998 05 24	704
1997 01 06	369	0.2+	1.5+	1997 02 09	369	0.4−	0.1+	1998 05 24	704
1997 01 06	369	0.6−	1.5+	1997 02 09	369	0.3+	0.4−	1998 05 24	704
1997 01 09	369	0.3+	1.0−	1997 03 01	369	0.7−	0.4−	1998 05 24	704
1997 01 09	369	0.5+	0.3+	1997 03 01	369	0.6+	0.3+	1998 05 24	704
1997 01 15	369	0.3+	0.4−	1998 05 22	704	1.5+	0.3−	1998 05 25	699
1997 01 15	369	0.1−	0.6+	1998 05 22	704	0.5−	1.0+	1998 05 25	699
1997 01 30	369	0.8−	0.3+	1998 05 22	704	(0.4−	2.8−)	1998 05 25	699

1997 AU₂ = 1998 HO₁₁₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	107.69678	<i>ω</i>	0.56839	−0.21095087	−0.94046521				
<i>a</i>	3.0764784	<i>Ω</i>	101.63118	+0.89575856	−0.29512820				
<i>e</i>	0.1457308	<i>i</i>	15.78881	+0.39130081	+0.16859577				
<i>P</i>	5.40	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1997 01 02	411	1.2+	0.6−	1997 01 14	411	0.6−	1.3−	1998 04 23	704
1997 01 02	411	0.7−	0.4+	1997 01 14	411	0.5+	0.8−	1998 04 23	704
1997 01 03	411	0.1+	0.2+	1997 01 26	411	0.1−	0.8+	1998 04 24	704
1997 01 03	411	0.4−	0.5+	1997 01 26	411	0.1+	0.1+	1998 04 24	704
1997 01 06	411	0.3+	0.4−	1998 04 23	704	0.6+	0.8+	1998 04 24	704
1997 01 06	411	0.5−	1.0+	1998 04 23	704	1.0+	0.1−	1998 04 24	704

1997 AW₂ = 1998 KF₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	78.02897	<i>ω</i>	120.07742	−0.88820358	−0.45736043				
<i>a</i>	3.0186768	<i>Ω</i>	32.76291	+0.38877653	−0.79892759				
<i>e</i>	0.1717522	<i>i</i>	4.63925	+0.24484119	−0.39055875				
<i>P</i>	5.24	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1997 01 04	411	0.1−	0.4+	1997 01 26	411	0.5+	0.5−	1998 05 22	704
1997 01 04	411	0.0	0.2−	1997 01 26	411	0.2+	0.3−	1998 05 22	704
1997 01 06	411	0.0	0.4+	1997 02 06	327	0.0	0.2+	1998 05 24	704
1997 01 06	411	0.5−	0.2−	1997 02 06	327	0.4+	0.1+	1998 05 24	704
1997 01 10	411	0.5+	0.4+	1997 02 06	327	0.9−	0.1−	1998 05 24	704
1997 01 10	411	0.2+	0.4−	1998 05 22	704	0.8−	0.2−	1998 05 24	704
1997 01 15	411	0.4−	0.3+	1998 05 22	704	0.5+	0.7+	1998 05 24	704
1997 01 15	411	0.1+	0.1−	1998 05 22	704	0.2+	0.1−		

1997 AF₅ = 1998 JG₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		Williams		<i>P</i>		<i>Q</i>	
<i>n</i>	293.27195	<i>ω</i>	234.23911	+0.87063884	+0.47426340				
<i>a</i>	2.2798218	<i>Ω</i>	97.12056	−0.39807094	+0.83524677				
<i>e</i>	0.1603237	<i>i</i>	7.56424	−0.28901131	+0.27827516				
<i>P</i>	3.44	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc									
1997 01 03	369	0.7+	0.2−	1998 05 01	699	1.0+	0.0	1998 05 24	704
1997 01 03	369	0.4−	0.4−	1998 05 01	699	1.8+	0.1−	1998 05 24	704
1997 01 06	369	1.8−	0.4+	1998 05 05	699	0.7−	0.7+	1998 05 25	699
1997 01 06	369	1.1−	1.6+	1998 05 05	699	0.4+	1.3+	1998 05 25	699
1997 01 09	369	0.6−	0.2−	1998 05 05	699	0.1−	0.3+	1998 05 25	699
1997 01 09	369	0.7−	0.1+	1998 05 22	704	0.2−	0.8+	1998 05 31	557
1997 01 15	369	0.1+	0.5−	1998 05 22	704	0.4−	0.8−	1998 05 31	557
1997 01 15	369	0.7+	0.2−	1998 05 22	704	0.9−	0.0	1998 05 31	557
1997 01 30	369	1.3+	0.1−	1998 05 22	704	0.1−	0.6−	1998 05 31	557
1997 01 30	369	0.5+	0.7−	1998 05 22	704	0.2−	0.9−	1998 05 31	557
1997 03 04	369	0.9+	0.1−	1998 05 24	704	1.0+	0.9−	1998 06 01	557
1997 03 04	369	0.6+	0.4+	1998 05 24	704	1.2+	0.8−	1998 06 01	557
1998 05 01	699	1.1+	0.5−	1998 05 24	704	0.4−	2.0−		

1997 AQ₅ = 1998 KR₂₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.20677391	<i>ω</i>	98.15212	−0.94074516	−0.32313005		
<i>a</i>	2.8322976	<i>Ω</i>	63.04669	+0.24749058	−0.86162294		
<i>e</i>	0.0251561	<i>i</i>	6.62806	+0.23183390	−0.39139862		
<i>P</i>	4.77	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1997 01 07	411	0.5+	0.4+	1997 01 28	411	0.5−	0.2−	1998 05 22	704	0.4−	0.2−
1997 01 07	411	0.5−	0.7−	1997 01 28	411	0.6+	0.3+	1998 05 24	704	0.5+	0.2+
1997 01 08	411	0.4+	0.4+	1998 05 22	704	0.1−	0.3+	1998 05 24	704	0.9−	0.3−
1997 01 08	411	0.2−	0.1+	1998 05 22	704	0.4+	0.4+	1998 05 24	704	0.3+	0.4+
1997 01 12	411	0.4+	0.3+	1998 05 22	704	0.1+	0.5−	1998 05 24	704	1.0+	0.9−
1997 01 12	411	0.7−	0.6−	1998 05 22	704	0.5+	0.4−	1998 05 24	704	1.4−	0.8+

1997 AW₅ = 1998 KT₂₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17792594	<i>ω</i>	43.57098	−0.92561762	−0.37652405		
<i>a</i>	3.1307126	<i>Ω</i>	114.27454	+0.33471739	−0.86159127		
<i>e</i>	0.1108224	<i>i</i>	2.40367	+0.17662471	−0.34042639		
<i>P</i>	5.54	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 01 01	327	0.0	0.0	1997 01 08	327	0.2−	0.0	1998 05 22	704	0.6+	0.3+
1997 01 01	327	0.0	0.2−	1997 01 08	327	0.1+	0.1+	1998 05 24	704	0.1−	0.5−
1997 01 01	327	0.7−	0.3+	1997 02 04	566	0.1−	0.0	1998 05 24	704	0.2+	0.1+
1997 01 04	327	0.2−	0.1−	1997 02 04	566	0.0	0.1−	1998 05 24	704	0.2+	1.3−
1997 01 04	327	0.3+	0.6−	1997 02 04	566	0.1−	0.0	1998 05 24	704	0.0	0.6+
1997 01 04	327	0.0	0.0	1998 05 22	704	0.1−	1.0+	1998 05 24	704	0.3−	2.0−
1997 01 08	327	0.1−	0.4+	1998 05 22	704	0.1−	0.3+				
1997 01 08	327	0.9+	0.1+	1998 05 22	704	0.4−	1.6+				

1997 AB₆ = 1998 KZ₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28952220	<i>ω</i>	181.47725	−0.41577568	−0.90772085		
<i>a</i>	2.2629839	<i>Ω</i>	293.09373	+0.83504659	−0.35648018		
<i>e</i>	0.0643247	<i>i</i>	3.51104	+0.36031622	−0.22127979		
<i>P</i>	3.40	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 12 27	327	0.1+	0.4+	1997 01 08	327	0.5−	0.3−	1998 05 22	704	0.6−	1.6+
1996 12 27	327	0.1−	0.2+	1997 01 08	327	0.4+	0.3−	1998 05 22	704	0.4+	0.5−
1996 12 27	327	0.1+	0.0	1997 01 09	327	0.2+	0.3+	1998 05 22	704	0.2+	1.9+
1997 01 02	327	0.1−	0.2+	1997 01 09	327	0.1−	0.0	1998 05 22	704	(3.8−	1.4+)
1997 01 02	327	0.0	0.2−	1997 01 09	327	0.3+	0.1−	1998 05 24	704	0.1+	0.1−
1997 01 02	327	0.1+	0.3+	1998 05 01	704	0.2+	0.1+	1998 05 24	704	0.5+	0.1+
1997 01 05	327	0.3−	0.3+	1998 05 01	704	0.8−	0.1−	1998 05 24	704	0.7+	0.1+
1997 01 05	327	0.6+	0.0	1998 05 01	704	0.5+	0.7−	1998 05 24	704	(1.0+	2.1−)
1997 01 05	327	0.4−	0.1−	1998 05 01	704	0.1+	1.0−				
1997 01 08	327	0.5−	0.2−	1998 05 22	704	1.1−	0.9−				

1997 AW₆ = 1998 KX₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23750314	<i>ω</i>	330.20287	+0.82618483	+0.56336606		
<i>a</i>	2.5823978	<i>Ω</i>	355.49392	−0.50032403	+0.72866205		
<i>e</i>	0.0948361	<i>i</i>	4.45901	−0.25902604	+0.38944871		
<i>P</i>	4.15	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 01 08	411	0.5+	0.1+	1997 02 04	566	0.6−	0.2−	1998 05 01	704	0.3−	0.2−
1997 01 08	411	0.5+	1.0+	1997 02 08	566	0.1+	0.2−	1998 05 22	704	0.2+	0.2−
1997 01 10	691	0.9−	0.3+	1997 02 08	566	0.3+	0.4−	1998 05 22	704	(1.3+	2.8+)
1997 01 10	691	0.8−	0.4+	1997 02 08	566	0.1−	0.3−	1998 05 22	704	1.4−	0.6+
1997 01 10	691	0.9−	0.1+	1997 02 16	411	0.1+	0.6−	1998 05 22	704	1.1+	0.4−
1997 01 10	411	0.3−	0.8−	1997 02 16	411	1.1+	0.2+	1998 05 22	704	0.1−	0.2+
1997 01 10	411	0.7+	0.2−	1998 04 22	704	0.6+	0.0	1998 05 24	704	1.2−	0.8+
1997 01 13	411	0.0	0.2+	1998 04 22	704	1.9+	1.7−	1998 05 24	704	0.9−	0.5+
1997 01 13	411	0.9−	0.7+	1998 04 22	704	0.1−	0.5+	1998 05 24	704	1.1+	0.3+
1997 01 28	411	0.2+	0.2+	1998 04 22	704	0.2+	0.2−	1998 05 24	704	0.1+	0.9−
1997 01 28	411	1.2+	0.4−	1998 05 01	704	0.2−	0.3+	1998 05 24	704	0.6−	0.1−
1997 02 04	566	0.1−	0.1+	1998 05 01	704	0.6−	0.3+				
1997 02 04	566	0.0	0.2−	1998 05 01	704	0.2+	0.4+				

1997 AX₆ = 1998 HS₁₄₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17671681	<i>ω</i>	292.20906	+0.26965108	−0.94997439		
<i>a</i>	3.1449770	<i>Ω</i>	141.03879	+0.94976354	+0.23537073		
<i>e</i>	0.0642295	<i>i</i>	14.51506	+0.15886321	+0.20530291		
<i>P</i>	5.58	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 01 09	411	0.6+	0.3+	1997 02 15	691	0.6−	0.4+	1998 04 23	704	0.2−	0.5+
1997 01 09	411	0.0	0.9+	1997 02 15	691	0.8−	0.3+	1998 04 24	704	0.8−	0.6+
1997 01 10	411	1.1−	0.7−	1997 02 15	691	1.3−	0.1−	1998 04 24	704	0.8+	0.8+
1997 01 10	411	0.8−	0.4−	1997 02 16	411	0.8+	0.5−	1998 04 24	704	1.1+	0.1+
1997 01 13	411	0.0	0.2+	1997 02 16	411	1.0+	0.6+	1998 04 24	704	0.0	0.4−
1997 01 13	411	0.4+	0.3+	1998 04 23	704	1.2−	0.7−	1998 04 24	704	0.3+	0.7+
1997 01 27	411	0.7+	0.7−	1998 04 23	704	0.5+	1.4−				
1997 01 27	411	1.1+	0.5−	1998 04 23	704	0.5−	0.2−				

1997 AZ₆ = 1998 KQ₅₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24421694	<i>ω</i>	233.52926	+0.85036014	−0.52572019		
<i>a</i>	2.5348496	<i>Ω</i>	158.16023	+0.50005502	+0.79406195		
<i>e</i>	0.1347771	<i>i</i>	3.46631	+0.16380661	+0.30509653		
<i>P</i>	4.04	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 05	691	0.2+	0.4−	1997 01 13	411	0.2−	0.4−	1998 05 01	704	0.8+	0.6+
1996 11 05	691	0.1+	0.3−	1997 01 27	411	0.9+	1.1+	1998 05 01	704	0.9−	0.2+
1996 11 05	691	0.2−	0.4−	1997 01 27	411	0.5+	0.1−	1998 05 22	704	1.2+	0.3+
1997 01 02	691	0.6−	0.4−	1997 02 16	411	0.4+	0.1−	1998 05 22	704	0.2−	1.2−
1997 01 02	691	0.8−	0.2−	1997 02 16	411	0.3+	0.1+	1998 05 22	704	0.1+	0.1−
1997 01 02	691	1.0−	0.3−	1997 02 16	411	0.9−	1.0+	1998 05 22	704	0.8−	0.4−
1997 01 09	411	0.3+	0.3−	1998 04 22	704	0.4−	0.0	1998 05 24	704	1.2−	0.8−
1997 01 09	411	0.8−	0.4+	1998 04 22	704	0.6+	0.5−	1998 05 24	704	1.3−	0.2+
1997 01 10	411	0.8+	0.2−	1998 05 01	704	0.7+	0.3+	1998 05 24	704	1.5+	1.1+
1997 01 10	411	1.1+	0.3+	1998 05 01	704	0.2−	0.2−	1998 05 24	704	(0.6+	2.1+)
1997 01 13	411	0.2−	0.3−	1998 05 01	704	(2.7−	0.2−)				

1997 AC₇ = 1998 KG₅₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22144223	<i>ω</i>	2.54732	−0.75428469	−0.63923699		
<i>a</i>	2.7058004	<i>Ω</i>	136.47956	+0.59846019	−0.76323305		
<i>e</i>	0.0778696	<i>i</i>	12.56184	+0.27000002	−0.09408177		
<i>P</i>	4.45	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 01 09	411	0.4+	0.9−	1997 01 27	411	0.2−	0.1−	1998 05 23	704	0.9+	0.3−
1997 01 09	411	0.5+	0.3−	1997 02 14	411	0.2+	0.2+	1998 05 23	704	0.6−	1.6+

M.P.C. 31984

1997 01 10	411	0.1+	0.7+	1997 02 14	411	0.1+	0.2-	1998 05 23	704	0.7+	0.6+
1997 01 10	411	0.0	0.3-	1998 05 22	688	0.1+	0.5-	1998 05 26	704	0.2-	0.3-
1997 01 13	411	0.5-	0.7+	1998 05 22	688	0.1+	0.3-	1998 05 26	704	0.4+	0.5+
1997 01 13	411	0.6-	0.4+	1998 05 22	688	0.1+	0.2-	1998 05 26	704	1.0-	0.4-
1997 01 27	411	0.0	0.1-	1998 05 23	704	0.0	0.4+	1998 05 26	704	0.4-	1.1-

1997 AD₈ = 1998 KB₄₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	239.28281		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.22996223	ω	103.38255	+0.99883926		-0.03225506					
<i>a</i>	2.6385483	Ω	258.47452	+0.01572273		+0.92033319					
<i>e</i>	0.1089465	<i>i</i>	2.09231	+0.04552933		+0.38980307					
<i>P</i>	4.29	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4				

Residuals in seconds of arc

1996 11 12	691	0.2-	0.1-	1997 01 16	691	1.1-	0.1-	1998 04 22	704	(1.7-	3.1-)
1996 11 12	691	0.2-	0.2-	1997 01 16	691	1.4-	0.0	1998 05 26	691	0.2+	0.5+
1996 11 12	691	0.0	0.1-	1997 01 16	691	1.1-	0.3+	1998 05 26	691	0.1+	0.6+
1997 01 02	691	0.7+	0.2-	1997 02 15	691	0.4+	0.8+	1998 05 26	691	0.1+	0.3-
1997 01 02	691	0.8+	0.3-	1997 02 15	691	0.8+	0.5+	1998 06 01	691	0.3+	0.0
1997 01 02	691	1.0+	0.4-	1997 02 15	691	0.3-	0.5+	1998 06 01	691	0.5+	0.6+
1997 01 10	691	0.4+	0.1-	1998 04 22	704	0.0	1.1-	1998 06 01	691	0.1+	0.6+
1997 01 10	691	0.2+	0.3-	1998 04 22	704	1.3-	0.4-				
1997 01 10	691	0.0	0.1-	1998 04 22	704	0.0	0.8-				

1997 AR₁₂ = 1953 UG = 1998 FA₁₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig											
<i>M</i>	168.78444		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.18731299	ω	88.28440	+0.68772177		-0.71805304					
<i>a</i>	3.0252234	Ω	317.58854	+0.58694948		+0.63665356					
<i>e</i>	0.0885261	<i>i</i>	9.12424	+0.42723422		+0.28119758					
<i>P</i>	5.26	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4				

Residuals in seconds of arc

1953 10 17	760	0.1-	0.4+	1997 01 27	411	0.7+	0.5+	1998 03 31	704	0.9+	0.1-
1997 01 10	411	0.1+	0.2+	1997 01 27	411	0.4+	0.1-	1998 03 31	704	(7.0-	1.3+)
1997 01 10	411	1.0+	0.9-	1997 02 12	411	0.1+	0.5+	1998 04 01	704	1.1-	1.2+
1997 01 11	411	0.7-	0.8-	1997 02 12	411	0.1-	0.2+	1998 04 01	704	0.7+	1.0-
1997 01 11	411	0.8-	0.3+	1998 03 31	704	1.2-	1.1-	1998 04 01	704	0.4+	1.1+
1997 01 14	411	0.1-	0.3+	1998 03 31	704	0.3+	1.4-	1998 04 01	704	0.2+	0.4-
1997 01 14	411	0.7-	0.3-	1998 03 31	704	0.0	2.1+				

1997 AS₁₂ = 1987 SA₈ = 1998 KS₄₂

Id. E. Bowell, G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	47.28260		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.25836767	ω	126.76454	-0.57107522		+0.80550107					
<i>a</i>	2.4414281	Ω	107.66698	-0.79612340		-0.49645160					
<i>e</i>	0.1748052	<i>i</i>	9.55978	-0.20015151		-0.32357970					
<i>P</i>	3.81	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3				

Residuals in seconds of arc

1987 09 18	010	1.1-	0.4-	1997 01 27	411	0.8+	0.6+	1997 02 12	411	0.5+	0.3+
1987 09 18	010	0.8+	1.2+	1997 01 27	411	0.3+	0.9+	1997 02 12	411	0.4-	0.9+
1997 01 10	411	0.9-	0.0	1997 02 06	566	0.6-	0.3-	1998 05 27	699	0.4-	0.0
1997 01 10	411	0.1+	0.3+	1997 02 06	566	0.8-	0.5-	1998 05 27	699	0.3-	0.1+
1997 01 11	411	0.5+	0.1+	1997 02 06	566	0.2-	0.4-	1998 05 27	699	0.9-	0.3+
1997 01 11	411	0.2-	0.8-	1997 02 07	566	0.1+	0.4+	1998 06 02	699	0.6+	0.3+
1997 01 14	411	0.3+	0.1-	1997 02 07	566	0.6+	0.5+	1998 06 02	699	0.4+	0.3+
1997 01 14	411	0.3-	0.5-	1997 02 07	566	0.4+	0.5+	1998 06 02	699	0.2+	0.6+

1998 JUNE 10

1997 AK₁₃ = 1998 KA₄₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	81.09209		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.17568967	ω	51.82781	-0.79082598		-0.56623096					
<i>a</i>	3.1572228	Ω	92.49919	+0.46317766		-0.80181588					
<i>e</i>	0.1645133	<i>i</i>	13.44726	+0.40007591		-0.19098113					
<i>P</i>	5.61	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1997 01 11	411	0.2-	0.5+	1998 05 05	699	0.5+	0.5-	1998 05 26	704	0.1+	0.0
1997 01 11	411	0.1+	0.3+	1998 05 05	699	0.5+	0.7-	1998 05 26	704	0.2+	0.6+
1997 01 12	411	0.1+	0.1+	1998 05 23	704	0.0	0.1-	1998 05 26	704	0.5-	1.1+
1997 01 12	411	0.1+	0.1-	1998 05 23	704	0.2-	0.8+	1998 06 03	704	0.4+	0.1-
1997 01 27	411	0.3-	0.1-	1998 05 23	704	0.6-	0.1-	1998 06 03	704	0.2+	0.8+
1997 01 27	411	0.2-	0.2+	1998 05 23	704	0.6-	0.3-	1998 06 03	704	0.7+	0.4+
1997 02 12	411	0.3+	0.2-	1998 05 23	704	1.9-	1.0+	1998 06 03	704	0.2-	0.6-
1997 02 12	411	0.1+	0.5-	1998 05 26	704	0.1-	0.7-	1998 06 03	704	0.5+	0.5-
1998 05 05	699	0.7+	0.4-	1998 05 26	704	0.3+	0.4-				

1997 AA₁₈ = 1998 HA₁₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	169.98174		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.18611558	ω	305.50785	+0.55747444		-0.81008954					
<i>a</i>	3.0381851	Ω	109.61224	+0.81037941		+0.48348596					
<i>e</i>	0.0851306	<i>i</i>	11.11508	+0.18029824		+0.33165685					
<i>P</i>	5.30	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1997 01 15	411	0.0	0.7-	1997 02 13	411	0.0	0.2+	1998 04 24	704	0.4-	0.7-
1997 01 15	411	0.1+	0.3-	1998 04 23	704	0.2-	0.3-	1998 04 24	704	0.5+	0.5-
1997 01 16	411	0.8+	0.9+	1998 04 23	704	0.4-	0.1-	1998 04 24	704	0.1-	0.3-
1997 01 16	411	0.3+	0.1-	1998 04 23	704	0.5+	0.6+	1998 04 24	704	0.5-	0.0
1997 01 28	411	0.4-	0.1+	1998 04 23	704	0.7+	1.2+	1998 05 27	699	0.1-	0.5-
1997 01 28	411	0.4-	0.1-	1998 04 23	704	0.3-	1.7+	1998 05 27	699	1.1+	0.8-
1997 02 13	411	0.2-	0.0	1998 04 24	704	0.2-	0.1-	1998 05 27	699	0.6-	0.2-

1997 AG₂₁ = 1972 TP₁ = 1978 EY₂ = 1984 XE = 1998 HN₁₀₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams											
<i>M</i>	168.87027		(2000.0)	<i>P</i>		<i>Q</i>					
<i>n</i>	0.25177081	ω	210.74560	+0.32025353		-0.94724589					
<i>a</i>	2.4838906	Ω	220.58001	+0.87310109		+0.30036031					
<i>e</i>	0.1556634	<i>i</i>	1.12422	+0.36760326		+0.11184322					
<i>P</i>	3.91	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	2				

Residuals in seconds of arc

1972 10 06	095	(2.1-	4.3+)	1998 04 25	809	(3.6+	2.1+)	1998 05 22	704	0.1-	0.6-
1972 10 07	095	1.1+	0.1+	1998 04 25	809	(3.3+	1.2+)	1998 05 22	704	0.9+	0.2-
1978 03 06	095	0.0	0.6+	1998 04 25	809	(3.9+	1.9+)	1998 05 22	704	0.5+	1.7-
1984 12 01	046	0.2+	2.3-	1998 04 28	809	(2.1+	0.6+)	1998 05 22	704	0.4-	0.6-
1984 12 01	046	1.5-	2.3-	1998 04 28	809	1.1+	0.2+	1998 05 22	704	(2.9-	2.4-)
1997 01 09	399	0.5+	0.5-	1998 04 28	809	0.3+	0.3+	1998 05 22	699	0.8+	1.4-
1997 01 09	399	0.7+	0.6-	1998 05 01	704	0.5+	0.5-	1998 05 22	699	0.4+	0.2+
1997 01 12	399	0.9-	0.1+	1998 05 01	704	1.2-	1.2-	1998 05 22	699	0.4+	0.5+
1997 01 12	399	1.4-	0.6+	1998 05 01	704	1.4-	1.0+	1998 05 24	704	1.0-	1.0-
1997 01 16	399	0.3+	0.9+	1998 05 01	704	0.8-	0.9-	1998 05 24	704	0.4+	0.1-
1997 01 16	399	0.8+	0.6+	1998 05 05	699	1.2+	0.7+	1998 05 24	704	1.4-	0.7-
1997 02 02	399	1.4+	0.5-	1998 05 05	699	0.6-	1.2+	1998 05 24	704	1.1-	0.6-
1997 02 02	399	(2.9+	0.3-)	1998 05 05	699	0.1+	0.7+	1998 05 24	704	0.2-	0.4-

1997 AM₂₁

Id. M. W. Buie (1998 observations)

1998 JUNE 10

M.P.C. 31985

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	135.20412		(2000.0)	P	Q
<i>n</i>	0.21410349	ω	345.04547	-0.16620478	-0.97283894
<i>a</i>	2.7672828	Ω	114.30658	+0.92189967	-0.21128646
<i>e</i>	0.1102878	<i>i</i>	10.18307	+0.34996711	+0.09456441
<i>P</i>	4.60	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1997 01 13	905	0.0	1.4-	1997 02 14	385	0.5-	0.4-	1998 05 22	688	0.2+	0.1-
1997 01 13	905	0.0	0.7+	1997 02 14	385	0.0	0.2-	1998 05 22	688	0.0	0.1-
1997 01 16	905	0.4+	0.2+	1997 02 14	385	0.0	0.4-	1998 05 22	688	0.2+	0.1-
1997 01 16	905	0.2-	1.2+	1997 03 07	385	0.0	0.4+	1998 05 23	704	0.3+	0.6-
1997 02 03	905	0.2+	0.6-	1997 03 07	385	0.5-	0.4-	1998 05 23	704	0.7+	1.0+
1997 02 03	905	0.5+	0.2+	1997 03 31	385	0.4+	0.5+	1998 05 23	704	0.8+	0.0
1997 02 13	385	0.1+	0.1+	1997 03 31	385	0.1-	0.5+	1998 05 23	704	0.7-	0.1-
1997 02 13	385	0.1+	0.1-	1998 05 05	699	0.4-	1.5-	1998 05 25	699	0.6-	0.2-
1997 02 13	385	0.4-	0.0	1998 05 05	699	0.1-	0.6+	1998 05 25	699	0.0	0.0
1997 02 14	385	0.1-	0.0	1998 05 05	699	0.6-	0.1+	1998 05 25	699	0.2+	1.0+

1997 AZ₂₁ = 1998 KT₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	341.03021		(2000.0)	P	Q
<i>n</i>	0.17930362	ω	242.66553	-0.14383456	+0.98958384
<i>a</i>	3.1146554	Ω	19.06747	-0.90137986	-0.12852618
<i>e</i>	0.1294090	<i>i</i>	1.04434	-0.40844334	-0.06484484
<i>P</i>	5.50	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1997 01 06	369	1.1-	0.2-	1997 02 07	910	0.5+	0.1-	1998 05 01	704	0.1-	0.1-
1997 01 06	369	0.3+	0.2+	1997 02 09	369	0.1+	0.2+	1998 05 01	704	0.3-	0.2-
1997 01 06	369	0.2-	0.0	1997 02 09	369	0.1-	0.3-	1998 05 18	699	0.0	0.3-
1997 01 09	369	(0.6+	6.1-)	1997 03 01	369	0.4+	0.7+	1998 05 18	699	0.3-	0.4-
1997 01 09	369	1.2+	0.1+	1997 03 01	369	0.5-	0.3+	1998 05 18	699	(2.6-	0.5+)
1997 01 09	369	0.3+	1.1-	1997 03 04	704	0.2+	0.3-	1998 05 22	704	0.1-	1.0+
1997 01 15	369	0.3-	0.7-	1997 03 04	704	0.0	0.3-	1998 05 22	704	0.2-	0.9+
1997 01 15	369	1.6-	1.2+	1997 03 05	704	0.4-	0.4+	1998 05 22	704	1.3-	0.4+
1997 01 18	369	0.6+	1.3+	1997 03 05	704	0.8+	0.7-	1998 05 22	704	0.2+	0.6+
1997 01 18	369	0.5+	1.0+	1997 03 06	704	0.2-	0.6-	1998 05 22	704	0.5+	0.6+
1997 01 18	369	0.4-	0.3-	1997 03 06	704	0.8+	0.1+	1998 05 22	699	0.4-	0.4+
1997 02 03	566	(2.6-	0.2-)	1998 04 21	704	0.4+	0.1+	1998 05 22	699	0.7-	0.8-
1997 02 03	566	0.5-	0.0	1998 04 21	704	0.9+	0.1-	1998 05 22	699	0.4+	1.7-
1997 02 03	566	0.7-	0.1+	1998 04 21	704	0.8+	0.8-	1998 05 24	704	0.1+	0.2-
1997 02 06	369	0.2-	0.1-	1998 04 21	704	0.0	0.3-	1998 05 24	704	0.6+	0.1+
1997 02 06	369	0.9-	0.4-	1998 04 21	704	0.3-	0.3+	1998 05 24	704	0.3-	1.0+
1997 02 06	910	0.7+	0.3-	1998 05 01	704	0.4+	0.9+	1998 05 24	704	0.4+	0.5-
1997 02 06	910	0.5+	0.2-	1998 05 01	704	0.4-	0.0	1998 05 24	704	0.4-	0.6-

1997 BG

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	356.27433		(2000.0)	P	Q
<i>n</i>	0.35025732	ω	190.15048	+0.77006793	+0.49881463
<i>a</i>	1.9931710	Ω	132.07532	-0.54130946	+0.84079885
<i>e</i>	0.1617355	<i>i</i>	32.39931	-0.33760842	-0.21033605
<i>P</i>	2.81	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1997 01 12	566	0.1+	0.6-	1997 01 19	046	0.4-	0.2+	1997 03 07	046	0.3+	0.3+
1997 01 12	566	0.5+	0.6-	1997 01 21	046	1.0+	0.1-	1997 03 12	046	0.0	0.0
1997 01 12	566	0.1+	1.0-	1997 01 21	046	0.3+	0.4+	1997 03 12	046	0.3+	0.5-
1997 01 16	046	0.6-	0.5+	1997 01 21	046	0.4+	0.6-	1997 03 12	046	0.6-	0.1-
1997 01 16	046	0.7-	0.5+	1997 02 06	046	0.4+	0.0	1997 04 09	046	0.3+	0.1+
1997 01 16	046	0.5-	0.1+	1997 02 06	046	0.5+	0.0	1997 04 09	046	0.4+	0.0
1997 01 16	046	0.2-	0.3+	1997 02 06	046	0.2+	0.1+	1997 04 09	046	0.3+	0.2+
1997 01 16	046	0.3-	0.4+	1997 02 08	046	0.1+	0.2-	1997 04 13	046	0.2+	0.1-
1997 01 16	046	0.0	0.5+	1997 02 08	046	0.3+	0.1-	1997 04 13	046	0.5+	0.1+

1997 01 18	046	0.4-	0.1-	1997 02 08	046	0.4-	0.1+	1997 04 13	046	0.3+	0.1-
1997 01 18	046	0.2-	0.1-	1997 02 10	046	0.4+	0.2-	1998 06 05	046	0.2+	0.1-
1997 01 18	046	0.3-	0.0	1997 02 10	046	0.2-	0.1+	1998 06 05	046	0.3+	0.2-
1997 01 18	046	0.6-	0.0	1997 02 10	046	0.0	0.0	1998 06 05	046	0.4+	0.1+
1997 01 18	046	0.5-	0.1+	1997 02 28	046	0.4+	0.3-	1998 06 06	046	0.1+	0.6+
1997 01 19	046	0.2-	0.4+	1997 02 28	046	0.3+	0.1+	1998 06 06	046	1.0-	0.6+
1997 01 19	046	0.5-	0.1+	1997 02 28	046	0.2+	0.2+	1998 06 06	046	0.3+	0.2-
1997 01 19	046	0.5-	0.1+	1997 03 07	046	0.1+	0.1+				
1997 01 19	046	0.3-	0.3+	1997 03 07	046	0.1+	0.5+				

1997 BO₁ = 1998 HC₆₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	211.16207		(2000.0)	P	Q
<i>n</i>	0.19248131	ω	313.45035	+0.97352612	-0.22569707
<i>a</i>	2.9708245	Ω	59.62419	+0.21995188	+0.88195061
<i>e</i>	0.0819074	<i>i</i>	2.40234	+0.06219377	+0.41379216
<i>P</i>	5.12	<i>H</i>	13.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1997 01 29	411	0.9+	0.0	1997 02 26	411	0.5+	0.9-	1998 04 22	704	0.7-	0.2+
1997 01 29	411	1.1-	0.5-	1997 02 26	411	0.3+	0.4+	1998 04 22	704	0.2-	0.4-
1997 01 30	411	1.3+	0.8-	1998 04 21	704	0.7+	0.2+	1998 04 22	704	0.7+	1.1-
1997 01 30	411	0.2+	0.3-	1998 04 21	704	0.2-	0.0	1998 04 22	704	1.3+	0.9-
1997 02 04	411	0.6+	1.3+	1998 04 21	704	0.8-	0.8+	1998 05 16	704	0.0	1.5-
1997 02 04	411	0.1-	0.3+	1998 04 21	704	0.0	1.5+	1998 05 16	704	0.3+	0.5+
1997 02 13	411	0.8-	0.4+	1998 04 21	704	0.4-	1.1+	1998 05 16	704	0.4+	0.4+
1997 02 13	411	0.6-	0.1-	1998 04 22	704	0.0	0.3+	1998 05 16	704	1.2-	1.2-

1997 BF₃ = 1985 VD₅ = 1998 JY₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	217.14893		(2000.0)	P	Q
<i>n</i>	0.28011632	ω	273.29885	+0.72744439	-0.68221616
<i>a</i>	2.3133630	Ω	129.73410	+0.66139236	+0.66861009
<i>e</i>	0.2210944	<i>i</i>	5.48628	+0.18271508	+0.29587440
<i>P</i>	3.52	<i>H</i>	15.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1985 11 11	095	0.2-	0.6+	1997 02 14	411	0.5-	0.6+	1997 03 06	704	0.4+	0.0
1997 01 30	411	0.3+	0.7-	1997 02 26	411	1.6-	0.3-	1998 05 07	910	0.1+	0.1-
1997 01 30	411	0.7+	0.9-	1997 02 26	411	0.2+	0.5-	1998 05 07	910	0.2+	0.2-
1997 01 31	411	1.0-	0.3-	1997 03 04	704	1.4+	0.0	1998 05 07	910	0.1-	0.0
1997 01 31	411	0.1-	0.2+	1997 03 04	704	0.4+	0.1+	1998 05 08	910	0.1-	0.2+
1997 02 06	411	1.1-	0.6+	1997 03 05	704	1.4+	0.4+	1998 05 08	910	0.0	0.3+
1997 02 06	411	1.1-	0.4+	1997 03 05	704	0.5+	0.5+	1998 05 08	910	0.0	0.5+
1997 02 14	411	0.3-	0.2+	1997 03 06	704	0.8+	0.2-				

1997 BN₃ = 1978 NQ₆ = 1998 KN₂₅

Id. G. V. Williams, S. Nakano

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	148.26904		(2000.0)	P	Q
<i>n</i>	0.18811670	ω	45.10623	+0.00211552	-0.99948705
<i>a</i>	3.0166006	Ω	44.80199	+0.90422736	-0.01173471
<i>e</i>	0.0621484	<i>i</i>	2.59921	+0.42704614	+0.02979838
<i>P</i>	5.24	<i>H</i>	13.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1978 07 10	675	(6.3+	4.8+)	Y	1997 02 11	411	0.5-	0.8+	1998 05 22	704	1.7-	0.3+
1978 07 11	675	(4.2-	5.4-)	Y	1997 03 01	411	0.3+	0.8-	1998 05 22	704	0.2-	0.5-
1978 07 13	675	0.2-	0.6+	Y	1997 03 01	411	0.1-	0.1-	1998 05 22	704	0.2-	0.1-
1997 01 31	411	0.5-	0.0		1998 04 28	809	0.8+	1.5+	1998 05 24	704	0.3+	0.2+
1997 01 31	411	1.2+	0.3-		1998 04 28	809	0.8+	1.0+	1998 05 24	704	0.4+	0.1-
1997 02 01	411	0.4+	0.2+		1998 04 28	809	0.2+	0.0	1998 05 24	704	0.8-	0.6-
1997 02 01	411	0.2+	0.3-		1998 05 22	704	0.0	0.2+	1998 05 24	704	0.6+	0.7-
1997 02 11	411	0.8-	0.8+		1998 05 22	704	0.3+	1.6-	1998 05 24	704	0.6-	0.1+

1997 BY₄ = 1985 WL = 1998 HJ₁₁₇

Id. G. V. Williams, S. Nakano

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	222.17842		(2000.0)		P		Q				
<i>n</i>	0.27554013	ω	309.21799		+0.93662500		−0.31095619				
<i>a</i>	2.3389062	Ω	69.43374		+0.35027649		+0.82289884				
<i>e</i>	0.1544740	<i>i</i>	9.92468		+0.00632373		+0.47554573				
<i>P</i>	3.58	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3				
Residuals in seconds of arc											
1985 11 20	095	0.4−	1.1+	1997 02 13	369	0.2+	0.8−	1998 04 23	704	0.3+	0.2−
1997 01 30	369	0.3−	0.4+	1997 02 13	369	0.2−	0.1+	1998 04 23	704	1.0−	0.1+
1997 01 30	369	0.4+	0.5+	1997 03 04	369	0.8+	0.3−	1998 04 24	704	0.2−	0.3−
1997 02 01	369	0.9−	0.1+	1997 03 04	369	0.4+	0.9−	1998 04 24	704	0.5+	0.1+
1997 02 01	369	0.8−	0.1+	1997 03 09	369	0.2+	1.0+	1998 04 24	704	0.2−	0.2−
1997 02 06	369	0.3−	0.1+	1997 03 09	369	0.4+	0.8+	1998 04 24	704	0.6−	0.2−
1997 02 06	369	0.0	0.3−	1998 04 23	704	0.3+	0.6+	1998 04 24	704	0.2+	0.2+
1997 02 09	369	0.2−	0.0	1998 04 23	704	0.5+	0.4+				
1997 02 09	369	0.9+	1.4−	1998 04 23	704	0.6+	0.5+				

1997 BJ₅ = 1998 FG₁₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	197.82362		(2000.0)		$\mathbf{P}$		$\mathbf{Q}$				
n	0.17031350	ω	62.64566		+0.96867718		−0.20420007				
a	3.2233193	Ω	308.78989		+0.10939767		+0.86175751				
e	0.1714611	i	10.44475		+0.22292751		+0.46440965				
P	5.79	H	13.5	G	0.15	U	4				
Residuals in seconds of arc											
1997 01 31	691	0.3−	0.1−	1997 02 08	709	0.0	0.1−	1997 03 06	704	0.1+	0.0
1997 01 31	691	0.1−	0.0	1997 02 08	709	0.1+	0.0	1997 03 06	704	0.6−	0.2−
1997 01 31	691	0.4−	0.1+	1997 02 08	709	0.1−	0.1−	1998 03 31	704	0.5−	0.7+
1997 02 02	691	0.6−	0.2+	1997 02 08	709	0.2+	0.0	1998 03 31	704	1.9+	0.2−
1997 02 02	691	0.8−	0.2+	1997 02 08	709	0.2+	0.2−	1998 03 31	704	0.3−	0.2+
1997 02 02	691	0.8−	0.1+	1997 02 08	608	0.3+	0.1−	1998 03 31	704	(4.7−	0.5+)
1997 02 06	566	0.1+	0.2+	1997 02 08	608	0.2+	0.5+	1998 03 31	704	(4.8−	3.8+)
1997 02 06	566	0.2+	0.5+	1997 02 10	801	2.0+	0.4−	1998 04 01	704	0.1+	0.6−
1997 02 06	566	0.5+	0.1+	1997 02 10	801	1.2+	0.8−	1998 04 01	704	0.1−	0.3−
1997 02 07	691	0.5−	0.2+	1997 02 10	801	0.9+	0.2+	1998 04 01	704	1.7−	0.0
1997 02 07	691	0.2−	0.2+	1997 03 05	704	0.4−	0.6+	1998 04 01	704	0.6+	0.3+
1997 02 07	691	0.5−	0.0	1997 03 05	704	0.7−	1.0−	1998 04 01	704	(2.2−	0.6+)

1997 BU₈ = 1998 KF₃₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	267.07358		(2000.0)		P		Q				
n	0.23065283	ω	192.89744		+0.98033841		+0.19694315				
a	2.6332789	Ω	155.73391		−0.17829201		+0.91067345				
e	0.0260405	i	1.70776		−0.08454921		+0.36316287				
P	4.27	H	15.0		G	0.15	U	5			
Residuals in seconds of arc											
1997 01 31	691	0.1−	0.8+	1997 03 05	704	0.8+	0.1−	1998 05 22	704	1.8+	0.7−
1997 01 31	691	0.0	0.5+	1997 03 05	704	0.4−	0.4−	1998 05 22	704	0.9+	1.6−
1997 01 31	691	0.1−	0.1+	1997 03 06	704	0.2−	0.3+	1998 05 24	704	0.3−	0.6−
1997 02 08	566	0.5−	0.7−	1997 03 06	704	0.1−	0.8+	1998 05 24	704	1.0−	0.8+
1997 02 08	566	0.4+	0.6−	1998 05 22	704	0.2+	1.2+	1998 05 24	704	0.6−	0.9−
1997 02 08	566	0.0	0.5−	1998 05 22	704	0.1+	2.2+	1998 05 24	704	1.1−	0.4−

1997 BV₈ = 1998 KS₅₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	310.63666		(2000.0)		P		Q				
<i>n</i>	0.29887570	ω	194.32817		+0.90391882		+0.42243093				
<i>a</i>	2.2155198	Ω	140.46721		−0.38132861		+0.86686743				
<i>e</i>	0.1896099	<i>i</i>	6.03800		−0.19369887		+0.26475076				
<i>P</i>	3.30	<i>H</i>	16.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1997 01 31	691	0.6+	0.4+	1997 03 06	704	0.4−	0.7−	1998 05 26	704	1.0+	0.7−
1997 01 31	691	0.3+	0.1+	1998 05 23	704	(2.2−	2.1−)	1998 06 03	704	0.2+	0.6+
1997 01 31	691	0.4+	0.1−	1998 05 23	704	0.7−	0.3−	1998 06 03	704	(1.1+	2.7+)
1997 02 08	566	1.0−	0.3+	1998 05 23	704	0.8+	0.6+	1998 06 03	704	1.1−	0.5−
1997 02 08	566	0.0	0.2+	1998 05 23	704	0.2−	0.6−	1998 06 03	704	0.6−	1.0−
1997 02 08	566	0.9−	0.0	1998 05 26	704	0.0	0.1+				
1997 03 06	704	1.1+	0.3−	1998 05 26	704	0.8+	1.8+				

1997 CR = 1990 SA₂₀ = 1998 KF₉

Id. G. V. Williams, S. Nakano

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	273.74196		(2000.0)			P		Q			
n	0.22188934	ω	209.35120			+0.96562298		+0.20757918			
a	2.7021643	Ω	137.72462			−0.16898046		+0.95865659			
e	0.1739471	i	13.45038			−0.19752939		+0.19464950			
P	4.44	H	13.5			G	0.15	U		3	
Residuals in seconds of arc											
1990 09 19	675	0.5−	0.4−	1997 02 11	411	0.6+	0.5−	1998 05 27	699	0.3+	0.4−
1990 09 19	675	0.6+	0.1−	1997 02 11	411	0.3−	0.1+	1998 05 28	699	0.5+	0.0
1997 02 01	411	0.3−	0.5−	1997 03 05	411	0.8+	0.3+	1998 05 28	699	0.3−	0.3+
1997 02 01	411	0.5−	0.9−	1997 03 05	411	0.1−	0.9+	1998 05 28	699	0.7−	0.1+
1997 02 03	411	0.2−	0.0	1998 05 27	699	0.2+	0.8−				
1997 02 03	411	0.1−	0.1+	1998 05 27	699	0.0	0.4+				

1997 CY = 1985 SY₃ = 1988 GL₂ = 1998 KR₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	144.66913		(2000.0)		P		Q				
n	0.20974807	ω	285.03993		−0.30983552		−0.95078666				
a	2.8054599	Ω	183.01308		+0.89012965		−0.28911169				
e	0.0130331	i	2.81780		+0.33417235		−0.11144127				
P	4.70	H	13.5	G	0.15	U	2				
Residuals in seconds of arc											
1985 09 20	095	0.5−	1.3+	1997 03 01	411	0.4+	0.0	1998 05 24	704	0.4−	0.1+
1988 04 13	054	0.4−	1.0−	1997 03 01	411	0.7−	1.2+	1998 05 24	704	1.4−	0.4−
1997 02 01	411	0.2+	0.2+	1998 05 22	704	0.3+	0.3+	1998 05 24	704	0.1−	0.7−
1997 02 01	411	0.1+	0.8−	1998 05 22	704	0.3−	0.3+	1998 06 03	704	1.2−	0.9+
1997 02 03	411	1.5−	0.1−	1998 05 22	704	0.7+	0.7−	1998 06 03	704	0.5+	1.0−
1997 02 03	411	0.1+	0.1−	1998 05 22	704	0.2−	0.2+	1998 06 03	704	0.5+	1.7+
1997 02 11	411	0.5+	1.1+	1998 05 24	704	1.8+	0.8+	1998 06 03	704	1.0+	0.4−
1997 02 11	411	1.4+	0.5+	1998 05 24	704	1.0−	0.1+				

1997 CG₁ = 1998 KB₃₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	208.55001			(2000.0)			P			Q					
n	0.23685766			ω	311.77885			+0.66968888			−0.73491000				
a	2.5870874			Ω	95.84591			+0.70925419			+0.59025331				
e	0.1430200			i	6.16790			+0.22017108			+0.33392861				
P	4.16			H	14.0			G	0.15			U	5		
Residuals in seconds of arc															
1997 02 01	411	0.1+	0.1+	1997 03 01	411	0.2+	0.6+	1998 05 24	704	0.2+	0.7+				
1997 02 01	411	0.4+	0.3+	1997 03 01	411	0.3+	0.4−	1998 05 24	704	0.4−	0.3−				
1997 02 03	411	0.3+	0.2+	1998 05 22	704	0.1−	0.9+	1998 05 24	704	0.0	1.0+				

1998 JUNE 10

1997 02 03	411	0.5−	0.8−	1998 05 22	704	0.8+	0.1+	1998 05 24	704	1.6−	0.1+
1997 02 11	411	0.6−	0.2+	1998 05 22	704	0.6−	0.3−				
1997 02 11	411	0.3−	0.3−	1998 05 22	704	1.8+	2.1−				

1997 CC₇ = 1998 HQ₁₂₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	288.90297		(2000.0)		P		Q
<i>n</i>	0.18456607	ω	180.63020		+0.58763226		+0.79634224
<i>a</i>	3.0551659	Ω	125.36884		−0.74158972		+0.60089446
<i>e</i>	0.0074746	<i>i</i>	10.11943		−0.32362481		+0.06902820
<i>P</i>	5.34	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 02 04	566	0.1+	0.2−	1997 02 27	587	0.5+	0.5+	1998 04 23	704	0.2−	0.6+
1997 02 04	566	0.7+	0.2−	1997 02 27	587	0.9−	0.6+	1998 04 23	704	0.6+	0.8−
1997 02 04	566	0.2+	0.0	1997 03 04	704	0.9+	1.6−	1998 04 23	704	0.4+	1.1+
1997 02 07	587	0.1+	1.2+	1997 03 04	704	0.2−	0.2−	1998 04 23	704	(3.7−	1.0+)
1997 02 07	587	(0.3−	2.1+)	1997 03 05	704	1.2+	0.2+	1998 04 24	704	0.2−	0.0
1997 02 07	587	0.6+	1.4+	1997 03 05	704	0.2+	0.1+	1998 04 24	704	1.2−	0.8−
1997 02 08	587	0.1+	0.4−	1997 03 06	704	1.0+	0.3−	1998 04 24	704	0.2+	1.4+
1997 02 08	587	0.3+	0.3−	1997 03 06	704	0.2−	0.6−	1998 05 01	699	1.3+	0.9−
1997 02 08	587	0.0	0.2+	1997 03 10	587	0.4−	0.0	1998 05 01	699	0.4−	0.4−
1997 02 10	587	1.5−	0.2−	1997 03 10	587	0.5−	0.0	1998 05 01	699	0.8+	0.3−
1997 02 10	587	0.7−	0.3−	1997 04 07	587	0.5+	1.2+	1998 05 20	587	0.8−	0.0
1997 02 13	587	0.3−	0.2−	1997 04 07	587	0.2−	0.1+	1998 05 20	587	0.8−	0.2+
1997 02 14	587	1.3−	0.0	1997 04 30	587	0.2−	0.2−	1998 05 22	587	0.3−	0.3−
1997 02 14	587	0.1+	0.7−	1997 04 30	587	0.1+	0.3+	1998 05 22	587	0.5+	0.1+

1997 CQ₁₁ = 1998 HL₉₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	132.04630		(2000.0)		P		Q
<i>n</i>	0.20270244	ω	125.61909		−0.17137036		−0.98515435
<i>a</i>	2.8700980	Ω	334.24280		+0.89618557		−0.15159606
<i>e</i>	0.0303816	<i>i</i>	1.33895		+0.40924762		−0.08055772
<i>P</i>	4.86	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1997 02 03	691	0.0	0.1−	1997 02 14	691	0.3−	0.2−	1998 04 21	704	0.5−	1.2+
1997 02 03	691	0.3−	0.1−	1997 02 14	691	0.8+	0.4+	1998 04 22	704	0.2−	1.3−
1997 02 03	691	0.3−	0.0	1997 02 14	691	0.7−	0.2−	1998 04 22	704	0.2−	0.5−
1997 02 07	691	0.0	0.1+	1998 04 21	704	0.0	0.4−	1998 04 22	704	1.0−	0.1+
1997 02 07	691	0.4+	0.1+	1998 04 21	704	0.4+	0.7−	1998 04 22	704	0.5−	1.3+
1997 02 07	691	0.3+	0.1−	1998 04 21	704	2.0+	0.2+				

1997 CO₁₉ = 1998 KR₃₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	34.23253		(2000.0)		P		Q
<i>n</i>	0.17728745	ω	145.95172		−0.86830637		+0.48609408
<i>a</i>	3.1382248	Ω	63.43009		−0.47614328		−0.76098697
<i>e</i>	0.1030442	<i>i</i>	6.34062		−0.13903823		−0.42966426
<i>P</i>	5.56	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 02 06	385	0.3−	0.1−	1997 03 04	385	0.4+	0.0	1998 05 22	704	0.4−	0.2+
1997 02 06	385	0.5+	0.7+	1997 03 11	385	0.3−	0.3+	1998 05 22	704	0.1−	0.0
1997 02 11	385	0.3+	0.2−	1997 03 11	385	0.2+	0.6+	1998 05 24	704	0.3+	0.7−
1997 02 11	385	0.9−	0.1−	1997 03 31	385	0.1−	0.3−	1998 05 24	704	0.5−	0.5−
1997 02 13	385	0.3−	0.2−	1997 03 31	385	0.3−	0.6−	1998 05 24	704	0.1+	0.7+
1997 02 13	385	0.2+	0.4−	1998 05 22	704	0.2−	0.4+	1998 05 24	704	0.8+	0.2+
1997 03 04	385	0.5+	0.4+	1998 05 22	704	0.8+	0.9−	1998 05 24	704	0.8−	0.7+

M.P.C. 31987

1997 CX₂₇ = 1998 HG₆₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	163.48282		(2000.0)		P		Q
<i>n</i>	0.17877019	ω	272.49132		+0.65069666		−0.75620755
<i>a</i>	3.1208482	Ω	136.65286		+0.73045700		+0.59858940
<i>e</i>	0.1626704	<i>i</i>	5.75889		+0.20742811		+0.26427424
<i>P</i>	5.51	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1997 02 01	610	2.1+	0.7+	1997 02 17	327	1.0−	0.5−	1998 04 21	704	0.3−	0.9−
1997 02 01	610	2.1+	1.2+	1997 02 17	327	0.2−	0.4−	1998 04 21	704	0.7−	1.3−
1997 02 01	610	1.8+	2.0+	1997 03 03	327	0.0	0.5−	1998 04 21	704	0.4−	0.8−
1997 02 06	327	0.3−	0.1−	1997 03 03	327	0.5−	0.3−	1998 04 21	704	1.1+	0.8+
1997 02 06	327	1.2−	0.2−	1997 03 03	327	1.0−	0.3−	1998 04 22	704	0.4+	0.6+
1997 02 06	327	1.6−	0.3−	1997 03 05	704	1.0+	0.8−	1998 04 22	704	1.3+	0.8+
1997 02 06	104	0.4−	0.2+	1997 03 05	704	0.8+	1.0+	1998 04 22	704	0.1+	0.6+
1997 02 06	104	1.0−	0.7−	1997 03 06	704	0.7+	0.2+	1998 04 22	704	0.4−	0.4+
1997 02 06	104	1.6−	1.8−	1997 03 06	704	0.6+	0.5+	1998 04 22	704	0.5+	0.2+
1997 02 17	327	0.2−	0.0	1998 04 21	704	1.7−	0.3−				

1997 CC₂₉ = 1992 HE₆ = 1993 OD₁₂ = 1998 KH₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	89.42781		(2000.0)		P		Q
<i>n</i>	0.17562202	ω	87.49099		−0.87807294		−0.47852421
<i>a</i>	3.1580336	Ω	63.91995		+0.43833791		−0.80564809
<i>e</i>	0.1019104	<i>i</i>	0.10077		+0.19195779		−0.34920728
<i>P</i>	5.61	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1992 04 25	809	1.9−	1.1−	1997 02 07	327	0.0	0.3+	1998 05 22	704	0.3−	1.1+
1992 04 25	809	0.3+	1.2−	1997 02 07	327	0.3+	0.1−	1998 05 22	704	0.1−	1.7+
1992 04 25	809	0.1+	1.9−	1997 02 07	327	1.0−	0.0	1998 05 22	704	0.5+	0.8+
1993 07 12	809	0.4+	0.5+	1997 02 14	327	0.7−	0.4+	1998 05 22	704	1.0+	1.6+
1993 07 12	809	0.0	0.3+	1997 02 14	327	0.0	0.1+	1998 05 24	704	0.4−	0.0
1993 07 12	809	0.6−	0.7+	1997 02 14	327	0.8+	0.4+	1998 05 24	704	0.6−	0.9+
1993 07 19	809	0.2+	1.5−	1997 02 18	327	0.6+	0.0	1998 05 24	704	0.1+	1.0−
1993 07 19	809	0.0	1.0−	1997 02 18	327	0.2−	0.1+	1998 05 24	704	0.8+	0.5−
1993 07 19	809	0.2+	0.3−	1997 02 18	327	0.8+	0.3+	1998 05 24	704	0.3−	0.0

1997 DR = 1998 KE₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	309.18101		(2000.0)		P		Q
<i>n</i>	0.21053019	ω	273.79115		+0.57708882		+0.81629054
<i>a</i>	2.7985074	Ω	31.49769		−0.72878947		+0.52869587
<i>e</i>	0.0208356	<i>i</i>	2.77160		−0.36855719		+0.23270246
<i>P</i>	4.68	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1997 02 28	966	0.7+	0.6+	1997 03 09	966	0.5−	0.0	1998 05 22	704	2.0−	1.1−
1997 02 28	966	0.5+	0.0	1997 03 09	966	0.6+	0.2+	1998 05 24	704	0.2−	0.0
1997 03 01	966	0.7−	0.6−	1998 05 22	704	0.1−	2.0+	1998 05 24	704	0.3−	1.0+
1997 03 05	966	1.0−	0.2−	1998 05 22	704	0.4−	1.2+	1998 05 24	704	2.0+	0.2−
1997 03 05	966	0.3+	0.1+	1998 05 22	704	1.5+	2.8−	1998 05 24	704	0.5−	0.0

1997 EL

Id. E. Bowell (1998 observations)

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	254.59678		(2000.0)		P		Q
<i>n</i>	0.18947565	ω	215.45358		+0.99209479		−0.07668428
<i>a</i>	3.0021596	Ω	148.49850		+0.09882291		+0.96527868
<i>e</i>	0.1206559	<i>i</i>	10.95904		−0.07734307		+0.24971301
<i>P</i>	5.20	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4

M.P.C. 31988

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Residuals in seconds of arc

1997 02 06	691	0.0	0.2+	1998 05 03	566	0.2+	0.0	1998 05 24	699	0.0	0.2−
1997 02 06	691	0.4−	0.2−	1998 05 03	566	0.6+	0.3−	1998 05 24	699	0.2−	0.3−
1997 02 06	691	0.1−	0.0	1998 05 05	699	0.1+	0.4+	1998 05 26	704	0.6−	0.4+
1997 03 01	411	0.7+	0.1+	1998 05 05	699	0.6+	1.4+	1998 05 26	704	0.6+	0.1−
1997 03 01	411	0.7−	0.3−	1998 05 05	699	0.3+	0.4+	1998 05 26	704	0.1+	0.1−
1997 03 02	411	0.4−	0.0	1998 05 23	704	0.7−	0.1+	1998 05 26	704	0.1−	0.5−
1997 03 02	411	0.6−	0.0	1998 05 23	704	0.0	1.3+	1998 05 26	704	0.3−	0.5−
1997 03 07	411	0.5+	0.1+	1998 05 23	704	0.1+	0.2−	1998 05 27	596	0.8−	0.3+
1997 03 07	411	0.3+	0.6+	1998 05 23	704	0.3−	0.4+	1998 05 27	596	1.4−	0.5+
1997 03 12	411	0.5+	0.5−	1998 05 23	704	0.7+	0.8+	1998 05 27	596	0.6−	1.2+
1997 03 12	411	0.4+	0.1−	1998 05 23	699	0.3−	0.5−	1998 06 03	704	0.2+	0.8−
1997 04 10	411	0.1+	0.1+	1998 05 23	699	0.1−	0.1−	1998 06 03	704	0.6−	1.0−
1997 04 10	411	0.3−	0.1−	1998 05 23	699	0.2+	1.2−	1998 06 03	704	1.2+	0.3−
1998 05 03	566	0.2+	0.4−	1998 05 24	699	0.2−	0.1−	1998 06 03	704	1.1+	0.7−

1997 EK₆ = 1998 HD₁₂₆

Id. G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	253.64654		(2000.0)	P	Q
<i>n</i>	0.23585661	ω	277.57357	+0.96234647	−0.04843008
<i>a</i>	2.5944025	Ω	85.47875	+0.15727997	+0.90176424
<i>e</i>	0.1691605	<i>i</i>	15.56383	−0.22170315	+0.42950643
<i>P</i>	4.18	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1997 03 06	046	0.3−	0.6−	1997 03 12	046	0.5+	0.6+	1998 04 24	704	0.0	1.0+
1997 03 06	046	0.5−	0.5−	1997 03 12	046	0.4+	0.4+	1998 04 24	704	0.2+	0.4−
1997 03 06	046	0.5−	0.1−	1997 04 01	046	0.2+	0.2+	1998 05 01	699	(2.3+ 1.0−)	
1997 03 07	046	0.2+	0.5−	1997 04 01	046	0.2−	0.7+	1998 05 01	699	1.5+	0.3+
1997 03 07	046	0.3+	0.5−	1997 04 01	046	0.1+	0.2+	1998 05 01	699	0.9+	0.5+
1997 03 07	046	0.7−	0.4−	1997 04 02	046	0.1−	0.3+	1998 05 16	046	0.7+	0.5−
1997 03 09	046	0.0	0.2+	1997 04 02	046	0.4+	0.1−	1998 05 16	046	0.9−	0.3+
1997 03 09	046	0.3−	0.1+	1997 04 02	046	0.2+	0.2+	1998 05 16	046	1.0−	0.1+
1997 03 09	046	0.2−	0.3−	1998 04 23	704	1.0−	1.0+	1998 05 16	046	0.9+	0.1+
1997 03 09	046	0.0	0.0	1998 04 23	704	0.8−	0.9−	1998 05 19	046	0.2−	0.3+
1997 03 09	046	0.2+	0.1−	1998 04 23	704	0.2−	0.2−	1998 05 19	046	0.5−	0.1+
1997 03 09	046	0.0	0.1+	1998 04 23	704	0.1−	0.3−	1998 05 19	046	0.2−	0.2+
1997 03 12	046	0.2+	0.2+	1998 04 24	704	0.5+	1.7−				

1997 EL₆ = 1998 KM₃₂

Id. G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	214.04638		(2000.0)	P	Q
<i>n</i>	0.17061208	ω	26.30822	+0.80250535	−0.59651317
<i>a</i>	3.2195576	Ω	10.34042	+0.53435903	+0.70922197
<i>e</i>	0.0607667	<i>i</i>	4.00550	+0.26541589	+0.37573426
<i>P</i>	5.78	<i>H</i>	13.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1997 03 06	046	0.2+	0.1+	1997 03 10	046	0.0	0.1−	1998 05 22	704	0.4−	1.7−
1997 03 06	046	0.1+	0.0	1997 03 12	046	0.5+	0.2−	1998 05 22	704	0.6−	0.7+
1997 03 06	046	0.0	0.3+	1997 03 12	046	0.1+	0.0	1998 05 24	704	1.6+	0.7−
1997 03 06	046	0.1+	0.0	1997 03 12	046	0.5+	0.0	1998 05 24	704	0.4+	0.9−
1997 03 07	046	0.1−	0.1−	1997 04 01	046	0.4+	0.3+	1998 05 24	704	1.0+	1.3+
1997 03 07	046	0.0	0.2−	1997 04 01	046	0.1+	0.1+	1998 05 24	704	1.5−	0.2−
1997 03 07	046	0.4+	0.0	1997 04 01	046	0.5+	0.0	1998 05 24	704	1.0+	1.0+
1997 03 08	046	0.3−	0.2+	1997 04 02	046	0.4−	0.0	1998 06 02	046	0.0	0.0
1997 03 08	046	0.5−	0.2+	1997 04 02	046	0.4−	0.1−	1998 06 02	046	0.4−	0.1−
1997 03 08	046	0.6−	0.3+	1997 04 02	046	0.3−	0.3−	1998 06 02	046	0.0	0.1−
1997 03 10	046	0.0	0.2−	1998 05 22	704	0.6−	0.3+				
1997 03 10	046	0.1−	0.3−	1998 05 22	704	0.5−	0.5+				

1997 EM₂₅ = 1998 KU₄₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	193.77008		(2000.0)	P	Q
<i>n</i>	0.23221391	ω	273.24902	+0.56522046	−0.80852881
<i>a</i>	2.6214640	Ω	140.82271	+0.82159862	+0.53388715
<i>e</i>	0.0873683	<i>i</i>	15.02129	+0.07417236	+0.24747865
<i>P</i>	4.24	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1997 01 31	691	0.1−	0.1−	1997 03 05	704	0.0	0.4+	1998 05 23	704	0.5−	0.4+
1997 01 31	691	0.2−	0.0	1997 03 05	704	0.6+	0.1+	1998 05 23	704	2.7+	0.4+
1997 01 31	691	0.0	0.1+	1997 03 06	704	0.5+	0.1+	1998 05 23	704	0.5+	0.8−
1997 03 01	369	0.9+	0.1−	1997 03 06	704	1.0+	0.0	1998 05 26	704	0.9−	2.2−
1997 03 01	369	0.6−	0.2−	1997 03 07	369	1.0−	1.1+	1998 05 26	704	0.3−	1.6+
1997 03 04	704	0.9+	0.1−	1997 03 07	369	0.6−	0.3−	1998 05 26	704	0.2+	0.8+
1997 03 04	704	0.4+	0.4−	1997 03 09	369	0.8−	0.4−	1998 05 26	704	0.7+	0.1+
1997 03 04	369	0.6−	0.0	1998 05 23	704	0.1+	0.9+	1998 05 26	704	0.8−	0.5−
1997 03 04	369	0.5−	0.2−	1998 05 23	704	1.9−	0.7−				

1997 NU

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	114.42410		(2000.0)	P	Q
<i>n</i>	0.22558107	ω	81.89191	−0.89029102	+0.41009934
<i>a</i>	2.6726020	Ω	122.11142	−0.45189767	−0.84934836
<i>e</i>	0.1160975	<i>i</i>	13.51802	+0.05630625	−0.33230392
<i>P</i>	4.37	<i>H</i>	12.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1997 07 01	097	0.2−	0.2+	1997 07 18	097	0.2+	0.2+	1997 08 29	097	0.2−	0.4+
1997 07 01	097	0.1−	0.3+	1997 07 18	097	0.2+	0.3−	1998 05 23	097	0.8−	0.0
1997 07 02	097	0.4−	0.2+	1997 07 19	097	0.3−	0.1−	1998 05 23	097	0.6−	0.4−
1997 07 02	097	0.4−	0.2+	1997 07 19	097	0.1−	0.2−	1998 05 30	097	0.2+	0.2+
1997 07 02	097	0.4−	0.2+	1997 08 02	097	(1.2− 2.3−)		1998 05 30	097	0.1+	0.0
1997 07 11	097	0.6−	1.5−	1997 08 02	097	0.3+	0.2−	1998 05 30	097	0.1+	0.0
1997 07 11	097	0.0	0.8−	1997 08 08	097	0.6+	0.3+	1998 05 31	097	0.1+	0.2+
1997 07 11	097	1.5+	0.8−	1997 08 08	097	0.6+	0.2+	1998 05 31	097	0.9+	0.1−
1997 07 11	097	0.2−	1.2+	1997 08 29	097	0.4−	0.7+				

1997 RT₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	91.78516		(2000.0)	P	Q
<i>n</i>	0.00362283	ω	80.19247	−0.43260098	+0.89949289
<i>a</i>	41.9859593	Ω	163.74718	−0.88904351	−0.41427463
<i>e</i>	0.0806858	<i>i</i>	12.67104	−0.14986002	−0.13888511
<i>P</i>	272	<i>H</i>	7.0	<i>G</i>	0.15
				<i>U</i>	7

Residuals in seconds of arc

1997 09 06	950	0.0	0.1+	1997 09 10	950	0.3+	0.0	1997 10 05	675	0.7+	0.1−
1997 09 06	950	0.1−	0.1+	1997 09 10	950	0.1+	0.6−	1997 10 27	675	0.2−	1.0+
1997 09 07	950	0.2−	0.0	1997 09 23	568	0.3−	0.2−	1997 10 27	675	0.2−	0.8+
1997 09 07	950	0.4+	0.3−	1997 09 23	568	0.1−	0.3+	1997 10 27	675	0.4−	0.9+
1997 09 07	950	0.0	0.2+	1997 09 24	568	0.1−	0.0	1998 05 29	568	0.0	0.3−
1997 09 07	675	0.1+	0.1+	1997 09 24	568	0.5−	0.2−	1998 05 29	568	0.1−	0.0
1997 09 07	675	0.1+	0.1+	1997 09 27	696	0.4−	1.1−	1998 05 29	568	0.0	0.2+
1997 09 08	675	0.0	0.2−	1997 09 27	696	0.4−	0.3−	1998 05 29	568	0.1+	0.1−
1997 09 08	675	0.1−	0.2−	1997 10 05	675	0.3+	0.5−	1998 05 30	568	0.2+	0.0
1997 09 10	950	0.4+	0.5+	1997 10 05	675	0.5+	0.0	1998 05 30	568	0.0	0.2−

1997 ST₂₃ = 1995 EL₇

Id. A. Gnädig

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M.P.C. 31989

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	98.02064		(2000.0)		P		Q				
<i>n</i>	0.22277224	ω	331.63603		+0.96056457		+0.27793258				
<i>a</i>	2.6950201	Ω	12.23569		-0.24712120		+0.86702608				
<i>e</i>	0.0790698	<i>i</i>	2.24936		-0.12746304		+0.41354476				
<i>P</i>	4.42	<i>H</i>	16.5		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1995 03 02	691	0.5+	0.1+	1995 03 08	691	0.4-	0.3+	1997 10 04	691	0.1-	0.1+
1995 03 02	691	0.4+	0.5-	1997 09 29	691	0.3-	0.3-	1997 10 04	691	0.4-	0.0
1995 03 02	691	0.9+	0.3-	1997 09 29	691	0.2+	0.1-	1997 10 31	910	0.4+	0.0
1995 03 08	691	0.5-	0.1+	1997 09 29	691	0.0	0.3+	1997 10 31	910	0.7+	0.1-
1995 03 08	691	0.8-	0.3+	1997 10 04	691	0.4-	0.1-	1997 10 31	910	0.0	0.2+

1997 TL₂₁ = 1993 SA₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	146.02446		(2000.0)		P		Q			
<i>n</i>	0.26030046	ω	272.53885		+0.31205828		+0.95000949			
<i>a</i>	2.4293277	Ω	15.65581		-0.85614989		+0.28579501			
<i>e</i>	0.2106593	<i>i</i>	2.14062		-0.41185799		+0.12571069			
<i>P</i>	3.79	<i>H</i>	17.0		<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1993 09 15	691	0.9-	0.7-	1993 09 23	809	1.0+	0.1-	1997 10 11	691	1.0-	0.0
1993 09 15	691	1.2-	0.5-	1993 09 23	809	0.3-	0.6-	1997 10 11	691	0.8-	0.4-
1993 09 15	691	0.9-	0.8-	1993 09 23	675	0.6+	2.3-	1997 10 31	910	0.1+	0.3+
1993 09 16	809	0.9+	0.1-	1997 10 04	691	0.8+	0.0	1997 10 31	910	0.3+	0.3+
1993 09 16	809	1.1+	1.5+	1997 10 04	691	0.5+	0.1-	1997 10 31	910	0.1-	0.1+
1993 09 16	809	0.1-	2.9+	1997 10 04	691	1.0+	0.0				
1993 09 23	809	0.0	0.6+	1997 10 11	691	0.9-	0.1-				

1997 WK₃₅ = 1993 BE₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	345.10204		(2000.0)		P		Q			
<i>n</i>	0.17331811	ω	308.35936		-0.70522029		-0.70897859			
<i>a</i>	3.1859583	Ω	186.49183		+0.66026783		-0.65484815			
<i>e</i>	0.1817878	<i>i</i>	1.87589		+0.25828422		-0.26176948			
<i>P</i>	5.69	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1993 01 23	809	0.0	0.1-	1997 10 01	910	0.1-	0.9-	1997 11 29	704	0.9+	1.0+
1993 01 28	809	0.5+	0.7+	1997 11 29	704	0.9-	1.2+	1997 12 04	704	0.3+	1.1+
1993 01 28	809	0.6-	1.0-	1997 11 29	704	0.7+	0.7+	1997 12 04	704	1.1-	1.4-
1997 10 01	910	0.1+	0.5-	1997 11 29	704	1.3+	0.5-	1997 12 04	704	0.1+	0.7-
1997 10 01	910	0.1-	0.9-	1997 11 29	704	0.6-	0.1-	1997 12 04	704	0.6-	0.6+

1998 AZ₅ = 1993 FS₇₀

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	176.07862		(2000.0)		P		Q			
<i>n</i>	0.17540239	ω	14.92859		+0.99658611		+0.07765969			
<i>a</i>	3.1606692	Ω	340.55176		-0.08171259		+0.87931891			
<i>e</i>	0.1270771	<i>i</i>	4.82740		-0.01179747		+0.46985874			
<i>P</i>	5.62	<i>H</i>	13.5		<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1993 03 21	809	0.2-	0.0	1998 01 08	910	0.3-	0.4-	1998 03 03	809	1.4-	0.4-
1993 03 22	809	0.1+	0.2-	1998 01 08	910	0.1+	0.2-	1998 03 03	809	0.7-	0.1-
1997 12 08	910	0.2-	0.3+	1998 01 09	910	0.1+	0.2-	1998 03 04	809	1.3+	1.1+
1997 12 08	910	0.2-	0.3+	1998 01 09	910	0.1+	0.5-	1998 03 04	809	1.4+	0.6+
1997 12 08	910	0.2+	0.0	1998 01 09	910	0.2+	0.3-	1998 03 04	809	1.5+	0.8+
1998 01 08	910	0.3-	0.3-	1998 03 03	809	1.9-	0.5-				

1998 AU₉ = 1981 EQ₁ = 1992 EA₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	335.10525		(2000.0)		P		Q			
<i>n</i>	0.18072756	ω	239.28229		-0.12171489		+0.99254489			
<i>a</i>	3.0982738	Ω	23.72910		-0.90519270		-0.10838009			
<i>e</i>	0.1180455	<i>i</i>	0.90200		-0.40719979		-0.05575303			
<i>P</i>	5.45	<i>H</i>	12.5		<i>G</i>	0.15	<i>U</i>	3		

Residuals in seconds of arc

1981 03 08	809	0.4-	0.3+	1998 01 08	688	0.4+	0.7+	1998 04 22	704	0.6+	0.1+
1981 03 08	809	0.1-	0.1-	1998 01 08	688	0.3+	0.1-	1998 04 30	699	0.3+	0.2-
1981 03 08	809	0.3+	0.6-	1998 04 21	704	1.2-	0.3-	1998 04 30	699	0.9+	0.5+
1992 03 01	809	0.4-	0.5+	1998 04 21	704	0.9-	0.1+	1998 04 30	699	0.8+	0.3+
1992 03 03	809	0.4-	1.0-	1998 04 21	704	0.8-	0.2-	1998 05 01	699	0.8+	0.2+
1992 03 06	809	0.6+	0.0	1998 04 21	704	1.5-	0.2-	1998 05 01	699	1.0+	0.0
1998 01 06	688	0.1+	0.5+	1998 04 21	704	1.7-	0.3-	1998 05 01	699	0.7+	0.0
1998 01 06	688	0.1+	0.3+	1998 04 22	704	0.3-	0.2-	1998 05 18	699	0.4+	0.2-
1998 01 06	688	0.4+	0.9+	1998 04 22	704	0.4-	0.2-	1998 05 18	699	0.3+	0.4-
1998 01 06	688	0.1+	0.5+	1998 04 22	704	0.2-	0.1+	1998 05 18	699	0.9+	0.6-
1998 01 08	688	0.3-	0.6+	1998 04 22	704	0.2-	0.0				

1998 BE₂ = 1976 GG₄ = 1995 QV₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	301.58387		(2000.0)		P		Q			
<i>n</i>	0.17344801	ω	66.79388		-0.79592147		+0.60519566			
<i>a</i>	3.1843674	Ω	150.44194		-0.56644553		-0.73529105			
<i>e</i>	0.1262646	<i>i</i>	1.82651		-0.21365504		-0.30509879			
<i>P</i>	5.68	<i>H</i>	12.5		<i>G</i>	0.15	<i>U</i>	3		

Residuals in seconds of arc

1976 04 02	095	0.2+	0.6+	1995 09 24	809	0.3-	0.0	1998 01 20	704	0.0	0.2+
1995 08 24	809	0.4+	0.1+	1997 12 29	566	0.1-	0.6+	1998 01 20	704	0.1+	0.0
1995 08 25	809	1.0+	1.2+	1997 12 29	566	0.1-	0.4+	1998 01 20	704	0.4+	0.2-
1995 08 25	809	0.0	0.3+	1997 12 29	566	0.4-	0.5+	1998 01 20	704	0.2+	0.2-
1995 08 26	809	0.2+	0.1+	1998 01 02	704	0.4+	0.6+	1998 01 20	704	0.6-	0.0
1995 08 27	809	(4.5-	4.6-)	1998 01 02	704	0.0	0.0	1998 01 22	704	0.6+	0.3+
1995 08 27	809	0.0	0.0	1998 01 02	704	0.0	0.2+	1998 01 22	704	0.4+	0.4+
1995 09 01	809	0.0	0.1-	1998 01 02	704	0.2-	0.1-	1998 01 22	704	0.5-	0.8+
1995 09 17	809	1.8-	0.7-	1998 01 02	704	0.5+	1.0-	1998 01 22	704	0.2-	0.3+
1995 09 18	809	0.1+	0.8-	1998 01 08	704	0.1-	0.5-	1998 04 14	704	0.2+	2.5-
1995 09 20	809	0.8-	0.2+	1998 01 08	704	0.2-	0.1+	1998 04 14	704	0.4-	1.6-
1995 09 22	809	0.2+	0.4+	1998 01 08	704	0.2+	0.1-	1998 04 14	704	2.7+	1.3+
1995 09 22	809	0.5+	0.5-	1998 01 08	704	0.5-	0.1-	1998 04 14	704	2.4-	0.4-
1995 09 23	809	0.6+	0.1-	1998 01 20	704	0.1-	0.0				

1998 BP₇ = 1996 VA₃₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	75.28324		(2000.0)		P		Q			
<i>n</i>	0.18695243	ω	275.70883		+0.23951659		-0.97084363			
<i>a</i>	3.0291118	Ω	160.42488		+0.90186308		+0.21876935			
<i>e</i>	0.0975013	<i>i</i>	1.66213		+0.35954804		+0.09799289			
<i>P</i>	5.27	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1996 11 01	327	0.4-	0.1-	1998 01 24	566	0.6-	0.9+	1998 01 29	566	0.1-	0.7+
1996 11 01	327	0.0	0.0	1998 01 24	566	0.0	0.5+	1998 01 29	566	0.2-	0.4-
1996 11 01	327	0.5+	0.3+	1998 01 24	566	0.2-	0.7+	1998 02 28	910	1.0+	0.1-
1996 11 02	327	0.3-	0.1-	1998 01 25	566	0.3+	0.8-	1998 02 28	910	0.6+	0.2-
1996 11 02	327	0.5+	0.2+	1998 01 25	566	0.1+	0.6-	1998 02 28	910	1.6-	0.3+
1996 11 02	327	0.3-	0.3-	1998 01 25	566	0.6+	1.2-				
1996 11 02	327	0.1+	0.0	1998 01 29	566	0.1-	0.3+				

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1998 BX₁₂ = 1992 RB₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	331.52561		(2000.0)	P		Q	
<i>n</i>	0.26125500	ω	103.81017	−0.89363958	+0.44438317		
<i>a</i>	2.4234068	Ω	102.60450	−0.43257314	−0.81569277		
<i>e</i>	0.1289254	<i>i</i>	3.68398	−0.11953565	−0.37036321		
<i>P</i>	3.77	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1992 09 02	809	0.1−	0.5−	1998 01 22	704	0.7+	0.8+	1998 01 24	704	0.2+	0.3−
1992 09 02	809	0.0	0.2−	1998 01 22	704	(2.9−	0.4+)	1998 01 24	704	0.3+	0.2−
1992 09 02	809	(1.6+	1.2−)	1998 01 23	704	0.2−	0.2+	1998 01 24	704	0.3−	0.3−
1992 09 03	809	0.1+	0.7+	1998 01 23	704	0.2+	0.9+	1998 01 25	704	0.3−	0.2−
1997 12 06	910	0.2−	0.1−	1998 01 23	704	0.0	0.2+	1998 01 25	704	0.3+	0.2+
1997 12 06	910	0.1+	0.1+	1998 01 23	704	0.2−	0.4+	1998 01 25	704	0.2−	0.3+
1997 12 06	910	0.1+	0.0	1998 01 23	704	0.0	0.2−	1998 01 25	704	0.3−	0.3+
1998 01 22	704	0.0	0.3−	1998 01 24	704	0.4+	0.6−				
1998 01 22	704	0.7−	1.0−	1998 01 24	704	0.0	0.2−				

1998 CE₃ = 1997 AW₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	120.94793		(2000.0)	P		Q	
<i>n</i>	0.19186027	ω	69.07001	+0.64163693	−0.76517794		
<i>a</i>	2.9772320	Ω	340.71712	+0.63058338	+0.56556068		
<i>e</i>	0.0918893	<i>i</i>	9.22850	+0.43665392	+0.30764240		
<i>P</i>	5.14	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1997 01 14	327	0.2−	0.0	1998 02 06	809	0.2−	0.3−	1998 03 03	809	0.8−	0.8−
1997 01 14	327	0.1−	0.2+	1998 02 06	809	0.4−	1.2−	1998 03 03	809	1.1−	1.5−
1997 01 14	327	0.2+	0.2−	1998 02 06	809	1.1−	1.0−	1998 03 03	809	0.8−	1.5−
1997 01 15	327	0.0	0.4+	1998 02 07	809	1.3+	0.4+	1998 03 04	809	1.2+	0.9+
1997 01 15	327	0.2−	0.1−	1998 02 07	809	0.6+	1.3+	1998 03 04	809	0.5+	1.5+
1997 01 15	327	0.3+	0.3−	1998 02 07	809	0.1+	1.0+	1998 03 04	809	0.8+	1.1+

1998 DG₆ = 1994 CZ₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	265.20257		(2000.0)	P		Q	
<i>n</i>	0.24220911	ω	304.74113	+0.41092523	+0.91090424		
<i>a</i>	2.5488390	Ω	349.32566	−0.75663460	+0.31791376		
<i>e</i>	0.1518672	<i>i</i>	11.62848	−0.50857108	+0.26302909		
<i>P</i>	4.07	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1994 02 08	809	0.3−	0.6−	1998 02 22	566	0.1+	0.0	1998 03 03	704	1.1+	0.2−
1994 02 08	809	0.9−	0.4−	1998 02 22	566	0.2+	0.5−	1998 03 03	704	0.9+	1.4+
1994 02 08	809	(2.3−	1.5−)	1998 02 22	566	0.5−	0.3+	1998 03 04	704	0.0	0.4+
1994 02 10	809	0.1−	0.1+	1998 02 23	566	0.6+	0.3+	1998 03 04	704	1.7−	0.3−
1994 02 10	809	0.5−	0.1−	1998 02 23	566	0.0	0.6+	1998 03 04	704	0.4−	0.1−
1994 02 10	809	0.9−	0.7−	1998 02 23	566	0.4−	0.4+	1998 03 04	704	0.3−	1.4−
1994 02 13	809	1.2+	0.6+	1998 03 03	704	0.6+	0.3−	1998 03 04	704	2.0−	0.1−
1994 02 13	809	0.9+	0.4−	1998 03 03	704	1.9+	0.3−				
1994 02 13	809	0.3+	1.4+	1998 03 03	704	(3.5+	0.5−)				

1998 DP₉ = 1996 XN₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	43.26025		(2000.0)	P		Q	
<i>n</i>	0.19160199	ω	70.37448	−0.84547777	−0.49719426		
<i>a</i>	2.9799069	Ω	79.37737	+0.38474036	−0.82018166		
<i>e</i>	0.0557262	<i>i</i>	11.43429	+0.37032714	−0.28301926		
<i>P</i>	5.14	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1996 12 04	098	0.4+	0.9−	1998 02 22	566	0.7−	0.6−	1998 05 20	327	0.0	0.3+
1996 12 04	098	0.8+	1.2−	1998 02 22	566	0.2+	0.3−	1998 05 20	327	0.4−	0.2+
1996 12 06	098	0.6−	1.3+	1998 02 23	566	0.0	0.0	1998 05 20	327	0.3−	0.1+
1996 12 06	098	0.6−	0.8+	1998 02 23	566	0.3+	0.2−	1998 05 24	327	0.3+	0.1−
1998 02 22	566	0.2−	0.1−	1998 02 23	566	0.1+	0.1+	1998 05 24	327	0.1+	0.2−
1998 02 22	566	0.1+	0.6−	1998 02 24	566	0.0	0.6+	1998 05 24	327	0.2+	0.1−
1998 02 22	566	0.3−	0.4−	1998 02 24	566	0.0	0.8+	1998 05 24	327	0.1+	0.1+
1998 02 22	566	0.3+	0.5−	1998 02 24	566	0.0	0.9+				

1998 DH₁₀ = 1969 VH₂ = 1993 FS₅₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	163.75171		(2000.0)	P		Q	
<i>n</i>	0.18480080	ω	195.96600	+0.96778900	−0.25173071		
<i>a</i>	3.0525784	Ω	178.59513	+0.24517180	+0.93871081		
<i>e</i>	0.1399941	<i>i</i>	9.41920	+0.05722971	+0.23548600		
<i>P</i>	5.33	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1969 11 15	095	0.0	0.1−	1998 02 24	566	0.1−	0.2+	1998 03 20	704	0.6−	0.2+
1993 03 19	809	0.0	0.9−	1998 02 24	566	0.3+	0.0	1998 03 20	704	0.2+	1.5+
1993 03 20	809	0.3−	0.1+	1998 02 24	566	0.1+	0.3+	1998 03 26	704	1.5−	1.4+
1998 02 22	566	0.8+	1.2−	1998 03 20	704	0.4+	0.0	1998 03 26	704	0.2+	0.9−
1998 02 22	566	0.6+	0.5−	1998 03 20	704	0.2−	0.5+	1998 03 26	704	0.3−	0.9+
1998 02 22	566	0.7+	1.1−	1998 03 20	704	0.5−	0.5−				

1998 DV₁₁ = 1995 QU₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	4.98692		(2000.0)	P		Q	
<i>n</i>	0.22435720	ω	36.26865	−0.92165497	+0.38749116		
<i>a</i>	2.6823125	Ω	166.48658	−0.37313661	−0.87095565		
<i>e</i>	0.1809048	<i>i</i>	4.92662	−0.10640107	−0.30213715		
<i>P</i>	4.39	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 08 22	809	1.1+	0.8+	1998 03 20	704	0.2+	0.5+	1998 03 26	327	0.4+	0.3−
1995 08 25	809	1.0−	1.3−	1998 03 20	704	0.7+	0.2+	1998 03 28	327	0.1−	0.1−
1995 09 20	809	0.1+	0.5+	1998 03 20	704	0.0	0.3−	1998 03 28	327	0.1−	0.0
1995 09 22	809	0.1−	0.1−	1998 03 20	704	0.3−	0.7+	1998 03 28	327	0.0	0.0
1998 02 24	566	0.1−	0.5−	1998 03 20	704	0.7−	0.4+	1998 04 14	327	0.3+	0.1−
1998 02 24	566	0.4−	0.5−	1998 03 22	704	0.6+	0.3+	1998 04 14	327	0.2+	0.1+
1998 02 24	566	0.3−	0.6−	1998 03 22	704	1.4+	0.1+	1998 04 14	327	0.1−	0.0
1998 02 25	566	0.5−	0.0	1998 03 22	704	1.1+	0.6+	1998 04 17	327	0.1−	0.7−
1998 02 25	566	0.4−	0.1−	1998 03 22	704	0.9+	0.5+	1998 04 17	327	0.4−	0.3−
1998 02 25	566	0.4−	0.4−	1998 03 22	704	0.6+	0.1+	1998 04 17	327	0.2−	0.2−
1998 03 03	704	0.1+	0.2+	1998 03 26	704	0.8+	0.4+	1998 04 18	327	0.1+	0.3−
1998 03 03	704	1.9+	2.4−	1998 03 26	704	0.5−	0.7+	1998 04 18	327	0.4−	0.0
1998 03 03	704	0.7−	0.5+	1998 03 26	704	0.6−	0.8+	1998 04 18	327	0.9−	0.3−
1998 03 03	704	0.7−	0.8+	1998 03 26	327	0.6−	0.1−				
1998 03 03	704	0.2−	0.8+	1998 03 26	327	0.9−	0.9−				

1998 DF₁₄ = 1992 FU₃ = 1993 OC₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	28.21810		(2000.0)	P		Q	
<i>n</i>	0.16914731	ω	87.60938	−0.99646940	+0.07938269		
<i>a</i>	3.2381179	Ω	96.94280	−0.08371924	−0.91504295		
<i>e</i>	0.2706654	<i>i</i>	1.57787	−0.00631082	−0.39546781		
<i>P</i>	5.83	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1992 03 30	033	0.2+	0.8−	1998 02 28	910	0.7−	0.7−	1998 05 07	910	0.6+	0.6+
1992 03 31	033	0.8−	0.9−	1998 02 28	910	0.5−	0.6−	1998 05 07	910	0.4+	0.0
1993 07 20	809	1.0+	0.9−	1998 02 28	910	0.6−	0.8−	1998 05 07	910	0.7+	0.1+
1993 07 20	809	0.0	0.4−	1998 04 30	699	0.7+	0.4+	1998 05 16	704	0.5+	0.4−
1993 07 20	809	0.3+	0.2−	1998 04 30	699	0.2+	0.3+	1998 05 16	704	0.0	1.6+

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1993 07 24	809	1.0−	1.0−	1998 04 30	699	0.5+	0.3+	1998 05 16	704	0.5−	0.3+
1998 02 27	910	0.3−	0.4−	1998 05 01	699	0.0	0.0	1998 05 16	704	(3.4+	1.9−)
1998 02 27	910	0.5−	0.5−	1998 05 01	699	0.8+	0.7+	1998 05 16	704	1.8−	0.6+
1998 02 27	910	0.5−	0.5−	1998 05 01	699	0.8+	0.0				

1998 DN₂₇ = 1998 FZ₃₆ = 1985 UV₂ = 1987 GS

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	185.58256		(2000.0)	P		Q	
<i>n</i>	0.26853587	ω	207.44099	+0.99500217		−0.09518453	
<i>a</i>	2.3794021	Ω	157.95888	+0.09981160		+0.93935315	
<i>e</i>	0.1049600	<i>i</i>	4.61217	+0.00288478		+0.32947771	
<i>P</i>	3.67	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1985 10 17	010	2.4−	0.2−	1998 02 27	132	0.6+	0.8−	1998 03 20	704	0.8+	1.2−
1985 10 18	010	2.5+	0.1+	1998 02 27	132	0.5−	0.6−	1998 03 20	704	0.6+	0.2+
1987 04 01	675	0.5+	0.2+	1998 03 02	132	0.4+	0.5+	1998 03 20	704	0.7−	0.6+
1987 04 01	675	0.3+	1.0−	1998 03 02	132	1.7−	1.9+	1998 03 20	704	0.5−	0.3−
1987 04 03	675	(4.8−	0.2+)	1998 03 04	704	1.6−	0.4+	1998 03 22	704	0.2−	0.6+
1987 04 03	675	1.4−	1.4−	1998 03 04	704	2.0−	0.4+	1998 03 22	704	1.0+	1.0+
1998 02 27	566	1.0+	0.3−	1998 03 04	704	0.4−	0.3+	1998 03 22	704	1.2+	0.7+
1998 02 27	566	0.9+	0.1+	1998 03 04	704	1.3−	0.1−	1998 03 22	704	1.9+	0.2+
1998 02 27	566	0.9+	0.2−	1998 03 04	704	1.7−	1.0−	1998 03 22	704	2.0+	0.2−

1998 DY₃₃ = 1981 AG₁ = 1984 YZ₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	90.26588		(2000.0)	P		Q	
<i>n</i>	0.23558113	ω	301.92101	+0.30966317		−0.94932319	
<i>a</i>	2.5964246	Ω	129.94338	+0.89436245		+0.27159136	
<i>e</i>	0.3012443	<i>i</i>	4.02375	+0.32283824		+0.15818854	
<i>P</i>	4.18	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 01 03	688	1.2−	1.1+	1998 02 26	809	(1.0+	2.9−)	1998 03 20	704	0.6+	0.8−
1981 01 03	688	1.4+	0.1+	1998 02 26	809	(2.4+	2.5−)	1998 03 20	704	0.0	0.0
1984 12 23	095	2.1+	1.1−	1998 02 27	809	(2.6+	3.2+)	1998 03 20	704	0.3+	1.6−
1984 12 27	095(13.4−	5.8+)		1998 02 27	809	(2.7+	3.7+)	1998 03 20	704	0.2+	0.9−
1984 12 30	095	2.3−	0.1+	1998 02 27	809	(2.6+	2.9+)	1998 03 22	704	0.4−	0.2−
1998 02 25	809	0.4+	1.5+	1998 02 28	809	0.4−	0.0	1998 03 22	704	0.1−	0.2−
1998 02 25	809	0.1−	1.2+	1998 02 28	809	0.1−	0.9−	1998 03 22	704	0.2+	0.4+
1998 02 25	809	0.1−	0.9+	1998 02 28	809	0.2+	1.2−	1998 03 22	704	0.4+	0.3+
1998 02 26	809	(1.6+	3.5−)	1998 03 20	704	0.4−	0.2−	1998 03 22	704	0.9−	1.0+

1998 DB₃₆ = 1991 ET₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	285.50888		(2000.0)	P		Q	
<i>n</i>	0.27542796	ω	288.35889	+0.42967705		+0.90263447	
<i>a</i>	2.3395412	Ω	7.23999	−0.73504410		+0.36575802	
<i>e</i>	0.2170933	<i>i</i>	11.47562	−0.52448814		+0.22687460	
<i>P</i>	3.58	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 03 12	809	0.4+	0.2+	1998 02 25	809	0.5−	0.5−	1998 03 24	704	0.8−	0.1−
1991 03 12	809	0.3+	0.2+	1998 02 25	809	1.1−	0.1−	1998 03 24	566	0.2+	0.0
1991 03 12	809	0.6+	0.3+	1998 02 25	809	1.6+	0.7−	1998 03 24	566	0.4+	0.3−
1991 03 14	809	0.6−	0.5−	1998 02 26	809	0.9−	1.3+	1998 03 24	566	0.5+	0.2−
1991 03 14	809	0.3−	0.5−	1998 02 26	809	0.2+	0.3+	1998 03 26	704	0.1+	0.5−
1991 03 14	809	0.6+	0.5−	1998 02 26	809	0.7+	0.3−	1998 03 26	704	0.4+	0.1+
1991 03 16	809	0.8−	0.3+	1998 03 24	704	0.5−	0.4+	1998 03 26	704	0.5+	0.0
1991 03 16	809	0.4−	0.4+	1998 03 24	704	0.5−	0.4+				
1991 03 16	809	0.2+	0.2+	1998 03 24	704	0.3−	0.2+				

M.P.C. 31991

1998 EL₅ = 1994 CO₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	113.80153		(2000.0)	P		Q	
<i>n</i>	0.26928649	ω	337.10701	−0.25845154		−0.96098564	
<i>a</i>	2.3749784	Ω	127.72906	+0.90447211		−0.27654946	
<i>e</i>	0.0669407	<i>i</i>	7.15682	+0.33931256		+0.00519597	
<i>P</i>	3.66	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 02 07	809	1.7+	0.9+	1998 03 01	691	0.3+	0.9−	1998 04 23	704	0.7+	1.1+
1994 02 07	809	0.9+	1.5+	1998 03 01	691	0.2+	0.9−	1998 04 23	704	1.0−	0.8+
1994 02 07	809	0.2+	0.6+	1998 03 04	691	0.1−	1.0−	1998 04 23	704	0.6−	1.4+
1994 02 09	809	0.1+	0.9−	1998 03 04	691	0.1−	0.8−	1998 04 24	704	1.2+	0.5+
1994 02 09	809	0.5+	1.6−	1998 03 04	691	0.1−	1.0−	1998 04 24	704	0.3−	0.4+
1994 02 09	809	0.4−	1.0−	1998 03 05	691	0.3−	0.9−	1998 04 24	704	0.6+	0.1−
1994 02 12	809	0.8−	1.0+	1998 03 05	691	0.2−	0.6−	1998 04 24	704	0.6+	0.4+
1994 02 12	809	0.8−	0.7+	1998 03 05	691	0.3−	0.8−	1998 04 24	704	0.7−	0.8−
1994 02 12	809	0.7−	0.6+	1998 04 23	704	0.7−	1.3+				
1998 03 01	691	0.1+	1.0−	1998 04 23	704	0.3+	0.8+				

1998 EB₁₂ = 1977 TU₄ = 1977 VG₁

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	197.12000		(2000.0)	P		Q	
<i>n</i>	0.30940207	ω	320.17282	+0.99525331		−0.07283492	
<i>a</i>	2.1649801	Ω	44.13628	+0.09436573		+0.88439733	
<i>e</i>	0.1557308	<i>i</i>	5.31819	−0.02379004		+0.46101674	
<i>P</i>	3.19	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 10 07	095	1.7−	1.1+	1998 03 24	704	0.2+	1.3−	1998 04 02	809	(1.3+	3.4+)
1977 11 09	049	0.5+	0.3−	1998 03 24	704	0.6−	1.3−	1998 04 02	809	(1.0+	3.2+)
1977 11 09	049	0.9+	0.0	1998 03 25	704	0.1−	0.7−	1998 04 03	809	0.3+	0.9+
1998 03 01	809	(3.6+	0.7+)	1998 03 25	704	0.8−	0.1+	1998 04 03	809	0.1+	0.9+
1998 03 01	809	(3.7+	0.8+)	1998 03 25	704	0.4−	0.2−	1998 04 03	809	0.3−	1.0+
1998 03 01	809	(3.5+	0.4+)	1998 03 25	704	0.3+	0.5−	1998 04 18	704	1.5+	0.1−
1998 03 02	809	(3.6+	0.5−)	1998 03 25	704	0.0	0.3−	1998 04 18	704	0.0	0.1+
1998 03 02	809	(3.6+	1.1−)	1998 03 26	566	0.1+	0.2+	1998 04 18	704	0.1−	0.6+
1998 03 02	809	(3.0+	1.8−)	1998 03 26	566	0.1−	0.2+	1998 04 18	704	1.1−	0.2+
1998 03 24	704	0.5+	0.3+	1998 03 26	566	0.2+	0.3+	1998 04 18	704	0.7+	1.3+
1998 03 24	704	0.0	0.4−	1998 04 02	809	(1.3+	3.8+)				

1998 ER₁₃ = 1990 VY

Id. G. V. Williams, A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	190.37328		(2000.0)	P		Q	
<i>n</i>	0.18473744	ω	204.83207	+0.99415130		−0.08736886	
<i>a</i>	3.0532763	Ω	159.87197	+0.09984928		+0.96756916	
<i>e</i>	0.0846096	<i>i</i>	10.63053	−0.04115002		+0.23701604	
<i>P</i>	5.34	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1990 11 08	413	(3.8−	0.9−)	1998 03 20	704	0.3+	0.9+	1998 03 22	704	(4.8−	3.4−)
1990 11 09	413	0.2−	0.5−	1998 03 20	704	1.3+	0.6+	1998 03 26	566	0.4−	0.4−
1990 11 09	413	0.2+	0.5+	1998 03 20	704	0.7+	1.1+	1998 03 26	566	0.2+	0.1−
1998 03 01	809	1.3+	0.1−	1998 03 22	704	1.3−	1.5+	1998 03 26	566	0.0	0.1−
1998 03 01	809	1.2+	0.3+	1998 03 22	704	0.4−	0.8+	1998 04 19	704	1.4+	0.9−
1998 03 01	809	1.0+	0.1+	1998 03 22	704	0.2−	1.3+	1998 04 19	704	0.1−	0.4+
1998 03 02	809	0.4−	1.8−	1998 03 22	704	(0.3+	3.3+)	1998 04 19	704	1.2−	1.2−
1998 03 02	809	0.3−	1.0−	1998 03 22	704	(1.5+	2.5+)	1998 04 19	704	0.9+	0.8−
1998 03 02	809	1.0−	1.3−	1998 03 22	704	1.1−	0.7−	1998 04 19	704	1.1−	0.3−
1998 03 20	704	0.1+	1.4+	1998 03 22	704	0.7+	0.3+				
1998 03 20	704	(0.2−	2.2+)	1998 03 22	704	1.6−	0.1−				

M.P.C. 31992

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1998 FO = 2123 T-1 = 1989 EB₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	76.51591		(2000.0)	P		Q	
<i>n</i>	0.21932080	ω	99.20755	-0.45197655		-0.89098203	
<i>a</i>	2.7232207	Ω	17.85729	+0.75305857		-0.40708644	
<i>e</i>	0.1345666	<i>i</i>	8.10303	+0.47814223		-0.20107625	
<i>P</i>	4.49	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1971 03 24	675	1.9-	1.8-	1998 03 20	704	0.1-	0.5-	1998 04 19	704	0.1-	0.1-
1971 03 25	675	0.6-	0.4+	1998 03 20	704	0.9+	0.1+	1998 04 19	704	0.5-	0.1+
1971 03 25	675	0.6-	1.0+	1998 03 20	704	0.1-	0.0	1998 04 19	704	0.8-	1.0+
1971 03 26	675	0.1+	0.2-	1998 03 20	704	0.8+	0.4-	1998 04 19	704	0.5-	0.4-
1971 03 27	675	0.2+	0.0	1998 03 21	691	0.1+	0.3-	1998 04 20	704	0.5+	0.4-
1971 04 02	675	1.3+	2.0-	1998 03 21	691	0.1+	0.1-	1998 04 20	704	0.4-	0.5+
1989 03 06	033	0.9+	0.7+	1998 03 21	691	0.2+	0.0	1998 04 20	704	0.7+	0.3+
1989 03 06	033	0.0	0.8+	1998 03 22	704	0.9+	0.3-	1998 04 20	704	0.2-	0.6+
1998 02 24	566	0.0	0.4+	1998 03 22	704	1.6+	0.2-	1998 04 20	704	0.5-	0.6+
1998 02 24	566	0.1+	0.6+	1998 03 22	704	0.5+	0.0	1998 04 24	699	0.3+	0.3-
1998 02 24	566	0.1+	0.4+	1998 03 22	704	0.4+	0.2+	1998 04 24	699	0.8-	1.0+
1998 03 18	691	1.3-	0.1-	1998 03 22	704	0.8+	0.4+	1998 04 24	699	0.2+	0.2+
1998 03 18	691	1.1-	0.2-	1998 03 25	691	0.2-	0.5-	1998 05 02	699	0.1+	0.2-
1998 03 18	691	0.9-	0.3-	1998 03 25	691	0.3-	0.3-	1998 05 02	699	0.5+	0.3-
1998 03 20	704	0.8+	0.2-	1998 03 25	691	0.6-	0.4-	1998 05 02	699	0.6-	0.3+

1998 FT₈ = 4238 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	347.50734		(2000.0)	P		Q	
<i>n</i>	0.22413077	ω	211.76529	-0.59861999		+0.79783542	
<i>a</i>	2.6841188	Ω	21.72566	-0.68853673		-0.46687924	
<i>e</i>	0.1430750	<i>i</i>	11.13771	-0.40935472		-0.38142157	
<i>P</i>	4.40	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1973 09 19	675	(2.8+	1.0-)	1998 03 20	704	0.4+	0.2+	1998 04 04	691	1.0-	0.0
1973 09 19	675	0.5+	0.4-	1998 03 20	704	0.1+	0.3-	1998 04 04	691	1.0-	0.2+
1973 09 20	675	0.3+	0.4+	1998 03 20	704	0.5+	0.0	1998 04 04	691	1.1-	0.2+
1973 09 24	675	1.1+	0.7+	1998 03 21	691	0.5-	0.1-	1998 04 19	704	0.1+	0.1+
1973 09 24	675	0.1+	0.2-	1998 03 21	691	0.7-	0.0	1998 04 19	704	0.3-	0.3-
1973 09 25	675	0.8-	0.1-	1998 03 21	691	0.7-	0.1-	1998 04 19	704	0.6+	0.0
1973 09 25	675	0.2-	0.1-	1998 03 22	704	0.9+	0.1+	1998 04 19	704	0.7-	0.4+
1973 09 29	675	(1.7+	3.1-)	1998 03 22	704	0.0	0.9+	1998 04 20	704	0.3+	0.0
1973 09 29	675	(1.1+	3.2-)	1998 03 22	704	0.7+	0.4-	1998 04 20	704	0.2-	0.2+
1973 09 30	675	1.0+	0.9+	1998 03 22	704	0.2+	0.5-	1998 04 20	704	0.4+	0.4+
1973 09 30	675	2.4+	0.2+	1998 03 22	704	0.8+	0.3-	1998 04 20	704	0.1-	0.8-
1973 10 04	675	1.4-	0.1-	1998 03 25	691	0.9-	0.1-	1998 04 20	704	1.8+	0.3-
1973 10 04	675	0.2-	0.5+	1998 03 25	691	0.7-	0.0	1998 05 02	699	0.1-	0.2-
1973 10 05	675	1.0-	1.1-	1998 03 25	691	0.9-	0.2-	1998 05 02	699	0.2+	0.1-
1973 10 05	675	2.0-	0.6-	1998 03 25	699	1.0+	0.1+	1998 05 02	699	0.0	0.1+
1998 03 20	704	(0.0	3.3-)	1998 03 25	699	0.7+	0.2+				
1998 03 20	704	0.1+	0.2-	1998 03 25	699	0.4+	0.5+				

1998 FG₁₀ = 1994 LM₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	82.49176		(2000.0)	P		Q	
<i>n</i>	0.21088752	ω	187.92526	-0.49884013		-0.86586198	
<i>a</i>	2.7953453	Ω	292.00512	+0.79740534		-0.44135588	
<i>e</i>	0.0433806	<i>i</i>	2.34697	+0.33956332		-0.23555894	
<i>P</i>	4.67	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 06 03	809	0.2+	1.2+	1998 03 20	704	1.5-	0.3-	1998 04 01	704	0.1-	0.0
1994 06 03	809	0.5-	0.5+	1998 03 22	704	0.0	0.2-	1998 04 01	704	0.0	2.2-
1994 06 03	809	1.1+	0.6+	1998 03 22	704	0.2+	0.3-	1998 04 01	704	(0.2+	8.1-)
1994 06 04	809	0.0	0.5-	1998 03 22	704	0.1-	2.3+	1998 04 18	704	0.0	0.8-

1994 06 04	809	0.2-	0.1-	1998 03 22	704	0.0	1.7+	1998 04 18	704	0.3+	0.3+
1994 06 04	809	0.4-	1.1-	1998 03 22	704	0.1+	1.9+	1998 04 18	704	0.7-	0.3-
1998 02 24	566	0.1-	0.1+	1998 03 24	910	0.6+	0.7-	1998 04 19	704	0.5+	0.1-
1998 02 24	566	0.1-	0.3+	1998 03 24	910	0.6+	0.7-	1998 04 19	704	0.4+	0.8-
1998 02 24	566	0.4+	0.2+	1998 03 25	910	0.6+	0.7-	1998 04 19	704	0.2-	0.7-
1998 03 20	704	0.3-	0.1-	1998 03 25	910	0.9+	0.4-	1998 04 19	704	1.2-	0.9-
1998 03 20	704	0.3-	0.3+	1998 03 25	910	0.7+	0.3-	1998 04 19	704	0.0	0.3+
1998 03 20	704	0.3-	1.4+	1998 03 26	910	0.7+	0.5-				
1998 03 20	704	0.1-	0.7+	1998 04 01	704	1.0-	0.3+				

1998 FT₁₃ = 1990 SC₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	144.77754		(2000.0)	P		Q	
<i>n</i>	0.18842938	ω	347.33813	+0.86833224		-0.48111948	
<i>a</i>	3.0132626	Ω	42.11886	+0.46928570		+0.71832918	
<i>e</i>	0.1053304	<i>i</i>	10.35164	+0.16053054		+0.50252087	
<i>P</i>	5.23	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1990 09 17	675	0.7+	0.7-	1998 03 26	566	0.2+	0.1+	1998 05 28	327	0.1+	0.7-
1990 09 17	675	1.5+	0.7-	1998 03 27	566	0.6-	0.1-	1998 05 28	327	0.1-	0.8-
1990 09 19	675	0.7+	1.7-	1998 03 27	566	0.6-	0.5-	1998 05 30	327	0.4+	0.9-
1990 09 19	675	0.2+	1.9-	1998 03 27	566	0.6-	0.1-	1998 05 30	327	0.1+	1.2-
1990 09 20	675	0.2+	0.2-	1998 05 20	327	0.5+	0.6-	1998 05 30	327	0.0	0.0
1990 09 20	675	0.0	0.3-	1998 05 20	327	0.4+	0.8-	1998 05 30	327	0.4-	1.2-
1998 03 26	566	1.2-	0.1+	1998 05 20	327	0.2+	0.8-				
1998 03 26	566	1.0-	0.2+	1998 05 28	327	0.3-	1.0-				

1998 FQ₁₄ = 1990 TR₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	318.36220		(2000.0)	P		Q	
<i>n</i>	0.22433634	ω	76.30462	+0.22382822		+0.97312325	
<i>a</i>	2.6824788	Ω	206.81572	-0.93416806		+0.19836308	
<i>e</i>	0.2870096	<i>i</i>	6.89389	-0.27790459		+0.11697536	
<i>P</i>	4.39	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1990 10 09	413	0.2-	0.1-	1998 03 26	910	0.9+	0.9-	1998 04 18	704	0.2-	0.9+
1990 10 11	413	0.2+	0.2+	1998 03 27	910	0.6+	0.6-	1998 04 18	704	0.4-	0.1+
1998 03 20	704	0.3+	0.3+	1998 03 27	910	0.7+	0.7-	1998 04 18	704	0.4+	0.1-
1998 03 20	704	1.0-	0.7+	1998 03 28	910	0.9+	0.9-	1998 04 18	704	0.9-	1.3-
1998 03 20	704	0.3+	0.5+	1998 03 28	910	0.8+	1.0-	1998 04 19	704	0.6+	0.0
1998 03 20	704	0.5-	1.1+	1998 03 28	910	0.7+	0.9-	1998 04 19	704	0.1+	0.7+
1998 03 20	704	0.6-	0.4-	1998 04 01	704	0.5-	0.3+	1998 04 19	704	0.0	0.5+
1998 03 22	704	0.9+	0.9+	1998 04 01	704	1.7-	0.4-	1998 04 19	704	0.8+	0.9+
1998 03 22	704	0.4-	0.2+	1998 04 01	704	1.3-	1.3+	1998 04 19	704	0.1-	0.2-
1998 03 22	704	1.1-	0.7+	1998 04 01	704	0.2-	0.6-				
1998 03 22	704	1.0+	0.3-	1998 04 18	704	0.3+	0.8-				

1998 FZ₁₅ = 1991 RL₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	195.18903		(2000.0)	P		Q	
<i>n</i>	0.23902096	ω	202.38694	+0.57353990		-0.79347490	
<i>a</i>	2.5714538	Ω	213.64189	+0.79620351		+0.59841074	
<i>e</i>	0.0727662	<i>i</i>	21.56113	+0.19264464		-0.11091517	
<i>P</i>	4.12	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 09 11	675	0.2-	0.3+	1998 03 30	910	0.1+	0.0	1998 05 26	704	0.4-	0.1-
1991 09 11	675	0.4+	0.3-	1998 03 31	910	0.5+	0.0	1998 05 26	704	0.3-	0.1+
1991 09 13	675	0.6+	0.1-	1998 03 31	910	0.2+	0.2-	1998 05 26	704	0.3-	0.5+
1991 09 16	675	0.5-	0.2-	1998 03 31	910	0.4+	0.1-	1998 05 26	704	0.5-	0.2-
1991 09 16	675	1.2-	1.3-	1998 05 23	704	0.3-	0.2-	1998 05 26	704	0.9-	0.7+
1991 09 17	675	0.8+	0.2+	1998 05 23	704	0.0	0.4+	1998 06 03	704	1.5+	0.3+
1991 09 17	675	0.2+	1.8+	1998 05 23	704	0.4-	0.3+	1998 06 03	704	1.5+	0.3+

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M.P.C. 31993

1998 03 28	910	1.5-	0.7+	1998 05 23	704	1.0-	0.6-	1998 06 03	704	1.9+	0.9-
1998 03 28	910	0.8-	0.3+	1998 05 23	699	0.0	0.0	1998 06 03	704	1.0+	0.8-
1998 03 28	910	1.2-	0.1-	1998 05 23	704	0.3-	0.1+	1998 06 04	699	0.5+	0.8-
1998 03 30	910	0.2-	0.2+	1998 05 23	699	0.7-	0.2-	1998 06 04	699	0.4+	0.6+
1998 03 30	910	0.0	0.1-	1998 05 23	699	0.4-	0.4+	1998 06 04	699	0.7+	0.3-

1998 FQ₂₃ = 1992 SD₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	58.70165		(2000.0)	P	Q
<i>n</i>	0.25976272	ω	49.89361	-0.65079155	-0.75808646
<i>a</i>	2.4326792	Ω	80.75965	-0.68297240	-0.60874633
<i>e</i>	0.1357918	<i>i</i>	2.44659	+0.33169120	-0.23395049
<i>P</i>	3.79	<i>H</i>	16.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1992 09 26	691	0.1+	0.0	1998 02 26	809	0.3+	0.1+	1998 03 20	704	0.7+	0.6+
1992 09 26	691	0.1+	0.3-	1998 02 26	809	0.1+	0.1+	1998 03 22	704	0.8+	0.2+
1992 09 26	691	0.2+	0.1-	1998 02 26	809	0.8-	0.2-	1998 03 22	704	0.4-	0.2-
1992 09 27	691	0.1-	0.3+	1998 03 20	704	0.2+	0.5-	1998 03 22	704	0.6-	0.1+
1992 09 27	691	0.2-	0.1+	1998 03 20	704	0.1-	0.4-	1998 03 22	704	0.8-	1.2-
1992 09 27	691	0.1-	0.0	1998 03 20	704	1.2+	1.5+	1998 03 22	704	0.8-	0.0

1998 FF₂₈ = 1986 WR₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Doppler

<i>M</i>	195.48677		(2000.0)	P	Q
<i>n</i>	0.29400910	ω	181.93823	+0.99881069	-0.04873124
<i>a</i>	2.2399012	Ω	180.85969	+0.04602270	+0.95294626
<i>e</i>	0.2234730	<i>i</i>	6.00484	+0.01609685	+0.29919676
<i>P</i>	3.35	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1986 11 27	033	0.4+	0.4+	1998 03 03	704	0.4-	1.5+	1998 03 20	704	0.5-	1.0-
1986 11 28	033	0.1-	0.2-	1998 03 03	704	1.3-	1.5+	1998 03 22	704	1.1+	2.0-
1986 11 29	033	0.2-	0.1-	1998 03 20	704	1.0-	0.2+	1998 03 22	704	0.4+	1.4+
1998 03 03	704	1.0+	1.5-	1998 03 20	704	1.3+	0.2-	1998 03 22	704	0.3+	1.9+
1998 03 03	704	0.5+	1.9-	1998 03 20	704	0.8+	0.4+	1998 03 22	704	0.7-	0.8-
1998 03 03	704	1.4-	1.1+	1998 03 20	704	0.2-	0.6-	1998 03 22	704	0.1-	0.1-

1998 FE₃₀ = 1993 BX₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	293.45055		(2000.0)	P	Q
<i>n</i>	0.21185809	ω	340.55000	+0.01799488	+0.99879773
<i>a</i>	2.7868014	Ω	290.45990	-0.91076657	-0.00244234
<i>e</i>	0.0614414	<i>i</i>	2.78965	-0.41252931	-0.04896050
<i>P</i>	4.65	<i>H</i>	13.4	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1993 01 23	809	0.9+	0.8+	1998 03 20	704	0.4-	0.2+	1998 03 26	704	0.8+	0.2-
1993 01 28	809	0.6+	0.2-	1998 03 22	704	0.4+	0.5-	1998 03 26	704	0.4-	1.6+
1993 01 28	809	1.5-	0.6-	1998 03 22	704	0.1+	0.4+	1998 04 01	704	0.1-	0.6+
1998 03 20	704	0.6-	0.6-	1998 03 22	704	0.7-	0.1-	1998 04 01	704	0.2+	0.4-
1998 03 20	704	1.1+	0.3-	1998 03 22	704	0.6-	1.0+	1998 04 01	704	0.0	0.3+
1998 03 20	704	0.5+	0.2+	1998 03 22	704	0.6-	0.2+	1998 04 01	704	0.1+	0.9-
1998 03 20	704	0.7+	0.5-	1998 03 26	704	0.1+	0.0	1998 04 01	704	0.5-	0.8-

1998 FN₃₂ = 1995 SO₄₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	358.62897		(2000.0)	P	Q
<i>n</i>	0.22843413	ω	219.22522	-0.86307744	+0.50351553
<i>a</i>	2.6503022	Ω	350.75316	-0.37874924	-0.69711166
<i>e</i>	0.1214621	<i>i</i>	14.27293	-0.33413523	-0.51039929
<i>P</i>	4.31	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1995 09 25	691	0.3-	0.1+	1998 03 22	704	0.3-	0.6+	1998 04 01	704	0.4+	0.0
1995 09 25	691	0.1+	0.2-	1998 03 22	704	1.0-	0.3+	1998 04 01	704	0.6+	0.4-
1995 09 25	691	0.2+	0.4-	1998 03 22	704	0.8-	0.7+	1998 04 01	704	0.3+	0.5-
1995 10 01	691	0.1-	0.3+	1998 03 22	704	1.2-	1.1+	1998 04 18	704	0.7+	0.9-
1995 10 01	691	0.0	0.3+	1998 03 24	566	0.6+	0.0	1998 04 18	704	0.5+	0.0
1995 10 01	691	0.0	0.1+	1998 03 24	566	0.4+	0.2-	1998 04 18	704	0.0	1.0+
1998 03 20	704	0.1+	0.4-	1998 03 24	566	0.6+	0.1-	1998 04 18	704	1.8-	0.1+
1998 03 20	704	0.2+	0.2-	1998 03 26	704	0.4+	0.1-	1998 04 18	704	(3.1-	0.4-)
1998 03 20	704	0.3-	0.2-	1998 03 26	704	0.0	0.2-	1998 04 19	704	0.1+	0.2+
1998 03 20	704	0.3+	0.3+	1998 03 26	704	0.3-	0.6-	1998 04 19	704	0.4-	0.7+
1998 03 20	704	0.5-	0.7+	1998 04 01	704	0.1+	0.9-	1998 04 19	704	0.3+	0.4-
1998 03 22	704	0.6+	0.4+	1998 04 01	704	0.4+	0.9-	1998 04 19	704	(2.4+	4.4-)

1998 FA₃₃ = 3100 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	326.63964		(2000.0)	P	Q
<i>n</i>	0.26538427	ω	96.77001	-0.21242575	+0.97704191
<i>a</i>	2.3982029	Ω	160.94185	-0.91506430	-0.19305763
<i>e</i>	0.1736112	<i>i</i>	2.85441	-0.34283032	-0.09009914
<i>P</i>	3.71	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1973 09 19	675	0.6-	1.0-	1998 03 20	704	0.2+	0.1-	1998 03 24	704	0.1+	0.1-
1973 09 19	675	2.2-	2.3+	1998 03 20	704	0.9+	1.6-	1998 03 24	704	0.4-	0.3+
1973 09 19	675	2.4+	0.0	1998 03 20	704	(0.5+	2.4-)	1998 03 24	704	0.7-	0.0
1973 09 19	675	(0.9+	3.7+)	1998 03 22	704	1.2+	0.2+	1998 03 24	704	0.1-	0.7+
1973 09 20	675	0.5-	0.4+	1998 03 22	704	0.2-	0.4+	1998 03 24	566	0.3+	0.6+
1973 09 20	675	1.1+	2.4+	1998 03 22	704	0.9-	0.4+	1998 03 24	566	0.3+	0.0
1973 09 24	675	1.1-	0.6-	1998 03 22	704	1.0-	0.3-	1998 03 24	566	0.4+	0.2-
1973 09 24	675	0.7-	2.1+	1998 03 22	704	0.3-	0.4-	1998 03 26	704	0.5-	0.3-
1973 09 24	675	0.9-	0.4-	1998 03 24	704	0.3+	0.6+	1998 03 26	704	1.1+	0.6-
1973 09 24	675	0.7-	2.2+	1998 03 24	704	0.1+	0.3+	1998 03 26	704	1.5+	0.4-
1973 09 25	675	1.2-	1.6-	1998 03 24	704	0.2-	0.0	1998 04 18	327	0.0	0.2+
1973 09 25	675	0.1+	1.3+	1998 03 24	704	0.1+	0.5-	1998 04 18	327	0.0	0.2+
1973 09 25	675	0.3-	1.9-	1998 03 24	704	0.4+	0.5+	1998 04 18	327	0.6-	0.6+
1973 09 25	675	1.1-	0.1+	1998 03 24	704	0.1+	0.1+	1998 04 19	704	0.5-	0.3-
1973 09 29	675	0.5+	0.3+	1998 03 24	704	0.3-	0.5+	1998 04 19	704	0.1+	0.4-
1973 09 29	675	0.8-	0.6+	1998 03 24	704	0.2-	0.3-	1998 04 19	704	0.4-	0.3+
1973 09 30	675	0.1+	0.0	1998 03 24	704	0.0	0.8+	1998 04 19	704	0.8+	0.7+
1973 09 30	675	1.4+	0.9-	1998 03 24	704	0.7-	0.8+	1998 04 19	704	0.5-	1.1+
1973 10 04	675	(3.1+	0.7+)	1998 03 24	704	0.1-	0.8+	1998 04 20	327	0.3-	0.4-
1973 10 04	675	2.3+	1.8-	1998 03 24	704	0.2-	0.7+	1998 04 20	327	0.1-	0.6-
1973 10 05	675	1.4+	0.7-	1998 03 24	704	0.5+	0.2+	1998 04 20	327	0.1+	0.6-
1973 10 05	675	0.3+	0.7-	1998 03 24	704	0.5-	0.5-	1998 04 24	327	0.2-	0.6-
1998 03 20	704	0.7-	0.0	1998 03 24	704	0.0	0.5-	1998 04 24	327	0.3+	0.6-
1998 03 20	704	0.5+	0.3+	1998 03 24	704	0.6+	0.3+	1998 04 24	327	0.2+	0.3-

1998 FD₃₃ = 3016 T-3

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	270.09857		(2000.0)	P	Q
<i>n</i>	0.21495215	ω	157.90201	+0.40142297	+0.91550660
<i>a</i>	2.7599943	Ω	135.75322	-0.84591572	+0.38172834
<i>e</i>	0.0492998	<i>i</i>	2.18434	-0.35112133	+0.12700844
<i>P</i>	4.59	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1977 10 16	675	0.3+	0.8-	1998 03 22	704	0.3-	2.4-	1998 03 24	704	1.3-	0.6+
1977 10 16	675	1.5-	1.7+	1998 03 22	704	0.5-	1.4+	1998 03 24	704	0.0	0.8-
1977 10 17	675	1.9-	1.2+	1998 03 24	704	0.1+	0.1+	1998 03 25	704	1.3+	0.2+
1977 10 17	675	2.2-	2.9+	1998 03 24	704	0.3+	0.6-	1998 03 25	704	0.1+	1.0-
1977 10 21	675	1.8+	0.5-	1998 03 24	704	0.3+	0.3+	1998 03 25	704	0.9+	0.6+
1977 10 21	675	1.7+	0.2+	1998 03 24	704	0.4+	1.3+	1998 03 25	704	0.9+	0.2-
1977 10 22	675	0.6+	1.5-	1998 03 24	704	0.1-	0.7+	1998 03 25	704	0.6-	0.2+
1977 10 22	675	1.3+	2.8-	1998 03 24	704	1.4+	0.2+	1998 04 19	704	0.5+	0.9-
1998 03 20	704	1.0-	1.1-	1998 03 24	704	1.1+	0.7+	1998 04 19	704	0.9-	0.9+

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1998 03 20	704	0.6+	0.0	1998 03 24	704	0.3-	0.3-	1998 04 19	704	0.5+	0.2+
1998 03 20	704	0.8-	0.6-	1998 03 24	704	1.1+	0.7-	1998 04 19	704	1.2+	1.2-
1998 03 20	704	0.2+	0.1+	1998 03 24	704	0.5+	0.0	1998 04 19	704	2.1-	0.3-
1998 03 20	704	0.2-	0.2-	1998 03 24	704	0.2+	0.2-	1998 04 24	327	0.4+	0.3+
1998 03 22	704	0.4+	1.2+	1998 03 24	704	0.8-	0.7-	1998 04 24	327	0.4-	0.2+
1998 03 22	704	2.4-	0.0	1998 03 24	704	0.9-	1.8+	1998 04 24	327	0.0	0.5+

1998 FL₃₆ = 1975 EU₄ = 1986 VB₅ = 1989 FV = 1993 BQ₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams							
<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	0.21531599	<i>ω</i>	118.97246	+0.24658405		+0.96865682	
<i>a</i>	2.7568842	<i>Ω</i>	165.21149	-0.92503777		+0.24448614	
<i>e</i>	0.1139240	<i>i</i>	6.75064	-0.28896614		+0.04393738	
<i>P</i>	4.58	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1975 03 15	095	1.4+	2.5+	1998 03 20	704	0.4-	1.1+	1998 03 28	704	0.1-	0.8+
1986 11 07	010	1.4-	0.5-	1998 03 20	704	0.3-	0.3+	1998 03 28	704	1.3+	1.0+
1986 11 07	010	1.0+	2.3+	1998 03 20	704	0.4-	1.1+	1998 03 28	704	(2.5+	3.7+)
1989 03 28	046	2.9-	2.9-	1998 03 20	704	0.7-	0.7+	1998 03 29	704	0.0	0.8+
1989 03 28	046	0.6-	4.1-	1998 03 22	704	0.2-	0.5+	1998 03 29	704	0.1+	1.1+
1989 03 30	046 (8.6-	34.9-)		1998 03 22	704	0.4+	0.6+	1998 03 29	704	0.0	0.2+
1989 03 30	046(15.4-	32.9-)		1998 03 22	704	0.3+	0.1+	1998 03 29	704	0.2+	0.3+
1993 01 28	809	0.4+	1.8-	1998 03 22	704	0.4+	0.0	1998 03 29	704	0.6-	0.3-
1993 01 28	809	1.9-	2.4-	1998 03 22	704	0.4-	0.3+	1998 04 19	704	0.7+	0.1-
1998 02 25	566	0.2-	0.8-	1998 03 26	566	0.3+	0.1+	1998 04 19	704	0.7+	0.4+
1998 02 25	566	0.1-	1.0-	1998 03 26	566	0.4+	0.1+	1998 04 19	704	0.7+	0.2+
1998 02 25	566	0.2-	1.0-	1998 03 26	566	0.7+	0.4+	1998 04 19	704	0.6+	0.3+
1998 03 20	704	0.8+	0.3+	1998 03 28	704	0.6+	1.2+	1998 04 19	704	0.6-	0.3+

1998 FV₄₀ = 1996 XW₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams							
<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	0.26472650	<i>ω</i>	177.91280	-0.62366065		+0.78119221	
<i>a</i>	2.4021739	<i>Ω</i>	53.50195	-0.71769568		-0.55801728	
<i>e</i>	0.1391762	<i>i</i>	1.99880	-0.30977461		-0.27992043	
<i>P</i>	3.72	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 12 04	691	0.5+	0.0	1998 03 20	704	0.5-	0.7+	1998 03 28	704	0.1+	0.3-
1996 12 04	691	0.3+	0.1-	1998 03 22	704	0.2+	0.5-	1998 03 28	704	1.0-	0.9-
1996 12 04	691	0.5+	0.2+	1998 03 22	704	0.2-	0.1+	1998 03 29	704	0.5+	0.1-
1996 12 12	691	0.6-	0.0	1998 03 22	704	0.8+	0.1+	1998 03 29	704	0.0	0.4+
1996 12 12	691	0.8-	0.1+	1998 03 22	704	0.1+	0.5-	1998 03 29	704	0.7-	0.3+
1996 12 12	691	0.8-	0.0	1998 03 22	704	0.8+	0.4-	1998 03 29	704	0.9-	0.5-
1996 12 13	691	0.1+	0.1+	1998 03 26	566	0.4+	0.5+	1998 03 29	704	0.4-	0.7-
1996 12 13	691	0.5+	0.1-	1998 03 26	566	0.5+	0.7+	1998 04 19	704	1.2+	1.1-
1996 12 13	691	0.4+	0.0	1998 03 26	566	0.4-	0.3+	1998 04 19	704	0.3-	0.2-
1998 03 20	704	0.6-	0.9+	1998 03 28	704	0.0	0.1+	1998 04 19	704	0.6+	0.2+
1998 03 20	704	0.7-	0.1-	1998 03 28	704	0.3-	0.5-	1998 04 19	704	0.2+	2.9+
1998 03 20	704	1.9+	0.4+	1998 03 28	704	0.9-	1.3-	1998 04 19	704	0.4-	0.4-

1998 FX₄₇ = 1991 LA₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams							
<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	0.26081386	<i>ω</i>	110.43619	+0.69323481		+0.71960203	
<i>a</i>	2.4261386	<i>Ω</i>	203.59980	-0.69286601		+0.65015367	
<i>e</i>	0.1945682	<i>i</i>	5.73134	-0.19839906		+0.24387111	
<i>P</i>	3.78	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 06 06	809	0.7+	0.5+	1998 03 20	704	1.2+	0.1+	1998 04 18	704	0.4-	0.4-
1991 06 06	809	0.4-	0.1+	1998 03 20	704	0.2+	0.6-	1998 04 18	704	0.9-	0.4-
1991 06 06	809	0.0	0.6-	1998 03 22	704	0.6-	0.3-	1998 04 19	704	0.4-	0.3-
1991 06 08	809	0.3+	0.2+	1998 03 22	704	0.1+	0.2-	1998 04 19	704	0.4+	1.2+

1991 06 08	809	0.4-	0.2-	1998 03 22	704	0.1+	0.4+	1998 04 19	704	0.1-	0.2-
1991 06 08	809	0.2-	0.1+	1998 03 22	704	0.7+	0.0	1998 04 19	704	1.5+	0.2+
1998 03 20	704	0.4-	0.9-	1998 03 22	704	0.4-	0.2+	1998 04 19	704	0.3+	0.2+
1998 03 20	704	0.5-	0.5+	1998 04 18	704	0.2+	0.1+				
1998 03 20	704	0.4-	0.8+	1998 04 18	704	0.7-	0.4-				

1998 FT₅₁ = 1996 TV₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams							
<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	0.30167771	<i>ω</i>	322.50843	-0.11619183		-0.99200620	
<i>a</i>	2.2017799	<i>Ω</i>	134.10464	+0.92706025		-0.12610483	
<i>e</i>	0.0781043	<i>i</i>	3.93085	+0.35645302		+0.00461142	
<i>P</i>	3.27	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 07	809	0.3-	1.2-	1998 03 20	704	0.3-	0.4-	1998 04 19	704	0.1-	0.4-
1996 10 07	809	0.2+	2.2-	1998 03 20	704	1.3-	0.4-	1998 04 19	704	2.2-	2.8+
1996 10 07	809	1.6+	1.2-	1998 03 20	704	0.4+	0.5+	1998 04 19	704	1.6+	0.1-
1996 10 08	809	0.3+	0.8+	1998 03 20	704	2.8+	2.2+	1998 04 19	704	0.3-	0.6+
1996 10 08	809	0.6-	1.1+	1998 03 20	704	0.2+	1.0-	1998 04 20	704	0.3+	0.7-
1996 10 08	809	0.9-	1.2-	1998 03 22	704	0.1+	1.1-	1998 04 20	704	0.7+	0.4+
1996 10 10	809	0.6+	1.7+	1998 03 22	704	0.8-	0.8-	1998 04 20	704	0.4-	2.0-
1996 10 10	809	0.3+	1.9+	1998 03 22	704	0.1+	0.3+	1998 04 20	704	0.0	0.8+
1996 10 10	809	1.1-	0.3+	1998 03 22	704	1.7-	0.0	1998 04 20	704	0.9+	0.8-

1998 FA₅₃ = 1995 QW₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams							
<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	0.17190691	<i>ω</i>	82.27929	+0.04941612		-0.99874734	
<i>a</i>	3.2033705	<i>Ω</i>	4.90879	+0.87633317		+0.03958046	
<i>e</i>	0.1470432	<i>i</i>	5.27131	+0.47916409		+0.03061279	
<i>P</i>	5.73	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1995 08 24	809	0.5+	0.6+	1998 02 24	566	0.7-	0.7-	1998 03 29	704	0.3-	0.3-
1995 08 25	809	1.1-	0.9+	1998 02 24	566	0.7-	0.5-	1998 03 29	704	0.1+	0.0
1995 08 25	809	1.3-	0.4-	1998 02 24	566	0.5-	1.1-	1998 03 29	704	0.1-	0.0
1995 08 26	809	0.2+	0.4+	1998 03 20	704	0.3+	0.5-	1998 03 29	704	0.2+	0.7-
1995 08 27	809	0.7-	1.8-	1998 03 20	704	0.4+	0.0	1998 03 29	704	0.0	0.1-
1995 08 28	809	0.4-	0.5-	1998 03 20	704	1.4+	0.2+	1998 04 01	704	0.1+	0.8-
1995 08 28	809	0.6+	0.1-	1998 03 20	704	0.7+	0.2-	1998 04 01	704	0.4-	0.8-
1995 08 29	809	1.4+	0.5-	1998 03 20	704	0.3+	0.3-	1998 04 01	704	0.5+	0.1-
1995 09 01	809	0.4+	0.1-	1998 03 22	704	0.1+	0.2-	1998 04 01	704	0.0	0.8-
1995 09 18	809	0.2+	0.1+	1998 03 22	704	0.6+	0.2+	1998 04 01	704	0.8-	0.8-
1995 09 19	809	0.8+	0.0	1998 03 22	704	0.0	0.0	1998 04 19	704	0.0	0.3+
1995 09 19	809	0.2+	0.8-	1998 03 22	704	0.5+	0.1-	1998 04 19	704	0.2+	1.2+
1995 09 20	809	0.6-	0.7-	1998 03 22	704	0.5+	0.0	1998 04 19	704	0.0	1.6+
1995 09 22	809	0.4+	0.6-	1998 03 25	367	0.3+	1.2+	1998 04 19	704	0.6-	1.7+
1995 09 23	809	0.5+	0.3+	1998 03 25	367	0.2+	0.4+	1998 04 20	704	0.1-	0.4+
1995 09 23	809 (6.1+	1.2-)		1998 03 28	704	0.0	0.6-	1998 04 20	704	0.2-	1.2+
1995 09 24	809	0.4+	0.6+	1998 03 28	704	0.1+	0.0	1998 04 20	704 (2.9+	0.5+)	
1998 01 28	910	1.1-	0.2+	1998 03 28	704	0.2-	1.1-	1998 04 20	704 (3.5-	2.7+)	
1998 01 28	910	1.1-	0.3+	1998 03 28	704	0.3-	1.0-				
1998 01 28	910	1.3-	0.2+	1998 03 28	704	0.5-	0.8-				

1998 FP₅₃ = 1993 TT₄₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

1998 JUNE 10

M.P.C. 31995

Residuals in seconds of arc

1993 10 10	809	0.0	0.3+	1998 03 20	704	0.4−	0.7−	1998 03 29	704	0.1+	0.3+
1993 10 10	809	1.4+	1.3+	1998 03 22	704	0.1+	0.0	1998 03 29	704	0.3+	0.1−
1993 10 10	809	0.3−	0.2+	1998 03 22	704	0.8+	0.2−	1998 03 29	704	0.5+	0.1−
1993 10 22	809	1.0+	0.9−	1998 03 22	704	0.1−	0.3+	1998 04 01	704	0.1+	1.4−
1993 10 22	809	0.2−	2.4−	1998 03 22	704	0.1+	0.5+	1998 04 01	704	0.4−	0.3+
1993 10 22	809	1.5−	0.1+	1998 03 22	704	0.4+	1.2+	1998 04 01	704	0.6−	0.2−
1998 02 24	566	0.0	0.4+	1998 03 28	704	0.4−	0.0	1998 04 01	704	0.6−	0.1−
1998 02 24	566	0.3−	0.3+	1998 03 28	704	0.5−	0.1−	1998 04 01	704	0.8−	0.0
1998 02 24	566	0.5−	0.4+	1998 03 28	704	0.4−	0.7−	1998 04 19	704	1.4+	0.4−
1998 03 20	704	0.0	0.3−	1998 03 28	704	0.1+	0.3−	1998 04 19	704	0.0	0.3−
1998 03 20	704	0.5+	0.5−	1998 03 28	704	0.3+	0.2−	1998 04 19	704	0.3+	0.1+
1998 03 20	704	0.4+	0.7+	1998 03 29	704	0.2+	0.2−	1998 04 19	704	0.3−	1.0−
1998 03 20	704	0.2−	0.6+	1998 03 29	704	0.5−	0.3+				

1998 FZ₅₃ = 1975 TX₁ = 1982 UQ = 1996 VZ₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	189.67672		(2000.0)	P	Q
<i>n</i>	0.28336677	ω	156.13203	+0.93891511	−0.33877470
<i>a</i>	2.2956381	Ω	223.81816	+0.29999195	+0.89193011
<i>e</i>	0.1884901	<i>i</i>	5.01971	+0.16865123	+0.29948687
<i>P</i>	3.48	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1975 10 03	095	0.9+	3.9+	1998 03 20	704	0.6−	1.0+	1998 04 01	704	0.9+	0.2+
1982 10 17	688	0.7−	1.8−	1998 03 20	704	0.5−	0.2+	1998 04 01	704	0.4+	0.1−
1982 10 17	688	1.5−	1.1−	1998 03 20	704	0.4+	0.2−	1998 04 01	704	0.1+	1.0+
1982 10 24	688	(2.3+	1.4+)	1998 03 20	704	0.0	0.8−	1998 04 18	704	0.4+	0.4−
1982 10 24	688	0.2−	0.5−	1998 03 20	704	0.3−	0.4+	1998 04 18	704	0.8+	0.3+
1996 11 05	691	0.2+	0.6+	1998 03 22	704	0.4+	1.7+	1998 04 18	704	(2.8−	3.4−)
1996 11 05	691	0.0	0.5+	1998 03 22	704	1.7−	0.2−	1998 04 18	704	(3.1−	2.3−)
1996 11 05	691	0.2+	0.3+	1998 03 22	704	1.5−	0.6+	1998 04 18	704	(4.4−	1.7−)
1996 11 11	691	0.2+	0.1−	1998 03 22	704	(2.8−	2.4+)	1998 04 19	704	0.3−	0.2−
1996 11 11	691	0.1+	0.1−	1998 03 30	910	1.1+	0.3−	1998 04 19	704	0.5+	0.3+
1996 11 11	691	0.3+	0.0	1998 03 30	910	0.9+	0.4−	1998 04 19	704	1.1−	0.0
1998 02 26	566	0.2+	0.0	1998 03 30	910	0.9+	0.0	1998 04 19	704	(2.1−	1.0−)
1998 02 26	566	0.4+	0.4−	1998 04 01	704	0.0	0.3−	1998 04 19	704	(3.5−	2.1−)
1998 02 26	566	0.6−	0.3−	1998 04 01	704	0.3−	0.3+				

1998 FX₅₄ = 1994 NO₂ = 1997 AY₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	223.19634		(2000.0)	P	Q
<i>n</i>	0.18877649	ω	262.14722	+0.95965825	+0.28062820
<i>a</i>	3.0095676	Ω	81.55383	−0.25052581	+0.88156943
<i>e</i>	0.0465393	<i>i</i>	1.00974	−0.12764348	+0.37958286
<i>P</i>	5.22	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1994 07 08	809	1.3+	0.4+	1997 01 11	817	0.3+	0.8+	1998 03 22	704	0.0	0.7+
1994 07 08	809	0.0	0.0	1997 01 14	817	0.1−	0.3+	1998 03 22	704	1.0+	1.0+
1994 07 08	809	0.3−	0.4+	1997 01 14	817	0.1+	0.1−	1998 03 22	704	0.4−	0.8+
1994 07 09	809	0.0	0.8−	1998 02 24	566	0.8−	0.4+	1998 03 25	566	0.4+	1.8−
1994 07 09	809	1.0+	1.1−	1998 02 24	566	0.3−	0.6+	1998 03 25	566	0.5+	1.5−
1994 07 09	809	0.3+	0.4−	1998 02 24	566	0.5−	0.8+	1998 03 25	566	1.2+	0.6−
1994 07 11	809	1.6−	0.7+	1998 02 27	910	0.0	0.2−	1998 04 19	704	0.4−	0.2−
1994 07 11	809	(2.2−	0.8+)	1998 02 27	910	0.2+	0.0	1998 04 19	704	0.7−	0.1−
1994 07 11	809	1.0−	0.9+	1998 02 27	910	0.4+	0.1−	1998 04 19	704	0.7+	1.4−
1994 07 12	809	0.3+	1.3+	1998 03 20	704	0.2+	0.1−	1998 04 19	704	0.7−	0.1+
1994 07 12	809	0.8+	0.8+	1998 03 20	704	0.3+	0.1+	1998 04 20	704	0.1+	0.3+
1994 07 12	809	1.2−	0.8+	1998 03 20	704	0.7+	0.5−	1998 04 20	704	0.4−	0.5+
1997 01 09	817	0.0	0.6+	1998 03 20	704	0.1−	1.0+	1998 04 20	704	0.4−	0.7+
1997 01 09	817	0.2+	0.7+	1998 03 20	704	0.1−	0.2+	1998 04 20	704	0.4−	0.6+
1997 01 11	817	0.0	1.0+	1998 03 22	704	1.1−	1.1−	1998 04 20	704	0.7+	0.3−

1998 FY₅₄ = 1993 FP₄₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	15.26207		(2000.0)	P	Q
<i>n</i>	0.19642589	ω	113.47898	−0.98227107	+0.18704796
<i>a</i>	2.9309173	Ω	77.30344	−0.17633795	−0.89924404
<i>e</i>	0.0240104	<i>i</i>	0.73501	−0.06362764	−0.39544054
<i>P</i>	5.02	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1993 03 19	809	0.4−	0.9+	1998 03 20	704	1.0−	0.1+	1998 04 19	704	0.6+	0.7−
1993 03 20	809	1.4+	0.9+	1998 03 20	704	0.3−	0.7+	1998 04 19	704	(1.0+	2.7−)
1993 03 24	809	0.2−	0.2+	1998 03 20	704	(6.3−	1.8+)	1998 04 19	704	0.4−	0.5+
1998 01 28	910	0.1−	0.4−	1998 03 22	704	1.2+	1.5−	1998 04 20	704	0.1−	0.3−
1998 01 28	910	0.2+	0.1+	1998 03 22	704	0.4+	0.4−	1998 04 20	704	1.3+	0.6+
1998 01 28	910	0.0	0.5+	1998 03 22	704	0.6−	0.4+	1998 04 20	704	(2.7−	1.7−)
1998 03 20	704	0.3+	0.3−	1998 03 22	704	0.9−	0.3+	1998 04 20	704	(0.5+	2.6−)
1998 03 20	704	0.1+	1.4−	1998 04 19	704	1.5−	0.2−	1998 04 20	704	(2.1−	2.0−)

1998 FA₅₆ = 1979 SU₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	353.96543		(2000.0)	P	Q
<i>n</i>	0.24135322	ω	47.42455	−0.77941334	+0.62523485
<i>a</i>	2.5548612	Ω	171.01715	−0.62315040	−0.76706057
<i>e</i>	0.0388843	<i>i</i>	14.82573	−0.06479515	−0.14387309
<i>P</i>	4.08	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1979 09 20	675	0.1−	0.2+	1998 03 20	704	0.4+	1.0−	1998 04 19	704	0.1−	0.5−
1979 09 21	675	0.1+	0.2−	1998 03 22	704	0.2−	0.6+	1998 04 19	704	0.3−	0.3+
1998 02 24	566	0.2+	0.5+	1998 03 22	704	0.3−	0.3+	1998 04 19	704	0.2+	0.4−
1998 02 24	566	0.1+	0.2−	1998 03 22	704	0.3−	0.1−	1998 04 19	704	0.6−	0.4−
1998 02 24	566	0.1+	0.1+	1998 03 22	704	0.2−	0.0	1998 04 20	704	0.2+	0.1+
1998 03 20	704	1.0−	0.2+	1998 03 22	704	0.3−	0.6+	1998 04 20	704	0.1+	0.2−
1998 03 20	704	0.0	0.4+	1998 03 24	566	0.6+	0.4−	1998 04 20	704	0.6+	0.2+
1998 03 20	704	0.1+	0.2−	1998 03 24	566	0.5+	0.3−	1998 04 20	704	0.1+	0.7+
1998 03 20	704	0.6−	0.5−	1998 03 24	566	0.6+	0.5−	1998 04 20	704	0.3+	0.5+

1998 FR₅₆ = 1977 EY₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	163.01499		(2000.0)	P	Q
<i>n</i>	0.23635691	ω	216.96786	+0.79681184	−0.60422632
<i>a</i>	2.5907401	Ω	180.21655	+0.60190562	+0.79392221
<i>e</i>	0.1680411	<i>i</i>	18.50549	+0.05291991	+0.06780909
<i>P</i>	4.17	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1977 03 12	381	0.3−	0.6+	1998 03 20	704	0.0	0.5+	1998 04 19	704	0.2+	0.2+
1977 03 12	381	0.7+	0.1+	1998 03 20	704	0.3−	0.2+	1998 04 19	704	0.1+	0.2−
1977 03 14	381	1.3−	0.9+	1998 03 20	704	0.3+	0.6+	1998 04 19	704	0.7−	0.2+
1977 03 14	381	1.3+	0.9−	1998 03 22	704	0.1+	1.3−	1998 04 20	704	0.5−	1.3+
1977 03 15	381	0.6−	1.2−	1998 03 22	704	0.4−	0.1−	1998 04 20	704	0.1+	0.0
1977 03 15	381	0.3+	0.5+	1998 03 22	704	0.1−	0.2−	1998 04 20	704	0.3+	0.2+
1998 03 20	704	0.2+	0.2+	1998 03 22	704	0.7+	0.1+	1998 04 20	704	0.4+	0.4−
1998 03 20	704	0.3+	0.4−	1998 04 19	704	0.5−	0.5−	1998 04 20	704	0.3−	0.5−

1998 FV₅₆ = 1971 SW₃ = 1991 ND₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	226.14830		(2000.0)	P	Q
<i>n</i>	0.24273650	ω	332.53501	+0.99127574	+0.12774620
<i>a</i>	2.5451458	Ω	20.20395	−0.09696325	+0.87357619
<i>e</i>	0.2312880	<i>i</i>	5.39223	−0.08927789	+0.46962278
<i>P</i>	4.06	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 4

M.P.C. 31996

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Residuals in seconds of arc

1971 09 26	805	1.2+	0.5-	1998 03 20	704	0.3-	0.2+	1998 04 19	704	1.2+	0.0
1971 09 27	805	0.6-	0.6-	1998 03 20	704	0.9-	0.6+	1998 04 19	704	(2.2-	1.2-)
1991 07 13	675	0.5-	0.8+	1998 03 20	704	0.3-	0.1-	1998 04 19	704	0.1+	0.0
1991 07 13	675	(0.7-	2.8+)	1998 03 20	704	0.1-	0.5+	1998 04 19	704	0.5-	0.6-
1991 07 16	675	1.0-	0.5-	1998 03 20	704	0.2+	1.1+	1998 04 20	704	0.2+	0.4-
1991 07 16	675	1.5+	0.2-	1998 03 22	704	0.5-	0.5-	1998 04 20	704	0.6+	0.7-
1998 02 27	910	0.8+	0.5+	1998 03 22	704	0.2+	1.4-	1998 04 20	704	0.7-	0.8-
1998 02 27	910	0.4+	0.3+	1998 03 22	704	(2.7-	1.6-)	1998 04 20	704	1.4-	0.1-
1998 02 28	910	1.0+	0.5+	1998 03 22	704	0.2-	0.6-	1998 04 20	704	0.4-	0.1+

1998 FF₅₇ = 2013 T-1

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	319.61920	(2000.0)	P	Q
<i>n</i>	0.29253038	ω	102.98136	+0.99664687
<i>a</i>	2.2474433	Ω	171.69933	-0.92686802
<i>e</i>	0.1546724	<i>i</i>	1.91294	-0.36639307
<i>P</i>	3.37	<i>H</i>	15.5	<i>G</i> 0.15 <i>U</i> 5

Residuals in seconds of arc

1971 03 24	675	1.0+	0.6+	1998 03 22	704	0.4+	0.1+	1998 04 19	704	0.4+	0.2-
1971 03 25	675	1.0-	0.2-	1998 03 22	704	0.4+	0.0	1998 04 19	704	1.2+	0.5+
1971 03 25	675	0.2-	0.1+	1998 03 22	704	0.7-	0.3-	1998 04 19	704	0.3-	0.2+
1971 03 26	675	0.0	0.9-	1998 03 22	704	0.2+	0.3-	1998 04 20	704	0.8-	0.6-
1998 03 20	704	0.6-	0.0	1998 03 22	704	0.4-	0.2-	1998 04 20	704	0.8+	0.5+
1998 03 20	704	0.2-	0.7+	1998 03 25	699	1.2+	0.9-	1998 04 20	704	0.4-	0.3-
1998 03 20	704	0.1-	1.1+	1998 03 25	699	0.5-	0.7+	1998 04 20	704	1.0-	0.6-
1998 03 20	704	0.1-	0.1-	1998 03 25	699	0.6+	0.6-	1998 04 20	704	0.3+	0.1-
1998 03 20	704	0.1-	0.2+	1998 04 19	704	0.2-	0.6+				

1998 FH₅₈ = 1995 WR₁₅

Id. A. Doppler

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	7.47080	(2000.0)	P	Q
<i>n</i>	0.17996575	ω	194.77273	-0.93192159
<i>a</i>	3.1070111	Ω	6.49106	-0.33190131
<i>e</i>	0.1148705	<i>i</i>	0.46723	-0.14616316
<i>P</i>	5.48	<i>H</i>	14.5	<i>G</i> 0.15 <i>U</i> 5

Residuals in seconds of arc

1995 11 17	691	0.2-	0.2+	1998 03 22	704	0.5+	0.4-	1998 04 01	704	1.0+	0.7+
1995 11 17	691	0.1-	0.2+	1998 03 22	704	1.0-	0.6+	1998 04 19	704	0.2-	0.7-
1995 11 17	691	0.1-	0.2-	1998 03 22	704	0.2+	0.2+	1998 04 19	704	0.1-	0.5-
1995 11 27	691	0.3+	0.4-	1998 03 22	704	0.7+	0.4-	1998 04 19	704	0.2-	0.2-
1995 11 27	691	0.4+	0.5-	1998 03 26	566	0.2-	0.2-	1998 04 19	704	0.6+	0.6-
1998 03 20	704	0.7-	0.0	1998 03 26	566	0.0	0.2-	1998 04 19	704	0.1-	1.1-
1998 03 20	704	0.8+	0.1-	1998 03 26	566	0.0	0.2+	1998 04 20	704	0.4-	0.3-
1998 03 20	704	0.4-	0.8+	1998 04 01	704	1.0+	0.2-	1998 04 20	704	0.5-	0.9+
1998 03 20	704	0.3-	0.4+	1998 04 01	704	0.2-	0.0	1998 04 20	704	0.5+	1.1+
1998 03 20	704	0.8-	0.7+	1998 04 01	704	0.9+	0.5-	1998 04 20	704	0.4+	0.5-
1998 03 22	704	0.4-	0.1+	1998 04 01	704	1.1+	0.1+	1998 04 20	704	2.5-	0.7-

1998 FL₅₈ = 1979 OQ₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	140.07436	(2000.0)	P	Q
<i>n</i>	0.29554966	ω	203.38993	+0.47038640
<i>a</i>	2.2321108	Ω	218.55082	+0.81028728
<i>e</i>	0.1571474	<i>i</i>	0.23473	+0.34952991
<i>P</i>	3.33	<i>H</i>	15.5	<i>G</i> 0.15 <i>U</i> 6

Residuals in seconds of arc

1979 07 24	675	0.7+	0.4+	1998 03 22	704	0.5-	0.1-	1998 04 19	704	0.7+	0.2-
1979 07 24	413	0.4-	1.5-	1998 03 22	704	0.3+	1.9-	1998 04 19	704	1.6-	0.7-
1979 07 25	675	0.3-	1.4+	1998 03 22	704	0.7+	0.1-	1998 04 19	704	0.1+	1.7-
1998 03 20	704	0.1+	0.0	1998 03 22	704	0.5-	0.5+	1998 04 20	704	0.4-	0.8+

1998 03 20	704	0.3+	1.1+	1998 03 26	566	0.4-	0.3+	1998 04 20	704	0.6+	0.1+
1998 03 20	704	0.3+	0.7+	1998 03 26	566	0.4+	0.5+	1998 04 20	704	0.1-	0.0
1998 03 20	704	0.5+	0.1+	1998 03 26	566	0.3-	0.7+	1998 04 20	704	0.7+	0.2-
1998 03 20	704	(3.8-	0.4-)	1998 04 19	704	(0.1+	3.6-)	1998 04 20	704	0.2-	1.7+
1998 03 22	704	0.4-	0.3+	1998 04 19	704	0.2-	1.9-				

1998 FY₅₈ = 1996 XY₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	22.84870	(2000.0)	P	Q
<i>n</i>	0.23935053	ω	171.41834	-0.98805724
<i>a</i>	2.5690928	Ω	17.30861	-0.14788104
<i>e</i>	0.1629628	<i>i</i>	7.35606	-0.04329071
<i>P</i>	4.12	<i>H</i>	16.0	<i>G</i> 0.15 <i>U</i> 4

Residuals in seconds of arc

1996 12 02	691	0.4-	0.2+	1998 03 20	704	0.5+	0.5+	1998 04 19	704	0.2-	0.6-
1996 12 02	691	0.4-	0.1-	1998 03 20	704	0.5-	0.7-	1998 04 19	704	0.2-	2.0-
1996 12 02	691	0.6-	0.2-	1998 03 22	704	0.6-	0.5+	1998 04 20	704	1.2+	0.4+
1996 12 09	691	0.4+	0.0	1998 03 22	704	0.8-	0.5-	1998 04 20	704	0.2+	1.5+
1996 12 09	691	0.4+	0.0	1998 03 22	704	0.8-	1.6-	1998 04 20	704	0.3-	0.7+
1996 12 09	691	0.6+	0.0	1998 03 22	704	2.1+	0.2+	1998 04 20	704	0.5-	0.4-
1998 03 20	704	2.8+	1.3+	1998 04 19	704	0.5+	0.3+	1998 04 20	704	0.5+	0.8+
1998 03 20	704	1.9-	0.5+	1998 04 19	704	0.7-	1.0-				
1998 03 20	704	0.5-	0.1-	1998 04 19	704	0.7-	0.2+				

1998 FQ₆₀ = 1995 SS₄₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	102.45394	(2000.0)	P	Q
<i>n</i>	0.17969761	ω	87.53155	+0.08112604
<i>a</i>	3.1101012	Ω	357.81492	+0.90852789
<i>e</i>	0.1663399	<i>i</i>	0.84072	+0.40987271
<i>P</i>	5.48	<i>H</i>	14.0	<i>G</i> 0.15 <i>U</i> 5

Residuals in seconds of arc

1995 09 26	691	0.2+	0.0	1998 03 22	704	0.4+	0.1+	1998 04 01	704	0.4+	0.7+
1995 09 26	691	0.0	0.2+	1998 03 22	704	0.5-	0.4-	1998 04 01	704	1.0+	0.0
1995 09 26	691	0.4-	0.3-	1998 03 22	704	0.6-	1.2-	1998 04 19	704	0.3-	0.0
1995 10 02	691	0.4-	0.5+	1998 03 22	704	0.6-	1.0-	1998 04 19	704	2.5-	0.8-
1995 10 02	691	0.0	0.5+	1998 03 22	704	0.3-	0.4+	1998 04 19	704	0.2-	0.3-
1995 10 02	691	0.1+	0.4+	1998 03 25	699	0.5+	0.1-	1998 04 19	704	1.0-	1.9-
1998 03 20	704	2.5+	0.9+	1998 03 25	699	0.0	0.9+	1998 04 20	704	1.2+	0.6-
1998 03 20	704	1.7-	2.1+	1998 03 25	699	0.8+	0.3+	1998 04 20	704	0.1+	0.4+
1998 03 20	704	0.4-	1.3+	1998 04 01	704	0.8+	0.1+	1998 04 20	704	0.6+	0.4-
1998 03 20	704	0.8+	0.7+	1998 04 01	704	1.8+	0.1-	1998 04 20	704	0.7+	1.0-
1998 03 20	704	1.2-	0.2+	1998 04 01	704	0.0	1.3+	1998 04 20	704	2.1-	0.8-

1998 FR₆₀ = 1981 UU₆ = 1986 WE₂ = 1990 QS₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	156.21430	(2000.0)	P	Q
<i>n</i>	0.20272789	ω	41.36179	+0.66447648
<i>a</i>	2.8698578	Ω	6.99786	+0.67909830
<i>e</i>	0.0591155	<i>i</i>	1.39217	+0.31192389
<i>P</i>	4.86	<i>H</i>	14.0	<i>G</i> 0.15 <i>U</i> 2

Residuals in seconds of arc

1981 10 30	381	0.5+	2.2-	1990 08 26	809	0.1-	1.4-	1998 04 01	704	0.4+	0.5+
1981 10 30	381	0.6+	1.9-	1990 08 26	809	0.3-	1.3-	1998 04 01	704	0.0	1.0-
1986 11 30	046	1.4+	3.0-	1998 03 20	704	0.1-	0.3+	1998 04 01	704	0.5-	0.7-
1986 11 30	046	0.7-	1.3-	1998 03 20	704	1.0-	1.1+	1998 04 19	704	0.7+	0.5-
1990 08 16	809	2.1+	0.2+	1998 03 20	704	1.0-	0.1-	1998 04 19	704	0.3+	0.7-
1990 08 16	809	0.8+	0.9-	1998 03 20	704	0.2+	0.5+	1998 04 19	704	0.1-	1.4-
1990 08 16	809	2.3+	1.4-	1998 03 20	704	1.8-	1.2-	1998 04 19	704	0.2+	0.5-
1990 08 18	809	1.3+	0.5+	1998 03 22	704	0.2+	0.5+	1998 04 19	704	0.0	1.0-
1990 08 18	809	0.8-	0.2-	1998 03 22	704	0.5+	0.1+	1998 04 20	704	0.0	1.8-
1990 08 18	809	1.0-	1.0-	1998 03 22	704	0.0	0.5+	1998 04 20	704	1.0-	1.2-

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1990 08 24	809	0.4+	0.6−	1998 03 22	704	1.7−	1.0−	1998 04 20	704	1.1+	1.5−
1990 08 24	809	0.1+	1.5−	1998 03 22	704	0.3+	2.5−	1998 04 20	704	0.2−	1.5−
1990 08 24	809	0.3−	1.3−	1998 04 01	704	0.2−	0.2+	1998 04 20	704	2.1−	1.3−
1990 08 26	809	0.0	1.3−	1998 04 01	704	0.7−	0.3+				

1998 FU₆₀ = 4824 P-L

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	29.57626	(2000.0)		P		Q	
<i>n</i>	0.22312127	<i>ω</i>	357.49787	−0.99941705		−0.03413391	
<i>a</i>	2.6922088	<i>Ω</i>	180.54732	+0.03239888		−0.94217768	
<i>e</i>	0.1773905	<i>i</i>	3.95545	+0.01076432		−0.33337080	
<i>P</i>	4.42	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1960 09 24	675	0.9−	0.3−	1998 03 20	704	0.9+	0.1−	1998 04 20	704	0.9+	0.5+
1960 09 24	675	0.2−	0.3−	1998 03 20	704	1.0+	0.4−	1998 04 20	704	0.0	0.1+
1960 09 26	675	0.7−	0.7−	1998 03 20	704	0.6+	0.4−	1998 04 22	704	0.4−	1.3−
1960 09 26	675	0.0	0.9−	1998 03 22	704	0.4−	0.0	1998 04 22	704	0.8+	0.4+
1960 09 27	675	0.2−	0.2+	1998 03 22	704	0.3−	0.4−	1998 04 22	704	0.4−	0.5+
1960 09 27	675	2.7+	2.0+	1998 03 22	704	0.7−	0.3+	1998 04 22	704	0.3+	1.6−
1960 09 28	675	0.0	0.5−	1998 03 22	704	1.3−	0.2+	1998 04 22	704	0.2−	0.2+
1960 09 28	675	0.7−	0.1+	1998 03 22	704	1.4−	1.0+	1998 05 02	699	0.7−	1.2+
1998 03 20	704	0.3+	0.1+	1998 04 20	704	0.2+	0.2+	1998 05 02	699	1.0+	0.9−
1998 03 20	704	0.4+	0.1−	1998 04 20	704	0.4+	0.5−	1998 05 02	699	0.9−	0.9+

1998 FV₆₀ = 1991 FD₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	340.13311	(2000.0)		P		Q	
<i>n</i>	0.28699821	<i>ω</i>	235.28180	−0.43245114		+0.90150122	
<i>a</i>	2.2762323	<i>Ω</i>	9.14139	−0.78887887		−0.36928303	
<i>e</i>	0.0794069	<i>i</i>	6.06270	−0.43664189		−0.22566699	
<i>P</i>	3.43	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 03 23	809	0.3+	0.5+	1998 03 20	704	0.2+	0.2−	1998 04 19	704	0.4−	0.0
1991 03 23	809	0.4+	0.4+	1998 03 20	704	0.2−	0.3−	1998 04 19	704	0.5+	0.6−
1991 03 23	809	0.9+	0.5+	1998 03 20	704	0.2−	0.1−	1998 04 20	704	0.5+	0.4−
1991 03 24	809	0.6−	0.6−	1998 03 22	704	1.3+	0.3−	1998 04 20	704	0.7+	0.5−
1991 03 24	809	0.4−	0.4−	1998 03 22	704	0.8−	0.2+	1998 04 20	704	0.1−	0.4−
1991 03 24	809	0.5−	0.3−	1998 03 22	704	0.0	0.2+	1998 04 20	704	0.0	0.6−
1998 03 08	699	0.3−	0.0	1998 03 22	704	0.3−	0.5+	1998 04 20	704	0.0	0.6−
1998 03 08	699	0.3−	0.1+	1998 03 22	704	0.4−	1.0+	1998 05 02	699	0.0	1.3+
1998 03 08	699	0.0	0.6+	1998 04 19	704	0.1+	0.1+	1998 05 02	699	0.2−	0.6+
1998 03 20	704	0.0	0.2−	1998 04 19	704	0.7−	0.5−	1998 05 02	699	0.4+	0.7+
1998 03 20	704	0.7+	0.9−	1998 04 19	704	0.4−	0.1+				

1998 FT₆₂ = 1961 TS₁ = 1976 JZ₆ = 1993 VQ₂ = 1996 TE₅₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	183.73657	(2000.0)		P		Q	
<i>n</i>	0.30959604	<i>ω</i>	69.30825	+0.86252703		−0.50571516	
<i>a</i>	2.1640757	<i>Ω</i>	321.06500	+0.45341042		+0.78759276	
<i>e</i>	0.1707829	<i>i</i>	1.57748	+0.22464662		+0.35206508	
<i>P</i>	3.18	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	2

Residuals in seconds of arc

1961 10 13	760	2.4+	0.1+	1996 10 10	372	0.8+	0.6+	1998 04 19	704	0.5+	0.1−
1961 10 17	760	1.2−	0.2−	1996 10 10	372	0.0	0.3+	1998 04 19	704	1.2−	0.1−
1961 10 17	760	1.1−	0.7−	1998 03 20	704	1.5+	1.1+	1998 04 19	704	0.1+	0.8+
1976 05 02	809	0.8+	0.4−	1998 03 20	704	0.6−	0.8−	1998 04 19	704	0.2−	0.7−
1993 11 15	365	(3.7−	1.0+)	1998 03 20	704	0.3+	0.7−	1998 04 19	704	2.0−	0.1+
1993 11 15	365	0.9−	0.9−	1998 03 20	704	0.9−	0.9+	1998 04 20	704	0.4+	0.8−
1993 11 16	365	(2.6+	1.7−)	1998 03 20	704	1.0−	1.7+	1998 04 20	704	0.5+	0.4+
1993 11 16	365	1.2+	1.5+	1998 03 22	704	0.3+	0.5−	1998 04 20	704	0.3−	0.1−
1993 11 22	365	0.1+	1.1−	1998 03 22	704	0.1−	0.2−	1998 04 20	704	0.4−	0.2+
1993 11 22	365	0.1+	0.4+	1998 03 22	704	0.9+	1.2−	1998 04 20	704	(2.7−	0.9+)

1996 10 04	372	0.2−	0.6−	1998 03 22	704	0.4+	0.4+
1996 10 04	372	0.7−	0.7−	1998 03 22	704	0.2+	1.3−

1998 FZ₆₂ = 1974 SV₃ = 1991 RL₃₄

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	167.44625	(2000.0)		P		Q	
<i>n</i>	0.22957609	<i>ω</i>	207.63581	+0.81303389		−0.58118485	
<i>a</i>	2.6415060	<i>Ω</i>	188.16608	+0.56899133		+0.80576789	
<i>e</i>	0.1864519	<i>i</i>	14.11581	+0.12338864		+0.11385197	
<i>P</i>	4.29	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1974 09 22	095	0.1+	0.7−	1998 03 25	699	(2.1−	1.1+)	1998 04 28	699	1.7−	0.5+
1991 09 12	675	1.0+	1.1+	1998 03 25	699	0.7+	0.2+	1998 04 28	699	1.4+	0.9+
1991 09 12	675	1.0−	0.8−	1998 03 25	699	0.3−	0.2−	1998 04 28	699	0.2+	0.2+
1998 03 20	704	(1.0−	3.0−)	1998 04 20	704	0.4−	0.1+	1998 04 30	699	0.4−	0.2+
1998 03 20	704	1.5+	0.5+	1998 04 20	704	0.2−	0.2+	1998 04 30	699	0.7−	0.2+
1998 03 20	704	0.2−	0.2−	1998 04 20	704	0.4+	0.3+	1998 04 30	699	0.4+	0.9−
1998 03 20	704	0.1−	0.8+	1998 04 20	704	0.0	0.2+	1998 05 01	699	1.5+	1.0−
1998 03 20	704	0.8−	1.1+	1998 04 20	704	0.9−	0.3+	1998 05 01	699	0.1+	0.3+
1998 03 22	704	0.5+	0.5−	1998 04 22	704	0.3−	0.5−	1998 05 01	691	1.8−	0.9−
1998 03 22	704	0.5+	0.6−	1998 04 22	704	1.4+	0.1−	1998 05 01	699	0.1+	0.7+
1998 03 22	704	0.1−	1.0−	1998 04 22	704	0.5+	0.5−	1998 05 01	691	(2.1−	0.3−)
1998 03 22	704	0.5−	0.9−	1998 04 22	704	0.4−	0.7−	1998 05 01	691	(2.2−	0.2+)
1998 03 22	704	1.0−	0.2+	1998 04 22	704	0.5+	0.4+				

1998 FH₆₃ = 1983 CL₄ = 1992 AK₅ = 1995 QT₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
<i>M</i>	142.38744	(2000.0)		P		Q	
<i>n</i>	0.20456106	<i>ω</i>	283.78864	+0.45922589		−0.88779469	
<i>a</i>	2.8526867	<i>Ω</i>	138.82981	+0.83188587		+0.41774278	
<i>e</i>	0.0632226	<i>i</i>	2.65830	+0.31157259		+0.19316201	
<i>P</i>	4.82	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1983 02 14	381	0.3+	1.1+	1998 03 20	704	0.2−	1.2+	1998 04 24	691	1.0−	1.0−
1992 01 03	033	0.2+	1.3−	1998 03 20	704	0.5−	0.3+	1998 04 24	691	1.3−	0.5−
1992 01 03	033	0.1+	0.8−	1998 03 22	704	0.3−	0.4+	1998 04 24	691	1.3−	0.8−
1995 08 19	809	0.6+	0.2+	1998 03 22	704	0.7−	0.4+	1998 04 27	691	0.2+	0.5−
1995 08 20	809	0.0	0.3+	1998 03 22	704	0.8−	0.3+	1998 04 27	691	0.2−	0.3−
1995 08 22	809	0.8−	0.6+	1998 03 22	704	0.7−	0.4+	1998 04 27	691	0.3−	0.5−
1995 08 26	809	0.3−	0.9+	1998 03 22	704	0.8−	1.0+	1998 04 28	699	0.2+	0.5−
1995 08 27	809	0.6−	0.1+	1998 04 20	704	0.4+	0.1−	1998 04 28	699	0.9+	0.2−
1995 08 29	809	0.2−	2.0−	1998 04 20	704	0.7+	0.7−	1998 04 28	699	0.1−	0.5−
1995 08 30	809	0.8+	1.4−	1998 04 20	704	0.0	0.3+	1998 04 30	699	1.1+	0.4−
1995 09 20	809	0.8+	0.7+	1998 04 20	704	0.2+	0.0	1998 04 30	699	1.2+	0.2−
1998 03 08	699	0.0	0.6+	1998 04 20	704	(5.0−	1.6+)	1998 04 30	699	1.1+	0.8−
1998 03 08	699	1.4−	0.8+	1998 04 22	704	0.3+	0.3−	1998 05 01	699	2.0+	0.2+
1998 03 08	699	0.5−	0.8+	1998 04 22	704	0.2+	0.1+	1998 05 01	699	0.6+	0.5−
1998 03 20	704	0.0	0.2−	1998 04 22	704	0.3+	0.5−	1998 05 01	699	0.5+	0.6−
1998 03 20	704	0.6−	0.4+	1998 04 22	704	0.5+	0.4−				
1998 03 20	704	0.4−	1.3+	1998 04 22	704	0.3+	1.5−				

1998 FL₆₃ = 1996 XY₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Epoch 1998 July 6.0 TT = JDT 2451000.5				Gnädig	
<i>M</i>	127.80764	(2000.0)		P	Q
<i>n</i>	0.24300969	<i>ω</i>	298.49980	+0.20791242	−0.97739321
<i>a</i>	2.5432379	<i>Ω</i>	139.44172	+0.91681558	+0.18104136
<i>e</i>	0.0745394	<i>i</i>	3.38611	+0.34091292	+0.10920865
<i>P</i>	4.06	<i>H</i>	16.0	<i>G</i> 0.15	<i>U</i> 4

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1996 12 02	691	0.6−	0.9−	1998 03 20	704	1.3−	0.4−	1998 04 20	704	0.2−	0.6−
1996 12 03	691	0.6+	1.1+	1998 03 20	704	0.0	0.9+	1998 04 22	704	0.2+	1.5−
1996 12 03	691	1.2+	1.4+	1998 03 22	704	0.6+	0.7+	1998 04 22	704	0.5−	0.8+
1996 12 03	691	0.6+	1.9+	1998 03 22	704	(0.9+	2.3+)	1998 04 22	704	(2.8−	0.4+)
1996 12 12	691	0.1−	1.0−	1998 03 22	704	0.7−	0.2−	1998 04 22	704	0.4−	0.7−
1996 12 12	691	0.1−	0.2−	1998 03 22	704	0.5+	1.7−	1998 04 22	704	(2.7−	0.4+)
1996 12 12	691	0.0	0.8−	1998 03 22	704	(3.0−	2.3+)				
1998 03 20	704	0.1+	0.0	1998 04 20	704	0.3+	0.9+				

1998 FV₆₃ = 1986 WN

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	184.37439		(2000.0)	P	Q
<i>n</i>	0.29279667	ω	339.36453	+0.89006283	−0.45038863
<i>a</i>	2.2460804	Ω	47.60551	+0.43042891	+0.77965203
<i>e</i>	0.1557458	<i>i</i>	5.46014	+0.15006371	+0.43507792
<i>P</i>	3.37	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1986 11 25	046	0.7−	0.4−	1998 03 20	704	1.0−	0.4+	1998 03 28	704	0.5−	0.7−
1986 11 25	046	0.9−	0.6+	1998 03 22	704	0.4+	0.3+	1998 03 29	704	0.1+	0.6+
1986 11 26	046	0.2+	2.6−	1998 03 22	704	0.4+	0.1+	1998 03 29	704	0.6+	0.5−
1986 11 26	046	0.2−	0.4−	1998 03 22	704	0.3+	0.5−	1998 03 29	704	1.0+	0.5+
1986 11 28	046	0.2+	1.9+	1998 03 22	704	0.3−	0.1+	1998 03 29	704	1.2+	2.7−
1986 11 28	046	1.4+	1.0+	1998 03 22	704	0.1+	0.5+	1998 03 29	704	0.9−	0.7−
1998 02 26	566	0.4−	0.6−	1998 03 25	699	0.1−	0.6+	1998 04 20	704	1.0+	1.1−
1998 02 26	566	0.4−	0.2−	1998 03 25	699	0.8+	0.1−	1998 04 20	704	1.5+	0.3+
1998 02 26	566	0.3−	0.2+	1998 03 25	699	0.3+	0.5+	1998 04 20	704	0.0	0.8+
1998 03 20	704	0.1−	0.1−	1998 03 28	704	0.5−	0.2+	1998 04 20	704	0.1+	0.2+
1998 03 20	704	0.2−	0.3+	1998 03 28	704	0.1−	0.2+	1998 04 20	704	3.0−	0.5−
1998 03 20	704	0.3−	0.8+	1998 03 28	704	0.4+	0.4−				
1998 03 20	704	0.0	1.1+	1998 03 28	704	0.3−	0.2+				

1998 FQ₆₄ = 1991 GM₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	287.36503		(2000.0)	P	Q
<i>n</i>	0.27875279	ω	288.91774	+0.56682027	+0.82327793
<i>a</i>	2.3209007	Ω	15.72416	−0.70723210	+0.50522510
<i>e</i>	0.1235430	<i>i</i>	6.45494	−0.42253702	+0.25876835
<i>P</i>	3.54	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1991 04 08	809	0.6−	0.1−	1998 03 20	704	0.4+	0.6+	1998 04 20	704	0.5+	0.1+
1991 04 08	809	0.0	0.1+	1998 03 20	704	0.4+	0.4−	1998 04 20	704	0.0	0.0
1991 04 08	809	0.5−	0.2−	1998 03 20	704	0.4−	0.5−	1998 04 20	704	0.6−	0.2−
1991 04 08	809	2.0+	0.7−	1998 03 20	704	0.1−	0.7−	1998 04 20	704	0.6−	0.8+
1991 04 08	809	0.6+	0.5−	1998 03 22	704	0.4−	0.2−	1998 04 22	704	0.4+	0.7−
1991 04 08	809	0.5+	0.0	1998 03 22	704	0.4−	0.7+	1998 04 22	704	0.4+	0.3−
1991 04 10	809	0.6−	0.4−	1998 03 22	704	0.2−	0.5+	1998 04 22	704	0.2−	0.1−
1991 04 10	809	0.0	0.4−	1998 03 22	704	1.3−	0.9+	1998 04 22	704	0.4−	0.8−
1991 04 10	809	0.9−	0.4−	1998 03 22	704	1.0−	0.9−	1998 04 22	704	0.8+	0.2−
1991 04 10	809	0.6+	1.2+	1998 03 25	699	0.5+	0.7+	1998 05 02	699	0.5+	0.2+
1991 04 10	809	0.1−	1.0+	1998 03 25	699	1.2+	0.2+	1998 05 02	699	0.1−	0.5+
1991 04 10	809	0.9−	0.6+	1998 03 25	699	0.9+	0.2+	1998 05 02	699	0.9−	0.7+
1998 03 20	704	0.1+	0.2−	1998 04 20	704	0.1+	1.1−				

1998 FX₆₄ = 1982 BP₇ = 1984 ST₇

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	180.95272		(2000.0)	P	Q
<i>n</i>	0.25527145	ω	21.06168	+0.84980440	−0.52680603
<i>a</i>	2.4611300	Ω	10.78013	+0.46920241	+0.74087567
<i>e</i>	0.1102702	<i>i</i>	5.38296	+0.24016989	+0.41662771
<i>P</i>	3.86	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1982 01 26	381	1.3−	0.6+	1998 03 24	566	0.2−	0.3−	1998 04 20	704	1.6−	1.8−
1982 01 26	381	1.3+	0.7−	1998 04 01	704	0.2−	0.4−	1998 04 22	704	0.3+	0.1−
1984 09 21	010	0.2+	0.4−	1998 04 01	704	0.5−	0.1+	1998 04 22	704	0.2+	0.1+
1998 03 20	704	0.1−	0.0	1998 04 01	704	0.2+	0.3+	1998 04 22	704	0.2+	1.5+
1998 03 20	704	0.4−	0.9−	1998 04 01	704	1.2+	0.0	1998 04 22	704	0.3+	0.1+
1998 03 20	704	(2.9+	1.4−)	1998 04 01	704	0.1+	0.7+	1998 04 22	704	0.7−	0.7+
1998 03 20	704	0.5+	0.0	1998 04 19	704	0.3+	0.0	1998 04 29	566	0.3−	0.2−
1998 03 22	704	0.3−	0.2+	1998 04 19	704	0.3+	0.0	1998 04 29	566	0.4−	0.4−
1998 03 22	704	0.3+	0.1−	1998 04 19	704	0.7−	0.4+	1998 04 29	566	0.2−	0.1−
1998 03 22	704	0.1+	0.3−	1998 04 19	704	0.1−	0.5−	1998 05 01	699	0.0	1.3+
1998 03 22	704	0.6+	0.6−	1998 04 20	704	0.3+	0.2+	1998 05 01	699	1.3+	1.1−
1998 03 22	704	0.3−	0.5+	1998 04 20	704	0.5−	0.6+	1998 05 01	699	1.4+	0.4−
1998 03 24	566	0.3−	1.0+	1998 04 20	704	0.7−	0.1−				
1998 03 24	566	0.2+	0.5−	1998 04 20	704	0.6−	0.1−				

1998 FA₆₅ = 1134 T-1 = 1988 VL₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	212.18698		(2000.0)	P	Q
<i>n</i>	0.25668874	ω	167.59718	+0.99084884	−0.13202472
<i>a</i>	2.4520623	Ω	200.05441	+0.11578888	+0.93829118
<i>e</i>	0.1226740	<i>i</i>	4.69571	+0.06936503	+0.31965472
<i>P</i>	3.84	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1971 03 24	675	0.6+	0.6−	1998 03 20	704	1.5+	1.0−	1998 04 19	704	0.3+	0.1−
1971 03 25	675	0.5−	0.1+	1998 03 22	704	0.1+	0.8+	1998 04 19	704	1.0+	0.2−
1971 03 25	675	0.1+	0.5+	1998 03 22	704	0.3−	0.9+	1998 04 19	704	0.9+	1.0+
1971 03 26	675	0.7−	1.3−	1998 03 22	704	0.5−	0.9+	1998 04 19	704	0.8−	1.8−
1971 03 27	675	1.0−	1.1−	1998 03 22	704	0.0	0.4−	1998 04 22	704	0.8−	0.9−
1971 04 02	675	0.9+	0.6+	1998 03 22	704	3.0−	0.3+	1998 04 22	704	0.3−	0.9−
1988 11 04	046	1.4+	1.4+	1998 04 01	704	0.3+	0.2−	1998 04 22	704	0.5+	1.2+
1988 11 04	046	1.5−	1.0−	1998 04 01	704	0.9+	0.2+	1998 04 22	704	0.7−	0.4−
1998 03 20	704	(3.0+	1.1+)	1998 04 01	704	0.2−	1.1+	1998 04 22	704	0.0	0.9+
1998 03 20	704	(3.7+	0.7−)	1998 04 01	704	1.8+	0.6+				
1998 03 20	704	(2.3+	1.0−)	1998 04 01	704	(3.3−	0.5−)				

1998 FG₆₅ = 1989 EX₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	342.94260		(2000.0)	P	Q
<i>n</i>	0.23136609	ω	55.87717	−0.31006479	+0.94963895
<i>a</i>	2.6278641	Ω	196.24325	−0.91682118	−0.31126173
<i>e</i>	0.2152289	<i>i</i>	9.30543	−0.25159242	−0.03608315
<i>P</i>	4.26	<i>H</i>	15.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1989 03 02	809	(3.1+)	1.7−)	1998 03 25	566	0.5+)	0.7−	1998 04 22	704	0.1+	0.7+
1989 03 02	809	0.9+	0.9−	1998 03 25	566	0.2+	0.3−	1998 04 22	704	1.3−	1.0+
1989 03 02	809	1.6−	0.6+	1998 03 25	566	0.7+	0.6−	1998 04 24	699	0.2−	0.2+
1989 03 03	809	0.8+	0.2+	1998 04 04	699	0.1−	0.1+	1998 04 24	699	0.0	0.2−
1989 03 03	809	0.2−	0.1−	1998 04 04	699	1.2+	1.4−	1998 04 24	699	0.6−	0.0
1989 03 03	809	0.0	0.1+	1998 04 04	699	0.0	0.2−	1998 04 28	699	0.4+	0.5+
1998 03 20	704	0.2−	0.2−	1998 04 19	704	0.1−	0.5+	1998 04 28	699	(2.3−	0.0)
1998 03 20	704	0.7−	0.1+	1998 04 19	704	0.1+	0.6−	1998 04 28	699	0.0	0.7+
1998 03 20	704	0.5+	0.6+	1998 04 19	704	0.9+	1.3+	1998 04 30	699	0.1+	1.2−
1998 03 20	704	0.3+	0.9+	1998 04 19	704	0.6+	0.7+	1998 04 30	699	0.2+	0.1+
1998 03 20	704	(2.6−	1.9+)	1998 04 20	704	0.5−	0.3−	1998 04 30	699	0.7+	0.8−
1998 03 22	704	0.0	0.5+	1998 04 20	704	0.6−	0.2+	1998 04 30	566	0.3−	0.1+
1998 03 22	704	0.3+	0.1−	1998 04 20	704	0.9−	0.8−	1998 04 30	566	0.6+	0.1−
1998 03 22	704	0.4+	1.1−	1998 04 20	704	0.6−	0.6−	1998 04 30	566	0.1+	0.0
1998 03 22	704	(0.2−	3.1+)	1998 04 20	704	(7.1−	0.7−)	1998 05 01	699	1.3+	0.5−
1998 03 22	699	0.1+	0.3−	1998 04 22	704	0.6−	0.4−	1998 05 01	699	0.2+	0.2+
1998 03 22	699	1.1−	0.6+	1998 04 22	704	0.6−	0.1+	1998 05 01	699	0.2−	0.3−
1998 03 22	699	0.4−	0.8+	1998 04 22	704	0.7−	0.7+				

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1998 FD₆₈ = 1996 XO₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18920295	ω	111.68926	-0.69347302	+0.72036628		
<i>a</i>	3.0050436	Ω	114.39828	-0.66617298	-0.63425189		
<i>e</i>	0.0765319	<i>i</i>	0.81451	-0.27442438	-0.28070797		
<i>P</i>	5.21	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1996 12 08	327	0.4+	0.7+	1998 03 20	704	(5.4-	1.3+)	1998 04 22	704	0.6+	0.3-
1996 12 08	327	0.1-	0.9-	1998 03 22	704	1.7-	0.2-	1998 04 22	704	0.4-	0.1+
1996 12 08	327	0.5-	0.7-	1998 03 22	704	(1.0+	2.7-)	1998 04 22	704	1.6-	0.8+
1996 12 18	327	0.8-	0.3+	1998 03 22	704	0.9-	0.8+	1998 04 22	704	0.1+	1.3+
1996 12 18	327	0.6+	0.5+	1998 03 22	704	0.3+	0.6+	1998 04 22	704	1.0+	1.6+
1996 12 18	327	0.4+	0.4+	1998 03 22	704	(6.9-	0.1+)	1998 04 24	699	0.4-	0.4-
1998 03 20	704	0.0	1.7-	1998 04 20	704	(0.8+	2.3-)	1998 04 24	699	0.4+	1.3-
1998 03 20	704	0.3+	0.8-	1998 04 20	704	1.5+	1.9-	1998 04 24	699	0.0	0.4+
1998 03 20	704	0.6+	0.3-	1998 04 20	704	0.4+	1.4+				
1998 03 20	704	0.5+	0.3-	1998 04 20	704	0.6-	0.2+				

1998 FO₆₉ = 1977 RW₁₁ = 1996 TU₆₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26299811	ω	336.96809	-0.76277567	-0.64640583		
<i>a</i>	2.4126869	Ω	162.72199	+0.60245070	-0.72059339		
<i>e</i>	0.1475695	<i>i</i>	3.52130	+0.23500304	-0.25080803		
<i>P</i>	3.75	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1977 09 09	675	1.7-	2.5-	1998 03 20	704	0.6-	0.3+	1998 03 25	566	0.7-	0.2-
1977 09 10	675	2.0+	1.8+	1998 03 22	704	0.2-	0.1-	1998 03 25	566	0.9-	0.1-
1996 10 11	566	0.7+	0.1-	1998 03 22	704	0.1+	0.4-	1998 03 25	566	0.8-	0.1+
1996 10 11	566	0.2-	0.3-	1998 03 22	704	0.2+	0.7-	1998 04 28	699	0.8+	0.4-
1996 10 11	566	0.6+	0.1-	1998 03 22	704	0.4+	0.7-	1998 04 28	699	0.5+	0.1-
1996 10 12	566	0.0	0.5-	1998 03 22	704	0.5-	1.1-	1998 04 28	699	0.6+	0.4-
1996 10 12	566	0.0	0.6-	1998 03 22	699	0.8-	0.5+	1998 04 30	699	0.6+	0.3-
1996 10 12	566	0.3-	0.5-	1998 03 22	699	0.2+	0.1-	1998 04 30	699	0.5+	0.2-
1998 03 20	704	0.1+	0.4-	1998 03 22	699	0.4+	0.7+	1998 04 30	699	0.1+	0.3-
1998 03 20	704	0.1-	0.2+	1998 03 24	699	0.1+	0.2-	1998 04 30	566	0.3-	0.2-
1998 03 20	704	0.4+	1.0+	1998 03 24	699	0.4+	0.4+	1998 04 30	566	0.3-	0.2-
1998 03 20	704	0.4-	0.3+	1998 03 24	699	0.2-	0.1-	1998 04 30	566	0.3-	0.1-

1998 FN₇₀ = 1984 SO₆

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26279572	ω	292.63007	+0.80152975	+0.59509686		
<i>a</i>	2.4139255	Ω	30.94160	-0.49841966	+0.71886467		
<i>e</i>	0.1514068	<i>i</i>	6.52113	-0.33034512	+0.35929559		
<i>P</i>	3.75	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1984 09 23	809	0.6-	0.5+	1984 09 28	809	0.9-	0.3+	1998 03 25	704	0.3+	0.7+
1984 09 23	809	0.5-	0.3+	1984 09 28	809	0.3-	0.4+	1998 03 25	704	0.5+	0.6+
1984 09 23	809	0.4-	0.2+	1984 09 29	809	0.4+	0.4-	1998 03 25	704	0.3-	1.3-
1984 09 24	809	0.6+	0.7+	1984 09 29	809	0.4+	0.2-	1998 03 25	704	0.1-	0.5+
1984 09 24	809	0.9+	0.6+	1984 09 29	809	0.3+	0.0	1998 03 25	704	(4.6-	0.6+)
1984 09 24	809	1.0+	0.4+	1998 03 20	704	0.9+	1.4-	1998 04 20	704	0.7-	0.6+
1984 09 26	809	1.0+	0.2+	1998 03 20	704	0.1-	0.9-	1998 04 20	704	0.2-	1.0-
1984 09 26	809	1.0+	0.4-	1998 03 20	704	0.4-	0.1+	1998 04 20	704	1.1+	0.4+
1984 09 26	809	1.4+	0.5-	1998 03 20	704	1.8-	0.9+	1998 04 20	704	(4.8-	1.5-)
1984 09 27	809	1.2-	0.8-	1998 03 22	704	(2.0+	1.8-)	1998 04 22	704	0.5-	0.5-
1984 09 27	809	0.8-	0.6-	1998 03 22	704	0.2-	0.9+	1998 04 22	704	0.6+	0.9+
1984 09 27	809	0.4-	0.8-	1998 03 22	704	1.3+	0.1-	1998 04 22	704	0.4-	0.7+
1984 09 28	809	1.6-	0.0	1998 03 22	704	(0.4-	3.0-)	1998 04 22	704	(0.8+	2.5-)

1998 FN₇₁ = 4203 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26268206	ω	177.77446	-0.97020558	+0.23806503		
<i>a</i>	2.4146218	Ω	16.21329	-0.22470648	-0.81468269		
<i>e</i>	0.1559487	<i>i</i>	9.27733	-0.09059870	-0.52878839		
<i>P</i>	3.75	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1973 09 24	675	1.7-	1.1-	1998 03 22	704	0.7+	0.2+	1998 04 20	704	0.5-	0.3-
1973 09 24	675	0.0	0.1+	1998 03 22	704	1.2+	0.1-	1998 04 20	704	(0.3-	2.2-)
1973 09 25	675	0.1+	0.5-	1998 03 22	704	0.7-	0.3-	1998 04 20	704	0.4+	1.1-
1973 09 25	675	1.3-	0.8+	1998 03 24	704	0.5+	0.0	1998 04 20	704	0.1-	0.0
1973 09 29	675	1.9-	2.3-	1998 03 24	704	0.2+	0.3+	1998 04 20	704	0.7+	1.7-
1973 09 29	675	0.9+	1.3-	1998 03 24	704	0.1+	0.2-	1998 04 22	704	0.5+	0.5-
1973 09 29	675	2.3+	0.6-	1998 03 24	704	0.3+	0.2+	1998 04 22	704	0.3+	0.0
1973 09 30	675	1.2+	2.2+	1998 03 24	704	0.0	0.1+	1998 04 22	704	1.1-	0.9-
1973 09 30	675	1.5+	0.6+	1998 03 24	704	0.1-	1.3+	1998 04 22	704	0.2-	0.2-
1973 10 04	675	0.1+	0.7+	1998 03 24	704	0.2+	0.5-	1998 04 22	704	0.2-	0.4-
1973 10 04	675	1.4-	1.8+	1998 03 24	704	0.5-	0.6+	1998 05 01	699	(2.8-	1.5-)
1998 03 20	704	0.9-	0.1-	1998 03 24	704	0.2+	0.3-	1998 05 01	699	0.0	0.2+
1998 03 20	704	0.0	0.9-	1998 03 24	704	0.0	0.2+	1998 05 01	699	0.4+	0.4+
1998 03 20	704	1.2-	0.2+	1998 03 25	704	0.3-	0.1+	1998 05 16	704	1.5+	0.1-
1998 03 20	704	1.1-	0.3-	1998 03 25	704	0.7+	0.1-	1998 05 16	704	1.2-	0.9+
1998 03 20	704	1.0+	0.5-	1998 03 25	704	0.3-	0.2+	1998 05 16	704	0.5-	1.6+
1998 03 22	704	0.4+	0.3+	1998 03 25	704	0.2+	1.2+	1998 05 16	704	(2.6-	0.5-)
1998 03 22	704	0.6-	0.0	1998 03 25	704	0.2+	1.0+				

1998 FY₇₁ = 1993 VZ₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.30586260	ω	49.39764	+0.62169370	-0.78325256		
<i>a</i>	2.1816502	Ω	2.17152	+0.68768565	+0.54367891		
<i>e</i>	0.0853016	<i>i</i>	5.32500	+0.37494719	+0.30154382		
<i>P</i>	3.22	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1993 11 09	691	0.4-	0.3-	1998 03 22	704	0.0	1.1-	1998 04 01	704	0.6-	0.6+
1993 11 09	691	0.2-	0.2-	1998 03 22	704	0.1+	1.1-	1998 04 18	704	1.0+	0.4+
1993 11 09	691	0.2+	0.4-	1998 03 22	704	0.0	0.8-	1998 04 18	704	1.1+	0.2+
1993 11 17	691	0.1+	0.2+	1998 03 22	704	0.1+	0.8-	1998 04 18	704	0.7-	0.7-
1993 11 17	691	0.1+	0.3+	1998 03 24	566	0.6+	0.6-	1998 04 18	704	1.8-	0.8+
1993 11 17	691	0.2+	0.3+	1998 03 24	566	0.5+	0.7-	1998 04 18	704	1.9-	1.6-
1998 03 20	704	0.3-	0.8+	1998 03 24	566	0.6+	0.7-	1998 04 19	704	1.0+	1.7+
1998 03 20	704	0.4-	1.7+	1998 04 01	704	0.1-	0.4+	1998 04 19	704	0.4+	0.6-
1998 03 20	704	0.2-	0.9+	1998 04 01	704	0.5+	0.2+	1998 04 19	704	0.5+	0.5-
1998 03 20	704	0.6-	0.5+	1998 04 01	704	0.7+	1.2+	1998 04 19	704	0.2-	0.5-
1998 03 22	704	0.1+	0.5-	1998 04 01	704	0.4-	0.7+				

1998 FQ₇₂ = 1980 TJ₇

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Epoch 1998 July 6.0 TT = JDT 2451000.5

M	245.11304		(2000.0)			P		Q		
n	0.25833607	ω	317.42492			+0.97848431		+0.20424788		
a	2.4416271	Ω	30.82543			-0.17064444		+0.88063846		
e	0.1956141	i	3.26405			-0.11596948		+0.42750288		
P	3.82	H	14.5			G	0.15	U	5	

Residuals in seconds of arc

1980 10 10	095	0.7-	1.1+	1998 03 25	704	0.3-	0.1+	1998 04 20	704	0.5+	0.3-
1980 10 15	095	1.2+	2.0-	1998 03 25	704	1.4+	0.5+	1998 04 20	704	0.9-	0.9-
1998 03 20	704	0.4+	1.6+	1998 03 25	704	0.8-	0.9+	1998 04 20	704	(2.2-	2.1+)
1998 03 20	704	0.3+	0.2+	1998 03 26	566	0.1+	0.2-	1998 04 22	704	0.9+	0.2+
1998 03 20	704	1.4-	1.4-	1998 03 26	566	0.0	0.5-	1998 04 22	704	0.4+	1.0+
1998 03 20	704	(3.4-	0.7-)	1998 03 26	566	0.0	1.4-	1998 04 22	704	0.8+	0.1-

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1998 03 22	704	0.6+	0.7−	1998 04 18	704	0.3+	0.1−	1998 04 22	704	1.1−	0.2−
1998 03 22	704	0.3+	1.4−	1998 04 18	704	0.4−	0.6−	1998 04 22	704	0.7−	0.1−
1998 03 22	704	0.2+	1.1−	1998 04 18	704	0.6−	0.0	1998 05 16	704	0.2−	1.4+
1998 03 22	704	0.2+	0.8−	1998 04 18	704	1.8−	0.9+	1998 05 16	704	1.0+	0.5−
1998 03 22	704	(4.1−	1.6−)	1998 04 18	704	1.0−	0.4+	1998 05 16	704	0.7−	0.9−
1998 03 25	704	0.3+	0.5+	1998 04 20	704	1.1−	1.1+	1998 05 16	704	1.1+	0.3−
1998 03 25	704	0.2+	1.1+	1998 04 20	704	1.8+	0.4+				

1998 FY₇₃ = 1979 RQ = 1979 ST₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	199.06055		(2000.0)		P		Q
<i>n</i>	0.18805707	ω	11.22187		+0.96372567		−0.26657501
<i>a</i>	3.0172383	Ω	4.30546		+0.22942466		+0.80242719
<i>e</i>	0.1085248	<i>i</i>	10.01943		+0.13637143		+0.53389921
<i>P</i>	5.24	<i>H</i>	13.0		<i>G</i> 0.15		<i>U</i> 4

Residuals in seconds of arc

1979 09 02	095	0.8−	0.8−	1998 03 25	704	0.4−	0.5−	1998 04 20	704	0.4+	0.0
1979 09 24	095	0.4+	1.3+	1998 03 25	704	0.2−	1.2−	1998 04 20	704	0.6−	0.9+
1998 03 22	704	0.2+	0.2−	1998 03 26	566	0.4+	1.4−	1998 04 20	704	0.6+	0.2+
1998 03 22	704	0.2−	1.1+	1998 03 26	566	0.2−	1.5−	1998 04 22	704	0.1−	1.1+
1998 03 22	704	0.2+	1.3+	1998 03 26	566	0.7+	2.1−	1998 04 22	704	0.3+	0.2+
1998 03 22	704	0.3−	0.4+	1998 04 01	704	0.7+	0.6+	1998 04 22	704	0.1−	0.1−
1998 03 22	704	0.4−	0.4+	1998 04 01	704	0.6+	0.2+	1998 04 22	704	0.2+	0.6+
1998 03 22	699	0.3−	0.2−	1998 04 01	704	0.0	0.2+	1998 04 22	704	0.8+	0.1−
1998 03 22	699	0.7+	1.6+	1998 04 01	704	0.4−	0.3+	1998 04 30	699	0.3+	0.3+
1998 03 22	699	0.8+	0.1+	1998 04 01	704	1.3−	0.6−	1998 04 30	699	0.1+	0.0
1998 03 24	699	0.3−	0.7+	1998 04 18	704	0.6+	0.4+	1998 04 30	699	0.2+	0.4+
1998 03 24	699	0.5−	0.1+	1998 04 18	704	0.3+	0.3−	1998 05 16	704	0.4+	0.6+
1998 03 24	699	0.3+	0.1+	1998 04 18	704	0.2+	0.4+	1998 05 16	704	0.8+	1.2−
1998 03 25	704	0.1−	0.4−	1998 04 18	704	0.0	0.2+	1998 05 16	704	0.3−	1.2−
1998 03 25	704	0.1−	0.7−	1998 04 20	704	0.6−	0.1−	1998 05 16	704	0.9−	2.4−
1998 03 25	704	0.5−	0.6+	1998 04 20	704	0.5−	0.3+	1998 05 16	704	1.2−	0.8+

1998 FB₇₅ = 1926 TP = 1973 YZ₁ = 1978 RN₂ = 1990 WL₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	112.91659		(2000.0)		P		Q
<i>n</i>	0.17415364	ω	53.25577		+0.07920016		−0.99684911
<i>a</i>	3.1757600	Ω	32.20247		+0.91196079		+0.07068033
<i>e</i>	0.1703387	<i>i</i>	0.47083		+0.40256036		+0.03600185
<i>P</i>	5.66	<i>H</i>	13.0		<i>G</i> 0.15		<i>U</i> 2

Residuals in seconds of arc

1926 10 06	672	0.1+	0.0	1998 03 24	704	0.3+	1.8+	1998 04 20	704	1.2−	0.3−
1926 10 07	672	0.2−	0.3+	1998 03 24	704	0.3+	0.4+	1998 04 21	704	0.3−	0.4−
1973 12 20	095	0.1−	0.9+	1998 03 24	704	0.2−	1.5+	1998 04 21	704	1.0+	0.7−
1978 09 12	095	(1.8+	4.0+)	1998 03 25	704	0.6+	0.2+	1998 04 21	704	0.3−	0.2−
1990 11 20	095	0.8+	0.7−	1998 03 25	704	0.3+	1.1+	1998 04 21	704	0.6−	0.7−
1990 11 20	095	0.6−	0.6−	1998 03 25	704	0.7+	0.7+	1998 04 21	704	0.4+	1.6−
1998 03 22	704	0.4−	0.3−	1998 03 25	704	0.1+	1.1+	1998 04 22	704	0.9−	0.7−
1998 03 22	704	1.4−	0.4−	1998 03 25	704	1.0−	1.4+	1998 04 22	704	0.3+	0.8−
1998 03 22	704	(4.3−	4.6+)	1998 04 01	704	0.2+	0.4−	1998 04 22	704	0.0	0.1−
1998 03 22	704	0.1−	0.5+	1998 04 01	704	0.1+	0.8−	1998 04 22	704	0.4−	0.6−
1998 03 24	704	1.2−	1.2+	1998 04 01	704	0.4−	0.1−	1998 04 22	704	(2.3−	3.9+)
1998 03 24	704	0.2+	0.0	1998 04 01	704	1.3+	0.6−	1998 05 16	704	1.0−	1.4+
1998 03 24	704	0.6−	0.3−	1998 04 01	704	0.9+	0.7−	1998 05 16	704	1.3+	0.5−
1998 03 24	704	0.3−	0.3−	1998 04 20	704	0.3−	0.4+	1998 05 16	704	0.8−	0.9+
1998 03 24	704	1.8+	0.1+	1998 04 20	704	0.3−	0.3−	1998 05 16	704	0.2−	0.6−
1998 03 24	704	0.4+	1.2+	1998 04 20	704	0.6−	0.7−				
1998 03 24	704	1.2+	0.3−	1998 04 20	704	0.8+	1.1−				

1998 FH₇₅ = 1983 TF = 1992 LB₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	200.99115		(2000.0)		P		Q
<i>n</i>	0.30790558	ω	220.18722		+0.90224874		−0.43111644
<i>a</i>	2.1719893	Ω	165.34298		+0.40443700		+0.83856933
<i>e</i>	0.1279581	<i>i</i>	2.09836		+0.14959255		+0.33307672
<i>P</i>	3.20	<i>H</i>	14.5		<i>G</i> 0.15		<i>U</i> 5

Residuals in seconds of arc

1983 10 01	046	3.0+	0.9−	1998 03 25	704	0.5+	0.2+	1998 04 22	704	0.3−	1.3−
1983 10 01	046	1.5−	3.0−	1998 03 25	704	0.8+	0.3+	1998 04 22	704	0.4−	0.4−
1992 06 03	809	0.1−	0.6+	1998 03 25	704	0.3+	0.1−	1998 04 22	704	0.3−	1.3−
1992 06 03	809	0.6+	1.0+	1998 03 25	704	0.6−	0.7+	1998 04 22	704	1.7−	0.6−
1992 06 03	809	0.1+	1.3+	1998 03 25	704	0.1+	1.1+	1998 04 22	704	0.4−	0.5−
1998 03 24	704	0.1−	0.6−	1998 04 21	704	0.4−	0.5−	1998 05 16	704	0.4−	0.7−
1998 03 24	704	0.2+	0.7−	1998 04 21	704	0.3−	0.4−	1998 05 16	704	1.6−	0.7+
1998 03 24	704	0.5−	0.7+	1998 04 21	704	0.6−	1.0−	1998 05 16	704	1.7+	0.3−
1998 03 24	704	0.5+	0.2−	1998 04 21	704	0.1+	0.0	1998 05 16	704	0.5+	0.0
1998 03 24	704	0.8+	0.0	1998 04 21	704	0.2−	1.4−				

1998 FN₇₅ = 1979 WO₂ = 1987 WX₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	151.21527		(2000.0)		P		Q
<i>n</i>	0.23451326	ω	38.46048		+0.48688069		−0.86714835
<i>a</i>	2.6043006	Ω	22.98750		+0.72015356		+0.33056427
<i>e</i>	0.1127854	<i>i</i>	15.57929		+0.49429348		+0.37253323
<i>P</i>	4.20	<i>H</i>	14.0		<i>G</i> 0.15		<i>U</i> 3

Residuals in seconds of arc

1979 11 16	095	0.0	0.0	1998 03 25	704	0.1−	0.7+	1998 04 22	704	0.3+	1.0−
1987 11 17	010	0.0	0.3−	1998 03 25	704	0.7−	0.5+	1998 04 22	704	0.3+	0.1+
1987 11 17	010	1.0+	0.9−	1998 03 25	704	0.0	0.1−	1998 04 22	704	0.7−	0.6−
1998 03 22	704	0.1−	0.4−	1998 03 25	704	1.3−	0.1−	1998 04 22	704	0.2+	0.8−
1998 03 22	704	0.3−	0.4+	1998 03 25	704	0.0	0.9+	1998 04 24	699	0.5−	0.4+
1998 03 22	704	0.5−	0.6−	1998 04 20	704	0.2−	0.1+	1998 04 24	699	0.2−	0.1+
1998 03 22	704	0.2−	0.0	1998 04 20	704	1.3−	0.6−	1998 04 24	699	0.3+	0.2−
1998 03 22	704	0.1+	0.3+	1998 04 20	704	0.0	0.3−	1998 05 03	566	0.9−	0.5−
1998 03 24	704	0.7+	0.0	1998 04 20	704	1.0+	1.0+	1998 05 03	566	0.6−	0.1+
1998 03 24	704	0.4+	0.8−	1998 04 20	704	0.5−	0.7+	1998 05 03	566	0.8−	0.3−
1998 03 24	704	1.0+	0.9−	1998 04 21	704	0.2−	0.3−	1998 05 16	704	0.6+	1.6+
1998 03 24	704	0.9+	0.6−	1998 04 21	704	0.2+	0.7+	1998 05 16	704	1.3+	1.2+
1998 03 24	704	1.0+	0.5−	1998 04 21	704	0.2+	0.1+	1998 05 16	704	0.2+	0.4+
1998 03 25	699	0.0	0.1−	1998 04 21	704	0.1+	0.2−	1998 05 16	704	0.6−	0.8+
1998 03 25	699	0.6−	0.3−	1998 04 21	704	1.2+	0.1−	1998 05 16	704	0.3−	1.4−
1998 03 25	699	0.0	0.0	1998 04 22	704	0.1−	0.5−				

1998 FL₇₆ = 1994 AZ₁₅ = 1996 WJ₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	342.81066		(2000.0)		P		Q
<i>n</i>	0.28152610	ω	179.67359		−0.35307275		+0.93055968
<i>a</i>	2.3056335	Ω	69.64928		−0.85862657		−0.28112495
<i>e</i>	0.1353332	<i>i</i>	5.93493		−0.37161814		−0.23457927
<i>P</i>	3.50	<i>H</i>	15.0		<i>G</i> 0.15		<i>U</i> 3

Residuals in seconds of arc

1994 01 14	033	0.2+	0.2−	1998 03 24	704	0.3+	0.3−	1998 04 20	704	0.4−	0.4+
1994 01 15	033	0.1+	0.3+	1998 03 24	704	0.2−	0.3−	1998 04 24	704	0.0	0.3+
1994 01 15	033	0.2−	0.1+	1998 03 24	704	0.7−	0.6−	1998 04 24	704	0.3+	0.6+
1996 11 30	817	0.2+	0.2−	1998 03 25	704	0.1−	0.5−	1998 04 24	704	0.1+	0.8+
1996 11 30	817	0.2−	0.1+	1998 03 25	704	0.1−	0.5+	1998 04 24	704	0.8−	0.7+
1996 11 30	817	0.3+	0.1−	1998 03 25	704	0.5+	0.0	1998 04 24	704	0.2+	0.2+
1996 12 03	817	0.5−	0.5+	1998 03 25	704	0.1+	0.3−	1998 05 16	704	0.1−	0

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1998 03 24	704	0.2−	0.3−	1998 04 20	704	0.6+	0.2+	1998 05 16	704	0.7−	0.6−
1998 03 24	704	0.2−	0.2+	1998 04 20	704	0.3+	0.2+				

1998 FH₇₇ = 1992 CX₄ = 1992 CT₅ = 1994 NX

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	132.05240		(2000.0)		P		Q
<i>n</i>	0.18458914	ω	298.59403		+0.20336256		−0.97131211
<i>a</i>	3.0549114	Ω	139.07035		+0.95114760		+0.16611241
<i>e</i>	0.0392214	<i>i</i>	10.84581		+0.23229705		+0.17017478
<i>P</i>	5.34	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1992 02 04	372	1.2−	0.5−	1994 07 16	596	(4.4−	3.8+)	1998 04 24	704	0.7+	0.4+
1992 02 04	372	1.6+	1.1+	1994 07 16	596	(3.5−	0.1+)	1998 04 24	704	1.7+	0.8−
1992 02 13	372	(0.2+	2.8−)	1994 07 16	596	(2.2−	1.6−)	1998 04 24	704	0.1−	0.2+
1992 02 13	372	0.5−	1.3−	1998 03 24	704	0.5−	0.6+	1998 05 01	566	0.8−	0.5−
1994 07 08	010	(2.9+	1.3+)	1998 03 24	704	0.3−	0.8+	1998 05 01	566	0.6−	1.3−
1994 07 08	010	1.1+	0.4+	1998 03 24	704	0.2−	0.0	1998 05 01	566	0.5−	0.7−
1994 07 08	010	0.6+	0.6+	1998 03 24	704	1.0−	0.0	1998 05 02	566	0.3−	1.1−
1994 07 10	675	0.7−	0.2−	1998 03 24	704	0.0	0.2−	1998 05 02	566	0.1−	0.9−
1994 07 10	675	1.1−	0.2+	1998 03 25	704	0.7+	0.0	1998 05 02	566	0.2+	0.6−
1994 07 14	010	(2.0+	3.1+)	1998 03 25	704	0.1−	0.3+	1998 05 16	704	(2.4+	0.4−)
1994 07 14	010	(1.9+	3.2+)	1998 03 25	704	0.1−	0.4+	1998 05 16	704	(0.3−	3.6+)
1994 07 14	010	(2.3+	2.9+)	1998 03 25	704	0.0	1.5+	1998 05 16	704	0.6+	0.1−
1994 07 14	596	1.2+	0.9+	1998 03 25	704	1.2−	0.6+	1998 05 16	704	0.5+	0.5−
1994 07 14	596	0.2+	0.8−	1998 04 24	704	1.2+	0.2+	1998 05 16	704	1.3−	1.1+
1994 07 14	596	1.2−	1.5−	1998 04 24	704	1.4+	0.7+				

1998 FP₇₇ = 1994 AN_s

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	181.98924		(2000.0)		P		Q
<i>n</i>	0.28998272	ω	274.58915		+0.79024013		−0.60792758
<i>a</i>	2.2605874	Ω	122.87113		+0.59232547		+0.72552108
<i>e</i>	0.0885494	<i>i</i>	5.26709		+0.15707025		+0.32255731
<i>P</i>	3.40	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 01 08	691	0.5−	0.4−	1998 03 24	704	0.2−	0.1−	1998 04 20	704	0.6−	1.3−
1994 01 08	691	1.0+	0.4−	1998 03 25	704	0.4−	0.6+	1998 04 24	704	0.3+	1.1−
1994 01 08	691	0.4−	0.3−	1998 03 25	704	1.1−	0.3−	1998 04 24	704	1.4−	0.9−
1994 01 13	691	1.1−	0.4+	1998 03 25	704	0.0	0.6−	1998 04 24	704	0.2−	0.1+
1994 01 13	691	0.6+	0.4+	1998 03 25	704	1.5+	0.9−	1998 04 24	704	0.8+	0.9+
1994 01 13	691	0.3+	0.3+	1998 03 25	704	0.3−	0.7+	1998 04 24	704	0.0	1.0+
1998 03 24	704	0.7−	1.5+	1998 04 20	704	1.0+	1.7+	1998 05 16	704	1.4−	0.5−
1998 03 24	704	0.3+	1.3−	1998 04 20	704	0.7+	0.5+	1998 05 16	704	0.2+	0.1+
1998 03 24	704	0.9+	0.2−	1998 04 20	704	1.0−	0.6−	1998 05 16	704	1.7+	0.8+

1998 FB₈₀ = 4830 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	83.84635		(2000.0)		P		Q
<i>n</i>	0.21717221	ω	2.91538		−0.24599739		−0.96669632
<i>a</i>	2.7411526	Ω	101.33305		+0.88782533		−0.25395163
<i>e</i>	0.1606505	<i>i</i>	4.12874		+0.38891062		−0.03172987
<i>P</i>	4.54	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	0.5+	0.7−	1998 03 24	704	0.9−	0.4+	1998 04 19	704	1.1−	1.0−
1973 09 19	675	0.5−	0.2+	1998 03 24	704	0.8−	0.2−	1998 04 19	704	0.4+	0.1−
1973 09 20	675	1.6−	0.5−	1998 03 25	704	0.3+	0.3−	1998 04 19	704	0.5+	0.5−
1973 09 24	675	0.7+	1.1+	1998 03 25	704	1.1+	1.1+	1998 04 20	704	1.9+	0.6+
1973 09 24	675	1.2+	0.5−	1998 03 25	704	0.9−	0.7−	1998 04 20	704	0.4−	0.7+
1998 03 24	704	0.4+	0.5−	1998 03 25	704	0.7+	1.3+	1998 04 20	704	0.4+	0.2+
1998 03 24	704	0.1−	0.0	1998 03 25	704	1.8−	1.1−	1998 04 20	704	0.4−	0.2−
1998 03 24	704	0.1+	0.3+	1998 04 19	704	1.4+	0.9+	1998 04 20	704	0.8−	1.5−

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1998 FG₈₈ = 1975 RJ₁ = 1979 OF₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	169.58586		(2000.0)		P		Q
<i>n</i>	0.23913744	ω	219.95103		+0.95316970		−0.28555704
<i>a</i>	2.5706187	Ω	156.07248		+0.29949628		+0.93704149
<i>e</i>	0.2148317	<i>i</i>	14.21906		−0.04206536		+0.20102343
<i>P</i>	4.12	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1975 09 03	095	0.0	1.1+	1998 02 26	809	(3.3+	0.5+)	1998 03 25	704	0.1+	0.6−
1975 09 05	095	(4.2−	5.2−)	1998 03 24	704	0.2−	0.3+	1998 04 02	809	(1.4+	3.3+)
1975 09 06	095	0.0	0.4−	1998 03 24	704	0.8+	0.3+	1998 04 02	809	(0.8+	3.5+)
1979 07 31	095	0.0	0.2−	1998 03 24	704	0.0	0.5−	1998 04 02	809	(1.2+	2.5+)
1998 02 25	809	0.0	0.2+	1998 03 24	704	0.8+	0.9−	1998 04 03	809	0.2−	0.5+
1998 02 25	809	(1.8−	3.2+)	1998 03 25	704	0.1+	0.2−	1998 04 03	809	1.1−	0.5−
1998 02 25	809	(1.6−	3.8+)	1998 03 25	704	0.2−	0.5+	1998 04 03	809	1.3−	0.4−
1998 02 26	809	0.5−	0.8+	1998 03 25	704	1.5+	0.2+				
1998 02 26	809	0.0	0.5+	1998 03 25	704	0.3+	0.4+				

1998 FA₉₁ = 1993 FZ₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	90.09115		(2000.0)		P		Q
<i>n</i>	0.19181031	ω	5.58524		−0.08562751		−0.98978301
<i>a</i>	2.9777490	Ω	89.36336		+0.90964170		−0.12434686
<i>e</i>	0.0830757	<i>i</i>	6.54674		+0.40647253		+0.06976717
<i>P</i>	5.14	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	7

Residuals in seconds of arc

1993 03 23	010	0.3+	0.0	1998 03 24	704	0.1−	0.9−	1998 04 02	809	1.5−	1.0+
1993 03 23	010	0.1+	0.6+	1998 03 25	704	0.7+	0.5+	1998 04 02	809	1.2−	1.1+
1993 03 23	010	0.9+	0.9−	1998 03 25	704	1.7+	0.6+	1998 04 03	809	1.8+	0.3−
1993 03 25	010	1.3−	0.2+	1998 03 25	704	0.3−	0.3+	1998 04 03	809	1.0+	0.9−
1998 03 24	704	0.1+	0.4−	1998 03 25	704	0.2+	0.3−	1998 04 03	809	0.8+	0.8−
1998 03 24	704	0.6+	0.1−	1998 03 25	704	1.6−	0.3+				
1998 03 24	704	0.0	1.0−	1998 04 02	809	2.3−	0.9+				

1998 FP₉₃ = 1996 XA₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	330.64526		(2000.0)		P		Q
<i>n</i>	0.27869121	ω	139.27477		−0.32750857		+0.93255067
<i>a</i>	2.3212426	Ω	111.11399		−0.90365200		−0.26218416
<i>e</i>	0.1441419	<i>i</i>	9.37411		−0.27595508		−0.24821104
<i>P</i>	3.54	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 12 12	691	0.2+	0.5−	1998 03 24	704	0.3−	0.0	1998 05 20	327	0.1−	0.1+
1996 12 12	691	0.4+	0.1+	1998 03 24	704	0.4+	0.5−	1998 05 20	327	0.5+	0.1+
1996 12 12	691	0.3+	0.0	1998 03 25	704	0.3+	0.4−	1998 05 20	327	0.4−	0.3+
1996 12 14	691	0.3−	0.2+	1998 03 25	704	0.5+	0.2−	1998 05 24	327	2.1−	1.4−
1996 12 14	691	0.4−	0.1−	1998 03 25	704	0.5−	0.1−	1998 05 24	327	0.8+	0.2+
1998 03 24	704	0.3+	0.4−	1998 03 25	704	0.7−	1.0+	1998 05 24	327	1.1+	0.2−
1998 03 24	704	0.3−	0.1+	1998 03 25	704	0.4+	1.1+				

1998 FF₉₇ = 1996 VC₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	359.51167		(2000.0)		P		Q
<i>n</i>	0.24097151	ω	319.17339		−0.83002309		+0.55319060
<i>a</i>	2.5575585	Ω	254.54920		−0.49063705		−0.78477343
<i>e</i>	0.1606265	<i>i</i>	4.22471		−0.26521117		−0.27948314
<i>P</i>	4.09	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 11 07	327	0.6+	0.1−	1998 03 31	704	0.7+	0.1+	1998 04 18	704	0.8−	0.8−
1996 11 07	327	0.1+	0.8−	1998 03 31	704	0.8−	0.8−	1998 04 18	704	0.0	1.1−

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1996 11 07	327	0.3−	0.2−	1998 04 01	704	0.6−	0.7+	1998 04 18	704	2.3−	0.2+
1996 11 09	327	0.2−	0.6+	1998 04 01	704	0.5−	0.7+	1998 04 19	704	0.8+	0.7−
1996 11 09	327	0.3+	0.4+	1998 04 01	704	0.0	0.1−	1998 04 19	704	0.3+	0.4+
1996 11 09	327	0.4−	0.1−	1998 04 01	704	1.2+	0.3−	1998 04 19	704	0.3+	0.0
1998 03 31	704	0.4+	0.5+	1998 04 01	704	0.4−	0.3−	1998 04 19	704	1.9+	0.8+
1998 03 31	704	0.4+	0.2+	1998 04 18	704	0.4−	0.1−	1998 04 19	704	0.2−	0.5+

1998 FZ₉₇ = 1950 TM₁ = 1983 VN₆ = 1995 SY₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	291.02611		(2000.0)	P	Q
<i>n</i>	0.24076273	ω	64.88374	+0.45211128	+0.88806212
<i>a</i>	2.5590369	Ω	232.25176	−0.85161318	+0.40199770
<i>e</i>	0.2219981	<i>i</i>	6.04820	−0.26523646	+0.22303253
<i>P</i>	4.09	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1950 10 13	024	0.9+	2.2−	1998 03 24	704	0.4+	1.3+	1998 04 01	704	0.4−	0.7−
1983 11 09	033	0.1−	0.1−	1998 03 24	704	0.4+	0.5+	1998 04 18	704	0.3+	1.1−
1983 11 10	033	0.3+	0.2+	1998 03 24	704	0.3−	1.1+	1998 04 18	704	0.0	0.2+
1995 09 20	400	0.6−	1.9+	1998 03 31	704	1.0−	0.4−	1998 04 18	704	0.3+	0.1−
1995 09 20	400	1.3+	0.1−	1998 03 31	704	0.3−	0.4−	1998 04 18	704	1.3−	0.2−
1995 09 21	400	1.2+	0.1−	1998 03 31	704	0.3+	3.9−	1998 04 19	704	0.3+	0.5−
1995 09 21	400	1.7−	2.6−	1998 03 31	704	2.3−	1.0−	1998 04 19	704	0.5+	0.1−
1998 02 25	566	0.9+	1.4+	1998 03 31	704	0.4−	1.3−	1998 04 19	704	0.4+	0.1+
1998 02 25	566	0.6+	1.3+	1998 04 01	704	0.6−	0.1+	1998 04 19	704	0.4+	0.3−
1998 02 25	566	1.1+	1.5+	1998 04 01	704	0.9−	0.9−	1998 04 19	704	0.8−	0.7−
1998 03 24	704	0.0	0.4+	1998 04 01	704	0.5+	0.7−				
1998 03 24	704	0.5+	1.0+	1998 04 01	704	0.1−	0.2−				

1998 FJ₁₀₃ = 1995 SZ₅₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Doppler

<i>M</i>	302.86843		(2000.0)	P	Q
<i>n</i>	0.25792499	ω	75.96662	+0.36428355	+0.92782889
<i>a</i>	2.4442208	Ω	215.72750	−0.89864869	+0.32761305
<i>e</i>	0.2017813	<i>i</i>	7.89363	−0.24439318	+0.17833461
<i>P</i>	3.82	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1995 09 20	693	0.5+	0.6−	1998 03 31	704	0.6−	1.0−	1998 04 18	704	0.1−	0.1+
1995 09 20	693	0.5+	1.1+	1998 04 01	704	1.0+	0.5−	1998 04 18	704	0.2+	0.5−
1995 09 25	693	0.5−	0.0	1998 04 01	704	0.1−	0.5+	1998 04 18	704	0.2−	0.2+
1995 09 25	693	0.5−	0.5−	1998 04 01	704	0.4+	0.8+	1998 04 19	704	0.3−	0.4−
1998 03 31	704	0.8−	0.6+	1998 04 01	704	0.3+	0.8+	1998 04 19	704	0.4−	0.8+
1998 03 31	704	0.7−	0.3−	1998 04 01	704	0.8+	0.9−	1998 04 19	704	0.3−	0.4−
1998 03 31	704	0.0	0.2+	1998 04 18	704	1.1+	0.0	1998 04 19	704	0.1−	0.0

1998 FJ₁₀₇ = 1994 CG₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	114.60099		(2000.0)	P	Q
<i>n</i>	0.26587345	ω	128.21958	−0.04021786	−0.99598366
<i>a</i>	2.3952604	Ω	323.83995	+0.86914788	+0.00462292
<i>e</i>	0.0820597	<i>i</i>	7.79179	+0.49291428	−0.08941581
<i>P</i>	3.71	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1994 02 14	033	0.7+	0.3−	1998 04 01	704	0.2+	0.4−	1998 04 19	704	0.8−	0.2−
1994 02 15	033	0.4+	0.5+	1998 04 01	704	0.7−	0.2+	1998 04 19	704	2.2−	0.0
1994 02 16	033	1.1−	0.2−	1998 04 01	704	0.3−	0.3+	1998 04 20	704	0.4+	1.2−
1998 03 31	704	0.5+	0.1+	1998 04 01	704	0.7+	0.4−	1998 04 20	704	1.5+	0.0
1998 03 31	704	1.8+	0.2−	1998 04 01	704	1.1−	0.7+	1998 04 20	704	0.7+	0.3+
1998 03 31	704	0.1+	0.8−	1998 04 19	704	0.1+	0.2−	1998 04 20	704	0.9−	0.8+
1998 03 31	704	0.7−	0.7+	1998 04 19	704	0.2−	0.4−	1998 04 20	704	0.8+	0.0
1998 03 31	704	0.2−	0.1−	1998 04 19	704	0.2+	0.7+				

1998 JUNE 10

1998 FQ₁₀₉ = 1994 LG₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	356.81840		(2000.0)	P	Q
<i>n</i>	0.22367106	ω	323.16910	−0.73308834	+0.67418482
<i>a</i>	2.6877952	Ω	259.47723	−0.60021832	−0.70335943
<i>e</i>	0.1084179	<i>i</i>	5.23795	−0.31987413	−0.22530056
<i>P</i>	4.41	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1994 06 03	809	0.6+	0.0	1998 03 31	704	1.5+	2.9+	1998 04 19	704	1.0−	1.0−
1994 06 03	809	0.9+	0.5−	1998 03 31	704	1.5+	2.3−	1998 04 19	704	0.3+	0.1+
1994 06 03	809	0.3−	0.0	1998 04 01	704	0.5−	0.8−	1998 04 19	704	1.9+	1.6+
1994 06 04	809	0.0	0.6+	1998 04 01	704	0.1+	0.3+	1998 04 20	704	0.4+	0.4−
1994 06 04	809	0.0	0.8−	1998 04 01	704	0.7−	0.4+	1998 04 20	704	0.0	0.8+
1994 06 04	809	1.2−	0.7+	1998 04 01	704	0.4+	0.1−	1998 04 20	704	0.5−	0.5−
1998 03 31	704	1.9−	1.3−	1998 04 01	704	0.0	1.7+	1998 04 20	704	0.2−	0.9−
1998 03 31	704	0.5−	0.7−	1998 04 19	704	0.6−	0.8+	1998 04 20	704	0.3−	0.4−

1998 FU₁₁₀ = 1984 BY₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	21.59771		(2000.0)	P	Q
<i>n</i>	0.29033709	ω	249.57939	−0.93676977	+0.34101585
<i>a</i>	2.2587476	Ω	310.27319	−0.27024409	−0.84756681
<i>e</i>	0.0485855	<i>i</i>	5.90946	−0.22232976	−0.40661862
<i>P</i>	3.39	<i>H</i>	15.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1984 01 25	675	0.2−	0.3+	1998 04 01	704	0.1+	1.6+	1998 04 19	704	0.9−	0.5−
1984 01 26	675	0.2+	0.3−	1998 04 01	704	0.9+	1.4+	1998 04 19	704	1.2+	0.1+
1998 03 31	704	1.7+	0.7−	1998 04 01	704	1.6+	1.1+	1998 04 20	704	1.0+	0.5+
1998 03 31	704	0.2+	2.0+	1998 04 01	704	1.9−	3.6−	1998 04 20	704	1.7−	1.3−
1998 03 31	704	1.0−	0.8−	1998 04 19	704	0.4+	0.0	1998 04 20	704	1.1−	1.1+
1998 03 31	704	1.6−	0.9−	1998 04 19	704	1.3+	0.9+	1998 04 20	704	0.1−	0.9−

1998 FC₁₁₁ = 1979 SQ₁₀ = 1996 CG

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	292.68515		(2000.0)	P	Q
<i>n</i>	0.18850628	ω	25.02623	+0.45725375	+0.87545259
<i>a</i>	3.0124429	Ω	272.52060	−0.84004611	+0.36738648
<i>e</i>	0.0852307	<i>i</i>	9.01436	−0.29196154	+0.31402218
<i>P</i>	5.23	<i>H</i>	12.5	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1979 09 29	095	0.1−	0.4+	1998 03 31	704	0.4+	0.3+	1998 05 19	426	0.3+	0.3+
1996 02 01	327	0.7+	0.2−	1998 03 31	704	0.4−	0.7−	1998 05 19	426	(0.4+	2.2+)
1996 02 01	327	0.2−	0.1+	1998 03 31	704	0.1+	1.1−	1998 05 21	426	0.3+	0.2+
1996 02 01	327	0.7+	0.2−	1998 03 31	704	0.8−	0.6−	1998 05 21	426	0.0	0.3+
1996 02 01	327	0.1−	0.4−	1998 04 01	704	0.0	0.5+	1998 05 21	426	0.0	0.4+
1996 02 02	327	0.2−	0.2−	1998 04 01	704	0.3+	0.5+	1998 05 22	566	0.7−	0.2+
1996 02 02	327	0.2−	1.2+	1998 04 01	704	0.5+	0.2+	1998 05 22	566	0.3+	0.2+
1996 02 02	327	0.8−	0.3+	1998 04 01	704	0.6−	0.4−	1998 05 22	566	0.2−	0.7+
1998 03 31	704	1.1+	0.1−	1998 04 01	704	0.4−	0.2−				

1998 FX₁₁₁ = 1990 VA₉ = 1995 YP₂₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	91.16320		(2000.0)	P	Q
<i>n</i>	0.19022214	ω	233.03248	−0.51018046	−0.84677685
<i>a</i>	2.9943003	Ω	248.29970	+0.83161664	−0.44101156
<i>e</i>	0.0600162	<i>i</i>	9.32899	+0.21938472	−0.29745213
<i>P</i>	5.18	<i>H</i>	12.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1990 11 10	046	(4.6+	4.6−)	1998 03 25	699	0.2+	0.6+	1998 04 01	704	0.3−	0.4+
1990 11 10	046	0.5+	1.9−	1998 03 31	704	0.4+	0.3+	1998 04 30	699	0.3+	0.2−

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1995 12 19	327	0.3+	0.2-	1998 03 31	704	0.3+	0.0	1998 04 30	699	0.6+	0.0
1995 12 19	327	0.2+	0.6+	1998 03 31	704	0.4-	0.1+	1998 04 30	699	0.7+	0.4-
1995 12 19	327	0.2+	0.5-	1998 03 31	704	0.3+	0.9-	1998 05 16	704	0.3+	0.4-
1995 12 21	327	0.6-	0.2+	1998 03 31	704	0.3-	0.9-	1998 05 16	704	0.7-	0.5-
1995 12 21	327	0.0	0.1+	1998 04 01	704	0.1+	0.1-	1998 05 16	704	0.9-	0.0
1995 12 21	327	0.1-	0.1-	1998 04 01	704	0.4-	0.3+	1998 05 16	704	0.7-	0.4-
1998 03 25	699	1.2+	0.4+	1998 04 01	704	0.1-	0.2+	1998 05 16	704	1.7-	0.2-
1998 03 25	699	0.3+	0.1+	1998 04 01	704	0.0	0.1+				

1998 FJ₁₁₂ = 1964 VR₂ = 1990 TO₁₅ = 1990 VJ₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	154.22751		(2000.0)	P	Q		
<i>n</i>	0.18833553	ω	161.36933	+0.62507163	-0.76644290		
<i>a</i>	3.0142635	Ω	249.66775	+0.69463186	+0.63257181		
<i>e</i>	0.0987893	<i>i</i>	9.07006	+0.35605062	+0.11143692		
<i>P</i>	5.23	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1964 11 12	330	0.1+	0.5-	1998 03 25	566	0.1-	0.3+	1998 04 01	704	0.4+	0.3-
1990 10 13	095	0.6+	4.1+	1998 03 25	566	0.1+	0.2+	1998 04 18	704	0.5-	0.5+
1990 10 13	095	0.9-	4.5-	1998 03 25	566	0.1-	0.2+	1998 04 18	704	0.5-	1.0+
1990 11 11	408	1.5-	3.3+	1998 03 31	704	0.4+	0.4+	1998 04 18	704	0.3-	0.1+
1990 11 11	408	0.9+	1.2+	1998 03 31	704	0.0	0.3-	1998 04 18	704	0.2-	0.3+
1990 11 11	408	0.7+	1.1-	1998 03 31	704	0.1-	0.5-	1998 04 18	704	1.6-	0.9+
1990 11 12	408	1.1-	0.2+	1998 03 31	704	0.0	0.7-	1998 04 19	704	0.4+	0.2+
1990 11 12	408	0.1+	1.7-	1998 03 31	704	1.2-	3.0-	1998 04 19	704	0.6+	0.1-
1990 11 12	408	0.8-	1.2-	1998 04 01	704	0.7+	0.3-	1998 04 19	704	0.4+	0.1-
1990 11 17	408	1.9+	1.3-	1998 04 01	704	0.4+	0.3+	1998 04 19	704	0.2+	0.8+
1990 11 17	408	1.8+	1.4+	1998 04 01	704	1.0+	0.6+				
1990 11 17	408	1.8-	0.5+	1998 04 01	704	0.3+	0.1+				

1998 FR₁₁₃ = 1978 WL₅

Id. A. Doppler

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	325.96791		(2000.0)	P	Q		
<i>n</i>	0.27526174	ω	18.16611	-0.05830476	+0.99323767		
<i>a</i>	2.3404830	Ω	248.58852	-0.92877551	-0.09084266		
<i>e</i>	0.1102644	<i>i</i>	6.19079	-0.36602814	+0.07229487		
<i>P</i>	3.58	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 11 29	675	0.1-	0.3-	1998 04 01	704	0.5-	0.2-	1998 04 19	704	0.2+	0.2-
1978 11 30	675	0.1+	0.1+	1998 04 01	704	0.8+	0.5+	1998 04 19	704	1.3+	0.1+
1998 03 31	704	0.5-	0.4+	1998 04 01	704	1.0+	0.8+	1998 04 19	704	1.0-	0.8-
1998 03 31	704	0.3+	0.1+	1998 04 18	704	0.2+	0.1+	1998 05 16	704	0.8-	0.2-
1998 03 31	704	0.1-	0.2+	1998 04 18	704	0.3+	0.5+	1998 05 16	704	0.1-	2.0-
1998 03 31	704	0.7-	0.6+	1998 04 18	704	0.1-	1.1-	1998 05 16	704	0.4+	0.6+
1998 04 01	704	0.3-	0.2-	1998 04 18	704	0.8-	0.9-	1998 05 16	704	0.2+	0.3+
1998 04 01	704	(2.8+	0.6-)	1998 04 19	704	0.4-	0.2-	1998 05 16	704	0.5+	1.5+

1998 FY₁₁₃ = 1994 NL₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	204.53734		(2000.0)	P	Q		
<i>n</i>	0.18260607	ω	117.72079	+0.98222810	-0.15500229		
<i>a</i>	3.0769888	Ω	251.35615	+0.10703461	+0.92580736		
<i>e</i>	0.0964566	<i>i</i>	6.41346	+0.15418023	+0.34475355		
<i>P</i>	5.40	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1994 07 04	010	0.6+	0.8+	1998 03 25	566	0.1+	0.2-	1998 04 20	704	1.0-	0.0
1994 07 04	010	0.5+	0.2-	1998 03 25	566	0.3-	0.2-	1998 04 20	704	0.6+	0.7-
1994 07 04	010	0.6+	0.1+	1998 03 31	704	0.4+	0.4+	1998 04 22	704	0.2-	1.3-
1994 07 05	010	0.6-	0.3+	1998 03 31	704	0.5+	0.8-	1998 04 22	704	0.4-	0.3-
1994 07 05	010	0.5-	0.6-	1998 03 31	704	0.8+	0.4+	1998 04 22	704	0.7+	0.2-
1994 07 05	010	0.5-	0.5-	1998 03 31	704	0.5-	1.0+	1998 04 22	704	0.5+	0.6+

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1994 07 08	010	(4.4+	2.1+)	1998 04 01	704	0.4-	0.6-	1998 04 22	704	(4.4-	0.8+)
1994 07 08	010	(3.4+	1.8+)	1998 04 01	704	0.5+	0.3+	1998 05 16	704	0.7+	0.0
1994 07 08	010	(2.5+	1.0+)	1998 04 01	704	0.1+	0.3+	1998 05 16	704	0.8+	0.6+
1994 07 14	010	(2.7-	2.3-)	1998 04 01	704	0.6-	0.3+	1998 05 16	704	0.0	1.1+
1994 07 14	010	(6.6-	3.1-)	1998 04 01	704	0.7-	0.2+	1998 05 16	704	0.5-	1.2-
1994 07 14	010	(8.7-	2.9-)	1998 04 20	704	0.3+	0.4-	1998 05 16	704	1.1-	0.9+
1998 03 25	566	0.3-	0.3-	1998 04 20	704	(0.8+	2.2-)				

1998 FG₁₁₄ = 1995 UU₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	89.24065		(2000.0)	P	Q		
<i>n</i>	0.18430391	ω	151.65973	-0.48436781	-0.87137436		
<i>a</i>	3.0580624	Ω	327.13598	+0.77305754	-0.38451721		
<i>e</i>	0.0652979	<i>i</i>	8.27153	+0.40959720	-0.30471830		
<i>P</i>	5.35	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 10 25	327	0.1-	0.0	1998 03 31	704	0.2+	0.0	1998 04 19	704	0.5-	1.7-
1995 10 25	327	0.1-	0.4+	1998 03 31	704	0.1+	2.2-	1998 04 19	704	0.6+	2.2+
1995 10 25	327	0.3+	0.1-	1998 04 01	704	1.0+	0.1+	1998 04 19	704	1.1-	1.0+
1995 10 26	327	0.1+	0.0	1998 04 01	704	0.7+	0.8+	1998 04 19	704	0.7+	0.3+
1995 10 26	327	0.1-	0.1-	1998 04 01	704	0.9-	0.1+	1998 04 20	704	0.9-	1.5+
1995 10 26	327	0.2-	0.2-	1998 04 01	704	0.4+	0.6-	1998 04 20	704	0.5+	0.8-
1998 03 31	704	0.1-	1.2+	1998 04 01	704	1.1-	0.9+	1998 04 20	704	0.3+	2.5-
1998 03 31	704	0.2-	0.4-	1998 04 19	704	0.0	0.3-	1998 04 20	704	0.4+	0.3+

1998 FX₁₁₅ = 1996 VN₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	34.63859		(2000.0)	P	Q		
<i>n</i>	0.30991710	ω	247.43455	-0.97976496	+0.18424178		
<i>a</i>	2.1625809	Ω	303.10055	-0.13143967	-0.88692702		
<i>e</i>	0.1075780	<i>i</i>	5.35648	-0.15094449	-0.42357457		
<i>P</i>	3.18	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 11 04	691	0.2-	0.1+	1998 03 31	704	(5.3-	3.0-)	1998 04 19	704	0.6+	0.4-
1996 11 04	691	0.1-	0.2+	1998 04 01	704	0.2+	0.6+	1998 04 20	704	0.3-	0.1-
1996 11 04	691	1.4+	0.3-	1998 04 01	704	0.2+	1.0+	1998 04 20	704	0.3-	1.7+
1996 11 13	691	0.3-	0.0	1998 04 01	704	0.0	0.1+	1998 04 20	704	1.2-	1.2-
1996 11 13	691	0.4-	0.2-	1998 04 01	704	0.0	1.3+	1998 04 20	704	0.4+	0.3+
1996 11 13	691	0.4-	0.2+	1998 04 01	704	0.0	0.3-	1998 04 20	704	0.3-	0.5-
1998 03 31	704	0.6-	1.9-	1998 04 19	704	0.2+	0.0	1998 04 30	699	0.6+	0.9+
1998 03 31	704	0.7+	1.3+	1998 04 19	704	0.6+	0.5+	1998 04 30	699	0.4+	0.8-
1998 03 31	704	0.3-	1.8-	1998 04 19	704	0.7-	0.9-	1998 04 30	699	0.2-	0.3+

1998 FK₁₁₆ = 1029 T-1

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	17.35177		(2000.0)	P	Q		
<i>n</i>	0.21976778	ω	342.87620	-0.95487960	+0.28719625		
<i>a</i>	2.7195270	Ω	214.10726	-0.25423636	-0.92211911		
<i>e</i>	0.1204256	<i>i</i>	7.75365	-0.15352141	-0.25925791		
<i>P</i>	4.48	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1971 03 24	675	1.3+	2.0-	1998 03 31	704	0.7-	1.8-	1998 04 19	704	0.7+	0.7+
1971 03 25	675	1.9-	1.0+	1998 03 31	704	(5.7-	1.4-)	1998 04 19	704	0.4-	0.8+
1971 03 25	675	0.1-	1.1+	1998 04 01	704	0.6-	0.8+	1998 04 19	704	0.6-	1.0-
1971 03 26	675	0.1+	1.1+	1998 04 01	704	0.1+	0.5+	1998 04 20	704	0.7+	1.2+
1971 03 27	675	0.7+	1.2-	1998 04 01	704	0.5-	0.8+	1998 04 20	704	2.0-	0.6+
1998 03 31	704	1.0+	0.5-	1998 04 01	704	0.5-	0.3-	1998 04 20	704	0.1-	0.4-
1998 03 31	704	0.0	0.8+	1998 04 01	704	0.0	0.2+	1998 04 20	704	1.7+	1.7-
1998 03 31	704	1.1+	0.7-	1998 04 19	704	0.1-	0.2-				

1998 FR₁₁₇ = 1982 GJ = 1990 VU₇ = 1996 BB₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	121.28467		(2000.0)		P		Q
<i>n</i>	0.18941881	ω	219.33062	−0.11124455	−0.98495956		
<i>a</i>	3.0027602	Ω	237.43787	+0.94676072	−0.06459588		
<i>e</i>	0.0736296	<i>i</i>	9.02513	+0.30210724	−0.16025614		
<i>P</i>	5.20	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1982 04 01	809	1.3+	1.1−	1998 03 31	704	0.3−	0.2−	1998 05 16	691	0.4−	0.1+
1982 04 01	809	0.3−	0.3+	1998 03 31	704	0.2+	0.6−	1998 05 16	691	0.5−	0.2+
1982 04 01	809	0.8−	0.4+	1998 03 31	704	0.2−	0.4−	1998 05 16	691	0.4−	0.5+
1990 11 11	675	0.1−	1.0−	1998 04 01	704	0.9+	0.3+	1998 05 16	704	0.3−	0.0
1990 11 11	675	0.2−	1.2−	1998 04 01	704	1.0+	0.9+	1998 05 16	704	0.5+	0.1−
1990 11 13	675	0.2+	0.1−	1998 04 01	704	0.8+	0.8+	1998 05 16	704	1.3+	0.1+
1990 11 13	675	0.2−	1.4−	1998 04 01	704	0.9+	0.9+	1998 05 16	704	0.1−	0.6+
1996 01 27	691	0.6−	0.1+	1998 04 01	704	0.2−	0.6−	1998 05 16	704	1.9−	0.2+
1996 01 27	691	0.8−	0.0	1998 04 21	704	0.1−	0.2−	1998 05 24	691	1.3−	0.9−
1996 01 27	691	1.0−	0.4+	1998 04 21	704	0.3+	0.7−	1998 05 24	691	1.2−	0.2−
1996 01 30	327	0.4+	0.2+	1998 04 21	704	0.3+	1.0−	1998 05 25	699	0.2−	0.0
1996 01 30	327	0.7+	1.2+	1998 04 21	704	0.9+	0.4−	1998 05 25	699	0.6−	0.8+
1996 01 30	327	0.7+	1.1+	1998 04 21	704	0.5+	0.1−	1998 05 25	699	1.3−	0.8+
1996 01 31	327	0.7+	1.0+	1998 04 22	704	0.0	1.0−	1998 05 27	691	0.2−	0.3−
1996 01 31	327	0.1−	0.7+	1998 04 22	704	0.1+	0.1−	1998 05 27	691	0.6−	0.4−
1996 01 31	327	0.2+	0.8+	1998 04 22	704	0.8+	0.2−	1998 05 27	691	0.6−	0.8+
1998 03 31	704	0.6+	0.4+	1998 04 22	704	0.7+	0.4−				
1998 03 31	704	0.5+	0.1−	1998 04 22	704	0.5−	0.7+				

1998 FU₁₁₇ = 2212 T-3 = 1986 RV₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	220.45484		(2000.0)		P		Q
<i>n</i>	0.21825274	ω	34.24138	+0.98483421	−0.17012676		
<i>a</i>	2.7320978	Ω	335.48660	+0.13508360	+0.87498848		
<i>e</i>	0.0819993	<i>i</i>	4.70546	+0.10887606	+0.45326819		
<i>P</i>	4.52	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 10 11	675	0.4+	0.3+	1998 03 25	910	0.1+	0.1−	1998 04 21	704	0.3+	1.2−
1977 10 11	675	0.7−	0.7+	1998 03 25	910	0.0	0.3−	1998 04 21	704	0.1−	0.8−
1977 10 12	675	0.5−	0.2−	1998 03 25	910	0.1+	0.1−	1998 04 21	704	(0.0	3.5−)
1977 10 12	675	(2.5−	0.0)	1998 03 31	704	0.7+	0.8−	1998 04 22	704	0.0	0.2+
1977 10 16	675	1.0−	1.7−	1998 03 31	704	1.1+	1.4+	1998 04 22	704	0.5+	0.3+
1977 10 16	675	0.7−	1.3−	1998 03 31	704	1.0+	1.2+	1998 04 22	704	0.7+	1.4−
1977 10 17	675	0.8+	0.5+	1998 03 31	704	0.7−	0.0	1998 04 22	704	1.0−	0.6−
1977 10 17	675	0.0	0.1+	1998 04 01	704	0.2+	0.2−	1998 04 22	704	(2.3−	0.6−)
1977 10 21	675	1.9+	1.6−	1998 04 01	704	0.2+	0.4+	1998 04 28	566	0.8−	0.5+
1977 10 21	675	(3.4+	1.2−)	1998 04 01	704	0.0	0.6−	1998 04 28	566	1.0−	0.3+
1977 10 22	675	0.0	1.8+	1998 04 01	704	0.2−	1.5+	1998 04 28	566	0.8−	0.5+
1977 10 22	675	0.3−	1.5+	1998 04 21	704	0.4+	0.2+				
1986 09 12	095	0.3−	0.5+	1998 04 21	704	0.4−	0.1+				

1998 FC₁₁₈ = 1986 YF₁ = 1989 UJ

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	216.09969		(2000.0)		P		Q
<i>n</i>	0.29109624	ω	136.50818	+0.95369665	−0.28610262		
<i>a</i>	2.2548188	Ω	240.33220	+0.23835501	+0.90706609		
<i>e</i>	0.1748958	<i>i</i>	6.12954	+0.18343826	+0.30883070		
<i>P</i>	3.39	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1986 12 30	675	0.4−	0.1+	1998 03 31	704	1.8−	0.0	1998 04 22	704	0.4+	0.3−
1986 12 30	675	0.4+	0.4−	1998 04 01	704	0.4−	0.3−	1998 04 22	704	1.7+	0.1+
1987 01 04	675	(6.0+	0.3+)	1998 04 01	704	(3.6+	2.0−)	1998 04 22	704	0.1−	0.7+
1987 01 04	675	(7.4+	0.1+)	1998 04 01	704	0.0	0.3−	1998 04 22	704	0.9+	1.3+
1989 10 21	400	1.8+	0.4+	1998 04 01	704	(2.4−	0.4−)	1998 04 22	704	(5.9−	1.8+)

1989 10 21	400	0.0	1.1−	1998 04 20	704	(0.1+	2.1+)	1998 04 30	699	1.3+	0.2−
1989 10 21	400	1.7+	0.6−	1998 04 20	704	(1.2−	2.3+)	1998 04 30	699	0.6+	0.0
1989 10 25	400	1.6−	0.6+	1998 04 20	704	(2.4+	1.3+)	1998 04 30	699	0.5−	0.8+
1989 10 25	400	2.0−	1.4+	1998 04 20	704	(2.2−	1.0−)	1998 05 16	704	1.1−	1.7−
1998 03 31	704	0.3−	0.7+	1998 04 21	704	0.6−	0.1+	1998 05 16	704	(0.8−	2.1−)
1998 03 31	704	0.6−	0.0	1998 04 21	704	0.2+	0.5+	1998 05 16	704	(0.7−	2.5−)
1998 03 31	704	0.4+	0.4+	1998 04 21	704	1.2−	0.0	1998 05 16	704	1.5+	0.6−
1998 03 31	704	0.4+	1.1−	1998 04 21	704	0.5−	0.6+				

1998 FE₁₁₈ = 1991 XT₃ = 1995 XX₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	32.31433		(2000.0)		P		Q
<i>n</i>	0.21436150	ω	326.78379	−0.97877798	+0.17308979		
<i>a</i>	2.7650619	Ω	223.61126	−0.13552214	−0.94827521		
<i>e</i>	0.0558362	<i>i</i>	9.15101	−0.15371210	−0.26610909		
<i>P</i>	4.60	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1991 12 05	399	0.9−	1.5+	1998 03 31	704	0.2+	0.1+	1998 04 21	704	0.2+	0.4+
1991 12 05	399	0.9+	1.0−	1998 03 31	704	0.1−	0.2+	1998 04 21	704	0.5+	0.5+
1995 12 12	327	0.1+	0.3+	1998 03 31	704	0.7−	0.5−	1998 04 22	704	0.0	0.5+
1995 12 12	327	0.0	0.2−	1998 03 31	704	0.7−	1.7−	1998 04 22	704	0.3+	0.2+
1995 12 12	327	0.1+	0.4+	1998 03 31	704	1.2−	0.8−	1998 04 22	704	0.3+	0.3−
1995 12 14	327	0.7−	0.6−	1998 04 01	704	0.4−	0.3+	1998 04 22	704	1.3+	0.5−
1995 12 14	327	0.4+	0.2+	1998 04 01	704	0.5−	0.4−	1998 04 22	704	(4.3−	0.9+)
1995 12 14	327	0.3+	0.2−	1998 04 01	704	0.0	0.2−	1998 05 16	704	1.2−	0.1+
1995 12 15	327	0.1−	0.0	1998 04 01	704	0.4−	0.9−	1998 05 16	704	1.5−	0.2+
1995 12 15	327	0.2+	0.6+	1998 04 01	704	0.2+	0.8−	1998 05 16	704	0.2−	0.8+
1995 12 15	327	0.5−	0.2+	1998 04 04	699	0.1−	0.1+	1998 05 16	704	0.1+	0.4+
1998 03 25	704	0.5+	0.5+	1998 04 04	699	0.1+	0.4+	1998 05 16	704	0.7+	1.0+
1998 03 25	704	0.8+	0.5+	1998 04 04	699	1.7+	0.4+	1998 05 28	699	0.3−	0.6−
1998 03 25	704	0.5−	0.7−	1998 04 21	704	0.1+	0.6+	1998 05 28	699	0.4−	0.4−
1998 03 25	704	(2.2+	0.0)	1998 04 21	704	0.1+	0.5+	1998 05 28	699	0.0	0.4−
1998 03 25	704	0.3+	0.9+	1998 04 21	704	0.7+	0.3+				

1998 FS₁₁₈ = 1977 RZ₁ = 1990 SD₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	298.75841		(2000.0)		P		Q
<i>n</i>	0.22568036	ω	313.01770	+0.68895010	+0.72480595		
<i>a</i>	2.6718180	Ω	0.54205	−0.58700496	+0.55960153		
<i>e</i>	0.2842987	<i>i</i>	12.36712	−0.42517401	+0.40187370		
<i>P</i>	4.37	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 09 08	095	1.3−	2.2+	1998 03 22	704	1.1+	0.0	1998 04 18	704	0.7−	1.1+
1977 09 09	675	1.2+	1.0−	1998 03 22	704	0.7+	1.5+	1998 04 18	704	0.1+	0.3−
1977 09 10	675	1.4+	1.2−	1998 03 22	704	(2.2−	2.3+)	1998 04 18	704	(2.6−	0.1+)
1977 09 10	095	2.2−	1.3+	1998 03 31	704	0.3−	1.6−	1998 04 20	704	0.7+	0.4−
1990 09 14	675	0.2+	0.9−	1998 03 31	704	0.1+	0.5+	1998 04 20	704	0.3−	0.6+
1990 09 14	675	0.2−	1.4−	1998 03 31	704	0.5−	0.4+	1998 04 20	704	1.4−	0.7+
1990 09 16	675	0.9+	0.5+	1998 03 31	704	0.7−	0.7−	1998 04 20	704	1.1−	0.4−
1990 09 16	675	0.2−	0.7+	1998 03 31	704	1.2−	0.8−	1998 05 16	704	1.0+	0.2+
1998 03 20	704	0.3−	0.5−	1998 04 01	704	0.7+	0.8−	1998 05 16	704	0.2+	1.2−
1998 03 20	704	0.7+	0.1+	1998 04 01	704	0.7+	0.2+	1998 05 16	704	(2.4+	0.5−)
1998 03 20	704	(2.4−	1.0+)	1998 04 01	704	0.3+	0.8−	1998 05 16	704	0.6+	1.3+
1998 03 20	704	(2.2−	0.9+)	1998 04 01	704	0.2+	1.6−	1998 05 16	704	0.0	0.5+
1998 03 22	704	0.9−	0.3+	1998 04 18	704	0.4+	0.0				
1998 03 22	704	0.0	1.2+	1998 04 18	704	0.4+	1.0+				

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1998 FY₁₁₉ = 1977 DT = 1982 BT₆ = 1985 SR₂ = 1985 SS₂ = 1985 UM₅
 = 1990 SS₂₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Doppler

<i>M</i>	153.89316		(2000.0)	P	Q
<i>n</i>	0.19078120	ω	51.06965	+0.84864412	-0.52572952
<i>a</i>	2.9884478	Ω	340.43075	+0.41512397	+0.73036741
<i>e</i>	0.1015375	<i>i</i>	10.04281	+0.32783417	+0.43608706
<i>P</i>	5.17	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1977 02 18	381	2.5-	1.3+	1998 03 03	704	1.0+	0.7-	1998 03 20	704	0.1-	0.8-
1977 02 18	381	0.8-	2.7-	1998 03 03	704	1.1-	1.1-	1998 03 20	704	0.0	1.2+
1977 02 19	381	2.1+	0.0	1998 03 03	704	0.5-	0.2+	1998 03 20	704	0.5-	0.7-
1977 02 19	381	0.3+	0.3+	1998 03 03	704	0.7+	0.1+	1998 03 20	704	0.3-	1.4+
1982 01 26	381	1.5+	1.7+	1998 03 03	704	1.3+	1.0+	1998 03 22	704	0.5+	0.0
1982 01 26	381	0.9+	0.2+	1998 03 04	704	2.4-	0.3+	1998 03 22	704	0.4+	0.8-
1985 09 19	095	0.2-	2.5-	1998 03 04	704	1.0-	0.4+	1998 03 22	704	1.6+	1.7-
1985 09 21	095	0.9+	1.7-	1998 03 04	704	1.3-	1.7+	1998 03 22	704	1.2+	0.7-
1985 10 18	095	0.2-	0.7+	1998 03 04	704	2.1-	1.3-	1998 03 22	704	0.2+	2.0-
1990 09 20	675	0.7+	0.6-	1998 03 04	704	2.3-	0.9+				
1990 09 20	675	0.8+	0.1+	1998 03 20	704	0.6+	1.5-				

1998 FZ₁₁₉ = 1995 XZ₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	286.02611		(2000.0)	P	Q
<i>n</i>	0.20879632	ω	348.48007	+0.16909864	+0.98384747
<i>a</i>	2.8139788	Ω	291.23384	-0.89919008	+0.12959829
<i>e</i>	0.0781280	<i>i</i>	3.61277	-0.40356269	+0.12348457
<i>P</i>	4.72	<i>H</i>	13.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1995 12 14	327	0.3+	0.3+	1998 03 20	704	0.5+	0.2-	1998 04 01	704	0.2+	0.1+
1995 12 14	327	0.0	0.5+	1998 03 22	704	2.1+	0.8-	1998 04 01	704	0.2-	0.3+
1995 12 14	327	0.6+	0.7+	1998 03 22	704	0.5-	0.4+	1998 04 01	704	0.1+	0.5+
1995 12 15	327	0.4-	0.1-	1998 03 22	704	0.8+	0.2-	1998 04 01	704	0.2-	0.4+
1995 12 15	327	0.5-	0.7-	1998 03 22	704	0.9-	0.2+	1998 04 18	704	0.2-	0.5-
1995 12 15	327	0.2-	0.3-	1998 03 22	704	0.3-	0.4-	1998 04 18	704	1.0+	0.1+
1998 03 20	704	0.3-	0.7-	1998 03 26	704	0.9-	0.3+	1998 04 18	704	0.8+	0.4+
1998 03 20	704	0.2-	0.4+	1998 03 26	704	0.0	0.6+	1998 04 18	704	0.5-	0.8+
1998 03 20	704	0.9+	0.7-	1998 03 26	704	1.7-	0.2-				
1998 03 20	704	0.0	0.4-	1998 04 01	704	0.1-	0.1+				

1998 FA₁₂₀ = 1993 FO₇₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	255.91361		(2000.0)	P	Q
<i>n</i>	0.18820471	ω	113.14881	+0.59943412	+0.79935525
<i>a</i>	3.0156601	Ω	193.91666	-0.78279276	+0.57466375
<i>e</i>	0.0929531	<i>i</i>	9.90011	-0.16707553	+0.17547865
<i>P</i>	5.24	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1993 03 21	809	0.4-	0.4-	1998 03 22	704	0.3+	0.3+	1998 04 01	704	0.3+	0.4+
1993 03 22	809	0.4+	0.4+	1998 03 22	704	0.3-	1.1-	1998 04 01	704	1.2-	0.6+
1998 03 20	704	0.8+	0.5-	1998 03 22	704	1.6-	0.1+	1998 04 01	704	0.4+	1.1-
1998 03 20	704	1.1+	0.2-	1998 03 22	704	0.3-	0.6+	1998 04 01	704	1.1+	1.3+
1998 03 20	704	0.1-	0.3+	1998 03 26	704	(1.5+	2.8-)	1998 04 01	704	0.6-	1.1-
1998 03 20	704	0.4-	0.7+	1998 03 26	704	0.8+	0.8+				
1998 03 20	704	0.1+	0.1+	1998 03 26	704	0.4-	1.2-				

1998 FL₁₂₁ = 1995 SF₄₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	287.30993		(2000.0)	P	Q
<i>n</i>	0.23437382	ω	147.74737	+0.37142082	+0.92832743
<i>a</i>	2.6053334	Ω	144.04875	-0.85751675	+0.34957924
<i>e</i>	0.0802501	<i>i</i>	1.55789	-0.35596573	+0.12650116
<i>P</i>	4.21	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1995 09 26	691	0.3-	0.1+	1998 03 20	704	0.5-	0.4+	1998 04 19	704	0.3+	1.0-
1995 09 26	691	0.1-	0.0	1998 03 20	704	0.5-	0.3+	1998 04 19	704	0.0	0.6+
1995 09 26	691	0.1-	0.2+	1998 03 20	704	0.7-	1.6+	1998 04 19	704	0.1-	1.0-
1995 10 02	691	0.2+	0.0	1998 03 22	704	0.2+	0.4-	1998 04 19	704	0.9-	1.2-
1995 10 02	691	0.3+	0.1+	1998 03 22	704	1.2+	1.1-	1998 04 20	704	0.4+	0.7-
1995 10 02	691	0.0	0.1-	1998 03 22	704	0.7+	1.0-	1998 04 20	704	(2.3+	2.0-)
1998 01 28	910	0.3-	0.1-	1998 03 22	704	0.6+	0.4-	1998 04 20	704	0.6-	1.6+
1998 01 28	910	0.1-	0.4-	1998 03 22	704	0.6+	1.2+	1998 04 20	704	0.2+	0.8-
1998 01 28	910	0.0	0.4-	1998 03 25	566	0.7+	0.0	1998 04 20	704	0.5-	0.7+
1998 03 20	704	1.0-	0.6+	1998 03 25	566	0.8+	0.1+				
1998 03 20	704	0.6-	1.2+	1998 03 25	566	0.2+	0.2+				

1998 FM₁₂₁ = 1969 OK₁ = 1988 TP₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig

<i>M</i>	248.53975		(2000.0)	P	Q
<i>n</i>	0.26523622	ω	97.58339	+0.94590737	+0.31875196
<i>a</i>	2.3990953	Ω	243.84541	-0.31785402	+0.87312260
<i>e</i>	0.2187034	<i>i</i>	3.86273	-0.06502362	+0.36885513
<i>P</i>	3.72	<i>H</i>	15.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1969 07 20	074	(3.5-	0.2+)	1998 03 20	704	0.7+	0.2+	1998 04 18	704	0.6+	0.0
1969 07 20	074	1.2-	0.8-	1998 03 20	704	0.4-	0.0	1998 04 18	704	0.6-	1.2+
1969 07 20	074	0.9-	0.6+	1998 03 22	704	0.8+	0.3-	1998 04 18	704	0.4-	0.1+
1969 07 20	074	0.6-	0.4+	1998 03 22	704	0.6-	0.4+	1998 04 18	704	(5.2-	0.3+)
1969 07 20	074	0.9+	0.0	1998 03 22	704	1.9+	0.1-	1998 04 19	704	1.0+	0.4-
1969 07 20	074	1.7+	0.1-	1998 04 01	704	1.0-	0.5+	1998 04 19	704	0.2-	0.9-
1988 10 10	400	0.0	2.6-	1998 04 01	704	0.4+	0.4+	1998 04 19	704	(3.1-	0.1-)
1988 10 10	400	0.1-	2.9+	1998 04 01	704	(0.7-	4.3+)	1998 04 19	704	(2.6-	0.9+)
1998 03 20	704	1.2+	0.3-	1998 04 01	704	1.1-	1.8-	1998 04 19	704	1.7-	2.0+
1998 03 20	704	0.6-	0.6-	1998 04 01	704	(5.1-	0.3+)				

1998 FO₁₂₁ = 1995 SE₄₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	350.73061		(2000.0)	P	Q
<i>n</i>	0.24212243	ω	74.62211	-0.64350242	+0.76526300
<i>a</i>	2.5494473	Ω	155.30045	-0.71667707	-0.59472263
<i>e</i>	0.1075528	<i>i</i>	2.28339	-0.26884681	-0.24632808
<i>P</i>	4.07	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1995 09 25	691	0.2+	0.1+	1998 03 20	704	0.1+	0.8+	1998 04 19	704	0.6+	0.2+
1995 09 25	691	0.3+	0.0	1998 03 20	704	0.0	0.2+	1998 04 19	704	1.2+	0.6+
1995 09 25	691	0.1+	0.2+	1998 03 20	704	0.2-	0.2+	1998 04 19	704	0.5-	0.7+
1995 10 01	691	0.3-	0.2+	1998 03 22	704	0.4+	0.1-	1998 04 20	704	0.0	0.7-
1995 10 01	691	0.3-	0.1+	1998 03 22	704	0.6+	0.0	1998 04 20	704	0.5-	1.1-
1995 10 01	691	0.1-	0.4-	1998 03 22	704	0.2+	0.5-	1998 04 20	704	0.0	0.1-
1998 03 20	704	0.5-	1.4-	1998 03 22	704	1.5+	1.0+	1998 04 20	704	0.8-	0.8+
1998 03 20	704	1.7-	0.3+	1998 04 19	704	0.5-	0.7-				

1998 FX₁₂₃ = 1989 RW₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	113.91585		(2000.0)		P		Q				
<i>n</i>	0.27149990	ω	49.39830		+0.62399262		-0.78129776				
<i>a</i>	2.3620528	Ω	2.15273		+0.54976108		+0.42583888				
<i>e</i>	0.2810051	<i>i</i>	22.52234		+0.55533410		+0.45632780				
<i>P</i>	3.63	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1989 09 05	675	0.8-	1.0+	1998 03 24	704	0.1+	0.7-	1998 04 18	704	0.0	0.0
1989 09 05	675	1.7-	0.4+	1998 03 25	704	1.1-	2.6-	1998 04 18	704	1.3+	0.7-
1989 09 07	675	1.9+	0.6-	1998 03 25	704	1.4+	1.9+	1998 04 18	704	0.7-	0.1-
1989 09 07	675	0.8+	1.0-	1998 03 25	704	0.4-	0.8+	1998 04 20	691	1.0-	0.1+
1998 03 24	704	0.5+	0.3+	1998 03 25	704	0.0	1.5+	1998 04 20	691	0.7-	0.1-
1998 03 24	704	1.1-	0.2-	1998 03 25	704	0.2-	0.3+	1998 04 20	691	0.6-	0.1-
1998 03 24	704	0.6+	1.5-	1998 04 18	704	1.5+	0.8+				

1998 FE₁₂₅ = 1989 EY₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	346.61734		(2000.0)		P		Q				
n	0.23122132	ω	74.64390		-0.43260351		+0.90083825				
a	2.6289609	Ω	169.49468		-0.88496758		-0.41650630				
e	0.1469963	i	11.60245		-0.17229794		-0.12252736				
P	4.26	H	14.5		G	0.15	U	4			
Residuals in seconds of arc											
1989 03 02	809	0.4-	0.4-	1998 03 25	704	1.3-	1.3+	1998 04 21	704	0.6-	0.0
1989 03 02	809	0.4-	0.7+	1998 03 25	704	0.2-	0.2+	1998 04 24	704	0.2+	0.3-
1989 03 02	809	0.1+	0.4-	1998 03 25	704	0.4-	1.5-	1998 04 24	704	0.3+	0.4+
1989 03 03	809	0.6+	0.2-	1998 03 25	704	1.2-	1.3-	1998 04 24	704	0.5+	0.2+
1989 03 03	809	0.2-	0.1-	1998 04 20	704	0.5-	0.1-	1998 04 24	704	0.3+	0.6+
1989 03 03	809	0.3+	0.5+	1998 04 20	704	0.1-	0.2-	1998 04 24	704	0.1-	0.2+
1998 03 24	704	0.8+	0.5+	1998 04 20	704	1.2+	0.4-	1998 05 16	704	0.3+	0.9-
1998 03 24	704	0.0	0.4+	1998 04 20	704	(0.9-	2.2-)	1998 05 16	704	1.0-	0.6-
1998 03 24	704	1.8+	0.5-	1998 04 21	704	0.0	0.1+	1998 05 16	704	1.2+	0.2-
1998 03 24	704	0.6+	0.7+	1998 04 21	704	0.3-	0.1+	1998 05 16	704	0.1+	0.2-
1998 03 24	704	0.3-	0.7-	1998 04 21	704	0.5+	0.6+	1998 05 16	704	1.6-	1.3+
1998 03 25	704	1.0-	0.8+	1998 04 21	704	0.6+	0.5-				

1998 FP₁₂₅ = 1978 UQ₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	313.14521		(2000.0)		P		Q				
n	0.22859460	ω	48.77031		-0.16919487		+0.97894050				
a	2.6490617	Ω	212.03243		-0.95638840		-0.19107710				
e	0.1080196	i	12.43705		-0.23810569		+0.07186816				
P	4.31	H	14.0		G	0.15	U	4			
Residuals in seconds of arc											
1978 10 27	675	0.5+	1.4+	1998 03 31	704	0.4+	0.2+	1998 04 19	704	0.8+	1.0+
1978 10 28	675	0.4-	0.9-	1998 03 31	704	0.6-	0.4+	1998 04 19	704	0.3+	0.2+
1978 10 29	675	0.1-	0.5-	1998 03 31	704	0.4+	1.3-	1998 04 19	704	0.7-	0.2+
1998 02 25	566	0.1-	0.1+	1998 03 31	704	0.0	1.9-	1998 04 22	704	0.5+	0.3-
1998 02 25	566	0.1+	0.2+	1998 04 01	704	0.3+	0.4-	1998 04 22	704	0.0	1.0+
1998 02 25	566	0.2-	0.1+	1998 04 01	704	1.4+	1.5+	1998 04 22	704	0.0	1.4+
1998 03 25	566	0.1+	0.5-	1998 04 01	704	0.9-	0.5-	1998 04 22	704	0.8-	1.9-
1998 03 25	566	0.1+	0.3-	1998 04 01	704	0.3+	0.7+	1998 04 22	704	0.5-	1.4-
1998 03 25	566	0.1+	0.2-	1998 04 01	704	1.6-	2.0+				
1998 03 31	704	0.2-	0.1-	1998 04 19	704	0.7+	0.1+				

1998 FZ₁₂₅ = 1994 PX₂₉ = 1996 XN₃₀

Id. A. Doppler, G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	271.11146		(2000.0)			P		Q			
n	0.16992986	ω	25.97004			+0.55838975		+0.82145159			
a	3.2281689	Ω	278.18042			-0.78005468		+0.47238835			
e	0.0431757	i	6.72059			-0.28233949		+0.31947852			
P	5.80	H	13.5			G	0.15	U	4		
Residuals in seconds of arc											
1994 08 12	809	1.0-	0.2-	1996 12 17	691	0.0	0.0	1998 04 01	704	0.5+	0.7-
1994 08 12	809	1.8-	0.8-	1996 12 17	691	0.3-	0.1-	1998 04 18	704	0.1-	0.3+
1994 08 12	809	1.6-	0.1-	1998 03 31	704	0.6-	0.8+	1998 04 18	704	1.0+	2.1+
1994 08 13	809	2.0+	0.4+	1998 03 31	704	0.3-	0.3-	1998 04 18	704	0.2+	1.0-
1994 08 13	809	1.8+	0.0	1998 03 31	704	0.1+	0.5+	1998 04 18	704	0.8-	1.0-
1994 08 13	809	1.4+	0.6-	1998 03 31	704	(5.6-	2.5-)	1998 04 19	704	0.9-	0.3+
1996 12 15	691	0.1+	0.1+	1998 04 01	704	0.4-	2.1-	1998 04 19	704	0.5+	0.0
1996 12 15	691	0.1+	0.6-	1998 04 01	704	0.7-	0.8-	1998 04 19	704	0.8-	0.6+
1996 12 15	691	0.1-	0.2-	1998 04 01	704	0.9+	0.6-	1998 04 19	704	0.1+	0.5+
1996 12 17	691	0.1-	0.1-	1998 04 01	704	0.9+	0.5+				

1998 FK₁₂₆ = 1951 XY = 1951 YG = 1988 DG₅ = 1988 JS₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	174.06094		(2000.0)		P		Q					
<i>n</i>	0.30545965	ω	177.72471		+0.65000113		-0.75892529					
<i>a</i>	2.1835685	Ω	231.73068		+0.69643573		+0.61550262					
<i>e</i>	0.1418890	<i>i</i>	2.85662		+0.30409835		+0.21257689					
<i>P</i>	3.23	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	3				
Residuals in seconds of arc												
1951 12 05	711	(9.7-	7.0+)	Y	1998 03 25	428	0.3+	0.3+	1998 04 21	704	0.8-	0.3+
1951 12 22	711	(2.0+	7.1+)	Y	1998 03 25	428	0.3+	0.1+	1998 04 21	704	0.2+	0.0
1951 12 23	711	0.1+	1.2-	Y	1998 03 30	428	0.7+	0.3-	1998 04 21	704	0.2-	0.1-
1988 02 18	413	0.1+	0.8+		1998 03 30	428	0.9+	0.4-	1998 04 21	704	0.2-	0.1-
1988 02 18	413	0.7+	0.8+		1998 04 01	704	1.0+	0.1+	1998 04 22	704	0.9-	0.4-
1988 05 11	413	1.1+	0.4-		1998 04 01	704	0.5+	0.8+	1998 04 22	704	1.0-	0.1+
1988 05 11	413	1.7-	0.5+		1998 04 01	704	1.9+	1.6+	1998 04 22	704	0.7-	0.1-
1998 03 23	428	0.8+	0.1+		1998 04 01	704	(0.2-	2.7+)	1998 04 22	704	0.9-	0.7+
1998 03 23	428	0.3+	0.0		1998 04 04	699	0.3-	1.3-	1998 04 28	428	1.2-	0.1-
1998 03 24	428	0.2-	0.3-		1998 04 04	699	0.8-	0.2+	1998 04 28	428	0.2+	0.1+
1998 03 25	704	0.5+	0.2-		1998 04 04	699	1.0+	0.6-	1998 05 16	704	0.0	0.2+
1998 03 25	704	0.5+	1.0-		1998 04 20	704	0.1+	0.3+	1998 05 16	704	0.1+	0.2+
1998 03 25	704	0.4+	0.6-		1998 04 20	704	0.8-	0.0	1998 05 16	704	1.3+	1.4+
1998 03 25	699	0.6+	0.2-		1998 04 20	704	0.3-	0.6-	1998 05 16	704	(0.4+	2.1-)
1998 03 25	704	1.5+	0.3-		1998 04 20	704	0.2+	0.6-	1998 05 16	704	(3.2-	0.2-)
1998 03 25	699	0.1+	0.3-		1998 04 20	704	0.6-	0.5-	1998 05 28	699	0.8-	0.3+
1998 03 25	699	1.0-	0.2+		1998 04 20	428	0.8-	0.2-	1998 05 28	699	0.6-	0.4+
1998 03 25	704	0.4+	1.5-		1998 04 20	428	0.8-	0.0	1998 05 28	699	0.7-	0.6-
1998 03 25	428	0.2-	0.5+		1998 04 21	704	0.5-	0.3+				

1998 GF = 1990 HO

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	65.38106		(2000.0)		P		Q				
n	0.36467626	ω	121.83031		-0.88416423		-0.41207391				
a	1.9402799	Ω	35.27233		+0.18011226		-0.73539816				
e	0.0319342	i	22.40606		+0.43106054		-0.53794482				
P	2.70	H	15.0		G	0.15	U	4			
Residuals in seconds of arc											
1990 04 26	675	0.1-	0.1+	1998 04 03	704	0.6-	0.5+	1998 05 14	704	0.1-	0.9-
1990 04 26	675	(8.1+	2.5+)	1998 04 03	704	0.4-	0.5+	1998 05 14	704	1.1+	0.2+
1990 04 28	675	0.9+	0.2-	1998 04 03	704	0.3+	0.5-	1998 05 14	704	0.6+	1.2+
1990 04 28	675	0.8-	0.1+	1998 04 03	704	0.3+	0.8+	1998 05 14	704	0.2+	0.1+
1998 04 02	704	0.1+	0.5-	1998 04 24	704	0.2+	0.1-	1998 05 14	704	0.7-	1.0-
1998 04 02	704	0.2+	0.0	1998 04 24	704	0.5-	0.0	1998 05 17	704	0.6-	0.3-
1998 04 02	704	0.4-	0.5-	1998 04 24	704	0.5+	0.3-	1998 05 17	704	0.5-	0.8+
1998 04 03	704	0.5+	0.0	1998 04 24	704	0.1-	0.0				

1998 GK = 1980 VZ₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.36677131	ω	211.78410	-0.43870953	+0.86767617		
<i>a</i>	1.9328841	Ω	33.90717	-0.71138870	-0.17635872		
<i>e</i>	0.1582674	<i>i</i>	24.78072	-0.54905379	-0.46479637		
<i>P</i>	2.69	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1980 11 01	675	0.4+	0.1+	1998 04 20	704	0.1+	0.7-
1980 11 02	675	0.6-	0.2+	1998 04 20	704	0.8-	0.5-
1998 04 02	704	0.0	0.1-	1998 04 21	704	(2.6+	3.2+)
1998 04 02	704	0.3-	0.3+	1998 04 21	704	0.6-	0.2+
1998 04 02	704	0.0	0.4+	1998 04 21	704	0.3-	0.1-
1998 04 03	704	0.1-	0.3+	1998 04 21	704	0.1+	0.3-
1998 04 03	704	0.9-	0.4+	1998 04 21	704	0.3-	0.4-
1998 04 03	704	0.1+	0.2+	1998 04 24	704	(3.3+	3.5-)
1998 04 03	704	0.7+	0.6-	1998 04 24	704	0.2-	0.5+
1998 04 03	704	0.8-	0.3-	1998 04 24	704	1.1+	1.2+
1998 04 20	704	(2.7-	0.8-)	1998 04 24	704	1.0+	1.6+
1998 04 20	704	0.7+	0.9-	1998 04 24	704	0.8-	0.2+
1998 04 20	704	0.8-	0.4-	1998 04 30	699	1.0+	0.6-

1998 GM₆ = 1980 FO₁₁ = 1984 AE₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.22066480	ω	28.01110	-0.63104590	-0.74701618		
<i>a</i>	2.7121519	Ω	101.90516	+0.66581490	-0.65992368		
<i>e</i>	0.0055775	<i>i</i>	12.34266	+0.39808491	-0.08042122		
<i>P</i>	4.47	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1980 03 16	095	0.1+	0.3+	1998 04 03	704	0.4+	0.6+
1984 01 08	688	0.8+	0.3+	1998 04 03	704	0.8+	1.2+
1984 01 08	688	0.8-	0.5-	1998 04 03	704	(5.7-	2.5-)
1998 04 02	704	0.4+	0.0	1998 04 25	566	0.7-	0.7-
1998 04 02	704	1.2+	0.1-	1998 04 25	566	0.4-	0.5-
1998 04 02	704	0.2+	0.8-	1998 04 25	566	0.4-	0.5-
1998 04 03	704	0.0	0.4-	1998 05 03	566	1.3-	1.7+
1998 04 03	704	0.1-	0.6-	1998 05 03	566	1.7-	0.9+

1998 GQ₈ = 1997 AC₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17937915	ω	189.77046	+0.46375779	+0.85026310		
<i>a</i>	3.1137811	Ω	108.22445	-0.79413599	+0.52352215		
<i>e</i>	0.1091377	<i>i</i>	15.19520	-0.39278077	-0.05456389		
<i>P</i>	5.49	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1997 01 14	566	0.1+	0.1-	1998 04 03	704	1.2-	0.6+
1997 01 14	566	0.2-	0.1-	1998 04 03	704	1.4+	0.9-
1997 01 14	566	0.3+	0.0	1998 04 03	704	0.4+	0.3+
1997 01 15	566	0.0	0.4+	1998 04 03	704	0.1-	0.4-
1997 01 15	566	0.1+	0.1-	1998 04 23	704	0.2+	1.0+
1997 01 15	566	0.3-	0.1+	1998 04 23	704	0.1-	0.7-
1998 04 02	704	1.3-	0.8-	1998 04 23	704	0.1-	0.5+
1998 04 02	704	0.2+	0.7-	1998 04 23	704	0.2-	0.3-
1998 04 02	704	0.0	0.3-	1998 04 23	704	0.0	0.1+
1998 04 03	704	0.2-	0.2-	1998 04 24	704	0.1-	0.6+

1998 GK₁₀ = 1982 KD₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18353002	ω	282.10464	-0.85657764	-0.49979653		
<i>a</i>	3.0666530	Ω	228.06350	+0.51452904	-0.80837071		
<i>e</i>	0.1338373	<i>i</i>	9.93688	+0.03917400	-0.31103092		
<i>P</i>	5.37	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1982 05 16	675	1.9-	1.2-	1998 04 21	704	0.3+	0.4-
1982 05 16	675	1.4+	0.5+	1998 04 21	704	0.0	0.1+
1982 05 17	675	0.6+	0.7+	1998 04 21	704	0.3-	0.4+
1998 04 03	428	0.3+	0.4-	1998 04 21	704	0.5+	0.4+
1998 04 03	428	0.3-	0.3+	1998 04 22	704	0.8-	0.1+
1998 04 04	428	0.5-	0.3+	1998 04 22	704	0.2+	0.5-
1998 04 04	428	0.1+	0.6-	1998 04 22	704	0.1-	0.2+
1998 04 05	428	0.2+	0.5-	1998 04 22	704	0.3-	0.9+
1998 04 21	704	0.1+	0.0	1998 04 24	428	0.8-	1.0+

1998 HV₄ = 1990 TG₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19850162	ω	211.35763	-0.48241382	+0.87576374		
<i>a</i>	2.9104491	Ω	29.80998	-0.79609425	-0.42989895		
<i>e</i>	0.0559244	<i>i</i>	2.04528	-0.36539137	-0.21960138		
<i>P</i>	4.97	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1990 10 14	033	0.0	0.1+	1998 04 21	120	0.4+	0.7+
1990 10 14	033	0.3-	0.4-	1998 04 21	120	0.1-	0.5+
1990 10 14	033	0.3+	0.5+	1998 04 22	704	0.2+	0.2-
1998 04 20	120	0.7+	0.2+	1998 04 22	704	0.6-	0.1-
1998 04 20	120	0.1+	0.3-	1998 04 22	704	0.5+	0.9-
1998 04 20	120	0.9-	0.8-	1998 04 22	704	0.4+	1.2-
1998 04 21	704	0.2+	0.5+	1998 04 22	704	0.2+	0.6-
1998 04 21	704	0.7+	0.4+	1998 04 23	120	0.4+	0.8+
1998 04 21	704	1.0-	0.9+	1998 04 23	120	0.8-	0.5+
1998 04 21	704	1.1-	0.9+	1998 04 30	699	0.2-	0.8-
1998 04 21	704	0.9-	0.4+	1998 04 30	699	0.1-	0.4-
1998 04 21	120	0.5+	0.8+	1998 04 30	699	0.2+	0.4-
1998 04 21	120	0.9+	0.1-	1998 05 01	704	0.4-	0.8-

1998 HJ₉ = 4361 T-1 = 1997 HW₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18713941	ω	207.29544	+0.96583216	-0.25452610		
<i>a</i>	3.0270938	Ω	167.16417	+0.25915638	+0.94667781		
<i>e</i>	0.1610793	<i>i</i>	12.69806	+0.00249030	+0.19752868		
<i>P</i>	5.27	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1971 03 24	675	(9.0+	3.9-)	1997 04 29	704	0.9+	0.0
1971 03 26	675	0.8+	0.5+	1997 04 29	704	0.2+	1.0+
1971 03 26	675	0.1-	0.1+	1998 04 18	691	0.5-	0.1-
1971 03 27	675	0.1+	3.6-	1998 04 18	691	0.7-	0.0
1971 04 02	675	1.3-	0.6+	1998 04 18	691	0.5-	0.1-
1997 04 28	704	1.1-	0.3+	1998 04 23	704	1.5+	0.8-
1997 04 28	704	0.1-	0.1+	1998 04 23	704	1.2+	1.0+
1997 04 28	704	1.3-	0.1-	1998 04 23	704	0.5+	0.8-
1997 04 28	704	1.5-	0.5-	1998 04 23	704	0.2+	1.1+
1997 04 29	704	0.9+	0.2-	1998 04 23	704	1.9-	0.8-
1997 04 29	704	1.1+	1.3+	1998 04 24	704	0.6+	0.1+
1997 04 29	704	1.3+	0.7+	1998 04 24	704	0.9+	0.8-

1998 HM₁₁ = 1932 EH = 1991 DF₂ = 1991 GJ₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	37.08874		(2000.0)		P		Q	
<i>n</i>	0.28500598	ω	88.94383	−0.95111127	+0.27980286			
<i>a</i>	2.2868274	Ω	107.29471	−0.30845880	−0.88183659			
<i>e</i>	0.1695265	<i>i</i>	7.87139	+0.01550852	−0.37957158			
<i>P</i>	3.46	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1932 03 05	024	0.2−	0.6−	1998 04 23	704	0.5+	1.1−	1998 04 24	691	1.1−	0.2−
1991 02 23	493	0.2−	0.7+	1998 04 23	704	1.4+	0.2+	1998 05 27	699	0.1+	0.4+
1991 02 23	493	0.4−	0.7+	1998 04 23	704	0.7−	1.0−	1998 05 27	699	0.4+	0.4+
1991 02 23	493	0.3+	0.2−	1998 04 23	704	1.9+	0.7+	1998 05 27	699	0.3+	0.0
1991 04 14	400	0.1+	1.4+	1998 04 24	704	0.5+	0.5−	1998 06 02	699	0.3+	0.3+
1991 04 14	400	1.2+	0.1−	1998 04 24	691	0.7−	0.5−	1998 06 02	699	0.1−	0.1+
1998 04 18	691	1.2−	0.0	1998 04 24	704	0.8+	0.3−	1998 06 02	699	0.1+	0.1+
1998 04 18	691	1.0−	0.2−	1998 04 24	691	0.4−	0.4−				
1998 04 18	691	1.0−	0.2−	1998 04 24	704	0.8−	0.5+				

1998 HB₁₄ = 1996 VZ₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	54.67121		(2000.0)		P		Q	
<i>n</i>	0.27527236	ω	87.52750	−0.97323521	−0.11130739			
<i>a</i>	2.3404228	Ω	86.03090	+0.02153732	−0.91520441			
<i>e</i>	0.0980784	<i>i</i>	11.62705	+0.22879986	−0.38731326			
<i>P</i>	3.58	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1996 11 03	691	0.3−	0.0	1998 04 23	704	0.3+	0.1−	1998 04 26	566	0.3−	0.2+
1996 11 03	691	0.1−	0.6−	1998 04 23	704	0.7−	0.4+	1998 04 26	566	0.0	0.1+
1996 11 03	691	0.1+	0.1+	1998 04 24	704	0.0	0.1−	1998 04 26	566	0.0	0.0
1996 11 11	691	0.1+	0.3−	1998 04 24	704	0.0	0.2−	1998 05 27	699	0.1−	0.3+
1996 11 11	691	0.4+	0.0	1998 04 24	704	0.7−	0.2−	1998 05 27	699	0.0	0.4+
1996 11 11	691	0.1+	0.1+	1998 04 24	704	0.6−	0.7+	1998 05 27	699	0.1−	0.2+
1998 04 23	704	0.1−	0.6−	1998 04 24	566	1.3+	0.7−	1998 06 02	699	0.1−	0.5−
1998 04 23	704	0.2−	0.7+	1998 04 24	566	0.4+	0.2−	1998 06 02	699	0.6+	0.8−
1998 04 23	704	0.3−	0.5+	1998 04 24	566	0.4+	0.3−	1998 06 02	699	0.2−	0.5−

1998 HH₁₄ = 1979 OJ₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	78.15152		(2000.0)		P		Q	
<i>n</i>	0.30301449	ω	37.05562	−0.89890880	−0.43090612			
<i>a</i>	2.1952995	Ω	117.23977	+0.37757916	−0.85365642			
<i>e</i>	0.0767700	<i>i</i>	5.11481	+0.22225425	−0.29255877			
<i>P</i>	3.25	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5	

Residuals in seconds of arc

1979 07 24	675	0.0	0.1−	1998 04 24	704	0.6+	0.2−	1998 05 22	704	0.2+	0.2−
1979 07 25	675	0.0	0.0	1998 04 24	704	0.7+	0.2+	1998 05 22	704	0.4−	1.8−
1998 04 21	704	0.3+	0.2−	1998 04 24	704	1.8−	0.2+	1998 05 22	704	0.3+	0.2−
1998 04 21	704	0.1−	0.2+	1998 04 24	704	0.5−	0.1−	1998 05 24	704	0.1+	0.5+
1998 04 21	704	0.2−	0.2+	1998 04 29	566	0.5−	0.2−	1998 05 24	704	1.7+	0.5+
1998 04 21	704	0.7+	0.7+	1998 04 29	566	0.4+	0.9−	1998 05 24	704	0.1+	1.2+
1998 04 21	704	0.4+	0.7+	1998 04 29	566	0.4−	0.4+	1998 05 24	704	0.7+	1.0−
1998 04 23	704	0.2+	0.6+	1998 04 30	566	0.0	1.1−	1998 05 24	704	0.2+	0.8−
1998 04 23	704	0.7−	0.6+	1998 04 30	566	0.3−	1.1−	1998 05 27	699	0.9−	1.1+
1998 04 23	704	0.5+	0.3+	1998 04 30	566	0.5−	0.9−	1998 05 27	699	0.5−	0.1+
1998 04 23	704	0.4+	0.2−	1998 05 22	704	0.0	0.6+	1998 05 27	699	(1.4−	2.3+)
1998 04 23	704	0.4−	0.2+	1998 05 22	704	0.3−	0.8+				

1998 HJ₁₄ = 1997 CM₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	316.29166		(2000.0)		P		Q	
<i>n</i>	0.18373365	ω	149.59713	+0.05267307	+0.98373999			
<i>a</i>	3.0643868	Ω	122.90707	−0.95244414	−0.10116502			
<i>e</i>	0.0931940	<i>i</i>	11.80109	−0.30012615	−0.14839567			
<i>P</i>	5.36	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1997 02 02	691	0.2−	0.3+	1998 03 24	704	0.4−	0.4−	1998 04 23	704	0.1+	0.4−
1997 02 02	691	0.1+	0.0	1998 03 24	704	0.0	0.7+	1998 04 24	704	0.3+	0.7−
1997 02 02	691	0.1−	0.2−	1998 03 24	704	0.7−	0.1+	1998 04 24	704	0.7−	0.1−
1997 02 04	691	0.3−	0.0	1998 04 03	704	0.1+	1.0−	1998 04 24	704	0.7+	1.0+
1997 02 04	691	0.0	0.1−	1998 04 03	704	1.1−	0.3+	1998 04 24	704	0.3−	0.8+
1997 02 04	691	0.1+	0.0	1998 04 03	704	(2.8−	0.7+)	1998 04 24	704	0.2−	0.1+
1997 02 04	691	0.1+	0.1−	1998 04 03	704	0.6−	0.6+	1998 04 27	566	0.4+	0.4−
1997 02 04	691	0.0	0.3−	1998 04 22	566	0.2+	0.2−	1998 04 27	566	0.4+	0.6−
1997 02 04	691	0.1+	0.3−	1998 04 22	566	0.1−	0.1+	1998 04 27	566	0.5+	0.6−
1997 02 06	691	0.1−	0.6+	1998 04 22	566	0.0	0.0	1998 05 16	704	0.4−	0.6+
1997 02 06	691	0.2−	0.3+	1998 04 23	704	0.3+	0.0	1998 05 16	704	0.6+	1.2+
1997 02 06	691	0.5+	0.2+	1998 04 23	704	0.4+	0.5−	1998 05 16	704	0.8+	0.0
1998 03 24	704	0.4+	1.5−	1998 04 23	704	0.2−	0.1−	1998 05 16	704	1.0−	1.4+
1998 03 24	704	0.6+	0.4+	1998 04 23	704	0.3−	0.6−	1998 05 16	704	(0.8+	2.2+)

1998 HW₁₇ = 1986 UG₁ = 1989 RC₃ = 1994 BG₅

Id. A. Gnädig

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	209.88415		(2000.0)		P		Q	
<i>n</i>	0.29866716	ω	63.70344	+0.96891978	−0.24267695			
<i>a</i>	2.2165510	Ω	310.30162	+0.19854694	+0.87860127			
<i>e</i>	0.1614999	<i>i</i>	3.60720	+0.14755871	+0.41130003			
<i>P</i>	3.30	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	2	

Residuals in seconds of arc

1986 10 29	054	0.3−	0.3+	1998 03 25	704	0.9−	0.3−	1998 04 19	704	0.7+	1.2+
1986 10 29	054	0.5−	1.5+	1998 03 25	704	1.6−	0.2+	1998 04 19	704	0.2−	0.9−
1989 09 05	511	0.8−	1.3−	1998 04 01	704	0.5+	0.4+	1998 04 20	704	0.7+	0.2+
1989 09 05	511	0.6+	2.0−	1998 04 01	704	0.2−	0.6+	1998 04 20	704	1.1+	0.0
1989 09 05	511	1.0+	1.7+	1998 04 01	704	0.0	0.1−	1998 04 20	704	0.4+	0.4+
1994 01 18	033	0.3+	1.3−	1998 04 01	704	(0.0	2.1+)	1998 04 20	704	0.4+	0.5−
1994 01 18	033	0.8−	0.8−	1998 04 01	704	0.5−	1.2+	1998 04 20	704	1.7−	0.5−
1994 01 19	033(35.0−	34.7−)		1998 04 18	704	(0.1+	2.4+)	1998 04 22	704	0.3−	1.4−
1998 03 24	699	0.8−	0.6+	1998 04 18	704	0.7−	1.1+	1998 04 22	704	0.1+	0.7+
1998 03 24	699	0.3+	0.2−	1998 04 18	704	0.3−	0.2−	1998 04 22	704	1.3+	1.1−
1998 03 24	699	0.5−	0.3−	1998 04 18	704	0.4−	0.7+	1998 04 22	704	0.8+	0.9−
1998 03 25	704	0.7−	0.2+	1998 04 19	704	1.6+	0.6+	1998 04 22	704	0.4−	0.7−
1998 03 25	704	0.1+	0.7−	1998 04 19	704	1.1+	1.1+				

1998 HE₂₀ = 1992 EP₂₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	243.43947		(2000.0)		P		Q	
<i>n</i>	0.19910044	ω	195.56283	+0.97677846	−0.21424098			
<i>a</i>	2.9046105	Ω	176.80581	+0.20046839	+0.91034454			
<i>e</i>	0.1064126	<i>i</i>	2.21610	+0.07560599	+0.35408137			
<i>P</i>	4.95	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5	

Residuals in seconds of arc

1992 03 02	809	0.7−	1.9+	1998 04 28	684	1.3−	1.0−	1998 05 22	704	1.5−	1.6+
1992 03 08	809	0.7+	1.2−	1998 05 01	684	0.7−	0.5−	1998 05 22	704	0.2+	0.6+
1992 03 09	809	0.0	0.7−	1998 05 01	684	0.5−	0.7−	1998 05 22	704	0.3+	0.5+
1998 04 25	809	1.9+	1.3+	1998 05 02	684	0.2+	0.5−	1998 05 22	704	0.0	0.6+
1998 04 25	809	1.3+	1.1+	1998 05 02	684	0.5+	0.2+	1998 05 23	699	0.9+	0.2+
1998 04 25	809	1.2+	0.8+	1998 05 05	699	0.5−	0.6+	1998 05 23	699	0.1+	0.5+
1998 04 27	684	0.7−	0.9−	1998 05 05	699	1.3+	0.1−	1998 05 23	699	0.6+	0.6−
1998 04 27	684	1.3−	1.3−	1998 05 05	699	0.0	0.7−	1998 05 24	704	0.6+	0.4−

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1998 04 28	809	0.0	0.0	1998 05 17	684	0.2−	0.7−	1998 05 24	704	0.1+	0.1+
1998 04 28	809	0.4−	0.3+	1998 05 17	684	0.1−	0.7−	1998 05 24	704	0.3−	0.2−
1998 04 28	809	0.4−	1.9+	1998 05 18	684	0.3−	0.2−	1998 05 24	704	0.3−	0.8−
1998 04 28	684	0.7−	1.0−	1998 05 18	684	0.2−	0.1−				

1998 HF₂₀ = 1978 US₇

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	327.00922			<i>P</i>		<i>Q</i>	
<i>n</i>	0.23453584	<i>ω</i>	97.13035	+0.35258694		+0.93571115	
<i>a</i>	2.6041334	<i>Ω</i>	193.53179	−0.87645667		+0.32598997	
<i>e</i>	0.1056330	<i>i</i>	2.76169	−0.32788132		+0.13481538	
<i>P</i>	4.20	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 10 27	675	0.9−	0.0	1998 05 05	699	1.2−	1.1+	1998 05 22	699	0.6+	1.0+
1978 10 28	675	0.4+	0.2−	1998 05 05	699	0.1−	0.4+	1998 05 22	699	0.7+	0.5+
1978 10 29	675	0.5+	0.1+	1998 05 17	684	0.2−	0.2+	1998 05 24	704	0.6+	0.5−
1998 04 27	684	0.5+	0.1−	1998 05 17	684	0.0	0.2+	1998 05 24	704	0.2−	0.2−
1998 04 27	684	0.3+	0.2+	1998 05 18	684	0.3+	0.1−	1998 05 24	699	0.2−	0.5+
1998 04 28	684	0.2+	0.3−	1998 05 18	684	0.1+	0.2−	1998 05 24	704	0.6+	0.1−
1998 04 28	684	0.0	0.3−	1998 05 22	704	0.9+	0.7+	1998 05 24	699	0.2+	1.5+
1998 05 01	684	0.1−	0.2+	1998 05 22	704	0.7−	0.7−	1998 05 24	699	0.5−	0.2+
1998 05 01	684	0.7+	0.1−	1998 05 22	704	0.9−	0.6−	1998 05 24	704	0.7+	1.4−
1998 05 02	684	0.1−	0.6−	1998 05 22	704	0.2−	0.4−	1998 05 24	704	0.7−	0.9−
1998 05 02	684	0.4−	0.9−	1998 05 22	699	0.1−	0.6+				
1998 05 05	699	0.4−	0.5−	1998 05 22	704	0.4−	0.3+				

1998 HQ₂₂ = 1975 VG₁₀ = 1994 AC₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	227.60490			<i>P</i>		<i>Q</i>	
<i>n</i>	0.28245497	<i>ω</i>	281.53058	+0.99189568		+0.11528596	
<i>a</i>	2.3005759	<i>Ω</i>	71.86662	−0.08315285		+0.90683807	
<i>e</i>	0.0446281	<i>i</i>	3.22150	−0.09606541		+0.40540581	
<i>P</i>	3.49	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1975 11 05	801	0.1+	0.4−	1998 03 20	704	0.7−	0.3+	1998 04 22	704	0.3+	0.9−
1994 01 08	691	0.1+	0.0	1998 03 20	704	0.0	0.7−	1998 04 22	704	(5.8−	0.9−)
1994 01 08	691	0.3−	0.3−	1998 03 20	704	(3.2−	2.1+)	1998 04 28	691	0.3−	0.5−
1994 01 08	691	0.1+	0.3−	1998 04 20	704	1.0+	0.8+	1998 04 28	691	0.4−	0.4−
1994 01 17	691	0.2−	0.2+	1998 04 20	704	1.0+	0.1+	1998 04 28	691	0.1+	0.2+
1994 01 17	691	0.2−	0.1−	1998 04 20	704	0.9+	1.6−	1998 05 03	691	0.4−	0.1−
1994 01 17	691	0.5+	0.0	1998 04 20	704	1.0−	1.2−	1998 05 03	691	0.6−	0.5−
1998 03 20	704	0.7−	1.3+	1998 04 22	704	0.3−	1.2+	1998 05 03	691	0.6−	0.5−
1998 03 20	704	1.4+	1.9+	1998 04 22	704	(2.3+	0.1+)				

1998 HG₂₃ = 1996 TR₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	217.32062			<i>P</i>		<i>Q</i>	
<i>n</i>	0.31703034	<i>ω</i>	289.27882	+0.99257087		−0.11330757	
<i>a</i>	2.1301107	<i>Ω</i>	77.24638	+0.12152312		+0.90550130	
<i>e</i>	0.0455750	<i>i</i>	2.60462	+0.00593356		+0.40893618	
<i>P</i>	3.11	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 10 08	566	0.4+	0.2+	1998 03 25	704	0.1+	0.4−	1998 04 20	704	1.0−	0.0
1996 10 08	566	0.2+	0.2+	1998 03 25	704	0.3+	0.2+	1998 04 20	704	0.8+	0.5−
1996 10 08	566	0.1+	0.3+	1998 03 25	704	(0.5+	2.3+)	1998 04 22	704	0.4−	0.7−
1996 10 09	566	0.1−	0.2−	1998 03 25	704	0.2−	0.2−	1998 04 22	704	1.1+	1.8+
1996 10 09	566	0.1−	0.1−	1998 04 19	704	1.4+	0.4−	1998 04 22	704	1.7−	0.5−
1996 10 09	566	0.5−	0.3−	1998 04 19	704	0.4+	1.1−	1998 04 22	704	(5.4−	0.4−)
1998 03 20	704	(2.3+	0.4−)	1998 04 19	704	(1.9+	2.6+)	1998 04 28	691	0.4−	0.2−
1998 03 20	704	(0.9+	2.3−)	1998 04 19	704	1.9+	1.6+	1998 04 28	691	0.0	0.4−

1998 03 20	704	0.6−	0.2+	1998 04 20	704	0.5−	0.5+	1998 04 28	691	0.4−	0.3−
1998 03 20	704	(2.0−	0.4+)	1998 04 20	704	0.9−	0.2+				

1998 HT₂₃ = 1991 TZ₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	277.89774			<i>P</i>		<i>Q</i>	
<i>n</i>	0.24228756	<i>ω</i>	312.90563	+0.72683350		+0.68665700	
<i>a</i>	2.5482888	<i>Ω</i>	3.81608	−0.54825230		+0.59293189	
<i>e</i>	0.1863612	<i>i</i>	12.73457	−0.41368161		+0.42063517	
<i>P</i>	4.07	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1991 10 07	033	1.0+	0.1+	1998 04 01	704	1.1−	0.5−	1998 04 22	691	0.3−	0.7+
1991 10 07	033	0.5−	0.1+	1998 04 19	704	1.2+	0.8−	1998 04 22	691	0.1−	0.1+
1991 10 08	033	0.0	0.1−	1998 04 19	704	1.4+	0.3+	1998 04 28	691	0.1−	0.2−
1991 10 09	033	0.6+	0.4−	1998 04 19	704	1.5+	0.6−	1998 04 28	691	0.5−	0.1−
1991 10 11	691	0.2−	0.0	1998 04 19	704	0.2+	1.3−	1998 04 28	691	0.4−	0.1+
1991 10 11	691	1.1−	0.1+	1998 04 20	704	1.9+	0.6+	1998 04 29	691	0.8−	0.3+
1991 10 11	691	0.2+	0.0	1998 04 20	704	0.2−	0.2+	1998 04 29	691	0.8−	0.3+
1998 04 01	704	0.9−	0.9+	1998 04 20	704	(2.6+	1.3−)	1998 04 29	691	0.8−	0.1+
1998 04 01	704	0.1+	1.0−	1998 04 20	704	(2.5−	1.1−)				
1998 04 01	704	0.2−	1.0+	1998 04 22	691	0.4−	0.1−				

1998 HQ₂₄ = 1988 BQ₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Williams			
(2000.0)				(2000.0)			
<i>M</i>	28.27737			<i>P</i>		<i>Q</i>	
<i>n</i>	0.21171573	<i>ω</i>	321.31374	−0.94894833		+0.31028027	
<i>a</i>	2.7880505	<i>Ω</i>	236.85306	−0.26991916		−0.89190101	
<i>e</i>	0.1396780	<i>i</i>	3.88808	−0.16321985		−0.32899656	
<i>P</i>	4.66	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1988 01 23	809	0.2−	0.3+	1998 04 21	704	0.8−	0.2−	1998 04 25	699	0.1+	0.5+
1988 01 23	809	0.0	0.8+	1998 04 21	704	0.1+	1.0−	1998 04 25	120	0.5+	0.6+
1988 01 24	809	0.0	1.4−	1998 04 21	704	0.3−	0.6−	1998 04 25	120	0.3−	0.9+
1988 01 24	809	0.0	1.1−	1998 04 22	704	1.4+	0.9−	1998 04 29	120	1.1+	0.6+
1988 01 24	809	0.2+	0.9−	1998 04 22	704	2.1−	0.6−	1998 04 29	120	1.1+	0.4+
1988 01 26	809	0.1−	0.0	1998 04 22	704	0.3+	0.3−	1998 05 02	566	0.4−	0.5−
1988 01 26	809	0.6+	0.2−	1998 04 22	704	0.1+	1.3−	1998 05 02	566	0.3+	0.5−
1988 01 27	809	0.2−	0.1−	1998 04 22	704	0.0	0.2+	1998 05 02	566	0.0	0.2−
1988 01 27	809	0.2+	0.2−	1998 04 23	120	0.3+	1.3+	1998 05 26	691	0.8+	0.7−
1988 01 28	809	0.4−	2.9+	1998 04 24	120	0.1−	1.9+	1998 05 26	691	1.6+	0.1−
1988 01 30	809	(0.1−	8.8+)	1998 04 24	120	0.0	0.8+	1998 05 26	691	2.8−	0.0
1998 04 21	704	1.1−	0.3−	1998 04 25	699	0.1+	0.9+				
1998 04 21	704	0.4−	1.0−	1998 04 25	699	0.4+	0.2+				

1998 HS₂₄ = 1992 BG₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden				Marsden			
(2000.0)				(2000.0)			
<i>M</i>	78.21760			<i>P</i>		<i>Q</i>	
<i>n</i>	0.19043055	<i>ω</i>	351.76648	−0.63429228		−0.76006564	
<i>a</i>	2.9921152	<i>Ω</i>	137.44274	+0.72067126		−0.64748821	
<i>e</i>	0.0476862	<i>i</i>	12.06163	+0.27983252		−0.05531033	
<i>P</i>	5.18	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1992 01 30	809	0.1−	0.1+	1998 04 22	012	0.3+	0.1+	1998 04 29	012	0.3−	0.2+
1992 01 30	809	0.9−	0.4+	1998 04 23	012	0.9+	0.0	1998 04 29	012	0.6−	0.7+
1992 01 30	809	1.3−	0.6+	1998 04 23	012	0.3+	0.0	1998 05 04	012	0.3+	1.1−
1992 02 02	809	1.5+	0.7−	1998 04 28	012	0.3−	0.4+	1998 05 04	012	0.4+	0.5−
1992 02 02	809	0.1+	0.0	1998 04 29	012	1.4−	0.8−				
1992 02 02	809	0.8+	0.5−	1998 04 29	012	0.3+	1.0+				

1998 HM₂₆ = 1995 US₄₉ = 1995 WH₄₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	275.56507		(2000.0)		P		Q				
<i>n</i>	0.24240972	ω	169.32111		+0.97238369		+0.23334329				
<i>a</i>	2.5474325	Ω	177.17263		-0.22037649		+0.92444152				
<i>e</i>	0.1676434	<i>i</i>	5.31429		-0.07683858		+0.30159372				
<i>P</i>	4.07 <th><i>H</i></th> <td>14.5<th><i>G</i></th><td>0.15</td><th><i>U</i></th><td>4</td><td></td><td></td></td>	<i>H</i>	14.5 <th><i>G</i></th> <td>0.15</td> <th><i>U</i></th> <td>4</td> <td></td> <td></td>	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1995 10 25	372	0.1+	0.7-	1998 04 22	704	0.2+	0.2+	1998 05 22	704	0.1-	0.6+
1995 10 25	372	0.7+	0.8+	1998 04 22	704	1.4+	0.0	1998 05 22	704	0.6-	0.5+
1995 11 26	691	0.4-	0.2-	1998 04 22	704	1.4+	1.2-	1998 05 22	704	0.3+	0.7-
1995 11 26	691	0.2-	0.3+	1998 04 22	704	1.0-	0.6+	1998 05 22	704	0.3-	0.1+
1995 11 26	691	0.4-	0.3-	1998 04 28	691	0.9-	0.0	1998 05 22	704	0.1-	0.3-
1995 11 27	691	0.0	0.1-	1998 04 28	691	0.7-	0.1+	1998 05 24	704	0.0	0.1+
1995 11 27	691	0.2+	0.0	1998 04 28	691	0.9-	0.2+	1998 05 24	704	0.7+	0.0
1995 11 27	691	0.1-	0.2-	1998 05 01	704	0.7+	0.6-	1998 05 24	704	0.9+	0.1+
1998 04 20	691	0.3-	0.2+	1998 05 01	704	0.7+	1.3-	1998 05 24	704	(2.7+	0.0)
1998 04 20	691	0.2-	0.3+	1998 05 01	704	0.8-	0.5+				
1998 04 20	691	0.5-	0.1+	1998 05 01	704	(3.5+	0.2+)				

1998 HH₂₇ = 1990 QP₁₆ = 1997 EW₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	178.76269		(2000.0)			P		Q		
<i>n</i>	0.21296539	ω	296.34704			+0.49075285		-0.86878539		
<i>a</i>	2.7771331	Ω	124.10688			+0.82517003		+0.43906106		
<i>e</i>	0.0862607	<i>i</i>	4.58119			+0.27974286		+0.22899200		
<i>P</i>	4.63	<i>H</i>	14.5			<i>G</i>	0.15	<i>U</i>	4	
Residuals in seconds of arc										
1990 08 24	809	(6.1+ 2.6-)	1997 03 06	704	0.9-	0.5-	1998 04 29	691	0.0	0.5+
1990 08 24	809	(6.1+ 3.3-)	1998 04 21	691	0.3-	0.4+	1998 05 22	704	1.0+	1.6+
1990 08 24	809	(4.4+ 4.4-)	1998 04 21	691	0.4-	0.4+	1998 05 22	704	1.7+	0.7-
1990 08 26	809	0.3+ 0.3+	1998 04 21	691	0.4-	0.5+	1998 05 22	704	(2.3+ 0.9+)	
1990 08 26	809	0.3- 0.6+	1998 04 22	704	(0.4+ 3.5-)	1998 05 22	704	1.3-	1.7-	
1990 08 26	809	0.2- 0.3-	1998 04 22	704	0.8+	0.0	1998 05 22	704	0.8-	0.3+
1997 03 04	704	0.5+ 1.7+	1998 04 22	704	1.2+	0.8-	1998 05 24	704	0.6-	0.3+
1997 03 04	704	0.6+ 0.2-	1998 04 22	704	0.3+	0.2-	1998 05 24	704	0.2-	1.0-
1997 03 05	704	0.1- 1.1-	1998 04 22	704	(3.0- 0.4+)	1998 05 24	704	0.7-	0.1+	
1997 03 05	704	0.1+ 1.0-	1998 04 29	691	0.5-	0.1+	1998 05 24	704	(1.3+ 2.3+)	
1997 03 06	704	0.1- 1.5+	1998 04 29	691	0.2+	0.5+				

1998 HB₃₀ = 1995 KA₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	211.17030		(2000.0)		P		Q				
<i>n</i>	0.29975724	ω	302.17550		+0.97698233		-0.20555549				
<i>a</i>	2.2111740	Ω	69.74062		+0.21040615		+0.88452136				
<i>e</i>	0.1610008	<i>i</i>	3.48523		+0.03513938		+0.41877071				
<i>P</i>	3.29	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1995 05 27	691	0.7-	0.1-	1998 03 20	327	1.2-	0.2+	1998 04 22	704	0.5+	0.2+
1995 05 27	691	0.9-	0.5-	1998 03 20	327	0.5+	0.4+	1998 04 22	704	1.2+	0.4+
1995 05 27	691	0.6-	0.1+	1998 03 25	704	0.6+	0.8-	1998 04 22	704	0.3+	0.7+
1995 05 31	691	0.3+	0.6-	1998 03 25	704	1.3+	1.4+	1998 04 22	704	0.3+	0.9+
1995 05 31	691	(3.3+	2.2-)	1998 03 25	704	1.2-	1.0-	1998 04 22	704	1.6+	1.2+
1995 05 31	691	1.8+	0.7+	1998 03 25	704	0.3+	0.2-	1998 04 24	691	0.4-	0.1-
1998 03 20	704	0.9+	0.7-	1998 03 25	704	1.7-	1.1-	1998 04 24	691	0.6-	0.1-
1998 03 20	704	0.3+	0.6-	1998 04 20	704	0.5+	0.9+	1998 04 24	691	0.4-	0.3-
1998 03 20	704	(1.2-	3.0+)	1998 04 20	704	0.6+	0.4+	1998 05 03	691	0.7-	0.6-
1998 03 20	704	0.9+	0.8-	1998 04 20	704	1.2-	0.0	1998 05 03	691	0.2+	0.4-
1998 03 20	327	1.1-	0.1-	1998 04 20	704	1.5-	0.7-	1998 05 03	691	0.2+	0.1+
1998 03 20	327	0.4-	1.2+	1998 04 20	704	(4.7-	1.0-)				

1998 HS₃₀ = 1974 YE = 1978 TY₆ = 1987 XO

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	168.28900		(2000.0)		P		Q				
n	0.22680219	ω	349.12172		+0.50082774		-0.83628046				
a	2.6630004	Ω	70.48811		+0.81083924		+0.36309453				
e	0.1545179	i	13.69605		+0.30283874		+0.41084955				
P	4.35	H	13.5	G	0.15	U	2				
Residuals in seconds of arc											
1974 12 18	330	0.2-	0.8+	1998 04 23	704	0.2+	0.4+	1998 04 30	566	0.6-	0.1-
1978 10 02	095	1.4-	0.2-	1998 04 23	704	1.6-	0.3+	1998 05 22	704	0.7+	0.6+
1978 10 08	095	1.3+	0.4+	1998 04 24	704	0.1+	0.0	1998 05 22	704	0.1-	0.6+
1987 12 14	046	0.2+	1.0-	1998 04 24	704	0.1-	1.1+	1998 05 22	704	0.6-	0.2+
1987 12 14	046	0.0	0.2+	1998 04 24	704	0.2+	1.6+	1998 05 22	704	0.6+	0.8-
1987 12 15	046	0.5+	0.5-	1998 04 24	704	0.3+	0.4+	1998 05 22	704	0.1+	0.2-
1987 12 15	046	0.8-	0.8-	1998 04 29	566	0.3+	0.2-	1998 05 24	704	0.1-	0.2+
1987 12 22	046	0.7+	0.9+	1998 04 29	566	0.2+	0.0	1998 05 24	704	0.7-	0.5+
1987 12 22	046	0.3-	0.7+	1998 04 29	566	0.3-	0.1-	1998 05 24	704	0.5-	0.9+
1998 04 21	704	0.1-	0.5+	1998 04 30	566	0.8+	1.3-	1998 05 24	704	1.0-	0.9+
1998 04 21	704	0.0	0.2-	1998 04 30	566	0.7+	1.5-	1998 05 24	704	1.1-	0.6+
1998 04 21	704	0.2-	0.1-	1998 04 30	566	0.8+	1.9-	1998 05 27	699	0.3+	0.3-
1998 04 21	704	0.4-	0.1-	1998 04 30	566	1.2+	1.3-	1998 05 27	699	0.2-	0.2+
1998 04 21	704	1.0-	0.1+	1998 04 30	566	0.7+	0.9-	1998 05 27	699	0.2+	0.1+
1998 04 23	704	0.1-	0.7+	1998 04 30	566	1.3+	1.3-	1998 06 02	699	0.1-	0.3+
1998 04 23	704	0.1+	0.4-	1998 04 30	566	0.2+	0.2-	1998 06 02	699	0.0	0.0
1998 04 23	704	0.5+	0.4+	1998 04 30	566	0.2-	0.2+	1998 06 02	699	0.5-	0.4+

1998 HZ₃₁ = 1978 WV₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	12.23712		(2000.0)			P		Q			
<i>n</i>	0.27270532	ω	332.10974			-0.84754414		+0.52239641			
<i>a</i>	2.3550871	Ω	239.68647			-0.46451330		-0.81551831			
<i>e</i>	0.0736661	<i>i</i>	6.22803			-0.25670279		-0.24906200			
<i>P</i>	3.61	<i>H</i>	14.0			<i>G</i>	0.15	<i>U</i>	4		
Residuals in seconds of arc											
1978 11 29	675	0.1+	0.2-	1998 03 31	704	0.1+	0.3-	1998 04 22	704	1.0-	0.4+
1978 11 30	675	0.1-	0.4-	1998 03 31	704	1.0+	0.4+	1998 04 30	699	0.2+	0.7-
1998 03 22	699	0.4-	0.3-	1998 03 31	704	0.0	0.1+	1998 04 30	699	0.5+	0.4-
1998 03 22	699	0.3+	0.7+	1998 04 20	704	0.4+	0.0	1998 04 30	699	0.5+	0.4-
1998 03 22	699	0.2-	0.6+	1998 04 20	704	0.7+	0.1+	1998 05 16	704	0.6+	1.6-
1998 03 25	704 (0.1+	2.4-)		1998 04 20	704	0.1-	0.6-	1998 05 16	704	0.5+	0.3+
1998 03 25	704 1.4-	0.4-		1998 04 20	704	0.6-	0.8-	1998 05 16	704	0.2+	0.4+
1998 03 25	704 0.3+	0.1+		1998 04 22	704	0.1+	0.1+	1998 05 16	704	0.3-	1.3+
1998 03 25	704 0.0	0.6+		1998 04 22	704	0.3-	0.1+	1998 05 16	704	0.8-	0.3-
1998 03 25	704 0.1+	1.0+		1998 04 22	704	0.5-	0.1-				
1998 03 31	704 0.2+	0.4-		1998 04 22	704	0.1-	0.3-				

1998 HX₃₂ = 1978 XH

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	207.23078		(2000.0)		P		Q				
n	0.17477099	ω	167.99845		+0.98881633		-0.14561298				
a	3.1682770	Ω	200.45872		+0.12806773		+0.93980496				
e	0.1024338	i	5.29159		+0.07642590		+0.30913346				
P	5.64	H	13.0		G	0.15	U	5			
Residuals in seconds of arc											
1978 12 03	675	1.5+	1.3-	1998 03 24	699	1.2+	0.5+	1998 04 18	704	0.2+	0.7+
1978 12 03	675	0.2-	0.1+	1998 03 24	699	0.2+	0.5-	1998 04 18	704	0.7-	1.2-
1978 12 05	675	0.8-	0.1+	1998 03 24	699	0.5-	1.0+	1998 04 18	704	1.4-	0.1+
1978 12 06	675	1.7-	0.0	1998 03 25	704	0.7+	0.7+	1998 04 20	704	1.0+	0.2-
1978 12 06	675	1.1+	1.0+	1998 03 25	704	0.0	0.1+	1998 04 20	704	0.1+	0.3-
1998 03 20	704	0.2-	0.2+	1998 03 25	704	1.1+	0.5+	1998 04 20	704	1.2-	0.4+
1998 03 20	704	0.8-	0.7-	1998 03 25	704	0.6-	0.1-	1998 04 20	704	1.6+	0.7+
1998 03 20	704	0.3+	0.0	1998 04 01	704	1.1-	0.2-	1998 04 20	704	0.0	1.0-

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1998 03 20	704	0.0	0.5−	1998 04 01	704	0.2+	0.0	1998 04 22	704	0.1−	0.7−
1998 03 22	704	0.5+	0.8−	1998 04 01	704	1.0−	0.5+	1998 04 22	704	0.8+	0.0
1998 03 22	704	(1.6−	2.4+)	1998 04 01	704	1.4+	0.1+	1998 04 22	704	0.3−	0.7+
1998 03 22	704	0.7+	0.4−	1998 04 01	704	1.0−	0.1+	1998 04 22	704	0.3−	0.5−
1998 03 22	704	1.1−	0.2+	1998 04 18	704	0.2+	0.8−	1998 04 22	704	0.1+	1.9+
1998 03 22	704	(6.0−	1.7+)	1998 04 18	704	0.1+	0.6−				

1998 HK₃₃ = 1981 RO₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	278.78090		(2000.0)	P	Q
<i>n</i>	0.27700662	ω	318.95962	+0.76556315	+0.64335781
<i>a</i>	2.3306440	Ω	1.00385	−0.55743661	+0.66482620
<i>e</i>	0.1395613	<i>i</i>	6.38083	−0.32121252	+0.37960091
<i>P</i>	3.56	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1981 09 03	675	0.6−	0.1−	1998 03 25	704	0.3+	0.6−	1998 04 20	704	1.0+	1.0+
1981 09 04	675	0.6+	0.1+	1998 03 25	704	1.6+	0.7+	1998 04 20	704	0.0	1.3+
1998 03 22	704	0.2−	0.7−	1998 04 01	704	1.3+	1.0−	1998 04 22	704	0.1+	0.7+
1998 03 22	704	1.7−	0.4−	1998 04 01	704	(2.2−	0.0)	1998 04 22	704	0.3−	1.7−
1998 03 22	704	0.1+	0.6+	1998 04 01	704	0.9−	1.4+	1998 04 22	704	0.2+	1.1−
1998 03 22	704	(4.6−	0.5+)	1998 04 01	704	0.7−	0.5−	1998 04 22	704	0.7+	0.4−
1998 03 25	704	0.2+	0.3−	1998 04 20	704	0.9−	0.1−				
1998 03 25	704	0.1+	0.6+	1998 04 20	704	0.9−	0.5+				

1998 HK₃₄ = 1994 CZ₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	36.71085		(2000.0)	P	Q
<i>n</i>	0.25959266	ω	117.01887	−0.99881615	−0.01951990
<i>a</i>	2.4337415	Ω	61.89196	−0.00095206	−0.90793754
<i>e</i>	0.1564665	<i>i</i>	2.89547	+0.04863530	−0.41865069
<i>P</i>	3.80	<i>H</i>	15.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1994 02 07	809	(2.2+	0.7+)	1998 03 25	704	0.3−	0.1−	1998 04 22	704	0.4+	0.6−
1994 02 07	809	0.4+	0.1−	1998 03 25	704	0.3−	0.7+	1998 04 24	699	0.7+	0.5−
1994 02 07	809	0.7+	0.4−	1998 03 25	704	0.3−	0.7−	1998 04 24	699	0.3+	0.9+
1994 02 09	809	(1.2−	2.4−)	1998 03 25	704	0.3+	0.4+	1998 04 24	699	0.0	0.8+
1994 02 09	809	(1.6−	3.5−)	1998 03 25	704	0.3+	0.2−	1998 04 28	699	0.3+	0.2−
1994 02 09	809	(1.6−	3.0−)	1998 04 20	704	0.1+	0.0	1998 04 28	699	0.4+	0.2−
1994 02 12	809	0.2−	0.8+	1998 04 20	704	0.4−	1.2−	1998 04 28	699	0.1+	0.4−
1994 02 12	809	0.9−	0.1+	1998 04 20	704	0.7−	0.1+	1998 04 30	699	0.3−	1.0+
1994 02 12	809	0.2+	0.1+	1998 04 20	704	0.4+	1.4+	1998 04 30	699	0.2+	0.0
1998 03 22	704	0.3−	0.1+	1998 04 20	704	0.4−	0.2+	1998 04 30	699	0.1−	0.8+
1998 03 22	704	0.7+	0.2−	1998 04 22	704	0.6+	0.3−	1998 05 01	699	0.3+	0.4+
1998 03 22	704	0.2+	0.6−	1998 04 22	704	1.0−	0.0	1998 05 01	699	0.3−	1.0−
1998 03 22	704	1.5−	1.0−	1998 04 22	704	0.9+	0.4+	1998 05 01	699	0.1+	0.3−
1998 03 22	704	(0.5−	2.2−)	1998 04 22	704	0.2−	0.1+				

1998 HS₃₄ = 1990 BD₁ = 1996 TC₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	70.19614		(2000.0)	P	Q
<i>n</i>	0.25915631	ω	42.04103	−0.80458491	−0.59134859
<i>a</i>	2.4364726	Ω	101.62664	+0.52899819	−0.75528803
<i>e</i>	0.0763659	<i>i</i>	3.17876	+0.26982223	−0.28257181
<i>P</i>	3.80	<i>H</i>	15.0	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1990 01 24	875	1.2−	0.8−	1998 03 25	704	0.2+	0.4−	1998 04 28	699	0.4+	0.1−
1990 01 25	875	1.2+	0.6+	1998 03 25	704	0.3+	0.8+	1998 04 28	699	0.3−	0.3+
1996 10 14	721	0.5−	0.5+	1998 03 25	704	(2.2−	0.6−)	1998 04 30	699	0.2+	1.1−
1996 10 14	721	0.1−	0.5−	1998 03 26	566	1.4−	0.1+	1998 04 30	699	0.5+	0.2−
1996 10 16	721	0.1+	0.2−	1998 03 26	566	1.6−	0.2−	1998 04 30	699	0.9+	0.4−
1996 10 16	721	0.8+	0.6−	1998 03 26	566	1.1−	0.1+	1998 05 01	699	0.3+	0.2−
1998 03 22	704	0.6+	0.3+	1998 04 20	704	0.5−	1.1−	1998 05 01	699	0.1+	0.2−

1998 03 22	704	0.2+	0.1+	1998 04 20	704	0.2−	1.0−	1998 05 01	699	0.2+	0.4−
1998 03 22	704	0.7+	0.7+	1998 04 20	704	1.0+	0.1+	1998 05 16	691	0.4−	0.2−
1998 03 22	704	0.2+	1.0+	1998 04 20	704	0.3+	0.4+	1998 05 16	704	1.6+	0.7+
1998 03 22	704	0.5−	0.9+	1998 04 22	704	0.2+	0.6−	1998 05 16	704	(1.4+	2.6−)
1998 03 25	699	0.3+	0.8+	1998 04 22	704	0.2+	0.2−	1998 05 16	691	0.5−	0.1+
1998 03 25	699	0.9−	0.5+	1998 04 22	704	0.1+	0.9−	1998 05 16	704	(1.6+	2.5+)
1998 03 25	699	0.2+	0.4+	1998 04 22	704	0.3−	0.7−	1998 05 16	691	0.6−	0.1+
1998 03 25	704	0.1−	0.3−	1998 04 22	704	0.4+	0.7−	1998 05 16	704	0.9−	1.5+
1998 03 25	704	0.1+	0.0	1998 04 28	699	0.4−	0.4−	1998 05 16	704	(3.4−	0.2+)

1998 HO₃₅ = 1989 YN₉ = 1991 JQ₆ = 1994 FG

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	339.85383		(2000.0)	P	Q
<i>n</i>	0.27290536	ω	115.77612	−0.28683055	+0.95715611
<i>a</i>	2.3539361	Ω	137.49253	−0.89866027	−0.25446133
<i>e</i>	0.1188580	<i>i</i>	3.37298	−0.33187039	−0.13820856
<i>P</i>	3.61	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1989 12 29	511	1.8+	0.0	1994 03 18	104	0.5+	0.6+	1998 04 20	704	0.1−	1.3−
1989 12 29	511	1.8−	0.1−	1994 03 20	104	0.8+	1.0−	1998 04 20	704	0.6−	0.3+
1991 05 12	809	0.8+	0.8+	1994 03 20	104	0.1−	0.1+	1998 04 20	704	0.1+	0.2−
1991 05 12	809	0.4+	1.2+	1994 03 20	104	0.8−	0.2+	1998 04 22	704	0.0	0.8−
1991 05 12	809	0.6−	1.1+	1994 03 20	104	1.2−	0.0	1998 04 22	704	0.1−	1.1−
1994 03 17	104	0.5+	0.7+	1998 03 22	704	0.3−	0.6−	1998 04 22	704	0.4+	0.8−
1994 03 17	104	0.4+	0.1+	1998 03 22	704	1.0−	0.5−	1998 04 22	704	0.1+	0.8−
1994 03 17	104	0.3−	0.1−	1998 03 22	704	0.9−	0.2−	1998 04 22	704	0.5+	1.5−
1994 03 17	104	0.3−	1.4+	1998 03 22	704	0.3−	1.2−	1998 05 01	699	0.3+	0.2−
1994 03 17	104	0.1+	0.8+	1998 03 22	704	0.8−	0.2−	1998 05 01	699	0.1−	0.2+
1994 03 17	104	0.4+	0.5+	1998 03 25	704	0.4+	0.5+	1998 05 01	699	0.3+	0.6−
1994 03 17	104	0.6+	1.1−	1998 03 25	704	0.8+	0.9+	1998 05 16	704	(2.4+	0.8−)
1994 03 18	104	0.4+	0.3+	1998 03 25	704	0.5+	0.5+	1998 05 16	704	0.7+	0.8+
1994 03 18	104	0.1+	0.1+	1998 03 25	704	0.7+	1.1+	1998 05 16	704	0.3+	0.5−
1994 03 18	104	0.5−	0.1+	1998 03 25	704	0.6−	1.2+	1998 05 16	704	1.8−	1.7+
1994 03 18	104	0.2+	0.3+	1998 04 20	704	0.5−	0.4−	1998 05 16	704	(2.2−	2.3−)

1998 HR₃₅ = 1990 RF₁₆ = 1990 SG₂₂ = 1993 FX₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	285.19273		(2000.0)	P	Q
<i>n</i>	0.20282681	ω	166.21747	+0.41644575	+0.90815715
<i>a</i>	2.8689246	Ω	128.37545	−0.83921548	+0.40204921
<i>e</i>	0.0286355	<i>i</i>	3.12249	−0.34970032	+0.11664919
<i>P</i>	4.86	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 3

Residuals in seconds of arc

1990 09 15	809	0.1+	0.4−	1998 03 22	704	0.2−	0.7−	1998 04 21	704	0.3+	0.3+
1990 09 15	809	0.2−	0.3+	1998 03 22	704	1.0+	0.1+	1998 04 21	704	0.5+	0.7+
1990 09 15	809	0.2−	0.2+	1998 03 22	704	0.5−	0.2−	1998 04 21	704	0.0	0.2+
1990 09 22	809	1.1+	0.6−	1998 03 25	699	0.2−	0.1−	1998 04 21	704	1.0+	0.2+
1990 09 22	809	0.1−	1.4−	1998 03 25	699	0.7+	0.0	1998 04 21	704	0.4+	0.0
1990 09 22	809	(0.9+	2.1−)	1998 03 25	699	0.1−	0.3−	1998 04 22	704	0.5−	0.3−
1993 03 17	809	0.9+	0.8+	1998 03 25	704	1.4+	0.1−	1998 04 22	704	0.9+	0.3−
1993 03 18	809	0.6−	0.2−	1998 03 25	704	0.6+	1.4+	1998 04 22	704	0.6−	0.2−
1993 03 18	809	0.2+	0.8+	1998 03 25	704	0.2+	0.0	1998 04 22	704	0.1−	0.7+
1993 03 23	809	1.0+	0.0	1998 03 25	704	0.5−	0.0	1998 04 22	704	1.2−	0.2−
1993 03 23	691	0.7−	0.9−	1998 04 20	704	0.6−	0.0	1998 05 16	704	1.2+	1.0−
1993 03 23	691	0.7−	0.9−	1998 04 20	704	0.4−	0.5−	1998 05 16	704	1.8+	0.6−
1993 03 23	691	0.7−	1.0−	1998 04 20	704	0.7−	0.1+	1998 05 16	704	(3.4+	2.4−)
1998 03 22	704	0.8−	0.6−	1998 04 20	704	1.5−	1.0+	1998 05 16	704	0.4+	0.3+
1998 03 22	704	0.9−	0.7−	1998 04 20	704	1.3−	0.2+	1998 05 16	704	(2.9−	0.5−)

1998 HK₃₆ = 1978 QD₃ = 1985 SC

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	265.24679	ω	287.38971	+0.92242120	+0.38239570		
<i>a</i>	2.2864100	Ω	50.16332	−0.32225395	+0.83917752		
<i>e</i>	0.2063599	<i>i</i>	4.03029	−0.21281807	+0.38672293		
<i>P</i>	3.46	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1978 08 22	414	0.6+	1.0−	1998 03 25	704	1.2+	0.3+
1978 08 22	414	0.7+	1.3−	1998 03 25	704	1.0+	0.2+
1978 08 23	414	0.5+	0.1−	1998 03 25	704	0.6+	0.2−
1978 08 23	414	0.5−	0.3−	1998 03 25	704	0.8+	0.6+
1985 09 18	688	1.6−	0.7+	1998 03 25	704	0.6−	0.2+
1985 09 18	688	3.2−	1.9+	1998 04 20	704	0.5−	0.1+
1985 10 12	688	2.2+	1.0+	1998 04 20	704	0.8−	0.2+
1985 10 12	688	0.1+	1.9+	1998 04 20	704	1.2+	0.4+
1998 03 22	704	1.7+	0.2+	1998 04 20	704	0.3−	1.1+
1998 03 22	704	0.7+	0.3−	1998 04 20	704	0.9−	0.6+
1998 03 22	704	0.7−	0.5−	1998 04 21	704	0.1−	0.2−
1998 03 22	704	0.1+	0.7−	1998 04 21	704	0.2−	0.1+
1998 03 22	704	0.9+	0.9+	1998 04 21	704	0.1−	0.5−

1998 HX₃₆ = 1976 UN₉ = 1988 CC₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	289.84990	ω	109.99250	+0.69967545	+0.71262587		
<i>a</i>	2.7879139	Ω	204.64647	−0.69278047	+0.65919081		
<i>e</i>	0.2228799	<i>i</i>	7.04858	−0.17466964	+0.24006634		
<i>P</i>	4.65	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1976 10 22	381	0.3−	0.0	1998 03 25	704	(3.1−	2.0+)
1976 10 22	381	0.5+	0.0	1998 04 01	704	0.3−	0.5+
1976 10 24	381	0.2−	0.3+	1998 04 01	704	1.2+	0.4−
1988 02 13	809	0.1−	0.2−	1998 04 01	704	0.8+	0.8+
1998 03 22	704	1.0+	0.7+	1998 04 01	704	0.8−	0.8−
1998 03 22	704	(0.9−	2.3+)	1998 04 01	704	(3.7−	0.4+)
1998 03 22	704	(0.1+	2.2+)	1998 04 20	704	0.3+	0.3+
1998 03 22	704	0.5−	0.5+	1998 04 20	704	(2.8−	0.8−)
1998 03 25	704	(2.3−	1.4+)	1998 04 20	704	1.5−	0.3−
1998 03 25	704	1.7−	0.0	1998 04 20	704	0.2−	0.3+
1998 03 25	704	(3.3−	1.1−)	1998 04 20	704	0.0	0.4+
1998 03 25	704	1.1−	0.1−	1998 04 21	704	0.4+	0.5+

1998 HC₃₇ = 1984 PC = 1988 VV₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	286.93743	ω	358.60809	+0.78862094	+0.61466090		
<i>a</i>	2.3765355	Ω	323.44822	−0.56387464	+0.71231002		
<i>e</i>	0.2212046	<i>i</i>	1.57806	−0.24519869	+0.33883094		
<i>P</i>	3.66	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3
Residuals in seconds of arc							
1984 08 03	046	1.2+	0.0	1998 03 25	704	0.3+	0.5+
1984 08 04	046	1.2−	0.1−	1998 03 25	704	0.2+	0.2−
1988 11 08	399	(6.2−	1.7−)	1998 03 25	704	0.4+	0.2−
1988 11 08	399	(4.5−	1.3−)	1998 03 25	704	0.1+	0.2−
1988 11 08	399	0.8−	1.7−	1998 03 25	704	0.4−	0.4−
1988 11 11	399	1.9+	1.2+	1998 04 20	704	0.3−	0.6−
1988 11 11	399	0.4−	1.1−	1998 04 20	704	0.3+	0.4+
1988 11 11	399	(3.1−	3.2−)	1998 04 20	704	0.6−	0.9−
1988 11 14	399	0.4+	1.2−	1998 04 20	704	0.0	0.3+
1988 11 14	399	0.3−	1.4+	1998 04 20	704	0.2−	0.6+
1988 11 14	399	0.7−	1.4+	1998 04 21	704	0.1−	0.1+

1998 03 25	699	0.2−	0.3+	1998 04 21	704	0.5−	0.1−	1998 05 16	704	0.7+	1.5+
1998 03 25	699	0.5+	0.2+	1998 04 21	704	0.1−	0.2−	1998 05 16	704	0.5−	0.6+
1998 03 25	699	0.2−	0.1+	1998 04 21	704	0.2−	0.3−				

1998 HB₃₈ = 1978 RS₁₀Id. G. V. Williams; 1978 PL₂ = 1978 RS₁₀ (*JAM* 2053) is invalid

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	338.46934	ω	331.70351	−0.05696847	+0.99761740		
<i>a</i>	2.5726259	Ω	295.00794	−0.90770546	−0.06798450		
<i>e</i>	0.2276010	<i>i</i>	2.46087	−0.41572273	+0.01173178		
<i>P</i>	4.13	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1978 09 06	809	0.6+	0.5−	1998 04 20	704	0.9−	0.9+
1978 09 10	809	1.0−	1.1+	1998 04 20	704	0.4+	1.0−
1978 09 10	809	0.4+	0.4−	1998 04 20	704	0.1−	0.8−
1978 09 10	809	0.6+	0.9+	1998 04 20	704	0.1−	0.9−
1978 09 10	809	0.7−	0.6−	1998 04 21	704	0.4−	1.0+
1998 03 25	704	0.0	0.6+	1998 04 21	704	0.3−	0.1−
1998 03 25	699	1.0−	0.8+	1998 04 21	704	0.0	0.8+
1998 03 25	699	0.4+	0.3+	1998 04 21	704	0.4+	0.0
1998 03 25	704	0.1−	0.4+	1998 04 21	704	0.0	0.5−
1998 03 25	699	0.3+	0.5+	1998 04 22	704	0.4−	0.5+
1998 03 25	704	0.3−	0.1+	1998 04 22	704	0.6+	0.8+
1998 03 25	704	1.3+	1.7−	1998 04 22	704	0.2−	0.1−
1998 04 20	704	0.1+	0.2+	1998 04 22	704	0.3+	0.3−

1998 HW₃₈ = 1979 QW = 1997 AA₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	315.42655	ω	19.41766	−0.02069588	+0.99969237		
<i>a</i>	2.9487914	Ω	249.39837	−0.91920590	−0.02440364		
<i>e</i>	0.0489587	<i>i</i>	0.83674	−0.39323299	+0.00443110		
<i>P</i>	5.06	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1979 08 22	809	1.0−	0.3+	1997 01 16	599	0.5+	0.1+
1979 08 22	809	0.3−	1.1+	1997 01 16	599	0.6+	0.2+
1979 08 22	809	0.2−	0.7+	1998 03 22	704	0.9+	0.6−
1979 08 23	809	(6.5−	9.1+)	1998 03 22	704	0.6+	0.1+
1979 08 23	809	0.7+	0.0	1998 03 22	704	(2.3−	1.4+)
1997 01 09	691	0.2−	0.3+	1998 03 22	704	0.7−	2.0+
1997 01 09	691	0.2−	0.7+	1998 03 25	704	0.5−	0.9+
1997 01 09	691	0.1−	0.7+	1998 03 25	704	0.8−	0.7+
1997 01 13	566	0.5+	0.1+	1998 03 25	704	0.1+	0.1+
1997 01 13	566	0.0	0.4+	1998 03 25	704	0.4+	1.7+
1997 01 13	566	0.7−	0.2+	1998 03 25	704	0.3−	0.5+
1997 01 14	566	0.4−	0.0	1998 04 01	704	1.7−	0.5−
1997 01 14	566	0.3+	0.0	1998 04 01	704	0.3−	0.2−
1997 01 14	566	0.5−	0.2−	1998 04 01	704	0.4−	0.6+
1997 01 14	599	(0.1+	3.1−)	1998 04 01	704	1.4+	0.5+
1997 01 14	599	0.5+	1.8−	1998 04 01	704	0.2−	0.5−
1997 01 15	599	0.3+	0.4+	1998 04 20	704	0.4+	0.4+
1997 01 15	599	0.3−	0.6+	1998 04 20	704	1.2+	0.8−

1998 HU₃₉ = 1991 WF

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	304.00909	ω	99.25940	+0.14435627	+0.98952558		
<i>a</i>	2.7298692	Ω	179.03995	−0.92176826	+0.13469914		
<i>e</i>	0.0119497	<i>i</i>	2.11860	−0.35986739	+0.05191589		
<i>P</i>	4.51	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

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Residuals in seconds of arc

1991 11 29	691	1.0+	0.6+	1998 03 25	704	0.4+	1.6-	1998 04 21	704	0.1-	1.3-
1991 11 29	691	0.1+	1.0+	1998 03 25	704	0.3-	0.5-	1998 04 22	704	0.7+	0.7-
1991 11 29	691	0.3+	0.0	1998 03 25	704	0.4-	1.7-	1998 04 22	704	0.7-	0.8-
1991 12 03	691	0.1+	0.3-	1998 04 20	704	0.3+	0.1-	1998 04 22	704	0.1+	0.2+
1991 12 03	691	0.5-	0.8-	1998 04 20	704	1.7+	0.8-	1998 04 22	704	1.2-	1.1-
1991 12 03	691	0.9-	0.6-	1998 04 20	704	1.4-	1.9+	1998 04 22	704	0.0	0.4+
1998 03 22	704	1.2+	1.8+	1998 04 20	704	0.3+	0.0	1998 05 16	704	0.7-	1.2+
1998 03 22	704	1.2-	1.3+	1998 04 20	704	0.3-	0.8-	1998 05 16	704	1.7+	1.7-
1998 03 22	704	0.2-	1.4+	1998 04 21	704	0.1-	0.3-	1998 05 16	704	0.2-	0.1-
1998 03 22	704	(4.0-	0.9+)	1998 04 21	704	0.8-	1.8+	1998 05 16	704	0.3-	1.4+
1998 03 25	704	0.3+	0.3+	1998 04 21	704	0.3-	0.7+				
1998 03 25	704	0.9+	0.3-	1998 04 21	704	0.6+	0.5-				

1998 HV₃₉ = 1995 UG₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	89.14623		(2000.0)	P	Q
<i>n</i>	0.19884650	ω	75.62437	-0.58963399	-0.80664753
<i>a</i>	2.9070829	Ω	50.58021	+0.71927659	-0.54732490
<i>e</i>	0.0350430	<i>i</i>	3.01549	+0.36738663	-0.22305879
<i>P</i>	4.96	<i>H</i>	13.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1995 10 20	691	0.1+	0.5+	1998 03 25	704	0.6-	0.3+	1998 04 22	704	0.0	0.1+
1995 10 20	691	0.0	0.3+	1998 03 25	704	0.1-	0.1+	1998 04 22	704	0.5+	0.8-
1995 10 20	691	0.1+	0.5+	1998 03 25	704	0.2+	0.1+	1998 04 22	704	0.3-	0.7-
1995 10 25	691	0.8+	1.5-	1998 04 20	704	0.1-	0.9+	1998 04 22	704	0.8-	0.1-
1995 10 25	691	0.6-	0.3+	1998 04 20	704	(2.1+	1.6+)	1998 04 22	704	0.6+	0.9-
1995 10 25	691	0.7-	0.4+	1998 04 20	704	0.6-	0.0	1998 04 25	699	0.0	0.8+
1998 03 22	704	0.2-	1.2+	1998 04 20	704	1.3+	0.1+	1998 04 25	699	1.2+	0.7+
1998 03 22	704	0.5-	1.0+	1998 04 20	704	0.1-	0.2-	1998 04 25	699	1.0+	0.7+
1998 03 22	704	0.5+	0.5-	1998 04 21	704	0.3+	0.1+	1998 05 16	704	1.0-	0.3-
1998 03 22	704	0.4-	0.7-	1998 04 21	704	1.0+	0.4+	1998 05 16	704	(2.6-	0.5+)
1998 03 22	704	0.2+	0.1+	1998 04 21	704	0.2-	0.3-	1998 05 16	704	0.3+	0.4+
1998 03 25	704	0.3-	0.5-	1998 04 21	704	0.4-	0.1+	1998 05 16	704	1.5-	0.7-
1998 03 25	704	0.3-	0.2-	1998 04 21	704	0.3+	0.6-				

1998 HS₄₂ = 1994 PH₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	346.83963		(2000.0)	P	Q
<i>n</i>	0.21278570	ω	106.15707	-0.14853889	+0.98700848
<i>a</i>	2.7786964	Ω	155.05186	-0.95370939	-0.12660223
<i>e</i>	0.2699836	<i>i</i>	8.34830	-0.26148535	-0.09892490
<i>P</i>	4.63	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1994 08 10	809	0.2-	0.1-	1998 04 23	704	0.1-	0.7-	1998 05 01	721	0.1+	0.2-
1994 08 10	809	0.2+	0.5+	1998 04 23	704	0.2-	0.3-	1998 05 16	704	0.4+	0.0
1994 08 10	809	0.5-	0.4-	1998 04 23	704	0.0	0.2-	1998 05 16	704	0.4-	0.2+
1994 08 11	809	0.7+	0.4+	1998 04 23	704	0.7+	0.9-	1998 05 16	704	0.2-	0.2+
1994 08 11	809	0.2+	0.1-	1998 04 24	704	0.1-	0.5+	1998 05 16	704	0.4+	0.9-
1994 08 11	809	0.3-	0.4-	1998 04 24	704	0.3+	0.2+	1998 05 16	704	1.1-	1.2-
1998 03 24	704	0.1+	0.0	1998 04 24	704	0.2+	0.3+	1998 05 23	699	0.1+	0.7+
1998 03 24	704	1.3+	0.9+	1998 04 24	704	0.2+	0.0	1998 05 23	699	0.3+	0.5+
1998 03 24	704	0.5+	0.4-	1998 04 24	704	0.4-	0.5+	1998 05 23	699	0.1-	0.7+
1998 03 24	704	1.2-	0.8-	1998 04 30	721	0.0	0.1-	1998 05 24	699	0.1+	0.0
1998 03 24	704	0.7-	0.8+	1998 04 30	721	0.2+	0.1+	1998 05 24	699	0.4+	0.3+
1998 04 23	704	1.1-	0.2-	1998 05 01	721	0.1+	0.1-	1998 05 24	699	0.2+	0.4+

1998 HT₄₂ = 1984 JJ = 1985 SA₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	322.02308		(2000.0)	P	Q
<i>n</i>	0.28103504	ω	101.16994	+0.22103915	+0.97526297
<i>a</i>	2.3083185	Ω	181.60410	-0.91988902	+0.20782049
<i>e</i>	0.0417644	<i>i</i>	4.01488	-0.32395353	+0.07531793
<i>P</i>	3.51	<i>H</i>	14.4	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1984 05 07	675	0.1-	0.8-	1998 05 01	358	0.1+	1.0+	1998 05 22	704	0.2+	0.3-
1984 05 08	675	1.3-	0.3-	1998 05 01	358	0.3-	0.5+	1998 05 22	704	0.5+	0.5-
1984 05 09	675	1.1+	0.1-	1998 05 04	358	1.8+	1.5+	1998 05 22	704	0.2-	0.7-
1985 09 21	095	0.1-	0.4+	1998 05 04	358	(0.3+	2.7+)	1998 05 24	704	0.2+	0.1+
1998 04 30	566	0.8-	0.3-	1998 05 19	358	0.7+	0.5-	1998 05 24	704	0.7-	0.1-
1998 04 30	566	0.8-	0.2-	1998 05 19	358	1.0-	0.0	1998 05 24	704	0.0	0.3+
1998 04 30	566	0.8-	0.2-	1998 05 19	358	0.6-	2.1+	1998 05 24	704	0.2-	0.3-
1998 04 30	358	0.1+	0.1+	1998 05 22	704	0.5+	0.0	1998 05 24	704	0.5-	0.3-
1998 04 30	358	1.3+	0.7-	1998 05 22	704	0.7+	0.1-				

1998 HE₄₃ = 4855 T-1 = 1972 RX₂ = 1991 RG₃₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	293.37793		(2000.0)	P	Q
<i>n</i>	0.25894817	ω	164.05501	+0.83969971	+0.54246491
<i>a</i>	2.4377780	Ω	163.02179	-0.50720279	+0.80001857
<i>e</i>	0.1375106	<i>i</i>	4.95536	-0.19403537	+0.25632424
<i>P</i>	3.81	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	3

Residuals in seconds of arc

1971 04 16	675	0.1-	0.7+	1998 05 01	704	0.5+	0.1+	1998 05 22	704	0.3+	0.2+
1971 04 16	675	0.1+	1.0+	1998 05 01	704	0.6+	0.9+	1998 05 22	704	1.3-	0.1+
1971 05 13	675	0.7-	0.9-	1998 05 01	704	0.9+	0.8-	1998 05 22	704	0.9-	0.3-
1971 05 14	675	0.4-	0.4-	1998 05 01	699	0.8+	0.5-	1998 05 22	704	0.6+	0.3+
1971 05 16	675	0.4+	2.4-	1998 05 01	699	1.0+	0.6-	1998 05 22	704	0.3-	0.9-
1972 09 04	095	1.1-	3.7+	1998 05 01	699	0.5+	0.3-	1998 05 24	704	0.0	1.4+
1991 09 07	399	0.6-	2.1-	1998 05 02	691	0.9-	0.1+	1998 05 24	704	0.7+	0.3-
1991 09 07	399	1.8+	2.3-	1998 05 02	691	0.7-	0.2+	1998 05 24	704	0.5+	0.3+
1998 04 30	691	0.4-	0.4+	1998 05 02	691	1.0-	0.2+	1998 05 24	704	0.8+	1.0+
1998 04 30	691	0.5-	0.2+	1998 05 05	699	0.1-	0.8-	1998 05 24	704	1.0-	1.7+
1998 04 30	691	0.4-	0.2+	1998 05 05	699	0.0	0.6-				
1998 05 01	704	0.7+	0.2-	1998 05 05	699	0.3+	0.5-				

1998 HO₄₅ = 1995 QM₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	305.30895		(2000.0)	P	Q
<i>n</i>	0.24192377	ω	323.40930	+0.40384140	+0.91406030
<i>a</i>	2.5508428	Ω	330.35612	-0.82033956	+0.34368486
<i>e</i>	0.1265448	<i>i</i>	4.34765	-0.40491374	+0.21534735
<i>P</i>	4.07	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1995 08 20	691	0.2+	0.2+	1998 03 31	704	0.4-	0.8+	1998 04 22	704	1.0+	0.2+
1995 08 20	691	0.2+	0.1+	1998 03 31	704	1.2-	1.0-	1998 04 22	704	0.3+	0.7-
1995 08 20	691	0.3-	0.2+	1998 03 31	704	0.2-	0.1+	1998 04 22	704	0.6-	0.2+
1995 08 27	691	0.2-	0.1+	1998 04 20	704	0.6+	0.3-	1998 04 22	704	0.4+	0.2+
1995 08 27	691	0.0	0.1-	1998 04 20	704	1.3+	0.4-	1998 04 22	704	0.0	0.3+
1995 08 27	691	0.0	0.0	1998 04 20	704	0.3+	0.7+	1998 04 25	699	0.1+	0.2-
1998 03 25	704	0.4+	0.1+	1998 04 20	704	1.1+	0.7+	1998 04 25	699	0.1+	0.9-
1998 03 25	704	0.3+	0.7+	1998 04 20	704	0.3-	0.7-	1998 04 25	699	0.2-	0.4-
1998 03 25	704	0.4-	0.4+	1998 04 21	704	0.2+	0.2-	1998 05 16	704	0.2-	0.6-
1998 03 25	704	(0.0	2.4+)	1998 04 21	704	0.3-	0.0	1998 05 16	704	0.4-	1.0-
1998 03 25	704	0.6-	1.3+	1998 04 21	704	0.4+	0.1-	1998 05 16	704	1.0-	0.4+
1998 03 31	704	0.1+	0.4-	1998 04 21	704	0.7-	0.1+	1998 05 16	704	0.4+	0.7+
1998 03 31	704	0.2-	0.2+	1998 04 21	704	0.4+	0.0	1998 05 16	704	0.7-	0.6+

1998 HV₅₀ = 1981 WW₅ = 1994 EN₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27036127	ω	54.10244	+0.84679999	+0.52950767		
<i>a</i>	2.3686801	Ω	273.87468	-0.50287989	+0.76602021		
<i>e</i>	0.1078444	<i>i</i>	2.90197	-0.17332513	+0.36446490		
<i>P</i>	3.65	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 11 24	095	0.5-	1.5+	1998 03 25	704	0.1-	0.6+	1998 04 25	699	0.4-	0.0
1994 03 09	675	0.9-	0.7-	1998 04 21	704	0.6+	0.2+	1998 04 25	699	0.7-	0.3-
1994 03 09	675	0.3+	0.9-	1998 04 21	704	0.6+	0.2+	1998 04 30	699	0.1-	0.1-
1994 03 11	675	1.3+	0.2-	1998 04 21	704	0.1+	0.3-	1998 04 30	699	0.1+	0.1+
1994 03 11	675	1.2-	1.0+	1998 04 21	704	0.2+	0.1+	1998 04 30	699	0.4-	0.6-
1998 03 25	704	0.3-	0.4-	1998 04 21	704	0.2+	0.8-	1998 05 16	704	0.2-	0.8-
1998 03 25	699	0.4+	0.3+	1998 04 22	704	0.0	0.2+	1998 05 16	704	0.7+	0.3-
1998 03 25	699	0.2-	0.5+	1998 04 22	704	0.0	0.3+	1998 05 16	704	0.4-	0.5+
1998 03 25	704	0.4+	0.4+	1998 04 22	704	0.5-	0.0	1998 05 16	704	1.2+	1.2+
1998 03 25	699	0.6+	0.4+	1998 04 22	704	0.8-	0.4-	1998 05 16	704	0.1+	1.7+
1998 03 25	704	0.8+	0.7+	1998 04 22	704	0.7-	0.0				
1998 03 25	704	0.3-	0.9-	1998 04 25	699	0.1+	0.2-				

1998 HB₅₁ = 1987 XA = 1990 HF₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23419882	ω	357.04661	+0.46030075	-0.88628414		
<i>a</i>	2.6066311	Ω	65.54207	+0.81565559	+0.39943124		
<i>e</i>	0.0905707	<i>i</i>	3.22579	+0.35046994	+0.23442505		
<i>P</i>	4.21	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1987 12 12	567	0.4+	0.2-	1998 04 25	699	0.6-	0.5+	1998 05 22	704	1.2-	0.3-
1987 12 12	567	0.7-	1.1+	1998 04 25	699	0.4+	1.5+	1998 05 22	704	0.4+	0.3-
1990 04 29	413	0.2+	0.1+	1998 04 28	809	3.1+	0.8-	1998 05 22	704	0.1+	0.4+
1990 05 01	413	0.1-	0.2+	1998 04 28	809	3.8+	0.1+	1998 05 24	704	0.4-	1.0+
1990 05 02	413	0.2-	0.1+	1998 04 28	809	(4.6+	0.5+)	1998 05 24	704	0.7+	0.4-
1998 04 25	809	0.5-	0.5-	1998 05 05	699	1.1-	0.1-	1998 05 24	704	0.3-	0.7+
1998 04 25	809	0.7-	2.0-	1998 05 05	699	0.5-	0.0	1998 05 24	704	0.4-	0.8-
1998 04 25	809	0.2+	0.7-	1998 05 05	699	1.1-	0.1-	1998 05 24	704	0.9-	0.9+
1998 04 25	699	0.5-	1.4+	1998 05 22	704	0.0	0.2+				

1998 HG₅₁ = 1989 CU₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.24424903	ω	214.29838	+0.37621099	-0.92008394		
<i>a</i>	2.5346275	Ω	213.97689	+0.88783425	+0.39167490		
<i>e</i>	0.1223718	<i>i</i>	11.26138	+0.26498232	-0.00602568		
<i>P</i>	4.04	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1989 02 05	809	1.4+	1.1+	1998 04 25	699	0.5+	0.8-	1998 05 05	699	0.3-	0.2-
1989 02 05	809	0.0	1.4+	1998 04 25	699	0.2-	0.0	1998 05 18	699	0.2+	0.1-
1989 02 05	809	0.0	0.4+	1998 04 25	699	0.6+	0.4+	1998 05 18	699	0.2-	0.1+
1989 02 07	809	1.0-	0.4-	1998 05 01	704	0.2+	0.6+	1998 05 18	699	0.5+	0.4-
1989 02 07	809	1.0-	0.8-	1998 05 01	704	0.5+	0.5-	1998 05 22	699	0.7+	0.2-
1989 02 07	809	0.6+	1.8-	1998 05 01	704	(3.1-	0.5-)	1998 05 22	699	0.8-	0.5-
1998 04 22	704	0.8-	1.0-	1998 05 01	704	0.1+	0.7+	1998 05 22	699	0.6+	0.8+
1998 04 22	704	0.3-	0.7+	1998 05 01	704	0.2-	0.5+	1998 05 28	699	0.4+	0.0
1998 04 22	704	0.6-	0.8+	1998 05 05	699	0.7-	0.5-	1998 05 28	699	0.8-	0.1+
1998 04 22	704	(5.6-	0.7-)	1998 05 05	699	0.3+	0.4-	1998 05 28	699	0.5+	0.2-

1998 HL₅₁ = 1996 VA₂₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28924202	ω	129.98815	-0.92850215	+0.36561563		
<i>a</i>	2.2644451	Ω	71.54522	-0.35812068	-0.83552538		
<i>e</i>	0.1509665	<i>i</i>	3.92174	-0.09814956	-0.41014942		
<i>P</i>	3.41	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 11 13	691	0.3+	0.9+	1998 04 22	704	0.1-	0.5-	1998 05 22	704	0.8+	0.1+
1996 11 13	691	0.2+	0.7+	1998 04 22	704	0.4+	0.2+	1998 05 22	704	0.9-	1.1+
1996 11 13	691	0.1-	1.1+	1998 04 22	704	0.1-	0.1-	1998 05 22	704	0.6+	0.3-
1996 11 18	691	0.7-	0.7+	1998 04 25	699	0.6+	0.0	1998 05 22	704	0.2+	0.7+
1996 11 18	691	0.6-	0.5+	1998 04 25	699	0.4+	0.4+	1998 05 24	704	0.1+	0.1-
1996 11 18	691	0.6-	0.6+	1998 04 25	699	0.6+	0.5+	1998 05 24	704	0.6-	0.0
1998 04 21	704	0.2+	0.6+	1998 04 28	566	0.9-	1.1-	1998 05 24	704	1.1+	1.3+
1998 04 21	704	1.9-	0.1-	1998 04 28	566	0.8-	1.1-	1998 05 24	704	0.7+	0.6+
1998 04 21	704	0.5-	0.5-	1998 04 28	566	0.4-	0.9-	1998 05 24	704	1.1-	1.2+
1998 04 21	704	0.3+	0.2-	1998 05 01	699	0.7+	0.5+	1998 05 28	699	1.0-	0.4+
1998 04 21	704	0.2+	0.1-	1998 05 01	699	0.8+	0.1+	1998 05 28	699	0.2+	0.1+
1998 04 22	704	0.1+	0.7+	1998 05 01	699	0.6+	0.3+	1998 05 28	699	0.2+	0.5+
1998 04 22	704	0.2+	0.2+	1998 05 22	704	0.7+	0.6-				

1998 HX₅₁ = 5560 P-L = 1994 SD₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17394367	ω	202.07766	+0.34983010	+0.93542934		
<i>a</i>	3.1783152	Ω	88.42907	-0.85171692	+0.34020972		
<i>e</i>	0.1079216	<i>i</i>	2.91874	-0.39012458	+0.09606921		
<i>P</i>	5.67	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1960 10 17	675	0.2+	1.2-	1998 04 21	704	0.6+	0.3+	1998 04 30	699	1.1+	1.0+
1960 10 22	675	0.4+	0.1+	1998 04 21	704	0.8-	0.1-	1998 04 30	699	0.5+	1.0+
1960 10 26	675	0.5+	1.5-	1998 04 21	704	0.2+	1.1-	1998 04 30	699	1.1+	0.7+
1994 09 30	691	0.5-	0.5+	1998 04 21	704	0.1+	1.0-	1998 05 01	699	0.5+	0.8+
1994 09 30	691	0.4-	0.2+	1998 04 21	704	0.3-	0.7-	1998 05 01	699	0.6-	0.1+
1994 09 30	691	0.1-	0.5+	1998 04 22	704	0.3-	0.4-	1998 05 01	699	0.2-	0.8+
1994 10 06	691	0.1+	0.3+	1998 04 22	704	0.1-	0.3-	1998 05 16	704	0.7-	0.3+
1994 10 06	691	0.1-	0.4+	1998 04 22	704	1.5-	0.5-	1998 05 16	704	0.7-	0.4-
1994 10 06	691	0.1-	0.6+	1998 04 22	704	0.1+	0.2+	1998 05 16	704	1.0+	0.8-

1998 HM₅₂ = 1982 YN = 1994 CQ₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28688093	ω	235.89364	+0.77736284	+0.61999000		
<i>a</i>	2.2768527	Ω	85.55747	-0.53627556	+0.74157082		
<i>e</i>	0.2154498	<i>i</i>	6.12589	-0.32880928	+0.25629107		
<i>P</i>	3.44	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1982 12 22	511	0.1-	1.1-	1998 04 27	426	0.5+	0.3+	1998 05 22	704	1.0-	0.5+
1982 12 23	511	0.1+	1.0-	1998 04 27	426	0.3+	0.1+	1998 05 22	699	0.2-	0.2+
1994 02 08	809	1.2+	0.6+	1998 05 05	426	0.4+	0.5-	1998 05 22	699	0.3-	0.4+
1994 02 08	809	0.1+	0.8+	1998 05 05	426	0.6+	0.5-	1998 05 24	704	1.5+	0.7+
1994 02 08	809	0.5+	0.7+	1998 05 05	426	0.4+	0.5-	1998 05 24	704	(2.4-	2.5-)
1994 02 10	809	0.2+	0.3+	1998 05 15	426	0.3+	0.4-	1998 05 24	704	0.1-	0.3+
1994 02 10	809	0.2-	0.3-	1998 05 15	426	0.2+	0.6-	1998 05 24	704	0.6+	0.4+
1994 02 10	809	1.1-	0.5-	1998 05 15	426	0.2+	0.4-	1998 05 24	704	0.1-	0.5+
1994 02 13	809	(3.0-	2.3+)	1998 05 17	426	0.2-	0.5-	1998 05 24	699	0.5-	0.1+
1994 02 13	809	(2.6-	2.3+)	1998 05 17	426	0.3-	0.5-	1998 05 24	699	0.0	0.2+
1994 02 13	809	(3.7-	2.8+)	1998 05 17	426	0.1+	0.6-	1998 05 24	699	0.2-	0.1+
1998 04 22	704	1.3+	0.1+	1998 05 22	704	0.2-	0.7-	1998 05 28	699	0.3-	0.1-
1998 04 22	704	0.6+	0.3+	1998 05 22	704	1.1-	0.1+	1998 05 28	699	0.1+	0.3-
1998 04 22	704	0.2+	0.4-	1998 05 22	704	0.7-	0.7-	1998 05 28	699	0.6-	0.3-

1998 04 22 704 0.6− 0.1+ 1998 05 22 704 1.0− 0.1+
 1998 04 22 704 0.6− 0.5+ 1998 05 22 699 0.2+ 0.6+

1998 HQ₅₂ = 1979 WO₁ = 1982 QB₃ = 1984 BG₂ = 1997 CK₂₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	303.89622		(2000.0)		P		Q
<i>n</i>	0.30031596	ω	201.96121		+0.75701615		+0.65162795
<i>a</i>	2.2084307	Ω	117.28326		−0.59115182		+0.71436414
<i>e</i>	0.1863088	<i>i</i>	3.09835		−0.27832726		+0.25507821
<i>P</i>	3.28	<i>H</i>	14.5		<i>G</i> 0.15		<i>U</i> 2

Residuals in seconds of arc

1979 11 16	095	1.1+	1.3−	1998 04 25	699	0.1+	0.2+	1998 05 04	358	(0.0	3.6−)
1982 08 17	095	0.1−	1.0−	1998 04 25	699	0.9+	0.6−	1998 05 04	358	0.2+	1.5−
1984 01 25	675	0.4−	0.5−	1998 04 30	566	0.7−	0.3−	1998 05 04	358	1.8−	0.5+
1984 01 26	675	0.1−	0.9−	1998 04 30	566	0.6−	0.4−	1998 05 22	704	0.6+	0.3−
1997 02 11	327	0.6−	0.1−	1998 04 30	566	0.9−	0.3−	1998 05 22	704	0.1+	0.1+
1997 02 11	327	0.5−	0.2+	1998 04 30	358	1.0−	1.3+	1998 05 22	704	1.9+	0.0
1997 02 11	327	0.5−	0.4+	1998 04 30	358	(1.3−	2.4−)	1998 05 22	704	0.3+	0.2−
1997 02 13	327	0.6−	0.1+	1998 04 30	358	1.4+	0.0	1998 05 22	704	0.4+	0.2+
1997 02 13	327	0.9+	0.1+	1998 05 01	704	0.3−	0.7−	1998 05 24	704	0.7+	0.1+
1997 02 13	327	1.0+	0.1−	1998 05 01	704	1.0−	0.1+	1998 05 24	704	0.4+	0.2+
1998 04 22	704	0.8−	0.4+	1998 05 01	704	0.6−	0.3+	1998 05 24	704	0.8+	0.3+
1998 04 22	704	0.0	0.0	1998 05 01	704	0.4+	0.6+	1998 05 24	704	0.1−	0.1−
1998 04 22	704	0.1+	1.2+	1998 05 01	704	1.4−	0.1+	1998 05 24	704	0.3+	0.4−
1998 04 22	704	0.4+	0.1−	1998 05 01	358	(2.2−	1.2+)	1998 05 28	699	1.0+	0.3+
1998 04 22	704	0.5−	0.1−	1998 05 01	358	0.2−	2.0−	1998 05 28	699	0.9+	0.2−
1998 04 25	699	0.6−	0.4−	1998 05 01	358	1.4−	0.4−	1998 05 28	699	0.9+	0.1−

1998 HN₆₈ = 1997 EZ₃₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	317.91076		(2000.0)		P		Q
<i>n</i>	0.17160807	ω	5.26505		+0.13630074		+0.98902350
<i>a</i>	3.2070883	Ω	272.57745		−0.91099143		+0.10250365
<i>e</i>	0.1105901	<i>i</i>	3.27377		−0.38925149		+0.10642140
<i>P</i>	5.74	<i>H</i>	13.5		<i>G</i> 0.15		<i>U</i> 5

Residuals in seconds of arc

1997 03 05	704	(2.1+	3.0−)	1998 04 21	704	0.7−	0.8+	1998 05 18	691	0.5−	0.1+
1997 03 05	704	0.4+	0.4+	1998 04 22	704	0.8+	0.2−	1998 05 26	691	0.2−	0.2−
1997 03 06	704	0.1−	1.6−	1998 04 22	704	0.3−	0.8−	1998 05 26	691	0.0	0.1+
1997 03 06	704	0.4−	1.1+	1998 04 22	704	0.7+	0.5−	1998 05 26	691	0.3+	0.3+
1998 04 21	704	1.9−	1.8+	1998 04 22	704	0.9+	0.3−	1998 06 01	691	0.2+	0.0
1998 04 21	704	0.1+	0.3−	1998 04 22	704	0.3+	0.6+	1998 06 01	691	0.1−	0.0
1998 04 21	704	0.4+	1.4−	1998 05 18	691	0.1−	0.0	1998 06 01	691	0.2+	0.6−
1998 04 21	704	0.0	0.5+	1998 05 18	691	0.2−	0.2+				

1998 HA₇₅ = 1997 YX₁₀ = 1978 TU₉ = 1985 RC₆ = 1991 JY₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	209.16989		(2000.0)		P		Q
<i>n</i>	0.28125599	ω	216.18025		+0.90858435		−0.41763228
<i>a</i>	2.3071094	Ω	168.49757		+0.39162710		+0.84539839
<i>e</i>	0.0758689	<i>i</i>	2.18431		+0.14526767		+0.33299376
<i>P</i>	3.50	<i>H</i>	14.0		<i>G</i> 0.15		<i>U</i> 3

Residuals in seconds of arc

1978 10 08	095	1.9+	0.4+	1998 04 21	704	0.3−	0.5−	1998 04 29	566	0.6−	0.1−
1985 09 15	095	1.4−	0.6−	1998 04 21	704	0.2+	0.3−	1998 05 16	704	0.6+	0.3−
1985 09 20	095	0.8−	1.1+	1998 04 21	704	0.3−	0.2+	1998 05 16	704	0.3−	0.1−
1991 05 05	372	3.0−	0.7−	1998 04 21	704	0.2−	0.4+	1998 05 16	704	2.5+	0.8−
1991 05 05	372	1.0+	3.3+	1998 04 22	704	0.1−	0.2+	1998 05 16	704	1.0+	0.2+
1997 12 27	327	0.1+	0.2+	1998 04 22	704	0.9+	0.2+	1998 05 16	704	0.3−	1.5−
1997 12 27	327	0.7−	0.4+	1998 04 22	704	0.0	0.1−	1998 05 25	699	0.4+	0.5−
1997 12 27	327	0.8−	0.3+	1998 04 22	704	0.5−	0.3+	1998 05 25	699	0.1+	0.2−
1997 12 29	327	0.4+	0.6+	1998 04 22	704	0.6−	0.0	1998 05 25	699	0.7+	0.0

1997 12 29 327 0.8+ 0.4+ 1998 04 29 566 0.3− 0.0
 1997 12 29 327 0.3+ 0.6+ 1998 04 29 566 0.3− 0.2−

1998 HX₇₈ = 1980 RS₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	301.06473		(2000.0)		P		Q
<i>n</i>	0.26140879	ω	52.38445		+0.55622626		+0.82708067
<i>a</i>	2.4224561	Ω	251.59982		−0.78680661		+0.49277683
<i>e</i>	0.1090056	<i>i</i>	4.89282		−0.26748403		+0.27038594
<i>P</i>	3.77	<i>H</i>	14.5		<i>G</i> 0.15		<i>U</i> 4

Residuals in seconds of arc

1980 09 13	675	0.1−	0.4+	1998 04 21	704	0.7+	0.2+	1998 05 16	704	0.1+	0.2−
1980 09 14	675	0.2+	0.4−	1998 04 21	704	1.7−	0.1−	1998 05 16	704	(2.5+	1.1+)
1998 03 31	704	0.0	0.7−	1998 04 22	704	0.1+	0.6+	1998 05 16	704	0.5+	0.7−
1998 03 31	704	1.1−	0.1−	1998 04 22	704	0.9−	0.0	1998 05 16	704	1.4−	1.0+
1998 03 31	704	0.6−	0.2+	1998 04 22	704	0.9+	0.3+	1998 05 24	691	0.4−	0.5−
1998 03 31	704	0.2−	1.1−	1998 04 22	704	0.4+	0.3−	1998 05 24	691	0.0	0.3−
1998 03 31	704	(6.5−	0.7−)	1998 04 22	704	1.1+	0.1+	1998 05 31	691	0.1−	0.4−
1998 04 21	704	0.7+	0.5+	1998 05 16	691	0.4+	0.3+	1998 05 31	691	0.3−	0.3−
1998 04 21	704	0.4+	0.1+	1998 05 16	691	0.6+	0.5+	1998 05 31	691	0.4−	0.2−
1998 04 21	704	0.5+	0.2+	1998 05 16	691	0.5+	0.5+				

1998 HA₈₀ = 1996 TG₄₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	68.81271		(2000.0)		P		Q
<i>n</i>	0.28464328	ω	139.91150		−0.91031881		−0.41344053
<i>a</i>	2.2887697	Ω	15.70178		+0.35870883		−0.81172853
<i>e</i>	0.1115379	<i>i</i>	4.16633		+0.20651303		−0.41250905
<i>P</i>	3.46	<i>H</i>	16.5		<i>G</i> 0.15		<i>U</i> 4

Residuals in seconds of arc

1996 10 04	691	0.2+	0.0	1998 04 21	704	1.1−	0.6−	1998 04 22	704	0.7+	0.6−
1996 10 04	691	0.3+	0.1−	1998 04 21	704	0.4−	1.4−	1998 05 26	691	0.0	0.5+
1996 10 04	691	0.5+	0.0	1998 04 21	704	0.9−	0.1+	1998 05 26	691	0.0	0.7−
1996 10 10	691	0.0	0.3+	1998 04 22	704	0.4+	1.5+	1998 05 26	691	0.5+	0.5+
1996 10 10	691	0.4−	0.0	1998 04 22	704	0.3+	1.2−	1998 05 27	691	0.1−	0.2+
1996 10 10	691	0.7−	0.2+	1998 04 22	704	0.4+	0.5+	1998 05 27	691	0.2−	0.1−
1998 04 21	704	0.1+	0.0	1998 04 22	704	0.5+	2.1+	1998 05 27	691	0.2−	0.4−

1998 HJ₈₀ = 1994 TO₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	333.61147		(2000.0)		P		Q
<i>n</i>	0.17009081	ω	236.42061		−0.17424706		+0.98393904
<i>a</i>	3.2261322	Ω	23.63555		−0.86838547		−0.13498938
<i>e</i>	0.0851631	<i>i</i>	5.54716		−0.46426785		−0.11679824
<i>P</i>	5.79	<i>H</i>	14.0		<i>G</i> 0.15		<i>U</i> 4

Residuals in seconds of arc

1994 10 04	691	0.4−	0.3−	1998 04 21	704	0.9+	0.3−	1998 05 01	704	0.4−	0.9+
1994 10 04	691	0.1+	0.3−	1998 04 21	704	0.5−	0.4+	1998 05 01	704	0.2+	0.2+
1994 10 04	691	0.4+	0.4−	1998 04 22	704	0.4+	0.3−	1998 05 01	704	0.3+	0.6+
1994 10 11	691	0.5+	0.1+	1998 04 22	704	0.5+	1.4+	1998 05 26	691	0.1−	0.4+
1994 10 11	691	0.3+	0.2+	1998 04 22	704	0.3+	0.7−	1998 05 26	691	1.1−	0.1+
1994 10 11	691	0.2−	1.1−	1998 04 22	704	0.2−	0.7+	1998 05 26	691	0.5−	0.1−
1994 10 12	691	0.8−	0.9+	1998 04 22	704	0.3−	0.6−	1998 05 28	691	0.3+	0.1+
1994 10 12	691	0.5−	0.2+	1998 04 25	699	0.0	0.2+	1998 05 28	691	0.5+	0.0
1994 10 12	691	0.8+	0.8+	1998 04 25	699	0.9+	0.0	1998 05 28	691	0.4+	0.3+
1998 04 21	704	0.5−	0.1+	1998 04 25	699	0.3−	1.3−	1998 06 01	691	0.2+	0.1+
1998 04 21	704	0.8−	0.2−	1998 05 01	704	0.1−	0.5−	1998 06 01	691	0.1+	0.2+
1998 04 21	704	0.0	0.1−	1998 05 01	704	0.4−	0.4−	1998 06 01	691	0.2+	0.9−

1998 HL₈₀ = 1995 OB₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28189075	ω	58.83940	+0.15535704	+0.98678129		
<i>a</i>	2.3036447	Ω	220.18003	−0.92893391	+0.13004850		
<i>e</i>	0.1365760	<i>i</i>	4.09897	−0.33607436	+0.09669574		
<i>P</i>	3.50	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 07 22	691	1.0+	0.4+	1998 04 21	704	0.8−	0.5−	1998 05 16	704	(2.2−	0.5+)
1995 07 22	691	0.8+	0.1+	1998 04 22	704	0.6−	0.8−	1998 05 16	704	0.5−	0.2+
1995 07 22	691	0.5+	0.2−	1998 04 22	704	0.3−	0.3−	1998 05 20	691	0.4−	0.1−
1995 07 24	691	0.8−	0.1+	1998 04 22	704	1.2+	0.0	1998 05 20	691	1.1−	0.2+
1995 07 24	691	0.9−	0.1−	1998 04 22	704	0.2−	0.4−	1998 05 20	691	0.9−	0.2+
1995 07 24	691	0.6−	0.4−	1998 05 01	699	0.2−	0.5−	1998 05 22	691	0.6+	0.4+
1998 04 21	704	0.7−	0.2−	1998 05 01	699	0.9+	0.2+	1998 05 22	691	0.1+	0.1+
1998 04 21	704	0.5−	0.8+	1998 05 01	699	0.9+	1.5−	1998 05 22	691	0.5+	0.2+
1998 04 21	704	0.8+	1.5+	1998 05 16	704	0.6+	1.1−				
1998 04 21	704	0.1+	0.9+	1998 05 16	704	0.4+	0.7+				

1998 HU₈₀ = 1981 JX₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23038332	ω	90.49347	−0.49881060	−0.86502532		
<i>a</i>	2.6353321	Ω	29.62385	+0.74536612	−0.45995136		
<i>e</i>	0.1344637	<i>i</i>	6.27522	+0.44228649	−0.20043938		
<i>P</i>	4.28	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1981 05 08	675	0.0	0.7+	1998 04 22	704	0.2−	0.0	1998 05 16	704	0.6+	1.4−
1981 05 09	675	0.1+	0.4−	1998 04 22	704	0.7+	0.6+	1998 05 16	704	0.8−	1.3+
1998 04 21	704	0.2+	0.1+	1998 04 22	704	0.3+	0.5−	1998 05 16	704	0.0	1.6+
1998 04 21	704	0.1+	0.5−	1998 04 22	704	0.3+	0.2+	1998 05 16	704	2.2+	0.6+
1998 04 21	704	0.4−	0.2+	1998 05 01	699	0.5+	0.2−	1998 05 16	704	3.3−	2.1−
1998 04 21	704	0.0	1.5+	1998 05 01	699	0.3+	0.0				
1998 04 22	704	1.1−	1.1−	1998 05 01	699	0.4+	0.5−				

1998 HP₈₃ = 1989 TK₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28835917	ω	71.63847	−0.83192485	−0.54551164		
<i>a</i>	2.2690646	Ω	75.18658	+0.46114475	−0.78151061		
<i>e</i>	0.0703348	<i>i</i>	6.03121	+0.30862043	−0.30275110		
<i>P</i>	3.42	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1989 09 29	675	(0.6+	3.1−)	1998 04 21	704	0.2+	0.5+	1998 04 23	704	0.4−	0.4−
1989 09 29	675	(1.6+	3.5−)	1998 04 21	704	0.5+	1.5−	1998 04 23	704	0.3−	0.0
1989 10 07	809	0.3−	0.1−	1998 04 21	704	(0.7+	2.6−)	1998 04 23	704	1.0−	0.8+
1989 10 07	809	1.2−	0.4−	1998 04 21	704	0.2−	0.6+	1998 04 23	704	0.6−	0.2−
1989 10 07	809	1.5−	1.0+	1998 04 22	704	0.2−	0.4−	1998 04 23	704	0.6−	1.1−
1989 10 08	809	1.9+	1.2−	1998 04 22	704	0.1−	0.5+	1998 04 30	566	0.1−	0.2−
1989 10 08	809	0.9+	0.2+	1998 04 22	704	0.2+	0.2+	1998 04 30	566	0.3−	0.1−
1989 10 08	809	0.3+	0.6+	1998 04 22	704	0.3+	0.6−	1998 04 30	566	0.2−	0.6−
1998 03 24	704	0.4+	0.3+	1998 04 22	704	0.6−	0.2−	1998 05 01	704	0.1+	0.3−
1998 03 24	704	0.7+	0.2+	1998 04 22	704	0.3+	0.1+	1998 05 01	704	0.7+	0.3+
1998 03 24	704	0.2−	0.8+	1998 04 22	704	0.5+	0.3+	1998 05 01	704	0.1+	0.9+
1998 03 24	704	0.2−	1.0−	1998 04 22	704	0.3+	0.1+	1998 05 01	704	0.6+	0.8+
1998 03 24	704	0.8−	0.1+	1998 04 22	704	0.4+	0.8+	1998 05 01	704	(2.4+	1.4+)
1998 04 21	704	0.1+	0.3+	1998 04 22	704	0.4+	0.8−				

1998 HF₈₇ = 1995 VL₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18408973	ω	144.53040	+0.92357611	−0.37302983		
<i>a</i>	3.0604339	Ω	237.60699	+0.32308096	+0.88164161		
<i>e</i>	0.0270050	<i>i</i>	6.02527	+0.20646030	+0.28906196		
<i>P</i>	5.35	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 11 15	691	0.2−	0.2−	1998 04 21	704	1.0−	0.0	1998 05 24	691	0.6−	0.2+
1995 11 15	691	(2.1+	3.4−)	1998 04 21	704	0.1−	0.3+	1998 05 24	691	0.7−	0.3+
1995 11 15	691	0.1−	0.1+	1998 04 21	704	0.5−	0.1−	1998 05 27	691	0.6+	0.1−
1995 11 19	691	0.1+	0.1−	1998 04 22	704	1.0−	0.3−	1998 05 27	691	0.4+	0.3+
1995 11 19	691	0.0	0.1−	1998 04 22	704	0.1+	0.2+	1998 05 27	691	0.7+	0.1+
1995 11 19	691	0.2+	0.2+	1998 04 22	704	0.1+	0.9−	1998 05 31	691	0.0	0.4−
1998 04 21	704	0.0	0.2+	1998 04 22	704	1.3+	0.8−	1998 05 31	691	0.6−	0.1−
1998 04 21	704	0.5+	0.5+	1998 04 22	704	0.7+	0.9+	1998 05 31	691	0.1+	0.4−

1998 HH₈₈ = 1978 WV₂₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28544589	ω	49.09763	+0.08410365	+0.99388210		
<i>a</i>	2.2844773	Ω	225.88238	−0.94159277	+0.05575748		
<i>e</i>	0.2011597	<i>i</i>	5.72293	−0.32608225	+0.09533875		
<i>P</i>	3.45	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 11 28	675	0.2−	0.5+	1998 04 22	704	0.7−	0.0	1998 05 01	704	0.5+	0.6+
1978 11 29	675	0.2+	0.5−	1998 04 22	704	0.6−	0.2−	1998 05 01	704	0.4+	0.4+
1998 04 21	704	0.4−	0.0	1998 04 22	704	0.5−	0.7−	1998 05 18	699	0.2−	0.5−
1998 04 21	704	0.5+	0.2−	1998 04 25	699	0.2+	0.3+	1998 05 18	699	0.1−	0.4−
1998 04 21	704	0.4−	0.3−	1998 04 25	699	0.6+	0.1−	1998 05 18	699	0.3+	0.1−
1998 04 21	704	0.0	0.5−	1998 04 25	699	0.5+	0.3+	1998 05 22	699	0.4−	0.1+
1998 04 21	704	0.1+	0.1+	1998 05 01	704	0.0	0.8+	1998 05 22	699	0.3+	0.8+
1998 04 22	704	0.7−	0.0	1998 05 01	704	1.2+	0.3+	1998 05 22	699	0.8−	0.8−
1998 04 22	704	0.5−	0.0	1998 05 01	704	0.4+	0.1+				

1998 HX₈₉ = 1994 AG₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.29639999	ω	44.49692	+0.48876358	−0.87221023		
<i>a</i>	2.2278397	Ω	16.27329	+0.78037987	+0.42738202		
<i>e</i>	0.1371338	<i>i</i>	3.87962	+0.39002234	+0.23789476		
<i>P</i>	3.33	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 01 14	033	0.0	0.4+	1998 04 22	704	0.4−	1.6−	1998 05 16	691	0.9−	0.1−
1994 01 15	033	0.2+	0.1+	1998 04 22	704	0.3−	1.0−	1998 05 16	691	1.4−	0.0
1994 01 15	033	0.2−	0.5−	1998 04 22	704	0.2−	0.4−	1998 05 24	691	0.4−	0.1−
1998 04 21	704	1.4−	0.2+	1998 05 01	704	1.1+	0.6+	1998 05 24	691	0.3−	0.2+
1998 04 21	704	0.4−	0.6+	1998 05 01	704	0.9+	0.7+	1998 05 31	691	0.4+	0.1−
1998 04 21	704	0.7+	1.0−	1998 05 01	704	0.9+	0.8+	1998 05 31	691	0.4+	0.4−
1998 04 21	704	(4.3−	0.9−)	1998 05 01	704	0.8+	0.9+	1998 05 31	691	0.6+	0.2−
1998 04 22	704	(0.5−	2.9−)	1998 05 01	704	0.6+	0.9+				
1998 04 22	704	(0.2−	2.3−)	1998 05 16	691	0.8−	0.0				

1998 HA₉₁ = 1986 AS = 1992 RU₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26590033	ω	297.04478	+0.32179540	−0.94454050		
<i>a</i>	2.3950990	Ω	134.02246	+0.89775923	+0.28241386		
<i>e</i>	0.1990214	<i>i</i>	5.22677	+0.30079243	+0.16758777		
<i>P</i>	3.71	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1986 01 12	801	0.0	0.1+	1998 04 21	704	0.1+	0.2-	1998 04 24	704	0.3-	0.8-
1992 09 02	809	0.8+	0.3+	1998 04 21	704	0.2+	0.1-	1998 04 24	704	0.3-	0.2-
1992 09 02	809	0.0	0.3-	1998 04 22	704	0.2-	0.7+	1998 04 24	704	0.2+	0.7+
1992 09 02	809	0.5-	0.9-	1998 04 22	704	0.4+	0.5+	1998 04 24	704	0.7-	0.3-
1992 09 03	809	0.2-	0.8+	1998 04 22	704	1.2-	0.1-	1998 04 24	704	0.1-	0.7-
1998 03 24	704	0.1+	0.9-	1998 04 22	704	0.1+	0.1-	1998 05 01	704	0.6-	0.1-
1998 03 24	704	0.2-	0.9+	1998 04 22	704	1.0-	0.2+	1998 05 01	704	1.5+	1.3+
1998 03 24	704	(2.1+ 0.2-)		1998 04 23	704	0.1+	0.7-	1998 05 01	704	0.3-	0.7+
1998 03 24	704	1.2+	1.7-	1998 04 23	704	1.2+	0.6-	1998 05 01	704	0.6+	0.7+
1998 04 21	704	0.4-	0.0	1998 04 23	704	0.3+	1.4+	1998 05 01	704	0.2+	0.3+
1998 04 21	704	0.0	0.5+	1998 04 23	704	0.1-	0.2+				
1998 04 21	704	0.4-	1.0-	1998 04 23	704	0.6-	0.8-				

1998 HZ₉₁ = 1976 GE₄ = 1994 EU₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

			Williams			
<i>M</i>	34.23166	(2000.0)	P	Q		
<i>n</i>	0.27136330	ω	59.53245	-0.95621498	+0.29072180	
<i>a</i>	2.3628454	Ω	137.34331	-0.28266093	-0.88757185	
<i>e</i>	0.1502168	<i>i</i>	2.84829	-0.07586643	-0.35734724	
<i>P</i>	3.63	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 3

Residuals in seconds of arc

1976 04 02	095	0.5+	1.2+	1998 04 22	704	0.2-	0.4+	1998 05 22	704	1.0-	0.4+
1994 03 11	098	0.3+	0.6-	1998 04 22	704	0.3-	0.3-	1998 05 24	704	0.5+	0.3+
1994 03 12	098	0.4-	0.2+	1998 05 01	704	0.4+	0.4-	1998 05 24	704	0.5-	0.8-
1998 04 21	704	0.2+	0.1-	1998 05 01	704	(0.3- 2.2+)		1998 05 24	704	0.2+	0.5+
1998 04 21	704	0.2-	0.1+	1998 05 01	704	0.2+	0.2-	1998 05 24	704	0.0	0.6+
1998 04 21	704	0.1+	0.5-	1998 05 01	704	0.3-	0.4+	1998 05 24	704	0.7+	1.1-
1998 04 21	704	0.1-	1.0-	1998 05 01	704	0.4-	0.4-	1998 05 27	699	0.2+	0.2+
1998 04 21	704	0.1-	0.6-	1998 05 22	704	0.4-	1.0+	1998 05 27	699	0.2+	0.1+
1998 04 22	704	0.1+	0.3+	1998 05 22	704	0.1+	0.5+	1998 05 27	699	0.3-	0.3+
1998 04 22	704	0.1+	0.1-	1998 05 22	704	0.0	0.4+				
1998 04 22	704	0.5-	0.3-	1998 05 22	704	0.9+	0.3-				

1998 HA₉₃ = 1995 SE₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

			Williams			
<i>M</i>	278.97127	(2000.0)	P	Q		
<i>n</i>	0.26083030	ω	329.74643	+0.93406744	+0.35704535	
<i>a</i>	2.4260366	Ω	9.34070	-0.31970268	+0.84368554	
<i>e</i>	0.2089430	<i>i</i>	2.13705	-0.15908553	+0.40089068	
<i>P</i>	3.78	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1995 09 20	399	0.1-	0.1+	1998 04 21	704	0.8+	0.1+	1998 05 01	704	0.4-	0.6+
1995 09 20	399	1.4+	0.0	1998 04 21	704	0.3+	0.5-	1998 05 01	704	0.3+	0.5+
1995 09 21	399	(2.5+ 0.2+)		1998 04 22	704	0.1+	0.5+	1998 05 01	704	0.5+	0.6-
1995 09 21	399	0.4+	0.3-	1998 04 22	704	0.3-	0.6-	1998 05 26	691	0.5+	0.6+
1995 09 30	399	0.4-	0.1+	1998 04 22	704	0.2-	1.1-	1998 05 26	691	0.5+	0.2+
1995 09 30	399	1.2-	0.3-	1998 04 22	704	1.0+	1.0-	1998 05 26	691	0.9+	0.1-
1998 04 21	704	0.6-	0.4+	1998 04 22	704	0.6-	0.9-	1998 05 31	691	0.2-	0.6+
1998 04 21	704	0.2+	0.2-	1998 05 01	704	0.6+	0.2+	1998 05 31	691	0.7-	0.5+
1998 04 21	704	1.8-	0.0	1998 05 01	704	0.4-	0.8+	1998 05 31	691	0.7-	0.1-

1998 HV₉₃ = 1992 EV₁₆ = 1994 PS₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

			Williams			
<i>M</i>	347.12816	(2000.0)	P	Q		
<i>n</i>	0.18271329	ω	271.74723	-0.37504861	+0.92671546	
<i>a</i>	3.0757849	Ω	336.18434	-0.82606348	-0.34544886	
<i>e</i>	0.0507178	<i>i</i>	3.28993	-0.42066336	-0.14786325	
<i>P</i>	5.39	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1992 03 01	809	0.3-	0.2+	1998 04 21	704	(4.4- 1.0-)		1998 05 01	704	0.3-	0.2+
1992 03 03	809	1.1-	0.7-	1998 04 22	704	0.8+	0.5+	1998 05 01	704	1.0+	0.0

1992 03 06	809	0.7+	1.0-	1998 04 22	704	0.1-	0.4+	1998 05 22	704	1.7+	0.6+
1994 08 12	809	0.2+	0.0	1998 04 22	704	0.4+	0.3+	1998 05 22	704	0.9-	1.2+
1994 08 12	809	1.1+	0.2+	1998 04 22	704	0.7+	1.4-	1998 05 22	704	0.8+	1.8+
1994 08 12	809	1.2+	0.0	1998 04 25	699	0.3-	1.9-	1998 05 22	704	0.4+	0.2+
1994 08 13	809	0.1-	0.3-	1998 04 25	699	0.4-	0.1-	1998 05 22	704	0.1-	1.3+
1994 08 13	809	0.9-	0.7-	1998 04 25	699	0.7-	0.3+	1998 05 24	704	(0.9- 2.2+)	
1994 08 13	809	0.6-	0.9-	1998 04 29	566	0.1-	0.1+	1998 05 24	704	0.2-	1.1-
1998 04 21	704	1.2-	0.2+	1998 04 29	566	0.3-	0.1-	1998 05 24	704	1.0+	0.6-
1998 04 21	704	0.8-	1.2+	1998 04 29	566	0.3-	0.3+	1998 05 24	704	0.2-	0.9-
1998 04 21	704	0.5-	1.8-	1998 05 01	704	0.5+	0.0	1998 05 24	704	1.2-	1.2-
1998 04 21	704	0.2+	0.5-	1998 05 01	704	0.1+	0.8+				

1998 HX₉₃ = 1994 GP₁₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

			Williams			
<i>M</i>	5.72249	(2000.0)	P	Q		
<i>n</i>	0.26438515	ω	0.20045	-0.60933695	+0.78657454	
<i>a</i>	2.4042411	Ω	232.25958	-0.72765793	-0.60484648	
<i>e</i>	0.0600039	<i>i</i>	7.26809	-0.31499592	-0.12434319	
<i>P</i>	3.73	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1994 04 06	033	0.5+	0.2-	1998 04 22	704	0.8-	0.4-	1998 05 18	699	0.4+	0.9-
1994 04 06	033	0.5+	0.5-	1998 04 25	699	0.7+	0.8+	1998 05 22	704	1.0-	1.1-
1994 04 08	033	0.9-	0.7+	1998 04 25	699	0.3+	0.5-	1998 05 22	704	0.6-	0.5-
1998 04 21	704	0.1+	0.3-	1998 04 25	699	0.1-	0.7+	1998 05 22	704	0.9+	0.1-
1998 04 21	704	0.1+	0.3-	1998 05 01	704	0.2-	0.3-	1998 05 22	704	(3.0- 0.5+)	
1998 04 21	704	0.3-	0.1+	1998 05 01	704	0.1-	0.8+	1998 05 22	704	0.1-	0.7+
1998 04 21	704	0.1+	1.1+	1998 05 01	704	0.3-	0.2-	1998 05 24	704	0.8+	0.6+
1998 04 21	704	0.0	0.7+	1998 05 01	704	1.0+	0.6+	1998 05 24	704	(3.0+ 1.7-)	
1998 04 22	704	0.2-	0.4-	1998 05 01	704	(3.7- 0.1+)		1998 05 24	704	1.0-	0.9-
1998 04 22	704	0.0	1.2-	1998 05 18	699	0.5-	0.8+	1998 05 24	704	0.9+	0.8+
1998 04 22	704	0.4-	0.7-	1998 05 18	699	0.1-	0.2+				

1998 HF₉₄ = 1995 SL₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

			Williams			
<i>M</i>	26.06168	(2000.0)	P	Q		
<i>n</i>	0.22354981	ω	169.10145	-0.95135565	+0.30261383	
<i>a</i>	2.6887671	Ω	28.71968	-0.29095397	-0.82068128	
<i>e</i>	0.3124184	<i>i</i>	6.91527	-0.10133221	-0.48467217	
<i>P</i>	4.41	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1995 09 18	691	0.5-	0.3+	1998 04 21	704	0.6-	0.7-	1998 05 03	566	0.1+	0.6-
1995 09 18	691	0.1+	0.3+	1998 04 21	704	0.1-	0.2+	1998 05 03	566	1.1+	1.0-
1995 09 18	691	0.9-	0.2+	1998 04 21	704	0.0	0.1-	1998 05 03	566	0.3+	1.0-
1995 09 24	691	0.1+	0.3-	1998 04 22	704	0.8-	0.7+	1998 05 22	704	1.0+	0.5-
1995 09 24	691	0.6+	0.1-	1998 04 22	704	0.2-	0.2+	1998 05 22	704	2.5-	0.6+
1995 09 24	691	0.3+	0.1-	1998 04 22	704	0.2+	0.1+	1998 05 22	704	0.2-	1.1-
1998 03 31	046	0.1-	0.3+	1998 04 22	704	0.3+	0.1+	1998 05 22	704	0.8-	0.9+
1998 03 31	046	0.1+	0.3+	1998 04 22	704	0.7-	0.3-	1998 05 24	704	0.6+	0.0
1998 03 31	046	0.1-	0.3+	1998 05 01	704	0.4+	0.6+	1998 05 24	704	0.4-	0.3+
1998 03 31	046	0.1+	0.3+	1998 05 01	704	0.0	0.4-	1998 05 24	704	0.5+	1.3+
1998 03 31	046	0.1+	0.2+	1998 05 01	704	0.3+	0.6+	1998 05 24	704	0.3-	0.5-
1998 04 21	704	0.6+	0.0	1998 05 01	704	0.5+	0.7+	1998 05 24	704	0.1+	0.3+
1998 04 21	704	0.6-	1.2-	1998 05 01	704	0.9+	0.1-				

1998 HU₉₄ = 1982 RA₂ = 1989 YK₉ = 1992 GZ₁ = 1992 HV₅Id. G. V. Williams, S. Nakano (d, *MPC* 22572)

Epoch 1998 July 6.0 TT = JDT 2451000.5

Residuals in seconds of arc

1982 09 15	046	(3.9+ 0.5+)	1992 04 25	809	0.9- 0.1+	1998 05 01	704	0.1- 0.2-
1982 09 15	046	(3.0+ 0.9-)	1992 04 25	809	0.3- 0.5-	1998 05 01	704	1.2+ 0.5-
1982 09 16	095	0.5- 2.1+	1998 04 21	704	0.6- 0.2-	1998 05 01	704	0.8- 0.3-
1982 09 16	046	1.1+ 0.1+	1998 04 21	704	(3.4+ 0.1-)	1998 05 01	704	0.5- 0.3-
1982 09 16	046	(3.3+ 1.2-)	1998 04 21	704	(4.0- 1.6-)	1998 05 22	704	0.1+ 0.4+
1982 09 17	046	0.0 1.5-	1998 04 21	704	0.3- 0.2-	1998 05 22	704	0.2+ 0.7+
1982 09 17	046	0.2- 1.6-	1998 04 21	704	0.5+ 0.2-	1998 05 22	704	0.1+ 0.8+
1989 12 28	511	(90.9+ 2.1-)	1998 04 22	704	0.4- 1.2+	1998 05 22	699	0.2- 0.0
1989 12 28	511	(92.4+ 1.8-)	1998 04 22	704	0.7+ 0.6+	1998 05 22	699	0.6+ 0.1+
1992 04 04	809	0.7+ 0.7-	1998 04 22	704	0.2+ 1.7-	1998 05 22	704	(0.4+ 2.1+)
1992 04 04	809	0.7+ 1.5-	1998 04 22	704	0.1- 0.9-	1998 05 22	699	0.3- 0.4+
1992 04 04	809	(0.4+ 2.3-)	1998 04 22	704	1.3- 0.3-	1998 05 22	704	0.6+ 1.3+
1992 04 06	809	(0.2+ 2.9-)	1998 04 25	699	0.4+ 0.2+	1998 05 24	704	0.3+ 0.0
1992 04 06	809	(0.1+ 2.5-)	1998 04 25	699	0.1- 0.3+	1998 05 24	704	1.2+ 0.2+
1992 04 06	809	(0.3+ 3.9-)	1998 04 25	699	0.3- 0.2-	1998 05 24	704	0.4+ 0.8-
1992 04 25	809	0.9- 1.0+	1998 05 01	704	0.4- 0.0	1998 05 24	704	0.5- 0.5+

1998 HD₉₅ = 1986 WG₂ = 1993 FB₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	235.99758			<i>P</i>		<i>Q</i>		
<i>n</i>	0.21623775	ω	293.17449	+0.98239993	-0.16793138			
<i>a</i>	2.7490441	Ω	76.57188	+0.18676075	+0.89077996			
<i>e</i>	0.1922759	<i>i</i>	4.82356	-0.00328456	+0.42226783			
<i>P</i>	4.56	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5	

Residuals in seconds of arc

1986 11 30	046	0.2+ 0.1+	1998 04 22	704	1.0- 0.9+	1998 05 22	704	0.0 0.6+
1986 11 30	046	0.3- 0.4+	1998 04 22	704	0.0 0.2+	1998 05 22	704	1.3+ 1.5-
1993 03 17	809	0.3+ 0.4-	1998 04 22	704	0.7+ 1.7-	1998 05 22	704	1.8- 0.9+
1993 03 18	809	0.0 0.1-	1998 04 28	566	0.7- 0.9-	1998 05 22	704	(3.0- 1.0+)
1993 03 23	809	0.5- 0.1-	1998 04 28	566	1.5- 0.4-	1998 05 24	704	(2.1+ 2.4-)
1998 04 21	704	1.4+ 0.3-	1998 04 28	566	0.5- 0.7-	1998 05 24	704	0.8+ 1.1+
1998 04 21	704	0.6- 1.0-	1998 05 01	704	1.3+ 0.1+	1998 05 24	704	0.5- 1.0+
1998 04 21	704	1.0+ 0.6+	1998 05 01	704	0.6- 0.0	1998 05 24	704	0.4- 0.5-
1998 04 21	704	0.7- 1.8+	1998 05 01	704	0.9+ 0.5+	1998 05 24	704	0.8+ 1.0-
1998 04 22	704	1.0+ 0.1+	1998 05 01	704	0.7- 1.3+			

1998 HN₉₅ = 1989 SJ₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	226.97740			<i>P</i>		<i>Q</i>		
<i>n</i>	0.18427596	ω	149.02499	+0.95830245	-0.21823104			
<i>a</i>	3.0583717	Ω	224.81998	+0.17764513	+0.96063556			
<i>e</i>	0.1520980	<i>i</i>	15.17173	+0.22382723	+0.17191432			
<i>P</i>	5.35	<i>H</i>	12.5	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1989 09 28	493	1.7- 2.2-	1998 04 22	704	0.7+ 0.4-	1998 05 22	704	0.3- 0.2+
1989 09 28	493	0.5- 1.5+	1998 04 22	704	0.3+ 0.1+	1998 05 22	699	1.0+ 0.5-
1989 10 03	493	1.2+ 1.6-	1998 04 25	699	0.4+ 0.6+	1998 05 22	699	0.5+ 0.4+
1989 10 03	493	1.0+ 2.3+	1998 04 25	699	0.3+ 0.2+	1998 05 22	704	0.5+ 0.5+
1998 04 21	704	0.3- 0.0	1998 04 25	699	0.3+ 0.6+	1998 05 22	699	0.3- 0.0
1998 04 21	704	0.2- 0.0	1998 05 01	704	0.5- 0.1+	1998 05 22	704	0.2- 1.5+
1998 04 21	704	0.3- 0.2-	1998 05 01	704	0.7+ 0.1+	1998 05 24	704	0.0 0.1+
1998 04 21	704	0.1- 1.5-	1998 05 01	704	1.2+ 0.8+	1998 05 24	704	0.7+ 1.3-
1998 04 22	704	0.1- 0.4+	1998 05 01	704	1.2- 0.4-	1998 05 24	704	0.8+ 0.3+
1998 04 22	704	0.9- 0.0	1998 05 22	704	0.5- 0.8+	1998 05 24	704	1.3- 2.1-
1998 04 22	704	0.1+ 0.3-	1998 05 22	704	0.3- 0.3+	1998 05 24	704	0.9- 0.4-

1998 HT₉₅ = 1991 RE₂₁ = 1996 YN₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	321.67119			<i>P</i>		<i>Q</i>		
<i>n</i>	0.25609041	ω	182.44544	+0.38247025	+0.92200003			
<i>a</i>	2.4558801	Ω	110.04646	-0.84663127	+0.37583490			
<i>e</i>	0.1747720	<i>i</i>	3.67844	-0.37004323	+0.09308103			
<i>P</i>	3.85	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1991 09 14	675	0.7+ 1.2-	1998 04 22	704	0.1- 0.3-	1998 05 22	704	0.3- 0.2+
1991 09 14	675	0.4+ 1.4-	1998 04 22	704	0.1+ 0.7-	1998 05 22	704	0.3- 0.3-
1991 09 16	675	0.2+ 0.4-	1998 04 22	704	0.3- 1.1-	1998 05 22	704	0.4- 0.3-
1991 09 16	675	0.3+ 0.5-	1998 04 22	704	0.4+ 1.7-	1998 05 22	704	0.7- 0.1-
1996 12 20	327	0.1+ 0.4-	1998 05 01	704	0.2+ 0.4-	1998 05 24	704	0.2+ 0.0
1996 12 20	327	0.7+ 0.6-	1998 05 01	699	0.3+ 0.1-	1998 05 24	704	0.5- 0.4+
1996 12 20	327	0.3+ 0.5-	1998 05 01	704	0.4+ 0.3+	1998 05 24	704	0.6- 0.3+
1996 12 22	327	1.1- 0.4-	1998 05 01	699	0.5+ 0.1+	1998 05 24	704	0.3+ 0.5-
1996 12 22	327	1.0- 0.7-	1998 05 01	704	0.2- 0.2+	1998 05 24	704	0.6- 0.8-
1996 12 22	327	0.2+ 0.7-	1998 05 01	699	0.6+ 0.1+	1998 05 27	699	0.7- 0.8+
1998 04 21	704	0.5- 0.7-	1998 05 01	704	0.8+ 0.0	1998 05 27	699	0.9- 0.6+
1998 04 21	704	0.2- 0.5-	1998 05 01	704	0.5- 0.8+	1998 05 27	699	0.7- 0.8+
1998 04 21	704	0.2- 0.3-	1998 05 05	132	0.7+ 0.2-	1998 06 02	699	0.5- 0.2+
1998 04 21	704	0.1+ 1.0+	1998 05 05	132	0.1+ 0.0	1998 06 02	699	0.6- 0.1-
1998 04 21	704	0.3+ 0.8+	1998 05 05	132	1.7+ 0.7-	1998 06 02	699	0.2- 0.1+
1998 04 22	704	0.3+ 0.7-	1998 05 22	704	0.4+ 0.3-			

1998 HF₉₆ = 1985 OR = 1992 TN₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	283.27977			<i>P</i>		<i>Q</i>		
<i>n</i>	0.29280436	ω	188.34118	+0.92414372	+0.37877405			
<i>a</i>	2.2460411	Ω	149.25154	-0.34464841	+0.88288893			
<i>e</i>	0.2136206	<i>i</i>	5.59940	-0.16485102	+0.27755604			
<i>P</i>	3.37	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	3	

Residuals in seconds of arc

1985 07 19	033	0.0 0.1-	1998 04 22	704	0.2+ 0.3-	1998 05 24	704	0.1+ 0.0
1992 09 30	675	0.1+ 0.1-	1998 04 22	704	1.0+ 0.6-	1998 05 24	704	0.1- 0.1-
1992 09 30	675	0.0 0.2+	1998 04 22	704	0.7+ 1.0-	1998 05 24	704	0.6- 0.3-
1992 10 03	675	0.4- 0.2-	1998 04 22	704	0.5+ 1.0-	1998 05 24	704	0.2+ 0.1-
1992 10 03	675	0.2+ 0.8+	1998 04 24	704	0.2- 0.4+	1998 05 24	704	0.1- 0.5+
1992 10 04	675	0.1+ 0.2-	1998 04 24	704	0.2+ 0.3-	1998 05 27	699	0.0 0.2+
1992 10 04	675	0.0 0.5-	1998 04 24	704	0.1- 0.7-	1998 05 27	699	0.2+ 0.8+
1998 04 21	704	0.4- 0.7+	1998 04 24	704	0.0 0.3+	1998 05 27	699	0.1- 0.6+
1998 04 21	704	0.4+ 0.3-	1998 05 22	704	0.5- 0.1-	1998 06 02	699	0.5+ 0.3+
1998 04 21	704	0.3- 0.5+	1998 05 22	704	0.6- 0.4-	1998 06 02	699	0.2+ 0.4-
1998 04 21	704	0.2- 0.9+	1998 05 22	704	0.7- 0.5+	1998 06 02	699	0.4+ 0.1-
1998 04 21	704	0.3+ 0.6+	1998 05 22	704	1.2- 0.2-			
1998 04 22	704	0.3+ 0.5-	1998 05 22	704	(2.2- 0.7+)			

1998 HT₉₇ = 1992 DU₁ = 1995 UD₅₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	64.95352			<i>P</i>		<i>Q</i>		
<i>n</i>	0.18595347	ω	142.98490	-0.95225744	-0.30230308			
<i>a</i>	3.0399506	Ω	19.55003	+0.24059642	-0.82908025			
<i>e</i>	0.0642677	<i>i</i>	7.32169	+0.18793385	-0.47036028			
<i>P</i>	5.30	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4	

Residuals in seconds of arc

1992 02 27	033	0.2- 0.2-	1998 04 21	704	0.1- 0.1+	1998 05 01	704	1.1+ 1.1+
1992 02 27	033	0.1- 0.0	1998 04 21	704	1.3+ 0.2+	1998 05 22	704	0.5- 0.0
1992 02 28	033	0.2+ 0.2+	1998 04 21	704	(0.4- 2.5+)	1998 05 22	704	1.2+ 1.8-
1995 10 19	691	0.3- 0.5+	1998 04 22	704	0.8- 1.8+	1998 05 22	704	0.5- 1.7-
1995 10 19	691	0.1- 0.5+	1998 04 22	704	1.2- 0.6+	1998 05 22	704	1.0+ 0.1-
1995 10 19	691	0.3- 0.4+	1998 04 22	704	0.5- 0.7-	1998 05 24	704	1.1+ 1.1+
1995 10 24	691	0.1- 0.4+	1998 04 22	704	0.2+ 0.7+	1998 05 24	704	1.3- 1.1-

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1995 10 24	691	0.1−	0.5+	1998 05 01	704	0.3−	0.3+	1998 05 24	704	0.9+	1.3+
1998 04 21	704	0.6+	0.4−	1998 05 01	704	0.5−	0.1−	1998 05 24	704	0.4+	0.2−
1998 04 21	704	1.5−	1.1+	1998 05 01	704	0.3+	0.0				

1998 HV₉₇ = 1997 EN₄₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23397979	ω	23.72643	+0.94211875	+0.33203768		
<i>a</i>	2.6082577	Ω	316.79309	−0.31746202	+0.83880763		
<i>e</i>	0.2652358	<i>i</i>	3.89539	−0.10784310	+0.43145420		
<i>P</i>	4.21	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1997 03 11	704	0.1+	0.6+	1998 04 22	704	0.3+	0.1+	1998 05 22	704	0.1−	1.0−
1997 03 11	704	0.3−	0.1−	1998 04 22	704	0.6+	0.8+	1998 05 22	704	0.3+	0.7+
1997 03 12	704	0.3−	0.2−	1998 04 22	704	1.1+	0.8−	1998 05 22	704	0.1+	0.0
1997 03 12	704	0.4+	0.4−	1998 05 01	704	0.1+	0.7+	1998 05 22	704	0.1+	0.2−
1998 04 21	704	0.4+	0.2+	1998 05 01	704	1.0−	1.5−	1998 05 24	704	(2.3−	0.1+)
1998 04 21	704	0.6−	1.0+	1998 05 01	704	0.9−	0.2+	1998 05 24	704	(3.6−	0.9−)
1998 04 21	704	(1.9+	2.2+)	1998 05 01	704	0.4−	0.3−	1998 05 24	704	0.2+	1.4+
1998 04 21	704	(4.2−	1.1+)	1998 05 22	704	0.2+	0.1−	1998 05 24	704	0.4−	1.1−

1998 HC₉₈ = 1989 TR₁₅ = 1992 PO₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.31154811	ω	286.90922	+0.34241612	+0.93953556		
<i>a</i>	2.1550266	Ω	3.12786	−0.82411917	+0.30285532		
<i>e</i>	0.2162452	<i>i</i>	5.16604	−0.45119707	+0.15984865		
<i>P</i>	3.16	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1989 10 03	809	0.4−	0.2−	1992 08 06	675	0.0	0.3+	1998 05 04	566	0.3+	0.9−
1989 10 03	809	0.3+	0.1−	1992 08 06	675	0.8−	1.3+	1998 05 04	566	0.0	0.2−
1989 10 03	809	1.2+	0.0	1998 04 21	704	0.6+	0.9+	1998 05 22	704	0.5+	1.0−
1989 10 05	809	0.6−	0.5−	1998 04 21	704	1.0+	0.4+	1998 05 22	704	0.6−	0.1+
1989 10 05	809	0.8−	0.4−	1998 04 21	704	0.6+	0.2+	1998 05 22	704	0.3+	1.2−
1989 10 06	809	0.1+	0.6+	1998 04 21	704	0.2+	0.1+	1998 05 22	704	0.6−	0.6−
1989 10 06	809	0.3+	0.2+	1998 04 21	704	0.1−	0.3+	1998 05 24	704	0.2−	0.2+
1989 10 06	809	0.8+	0.3+	1998 04 22	704	0.6+	0.9+	1998 05 24	704	0.3−	0.1+
1989 10 07	809	0.1−	0.3−	1998 04 22	704	0.4−	0.0	1998 05 24	704	1.2−	1.1+
1989 10 07	809	0.1−	0.4−	1998 04 22	704	0.1+	0.3+	1998 05 24	704	0.4+	0.4−
1989 10 07	809	0.1+	0.6−	1998 04 22	704	1.1−	0.6−	1998 05 24	704	1.0−	0.2+
1992 08 03	675	0.2−	0.6−	1998 04 22	704	0.4+	0.6−				
1992 08 03	675	0.4+	0.1+	1998 05 04	566	0.0	0.3−				

1998 HN₉₈ = 1981 JB₄ = 1993 AT

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.23152221	ω	97.45685	−0.65208590	−0.75630256		
<i>a</i>	2.6266827	Ω	33.43267	+0.65227896	−0.59517886		
<i>e</i>	0.1448381	<i>i</i>	5.50183	+0.38641446	−0.27160367		
<i>P</i>	4.26	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 05 08	675	2.6−	1.2+	1998 04 21	704	0.0	0.2−	1998 05 22	704	0.8+	0.0
1981 05 09	675	2.7+	0.9−	1998 04 21	704	0.1−	0.1+	1998 05 22	704	(3.5−	1.8−)
1993 01 12	896	1.4−	1.2+	1998 04 22	704	0.9+	0.4+	1998 05 22	704	(5.4−	0.5+)
1993 01 12	896	0.7−	0.0	1998 04 22	704	0.5−	0.1−	1998 05 24	704	1.2+	0.3−
1993 01 17	896	0.9+	0.9−	1998 04 22	704	1.3+	0.1+	1998 05 24	704	0.1−	0.1+
1993 01 17	896	1.2+	0.3−	1998 04 22	704	0.6−	0.6−	1998 05 24	704	0.4+	0.2+
1998 04 21	704	0.1+	0.2+	1998 04 22	704	1.5−	0.1+	1998 05 24	704	0.3+	0.8+
1998 04 21	704	0.4−	0.5+	1998 05 22	704	0.0	0.4−	1998 05 24	704	1.2−	0.2−
1998 04 21	704	0.0	0.3−	1998 05 22	704	0.7−	0.7−				

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1998 HD₉₉ = 1981 FX = 1992 FY₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17626940	ω	102.50276	−0.94534039	+0.32223677		
<i>a</i>	3.1502965	Ω	96.31195	−0.31528763	−0.86415778		
<i>e</i>	0.1184564	<i>i</i>	2.88060	−0.08321817	−0.38651624		
<i>P</i>	5.59	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1981 03 27	046	0.3+	0.5+	1998 04 22	704	0.9−	1.7+	1998 05 22	704	0.0	0.4+
1981 03 28	046	0.8−	1.8−	1998 04 29	566	0.4+	0.1+	1998 05 22	704	0.2+	0.9+
1992 03 24	399	0.9+	1.3−	1998 04 29	566	0.6+	0.1−	1998 05 24	704	0.3+	0.1−
1992 03 24	399	0.8−	1.7+	1998 04 29	566	0.0	1.5−	1998 05 24	704	0.9−	0.6−
1998 04 21	704	0.1+	0.2−	1998 05 01	704	0.5+	0.5+	1998 05 24	704	0.5−	0.4+
1998 04 21	704	0.2+	0.1−	1998 05 01	704	1.5+	0.1+	1998 05 24	704	1.1−	0.0
1998 04 21	704	0.5+	0.2−	1998 05 01	704	0.1+	0.6−	1998 05 24	704	0.4−	1.8−
1998 04 21	704	0.2+	0.8+	1998 05 01	704	1.5+	0.6−	1998 05 28	699	1.4−	0.7+
1998 04 21	704	0.5+	1.4+	1998 05 01	704	(2.3−	1.1−)	1998 05 28	699	0.7−	0.7+
1998 04 22	704	0.5+	0.3−	1998 05 22	704	0.5−	1.5−	1998 05 28	699	0.5−	0.8+
1998 04 22	704	0.5+	0.7+	1998 05 22	704	(2.8−	1.1−)				
1998 04 22	704	0.6+	0.1−	1998 05 22	704	1.4−	0.4−				

1998 HF₉₉ = 3151 T-3

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26725959	ω	102.75696	+0.35431369	+0.93503497		
<i>a</i>	2.3869713	Ω	188.03118	−0.89021088	+0.33297519		
<i>e</i>	0.0270930	<i>i</i>	5.37729	−0.28633269	+0.12180777		
<i>P</i>	3.69	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1977 10 07	675	1.6+	0.3−	1998 04 21	704	0.5−	1.2−	1998 05 22	704	1.6+	1.2+
1977 10 11	675	1.0−	0.5+	1998 04 21	704	0.3−	0.6−	1998 05 22	704	0.7+	0.8−
1977 10 11	675	0.1−	0.1+	1998 04 21	704	1.1−	0.4+	1998 05 22	704	0.6−	0.0
1977 10 12	675	0.7+	0.2−	1998 04 21	704	0.7+	1.2−	1998 05 24	704	0.1−	0.2−
1977 10 12	675	1.7+	0.6−	1998 04 22	704	0.4+	0.3+	1998 05 24	704	0.2+	0.2−
1977 10 16	675	0.9+	0.3+	1998 04 22	704	(2.2+	0.7+)	1998 05 24	704	0.1+	0.3−
1977 10 16	675	0.0	0.7+	1998 04 22	704	0.1−	0.5+	1998 05 24	704	0.8+	0.4+
1977 10 17	675	0.6−	0.6+	1998 04 22	704	0.1−	0.9+	1998 05 24	704	1.2−	0.4−
1977 10 17	675	0.1−	1.5+	1998 04 22	704	0.4+	1.3+	1998 05 27	699	1.4+	0.2+
1977 10 21	675	1.8−	0.6−	1998 05 03	566	0.7−	0.4+	1998 05 27	699	1.7+	0.4+
1977 10 21	675	1.5−	0.4+	1998 05 03	566	0.7−	0.8+	1998 05 27	699	0.2+	0.3−
1977 10 22	675	0.4−	0.8−	1998 05 03	566	0.4+	1.2−	1998 06 02	699	1.8−	0.4+
1977 10 22	675	0.5+	1.4−	1998 05 22	704	0.5−	0.8−	1998 06 02	699	1.3−	0.7−
1998 04 21	704	0.4−	0.1−	1998 05 22	704	1.9+	0.5+	1998 06 02	699	1.0−	0.4+

1998 HH₉₉ = 1996 XK₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.29080102	ω	232.75082	+0.80410326	+0.59183352		
<i>a</i>	2.2563446	Ω	90.89408	−0.52611418	+0.75240525		
<i>e</i>	0.1295821	<i>i</i>	3.21833	−0.27680647	+0.28917023		
<i>P</i>	3.39	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1996 12 10	327	0.0	0.1+	1998 04 22	704	0.2−	0.5+	1998 05 22	704	0.8+	0.8+
1996 12 10	327	0.1+	0.2−	1998 04 22	704	0.2−	0.8−	1998 05 22	704	0.0	0.0
1996 12 10	327	0.2−	0.2−	1998 04 22	704	0.1−	0.5−	1998 05 22	704	0.4+	0.2−
1996 12 10	327	0.3+	0.1−	1998 04 22	704	0.3+	0.0	1998 05 22	704	0.3+	0.1−
1996 12 10	327	0.0	0.4−	1998 04 22	704	0.6+	0.9+	1998 05 24	704	0.1+	0.2−
1996 12 10	327	0.2−	0.1−	1998 04 25	699	0.0	0.2−	1998 05 24	704	0.4+	0.6−
1996 12 11	327	0.2−	0.2−	1998 04 25	699	0.7+	1.1−	1998 05 24	704	0.2+	0.4+
1996 12 11	327	0.0	0.6+	1998 04 25	699	0.3−	0.1+	1998 05 24	704	0.5−	0.8−
1996 12 11	327	0.3+	0.5+	1998 05 01	704	0.6+	0.3−	1998 05 24	704	0.9−	0.1+
1998 04 21	704	0.2+	0.6−	1998 05 01	704	0.5+	0.1+	1998 05 28	699	0.5−	0.1−

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1998 04 21	704	0.6−	0.5−	1998 05 01	704	1.4−	0.8+	1998 05 28	699	0.0	0.3+
1998 04 21	704	0.5−	0.2+	1998 05 01	704	0.1−	0.6+	1998 05 28	699	0.4−	0.0
1998 04 21	704	0.2−	0.1+	1998 05 01	704	0.5+	0.4+				
1998 04 21	704	0.2+	0.7+	1998 05 22	704	0.2+	0.0				

1998 HL₉₉ = 1975 SC₁ = 1992 SK₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	253.95493		(2000.0)		P		Q		Williams		
<i>n</i>	0.28899459	ω	200.65882		+0.99898684		+0.03975893				
<i>a</i>	2.2657374	Ω	157.03198		−0.02982032		+0.93569250				
<i>e</i>	0.1414269	<i>i</i>	3.09722		−0.03370519		+0.35056920				
<i>P</i>	3.41	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	5			

Residuals in seconds of arc

1975 09 30	675	0.3−	0.4−	1998 04 21	704	0.3+	0.4−	1998 05 22	704	0.3−	1.1−
1975 10 01	675	0.3−	1.1−	1998 04 21	704	0.2+	0.7−	1998 05 22	704	1.0+	0.8−
1975 10 02	675	1.1+	0.3+	1998 04 21	704	0.3−	1.3−	1998 05 22	704	0.5+	0.3−
1992 09 21	033	0.1−	3.1−	1998 04 21	704	1.3−	0.6+	1998 05 22	704	0.6−	0.8+
1992 09 22	033	0.2+	0.6−	1998 04 21	704	0.1+	0.5−	1998 05 24	704	0.1+	0.1−
1992 09 23	033	0.4−	1.4+	1998 04 22	704	1.2−	0.6−	1998 05 24	704	0.5+	0.7+
1992 09 24	033	0.5+	0.1−	1998 04 22	704	1.4+	0.4+	1998 05 24	704	0.4−	1.4+
1992 09 26	033	0.3+	2.2+	1998 04 22	704	0.1−	0.7+	1998 05 24	704	0.2−	0.0
1992 09 27	033	0.4+	0.6+	1998 04 22	704	0.8−	1.8+	1998 05 24	704	0.1−	1.4−
1992 09 28	033	1.3−	0.8+	1998 04 22	704	1.0+	0.7+				

1998 HX₉₉ = 1991 CB₆ = 1992 OQ₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	72.54305		(2000.0)		P		Q		Williams		
<i>n</i>	0.29474160	ω	1.75381		−0.91877970		−0.39340789				
<i>a</i>	2.2361886	Ω	155.00017		+0.36124436		−0.87132936				
<i>e</i>	0.1041752	<i>i</i>	4.44768		+0.15920543		−0.29328377				
<i>P</i>	3.34	<i>H</i>	15.0		<i>G</i>	0.15	<i>U</i>	4			

Residuals in seconds of arc

1991 02 13	675	(0.2−	3.7−)	1998 04 21	704	0.4+	1.1+	1998 05 22	704	0.9+	0.3−
1991 02 13	675	0.4−	1.1−	1998 04 22	704	0.4+	0.1+	1998 05 22	704	0.2−	1.2+
1992 07 26	809	1.2+	0.0	1998 04 22	704	0.0	0.2+	1998 05 22	704	0.6−	0.1+
1992 07 26	809	1.3+	0.3−	1998 04 22	704	0.5+	0.2−	1998 05 22	704	0.0	1.2+
1992 07 26	809	0.6+	0.2+	1998 04 22	704	0.1−	0.5−	1998 05 24	704	0.2−	0.6−
1992 07 30	809	1.0−	0.3−	1998 04 22	704	0.0	1.1−	1998 05 24	704	0.4+	1.2−
1992 07 30	809	1.0−	0.8−	1998 05 01	704	0.3+	0.5−	1998 05 24	704	0.1−	0.6+
1992 07 30	809	0.7−	0.0	1998 05 01	704	0.2−	0.1+	1998 05 24	704	0.4−	0.8−
1998 04 21	704	0.1−	0.4−	1998 05 01	704	0.1+	0.5−	1998 05 24	704	1.4−	0.2−
1998 04 21	704	0.2+	0.3+	1998 05 01	704	0.0	0.6−	1998 05 27	699	0.5−	0.7+
1998 04 21	704	0.7−	0.6+	1998 05 01	704	0.8+	0.1−	1998 05 27	699	0.1+	0.1+
1998 04 21	704	0.6+	0.3+	1998 05 22	704	0.1−	0.4+	1998 05 27	699	0.3−	0.2+

1998 HZ₉₉ = 1977 EC₃ = 1989 CY₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	14.17357		(2000.0)		P		Q		Williams		
<i>n</i>	0.24064099	ω	71.76707		−0.73490251		+0.67659103				
<i>a</i>	2.5598999	Ω	150.75726		−0.65250843		−0.68684184				
<i>e</i>	0.0542398	<i>i</i>	5.43750		−0.18480003		−0.26546724				
<i>P</i>	4.10	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	4			

Residuals in seconds of arc

1977 03 12	381	0.2−	0.5+	1998 04 22	704	0.2−	0.4−	1998 04 30	566	0.1+	0.2+
1977 03 12	381	0.5−	0.1−	1998 04 22	704	0.5−	0.0	1998 04 30	566	0.0	0.0
1977 03 15	381	0.2−	0.4−	1998 04 25	699	0.3−	0.2−	1998 04 30	566	0.2+	0.0
1977 03 15	381	1.1+	0.6+	1998 04 25	699	0.5+	0.4+	1998 05 22	704	0.5+	0.2−
1989 02 05	888	0.5+	1.0+	1998 04 25	699	0.0	0.2+	1998 05 22	704	0.6+	0.8+
1989 02 05	888	0.6−	1.5−	1998 04 30	566	0.2+	0.2−	1998 05 22	704	(0.3+	3.1−)
1998 04 21	704	0.2−	0.1+	1998 04 30	566	0.2−	0.0	1998 05 22	704	1.3−	0.2+
1998 04 21	704	0.6−	0.4−	1998 04 30	566	0.1+	0.0	1998 05 22	704	0.1−	0.8+
1998 04 21	704	0.3−	0.5−	1998 04 30	566	0.4−	0.3−	1998 05 24	704	0.7+	0.4−

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1998 04 21	704	0.1−	0.0	1998 04 30	566	0.1+	0.0	1998 05 24	704	1.0+	0.9−
1998 04 21	704	0.6−	0.2+	1998 04 30	566	0.3+	0.1−	1998 05 24	704	0.2−	0.4+
1998 04 22	704	0.0	0.1+	1998 04 30	566	0.2−	0.0	1998 05 24	704	0.3−	0.4−
1998 04 22	704	0.5+	0.1−	1998 04 30	566	0.1−	0.2−	1998 05 24	704	0.1−	0.2+
1998 04 22	704	0.6+	0.0	1998 04 30	566	0.2+	0.2+				

1998 HF₁₀₀ = 1967 EG = 1980 DO

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	46.76090		(2000.0)		P		Q		Williams		
<i>n</i>	0.22623832	ω	56.02907		−0.99762872		−0.00994890				
<i>a</i>	2.6674233	Ω	123.31190		−0.01494030		−0.93459795				
<i>e</i>	0.1551577	<i>i</i>	4.67435		+0.06718426		−0.35556672				
<i>P</i>	4.36	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	3			

Residuals in seconds of arc

1967 03 08	095	0.8+	3.5+	1998 04 21	704	0.2+	0.8−	1998 05 22	704	0.4+	0.5+
1980 02 14	046	0.4−	0.5+	1998 04 21	704	0.3+	0.4−	1998 05 22	704	0.4+	0.0
1980 02 14	046	2.8−	1.2+	1998 04 21	704	0.2−	1.1−	1998 05 24	704	0.3−	0.9−
1980 02 15	046	0.1+	0.6−	1998 04 21	704	0.0	1.0−	1998 05 24	704	1.8−	0.4−
1980 02 15	046	0.6+	0.4+	1998 04 22	704	0.7+	0.3+	1998 05 24	704	0.3+	0.3+
1980 02 19	046	0.9+	0.1+	1998 04 22	704	0.0	0.7+	1998 05 24	704	1.2+	0.3+
1980 02 19	046	2.0+	1.7−	1998 04 22	704	1.9+	0.0	1998 05 24	704	0.2+	0.4−
1980 02 20	046	0.8+	0.9−	1998 04 22	704	3.1−	2.4+	1998 06 02	699	0.5−	0.8−
1980 02 20	046	0.3−	0.1−	1998 04 22	704	1.2−	0.2+	1998 06 02	699	0.2−	0.3−
1980 02 21	046	1.3−	1.5−	1998 05 22	704	0.4−	0.4−	1998 06 02	699	1.2+	0.3+
1980 02 22	046	0.1−	1.0−	1998 05 22	704	0.3−	0.1+				
1998 04 21	704	0.3+	0.1+	1998 05 22	704	0.7+	0.5+				

1998 HJ₁₀₀ = 1991 VG₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	95.17810		(2000.0)		P		Q		Williams		
<i>n</i>	0.21289366	ω	296.74542		−0.62054854		−0.78353087				
<i>a</i>	2.7777569	Ω	191.77167		+0.76320543		−0.59421230				
<i>e</i>	0.1083882	<i>i</i>	8.91208		+0.18010269		−0.18163459				
<i>P</i>	4.63	<i>H</i>	13.5		<i>G</i>	0.15	<i>U</i>	5			

Residuals in seconds of arc

1991 11 06	809	1.0+	1.2+	1998 04 21	704	0.0	0.8+	1998 05 24	704	1.9+	1.1−
1991 11 06	809	0.9−	0.2+	1998 04 22	704	0.4+	0.4−	1998 05 25	327	0.2+	0.4+
1991 11 06	809	0.5−	0.7+	1998 04 22	704	0.5−	0.2−	1998 05 25	327	0.2+	0.5+
1991 11 09	809	0.2−	1.3−	1998 04 22	704	0.7+	0.3−	1998 05 25	327	0.3+	0.2+
1991 11 09	809	0.8−	0.0	1998 04 22	704	0.8−	0.5+	1998 05 25	327	0.3+	0.5+
1991 11 09	809	0.4−	0.2+	1998 05 22	704	0.7−	0.2+	1998 05 28	327	0.4−	0.0
1991 11 12	809	1.2+	0.3−	1998 05 22	704	0.6+	0.3+	1998 05 28	327	0.4−	0.3−
1991 11 12	809	0.4+	0.8−	1998 05 22	704	1.1−	0.1−	1998 05 28	327	0.2−	0.2−
1991 11 12	809	0.2+	0.2+	1998 05 22	704	0.7+	1.2+	1998 06 02	699	0.1+	0.1−
1998 04 21	704	0.1+	0.5+	1998 05 24	704	0.0	0.0	1998 06 02	699	0.2−	0.1+
1998 04 21	704	0.2−	0.6−	1998 05 24	704	0.1+	0.4−	1998 06 02	699	0.8−	0.1−
1998 04 21	704	0.1+	0.2−	1998 05 24	704	0.1−	0.0				
1998 04 21	704	0.1−	0.1−	1998 05 24	704	0.0	0.7−				

1998 HM₁₀₀ = 1997 CJ₂₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	137.14871		(2000.0)		P		Q
n	0.20151021	ω	342.69030		−0.09482044		−0.99416558
a	2.8814075	Ω	112.72612		+0.91981927		−0.10724877
e	0.0255197	i	3.19571		+0.38071197		+0.01151072
P	4.89	H	14.0	G	0.15	U	5

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1997 02 14	691	0.1+	0.3+	1998 05 01	704	0.7-	0.8+	1998 05 24	704	1.2+	0.1+
1998 04 21	704	0.6-	0.9-	1998 05 01	704	0.7-	0.3+	1998 05 24	704	0.2-	0.3-
1998 04 21	704	0.1+	0.3-	1998 05 01	704	0.0	0.3+	1998 05 24	704	1.9-	0.6-
1998 04 21	704	0.4-	0.4-	1998 05 01	704	0.6+	0.7+	1998 05 28	699	1.0+	0.6-
1998 04 21	704	0.7+	0.1-	1998 05 01	704	1.9+	0.4+	1998 05 28	699	0.0	0.5+
1998 04 21	704	0.6+	0.3+	1998 05 23	704	0.1+	0.6+	1998 05 28	699	0.1-	0.3+

1998 HQ₁₀₀ = 3164 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	345.60109		(2000.0)	P	Q
<i>n</i>	0.30576162	ω	172.75958	-0.20177802	+0.97838621
<i>a</i>	2.1821306	Ω	85.59190	-0.90086973	-0.16727210
<i>e</i>	0.0419554	<i>i</i>	2.60026	-0.38434275	-0.12157496
<i>P</i>	3.22	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1973 09 19	675	1.2+	1.3+	1998 04 21	704	0.3+	0.9-	1998 05 04	566	0.2+	0.7-
1973 09 19	675	0.0	1.0+	1998 04 21	704	0.1-	0.3-	1998 05 22	704	0.1-	0.1-
1973 09 20	675	0.2-	0.4+	1998 04 21	704	0.3-	0.3+	1998 05 22	704	0.1-	0.5+
1973 09 24	675	0.5-	0.7-	1998 04 21	704	0.2+	0.6+	1998 05 22	704	0.4-	0.3-
1973 09 24	675	0.6-	0.6-	1998 04 22	704	0.2+	0.5+	1998 05 22	704	0.4+	1.2-
1973 09 25	675	2.1-	0.9-	1998 04 22	704	0.1-	0.4+	1998 05 22	704	0.4-	0.2-
1973 09 25	675	1.2-	0.7-	1998 04 22	704	0.8-	0.0	1998 05 24	704	0.0	0.2+
1973 09 29	675	1.2+	0.1+	1998 04 22	704	0.7-	0.4-	1998 05 24	704	0.2-	0.3+
1973 09 29	675	0.6+	0.1+	1998 04 22	704	0.0	0.3+	1998 05 24	704	0.3+	0.7+
1973 09 30	675	0.0	0.5-	1998 05 01	704	0.3+	0.5-	1998 05 24	704	0.0	0.5-
1973 09 30	675	0.3-	0.2+	1998 05 01	704	0.4-	0.1-	1998 05 24	704	0.4-	0.0
1973 10 04	675	(3.9+	0.2-)	1998 05 01	704	0.6-	0.2+	1998 05 28	699	0.3+	0.4+
1973 10 04	675	(3.0+	1.4-)	1998 05 01	704	0.2-	0.7+	1998 05 28	699	1.0+	0.3+
1973 10 05	675	1.4+	0.1+	1998 05 01	704	0.7+	1.0+	1998 05 28	699	0.5+	0.4+
1973 10 05	675	0.8+	0.2-	1998 05 04	566	0.1-	0.2-				
1998 04 21	704	0.4+	0.6-	1998 05 04	566	0.1+	0.9-				

1998 HF₁₀₁ = 1991 JV₃ = 1995 US₄₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	323.03003		(2000.0)	P	Q
<i>n</i>	0.27749888	ω	181.20414	+0.55114720	+0.83241159
<i>a</i>	2.3278870	Ω	122.24446	-0.76498314	+0.53169034
<i>e</i>	0.2612730	<i>i</i>	3.91089	-0.33322299	+0.15619323
<i>P</i>	3.55	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	2

Residuals in seconds of arc

1991 05 12	809	0.9+	1.0+	1998 04 21	704	0.8+	0.0	1998 05 22	704	0.4-	0.5+
1991 05 12	809	0.6+	0.6+	1998 04 21	704	0.4+	0.2+	1998 05 22	704	0.2-	0.4-
1991 05 12	809	0.5-	0.2+	1998 04 22	704	0.7+	0.3-	1998 05 22	704	0.6-	0.6+
1991 05 17	809	0.1+	0.3-	1998 04 22	704	0.9+	0.3+	1998 05 24	704	0.0	0.2-
1991 05 17	809	0.6-	1.0-	1998 04 22	704	0.7+	0.1-	1998 05 24	704	0.3-	0.7-
1991 05 17	809	0.4-	0.5-	1998 04 22	704	0.7+	0.0	1998 05 24	704	0.8-	0.0
1995 10 23	033	1.0-	0.7-	1998 04 22	704	0.5+	0.6+	1998 05 24	704	0.4+	0.4+
1995 10 23	033	1.0-	1.3+	1998 04 25	699	0.0	0.3+	1998 05 24	704	0.7-	0.7+
1995 10 24	033	1.3+	0.5+	1998 04 25	699	0.1-	0.7+	1998 06 02	699	0.2+	0.2-
1995 10 25	033	0.1+	0.1+	1998 04 25	699	0.6+	0.3-	1998 06 02	699	0.2-	0.5-
1998 04 21	704	0.7-	0.7+	1998 05 22	704	0.6-	0.3+	1998 06 02	699	0.1+	0.3-
1998 04 21	704	0.5+	0.9-	1998 05 22	704	1.5-	0.0				

1998 HJ₁₀₁ = 1984 SU₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	305.68531		(2000.0)	P	Q
<i>n</i>	0.27055889	ω	138.04736	+0.77333628	+0.63399088
<i>a</i>	2.3675265	Ω	182.61142	-0.59560184	+0.72511375
<i>e</i>	0.2417752	<i>i</i>	3.22156	-0.21727735	+0.26882264
<i>P</i>	3.64	<i>H</i>	15.5	<i>G</i>	0.15
				<i>U</i>	4

Residuals in seconds of arc

1984 09 21	809	1.8+	1.0+	1984 09 27	809	0.9-	0.1-	1998 04 22	704	0.7-	0.6-
1984 09 21	809	2.1+	0.9+	1984 09 28	809	0.3+	0.0	1998 05 01	704	0.3+	0.4-
1984 09 21	809	2.4+	0.7+	1984 09 28	809	0.6+	0.0	1998 05 01	704	0.3-	0.9-
1984 09 23	809	1.7-	0.6-	1984 09 28	809	0.9+	0.0	1998 05 01	704	1.3+	1.1+
1984 09 23	809	1.0-	0.3-	1984 09 29	809	0.2+	0.4-	1998 05 01	704	(6.3-	1.0+)
1984 09 23	809	0.2-	0.5-	1984 09 29	809	0.0	0.3-	1998 05 22	704	0.7-	1.0+
1984 09 24	809	1.1-	0.5-	1984 09 29	809	0.4+	0.0	1998 05 22	704	0.4+	0.1+
1984 09 24	809	0.7-	0.5-	1998 04 21	704	1.4+	0.4-	1998 05 22	704	1.7+	0.9-
1984 09 24	809	0.3-	0.2-	1998 04 21	704	0.0	0.2-	1998 05 24	704	0.8-	0.4+
1984 09 26	809	0.3-	0.6+	1998 04 21	704	1.3-	1.6+	1998 05 24	704	0.4-	0.1+
1984 09 26	809	0.1+	0.4+	1998 04 21	704	1.0+	0.9-	1998 05 24	704	0.1-	0.5-
1984 09 26	809	0.3+	0.4+	1998 04 22	704	1.5+	1.5+	1998 05 24	704	1.9-	1.4-
1984 09 27	809	1.7-	0.2-	1998 04 22	704	0.7-	0.6-				
1984 09 27	809	1.4-	0.0	1998 04 22	704	0.6-	1.3+				

1998 HD₁₀₃ = 1997 CO₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	70.67349		(2000.0)	P	Q
<i>n</i>	0.25424327	ω	242.07329	-0.93912672	-0.34252677
<i>a</i>	2.4677609	Ω	277.88548	+0.32395506	-0.85686959
<i>e</i>	0.1623846	<i>i</i>	1.54841	+0.11442958	-0.38529198
<i>P</i>	3.88	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1997 02 04	691	0.4+	1.0-	1998 04 25	809	0.9-	2.2+	1998 05 22	704	0.2-	0.8-
1997 02 04	691	0.4+	0.6-	1998 04 25	809	0.2-	2.8+	1998 05 22	704	0.3+	0.8-
1997 02 04	691	0.5+	0.7-	1998 04 28	809	1.3+	0.5-	1998 05 24	704	0.5-	1.4-
1997 02 10	691	0.4-	0.9-	1998 04 28	809	0.3+	1.0-	1998 05 24	704	0.7-	1.6-
1997 02 10	691	0.0	0.8+	1998 04 28	809	0.8+	0.3-	1998 05 24	704	0.6-	0.7-
1997 02 10	691	0.3-	0.6-	1998 05 22	704	0.6+	0.2-	1998 05 24	704	0.2-	1.5-
1998 04 25	809	0.2-	3.0+	1998 05 22	704	0.6-	0.9-				

1998 HF₁₀₃ = 1977 RR₁₀ = 1994 GC₁₀Id. G. V. Williams; 1994 AC₁₃ = 1977 RR₁₀ (*MPC* 23529) is invalid

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	72.89512		(2000.0)	P	Q
<i>n</i>	0.26668926	ω	112.24942	-0.91866241	-0.39378168
<i>a</i>	2.3903731	Ω	44.57731	+0.34388078	-0.83643842
<i>e</i>	0.1730589	<i>i</i>	2.57634	+0.19443608	-0.38119124
<i>P</i>	3.70	<i>H</i>	15.5	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1977 09 09	675	(11.8+	3.0+)	1998 04 28	809	1.6+	0.3-	1998 05 22	704	2.4+	1.1-
1977 09 10	675	0.1-	0.1+	1998 04 28	809	0.4-	0.4+	1998 05 23	699	0.6-	0.9+
1994 04 03	033	1.1+	0.3+	1998 04 28	809	1.3+	0.0	1998 05 23	699	1.0+	0.6+
1994 04 03	033	0.5+	0.4-	1998 05 05	699	1.0-	1.6+	1998 05 23	699	0.0	0.1-
1994 04 03	033	0.2-	0.2+	1998 05 05	699	1.2-	0.8+	1998 05 24	704	0.4-	0.7-
1994 04 04	033	1.8-	0.9-	1998 05 05	699	0.5+	0.5+	1998 05 24	704	0.2-	1.7-
1998 04 25	809	0.6+	1.9+	1998 05 22	704	0.4-	1.7-	1998 05 24	704	0.6-	0.4+
1998 04 25	809	0.4-	1.1+	1998 05 22	704	0.9-	0.4-	1998 05 24	704	1.1+	1.9-
1998 04 25	809	0.5+	0.8+	1998 05 22	704	1.1-	1.0+	1998 05 24	704	2.0-	1.3-

1998 HH₁₁₄ = 1991 JG₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	328.78966		(2000.0)	P	Q
<i>n</i>	0.27559064	ω	140.63892	+0.06236328	+0.99428074
<i>a</i>	2.3386204	Ω	132.74958	-0.94290013	+0.08717152
<i>e</i>	0.0956134	<i>i</i>	6.78045	-0.32718522	-0.06170032
<i>P</i>	3.58	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1991 05 13	809	0.3+	0.4-	1998 04 23	704	0.1+	0.5-	1998 05 23	699	0.2+	0.1-
1991 05 13	809	0.3+	0.2-	1998 04 23	704	0.3-	0.1+	1998 05 23	699	0.5-	0.2-
1991 05 13	809	0.9+	0.7-	1998 04 23	704	0.1-	0.1+	1998 05 23	699	0.4-	0.0

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1991 05 17	809	0.4−	0.1+	1998 04 24	704	0.2+	0.5+	1998 05 24	699	0.1+	0.2−
1991 05 17	809	0.2−	1.3+	1998 04 24	704	0.6+	0.3−	1998 05 24	699	0.1+	0.5−
1991 05 17	809	0.8−	0.3+	1998 04 24	704	0.2−	0.4+	1998 05 24	699	0.0	0.4−
1998 04 23	704	0.6+	0.4−	1998 04 24	704	0.1+	0.2+				
1998 04 23	704	0.1+	0.0	1998 04 24	704	0.9−	0.7+				

1998 HO₁₁₇ = 1992 QH₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams			
<i>n</i>	227.65260	<i>ω</i>	282.89119	+0.95041005	−0.28464435						
<i>a</i>	2.2783743	<i>Ω</i>	93.75174	+0.31099631	+0.86801026						
<i>e</i>	0.1786192	<i>i</i>	7.21322	+0.00142768	+0.40686090						
<i>P</i>	3.44	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1992 08 23	675	0.1+	0.6−	1998 04 23	704	0.7−	0.5−	1998 05 22	704	0.0	1.6+
1992 08 23	675	0.7−	0.1+	1998 04 24	704	0.1+	0.6+	1998 05 22	704	0.4+	0.4−
1992 08 28	675	0.0	0.1−	1998 04 24	704	0.5+	0.6+	1998 05 22	704	0.6+	1.4+
1992 08 28	675	0.5+	0.5+	1998 04 24	704	0.5+	0.7+	1998 05 24	704	0.6+	0.6−
1998 04 23	704	0.8−	0.6−	1998 04 24	704	0.0	1.0+	1998 05 24	704	0.3+	0.2+
1998 04 23	704	0.7+	0.8−	1998 04 24	704	0.8−	0.8+	1998 05 24	704	0.0	0.7−
1998 04 23	704	1.1−	0.8−	1998 05 22	704	0.9−	0.5+	1998 05 24	704	0.3−	0.5−
1998 04 23	704	1.5+	0.8−	1998 05 22	704	0.5−	1.7−				

1998 HL₁₂₀ = 1977 CN = 1990 MK

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams			
<i>n</i>	0.24044882	<i>ω</i>	82.61887	−0.78579556	+0.59372484						
<i>a</i>	2.5612636	<i>Ω</i>	133.61074	−0.61841381	−0.74995755						
<i>e</i>	0.1410098	<i>i</i>	13.84428	−0.00947135	−0.29164103						
<i>P</i>	4.10	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	3				
Residuals in seconds of arc											
1977 02 11	675	0.3−	0.3+	1998 04 23	704	0.5−	0.3+	1998 04 28	704	0.4−	0.5+
1977 02 11	675(11.0+	7.7−)		1998 04 23	704	0.9−	0.6−	1998 04 28	704	0.1−	0.3+
1977 02 12	675	0.3+	0.1−	1998 04 23	704	0.3−	0.0	1998 04 28	704	0.3−	0.7+
1977 02 12	675	0.0	0.0	1998 04 23	704	0.2+	0.1−	1998 04 28	704	0.3−	0.0
1990 06 26	675	0.2+	1.0−	1998 04 23	704	0.5−	0.8−	1998 04 28	704	(2.3−	0.1−)
1990 06 26	675	0.2−	0.2−	1998 04 24	704	0.8−	0.3+	1998 05 22	566	0.9+	0.1−
1990 06 28	675	0.7−	0.4+	1998 04 24	704	0.0	0.3−	1998 05 22	566	0.5+	0.3−
1990 06 29	413	1.6+	0.6+	1998 04 24	704	0.3+	0.3+	1998 05 22	566	1.0+	0.5−
1990 06 29	413	0.7−	0.7+	1998 04 24	704	1.3+	0.2+				

1998 HE₁₂₁ = 1990 WD₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams			
<i>n</i>	0.18932706	<i>ω</i>	320.65869	+0.68340208	−0.70134999						
<i>a</i>	3.0037302	<i>Ω</i>	85.18614	+0.71055707	+0.57531235						
<i>e</i>	0.0822163	<i>i</i>	11.73434	+0.16754179	+0.42086089						
<i>P</i>	5.21	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4				
Residuals in seconds of arc											
1990 11 14	675	0.2−	1.5+	1998 04 21	704	0.3−	0.3−	1998 04 24	704	0.9+	0.6+
1990 11 14	675	0.8+	1.1+	1998 04 21	704	1.0−	1.3−	1998 04 24	704	0.5−	0.6−
1990 11 16	809	0.3−	0.3+	1998 04 21	704	1.0−	0.4−	1998 05 01	699	0.5+	0.3+
1990 11 17	809	1.1+	0.5−	1998 04 21	704	0.3−	0.0	1998 05 01	699	0.5+	0.3+
1990 11 21	809	0.1−	0.1+	1998 04 23	704	0.1−	0.2+	1998 05 01	699	0.4+	0.7+
1990 11 21	809	0.3−	0.7+	1998 04 23	704	1.3+	0.7+	1998 05 27	699	0.0	0.4+
1990 11 21	809	0.5−	0.8+	1998 04 23	704	0.9−	0.1−	1998 05 27	699	0.4+	0.5+
1990 11 22	809	0.1+	1.3−	1998 04 23	704	0.0	0.2+	1998 05 27	699	0.3+	0.4+
1990 11 22	809	0.0	0.9−	1998 04 23	704	1.0−	1.0−	1998 06 02	699	0.5+	0.3+
1990 11 22	809	0.8−	1.2−	1998 04 24	704	0.3+	0.2+	1998 06 02	699	0.0	0.5+
1998 04 21	704	0.3−	0.1−	1998 04 24	704	0.5+	0.8−	1998 06 02	699	0.2+	0.2+

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1998 HG₁₂₁ = 1984 SJ = 1996 XO₃₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams			
<i>n</i>	0.26561506	<i>ω</i>	207.49953	+0.95216272	+0.29608651						
<i>a</i>	2.3968135	<i>Ω</i>	135.06162	−0.25701745	+0.90977652						
<i>e</i>	0.1461119	<i>i</i>	6.14604	−0.16531237	+0.29092860						
<i>P</i>	3.71	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	3				
Residuals in seconds of arc											
1984 09 23	071	(5.0−	1.7−)	1998 04 21	704	0.9−	0.3+	1998 04 29	566	0.1+	0.5−
1984 09 23	071	1.3+	1.6−	1998 04 21	704	0.5−	0.0	1998 05 22	704	0.3−	0.7−
1984 09 23	071	(4.9−	0.8−)	1998 04 21	704	0.9−	0.8+	1998 05 22	704	0.7−	0.2+
1984 09 23	071	0.0	0.9+	1998 04 21	704	0.6−	0.8+	1998 05 22	704	0.1−	0.9+
1984 09 24	071	1.8−	0.1+	1998 04 23	704	0.1−	0.1+	1998 05 22	704	0.2+	0.7−
1984 09 25	071	0.3+	1.1+	1998 04 23	704	0.2+	0.2+	1998 05 22	704	0.1+	0.3+
1996 12 14	557	0.7+	0.0	1998 04 23	704	0.5+	0.7+	1998 05 24	704	0.2−	0.1−
1996 12 15	557	0.5+	0.1+	1998 04 23	704	0.2+	1.4+	1998 05 24	704	0.1+	0.8−
1996 12 15	557	0.3+	0.4+	1998 04 24	704	1.2+	0.0	1998 05 24	704	1.1−	0.5+
1996 12 15	557	0.1+	0.2+	1998 04 24	704	0.4+	1.0−	1998 05 24	704	0.4−	0.0
1996 12 15	691	0.3+	0.0	1998 04 24	704	0.5+	0.0	1998 05 24	704	(2.1+	0.1+)
1996 12 15	691	0.2+	0.5−	1998 04 24	704	0.3+	0.8−	1998 05 27	699	0.5+	0.9−
1996 12 15	691	0.4+	0.1−	1998 04 25	699	0.1+	0.1+	1998 05 27	699	0.7+	0.9−
1996 12 17	691	0.8−	0.0	1998 04 25	699	0.7+	0.1+	1998 05 27	699	0.3+	1.0−
1996 12 17	691	0.8−	0.1−	1998 04 25	699	0.5+	0.2+	1998 06 02	699	0.4+	0.3−
1996 12 17	691	0.7−	0.0	1998 04 29	566	0.0	0.2−	1998 06 02	699	0.1−	0.2−
1998 04 21	704	0.3−	1.5+	1998 04 29	566	0.1−	0.1−	1998 06 02	699	0.7−	0.4+

1998 HJ₁₂₁ = 3063 T-1 = 1989 SD₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	298.18302		(2000.0)		P		Q				
<i>n</i>	0.18537596	<i>ω</i>	119.99542		+0.57867441		+0.81535553				
<i>a</i>	3.0462609	<i>Ω</i>	185.46875		−0.79850367		+0.56189188				
<i>e</i>	0.0905334	<i>i</i>	11.01007		−0.16591506		+0.13954525				
<i>P</i>	5.32	<i>H</i>	14.0		<i>G</i>	0.15	<i>U</i>	3			
Residuals in seconds of arc											
1971 03 24	675	1.1−	0.7+	1998 04 21	704	0.6−	0.9+	1998 05 22	704	0.2+	0.2−
1971 03 25	675	0.2+	0.5+	1998 04 21	704	0.2−	1.4+	1998 05 22	704	0.1+	0.6+
1971 03 26	675	0.8+	0.8+	1998 04 21	704	0.3+	0.3+	1998 05 22	704	0.3+	1.4+
1971 03 26	675	1.1+	0.7−	1998 04 21	704	0.1−	1.0+	1998 05 22	704	0.7−	1.3+
1971 03 27	675	0.3+	1.1+	1998 04 23	704	0.8+	0.2+	1998 05 22	704	0.9−	1.1+
1971 04 02	675	0.7−	0.0	1998 04 23	704	0.0	0.2+	1998 05 24	704	0.1+	0.5−
1989 09 26	809	1.1−	1.0+	1998 04 23	704	0.1+	0.6−	1998 05 24	704	0.4+	1.7−
1989 09 26	809	1.1−	1.8+	1998 04 23	704	0.4−	0.2−	1998 05 24	704	0.4+	1.5+
1989 09 26	809	0.5−	0.5−	1998 04 24	704	0.2−	0.1+	1998 05 24	704	0.5−	0.7+
1989 09 28	809	1.3+	1.6+	1998 04 24	704	0.1+	0.3−	1998 05 24	704	0.4−	1.9−
1989 09 28	809	1.0+	0.9+	1998 04 24	704	0.6+	0.3−	1998 05 27	699	0.0	0.1−
1989 09 28	809	0.3+	0.2+	1998 04 24	704	0.8−	0.6+	1998 05 27	699	0.5−	1.0−
1989 09 29	675	0.9−	0.6−	1998 04 25	699	1.8+	0.2+	1998 05 27	699	0.6+	1.5−
1989 09 29	675	0.2+	0.3−	1998 04 25	699	0.2+	0.2+	1998 06 02	699	0.8−	0.4+
1989 10 03	809	0.2+	0.5+	1998 04 25	699	0.0	0.7+	1998 06 02	699	0.7−	0.6−
1989 10 03	809	0.2+	0.6+	1998 04 29	566	0.6+	0.7−	1998 06 02	699	0.2−	0.1+
1989 10 03	809	0.6−	0.5−	1998 04 29	566	0.4+	0.4−				
1998 04 21	704	0.1+	0.2+	1998 04 29	566	0.1+	0.8−				

Residuals in seconds of arc

1997 02 07	691	0.2+	0.5+	1998 04 23	704	0.7-	0.1+	1998 05 22	704	0.4+	0.3-
1997 02 07	691	0.9-	0.1-	1998 04 24	704	0.4+	0.8+	1998 05 24	704	1.1+	0.3-
1997 02 07	691	0.2+	0.1+	1998 04 24	704	0.1-	0.2-	1998 05 24	704	0.4-	1.5-
1997 02 14	691	0.2+	0.6-	1998 04 24	704	1.2-	1.5-	1998 05 24	704	0.2+	1.2+
1997 02 14	691	0.1+	0.1+	1998 04 24	704	0.3-	0.5+	1998 05 24	704	1.0-	0.6+
1997 02 14	691	0.2+	0.0	1998 05 22	704	0.2-	0.4+	1998 05 24	704	1.0-	0.0
1998 04 23	704	0.6+	0.1+	1998 05 22	704	1.3+	0.9-	1998 06 02	699	1.5-	0.2-
1998 04 23	704	1.5+	0.0	1998 05 22	704	0.7+	0.9+	1998 06 02	699	0.3-	0.3-
1998 04 23	704	0.8-	0.3+	1998 05 22	704	1.1+	0.1+	1998 06 02	699	0.1+	0.0

1998 HH₁₂₃ = 1974 SF₃ = 1995 SH₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	213.95844		(2000.0)		P		Q
<i>n</i>	0.23495092	ω	207.37557		+0.87512353		-0.48386589
<i>a</i>	2.6010654	Ω	181.59700		+0.47294701		+0.85775263
<i>e</i>	0.0845204	<i>i</i>	11.82188		+0.10237153		+0.17359209
<i>P</i>	4.19	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1974 09 21	095	1.0+	2.8+	1998 04 23	704	0.4+	0.1-	1998 05 01	699	0.1-	0.1-
1974 09 23	095	0.8-	3.5-	1998 04 23	704	0.4+	0.5-	1998 05 27	699	0.2+	0.9+
1995 09 20	399	0.9+	0.6-	1998 04 23	704	0.0	0.2-	1998 05 27	699	1.5+	0.3+
1995 09 20	399	0.4+	1.2+	1998 04 23	704	3.3-	0.4+	1998 05 27	699	0.9+	0.1-
1995 09 21	399	0.2-	0.5+	1998 04 24	704	0.2-	0.6+	1998 06 02	699	0.6+	1.6-
1995 09 21	399	0.5-	0.4-	1998 04 24	704	0.5-	0.3+	1998 06 02	699	0.5+	0.8-
1995 09 30	399	0.9-	0.4+	1998 04 24	704	0.4-	0.4+	1998 06 02	699	0.3-	0.1+
1995 09 30	399	0.2+	0.4-	1998 05 01	699	0.3-	0.0				
1998 04 23	704	0.5+	0.5-	1998 05 01	699	0.2+	0.8+				

1998 HK₁₂₄ = 1984 BD₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	232.53832		(2000.0)		P		Q
<i>n</i>	0.29917337	ω	250.58168		+0.94883838		-0.30372879
<i>a</i>	2.2140500	Ω	127.00645		+0.31474535		+0.88781474
<i>e</i>	0.1187196	<i>i</i>	6.20685		+0.02531979		+0.34573662
<i>P</i>	3.29	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1984 01 25	675	0.7-	0.5-	1998 04 24	704	0.7-	0.5-	1998 05 24	704	1.0-	0.1+
1984 01 26	675	0.7+	0.6+	1998 04 24	704	0.1+	0.5+	1998 05 24	704	0.8+	0.6-
1998 04 23	704	0.0	0.5+	1998 05 22	704	0.5+	0.1+	1998 05 24	704	0.3-	1.0+
1998 04 23	704	0.5+	0.7-	1998 05 22	704	0.2-	0.0	1998 05 24	704	0.5+	1.3+
1998 04 23	704	0.4+	1.8-	1998 05 22	704	0.2+	1.0-	1998 05 24	704	0.3+	0.4-
1998 04 23	704	0.2-	1.2+	1998 05 22	704	0.4-	0.1+				
1998 04 24	704	0.5-	0.4+	1998 05 22	704	(4.7-	1.5-)				

1998 HQ₁₂₄ = 1990 AK = 1991 LD₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	139.21586		(2000.0)		P		Q
<i>n</i>	0.27556938	ω	341.97172		-0.17175288		-0.98115345
<i>a</i>	2.3387407	Ω	117.83806		+0.91572710		-0.19214313
<i>e</i>	0.0564193	<i>i</i>	5.74635		+0.36324210		+0.02046772
<i>P</i>	3.58	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1990 01 03	511	0.2+	0.5-	1998 04 23	704	0.3+	1.4-	1998 05 22	704	0.6-	0.6+
1990 01 03	511	0.3-	0.1-	1998 04 23	704	1.0+	1.4-	1998 05 22	704	(0.1-	2.5-)
1990 01 04	511	0.5+	0.6+	1998 04 24	704	0.1-	0.4+	1998 05 22	704	0.0	0.2-
1990 01 04	511	0.4-	0.5+	1998 04 24	704	0.6+	0.0	1998 05 22	704	0.0	0.2-
1991 06 06	809	1.9+	0.4-	1998 04 24	704	0.1-	0.1+	1998 05 24	704	0.2+	1.7+
1991 06 06	809	1.4-	0.5+	1998 05 05	699	0.5-	0.9+	1998 05 24	704	0.0	0.3-
1991 06 06	809	0.3-	0.9+	1998 05 05	699	0.9-	0.1+	1998 05 24	704	0.1-	0.1-
1998 04 23	704	0.1+	0.2-	1998 05 05	699	1.2-	0.5+	1998 05 24	704	0.9+	0.5+
1998 04 23	704	0.7+	0.4-	1998 05 22	704	0.2+	0.6+	1998 05 24	704	0.7-	1.7-

1998 HT₁₂₅ = 1976 DH₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	40.20784		(2000.0)		P		Q
<i>n</i>	0.27503390	ω	71.76500		-0.95117158		+0.30201656
<i>a</i>	2.3417754	Ω	125.76666		-0.30446637		-0.88412039
<i>e</i>	0.1434410	<i>i</i>	4.50321		-0.05072334		-0.35653491
<i>P</i>	3.58	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1976 02 27	033	1.3-	0.7+	1998 04 24	704	0.4+	0.1+	1998 05 22	704	0.2-	0.6-
1976 03 01	033	1.3+	0.0	1998 04 24	704	0.6-	0.5-	1998 05 22	704	0.0	0.2-
1976 03 02	033	0.5+	0.3-	1998 05 01	704	0.7+	0.3+	1998 05 22	704	0.8-	0.2-
1976 03 03	033	2.1-	1.1+	1998 05 01	704	0.6+	0.2+	1998 05 22	704	0.5-	0.5+
1976 03 03	033	1.6+	1.3-	1998 05 01	704	1.0-	0.3+	1998 05 24	704	0.6+	0.7+
1998 04 23	704	0.1+	0.3+	1998 05 01	704	0.1+	0.2-	1998 05 24	704	0.5+	0.8-
1998 04 23	704	0.0	0.1-	1998 05 05	699	0.0	0.4+	1998 05 24	704	0.5+	0.4+
1998 04 23	704	0.6-	0.7-	1998 05 05	699	0.5+	0.2+	1998 05 24	704	0.1-	0.1+
1998 04 23	704	0.5-	0.1-	1998 05 05	699	0.1-	0.4-	1998 05 24	704	0.3-	0.8+
1998 04 24	704	0.5+	0.3-	1998 05 22	704	0.2+	0.1-				

1998 HZ₁₂₇ = 1988 RJ₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	331.53295		(2000.0)		P		Q
<i>n</i>	0.17275484	ω	52.04334		-0.29325537		+0.95601545
<i>a</i>	3.1928798	Ω	200.90607		-0.88231581		-0.27304585
<i>e</i>	0.1256799	<i>i</i>	0.96011		-0.36813056		-0.10714676
<i>P</i>	5.71	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1988 09 14	807	0.1-	0.2-	1998 03 25	704	0.2-	0.6-	1998 04 18	704	(2.6-	0.4+)
1988 09 15	807	0.1+	0.3+	1998 03 25	704	(2.5-	1.2-)	1998 04 18	704	(4.8-	0.9-)
1988 09 16	807	0.0	0.2-	1998 04 01	704	1.1+	0.7+	1998 04 20	704	1.4-	0.1-
1998 03 22	704	0.2-	0.3-	1998 04 01	704	0.5-	0.7+	1998 04 20	704	1.1+	0.9-
1998 03 22	704	1.6+	1.2+	1998 04 01	704	0.4-	0.5+	1998 04 20	704	(1.7+	2.3+)
1998 03 22	704	1.2+	0.2-	1998 04 01	704	0.3-	0.5-	1998 04 20	704	1.3+	1.2+
1998 03 22	704	1.0-	0.6-	1998 04 01	704	0.4-	1.4-	1998 04 22	704	0.6+	0.5+
1998 03 25	704	0.3-	0.5+	1998 04 18	704	0.5+	0.4-	1998 04 22	704	(2.4-	0.1+)
1998 03 25	704	0.5-	0.0	1998 04 18	704	0.2-	0.6+	1998 04 22	704	0.5+	0.2-
1998 03 25	704	0.2-	0.5-	1998 04 18	704	1.1-	0.1-	1998 04 22	704	1.1-	0.3-

1998 HT₁₂₉ = 1206 T-1

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	64.39839		(2000.0)		P		Q
<i>n</i>	0.18275156	ω	297.16214		-0.66038970		-0.74988728
<i>a</i>	3.0753554	Ω	194.38160		+0.73284227		-0.63214743
<i>e</i>	0.0952488	<i>i</i>	9.13366		+0.16379146		-0.19508637
<i>P</i>	5.39	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1971 03 24	675	0.3+	0.7+	1998 03 24	704	0.1+	0.9-	1998 04 19	704	1.3+	1.4-
1971 03 25	675	0.7-	0.8+	1998 03 24	704	0.7+	0.5+	1998 04 19	704	0.1+	0.5-
1971 03 25	675	0.5+	0.5-	1998 03 24	704	0.6-	1.0-	1998 04 19	704	0.0	0.4+
1971 03 26	675	2.0+	1.4-	1998 03 24	704	1.1+	0.5-	1998 04 19	704	0.4+	1.4+
1971 03 27	675	2.3-	0.1+	1998 03 24	704	1.7+	0.4-	1998 04 19	704	0.0	2.1-
1971 04 02	675	0.2+	0.6+	1998 04 01	704	2.5+	0.8+	1998 04 20	704	0.3-	1.3+
1998 03 20	704	0.6+	0.2-	1998 04 01	704	0.9-	0.7-	1998 04 20	704	0.7-	0.9+
1998 03 20	704	0.1+	0.4+	1998 04 01	704	0.4-	1.5+	1998 04 20	704	0.2+	0.0
1998 03 20	704	0.4-	0.2-	1998 04 01	704	1.9-	0.7+	1998 04 20	704	0.2-	1.0+
1998 03 20	704	1.3-	0.6+	1998 04 01	704	0.8-	0.3-	1998 04 20	704	1.3-	1.4-

1998 HA₁₃₃ = 1995 UY₂₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17815183	ω	197.74168	+0.72408290	-0.67849557		
<i>a</i>	3.1280656	Ω	206.31107	+0.66183476	+0.73406650		
<i>e</i>	0.0921034	<i>i</i>	16.23024	+0.19411004	+0.02810942		
<i>P</i>	5.53	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1995 10 19	691	0.1+	0.4+	1998 03 25	704	0.1-	0.2-
1995 10 19	691	0.2+	0.5+	1998 03 25	704	1.8-	0.1+
1995 10 19	691	0.1+	0.4+	1998 03 25	566	0.3+	0.4-
1995 10 22	691	0.1-	0.4-	1998 03 25	566	0.8+	0.2-
1995 10 22	691	0.0	0.5-	1998 03 25	566	0.1+	0.1-
1995 10 22	691	0.2-	0.0	1998 04 01	704	0.1+	0.2+
1998 03 22	704	0.8+	0.0	1998 04 01	704	0.2+	0.0
1998 03 22	704	0.1+	0.3+	1998 04 01	704	0.2-	0.4+
1998 03 22	704	0.4+	1.1-	1998 04 01	704	0.2+	1.4+
1998 03 22	704	0.2+	1.1-	1998 04 01	704	0.4+	0.6+
1998 03 22	704	1.4-	0.5-	1998 04 19	704	0.9+	0.5+
1998 03 25	704	0.6-	0.0	1998 04 19	704	1.1+	0.9+
1998 03 25	704	0.3-	0.4+	1998 04 19	704	1.3-	0.2+
1998 03 25	704	0.9-	0.0	1998 04 19	704	1.1+	0.6+

1998 HQ₁₃₆ = 1992 SV₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.26770743	ω	147.84472	-0.99720636	-0.05430364		
<i>a</i>	2.3843084	Ω	29.17381	+0.02307944	-0.87704238		
<i>e</i>	0.1127711	<i>i</i>	6.03969	+0.07104099	-0.47733404		
<i>P</i>	3.68	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1992 09 27	691	0.0	0.1-	1998 03 22	704	1.9-	1.6-
1992 09 27	691	0.3+	0.2-	1998 03 22	704	0.3+	1.8+
1992 09 27	691	0.0	0.4-	1998 03 25	704	1.3-	0.2-
1992 10 02	691	0.0	0.4+	1998 03 25	704	1.6+	0.3+
1992 10 02	691	0.2-	0.0	1998 03 25	704	0.6-	0.1+
1992 10 02	691	0.1-	0.3+	1998 03 25	704	0.8+	0.2+
1998 03 22	704	0.7+	0.1-	1998 04 20	704	0.1-	1.2+
1998 03 22	704	0.1+	0.5-	1998 04 20	704	1.8+	0.3+

1998 HR₁₃₆ = 1979 MY₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.25137052	ω	61.77133	-0.56108118	+0.82773574		
<i>a</i>	2.4865269	Ω	174.08578	-0.77967399	-0.52585794		
<i>e</i>	0.1164503	<i>i</i>	3.58263	-0.27802226	-0.19577276		
<i>P</i>	3.92	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1979 06 23	413(13.6-	1.7-)		1998 03 25	704	0.1-	0.9-
1979 06 24	413	0.6+	0.2-	1998 03 25	704	0.3+	0.2+
1979 06 25	413	0.3+	0.4+	1998 03 25	704	0.2-	0.2+
1979 06 29	413	0.8-	0.3-	1998 03 25	704	0.6-	0.5+
1998 03 20	704	0.4+	0.5+	1998 03 25	704	0.1-	0.9-
1998 03 20	704	0.9+	1.5+	1998 04 20	704	0.5-	1.1-
1998 03 20	704	0.4+	1.1-	1998 04 20	704	1.2-	0.7+
1998 03 20	704	0.4-	1.2-	1998 04 20	704	0.3-	0.4-

1998 HV₁₃₇ = 1994 CQ₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27333193	ω	334.20851	+0.91693356	+0.39901168		
<i>a</i>	2.3514864	Ω	2.29099	-0.34248459	+0.79302573		
<i>e</i>	0.1247498	<i>i</i>	6.81821	-0.20478562	+0.46032583		
<i>P</i>	3.61	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1994 02 08	809	0.5-	1.2+	1998 03 22	704	0.6-	0.0
1994 02 08	809	0.6-	0.7+	1998 03 22	704	0.2+	0.9-
1994 02 08	809	1.3-	0.1+	1998 03 22	704	1.7-	1.3-
1994 02 10	809	1.8+	1.6-	1998 03 22	704	0.6+	0.3-
1994 02 10	809	0.2+	1.5+	1998 03 25	704	0.4+	0.1+
1994 02 10	809	0.3+	1.2-	1998 03 25	704	0.1+	0.9+
1994 02 13	809	0.5+	0.7-	1998 03 25	704	1.0+	0.6-
1994 02 13	809	0.0	0.2-	1998 03 25	704	0.2+	2.1+
1994 02 13	809	0.3-	0.3+	1998 04 20	704	0.1-	0.4-

1998 HU₁₄₄ = 1978 SV₄ = 1997 CG₂₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18496379	ω	158.25656	+0.87729022	+0.47995380		
<i>a</i>	3.0507848	Ω	173.05949	-0.44334075	+0.81233565		
<i>e</i>	0.2044782	<i>i</i>	1.18277	-0.18387727	+0.33129313		
<i>P</i>	5.33	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1978 09 27	095	0.4-	0.6+	1998 04 21	704	0.4+	0.4+
1978 10 03	095	0.0	0.1+	1998 04 21	704	1.8-	0.4-
1978 10 07	095	0.1-	0.9+	1998 04 22	704	2.1-	1.4-
1997 02 13	684	1.3+	0.6+	1998 04 22	704	0.9+	0.5-
1997 02 13	684	0.6+	0.4-	1998 04 22	704	1.0+	0.5-
1997 02 14	684	0.7-	0.3+	1998 04 22	704	0.8+	1.4+
1997 02 14	684	0.2-	0.1+	1998 04 22	704	0.4+	0.4+
1997 02 14	684	0.6-	0.2+	1998 05 01	704	0.1-	0.2-
1998 04 21	704	0.6+	0.6+	1998 05 01	704	1.4+	0.2-
1998 04 21	704	0.3-	0.7+	1998 05 01	704	1.2-	0.4-
1998 04 21	704	0.1-	0.5+	1998 05 01	704	0.3-	0.4-

1998 HC₁₄₆ = 1997 EW₃₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17223737	ω	136.13459	-0.45570258	+0.88197893		
<i>a</i>	3.1992717	Ω	106.41750	-0.84732621	-0.38844263		
<i>e</i>	0.0630616	<i>i</i>	7.19868	-0.27271497	-0.26688103		
<i>P</i>	5.72	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5
Residuals in seconds of arc							
1997 03 05	704	0.3-	0.1-	1998 04 23	704	0.1-	0.3-
1997 03 05	704	0.8+	0.3-	1998 04 23	704	0.5-	0.3+
1997 03 06	704	0.5-	0.0	1998 04 23	704	1.5+	1.4+
1997 03 06	704	0.1+	0.3+	1998 04 23	704	1.3+	1.6+
1998 04 21	704	0.1+	0.9-	1998 04 29	566	0.4+	0.8-
1998 04 21	704	1.4-	0.8-	1998 04 29	566	0.1+	0.2+
1998 04 21	704	0.0	0.6-	1998 04 29	566	0.2+	0.3-
1998 04 21	704	0.0	0.3-	1998 05 22	704	1.4-	0.6-
1998 04 21	704	1.3-	0.1+	1998 05 22	704	0.5+	0.5+

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1998 HH₁₄₆ = 1974 DM = 1976 YF₇
 Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.29227261	ω	14.53496	-0.36618745	-0.92882008		
<i>a</i>	2.2487645	Ω	96.97065	+0.84796460	-0.35811042		
<i>e</i>	0.0951991	<i>i</i>	3.26705	+0.38322681	-0.09513243		
<i>P</i>	3.37	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1974 02 19	029	1.3+	0.6+	1998 04 22	704	0.2-	0.3-	1998 05 22	704	0.3+	0.4-
1974 02 20	029	0.0	0.4+	1998 04 22	704	0.6-	0.2-	1998 05 22	704	0.1+	0.9+
1974 02 23	029	0.6-	0.8+	1998 04 22	704	0.2-	1.1-	1998 05 24	704	1.4-	1.3-
1976 12 20	095	0.3+	2.5-	1998 05 01	704	0.1+	0.0	1998 05 24	704	0.4-	2.0-
1998 04 21	704	0.9-	0.8-	1998 05 01	704	0.4+	0.0	1998 05 24	704	0.3+	0.1+
1998 04 21	704	0.5-	0.1-	1998 05 01	704	0.2+	0.1+	1998 05 24	704	2.1+	1.5-
1998 04 21	704	0.8-	0.4+	1998 05 01	704	1.4+	0.2+	1998 05 24	704	2.9-	0.6-
1998 04 21	704	0.0	0.9+	1998 05 01	704	0.8-	0.5+	1998 05 28	699	0.0	0.3+
1998 04 21	704	0.1-	1.1+	1998 05 22	704	0.9+	0.2-	1998 05 28	699	0.1+	0.6+
1998 04 22	704	0.3-	0.2+	1998 05 22	704	1.1+	0.6-	1998 05 28	699	0.4+	0.6+
1998 04 22	704	0.2+	0.6-	1998 05 22	704	0.7+	1.0+				

1998 HP₁₄₇ = 1994 NQ₇
 Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.21566670	ω	197.81673	+0.64166671	+0.75742087		
<i>a</i>	2.7538947	Ω	112.28054	-0.68685927	+0.63751957		
<i>e</i>	0.0187991	<i>i</i>	7.49727	-0.34130366	+0.14100504		
<i>P</i>	4.57	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 07 11	809	0.2+	0.6+	1998 04 23	704	0.3-	0.6-	1998 05 22	704	0.8+	0.6-
1994 07 11	809	0.3+	0.3+	1998 04 23	704	0.5+	0.5+	1998 05 24	704	1.5+	1.5+
1994 07 11	809	0.4+	0.6+	1998 04 24	704	0.2+	0.7-	1998 05 24	704	1.6-	0.1-
1994 07 12	809	0.0	0.1-	1998 04 24	704	1.2-	0.6+	1998 05 24	704	0.4+	0.0
1994 07 12	809	0.1+	0.6-	1998 04 24	704	(3.0-	1.6+)	1998 05 24	704	0.2-	0.8-
1994 07 12	809	0.9-	0.7-	1998 05 22	704	0.5+	0.6-	1998 05 25	699	0.9+	0.6+
1998 04 23	704	0.4+	1.8+	1998 05 22	704	1.1-	0.2+	1998 05 25	699	0.1-	1.5-
1998 04 23	704	0.3+	1.6-	1998 05 22	704	0.9-	0.5+	1998 05 25	699	0.1-	0.8+

1998 HX₁₄₇ = 1978 VM₆
 Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.12417742	ω	174.57610	-0.66495349	+0.73483770		
<i>a</i>	3.9790032	Ω	53.66420	-0.69133842	-0.53787740		
<i>e</i>	0.0631100	<i>i</i>	9.54687	-0.28264472	-0.41316032		
<i>P</i>	7.94	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1978 11 05	675	0.1+	0.3+	1998 04 28	809	0.4-	1.6-	1998 05 24	704	0.0	0.9+
1978 11 06	675	0.1-	0.3-	1998 04 28	809	0.2-	1.3-	1998 05 24	704	1.4-	0.5+
1998 04 25	809	1.2+	1.7+	1998 05 22	704	0.6-	0.1-	1998 05 24	704	1.5+	0.0
1998 04 25	809	0.1-	1.4+	1998 05 22	704	0.1+	1.7+	1998 05 24	704	0.1-	0.0
1998 04 25	809	0.8-	0.7+	1998 05 22	704	1.0+	1.1-				
1998 04 28	809	0.3+	1.3-	1998 05 22	704	0.4-	1.5-				

1998 HZ₁₄₇ = 3384 T-3 = 1991 NK₉
 Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27154135	ω	198.28139	-0.22121416	+0.97512909		
<i>a</i>	2.3618124	Ω	58.94028	-0.89274506	-0.19683282		
<i>e</i>	0.1826453	<i>i</i>	0.91602	-0.39251822	-0.10188277		
<i>P</i>	3.63	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1977 10 07	675	0.1-	0.2-	1991 07 15	809	1.0+	0.8+	1998 05 05	699	0.4-	0.9+
1977 10 11	675	(3.0-	3.1+)	1998 04 25	809	(1.8+	3.9+)	1998 05 05	699	0.2-	0.1-
1977 10 11	675	1.4-	0.7+	1998 04 25	809	(0.6+	3.4+)	1998 05 23	699	0.1+	0.2-
1977 10 12	675	0.2+	0.3+	1998 04 25	809	(1.0+	3.4+)	1998 05 23	699	0.8+	0.1-
1977 10 12	675	0.9+	1.5+	1998 04 28	809	0.3+	0.6-	1998 05 23	699	1.0+	0.3+
1977 10 16	675	0.5+	1.6-	1998 04 28	809	0.2-	0.1+	1998 05 25	699	0.1+	0.3-
1977 10 16	675	0.1+	0.3-	1998 04 28	809	0.2+	0.4-	1998 05 25	699	0.6+	0.4-
1977 10 17	675	0.6-	0.3-	1998 04 28	809	(3.2-	0.8-)	1998 05 25	699	1.2+	0.1+
1977 10 17	675	0.4+	0.6-	1998 04 28	809	(2.6-	1.0-)	1998 06 01	691	1.1-	0.5-
1991 07 15	809	1.0-	0.5-	1998 04 28	809	(2.6-	0.9+)	1998 06 01	691	1.3-	0.3-
1991 07 15	809	0.1-	0.3+	1998 05 05	699	0.4-	1.0+	1998 06 01	691	1.0-	0.0

1998 HH₁₄₈ = 1995 SO₆

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.27505578	ω	243.31427	-0.36432839	+0.93126924		
<i>a</i>	2.3416512	Ω	5.32019	-0.84835025	-0.33119907		
<i>e</i>	0.1685519	<i>i</i>	0.96136	-0.38414408	-0.15180505		
<i>P</i>	3.58	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 09 17	691	1.0+	0.3-	1998 04 28	809	1.0+	1.8+	1998 05 22	699	1.3+	0.3+
1995 09 17	691	0.1+	0.1+	1998 04 28	809	0.4-	0.5+	1998 05 22	704	0.1-	1.0+
1995 09 17	691	0.3-	0.1-	1998 04 28	809	0.7-	2.1+	1998 05 24	704	0.1-	0.1+
1995 09 18	691	0.3-	0.0	1998 05 22	704	1.2+	0.5-	1998 05 24	704	0.5-	0.3-
1995 09 18	691	0.4-	0.1-	1998 05 22	704	0.2-	1.2+	1998 05 24	704	0.9-	0.8-
1995 09 18	691	0.0	0.0	1998 05 22	704	0.3+	1.0-	1998 05 24	704	0.2-	1.2-
1998 04 25	809	0.1-	1.6-	1998 05 22	699	0.1+	0.0	1998 05 24	704	1.5-	1.3+
1998 04 25	809	0.6-	2.2-	1998 05 22	699	1.1+	0.4+				
1998 04 25	809	0.0	2.0-	1998 05 22	704	0.2+	0.6+				

1998 HJ₁₄₈ = 1997 EF₃₉

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18213983	ω	78.01366	-0.59069923	+0.80680593		
<i>a</i>	3.0822375	Ω	155.76797	-0.75102219	-0.54440562		
<i>e</i>	0.0912538	<i>i</i>	1.64371	-0.29502557	-0.22953585		
<i>P</i>	5.41	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1997 03 05	704	1.2+	0.0	1998 05 22	704	0.1-	0.5+	1998 05 24	704	1.6-	0.1+
1997 03 05	704	0.4+	0.3+	1998 05 22	704	0.1+	1.4-	1998 05 24	704	1.0-	1.1-
1997 03 06	704	0.9-	0.6-	1998 05 22	704	(0.5+	2.1-)	1998 05 24	699	0.2+	0.8-
1997 03 06	704	0.7-	0.0	1998 05 22	699	0.5+	0.6+	1998 05 24	704	0.7-	0.6+
1998 04 25	809	0.9-	0.1-	1998 05 22	704	0.7+	0.9+	1998 05 24	699	0.9+	0.2-
1998 04 25	809	0.3-	0.3+	1998 05 22	699	0.5-	0.6-	1998 05 24	699	1.1-	0.2+
1998 04 25	809	0.8-	0.4-	1998 05 22	699	0.9+	0.4-	1998 05 24	704	0.3+	0.4-
1998 04 28	809	1.3+	1.0+	1998 05 23	699	0.2+	0.9-	1998 05 24	704	0.1-	1.0-
1998 04 28	809	1.2+	1.8+	1998 05 23	699	0.7+	1.3+				
1998 04 28	809	(1.6+	3.0+)	1998 05 23	699	(2.3+	2.1-)				

1998 HK₁₄₈ = 1991 JP₃

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.28210286	ω	191.72578	-0.26723279	+0.96195544		
<i>a</i>	2.3024898	Ω	62.79650	-0.87887038	-0.21912187		
<i>e</i>	0.1628750	<i>i</i>	3.66285	-0.39518791	-0.16317886		
<i>P</i>	3.49	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1991 05 13	033	0.7-	1.7-	1998 04 28	809	(1.3+	3.0+)	1998 05 22	704	0.4-	0.4-
1991 05 13	033	(1.1-	2.3-)	1998 04 28	809	(1.4+	2.2+)	1998 05 22	704	0.2-	1.0+
1991 05 14	033	0.3-	1.5-	1998 04 28	809	(1.4+	3.9+)	1998 05 24	704	0.4+	0.4-
1998 04 25	809	(0.6+	2.2+)	1998 05 03	566	1.5-	1.8-	1998 05 24	704	0.7+	0.0

1998 04 25	809	0.8+	1.7+	1998 05 03	566	(1.5−	2.1−)	1998 05 24	704	0.5+	1.0+
1998 04 25	809	0.4+	1.4+	1998 05 03	566	(1.5−	2.3−)	1998 05 24	704	0.1+	0.5+
1998 04 25	699	(3.0−	2.1−)	1998 05 22	704	0.2+	0.2−	1998 06 03	704	0.2+	0.4+
1998 04 25	699	(2.9−	1.4−)	1998 05 22	704	0.6+	0.0	1998 06 03	704	0.6−	0.7+
1998 04 25	699	(2.8−	1.7−)	1998 05 22	704	0.4+	0.0	1998 06 03	704	0.8−	0.6−

1998 HO₁₄₈ = 1983 TW

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	328.13103		(2000.0)				
<i>n</i>	0.31542021	ω	263.30983	+0.41159724		+0.91113132	
<i>a</i>	2.1373536	Ω	31.02129	−0.81951357		+0.37994390	
<i>e</i>	0.1042871	<i>i</i>	2.29913	−0.39872950		+0.15963191	
<i>P</i>	3.12	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1983 10 08	801	0.5+	0.8−	1998 05 22	704	0.0	0.3−	1998 05 24	704	0.2+	0.2+
1983 10 10	801	0.0	0.4−	1998 05 22	699	0.8+	1.4+	1998 05 24	704	0.7−	0.5+
1998 04 25	809	0.6−	0.0	1998 05 22	699	0.6+	0.5+	1998 05 24	704	0.1−	0.9−
1998 04 25	809	0.8−	1.2−	1998 05 22	704	0.4+	0.3−	1998 05 24	704	0.2+	0.3+
1998 04 25	809	0.6−	1.4−	1998 05 22	699	0.0	1.1+	1998 06 03	704	1.1−	0.0
1998 04 28	809	(0.5−	2.2−)	1998 05 22	704	0.9−	0.4−	1998 06 03	704	0.1+	0.3−
1998 04 28	809	(0.9−	2.7−)	1998 05 23	699	0.8+	0.3−	1998 06 03	704	0.4+	0.3+
1998 04 28	809	0.8−	1.7−	1998 05 23	699	0.4+	0.0	1998 06 03	704	0.6+	1.2+
1998 05 22	704	0.2+	0.2−	1998 05 23	699	0.2+	0.3+				
1998 05 22	704	0.0	0.2+	1998 05 24	704	0.3+	0.5−				

1998 HQ₁₄₈ = 1191 T-2 = 1995 WY₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	332.92054		(2000.0)				
<i>n</i>	0.27088498	ω	67.39065	+0.48227869		+0.87573586	
<i>a</i>	2.3656261	Ω	231.46275	−0.81380396		+0.43849314	
<i>e</i>	0.2256953	<i>i</i>	1.62820	−0.32423816		+0.20201599	
<i>P</i>	3.64	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	3

Residuals in seconds of arc

1973 09 19	675	1.0+	1.0+	1973 10 05	675	0.2+	1.6−	1998 05 22	704	0.5+	1.2+
1973 09 19	675	0.5+	1.2+	1995 11 18	691	0.3+	1.3+	1998 05 22	704	0.2−	0.7−
1973 09 20	675	0.6−	0.0	1995 11 18	691	0.1−	1.4+	1998 05 22	704	0.6−	0.1−
1973 09 24	675	1.7−	0.3−	1995 11 18	691	0.1+	1.2+	1998 05 22	704	0.0	0.4−
1973 09 24	675	1.5−	0.1+	1995 11 28	691	1.0−	0.7+	1998 05 23	699	0.4+	1.0+
1973 09 25	675	1.3−	1.5−	1995 11 28	691	1.0−	1.6+	1998 05 23	699	0.7+	0.8+
1973 09 25	675	0.5−	0.7−	1995 11 28	691	1.1−	0.7+	1998 05 23	699	0.2+	0.5+
1973 09 29	675	0.1+	0.6+	1998 04 25	809	0.2+	0.9−	1998 05 24	704	0.5+	1.1+
1973 09 29	675	0.6−	0.5+	1998 04 25	809	0.6−	1.2−	1998 05 24	704	0.5+	0.8+
1973 09 30	675	0.9+	0.6+	1998 04 25	809	0.1−	1.0−	1998 05 24	704	0.1+	0.6+
1973 09 30	675	1.1+	1.0+	1998 04 28	809	0.7+	0.3−	1998 05 24	704	0.9−	0.9+
1973 10 04	675	1.8+	1.6−	1998 04 28	809	0.7+	0.2+	1998 05 24	704	1.8−	1.0−
1973 10 04	675	1.3+	1.4−	1998 04 28	809	0.6+	1.3+				
1973 10 05	675	0.6+	0.8−	1998 05 22	704	0.1−	0.3+				

1998 HV₁₄₈ = 1994 UW₁₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	299.16029		(2000.0)				
<i>n</i>	0.19080253	ω	289.26129	+0.85851808		+0.51161995	
<i>a</i>	2.9882250	Ω	39.98732	−0.44799053		+0.78109477	
<i>e</i>	0.1811132	<i>i</i>	3.07942	−0.24950189		+0.35796088	
<i>P</i>	5.17	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 10 28	033	1.1+	0.2+	1998 04 25	809	0.3−	0.6+	1998 05 22	704	0.9+	1.3−
1994 10 28	033	0.8+	0.6+	1998 04 25	809	0.6−	0.3−	1998 05 23	699	0.1−	0.3+
1994 10 29	691	0.7−	0.0	1998 04 28	809	0.9+	1.2−	1998 05 23	699	1.6+	0.7+
1994 10 29	691	0.7−	0.4−	1998 04 28	809	0.2+	0.5−	1998 05 23	699	0.1+	0.6+
1994 10 29	691	0.7−	0.2−	1998 04 28	809	1.3+	0.0	1998 05 24	704	0.5−	0.4+
1994 11 01	033	0.1+	0.3−	1998 05 22	704	0.2−	0.2+	1998 05 24	704	1.0+	1.7−

1994 11 01	033	0.1+	0.0	1998 05 22	704	0.9−	0.2+	1998 05 24	704	(4.1−	1.5−)
1998 04 25	809	1.2−	0.8+	1998 05 22	704	1.7−	0.3+	1998 05 24	704	0.4−	0.8+

1998 HR₁₄₉ = 1995 SE₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	9.40803		(2000.0)				
<i>n</i>	0.23569564	ω	231.36507	−0.48490132		+0.87453281	
<i>a</i>	2.5955835	Ω	9.63857	−0.78694231		−0.43233720	
<i>e</i>	0.0395303	<i>i</i>	2.71876	−0.38156586		−0.21972006	
<i>P</i>	4.18	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 09 18	691	1.5−	0.2+	1995 09 27	691	0.4+	0.3+	1998 05 22	704	0.1−	1.6+
1995 09 18	691	1.4−	0.3−	1998 04 25	809	1.3−	0.9+	1998 05 22	704	1.0+	3.3−
1995 09 18	691	2.3−	0.3−	1998 04 25	809	0.6−	0.2+	1998 05 22	704	0.4−	1.6−
1995 09 24	691	1.8+	0.4−	1998 04 25	809	0.6−	0.1+	1998 05 24	704	0.4+	0.0
1995 09 24	691	0.1+	0.2+	1998 04 28	809	1.7+	1.7+	1998 05 24	704	1.1−	0.3−
1995 09 24	691	0.1−	0.3+	1998 04 28	809	1.5+	0.4+	1998 05 24	704	0.5−	1.0−
1995 09 27	691	1.2+	0.3+	1998 04 28	809	0.9+	0.1+	1998 05 24	704	0.8−	0.8+
1995 09 27	691	1.4+	0.3+	1998 05 22	704	1.1+	1.0+	1998 05 24	704	1.3−	0.1−

1998 HU₁₄₉ = 1994 CH₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	327.29600		(2000.0)				
<i>n</i>	0.28774188	ω	282.54326	+0.54636128		+0.83730200	
<i>a</i>	2.2723087	Ω	20.61385	−0.74422961		+0.49649548	
<i>e</i>	0.1791651	<i>i</i>	3.31595	−0.38420261		+0.22894889	
<i>P</i>	3.43	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1994 02 08	809	(4.2+	3.9+)	1998 04 28	809	1.5+	0.3+	1998 05 24	704	0.7−	0.8−
1994 02 08	809	(4.6+	2.7+)	1998 04 28	809	1.0+	0.2+	1998 05 24	704	0.3−	0.8−
1994 02 08	809	(3.0+	1.8+)	1998 04 28	809	0.9+	0.0	1998 05 24	704	1.7−	0.7−
1994 02 10	809	0.4+	0.0	1998 05 22	704	1.0−	0.5+	1998 05 24	704	0.0	1.1−
1994 02 10	809	0.1−	0.1+	1998 05 22	704	1.4−	1.6+	1998 06 03	704	0.2−	1.0−
1994 02 10	809	0.5−	0.5−	1998 05 22	704	0.1+	0.6+	1998 06 03	704	0.9+	0.1−
1998 04 25	809	0.3+	0.3+	1998 05 22	704	0.5+	0.6+	1998 06 03	704	0.4−	0.2+
1998 04 25	809	0.6−	0.1−	1998 05 22	704	0.3−	1.8+	1998 06 03	704	1.2+	0.6+
1998 04 25	809	0.6−	0.2+	1998 05 24	704	0.1−	0.5−	1998 06 03	704	1.0+	1.7−

1998 HT₁₅₀ = 3267 T-2

Epoch 1998 July 6.0 TT = JDT 2451000.5

				Williams			
				P		Q	
<i>M</i>	18.32156		(2000.0)				
<i>n</i>	0.30423941	ω	93.60226	−0.81889499		+0.57006076	
<i>a</i>	2.1894031	Ω	121.16360	−0.55265089		−0.75184568	
<i>e</i>	0.0445857	<i>i</i>	4.46704	−0.15488056		−0.33129866	
<i>P</i>	3.24	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1973 09 29	675	0.5+	1.2+	1998 03 24	704	0.1+	1.9+	1998 04 22	691	0.2-	0.2+
1973 09 29	675	0.4-	0.3+	1998 03 24	704	0.3+	0.2-	1998 04 22	691	0.3-	0.2+
1973 09 30	675	0.1-	1.5-	1998 03 24	704	0.3+	1.1+	1998 05 19	620	0.8-	0.2+
1973 09 30	675	0.2-	2.3-	1998 04 21	704	1.2+	0.4+	1998 05 19	620	0.7-	0.1-
1973 10 04	675	1.2+	2.2+	1998 04 21	704	0.3+	0.5-	1998 05 19	620	0.9-	0.4-
1973 10 04	675	0.7+	1.8+	1998 04 21	704	1.8+	0.5-	1998 05 19	620	1.0-	1.3-
1973 10 05	675	1.7-	0.2+	1998 04 21	704	1.0+	0.3+	1998 05 21	620	1.1+	0.0
1973 10 05	675	0.8-	0.6+	1998 04 21	704	1.6+	0.8+	1998 05 21	620	1.6-	0.3-
1998 03 24	704	0.3+	0.6-	1998 04 22	691	0.1+	0.3+	1998 05 21	620	1.4-	0.4+

1998 JUNE 10

M.P.C. 32027

1998 JA = 1976 GJ₆ = 1977 QJ₄ = 1981 FZ = 1997 CL₁₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	348.08636		(2000.0)		P		Q				
<i>n</i>	0.18190214	ω	124.76414		-0.00844297		+0.99664012				
<i>a</i>	3.0849220	Ω	144.48188		-0.95716509		+0.01552567				
<i>e</i>	0.1401412	<i>i</i>	8.06125		-0.28941960		-0.08042036				
<i>P</i>	5.42	<i>H</i>	13.0		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1976 04 02	095	0.3+	1.3+	1997 02 11	691	0.1-	0.2+	1998 05 26	704	1.4-	0.9+
1977 08 18	095	(11.3-	0.8+)	1998 05 01	721	0.7+	0.1+	1998 05 26	704	0.2+	0.2-
1981 03 27	046	0.6-	1.9+	1998 05 01	721	0.5+	0.0	1998 05 26	704	0.9-	0.3+
1981 03 27	046	(1.2-	3.4+)	1998 05 02	721	0.2+	0.8-	1998 05 26	704	0.5-	0.9+
1981 03 29	046	1.0-	1.4-	1998 05 02	721	0.5+	0.3-	1998 06 03	704	0.6+	0.2-
1981 03 29	046	1.3+	2.2-	1998 05 23	704	0.5+	0.1-	1998 06 03	704	0.0	0.1+
1997 02 07	691	0.1+	0.2+	1998 05 23	704	1.0+	0.0	1998 06 03	704	0.3+	0.2-
1997 02 07	691	0.2+	0.1-	1998 05 23	704	0.6+	0.3-	1998 06 03	704	0.0	0.0
1997 02 07	691	0.2+	0.2+	1998 05 23	704	1.3-	0.4+	1998 06 03	704	0.7-	0.3-
1997 02 11	691	0.1-	0.2+	1998 05 23	704	0.4-	0.0				
1997 02 11	691	0.2-	0.0	1998 05 26	704	0.2+	0.6-				

1998 JQ = 1994 CK₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Asher

<i>M</i>	298.15859		(2000.0)		P		Q				
<i>n</i>	0.27875210	ω	306.19599		+0.69016981		+0.72344865				
<i>a</i>	2.3209046	Ω	7.51815		-0.61534616		+0.59905168				
<i>e</i>	0.1417230	<i>i</i>	7.44837		-0.38080801		+0.34316050				
<i>P</i>	3.54	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1994 02 08	809	1.4-	0.0	1998 04 21	704	0.9+	0.8-	1998 04 25	699	0.5-	0.4+
1994 02 08	809	1.3-	0.9-	1998 04 21	704	0.0	0.3-	1998 04 25	699	0.4-	0.7-
1994 02 08	809	1.5-	0.5-	1998 04 21	704	0.1+	0.7+	1998 05 01	566	0.2-	0.1-
1994 02 10	809	1.5+	1.7+	1998 04 21	704	0.1-	0.5+	1998 05 01	566	0.2+	0.3+
1994 02 10	809	0.9+	0.7+	1998 04 22	704	0.0	0.2-	1998 05 01	566	0.0	0.5+
1994 02 10	809	1.2+	1.4+	1998 04 22	704	0.0	0.3-	1998 05 02	566	0.5-	0.4-
1994 02 13	809	0.8+	0.7-	1998 04 22	704	0.1-	0.2-	1998 05 02	566	0.1-	0.1+
1994 02 13	809	0.1-	0.8-	1998 04 22	704	0.0	0.2+	1998 05 02	566	0.4+	0.3+
1994 02 13	809	0.0	0.9-	1998 04 22	704	0.0	0.4+				
1998 04 21	704	0.8+	0.6-	1998 04 25	699	0.5-	0.2+				

1998 JR = 1993 FH₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	291.19279		(2000.0)		P		Q				
<i>n</i>	0.20861247	ω	14.81301		+0.66770381		+0.74225537				
<i>a</i>	2.8156318	Ω	297.11281		-0.68932623		+0.58765924				
<i>e</i>	0.1090651	<i>i</i>	3.65999		-0.28107112		+0.32204592				
<i>P</i>	4.72	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	6			
Residuals in seconds of arc											
1993 03 21	809	1.2-	0.0	1998 04 22	704	0.0	0.6-	1998 05 01	566	0.3-	0.4-
1993 03 22	809	0.2+	0.4+	1998 04 22	704	0.6-	0.7-	1998 05 01	566	0.3-	0.1-
1993 03 26	809	0.9+	0.3-	1998 04 22	704	0.6+	0.6-	1998 05 01	566	0.3+	0.1-
1998 04 21	704	0.1+	0.8+	1998 04 22	704	0.2+	0.7-	1998 05 02	566	0.1-	0.5-
1998 04 21	704	0.1-	0.4+	1998 04 22	704	0.5+	0.7-	1998 05 02	566	0.0	0.5+
1998 04 21	704	0.5-	0.3+	1998 04 25	699	0.0	0.2+	1998 05 02	566	0.2-	0.6+
1998 04 21	704	0.1-	0.1+	1998 04 25	699	1.0+	0.7+				
1998 04 21	704	1.5-	0.3-	1998 04 25	699	1.1+	0.6+				

1998 JU = 1994 BL₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	71.30093		(2000.0)		P		Q				
n	0.28073899	ω	146.90262		-0.87517629		-0.48379710				
a	2.3099410	Ω	4.16626		+0.43570651		-0.79050554				
e	0.1331327	i	2.06042		+0.21030047		-0.37555473				
P	3.51	H	16.0		G	0.15	U	5			
Residuals in seconds of arc											
1994 01 18	033	0.5+	0.1-	1998 04 22	704	0.4-	0.3-	1998 05 01	566	0.1+	0.8-
1994 01 18	033	0.1-	0.9+	1998 04 22	704	0.3+	0.1-	1998 05 01	566	0.3-	0.5-
1994 01 19	033	0.4-	0.8-	1998 04 22	704	0.5-	0.3+	1998 05 02	566	0.5+	0.7-
1998 04 21	704	0.4+	0.1-	1998 04 22	704	0.2+	0.1-	1998 05 02	566	0.5+	0.8-
1998 04 21	704	1.5+	0.2-	1998 04 22	704	0.4-	0.6+	1998 05 02	566	0.4-	0.9-
1998 04 21	704	0.5+	0.5-	1998 04 29	120	1.1-	1.0+	1998 05 27	691	0.0	0.5+
1998 04 21	704	0.8+	0.5+	1998 04 29	120	0.4-	0.9+	1998 05 27	691	0.0	0.3+
1998 04 21	704	1.5-	1.7+	1998 05 01	566	0.0	0.8-	1998 05 27	691	0.2+	0.1+

1998 JV = 1976 JS₅ = 1977 XQ₁ = 1984 SO₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

M	295.79063		(2000.0)		P		Q				
n	0.26781069	ω	90.42336		+0.80694121		+0.59024507				
a	2.3836955	Ω	233.40239		-0.55193085		+0.74069184				
e	0.2207679	i	1.52521		-0.21028131		+0.32091486				
P	3.68	H	14.5		G	0.15	U	2			
Residuals in seconds of arc											
1976 05 03	809	0.1+	0.5+	1998 04 21	704	1.1-	1.4+	1998 05 02	566	0.2+	0.9-
1977 12 07	675	0.2-	0.7+	1998 04 22	704	0.2+	0.3+	1998 05 02	566	0.1+	1.0-
1977 12 08	675	0.1+	0.0	1998 04 22	704	0.6+	0.0	1998 05 02	566	0.7+	1.2-
1984 09 27	046 (3.1+	1.3-)		1998 04 22	704	0.2+	0.5+	1998 05 16	704	0.8+	0.2-
1984 09 27	046 (5.9+	0.7+)		1998 04 22	704	0.5+	0.0	1998 05 16	704	0.7+	0.4+
1984 09 29	046 0.5+	0.2-		1998 04 22	704	0.3+	0.6+	1998 05 16	704	0.1-	0.1-
1984 09 29	046 1.0+	0.6+		1998 04 25	120	0.9-	0.3-	1998 05 16	704	0.1-	0.8-
1984 09 30	046 1.6-	0.0		1998 04 25	120	0.1-	1.0+	1998 05 25	699	0.7-	0.6-
1984 09 30	046 0.1-	0.2+		1998 04 29	120	0.9+	0.3-	1998 05 25	699	0.8+	0.3+
1998 04 21	704 0.9-	0.1+		1998 04 29	120	0.8+	0.4-	1998 05 25	699	0.3-	0.5+
1998 04 21	704 0.4-	0.1+		1998 05 01	566	0.3+	0.6-	1998 06 02	691	0.7-	0.5+
1998 04 21	704 0.1-	0.4+		1998 05 01	566	0.2+	0.7-	1998 06 02	691	0.4-	0.5+
1998 04 21	704 0.6-	1.0+		1998 05 01	566	0.2-	0.6-	1998 06 02	691	0.7-	0.7+

1998 JW = 1995 UE₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	313.18287		(2000.0)		P		Q				
<i>n</i>	0.21982739	ω	66.77483		+0.27994591		+0.95105064				
<i>a</i>	2.7190353	Ω	220.21880		-0.93815574		+0.24208635				
<i>e</i>	0.0839435	<i>i</i>	11.69561		-0.20370099		+0.19208561				
<i>P</i>	4.48	<i>H</i>	14.5		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1995 10 27	399	0.6-	0.8-	1998 04 22	704	0.4-	0.0	1998 05 02	566	0.3-	0.1-
1995 10 27	399	1.0-	0.8+	1998 04 25	699	0.6+	0.8+	1998 05 02	566	0.2+	0.2+
1995 10 28	399	0.3-	0.9-	1998 04 25	699	0.8+	0.3-	1998 05 18	699	1.6-	0.9-
1995 10 28	399	1.9+	0.9+	1998 04 25	699	0.2+	0.3-	1998 05 18	699	0.8-	0.9+
1998 04 21	704	0.7+	0.2-	1998 04 29	120	0.5-	0.7-	1998 05 18	699	0.5+	0.7+
1998 04 21	704	0.0	0.0	1998 04 29	120	0.9-	0.2-	1998 05 22	699	0.6+	0.2+
1998 04 21	704	0.1+	0.0	1998 05 01	699	0.0	0.2+	1998 05 22	699	0.6+	0.4+
1998 04 21	704	0.0	0.5-	1998 05 01	699	0.6+	0.4-	1998 05 22	699	0.6+	0.1-
1998 04 21	704	0.2-	0.3+	1998 05 01	699	0.6+	0.1+	1998 05 25	699	0.7+	0.7-
1998 04 22	704	0.3+	0.6-	1998 05 01	566	0.1+	0.0	1998 05 25	699	0.7-	0.3-
1998 04 22	704	0.7-	0.4+	1998 05 01	566	0.1-	0.2-	1998 05 25	699	0.3-	0.1+
1998 04 22	704	0.5-	0.6+	1998 05 01	566	0.0	0.2+				
1998 04 22	704	0.5-	0.4+	1998 05 02	566	0.4+	0.1-				

1998 JV₁ = 1997 EN₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	350.36295	(2000.0)	P		Q	
<i>n</i>	0.17469153	ω	127.09822	−0.34410716	+0.93263123	
<i>a</i>	3.1692377	Ω	122.43276	−0.89710716	−0.29244451	
<i>e</i>	0.0898980	<i>i</i>	7.39124	−0.27710829	−0.21136509	
<i>P</i>	5.64	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1997 03 04	704	0.9+	0.2+	1998 04 23	704	0.4−	0.2−	1998 05 02	566	0.1−	0.9−
1997 03 04	704	1.1+	1.0−	1998 04 23	704	0.4+	0.3+	1998 05 02	566	0.4+	0.7−
1997 03 05	704	0.2+	0.1−	1998 04 23	704	0.6+	0.3+	1998 05 05	699	0.2−	0.4−
1997 03 05	704	1.3+	0.4+	1998 04 24	704	0.4−	0.5+	1998 05 05	699	0.0	0.1+
1997 03 06	704	0.3−	0.2−	1998 04 24	704	0.2+	1.0+	1998 05 05	699	0.6+	0.4+
1997 03 06	704	0.6+	0.5+	1998 04 24	704	0.0	1.0+	1998 05 27	699	0.1−	0.5+
1997 03 07	098	0.8+	0.6+	1998 05 01	699	0.3−	0.6+	1998 05 27	699	0.1−	0.6+
1997 03 07	098	1.0−	0.6+	1998 05 01	699	0.7−	0.6+	1998 05 27	699	0.3−	0.1+
1997 03 10	098	0.4−	0.8−	1998 05 01	699	0.7−	0.8+	1998 06 02	699	0.9+	0.1−
1997 03 10	098	1.8−	0.7+	1998 05 01	566	0.2−	1.6−	1998 06 02	699	0.5+	1.2+
1997 03 12	098	1.7−	0.7−	1998 05 01	566	0.0	1.2−	1998 06 02	699	0.1−	0.0
1997 03 13	098	0.2+	0.0	1998 05 01	566	0.3+	1.8−				
1998 04 23	704	0.2+	0.0	1998 05 02	566	0.3−	0.9−				

1998 JA₂ = 1979 HA₄ = 1986 ET₂ = 1990 ED₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	1.34363	(2000.0)	P		Q	
<i>n</i>	0.26132411	ω	207.03223	−0.34620087	+0.93747911	
<i>a</i>	2.4229794	Ω	42.73880	−0.85094237	−0.29774360	
<i>e</i>	0.1275070	<i>i</i>	3.01938	−0.39502157	−0.18022672	
<i>P</i>	3.77	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1979 04 30	095	0.8+	1.8+	1998 04 25	809	1.8+	1.3−	1998 05 22	704	0.1+	1.0+
1986 03 06	675(64.7+	2.5−)		1998 04 25	809	1.8+	0.8−	1998 05 22	704	1.2+	0.9+
1986 03 06	675(66.7+	1.5−)		1998 04 28	809	1.5+	1.8+	1998 05 22	704	0.0	0.6+
1986 03 08	675(54.2+	2.1−)		1998 04 28	809	0.3+	1.0+	1998 05 22	704	0.2−	0.7+
1986 03 08	675(45.2+	1.0−)		1998 04 28	809	0.2+	0.5+	1998 05 22	699	0.1+	1.3−
1990 03 02	809	0.8−	0.4−	1998 05 01	566	0.5−	0.3+	1998 05 22	699	0.4+	0.4−
1990 03 02	809	0.4−	0.4−	1998 05 01	566	0.5−	0.2+	1998 05 22	699	0.8−	0.5−
1990 03 02	809	0.0	0.4−	1998 05 01	566	1.0−	0.1−	1998 05 24	704	0.8−	0.8−
1990 03 03	809	0.2+	0.1−	1998 05 02	566	0.5−	0.2+	1998 05 24	704	0.6−	0.4−
1990 03 03	809	0.2+	0.1−	1998 05 02	566	0.4−	0.1+	1998 05 24	704	0.5−	0.6−
1990 03 03	809	0.3+	0.2+	1998 05 02	566	0.9−	0.0	1998 05 24	704	0.5+	0.9−
1998 04 25	809	(2.3+	0.5−)	1998 05 22	704	0.0	0.4−	1998 05 24	704	1.5−	1.1−

1998 JC₂ = 1997 EQ₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	349.03720	(2000.0)	P		Q	
<i>n</i>	0.20327911	ω	155.12238	−0.23753921	+0.96978771	
<i>a</i>	2.8646675	Ω	101.09721	−0.90042833	−0.19837068	
<i>e</i>	0.0145626	<i>i</i>	3.24575	−0.36442275	−0.14198901	
<i>P</i>	4.85	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1997 03 04	704	0.8−	1.1+	1998 05 05	699	0.4−	1.0−	1998 05 24	704	0.9−	0.4+
1997 03 04	704	0.3+	0.7+	1998 05 05	699	0.1+	0.7+	1998 05 24	699	1.3+	0.7+
1997 03 05	704	(1.0+	2.7−)	1998 05 22	704	0.4−	0.1−	1998 05 24	704	0.6+	0.0
1997 03 05	704	0.1−	0.6−	1998 05 22	704	0.7−	0.8+	1998 05 24	699	0.2+	0.9+
1997 03 06	704	0.0	0.6−	1998 05 22	704	0.4−	0.7−	1998 05 24	704	0.2−	1.5−
1997 03 06	704	0.6+	0.7−	1998 05 22	704	0.7+	1.2−	1998 05 24	699	0.2−	0.8+
1998 05 01	566	0.7+	0.5−	1998 05 22	699	(2.6+	4.5−)	1998 05 24	704	1.2−	1.6−
1998 05 01	566	0.0	0.0	1998 05 22	699	0.8+	0.0	1998 05 26	426	0.1−	0.1+
1998 05 01	566	(2.1+	0.0)	1998 05 22	699	0.8−	0.4+	1998 05 26	426	0.5+	0.1+
1998 05 02	566	0.6−	0.8+	1998 05 23	699	0.5+	0.0	1998 05 26	426	0.8−	0.7−
1998 05 02	566	0.0	0.1−	1998 05 23	699	0.0	0.7+	1998 05 31	426	0.4−	0.7+

1998 05 02	566	0.2−	0.0	1998 05 23	699	1.4+	0.2+	1998 05 31	426	0.1+	0.2−
1998 05 05	699	0.2+	0.4+	1998 05 24	704	0.1+	0.1−				

1998 JD₂ = 1988 PU₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	339.87782	(2000.0)	P		Q	
<i>n</i>	0.28455631	ω	96.47457	+0.23152844	+0.97277978	
<i>a</i>	2.2892360	Ω	186.93534	−0.92129281	+0.21605019	
<i>e</i>	0.1840069	<i>i</i>	4.60755	−0.31243262	+0.08379631	
<i>P</i>	3.46	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i> 5

Residuals in seconds of arc

1988 08 10	413	1.0−	0.4+	1998 05 02	566	0.0	0.0	1998 05 23	699	0.3+	0.0
1988 08 10	413	1.4−	0.1−	1998 05 05	699	0.1+	0.1−	1998 05 23	699	0.2−	0.5+
1988 08 11	413	0.1+	0.6−	1998 05 05	699	0.1+	0.7+	1998 05 23	699	0.4+	1.0+
1988 08 11	413	2.3+	0.5+	1998 05 05	699	0.1−	0.5+	1998 05 24	704	0.6+	0.4−
1998 04 24	910	0.0	0.1−	1998 05 22	704	0.6−	0.3−	1998 05 24	699	0.7−	0.2+
1998 04 24	910	0.0	0.2−	1998 05 22	704	0.2+	0.0	1998 05 24	699	0.8−	0.9−
1998 04 24	910	0.1−	0.1−	1998 05 22	704	0.2+	0.7−	1998 05 24	704	0.3+	0.5+
1998 05 01	566	0.3−	0.1+	1998 05 22	704	0.2+	0.1−	1998 05 24	699	0.3+	1.0−
1998 05 01	566	0.2−	0.2+	1998 05 22	699	0.1−	0.3−	1998 05 24	704	0.1−	0.3+
1998 05 01	566	0.5−	0.2+	1998 05 22	704	0.5+	0.2+	1998 05 24	704	0.1−	0.0
1998 05 02	566	0.5+	0.2−	1998 05 22	699	0.2−	0.8−	1998 05 24	704	0.4+	0.4+
1998 05 02	566	0.4+	0.1+	1998 05 22	699	0.4−	0.3+				

1998 JE₂ = 1991 PH₂₇ = 1995 OK₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	47.15699	(2000.0)	P		Q	
<i>n</i>	0.26319975	ω	50.47338	−0.98155230	+0.18802561	
<i>a</i>	2.4114545	Ω	140.32924	−0.18781598	−0.91430590	
<i>e</i>	0.1336955	<i>i</i>	3.11253	−0.03578046	−0.35873540	
<i>P</i>	3.74	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 4

Residuals in seconds of arc

1991 08 05	809	0.0	0.2−	1998 05 01	704	0.1−	0.4−	1998 05 22	704	0.3−	0.0
1991 08 05	809	0.1−	0.2−	1998 05 01	704	0.2+	0.8+	1998 05 22	704	0.2−	0.9−
1991 08 05	809	0.1+	0.3+	1998 05 01	566	0.2−	0.0	1998 05 24	704	0.2+	0.2−
1995 07 27	691	0.1+	0.0	1998 05 01	566	0.4−	0.1−	1998 05 24	699	0.4−	0.4+
1995 07 27	691	0.3−	0.0	1998 05 01	566	0.5−	0.1+	1998 05 24	699	0.3+	0.4−
1995 07 27	691	0.0	0.2+	1998 05 02	566	0.2+	0.1+	1998 05 24	704	0.7−	0.2+
1995 08 03	691	0.1−	0.1+	1998 05 02	566	0.0	0.2+	1998 05 24	699	0.5+	0.3+
1995 08 03	691	0.3+	0.1−	1998 05 02	566	0.0	0.5+	1998 05 24	704	0.8+	0.0
1995 08 03	691	0.0	0.0	1998 05 22	704	0.2+	0.1−	1998 05 24	704	0.2+	0.6−
1998 05 01	704	0.5+	0.0	1998 05 22	704	0.2−	0.2+	1998 05 24	704	0.1−	0.9+
1998 05 01	704	0.7+	0.4−	1998 05 22	704	0.6−	0.7−				

1998 JO₂ = 1997 CP₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	68.02461	(2000.0)	P		Q	
<i>n</i>	0.28480896	ω	87.57539	−0.96717753	−0.19308315	
<i>a</i>	2.2878820	Ω	81.25750	+0.10931005	−0.90300629	
<i>e</i>	0.0643433	<i>i</i>	9.62088	+0.22938817	−0.38379492	
<i>P</i>	3.46	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i> 3

Residuals in seconds of arc

1997 02 04	691	0.0	0.0	1998 04 24	704	0.3+	0.2+	1998 05 22	704	0.2+	1.2−
1997 02 04	691	0.1−	0.4+	1998 04 24	704	0.4−	0.3+	1998 05 24	704	0.3−	0.4+
1997 02 04	691	0.3−	0.1+	1998 05 01	699	0.1−	0.1+	1998 05 24	704	0.6−	0.1+
1997 02 10	691	0.2+	0.3−	1998 05 01	699	1.2+	0.7+	1998 05 24	704	0.0	0.2+
1997 02 10	691	0.2+	0.1−	1998 05 01	699	0.7−	0.1−	1998 05 24	704	1.1+	0.5−
1997 02 10	691	0.1+	0.2−	1998 05 05	699	0.2−	0.4+	1998 05 24	704	0.3+	0.6−
1998 04 23	704	0.1+	0.2−	1998 05 05	699	0.0	0.3+	1998 05 27	699	0.2+	0.2+
1998 04 23	704	0.4+	0.2+	1998 05 05	699	0.8−	0.4+	1998 05 27	699	0.3+	0.5−
1998 04 23	704	0.4+	0.2−	1998 05 22	704	0.2+	0.7−	1998 05 27	699	0.1−	0.7+
1998 04 23	704	0.1+	0.2+	1998 05 22	704	0.5−	0.2+	1998 06 02	699	0.4−	0.9+

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1998 04 23	704	1.1−	0.4−	1998 05 22	704	0.0	0.3−	1998 06 02	699	0.3+	0.3−
1998 04 24	704	0.3+	0.9−	1998 05 22	704	0.6+	0.0	1998 06 02	699	0.7−	0.1+

1998 JX₂ = 1992 EL₁₄ = 1997 EQ₄₂
Epoch 1998 July 6.0 TT = JDT 2451000.5

M	300.34448		(2000.0)	P		Q	
n	0.19082747	ω	144.62537	+0.65747420		+0.75229982	
a	2.9879646	Ω	166.31610	−0.72579242		+0.64733520	
e	0.0883757	i	10.25191	−0.20236860		+0.12248313	
P	5.16	H	13.0	G	0.15	U	5

Residuals in seconds of arc

1992 03 01	809	0.2+	0.2+	1997 03 12	704	0.3+	0.3+	1998 05 19	691	0.8−	0.5−
1992 03 03	809	0.2+	0.2+	1998 05 01	699	1.5+	0.6+	1998 05 28	691	0.8−	0.1−
1992 03 06	809	3.0+	0.9−	1998 05 01	699	1.5+	0.5+	1998 05 28	691	0.6−	0.3−
1992 03 09	809	4.0−	2.1−	1998 05 01	699	0.9+	1.1+	1998 05 28	691	0.4−	0.2−
1997 03 10	704	0.2−	1.0−	1998 05 05	699	2.2+	0.2+	1998 06 02	691	1.5−	0.6−
1997 03 10	704	0.1+	0.8+	1998 05 05	699	1.1+	0.3+	1998 06 02	691	1.4−	0.7−
1997 03 11	704	0.0	1.1+	1998 05 05	699	1.2+	1.0+	1998 06 02	691	1.1−	0.4−
1997 03 11	704	0.3−	0.4+	1998 05 19	691	1.1−	0.0				
1997 03 12	704	0.5+	0.6+	1998 05 19	691	0.7−	0.2−				

1998 JE₃ = 1988 VS₁₂ = 1994 EQ₅
Epoch 1998 July 6.0 TT = JDT 2451000.5

M	325.18830		(2000.0)	P		Q	
n	0.27192852	ω	109.50593	+0.39851508		+0.91712020	
a	2.3595700	Ω	184.01169	−0.88133285		+0.38029412	
e	0.1339425	i	7.17147	−0.25384669		+0.11944426	
P	3.62	H	14.0	G	0.15	U	4

Residuals in seconds of arc

1988 11 04	327	0.6−	0.6−	1998 04 23	704	1.0−	0.1+	1998 05 05	699	0.1+	0.1−
1994 03 10	675	0.6−	0.2+	1998 04 24	704	0.2−	0.6−	1998 05 05	699	0.7+	0.1−
1994 03 10	675	1.2+	0.2+	1998 04 24	704	0.8+	0.6−	1998 05 25	699	0.2−	0.2−
1994 03 11	675	0.7−	0.5−	1998 04 24	704	0.5+	0.1−	1998 05 25	699	0.0	0.3−
1998 04 23	704	0.4−	0.0	1998 05 01	699	0.3−	1.0+	1998 05 25	699	0.1+	0.6−
1998 04 23	704	0.9−	0.2−	1998 05 01	699	0.8−	0.3+	1998 06 02	699	0.0	0.1+
1998 04 23	704	0.5+	0.3−	1998 05 01	699	0.4+	0.8+	1998 06 02	699	0.0	0.1+
				1998 05 05	699	0.3+	0.0	1998 06 02	699	0.4+	0.0

1998 JH₃ = 1987 UA₂
Epoch 1998 July 6.0 TT = JDT 2451000.5

M	223.51635		(2000.0)	P	Q
n	0.24590082	ω	294.95971	+0.87647297	−0.44901118
a	2.5232642	Ω	92.13310	+0.48007732	+0.78784374
e	0.1328015	i	10.01210	+0.03634401	+0.42153434
P	4.01	H	13.5	G 0.15	U 4

Residuals in seconds of arc

1987 10 17	675	0.2+	0.2−	1998 05 01	699	0.1−	0.0	1998 05 22	704	0.2+	0.5−
1987 10 18	675	0.2−	0.1+	1998 05 05	699	0.8−	1.1+	1998 05 22	704	1.2−	0.4−
1998 04 24	704	0.8+	0.4−	1998 05 05	699	0.4−	0.5−	1998 05 24	704	1.3−	0.1+
1998 04 24	704	0.4−	0.1+	1998 05 05	699	0.5+	0.9+	1998 05 24	704	1.2+	0.5−
1998 04 24	704	0.9−	0.1−	1998 05 22	704	0.0	0.2−	1998 05 24	704	0.3+	0.2−
1998 05 01	699	0.9+	0.0	1998 05 22	704	0.8−	0.8+	1998 05 24	704	1.0+	0.2−
1998 05 01	699	0.7+	0.8−	1998 05 22	704	0.7−	0.4+	1998 05 24	704	1.1+	0.4+

1998 JB₄ = 1990 TP₅ = 1995 UA₄₇
Epoch 1998 July 6.0 TT = JDT 2451000.5

M	7.74348		(2000.0)	$\mathbf{P}$	$\mathbf{Q}$	
n	0.22217662	ω	25.95901	−0.53489985	+0.83738860	
a	2.6998346	Ω	212.06127	−0.80741629	−0.54584290	
e	0.1314754	i	12.23877	−0.24891984	−0.02891125	
P	4.44	H	14.0	G	0.15	
					U	3

Residuals in seconds of arc

1990 10 09	413	0.6−	0.1−	1998 04 24	910	0.5+	0.8−	1998 05 05	426	0.2+	0.2−
1990 10 11	413	0.7+	0.2−	1998 04 24	910	0.7+	0.9−	1998 05 05	426	0.0	0.1−
1995 10 27	399	0.7−	1.5−	1998 04 24	910	0.6+	0.8−	1998 05 15	426	0.6−	0.1+
1995 10 27	399	1.7+	0.5+	1998 05 01	704	0.3−	0.8+	1998 05 15	426	0.5−	0.3−
1995 10 28	399	1.1−	1.7+	1998 05 01	704	0.7+	0.8−	1998 05 15	426	0.4−	0.2−
1995 10 28	399	(0.6+	3.2+)	1998 05 01	704	0.1+	1.0+	1998 05 19	426	0.1−	0.0
1998 04 22	704	1.0−	0.3+	1998 05 01	704	(0.1−	2.4+)	1998 05 19	426	0.3−	0.0
1998 04 22	704	0.1−	0.4+	1998 05 05	699	0.5+	0.4+	1998 05 19	426	0.0	0.0
1998 04 22	704	0.4+	0.0	1998 05 05	699	0.3+	0.9+	1998 05 21	426	0.0	0.0
1998 04 22	704	0.3−	0.1+	1998 05 05	699	0.4−	0.6+	1998 05 21	426	0.1−	0.2−
1998 04 22	704	0.1+	0.2+	1998 05 05	426	0.0	0.1−	1998 05 21	426	0.0	0.1+

1998 JC₄ = 1992 HT₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	170.37790		(2000.0)	P	Q
n	0.18380615	ω	216.77132	+0.33232713	−0.93913043
a	3.0635809	Ω	214.06638	+0.89814945	+0.34331361
e	0.0842676	i	8.94915	+0.28789972	+0.01303087
P	5.36	H	13.0	G 0.15	U 5

Residuals in seconds of arc

1992 04 22	809	0.0	0.3−	1998 05 15	426	0.3−	0.0	1998 05 22	566	0.7+	0.4+
1992 04 22	809	0.1−	0.1−	1998 05 15	426	0.2−	0.2−	1998 05 22	566	0.4+	0.4+
1992 04 23	809	0.0	0.1+	1998 05 15	426	0.2+	0.4−	1998 05 22	566	1.1+	0.8+
1992 04 23	809	0.3+	0.5+	1998 05 19	426	0.3−	0.1−	1998 05 23	699	0.1+	0.7+
1992 04 23	809	0.2−	0.2−	1998 05 19	426	0.3−	0.6−	1998 05 23	699	0.8+	0.3+
1998 05 01	566	0.2+	0.3+	1998 05 19	426	0.2−	0.1+	1998 05 23	699	0.5+	0.2+
1998 05 01	566	0.2+	0.3+	1998 05 21	426	0.4−	0.1−	1998 05 24	704	0.4+	0.0
1998 05 01	566	1.5−	0.1+	1998 05 21	426	0.3+	0.2−	1998 05 24	699	0.3−	0.0
1998 05 05	699	0.5−	0.3+	1998 05 21	426	0.0	0.1−	1998 05 24	699	0.0	0.0
1998 05 05	699	1.3−	1.2−	1998 05 22	704	0.2+	0.4−	1998 05 24	704	0.1+	0.8−
1998 05 05	699	0.3−	0.1−	1998 05 22	704	0.4−	0.2−	1998 05 24	699	0.1+	0.8+
1998 05 05	426	0.2+	0.2+	1998 05 22	704	0.8−	0.2−	1998 05 24	704	0.1−	0.0
1998 05 05	426	0.2+	0.0	1998 05 22	704	0.9+	0.1−	1998 05 24	704	0.1−	0.7−
1998 05 05	426	0.5+	0.3+	1998 05 22	704	0.3+	0.8+	1998 05 24	704	0.4−	0.7−

1998 JK₄ = 1991 GL₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	327.80957		(2000.0)	P	Q
n	0.28901897	ω	72.22378	+0.39790849	+0.91652784
a	2.2656100	Ω	221.29795	−0.86328844	+0.35909761
e	0.1545590	i	3.52391	−0.31048657	+0.17614093
P	3.41	H	15.0	G 0.15	U 5

1998 KK = 1990 WO₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	107.41613		(2000.0)		P		Q		
<i>n</i>	0.18094121	ω	228.06620		-0.39461449		-0.91515602		
<i>a</i>	3.0958344	Ω	245.34894		+0.86754525		-0.34158540		
<i>e</i>	0.1489699	<i>i</i>	5.19369		+0.30272866		-0.21403007		
<i>P</i>	5.45	<i>H</i>	12.5		<i>G</i>	0.15	<i>U</i>	6	

Residuals in seconds of arc

1990 11 16	809	0.4-	0.2+	1998 05 19	611	0.8-	0.5-	1998 05 23	611	0.9+	0.4+
1990 11 17	809	0.4+	0.1-	1998 05 20	611	0.2+	1.3+	1998 05 24	704	0.9-	0.6+
1998 04 22	704	0.1+	0.5-	1998 05 20	611	0.9+	1.0-	1998 05 24	704	0.7-	0.3+
1998 04 22	704	0.0	0.1+	1998 05 22	704	0.4+	0.5+	1998 05 24	704	0.5+	0.1-
1998 04 22	704	0.1+	0.7-	1998 05 22	704	0.0	0.5+	1998 05 24	704	1.6+	0.3-
1998 04 22	704	0.4-	0.4-	1998 05 22	704	1.2-	0.5-	1998 05 24	704	0.4-	0.3-
1998 04 22	704	0.7-	1.4+	1998 05 22	704	0.2-	1.0-	1998 05 30	611	0.0	0.0
1998 05 19	611	0.1+	0.1-	1998 05 22	704	0.3-	0.0	1998 05 30	611	0.7-	0.5+
1998 05 19	611	0.0	0.2-	1998 05 23	611	1.5+	0.1+				

1998 KL = 1992 ST₁₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	180.63824			(2000.0)		P		Q			
<i>n</i>	0.28364961	ω		242.89561		+0.45430810		-0.89084461			
<i>a</i>	2.2941118	Ω		180.08434		+0.84723810		+0.43211831			
<i>e</i>	0.1611692	<i>i</i>		5.44223		+0.27530301		+0.14024848			
<i>P</i>	3.47 <th><i>H</i></th> <td></td> <td>14.5</td> <td></td> <th><i>G</i></th> <td>0.15</td> <th><i>U</i></th> <td></td> <td>6</td> <td></td>	<i>H</i>		14.5		<i>G</i>	0.15	<i>U</i>		6	
Residuals in seconds of arc											
1992 09 22	809	0.3+	0.3+	1998 05 21	426	0.5-	0.3-	1998 05 24	704	0.0	0.9+
1992 09 22	809	0.3+	0.7+	1998 05 21	426	0.6+	0.1-	1998 05 24	704	0.8-	0.5+
1992 09 22	809	0.5-	0.1-	1998 05 22	704	0.4+	0.8-	1998 05 25	699	1.0+	0.6-
1992 09 23	809	0.3+	0.4-	1998 05 22	704	0.8-	1.2+	1998 05 25	699	1.0+	0.2+
1992 09 23	809	0.1+	0.2+	1998 05 22	704	1.0-	0.5-	1998 05 25	699	0.3-	0.3+
1992 09 23	809	0.4-	0.8-	1998 05 22	704	1.5+	0.7-	1998 05 27	426	0.1+	0.4-
1998 05 19	426	0.1-	0.0	1998 05 22	704	(3.9-	0.0)	1998 05 27	426	1.2-	0.5+
1998 05 19	426	0.3-	0.2-	1998 05 24	704	0.2+	0.6+	1998 05 27	426	0.0	0.0
1998 05 19	426	0.1-	0.1-	1998 05 24	704	1.2-	0.7-	1998 05 31	426	1.0+	0.1-
1998 05 21	426	0.1-	0.1+	1998 05 24	704	1.3+	0.1+	1998 05 31	426	0.4-	0.1+

1998 KN = 1995 VK₁₀

Id. S. Nakano

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	324.97931		(2000.0)			P		Q			
<i>n</i>	0.27663496	ω	206.51251			+0.68555388		+0.72647256			
<i>a</i>	2.3327310	Ω	106.80806			−0.65883284		+0.64682480			
<i>e</i>	0.2511875	<i>i</i>	2.84243			−0.30976631		+0.23206742			
<i>P</i>	3.56	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	5				
Residuals in seconds of arc											
1995 11 15	691	0.2−	0.1−	1998 05 22	704	0.9−	0.4+	1998 05 24	704	0.2+	0.3−
1995 11 15	691	0.1−	0.1+	1998 05 22	704	0.4−	0.4+	1998 05 24	704	0.3−	0.2−
1995 11 15	691	0.1−	0.1+	1998 05 22	704	0.1−	0.9+	1998 05 24	699	0.2+	0.6+
1995 11 20	691	0.1+	0.2−	1998 05 22	704	0.5+	0.8+	1998 05 24	704	0.6−	0.1+
1995 11 20	691	0.0	0.0	1998 05 22	699	0.0	0.4−	1998 05 24	699	0.5+	0.3−
1995 11 20	691	0.2+	0.1+	1998 05 22	699	1.0+	0.7−	1998 05 24	699	1.1+	0.3+
1998 05 21	426	0.9−	0.7−	1998 05 22	699	0.2+	0.4−	1998 05 24	704	0.0	0.6−
1998 05 21	426	0.5−	0.3−	1998 05 22	360	0.3+	0.2+	1998 05 24	704	0.1−	1.1−
1998 05 21	402	0.4+	0.4+	1998 05 22	360	0.2+	0.0	1998 05 27	360	0.5−	0.3−
1998 05 21	426	0.0	0.1+	1998 05 22	402	0.0	0.2−	1998 05 27	360	0.4−	0.2−
1998 05 21	402	0.9+	0.3+	1998 05 22	360	0.1−	0.1+	1998 06 03	704	0.1+	1.1+
1998 05 21	402	0.3+	0.5+	1998 05 22	402	0.2−	0.1−	1998 06 03	704	0.6+	0.4+
1998 05 21	360	0.1+	0.2+	1998 05 22	402	0.1+	0.0	1998 06 03	704	0.4−	0.1−
1998 05 21	360	0.0	0.2+	1998 05 23	426	0.2−	0.1−	1998 06 03	704	0.1+	1.0−
1998 05 21	360	0.1+	0.2+	1998 05 23	426	0.6−	0.3−				
1998 05 22	704	0.3+	0.2−	1998 05 23	426	0.9−	0.2+				

1998 KJ₁ = 1995 SH₄₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	15.84560		(2000.0)		P		Q				
<i>n</i>	0.23383435	ω	350.91975		-0.68058254		+0.73249811				
<i>a</i>	2.6093390	Ω	236.18918		-0.67100320		-0.63188480				
<i>e</i>	0.1525747	<i>i</i>	1.09891		-0.29421440		-0.25331427				
<i>P</i>	4.21	<i>H</i>	15.5		<i>G</i>	0.15	<i>U</i>	5			
Residuals in seconds of arc											
1995 09 25	691	0.8-	0.1+	1998 05 01	704	0.1-	1.4-	1998 05 22	704	0.2-	0.2+
1995 09 25	691	0.1-	0.1+	1998 05 05	699	0.7-	0.5+	1998 05 22	699	0.4+	0.2+
1995 09 30	691	0.1+	0.1-	1998 05 05	699	0.0	0.2-	1998 05 22	699	0.6+	0.5-
1995 09 30	691	0.5+	0.2-	1998 05 05	699	0.2+	0.3+	1998 05 22	699	0.5+	0.0
1995 09 30	691	0.3+	0.3-	1998 05 18	699	0.2-	0.8-	1998 05 24	704	1.1-	0.9+
1998 04 30	566	0.1+	0.8-	1998 05 18	699	0.1+	0.3-	1998 05 24	704	0.1-	0.4-
1998 04 30	566	0.3-	0.9-	1998 05 18	699	0.2+	0.6+	1998 05 24	704	0.5-	0.0
1998 04 30	566	0.3+	0.9-	1998 05 22	704	0.9+	0.5-	1998 05 24	704	0.6-	0.4+
1998 05 01	704	0.2-	0.2+	1998 05 22	704	0.3-	0.7+	1998 05 24	704	0.9+	1.0+
1998 05 01	704	0.0	1.0+	1998 05 22	704	0.7-	0.8-				
1998 05 01	704	0.3+	1.1+	1998 05 22	704	0.2+	0.1-				

1998 KK₁ = 1978 SD₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	270.31494			(2000.0)			P			Q		
n	0.28477221	ω		306.22243			+0.99263176			+0.11293492		
a	2.2880788	Ω		47.33774			-0.08284897			+0.89700249		
e	0.1778030	i		3.42311			-0.08842077			+0.42735493		
P	3.46 <th>H</th> <td></td> <td>15.0</td> <th>G</th> <td></td> <td>0.15<th>U</th><td></td><td>5</td><td></td><td></td></td>	H		15.0	G		0.15 <th>U</th> <td></td> <td>5</td> <td></td> <td></td>	U		5		
Residuals in seconds of arc												
1978 09 27	095	0.6+	0.1-	1998 05 01	704	1.1+	1.6+	1998 05 22	699	0.0	0.4+	
1978 10 03	095	0.8-	0.3+	1998 05 01	704	0.5-	1.1-	1998 05 22	699	0.2-	0.0	
1978 10 07	095	0.2+	0.4-	1998 05 18	699	0.1-	0.3+	1998 05 22	699	0.9+	0.1-	
1998 04 22	704	(2.1+	2.2+)	1998 05 18	699	0.2+	1.5+	1998 05 24	704	0.1+	0.3+	
1998 04 22	704	0.9-	0.4+	1998 05 18	699	1.5+	0.6-	1998 05 24	704	0.1+	0.4-	
1998 04 22	704	(0.2+	3.1+)	1998 05 22	704	0.6-	0.2-	1998 05 24	704	0.7-	0.7+	
1998 04 22	704	2.0-	0.2-	1998 05 22	704	0.4-	0.3-	1998 05 24	704	1.0+	0.1-	
1998 04 22	704	0.8+	0.5-	1998 05 22	704	0.4-	0.3-	1998 05 24	704	0.9-	0.1-	
1998 05 01	704	1.0+	1.3-	1998 05 22	704	0.1+	0.8-					
1998 05 01	704	(2.4-	0.2-)	1998 05 22	704	0.2-	0.5+					

1998 KS₁ = 1992 TS₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	303.63754			(2000.0)		P		Q			
<i>n</i>	0.29656497			ω	83.94582	+0.73654828		+0.67313964			
<i>a</i>	2.2270133			Ω	233.72209	−0.64850692		+0.67500160			
<i>e</i>	0.1710410			<i>i</i>	4.70883	−0.19218586		+0.30208587			
<i>P</i>	3.32			<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6		

Residuals in seconds of arc

1992 10 02	675	1.2+	0.5+	1998 05 22	704	0.2−	0.3−	1998 05 22	704	0.7−	0.2+
1992 10 02	675	1.4+	0.4−	1998 05 22	704	0.8+	0.4−	1998 05 24	704	0.4+	0.2−
1992 10 04	675	2.3−	0.2−	1998 05 22	704	0.3−	0.1+	1998 05 24	704	1.0−	0.1+
1992 10 04	675	0.3−	0.1+	1998 05 22	699	0.8+	0.3−	1998 05 24	704	1.1+	0.2−
1998 05 18	699	0.2+	0.3+	1998 05 22	699	0.1+	0.1−	1998 05 24	704	0.5−	0.8−
1998 05 18	699	0.0	0.2+	1998 05 22	704	0.1+	0.1+	1998 05 24	704	0.4−	0.3+
1998 05 18	699	0.2+	0.3+	1998 05 22	699	0.7−	0.7+				

1998 KP₃ = 1995 YW₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.27248635	ω	104.89944	+0.89299807	+0.44355150				
<i>a</i>	2.3563486	Ω	228.83351	−0.44197789	+0.83230664				
<i>e</i>	0.1363994	<i>i</i>	5.81461	−0.08491170	+0.33245710				
<i>P</i>	3.62	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1995 12 17	327	0.0	0.3−	1998 05 22	704	0.4+	0.3−	1998 05 25	426	0.1−	0.1+
1995 12 17	327	0.0	0.1−	1998 05 22	704	0.9+	1.6+	1998 05 26	426	0.2−	0.1−
1995 12 17	327	0.2−	0.5−	1998 05 24	704	0.0	0.1+	1998 05 26	426	0.2−	0.1+
1995 12 18	327	0.0	0.6+	1998 05 24	704	0.2−	0.8−	1998 05 26	426	0.4−	0.3−
1995 12 18	327	0.2+	0.0	1998 05 24	704	0.8+	0.7+	1998 06 02	426	0.4+	0.0
1995 12 18	327	0.1−	0.3+	1998 05 24	704	0.1−	0.0	1998 06 02	426	0.3+	0.0
1998 05 22	704	0.2−	0.3−	1998 05 24	704	0.7−	0.4−	1998 06 02	426	0.1−	0.2+
1998 05 22	704	0.7−	0.9+	1998 05 25	426	0.3−	0.1−				
1998 05 22	704	0.3+	1.3−	1998 05 25	426	0.1+	0.4−				

1998 KW₃ = 1994 TW₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.17781245	ω	63.48314	−0.43388454	+0.90096752				
<i>a</i>	3.1320446	Ω	180.80605	−0.85638362	−0.41286761				
<i>e</i>	0.1084820	<i>i</i>	5.37596	−0.27991301	−0.13340867				
<i>P</i>	5.54	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1994 10 02	691	0.2+	0.0	1998 05 05	699	0.2−	1.0+	1998 05 23	699	0.1+	0.2+
1994 10 02	691	0.3−	0.1+	1998 05 05	699	0.6−	0.6−	1998 05 23	699	0.6+	0.3−
1994 10 02	691	0.2+	0.2+	1998 05 05	699	0.8−	0.9−	1998 05 23	699	0.3−	0.1+
1994 10 06	691	0.1+	0.1−	1998 05 22	704	0.3+	0.7+	1998 05 24	699	0.0	0.1+
1994 10 06	691	0.1−	0.1+	1998 05 22	704	1.1−	0.2+	1998 05 24	704	0.3−	0.1+
1994 10 06	691	0.1+	0.4−	1998 05 22	704	0.5−	0.5−	1998 05 24	699	0.7+	0.2+
1998 04 22	704	1.0+	0.1−	1998 05 22	704	0.0	0.3−	1998 05 24	699	1.0+	0.3−
1998 04 22	704	1.6+	0.6+	1998 05 22	699	0.4+	0.7−	1998 05 24	704	0.4+	0.2+
1998 04 22	704	(2.4+	0.1+)	1998 05 22	704	0.6−	0.4−	1998 05 24	704	0.1−	0.6+
1998 04 22	704	0.8−	0.3−	1998 05 22	699	0.3+	0.1+	1998 05 24	704	0.4−	0.2−
1998 04 22	704	0.9−	0.3−	1998 05 22	699	0.1+	0.0	1998 05 24	704	0.3+	0.8+

1998 KX₃ = 1997 CR₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.18079153	ω	326.79839	−0.24593862	−0.96809686				
<i>a</i>	3.0975429	Ω	137.38381	+0.90402600	−0.24695722				
<i>e</i>	0.0884662	<i>i</i>	4.06406	+0.34964438	−0.04243358				
<i>P</i>	5.45	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1997 02 01	691	0.3−	0.2+	1998 05 05	699	0.5−	0.3−	1998 05 23	699	0.1+	0.7+
1997 02 01	691	0.2+	0.2+	1998 05 05	699	0.8+	1.1−	1998 05 23	699	0.4−	0.1+
1997 02 01	691	0.1+	0.0	1998 05 05	699	1.7−	0.4+	1998 05 23	699	0.3+	0.6+
1997 02 06	691	0.0	0.0	1998 05 16	691	0.1−	0.5−	1998 05 24	704	1.2+	0.7−
1997 02 06	691	0.2+	0.1−	1998 05 16	691	1.1−	0.1+	1998 05 24	704	1.8−	0.3+
1997 02 06	691	0.1−	0.2−	1998 05 22	704	0.4+	0.6−	1998 05 24	704	(1.1−	2.2−)
1998 04 22	704	0.2+	0.1−	1998 05 22	704	0.6+	0.4+	1998 05 24	704	0.1−	0.2−
1998 04 22	704	0.0	0.1−	1998 05 22	704	0.7+	0.2+	1998 05 24	704	0.7+	0.4+
1998 04 22	704	0.5−	0.6+	1998 05 22	704	0.1−	0.4+	1998 05 24	699	1.1+	0.3−
1998 04 22	704	1.0−	0.5−	1998 05 22	699	0.3−	0.8+	1998 05 24	699	0.2−	0.1+
1998 04 24	910	0.6+	0.3−	1998 05 22	704	0.2−	0.2+	1998 05 24	699	0.6−	0.6+
1998 04 24	910	0.8+	0.2−	1998 05 22	699	0.2+	0.6−				
1998 04 24	910	0.7+	0.0	1998 05 22	699	0.2+	0.6−				

1998 KW₄ = 1996 XC₂₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Williams	
<i>n</i>	0.28561065	ω	11.82766	−0.70674155	+0.70612726				
<i>a</i>	2.2835987	Ω	213.23075	−0.65540648	−0.67668834				
<i>e</i>	0.1410173	<i>i</i>	4.56295	−0.26638078	−0.20851185				
<i>P</i>	3.45	<i>H</i>	16.0	<i>G</i>	0.15	<i>U</i>	4		

Residuals in seconds of arc

1996 12 13	684	0.2+	0.2+	1998 05 22	704	0.1−	0.8+	1998 05 24	704	0.3+	0.7+
1996 12 13	684	0.4−	0.3+	1998 05 22	699	1.3−	0.5+	1998 05 24	699	0.5+	0.1−
1996 12 13	684	0.3+	0.1+	1998 05 22	699	0.4+	1.4−	1998 05 24	699	0.2−	0.4−
1996 12 14	684	0.3+	0.4−	1998 05 22	699	0.5+	0.0	1998 05 24	704	0.6−	0.4+
1996 12 14	684	0.2−	0.4−	1998 05 23	699	0.5+	0.3−	1998 05 24	704	0.8−	0.7+
1996 12 14	684	0.1−	0.2+	1998 05 23	699	0.5+	0.4+	1998 06 03	704	0.6+	0.1−
1998 05 22	704	0.5+	0.2+	1998 05 23	699	1.1−	0.4−	1998 06 03	704	1.3+	0.8+
1998 05 22	704	0.1−	0.4+	1998 05 24	704	0.7+	0.3+	1998 06 03	704	1.4+	1.7+
1998 05 22	704	0.5−	0.1−	1998 05 24	704	0.3−	0.7−	1998 06 03	704	2.0−	1.8−
1998 05 22	704	0.8+	0.4−	1998 05 24	699	0.2+	0.4−	1998 06 03	704	1.3−	0.8−

1998 KB₅ = 1991 DF

Id. S. Nakano

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Asher	
<i>n</i>	0.30831015	ω	31.22296	+0.24617606	+0.96564445				
<i>a</i>	2.1700888	Ω	253.13955	−0.90621777	+0.19886394				
<i>e</i>	0.1486166	<i>i</i>	4.98956	−0.34375383	+0.16728398				
<i>P</i>	3.20	<i>H</i>	16.3	<i>G</i>	0.15	<i>U</i>	5		

Residuals in seconds of arc

1991 02 19	691	0.4+	0.2+	1991 02 21	691	0.8−	0.2+	1998 05 26	360	0.2+	0.1+
1991 02 19	691	0.6+	0.6−	1991 02 21	691	0.1+	1.1+	1998 05 27	360	0.4+	0.4−
1991 02 19	691	0.1+	1.0−	1998 05 22	360	0.0	0.2+	1998 05 27	360	0.4+	0.2−
1991 02 20	691(11.3−	0.1+)		1998 05 22	360	0.1−	0.3+	1998 05 31	360	0.3−	0.1+
1991 02 20	691(13.3−	0.6+)		1998 05 22	360	0.4−	0.0	1998 05 31	360	0.2−	0.1+
1991 02 20	691(13.3−	1.5+)		1998 05 26	360	0.1+	0.1−				
1991 02 21	691	0.4−	0.0	1998 05 26	360	0.1−	0.0				

1998 KC₅ = 1974 RA₁ = 1989 RN₅ = 1993 LE₂ = 1994 PG₂

Id. G. V. Williams

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q		Marsden	
<i>n</i>	0.19642249	ω	243.25407	+0.93288320	−0.35873532				
<i>a</i>	2.9309511	Ω	137.74714	+0.34513735	+0.86476232				
<i>e</i>	0.1264608	<i>i</i>	2.74624	+0.10300070	+0.35141871				
<i>P</i>	5.02	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	3		

Residuals in seconds of arc

1974 09 11	095	0.6−	0.5+	1998 05 20	046	0.1+	0.5+	1998 05 28	046	0.7+	0.3−
1989 09 01	808	1.6+	0.2+	1998 05 20	046	0.2+	0.6+	1998 05 28	046	0.2+	0.7−
1989 09 01	808	(5.5−	2.4−)	1998 05 20	046	0.3+	0.5+	1998 05 28	046	0.1+	0.1−
1993 06 15	675	0.2+	0.1+	1998 05 20	046	0.0	0.4+	1998 05 28	046	0.2+	0.6−
1993 06 15	675	0.4+	1.1−	1998 05 22	704	0.1+	0.1−	1998 05 31	046	0.1+	0.1−
1993 06 16	675	1.0−	0.5−	1998 05 22	704	1.1−	1.3+	1998 05 31	046	0.0	0.1+
1994 08 09	675	0.1−	0.4+	1998 05 22	704	0.8−	1.0+	1998 05 31	046	0.0	0.1+
1994 08 09	675	(2.8−	3.0+)	1998 05 22	704	0.6−	0.2+	1998 06 01	046	0.1−	0.2−
1994 08 11	675	0.0	0.1−	1998 05 22	704	(5.9−	0.7+)	1998 06 01	046	0.1+	0.2−
1994 08 11	675	1.2−	0.8−	1998 05 24	704	0.2+	0.6−	1998 06 01	046	0.0	0.2+
1998 05 20	046	0.1−	0.3+	1998 05 24	704	(2.3+	0.4−)	1998 06 02	046	0.1+	0.2+
1998 05 20	046	0.1+	0.3+	1998 05 24	704	(2.5−	0.9+)	1998 06 02	046	0.4−	0.2+
1998 05 20	046	0.2+	0.4+	1998 05 24	704	0.7+	0.7−	1998 06 02	046	0.1+	0.0
1998 05 20	046	0.2+	0.4+	1998 05 24	704	0.0	1.4−				
1998 05 20	046	0.2+	0.5+	1998 05 28	046	0.3−	0.4−				

1998 KD₅ = 1981 JN₄ = 1997 JE₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.18325928	ω	275.47418	+0.73161232	+0.67133082		
<i>a</i>	3.0696726	Ω	42.43334	−0.53494492	+0.67315681		
<i>e</i>	0.0863743	<i>i</i>	10.12090	−0.42258412	+0.31012069		
<i>P</i>	5.38	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1981 05 08	675	0.1−	0.1−	1997 05 03	910	0.0	0.4+
1981 05 09	675	(6.9+	5.4−)	1998 05 24	426	0.1−	0.1−
1997 05 01	910	0.1+	0.0	1998 05 24	426	0.6−	0.4−
1997 05 01	910	0.2+	0.1−	1998 05 24	426	0.4−	0.2+
1997 05 01	910	0.0	0.2−	1998 05 27	426	0.3+	0.3−
1997 05 02	910	0.0	0.1+	1998 05 27	426	0.2+	0.3−
1997 05 02	910	0.2−	0.0	1998 05 27	426	0.5+	0.1−

1998 KE₅ = 1993 SD₁₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.17705146	ω	184.30099	+0.99980159	−0.01028916		
<i>a</i>	3.1410128	Ω	176.16229	+0.01275397	+0.98839632		
<i>e</i>	0.2125682	<i>i</i>	14.76389	−0.01530108	+0.15154814		
<i>P</i>	5.57	<i>H</i>	13.0	<i>G</i>	0.15	<i>U</i>	4
Residuals in seconds of arc							
1993 09 18	675	0.1−	0.0	1998 05 27	684	0.0	0.2+
1993 09 18	675	0.1+	0.0	1998 05 28	684	0.2−	0.3+
1993 09 22	675	0.1−	0.2−	1998 05 28	684	0.1−	0.1+
1993 09 22	675	0.1+	0.2+	1998 05 29	684	0.4+	0.1−
1998 05 27	684	0.2−	0.4−	1998 05 29	684	0.1+	0.2+

1998 KX₆ = 1997 CW₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.29078475	ω	204.02591	+0.91238476	+0.40753536		
<i>a</i>	2.2564288	Ω	131.86741	−0.36672849	+0.85542290		
<i>e</i>	0.1908974	<i>i</i>	2.95016	−0.18183582	+0.31963509		
<i>P</i>	3.39	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1997 02 06	566	0.9−	0.0	1998 05 22	704	0.8+	0.3−
1997 02 06	566	1.2−	0.3+	1998 05 22	704	1.1+	0.4−
1997 02 06	566	0.1+	0.7+	1998 05 22	704	0.2−	0.6+
1997 02 06	910	1.2+	0.1+	1998 05 22	704	0.5+	0.8−
1997 02 06	910	1.1+	0.1+	1998 05 22	699	0.6−	0.0
1997 02 07	910	1.3+	0.2+	1998 05 22	699	0.3−	0.3−
1997 02 08	566	0.2−	0.2−	1998 05 22	699	0.1−	0.4+
1997 02 08	566	0.9−	0.9−	1998 05 23	699	0.2+	0.8+
1997 02 08	566	0.4−	0.3−	1998 05 23	699	0.1−	0.4−
1998 05 22	704	0.3−	0.1+	1998 05 23	699	0.7−	0.5+

1998 KV₇ = 1992 ES₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>		(2000.0)		P		Q	
<i>n</i>	0.19320891	ω	135.01003	+0.25697218	+0.96608018		
<i>a</i>	2.9633613	Ω	149.85313	−0.90038038	+0.24894540		
<i>e</i>	0.0466357	<i>i</i>	2.91967	−0.35111320	+0.06866783		
<i>P</i>	5.10	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6
Residuals in seconds of arc							
1992 02 25	691	0.1+	0.1+	1998 05 22	704	0.6+	0.5−
1992 02 25	691	0.5+	0.2−	1998 05 22	704	0.6−	0.4−
1992 02 25	691	0.5+	0.3−	1998 05 23	699	1.5+	0.6+

1992 03 06	809	0.8−	0.8+	1998 05 23	699	0.9+	0.4+	1998 05 24	704	0.0	0.3+
1992 03 08	809	0.5+	0.1−	1998 05 23	699	0.8−	0.6+	1998 06 03	704	0.5+	0.1−
1992 03 09	809	0.8−	0.4−	1998 05 24	704	0.1+	0.3+	1998 06 03	704	0.6−	0.7−
1998 05 22	704	0.5−	0.9+	1998 05 24	704	0.3−	0.3+	1998 06 03	704	1.3−	0.1+
1998 05 22	704	0.2+	0.3+	1998 05 24	699	0.0	0.8+	1998 06 03	704	0.6+	1.4−
1998 05 22	704	0.5−	0.5−	1998 05 24	704	1.4−	0.4−				

1998 KZ₈ = 1975 XT₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	189.93726		(2000.0)		P		Q				
<i>n</i>	0.24202471	ω	322.31844		+0.49378510		−0.82585091				
<i>a</i>	2.5501335	Ω	96.54759		+0.84952367		+0.39126179				
<i>e</i>	0.0704819	<i>i</i>	15.90757		+0.18570355		+0.40605970				
<i>P</i>	4.07	<i>H</i>	13.0		<i>G</i>	0.15	<i>U</i>	4			
Residuals in seconds of arc											
1975 12 06	809	0.4+	0.2−	1998 05 23	704	0.1+	0.6−	1998 05 26	704	0.3−	0.0
1975 12 06	809	0.2+	0.0	1998 05 23	699	0.6−	0.6+	1998 05 26	704	0.5−	0.6+
1975 12 07	809	0.1−	0.5−	1998 05 23	699	0.0	0.4−	1998 05 26	704	0.5+	0.1+
1975 12 07	809	0.5−	0.8+	1998 05 23	699	0.3+	0.2+	1998 05 26	704	0.1+	0.9+
1998 05 23	704	0.1+	0.0	1998 05 24	699	0.2−	0.2+	1998 06 03	704	0.2−	0.1−
1998 05 23	704	0.7+	0.5+	1998 05 24	699	0.3−	0.1+	1998 06 03	704	0.5+	0.5+
1998 05 23	704	0.0	0.4−	1998 05 24	699	0.7−	0.0	1998 06 03	704	0.2−	0.6−
1998 05 23	704	1.0+	1.7−	1998 05 26	704	0.4−	0.4+	1998 06 03	704	0.1+	0.4−

1998 KN₁₀ = 1435 T-2 = 1995 UH₃₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	263.64368		(2000.0)		P		Q				
<i>n</i>	0.22659093	<i>ω</i>	154.11854		+0.97466641		+0.21572501				
<i>a</i>	2.6646553	<i>Ω</i>	193.81478		−0.22266229		+0.96082182				
<i>e</i>	0.0553912	<i>i</i>	14.32003		+0.02114006		+0.17402343				
<i>P</i>	4.35	<i>H</i>	16.0		<i>G</i>	0.15	<i>U</i>	3			
Residuals in seconds of arc											
1973 09 29	675	0.5+	0.8−	1995 10 21	691	0.1+	0.3−	1998 05 19	691	0.5+	0.0
1973 09 29	675	0.1−	0.9+	1995 10 21	691	0.2+	0.1+	1998 05 28	691	0.4+	0.4+
1973 09 30	675	0.3−	1.1+	1995 10 25	691	0.0	0.3+	1998 05 28	691	0.4+	0.3+
1973 09 30	675	0.5−	1.7+	1995 10 25	691	0.1−	0.1+	1998 05 28	691	0.4+	0.1+
1973 10 04	675	0.6+	1.5−	1995 10 25	691	0.1+	0.1+	1998 06 02	691	1.3−	0.4−
1973 10 04	675	0.1−	1.7−	1998 05 19	691	0.5+	0.3+	1998 06 02	691	0.8−	0.4−
1995 10 21	691	0.5−	0.2+	1998 05 19	691	0.7+	0.5+	1998 06 02	691	0.9−	0.5−

1998 KN₂₄ = 1980 DO₁ = 1983 VH₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

M	276.23161		(2000.0)		P		Q				
n	0.17149845	ω	287.82140		+0.86801340		+0.45402829				
a	3.2084547	Ω	45.74139		−0.27768114		+0.77948605				
e	0.0728245	i	16.30103		−0.41163809		+0.43157828				
P	5.75	H	12.0		G	0.15	U	3			
Residuals in seconds of arc											
1980 02 21	033	0.9−	0.3+	1998 05 05	699	0.4+	0.6−	1998 05 31	844	0.1−	1.5+
1980 02 22	033	0.8+	0.5−	1998 05 22	704	0.6−	0.5−	1998 06 03	844	0.6+	0.1−
1983 11 08	381	0.2−	0.3+	1998 05 22	704	0.0	0.3+	1998 06 03	844	0.6+	0.3−
1998 04 22	704	0.6+	0.6+	1998 05 22	704	0.3+	0.0	1998 06 03	844	1.1+	0.2+
1998 04 22	704	0.8+	0.8+	1998 05 22	704	0.2+	0.2−	1998 06 03	844	0.0	0.1−
1998 04 22	704	0.3+	1.9−	1998 05 22	704	0.4−	1.5−	1998 06 03	844	0.1−	0.3+
1998 04 22	704	0.2+	0.3+	1998 05 24	704	(0.4−	2.2+)	1998 06 04	844	1.4−	0.4+
1998 04 22	704	0.5+	0.2+	1998 05 24	704	1.2−	0.2+	1998 06 04	844	1.0−	0.6−
1998 04 25	809	0.3+	0.4+	1998 05 24	704	0.2−	0.5+	1998 06 04	844	0.9−	0.4−
1998 04 25	809	0.6+	1.0−	1998 05 24	704	0.2+	0.3+	1998 06 04	844	0.3−	0.2+
1998 04 25	809	0.3−	0.4−	1998 05 24	704	0.5−	0.9+	1998 06 05	844	(2.4+	1.2+)
1998 05 01	704	0.2+	0.5−	1998 05 31	844	0.5−	0.0	1998 06 05	844	1.2+	0.2+
1998 05 01	704	0.5+	0.1−	1998 05 31	844	0.1−	0.3+	1998 06 05	844	0.4−	0.5−
1998 05 01	704	0.5−	0.1−	1998 05 31	844	0.5−	0.2−	1998 06 05	844	0.7−	0.3−

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1998 05 01	704	0.3−	0.8+	1998 05 31	844	0.2−	0.2+	1998 06 05	844	0.0	0.3+
1998 05 05	699	0.3+	0.4+	1998 05 31	844	1.6+	0.5+				
1998 05 05	699	0.7+	0.1−	1998 05 31	844	0.9−	0.1−				

1998 KW₃₄ = 1995 UG₄₄ = 1997 EZ₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	335.67580		(2000.0)	P	Q	Williams	
<i>n</i>	0.24277140	ω	108.12856	+0.36273349	+0.93188017		
<i>a</i>	2.5449018	Ω	183.15226	−0.88501229	+0.34284212		
<i>e</i>	0.1861160	<i>i</i>	5.08710	−0.29185213	+0.11856912		
<i>P</i>	4.06	<i>H</i>	15.5	<i>G</i>	0.15	<i>U</i>	4

Residuals in seconds of arc

1995 10 25	691	0.0	0.1−	1997 03 13	691	0.3+	0.3+	1998 05 24	704	0.3+	0.8+
1995 10 25	691	0.2−	0.1+	1997 03 13	691	0.7+	0.1+	1998 05 24	704	0.0	0.4+
1995 10 25	691	0.1−	0.3+	1997 03 13	691	0.3+	0.2−	1998 05 24	704	1.1+	0.0
1995 10 28	691	0.0	0.3+	1998 05 22	704	1.4−	0.7+	1998 05 24	704	0.5−	0.4−
1995 10 28	691	0.0	0.5+	1998 05 22	704	0.9−	0.0	1998 06 03	704	0.3+	0.6+
1995 10 28	691	0.1−	0.3+	1998 05 22	704	0.6−	0.7+	1998 06 03	704	1.1+	0.8+
1997 03 05	691	0.1−	0.2−	1998 05 22	704	0.2−	0.5−	1998 06 03	704	1.7+	1.6−
1997 03 05	691	0.2−	0.1−	1998 05 22	704	0.2−	0.5+	1998 06 03	704	1.6+	0.1+
1997 03 05	691	0.8−	0.2+	1998 05 24	704	1.6+	0.5+	1998 06 03	704	3.8−	1.5−

1998 KF₃₆ = 1997 EL₄₂

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	300.17173		(2000.0)	P	Q	Williams	
<i>n</i>	0.21596767	ω	18.83875	+0.80263333	+0.59536293		
<i>a</i>	2.7513355	Ω	304.56849	−0.55276960	+0.71953147		
<i>e</i>	0.0976601	<i>i</i>	2.53141	−0.22411048	+0.35751565		
<i>P</i>	4.56	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1997 03 10	704	0.4+	1.1+	1998 05 22	704	1.6+	1.0+	1998 05 24	704	0.2+	0.6−
1997 03 10	704	0.5−	0.3−	1998 05 22	704	0.9−	0.9+	1998 05 24	704	1.0−	0.4+
1997 03 11	704	0.3+	1.0+	1998 05 22	704	1.1+	1.6−	1998 06 03	704	1.5+	1.6−
1997 03 11	704	0.5−	0.5+	1998 05 22	704	1.4−	0.0	1998 06 03	704	0.3+	0.7+
1997 03 12	704	0.3−	1.0−	1998 05 24	704	0.6+	0.8−	1998 06 03	704	1.8+	0.5+
1997 03 12	704	0.6+	1.3−	1998 05 24	704	0.5−	0.6−	1998 06 03	704	0.1+	0.5+
1998 05 22	704	0.3−	0.2+	1998 05 24	704	0.6+	0.7+	1998 06 03	704	3.8−	0.4+

1998 KG₃₈ = 1985 QK₅ = 1985 RE₆

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Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	267.25341		(2000.0)	P	Q	Williams	
<i>n</i>	0.21159182	ω	182.80620	+0.99814896	+0.06056734		
<i>a</i>	2.7891388	Ω	173.71349	−0.05477421	+0.93459837		
<i>e</i>	0.0993675	<i>i</i>	2.87948	−0.02642814	+0.35051033		
<i>P</i>	4.66	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1985 08 23	095	0.1+	0.6+	1998 05 22	704	1.2+	0.1−	1998 05 24	704	0.0	0.0
1985 09 15	095	1.4−	2.2−	1998 05 22	704	2.1−	0.3−	1998 06 03	704	0.9+	1.7−
1985 09 20	095	1.4+	1.7+	1998 05 24	704	0.6+	1.0+	1998 06 03	704	1.0−	1.1+
1998 05 22	704	0.5−	0.4−	1998 05 24	704	0.8+	0.6−	1998 06 03	704	0.4−	0.6−
1998 05 22	704	0.2+	0.4+	1998 05 24	704	1.2−	0.2+	1998 06 03	704	0.3+	0.3+
1998 05 22	704	1.2+	0.9+	1998 05 24	704	0.1+	0.3−				

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1998 KS₃₉ = 1996 BQ₁₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	170.23658		(2000.0)	P	Q	Williams	
<i>n</i>	0.20671805	ω	279.49065	+0.13354916	−0.99096906		
<i>a</i>	2.8328078	Ω	162.82062	+0.92450630	+0.12019784		
<i>e</i>	0.0331065	<i>i</i>	2.33599	+0.35700521	+0.05943730		
<i>P</i>	4.77	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1996 01 21	327	0.1−	0.5+	1998 05 22	704	0.2+	0.3−	1998 05 24	704	1.3+	0.4−
1996 01 21	327	0.1+	0.2−	1998 05 22	704	1.1−	1.4+	1998 05 24	704	0.9−	0.0
1996 01 21	327	0.5−	0.6−	1998 05 22	704	0.2−	0.6−	1998 06 03	704	2.2+	0.9−
1996 01 22	327	0.7+	0.1+	1998 05 22	704	0.2+	0.8+	1998 06 03	704	1.5−	1.8−
1996 01 22	327	0.1−	0.0	1998 05 24	704	0.9−	0.3+	1998 06 03	704	0.7−	0.6+
1996 01 22	327	0.1−	0.3+	1998 05 24	704	0.2−	1.2−	1998 06 03	704	0.2−	0.2+
1998 05 22	704	0.7−	0.7−	1998 05 24	704	2.5+	0.7+	1998 06 03	704	0.1+	2.2+

1998 KE₄₁ = 1995 YJ₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	49.80618		(2000.0)	P	Q	Williams	
<i>n</i>	0.18254656	ω	312.28788	−0.93884955	+0.22623148		
<i>a</i>	3.0776574	Ω	242.33180	−0.15916804	−0.95363276		
<i>e</i>	0.1105050	<i>i</i>	17.04322	−0.30533106	−0.19850411		
<i>P</i>	5.40	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1995 12 19	566	0.4+	0.1−	1998 05 22	704	0.4+	0.7+	1998 05 24	704	0.7−	0.2+
1995 12 19	566	0.1+	0.4−	1998 05 22	704	0.4−	1.4−	1998 06 03	704	1.1+	0.5+
1995 12 19	566	0.8+	0.1+	1998 05 22	704	0.5+	1.5+	1998 06 03	704	1.2−	0.7−
1995 12 20	566	0.5−	0.2+	1998 05 24	704	0.9+	0.7−	1998 06 03	704	1.1+	0.4+
1995 12 20	566	0.5−	0.1+	1998 05 24	704	1.0−	0.7−	1998 06 03	704	(4.7−	0.8−)
1995 12 20	566	0.3−	0.1−	1998 05 24	704	1.1−	0.3+				
1998 05 22	704	0.1+	0.8−	1998 05 24	704	0.3+	0.3+				

1998 KR₄₂ = 3103 T-3

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	64.20091		(2000.0)	P	Q	Williams	
<i>n</i>	0.21926528	ω	350.11129	−0.99921285	+0.00075662		
<i>a</i>	2.7236803	Ω	190.18634	+0.00660409	−0.98269329		
<i>e</i>	0.0998500	<i>i</i>	12.96006	−0.03911614	−0.18523857		
<i>P</i>	4.50	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1977 10 07	675	2.4+	2.1−	1977 10 22	675	1.1+	0.2−	1998 05 26	704	0.1−	1.6+
1977 10 11	675	0.0	1.1+	1977 10 22	675	1.6+	1.4−	1998 05 27	699	0.8+	0.5−
1977 10 11	675	0.2−	0.3+	1977 10 22	675	0.5+	0.6−	1998 05 27	699	0.4−	0.0
1977 10 12	675	0.8−	0.1−	1998 05 23	704	0.4+	0.4−	1998 05 27	699	1.2+	0.3−
1977 10 12	675	0.6−	0.5−	1998 05 23	704	0.2−	0.6+	1998 06 02	699	0.1+	0.1+
1977 10 16	675	0.0	1.2+	1998 05 23	704	0.9−	0.4+	1998 06 02	699	0.3−	0.2−
1977 10 16	675	0.7−	1.0+	1998 05 23	704	0.3+	0.0	1998 06 02	699	0.0	0.6−
1977 10 17	675	(0.2−	2.9+)	1998 05 23	704	0.4+	0.5−	1998 06 03	704	1.1−	1.1−
1977 10 17	675	0.4+	1.4+	1998 05 26	704	0.0	0.1+	1998 06 03	704	0.6−	0.8+
1977 10 21	675	(1.2−	3.1+)	1998 05 26	704	0.5+	0.4−	1998 06 03	704	0.3+	1.2+
1977 10 21	675	1.9−	1.4+	1998 05 26	704	0.4−	1.1+	1998 06 03	704	1.0+	0.0
1977 10 22	675	1.8−	1.6−	1998 05 26	704	0.9−	1.9−				

1998 KM₄₆ = 1992 TE₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	185.96673		(2000.0)	P	Q	Williams	
<i>n</i>	0.28416476	ω	243.48875	+0.27148989	−0.96223036		
<i>a</i>	2.2913384	Ω	190.81609	+0.91683004	+0.26493541		
<i>e</i>	0.0766882	<i>i</i>	6.16376	+0.29277281	+0.06262560		
<i>P</i>	3.47	<i>H</i>	14.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1992 10 01	372	0.8−	1.0+	1998 05 22	704	1.2−	0.9+	1998 05 24	704	0.8−	1.0−
1992 10 01	372	0.1+	0.1−	1998 05 22	704	0.3−	0.0	1998 05 24	704	0.4−	1.9−
1992 10 05	372	1.0−	2.1−	1998 05 22	704	0.5+	0.6−	1998 06 03	704	0.7−	1.0−
1992 10 05	372	0.8−	0.1−	1998 05 22	704	0.4−	0.5+	1998 06 03	704	2.1+	1.1+
1992 10 06	372	1.0+	0.0	1998 05 24	704	0.0	0.1−	1998 06 03	704	0.5−	1.5+
1992 10 06	372	1.4+	1.3+	1998 05 24	704	0.2−	1.2+	1998 06 03	704	2.4+	0.8+
1998 05 22	704	0.3−	0.6−	1998 05 24	704	1.1−	0.4+	1998 06 03	704	0.7+	1.3−

1998 KX₄₈ = 1995 WF₄₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	347.32861		(2000.0)	P	Q
<i>n</i>	0.18882199	ω	142.43948	−0.18114502	+0.96875790
<i>a</i>	3.0090842	Ω	116.54872	−0.94198380	−0.12142084
<i>e</i>	0.0508851	<i>i</i>	10.91556	−0.28258275	−0.21625241
<i>P</i>	5.22	<i>H</i>	12.5	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1995 11 30	372	1.3−	0.2−	1998 05 06	566	0.6−	0.3−	1998 05 26	704	0.1−	0.0
1995 11 30	372	0.3+	0.3+	1998 05 22	566	0.0	0.1−	1998 05 26	704	0.3+	0.0
1995 12 02	372	0.6+	0.1+	1998 05 22	566	0.1+	0.0	1998 05 26	704	0.7+	0.4−
1995 12 02	372	0.4+	0.0	1998 05 22	566	0.2−	0.3+	1998 05 26	704	0.1−	0.6+
1998 05 05	699	0.1−	0.6+	1998 05 23	704	0.9+	0.3+	1998 06 03	704	0.2+	0.4+
1998 05 05	699	0.4+	0.1+	1998 05 23	704	0.7+	0.7−	1998 06 03	704	1.0−	1.2+
1998 05 05	699	0.2−	0.2+	1998 05 23	704	0.6+	1.1−	1998 06 03	704	0.6−	0.6+
1998 05 06	566	0.4−	0.0	1998 05 23	704	0.5−	0.5−	1998 06 03	704	0.0	0.0
1998 05 06	566	0.1−	0.1+	1998 05 23	704	0.5+	0.8−	1998 06 03	704	0.4−	0.3−

1998 KF₄₉ = 1994 NU₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	45.35201		(2000.0)	P	Q
<i>n</i>	0.22087035	ω	80.52540	−0.94752169	+0.29954069
<i>a</i>	2.7104690	Ω	116.83524	−0.31966637	−0.88334732
<i>e</i>	0.0802798	<i>i</i>	7.19153	−0.00400777	−0.36051753
<i>P</i>	4.46	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1994 07 11	809	0.1+	0.8+	1998 05 05	699	0.7+	0.0	1998 05 26	704	0.9−	0.7−
1994 07 11	809	0.3−	0.9+	1998 05 05	699	0.5−	0.1−	1998 05 26	704	0.1−	0.9+
1994 07 11	809	1.3+	0.4+	1998 05 23	704	0.0	0.2+	1998 05 26	704	0.6+	1.5+
1994 07 12	809	0.1−	0.7−	1998 05 23	704	0.3−	0.0	1998 05 26	704	1.4+	1.9−
1994 07 12	809	0.3−	0.1−	1998 05 23	704	0.3−	0.1+	1998 05 26	704	1.1+	0.9+
1994 07 12	809	0.8−	1.3−	1998 05 23	704	1.2−	0.1+	1998 06 03	704	1.6+	1.1−
1998 05 03	566	1.1+	0.4−	1998 05 23	699	0.1−	0.3+	1998 06 03	704	(2.4+ 0.4−)	
1998 05 03	566	0.3+	0.4−	1998 05 23	699	0.0	0.3−	1998 06 03	704	1.7−	0.1−
1998 05 03	566	0.2−	0.3−	1998 05 23	704	0.6−	1.0+	1998 06 03	704	1.5−	0.3+
1998 05 05	699	0.1−	0.1+	1998 05 23	699	0.8+	0.2−				

1998 KB₅₁ = 1982 KD₃ = 1995 UG₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	13.87965		(2000.0)	P	Q
<i>n</i>	0.24692723	ω	59.76735	−0.51824309	+0.85522951
<i>a</i>	2.5162671	Ω	179.00711	−0.82672905	−0.50019988
<i>e</i>	0.1068221	<i>i</i>	8.51724	−0.21895930	−0.13558234
<i>P</i>	3.99	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1982 05 23	095	0.0	0.2−	1995 10 24	033	0.9+	0.5+	1998 05 26	704	0.2−	0.1+
1995 10 20	691	0.4−	0.4+	1995 10 25	033	0.9+	0.6−	1998 05 26	704	0.3+	0.1−
1995 10 20	691	0.6−	0.4+	1998 05 23	704	0.5+	0.0	1998 05 26	704	1.0−	0.3+
1995 10 20	691	0.3−	0.4−	1998 05 23	704	0.2+	0.4−	1998 06 03	704	1.1+	0.0
1995 10 23	033	0.8+	0.6−	1998 05 23	704	0.9−	0.1+	1998 06 03	704	0.6+	0.2−
1995 10 23	033	0.9+	0.7−	1998 05 23	704	0.6+	0.6−	1998 06 03	704	0.2−	0.6+
1995 10 24	691	0.6−	0.1+	1998 05 23	704	0.0	0.5−	1998 06 03	704	0.6−	0.2+

1995 10 24	691	0.6−	0.1+	1998 05 26	704	0.7−	1.2+	1998 06 03	704	0.9+	0.8−
1995 10 24	691	0.8−	0.0	1998 05 26	704	0.6−	0.2+				

1998 KD₅₁ = 1966 CR = 1971 HM = 1987 YH₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	10.47978		(2000.0)	P	Q
<i>n</i>	0.22061902	ω	110.81943	−0.47390243	+0.87285153
<i>a</i>	2.7125271	Ω	130.34756	−0.85400899	−0.42334896
<i>e</i>	0.1475661	<i>i</i>	8.78441	−0.21467450	−0.24270531
<i>P</i>	4.47	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1966 02 14	330	0.2+	0.0	1998 05 23	704	0.2+	1.7−	1998 05 26	704	0.4−	0.9+
1966 02 25	330	0.2−	0.1+	1998 05 25	699	0.3−	0.2−	1998 06 03	704	0.0	0.3+
1971 04 27	095 (18.2−	3.1−)		1998 05 25	699	0.1+	0.7+	1998 06 03	704	0.4+	0.1−
1987 12 29	010	0.0	1.1−	1998 05 25	699	0.0	0.5+	1998 06 03	704	0.0	0.1+
1987 12 29	010	0.0	0.9+	1998 05 26	704	0.1−	0.3+	1998 06 03	704	(0.0 2.7−)	
1998 05 23	704	1.1+	0.1−	1998 05 26	704	0.3−	0.6+	1998 06 03	704	0.6+	1.4−
1998 05 23	704	0.5−	1.4+	1998 05 26	704	0.3+	0.4−				
1998 05 23	704	1.5−	0.3−	1998 05 26	704	0.5+	0.7−				

1998 KQ₅₁ = 1997 HV₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	165.47457		(2000.0)	P	Q
<i>n</i>	0.19119910	ω	278.48583	+0.12782118	−0.99033561
<i>a</i>	2.9840916	Ω	163.86961	+0.96903244	+0.11314241
<i>e</i>	0.0911568	<i>i</i>	11.17097	+0.21127679	+0.08021329
<i>P</i>	5.15	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1997 04 28	704	0.3−	0.5−	1997 04 29	704	0.2+	0.1−	1998 05 26	704	1.0+	0.5−
1997 04 28	704	0.1−	0.3−	1998 05 23	704	0.0	0.5−	1998 05 26	704	0.1+	0.3+
1997 04 28	704	0.7+	0.4−	1998 05 23	704	0.6−	0.1−	1998 05 26	704	0.5−	0.8−
1997 04 28	704	0.3−	0.2−	1998 05 23	704	0.6+	0.2+	1998 05 26	704	0.5+	0.3−
1997 04 28	704	(2.6−	0.9+)	1998 05 23	704	0.2−	0.6−	1998 05 26	704	0.5+	0.5+
1997 04 29	704	0.1+	0.4−	1998 05 23	704	1.3−	0.5+	1998 06 03	704	(2.7−	1.1+)
1997 04 29	704	0.2+	0.5+	1998 05 25	699	0.0	1.5+	1998 06 03	704	0.6+	0.8+
1997 04 29	704	0.5−	0.8+	1998 05 25	699	0.2+	0.3+	1998 06 03	704	0.4−	0.2−
1997 04 29	704	0.1+	0.4+	1998 05 25	699	0.3+	0.2+	1998 06 03	704	0.8−	1.3−

1998 KS₅₁ = 1978 NF₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	315.21383		(2000.0)	P	Q
<i>n</i>	0.24296397	ω	139.45219	+0.74547958	+0.66651503
<i>a</i>	2.5435570	Ω	178.72541	−0.65010815	+0.72850042
<i>e</i>	0.1878680	<i>i</i>	10.96891	−0.14703601	+0.15825567
<i>P</i>	4.06	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1978 07 10	095	1.5+	0.6+	1998 05 23	704	0.2+	0.5−	1998 05 27	699	0.3+	0.2+
1978 07 12	095	1.5−	0.6−	1998 05 26	704	0.1+	0.4+	1998 05 27	699	0.0	0.3+
1998 05 23	704	0.3+	0.4−	1998 05 26	704	0.2−	0.9+	1998 05 27	699	0.1+	0.6+
1998 05 23	704	0.4−	0.1+	1998 05 26	704	0.4+	1.0−	1998 06 04	699	0.0	0.3−
1998 05 23	704	1.6+	0.0	1998 05 26	704	0.6−	0.1−	1998 06 04	699	0.3−	0.1−
1998 05 23	704	1.6−	0.9−	1998 05 26	704	0.3+	0.7+	1998 06 04	699	0.1−	0.2+

1998 KU₅₁ = 1993 MD

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	316.94865		(2000.0)	P	Q
<i>n</i>	0.18797179	ω	167.83066	+0.53183346	+0.83419708
<i>a</i>	3.0181508	Ω	134.08564	−0.79300035	+0.55100432
<i>e</i>	0.0972771	<i>i</i>	11.71423	−0.29715923	+0.02257140
<i>P</i>	5.24	<i>H</i>	13.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1993 06 17	693	1.2−	0.4+	1998 05 23	704	0.1−	0.4+	1998 06 03	704	0.1+	0.8−
1993 06 17	693	1.4+	0.1−	1998 05 26	704	0.2+	0.2+	1998 06 03	704	0.3−	0.4−
1993 06 18	693	0.2−	1.7−	1998 05 26	704	0.1+	0.7+	1998 06 03	704	1.5+	0.2−
1993 06 18	693	0.0	1.4+	1998 05 26	704	0.5−	1.0−	1998 06 04	699	1.0−	0.2+
1998 05 23	704	0.0	0.1+	1998 05 26	704	0.4+	1.6−	1998 06 04	699	1.2−	0.9+
1998 05 23	704	0.2−	0.5+	1998 05 26	704	0.5+	0.1+	1998 06 04	699	1.6−	0.5+
1998 05 23	704	0.5−	0.7+	1998 06 03	704	1.3+	0.8+				
1998 05 23	704	0.2−	0.0	1998 06 03	704	1.5+	1.1−				

1998 KP₅₃ = 5694 T-3

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	3.72655	(2000.0)	P	Q
<i>n</i>	0.17548812	ω 118.53035	−0.31497316	+0.93893436
<i>a</i>	3.1596398	Ω 132.41342	−0.92312404	−0.26915301
<i>e</i>	0.1643113	<i>i</i> 10.81580	−0.22053097	−0.21438034
<i>P</i>	5.62	<i>H</i> 14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1977 10 11	675	1.7+	0.2+	1977 10 17	675	0.0	0.0	1998 05 26	704	1.9+	1.6+
1977 10 11	675	0.9−	0.5−	1998 05 23	704	1.0+	2.2−	1998 05 26	704	1.0+	0.2−
1977 10 12	675	0.2−	0.4−	1998 05 23	704	1.4+	1.4+	1998 05 26	704	0.1−	0.4−
1977 10 12	675	0.8−	0.4−	1998 05 23	704	2.0−	0.5+	1998 06 03	704	0.6+	0.4+
1977 10 16	675	0.4+	0.2−	1998 05 23	704	2.5−	0.6−	1998 06 03	704	1.8+	0.9−
1977 10 16	675	0.6+	1.3+	1998 05 26	704	1.2−	2.0−	1998 06 03	704	1.0−	0.1−
1977 10 17	675	0.9−	0.1−	1998 05 26	704	0.1−	2.0+	1998 06 03	704	0.7−	0.6+

1998 KM₅₄ = 1997 AR₁₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	23.45856	(2000.0)	P	Q
<i>n</i>	0.23770170	ω 115.00642	−0.62259806	+0.76371945
<i>a</i>	2.5809595	Ω 115.40058	−0.76866604	−0.55597664
<i>e</i>	0.1254645	<i>i</i> 10.88604	−0.14671116	−0.32805880
<i>P</i>	4.15	<i>H</i> 15.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1997 01 12	566	0.2+	0.4−	1998 05 23	704	0.5−	0.7+	1998 05 26	704	0.7+	1.5−
1997 01 12	566	0.9+	0.3−	1998 05 23	704	0.4+	0.1+	1998 06 03	704	0.0	0.1−
1997 01 12	566	0.4−	0.1−	1998 05 23	704	0.3−	1.4−	1998 06 03	704	2.0−	2.1+
1997 01 13	566	0.7−	0.6+	1998 05 23	704	0.5+	0.6+	1998 06 03	704	0.1−	0.0
1997 01 13	566	0.2−	0.2+	1998 05 26	704	1.2−	0.6+	1998 06 03	704	2.1+	2.0−
1997 01 13	566	0.2+	0.0	1998 05 26	704	0.6+	0.6−				
1998 05 23	704	0.4−	0.4+	1998 05 26	704	0.2+	1.1+				

1998 KR₅₄ = 1982 BK₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	235.27780	(2000.0)	P	Q
<i>n</i>	0.26562339	ω 288.45913	+0.81171196	−0.53473118
<i>a</i>	2.3967634	Ω 104.48984	+0.58405316	+0.74152269
<i>e</i>	0.1212095	<i>i</i> 14.04213	+0.00236666	+0.40522421
<i>P</i>	3.71	<i>H</i> 14.5	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1982 01 26	381	0.4−	3.0−	1998 05 23	704	0.3+	0.3+	1998 05 26	704	0.2−	0.9−
1982 01 26	381	2.3−	2.1+	1998 05 23	704	0.8+	0.6−	1998 05 26	704	0.4+	1.2−
1982 01 26	381	0.5−	0.3−	1998 05 23	704	1.7+	0.7+	1998 06 03	704	0.2−	1.4+
1982 01 26	381	0.9+	1.1−	1998 05 23	704	0.6−	0.1−	1998 06 03	704	1.4−	0.8−
1982 01 26	381	0.2−	0.5−	1998 05 23	704	0.5+	0.7+	1998 06 03	704	0.2+	0.8+
1982 01 28	381	0.5+	2.3+	1998 05 26	704	0.1+	1.3−	1998 06 03	704	0.7+	0.6−
1982 01 28	381	0.2−	0.7+	1998 05 26	704	3.1+	0.3+	1998 06 03	704	2.6−	0.7−
1982 01 28	381	2.1+	0.2−	1998 05 26	704	2.8−	1.9+				

1998 KN₅₆ = 1992 EY₁₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	279.00363	(2000.0)	P	Q
<i>n</i>	0.18867933	ω 335.48566	+0.85373762	+0.52064863
<i>a</i>	3.0106007	Ω 353.12400	−0.46671511	+0.75870421
<i>e</i>	0.1265853	<i>i</i> 3.61848	−0.23088762	+0.39152641
<i>P</i>	5.22	<i>H</i> 13.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1992 03 01	809	0.6−	0.0	1998 04 21	704	0.9+	0.6+	1998 05 22	704	1.0+	0.2−
1992 03 03	809	0.8−	0.5−	1998 05 01	704	0.9−	0.9−	1998 05 22	704	0.8−	0.5+
1992 03 06	809	1.4+	0.5+	1998 05 01	704	1.4+	0.3−	1998 05 24	704	1.5+	0.4+
1998 04 21	704	0.5−	1.5−	1998 05 01	704	0.5+	0.8+	1998 05 24	704	0.1−	1.4−
1998 04 21	704	0.3+	0.2+	1998 05 01	704	0.6+	0.8+	1998 05 24	704	2.4−	1.3+
1998 04 21	704	0.6+	1.9+	1998 05 22	704	0.2+	0.6−	1998 05 24	704	0.3−	0.9+
1998 04 21	704	2.7−	1.0−	1998 05 22	704	1.3+	0.9−	1998 05 24	704	0.5−	0.6−

2102 P-L = 1998 KV₄₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	333.78137	(2000.0)	P	Q
<i>n</i>	0.28170181	ω 324.88652	+0.51425370	+0.85718635
<i>a</i>	2.3046746	Ω 336.02439	−0.77036476	+0.44741630
<i>e</i>	0.1869730	<i>i</i> 3.92765	−0.37693670	+0.25504946
<i>P</i>	3.50	<i>H</i> 15.5	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1960 09 24	675	0.3−	0.8−	1960 10 22	675	0.8+	2.5−	1998 05 22	704	1.5−	0.4−
1960 09 25	675	0.4+	0.8+	1960 10 22	675	0.6−	0.8+	1998 05 22	704	1.5+	0.7−
1960 09 26	675	0.4−	0.2−	1960 10 24	675	0.8−	0.8+	1998 05 24	704	0.7−	0.2−
1960 09 26	675	0.1−	0.9+	1960 10 26	675	0.8+	0.2+	1998 05 24	704	1.3−	1.9+
1960 09 28	675	0.3−	0.1−	1998 05 22	704	1.8+	0.4+	1998 05 24	704	0.4+	0.6−
1960 10 17	675	0.6+	0.2+	1998 05 22	704	0.4+	0.1+	1998 05 24	704	0.6−	0.5−

2542 P-L = 1989 TB₁₇ = 1998 FS₁₃₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	156.54148	(2000.0)	P	Q
<i>n</i>	0.27280214	ω 331.14111	+0.92989929	−0.36443920
<i>a</i>	2.3545299	Ω 50.31860	+0.34865001	+0.83030262
<i>e</i>	0.2324189	<i>i</i> 3.70361	+0.11717710	+0.42164158
<i>P</i>	3.61	<i>H</i> 15.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1960 09 24	675	0.5−	0.4+	1989 10 07	809	1.2−	0.8−	1998 03 20	704	2.1+	0.2−
1960 09 26	675	0.3+	0.9−	1989 10 07	809	0.9−	0.8−	1998 03 20	704	0.2−	0.1−
1960 09 28	675	0.4+	0.2+	1989 10 07	809	0.7−	0.8−	1998 03 20	704	2.4−	0.1+
1960 09 29	675	0.8+	0.1−	1989 10 09	809	0.4−	1.0+	1998 03 26	704	0.7+	0.1+
1960 10 22	675	0.8−	0.3−	1989 10 09	809	0.8+	1.1+	1998 03 26	704	1.6+	1.4+
1960 10 25	675	0.9+	0.5−	1989 10 09	809	1.9+	1.2+	1998 03 26	704	2.1−	1.7−
1960 10 26	675	0.4−	0.2−	1998 03 20	704	0.1−	0.4−				

2611 P-L = 1998 KR₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	303.77028	(2000.0)	P	Q
<i>n</i>	0.17478959	ω 125.87272	+0.58174375	+0.81337197
<i>a</i>	3.1680523	Ω 179.69920	−0.77362112	+0.55350286
<i>e</i>	0.0793358	<i>i</i> 5.47317	−0.25116641	+0.17905482
<i>P</i>	5.64	<i>H</i> 13.0	<i>G</i> 0.15	<i>U</i> 4

Residuals in seconds of arc

1960 09 24	675	0.2−	0.2−	1998 05 01	704	0.0	0.9−	1998 05 23	699	0.3+	0.7+
1960 09 26	675	1.0+	0.4+	1998 05 01	704	0.5−	0.5−	1998 05 23	699	0.4−	0.6+
1960 09 26	675	0.2−	0.6−	1998 05 01	704	0.4+	0.5+	1998 05 24	704	0.2+	0.0
1960 09 27	675	0.4+	0.6+	1998 05 05	699	0.7−	1.0+	1998 05 24	704	0.4+	0.7−
1960 09 28	675	0.3−	0.3−	1998 05 05	699	0.1+	0.1+	1998 05 24	704	0.1−	0.6−

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1960 10 17	675	0.1+	0.5+	1998 05 05	699	0.3+	0.1-	1998 05 24	704	1.3-	0.6-
1960 10 22	675	0.7-	0.3+	1998 05 22	704	0.9+	0.5-	1998 05 24	704	0.5+	0.8-
1960 10 25	675	0.6+	0.6-	1998 05 22	704	0.1+	0.4+	1998 05 24	699	0.2+	0.8+
1960 10 26	675	0.8-	0.0	1998 05 22	704	0.2-	0.4-	1998 05 24	699	0.0	0.9+
1998 04 22	704	0.0	0.6-	1998 05 22	704	0.6-	0.8-	1998 05 24	699	0.0	0.8+
1998 04 22	704	0.5+	0.0	1998 05 22	699	0.9+	0.4-	1998 05 25	699	0.6-	0.4-
1998 04 22	704	0.6+	0.1-	1998 05 22	704	0.5-	0.2-	1998 05 25	699	0.3+	0.4-
1998 04 22	704	1.0+	1.0+	1998 05 22	699	0.2-	0.4-	1998 05 25	699	0.4-	0.1+
1998 04 22	704	1.2-	0.9+	1998 05 22	699	0.3+	0.1-				
1998 05 01	704	0.1-	0.8-	1998 05 23	699	0.2-	1.6+				

2728 P-L = 1993 FY₅₂ = 1998 FE₁₂₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	38.21179		(2000.0)	P	Q
<i>n</i>	0.19615846	ω	148.63969	-0.95070389	-0.30688081
<i>a</i>	2.9335806	Ω	13.70623	+0.23102694	-0.79679808
<i>e</i>	0.0740060	<i>i</i>	10.84160	+0.20685424	-0.52051608
<i>P</i>	5.02	<i>H</i>	14.5	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1960 09 24	675	0.1-	0.6-	1993 03 18	809	0.4+	2.0+	1998 03 20	704	0.1+	0.2+
1960 09 24	675	0.6+	1.4-	1993 03 24	691	0.0	1.1-	1998 03 20	704	1.0+	0.7+
1960 09 26	675	0.3-	0.3-	1993 03 24	691	0.2+	1.2-	1998 03 22	704	0.5+	1.0-
1960 09 28	675	0.2-	0.5+	1993 03 24	691	0.1+	1.1-	1998 03 22	704	0.5+	0.9-
1960 09 28	675	0.5-	0.8+	1993 04 17	413	1.2+	0.1+	1998 03 22	704	0.3-	0.1-
1960 09 29	675	0.8+	0.3+	1998 03 20	704	0.8-	1.3-	1998 03 22	704	0.4-	1.0+
1960 09 29	675	0.5-	0.5+	1998 03 20	704	0.4+	1.0+				
1993 03 17	809	1.5-	1.8+	1998 03 20	704	1.4-	0.0				

4647 P-L = 1998 HG₁₄₈

Id. B. G. Marsden

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	348.17349		(2000.0)	P	Q
<i>n</i>	0.30662340	ω	76.41567	+0.01746601	+0.99982538
<i>a</i>	2.1780400	Ω	194.58999	-0.92723908	+0.01371112
<i>e</i>	0.1232229	<i>i</i>	1.51146	-0.37406233	+0.01269702
<i>P</i>	3.21	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1960 09 24	675	0.4-	0.0	1960 10 25	675	0.8+	0.3-	1998 05 23	699	0.1+	0.2+
1960 09 24	675	0.1-	0.1+	1960 10 26	675	0.9-	0.9+	1998 05 23	699	0.3-	0.1+
1960 09 25	675	0.2+	0.6-	1960 10 26	675	0.7+	0.6-	1998 05 23	699	0.0	0.3-
1960 09 26	675	0.2+	1.0+	1998 04 25	809	(1.8-	4.5+)	1998 06 03	704	0.1-	0.6-
1960 09 28	675	0.1-	0.6+	1998 04 25	809	(2.2-	4.2+)	1998 06 03	704	0.4-	0.5+
1960 10 17	675	0.3-	0.7-	1998 04 25	809	(1.6-	4.5+)	1998 06 03	704	0.2-	0.4+
1960 10 22	675	0.4-	0.4+	1998 04 28	809	(1.7-	5.5+)	1998 06 03	704	0.2+	0.1-
1960 10 22	675	0.6+	1.2-	1998 04 28	809	(2.3-	5.4+)	1998 06 03	704	0.7+	0.2-
1960 10 24	675	0.5-	0.3+	1998 04 28	809	(1.9-	6.5+)				

6539 P-L = 1998 HM₆₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	304.83106		(2000.0)	P	Q
<i>n</i>	0.22616598	ω	118.75462	+0.33071991	+0.94346330
<i>a</i>	2.6679920	Ω	170.47686	-0.90617939	+0.32409766
<i>e</i>	0.0671182	<i>i</i>	7.77802	-0.26355880	+0.06955366
<i>P</i>	4.36	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1960 09 24	675	0.2-	0.2-	1960 10 26	675	1.3+	0.0	1998 04 22	704	0.9-	0.5+
1960 09 26	675	0.5-	0.5-	1998 04 21	704	0.0	0.5-	1998 04 22	704	0.1+	0.2-
1960 09 27	675	0.4+	0.3+	1998 04 21	704	0.0	0.1+	1998 04 22	704	(5.0-	0.0)
1960 09 28	675	0.2+	0.4+	1998 04 21	704	0.9+	0.3-	1998 05 16	704	0.1+	0.7-
1960 10 17	675	0.3-	0.0	1998 04 21	704	0.1+	0.3-	1998 05 16	704	0.5+	0.7-
1960 10 22	675	0.9-	0.7-	1998 04 21	704	0.4+	0.1-	1998 05 16	704	0.2-	0.5+

1960 10 25	675	0.1-	0.0	1998 04 22	704	0.7-	0.7+	1998 05 16	704	0.0	0.5+
1960 10 26	675	0.1+	0.9+	1998 04 22	704	0.2-	0.5+				

6606 P-L = 1998 HH₉₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	98.19863		(2000.0)	P	Q
<i>n</i>	0.27750151	ω	105.34510	-0.69635928	-0.71549110
<i>a</i>	2.3278723	Ω	29.04219	+0.60606825	-0.62817482
<i>e</i>	0.0434620	<i>i</i>	6.64560	+0.38440217	-0.30572682
<i>P</i>	3.55	<i>H</i>	15.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1960 09 24	675	0.0	0.2+	1998 04 21	704	0.4-	0.1+	1998 04 25	699	0.3-	0.3+
1960 09 26	675	0.1-	0.5-	1998 04 21	704	0.2+	0.3+	1998 04 25	699	0.1+	0.1+
1960 09 27	675	1.1-	0.3+	1998 04 21	704	(0.0	2.9+)	1998 04 28	566	0.1+	1.0-
1960 09 28	675	1.3+	0.5-	1998 04 21	704	(0.1-	2.3+)	1998 04 28	566	0.7-	1.0-
1960 10 17	675	0.2+	0.6+	1998 04 22	704	0.3-	0.5+	1998 04 28	566	0.6-	0.2+
1960 10 17	675	(2.4+	3.3+)	1998 04 22	704	0.4-	0.6-	1998 05 18	699	0.3+	0.2+
1960 10 22	675	0.7-	0.3+	1998 04 22	704	0.6-	0.3-	1998 05 18	699	0.2-	0.4-
1960 10 26	675	0.4+	0.5-	1998 04 22	704	1.5+	1.4-	1998 05 18	699	0.8+	0.4+
1998 04 21	704	0.2-	1.0+	1998 04 25	699	0.5+	1.6+				

3033 T-1 = 1998 KW₁₇

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	310.65124		(2000.0)	P	Q
<i>n</i>	0.25900624	ω	301.81405	+0.61693506	+0.78691902
<i>a</i>	2.4374136	Ω	6.32078	-0.67930760	+0.54028758
<i>e</i>	0.1393652	<i>i</i>	6.37819	-0.39740699	+0.29807346
<i>P</i>	3.81	<i>H</i>	14.0	<i>G</i>	0.15
				<i>U</i>	5

Residuals in seconds of arc

1971 03 24	675	1.5-	1.2-	1971 04 02	675	0.1-	0.3+	1998 05 22	704	0.1+	0.0
1971 03 25	675	0.8-	0.6+	1971 04 16	675	0.4+	1.2+	1998 05 22	704	0.4-	0.5-
1971 03 26	675	0.3+	2.1+	1971 04 16	675	0.5+	0.0	1998 05 24	704	0.4+	0.4-
1971 03 26	675	0.6+	1.5-	1971 05 13	675	0.1+	0.7-	1998 05 24	704	0.1-	1.0-
1971 03 26	675	0.2+	1.2+	1971 05 14	675	0.6-	0.3-	1998 05 24	704	0.1-	0.2+
1971 03 26	675	1.0+	1.5-	1998 05 22	704	0.2-	0.2-	1998 05 24	704	0.5-	0.8+
1971 03 27	675	0.0	1.0-	1998 05 22	704	0.3+	0.5+	1998 05 24	704	0.4-	0.4+
1971 03 27	675	0.2-	0.4+	1998 05 22	704	1.0+	0.2+				

1005 T-2 = 1998 KA₃₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	234.50225		(2000.0)	P	Q
<i>n</i>	0.18704255	ω	170.82529	+0.94859112	-0.31600682
<i>a</i>	3.0281387	Ω	207.61655	+0.28790626	+0.88480210
<i>e</i>	0.0977190	<i>i</i>	2.19275	+0.13147191	+0.34243967
<i>P</i>	5.27	<i>H</i>	13.5	<i>G</i>	0.15
				<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	0.3+	0.4-	1973 09 29	675	2.2+	0.7-	1998 05 22	704	0.7+	1.7-
1973 09 19	675	0.9-	0.3-	1973 09 29	675	0.1-	1.0+	1998 05 24	704	0.6+	1.5+
1973 09 20	675	1.0-	0.7-	1973 10 04	675	0.8+	0.3+	1998 05 24	704	0.1+	2.0-
1973 09 24	675	0.5-	0.1+	1973 10 04	675	0.7+	0.4+	1998 05 24	704	0.2-	1.0-
1973 09 24	675	0.3+	0.0	1998 05 22	704	0.3-	0.2+	1998 05 24	704	1.2+	0.3-
1973 09 25	675	1.1-	0.8-	1998 05 22	704	0.1+	1.1+	1998 05 24	704	2.7-	0.6+
1973 09 25	675	0.8-	1.1+	1998 05 22	704	0.4+	1.6+				

1150 T-2 = 1998 KF₂₃

Epoch 1998 July 6.0 TT = JDT 2451000.5

<i>M</i>	321.58310		(2000.0)	P	Q
<i>n</i>	0.26991096	ω	259.49836	+0.56409836	+0.82557096
<i>a</i>	2.3713138	Ω	44.85226	-0.74899834	+0.51926544
<i>e</i>	0.1962636	<i>i</i>	1.22037	-0.34755507	+0.22089816
<i>P</i>	3.65	<i>H</i>	15.5	<i>G</i>	0.15
				<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	0.4+	0.6-	1973 09 29	675	0.5-	2.3-	1973 10 05	675	1.1+	1.5+
1973 09 19	675	0.3+	1.5-	1973 09 29	675	0.8+	1.8+	1973 10 05	675	0.0	0.3+
1973 09 20	675	0.1-	0.1-	1973 09 29	675	1.6-	2.2-	1973 10 05	675	0.5-	0.3-
1973 09 20	675	1.0+	1.8+	1973 09 29	675	0.2-	0.9+	1973 10 05	675	1.1+	0.4+
1973 09 24	675	0.5+	1.8-	1973 09 30	675	0.1-	1.4-	1998 05 22	704	0.5+	0.8-
1973 09 24	675	0.5-	3.0+	1973 09 30	675	0.7+	0.3+	1998 05 22	704	0.5-	0.4+
1973 09 24	675	0.2+	2.1-	1973 09 30	675	1.1+	0.4-	1998 05 22	704	0.6+	0.6-
1973 09 24	675	1.4-	2.1+	1973 09 30	675	0.6-	0.5+	1998 05 22	704	2.5-	0.3+
1973 09 25	675	2.4-	2.1-	1973 10 04	675	0.5-	1.9-	1998 05 24	704	1.1+	1.3-
1973 09 25	675	0.1-	1.6+	1973 10 04	675	1.5+	0.0	1998 05 24	704	1.1-	0.4+
1973 09 25	675	0.3-	0.2-	1973 10 04	675	1.5-	1.1-	1998 05 24	704	1.9+	1.5+
1973 09 25	675	1.3+	2.4+	1973 10 04	675	0.4+	1.2+				

1244 T-2 = 1998 HQ₁₁₉

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Q			
<i>M</i>	130.86047		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.22228687	ω	264.63052	-0.08048063	-0.99578474		
<i>a</i>	2.6989417	Ω	190.30034	+0.98390041	-0.07229902		
<i>e</i>	0.0930738	<i>i</i>	14.24386	+0.15957081	-0.05644111		
<i>P</i>	4.43	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	2.6+	1.1+	1973 09 30	675	0.9+	1.7+	1998 04 23	704	0.2-	1.0-
1973 09 19	675	0.3+	1.1-	1973 10 04	675	1.1-	0.4-	1998 04 24	704	0.0	0.1+
1973 09 24	675	1.4-	1.0-	1973 10 05	675	1.6+	0.4-	1998 04 24	704	0.3+	1.0-
1973 09 24	675	1.3-	0.8-	1973 10 05	675	0.1-	0.7-	1998 04 24	704	0.5+	1.4+
1973 09 25	675	1.0-	1.0+	1998 04 23	704	0.5-	1.0+	1998 04 24	704	0.7+	0.6-
1973 09 29	675	1.4-	0.6+	1998 04 23	704	0.4-	0.3+				
1973 09 29	675	0.9+	0.0	1998 04 23	704	0.4-	0.1-				

2180 T-2 = 1984 SU₇ = 1990 VU₉ = 1998 FU₂₆

Epoch 1998 July 6.0 TT = JDT 2451000.5

Gnädig				Q			
<i>M</i>	70.39697		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.17830737	ω	107.36682	-0.41363417	-0.91025604		
<i>a</i>	3.1262462	Ω	7.14921	+0.76884927	-0.36009192		
<i>e</i>	0.0464256	<i>i</i>	8.52942	+0.48762442	-0.20437161		
<i>P</i>	5.53	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	1

Residuals in seconds of arc

1973 09 19	675	0.1-	0.5+	1973 10 04	675	0.1-	0.5-	1998 03 20	704	0.5-	0.3+
1973 09 19	675	0.9+	1.2-	1973 10 05	675	1.0+	1.3-	1998 03 20	704	0.1-	0.2-
1973 09 20	675	0.9-	0.4-	1973 10 05	675	1.0+	1.0+	1998 03 20	704	0.1+	0.0
1973 09 24	675	1.7-	0.7+	1984 09 21	010	0.0	0.1+	1998 03 20	704	0.9-	0.1+
1973 09 24	675	(1.6-	2.4+)	1990 11 11	675	1.0-	0.1-	1998 03 20	704	1.0-	0.6+
1973 09 25	675	1.3+	1.3-	1990 11 11	675	0.6+	0.8+	1998 03 22	704	0.3-	0.1+
1973 09 25	675	0.3-	0.0	1998 02 25	809	(2.8+	0.2+)	1998 03 22	704	0.3-	0.3-
1973 09 29	675	0.0	0.2+	1998 02 25	809	1.2+	0.5+	1998 03 22	704	0.5-	0.8+
1973 09 29	675	0.4+	1.4+	1998 02 25	809	1.4+	0.0	1998 03 22	704	1.7-	0.6+
1973 09 30	675	0.2+	0.3-	1998 02 26	809	0.9+	1.2-	1998 03 22	704	0.6-	0.8+
1973 09 30	675	0.9-	0.4-	1998 02 26	809	0.2-	1.6-				
1973 10 04	675	1.4+	0.5+	1998 02 26	809	1.8+	1.7-				

2187 T-2 = 1998 HY₆₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Q			
<i>M</i>	84.57602		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.25978881	ω	146.92739	-0.62410470	-0.78125628		
<i>a</i>	2.4325163	Ω	341.68071	+0.70869986	-0.55983075		
<i>e</i>	0.1536762	<i>i</i>	2.09433	+0.32899519	-0.27609446		
<i>P</i>	3.79	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	2.2+	0.5-	1973 09 30	675	0.5-	0.8-	1998 04 21	704	0.1+	0.4+
1973 09 19	675	0.6-	0.1-	1973 09 30	675	0.0	0.0	1998 04 21	704	0.2+	0.1-
1973 09 20	675	0.5+	1.8-	1973 10 04	675	0.0	0.0	1998 04 22	704	0.2+	0.1+

1973 09 24	675	1.4-	1.6+	1973 10 04	675	0.3-	1.4-	1998 04 22	704	0.4-	0.8+
1973 09 24	675	1.4-	1.6+	1973 10 05	675	0.7+	0.3+	1998 04 22	704	0.3+	0.7+
1973 09 25	675	0.0	0.6-	1973 10 05	675	0.0	1.1-	1998 04 22	704	0.2-	1.9-
1973 09 25	675	1.3-	1.3-	1998 04 21	704	0.2+	1.0-	1998 04 22	704	0.4-	1.7+
1973 09 29	675	1.4+	2.4+	1998 04 21	704	0.1+	0.8-				
1973 09 29	675	0.9+	1.7+	1998 04 21	704	0.3-	0.2+				

2261 T-2 = 1977 UB₂ = 1998 HS₆₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Q			
<i>M</i>	156.67000		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.26038021	ω	70.49892	+0.49465734	-0.86906385		
<i>a</i>	2.4288316	Ω	349.84649	+0.78292947	+0.44884854		
<i>e</i>	0.1675405	<i>i</i>	2.11027	+0.37727386	+0.20799761		
<i>P</i>	3.79	<i>H</i>	14.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1973 09 19	675	0.4-	1.8+	1973 09 30	675	0.4-	0.8-	1998 04 21	704	0.0	1.0+
1973 09 19	675	(2.2-	2.9+)	1973 09 30	675	0.1-	0.7-	1998 04 21	704	0.6+	0.3+
1973 09 20	675	1.2+	2.4+	1973 10 04	675	0.3+	0.9-	1998 04 22	704	(0.6+	2.5-)
1973 09 24	675	1.6-	1.3+	1973 10 04	675	0.8+	0.3+	1998 04 22	704	0.8-	1.0+
1973 09 24	675	1.3-	1.6+	1973 10 05	675	0.4-	0.8-	1998 04 22	704	0.9-	1.3-
1973 09 25	675	1.4+	1.7-	1973 10 05	675	0.1+	1.0-	1998 04 22	704	0.8+	0.9-
1973 09 25	675	0.5+	1.3-	1977 10 20	033	0.3-	1.2+	1998 04 22	704	0.3+	0.6+
1973 09 29	675	(1.0-	3.2+)	1998 04 21	704	1.2+	0.4+				
1973 09 29	675	(0.8-	3.8+)	1998 04 21	704	0.7-	0.2+				

3193 T-2 = 1998 HF₁₃₈

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Q			
<i>M</i>	173.40740		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.18226699	ω	248.58905	+0.77109805	-0.63195695		
<i>a</i>	3.0808038	Ω	150.43959	+0.62680204	+0.73196412		
<i>e</i>	0.0460333	<i>i</i>	9.06237	+0.11192407	+0.25467420		
<i>P</i>	5.41	<i>H</i>	13.5	<i>G</i>	0.15	<i>U</i>	6

Residuals in seconds of arc

1973 09 19	675	0.8-	1.3-	1973 09 29	675	0.3+	0.8+	1998 04 21	704	0.5-	0.8-
1973 09 19	675	2.6-	0.5+	1973 09 29	675	0.1-	0.5+	1998 04 21	704	0.2+	0.9-
1973 09 20	675	1.3+	0.8-	1973 09 30	675	0.6-	1.1-	1998 04 24	704	0.6-	0.2-
1973 09 24	675	1.4-	0.4+	1973 09 30	675	0.2-	0.6-	1998 04 24	704	0.0	1.8+
1973 09 24	675	0.3-	1.6+	1998 04 21	704	0.0	0.6-	1998 04 24	704	1.5+	0.8-
1973 09 25	675	1.8+	0.2-	1998 04 21	704	0.8+	0.2-	1998 04 24	704	0.2+	1.4+
1973 09 25	675	2.6+	0.3+	1998 04 21	704	0.1+	0.6-	1998 04 24	704	1.7-	0.8+

3227 T-2 = 1998 HT₈₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams				Q			
<i>M</i>	226.08372		(2000.0)	<i>P</i>		<i>Q</i>	
<i>n</i>	0.22447116	ω	320.25667	+0.98937729	-0.11773905		
<i>a</i>	2.6814046	Ω	46.72727	+0.14410657	+0.87152953		
<i>e</i>	0.0579007	<i>i</i>	6.72512	-0.01912782	+0.47599768		
<i>P</i>	4.39	<i>H</i>	15.0	<i>G</i>	0.15	<i>U</i>	5

Residuals in seconds of arc

1973 09 19	675	2.2+	2.3-	1973 09 30	675	1.4-	0.9+	1998 04 22	704	1.3-	1.3+
1973 09 19	675	0.2-	1.9-	1973 10 04	675	1.6+	1.7+	1998 04 22	704	0.2-	0.8+
1973 09 20	675	0.8+	0.6+	1973 10 04	675	0.4-	1.8+	1998 04 22	704	0.2-	0.9+
1973 09 24	675	2.0-	0.9+	1973 10 05	675	0.5+	0.5-	1998 04 22	704	0.7+	0.5-
1973 09 24	675	0.6-	0.9+	1973 10 05	675	0.6-	1.4-	1998 04 22	704	0.5+	0.1-
1973 09 25	675	1.0+	0.9-	1998 04 21	704	0.4+	0.2+	1998 05 22	691	0.4+	0.2-
1973 09 25	675	0.1+	0.4-	1998 04 21	704	1.0-	0.5-	1998 05 22	691	0.5+	0.1-
1973 09 29	675	1.1-	0.1+	1998 04 21	704	0.9+	1.0+	1998 05 22	691	0.8+	0.5-
1973 09 29	675	1.0-	0.4+	1998 04 21	704	0.3+	2.0-				
1973 09 30	675	1.1+	0.4+	1998 04 21	704	1.6-	0.1+				

4232 T-2 = 1998 GT₁₀

Epoch 1998 July 6.0 TT = JDT 2451000.5

Marsden

<i>M</i>	146.41470		(2000.0)	P	Q
<i>n</i>	0.25739278	ω	328.33788	+0.78482112	-0.61629418
<i>a</i>	2.4475889	Ω	69.84820	+0.58208051	+0.69702367
<i>e</i>	0.1733407	<i>i</i>	3.97603	+0.21269249	+0.36652350
<i>P</i>	3.83	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1973 09 19	675	1.4+	0.8-	1973 09 29	675	0.6+	1.2-	1973 10 05	675	1.6-	0.3+
1973 09 19	675	1.0+	1.0-	1973 09 29	675	0.5-	1.2-	1998 04 02	809	0.3+	1.5+
1973 09 20	675	1.9-	0.5-	1973 09 30	675	0.7+	0.4-	1998 04 02	809	0.5-	1.7+
1973 09 24	675	0.8+	1.8+	1973 09 30	675	0.4+	0.2-	1998 04 02	809	0.5+	1.0+
1973 09 24	675	0.4+	0.8+	1973 10 04	675	0.2+	0.9-	1998 04 03	809	0.5+	1.2-
1973 09 25	675	1.5-	1.1+	1973 10 04	675	0.1+	0.4-	1998 04 03	809	0.5-	1.6-
1973 09 25	675	0.5-	1.5+	1973 10 05	675	0.5+	1.0+	1998 04 03	809	0.3-	1.6-

2266 T-3 = 1998 HJ₈₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	204.28186		(2000.0)	P	Q
<i>n</i>	0.21825160	ω	181.26294	+0.88290789	-0.45416397
<i>a</i>	2.7321073	Ω	206.78504	+0.43308608	+0.88575354
<i>e</i>	0.0683780	<i>i</i>	15.33790	+0.18141142	+0.09579014
<i>P</i>	4.52	<i>H</i>	14.5	<i>G</i> 0.15	<i>U</i> 6

Residuals in seconds of arc

1977 10 07	675	0.5+	1.2-	1977 10 17	675	0.7+	1.1-	1998 04 21	704	0.3-	0.6+
1977 10 11	675	1.0-	1.7+	1977 10 21	675	0.9-	1.4+	1998 04 21	704	0.7+	1.1-
1977 10 11	675	1.7-	0.3+	1977 10 21	675	1.4+	0.3-	1998 04 21	704	2.5-	1.5+
1977 10 12	675	0.2+	0.7+	1977 10 21	675	2.8-	2.4+	1998 04 22	704	0.0	1.3-
1977 10 12	675	0.1-	1.1+	1977 10 21	675	0.4-	1.7-	1998 04 22	704	0.0	2.2+
1977 10 16	675	0.6+	0.9-	1977 10 22	675	0.8+	1.7-	1998 04 22	704	0.0	0.9-
1977 10 16	675	0.9+	2.4-	1977 10 22	675	0.5-	0.0	1998 04 22	704	0.2+	0.2+
1977 10 17	675	0.3-	0.9+	1977 10 22	675	1.5+	0.6-	1998 04 22	704	0.3+	0.7-
1977 10 17	675	0.5-	0.9-	1977 10 22	675	0.6+	2.5+				
1977 10 17	675	0.8+	0.2-	1998 04 21	704	1.6+	0.4-				

3135 T-3 = 1998 KM₁

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	144.43649		(2000.0)	P	Q
<i>n</i>	0.21741377	ω	262.68353	+0.02630443	-0.99963562
<i>a</i>	2.7391219	Ω	185.81947	+0.93912696	+0.02678826
<i>e</i>	0.0601247	<i>i</i>	3.42577	+0.34256186	+0.00331987
<i>P</i>	4.53	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1977 10 07	675	1.5+	0.8-	1998 04 22	704	1.1-	0.5-	1998 05 18	699	0.3+	0.5+
1977 10 11	675	0.3-	1.2+	1998 04 22	704	0.3-	0.3+	1998 05 22	704	0.0	0.3+
1977 10 11	675	1.2-	1.4+	1998 04 22	704	0.4-	0.8-	1998 05 22	704	0.8+	0.6+

1977 10 12	675	1.5+	0.3-	1998 04 22	704	0.5-	1.2+	1998 05 22	704	0.4+	0.8+
1977 10 12	675	0.2-	0.5-	1998 05 01	704	0.3-	0.2-	1998 05 22	704	1.7+	1.8-
1977 10 16	675	0.0	1.6-	1998 05 01	704	1.3+	0.2+	1998 05 22	699	1.7+	1.2+
1977 10 16	675	0.1-	0.6-	1998 05 01	704	0.2-	1.2-	1998 05 22	699	0.3-	0.8+
1977 10 17	675	1.5-	0.3+	1998 05 01	704	0.4+	0.6-	1998 05 22	699	0.1-	0.2-
1977 10 17	675	1.3-	0.1-	1998 05 01	704	0.9-	0.5-	1998 05 24	704	0.1-	0.5+
1977 10 21	675	0.2+	0.4+	1998 05 05	699	1.0-	0.9+	1998 05 24	704	0.6+	0.9-
1977 10 21	675	1.1+	1.1+	1998 05 05	699	0.2-	0.5-	1998 05 24	704	0.1+	1.2+
1977 10 22	675	(3.2+	0.8-)	1998 05 05	699	0.4+	0.4+	1998 05 24	704	1.6-	0.5-
1977 10 22	675	0.3+	0.8-	1998 05 18	699	0.3+	0.2-	1998 05 24	704	0.4-	2.0-
1998 04 22	704	0.9-	0.1+	1998 05 18	699	0.2+	0.5+				

4288 T-3 = 1998 HZ₁₃₄

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	302.49278		(2000.0)	P	Q
<i>n</i>	0.21743598	ω	146.77605	+0.09550171	+0.99239520
<i>a</i>	2.7389353	Ω	128.58219	-0.93357432	+0.11636720
<i>e</i>	0.0796120	<i>i</i>	5.70155	-0.34542498	-0.04013024
<i>P</i>	4.53	<i>H</i>	14.0	<i>G</i> 0.15	<i>U</i> 5

Residuals in seconds of arc

1977 10 11	675	0.0	1.4-	1977 10 21	675	0.3+	0.4-	1998 04 19	704	0.5+	0.2-
1977 10 11	675	0.9+	0.9-	1977 10 21	675	2.1+	0.4+	1998 04 19	704	1.0+	0.6+
1977 10 12	675	0.8+	1.1-	1977 10 22	675	0.4-	1.9+	1998 04 19	704	0.9-	0.9+
1977 10 12	675	0.3-	0.1-	1977 10 22	675	1.3-	0.5-	1998 04 20	704	0.4+	0.8-
1977 10 16	675	2.1+	1.1+	1998 03 25	566	0.4+	0.3-	1998 04 20	704	0.1+	0.6-
1977 10 16	675	1.2-	0.1-	1998 03 25	566	0.4-	0.1+	1998 04 20	704	0.7+	0.3+
1977 10 17	675	1.0-	0.5+	1998 03 25	566	0.7-	0.3-	1998 04 20	704	0.1+	0.1-
1977 10 17	675	2.1-	0.5+	1998 04 19	704	0.1+	0.6-	1998 04 20	704	1.2-	1.1+

5051 T-3 = 1973 YQ₂ = 1982 VC₁₂ = 1994 LU₃ = 1998 HO₁₀₅

Epoch 1998 July 6.0 TT = JDT 2451000.5

Williams

<i>M</i>	142.60357		(2000.0)	P	Q
<i>n</i>	0.21403763	ω	1.30471	+0.38225166	-0.90902300
<i>a</i>	2.7678505	Ω	66.24349	+0.84615558	+0.27213080
<i>e</i>	0.1401315	<i>i</i>	10.45039	+0.37135483	+0.31562954
<i>P</i>	4.60	<i>H</i>	13.0	<i>G</i> 0.15	<i>U</i> 2

Residuals in seconds of arc

1973 12 20	095	0.0	0.7-	1977 10 22	675	0.6-	1.4-	1998 04 23	704	0.4+	1.5-
1977 10 11	675	0.0	0.0	1982 11 13	095	(2.6-	4.2-)	1998 04 24	704	0.7-	1.3-
1977 10 11	675	0.2+	0.5+	1994 06 03	809	1.3+	0.6+	1998 04 24	704	0.1+	0.8-
1977 10 12	675	1.1+	0.5-	1994 06 03	809	1.1+	0.1-	1998 04 24	704	0.0	0.8-
1977 10 12	675	0.4+	1.9-	1994 06 03	809	(2.4+	0.2-)	1998 04 24	704	0.6-	0.4-
1977 10 16	675	1.8+	1.5-	1994 06 04	809	0.5-	0.3+	1998 04 24	704	0.9-	1.2-
1977 10 16	675	1.5+	1.9-	1994 06 04	809	0.2-	0.6-	1998 05 16	704	0.2+	0.0
1977 10 17	675	0.8+	2.2-	1994 06 04	809	0.4-	0.1+	1998 05 16	704	1.6-	0.1-
1977 10 17	675	0.7+	1.0-	1998 04 23	704	0.6-	1.3-	1998 05 16	704	1.3-	0.3-
1977 10 21	675	0.1-	0.8+	1998 04 23	704	0.6-	0.3-	1998 05 16	704	0.8-	0.2+
1977 10 21	675	0.0	0.2+	1998 04 23	704	0.6-	1.0-				
1977 10 22	675	1.2-	0.2+	1998 04 23	704	0.2+	0.8-				

Object	<i>H</i>	<i>G</i>	Epoch	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	<i>a</i>	Obs.	Opp. & Arc	rms Perts	<i>U</i>	Computer	<i>MPC</i>	Object
(566)	8.03	0.15	19980706	218.04533	293.15872	80.63651	4.91434	0.1013208	3.3879740	106	37 19 5-1998	0.90	M-v 0	Bowell	30779	(566)
(585)	10.40	0.15	19980706	145.79893	327.48516	180.42979	7.55748	0.1309679	2.4297794	126	30 19 6-1998	0.80	M-v 0	Bowell	26915	(585)
(655)	9.6	0.15	19980706	185.02489	282.43541	130.30440	6.49697	0.0899078	2.9873335	62	23 1924-1998	0.84	M-v 1	Bowell	26916	(655)
(887)	13.76	-0.12	19980706	77.41859	350.05461	110.71672	9.30327	0.5627235	2.4854984	401	21 1918-1998	0.56	M-v 2	Goffin	26918	(887)
(1036)	9.45	0.30	19980706	349.71579	132.30528	215.78893	26.64455	0.5387967	2.6583768	1294	46 1924-1998	0.55	M-v 2	Goffin	22271	(1036)
(1056)	11.7	0.15	19980706	314.67104	212.25090	104.31082	5.42781	0.1778604	2.2296961	126	19 1924-1998	0.81	M-v 1	Williams	30779	(1056)
(1155)	11.5	0.15	19980706	10.17129	193.47478	39.26381	6.60338	0.1615787	2.4643631	36	12 1928-1998	0.87	M-v 1	Bowell	31272	(1155)
(1198)	14.6	0.15	19980706	285.64871	83.80850	260.12072	2.72452	0.3355767	2.2505610	38	10 1931-1998	0.79	M-v 1	Bowell	29910	(1198)
(1273)	12.8	0.15	19980706	276.51105	48.32440	296.91171	5.41697	0.1623476	2.3930859	110	16 1932-1998	0.92	M-v 1	Williams	26923	(1273)

(1395)	11.4	0.15	19980706	239.52312	108.07655	245.35030	8.67245	0.0465504	3.2038166	31	12	1936-1998	0.75	M-v	1	Bowell	31415	(1395)
(1399)	13.8	0.15	19980706	231.30288	223.66428	161.79385	6.50691	0.1658187	2.2157427	70	11	1936-1998	0.95	M-v	2	Williams	29940	(1399)
(1449)	12.4	0.15	19980706	7.35157	131.50511	110.96642	6.63748	0.1413097	2.2223787	80	18	1928-1998	0.98	M-v	1	Williams	24227	(1449)
(1516)	12.3	0.15	19980706	33.01362	92.38760	126.41984	8.72605	0.1892492	2.6187527	85	15	1938-1998	1.04	M-v	1	Williams	29654	(1516)
(1530)	13.1	0.15	19980706	253.31362	84.49239	286.13018	4.42231	0.1987773	2.2482275	51	7	1938-1998	0.80	M-v	0	Bowell	31782	(1530)
(1580)	14.52	0.00	19980706	293.45400	159.30290	62.37892	52.11238	0.4899252	2.1947742	155	13	1950-1997	0.56	M-v	3	Goffin	30288	(1580)
(1627)	13.2	0.60	19980706	36.61756	167.48978	133.26783	8.44102	0.3967619	1.8634434	380	17	1929-1997	0.54	M-v	2	Goffin	27119	(1627)
(1685)	14.23	0.15	19980706	38.24263	126.92137	274.42324	9.37736	0.4358307	1.3670097	259	21	1948-1997	0.55	M-v	3	Goffin	31782	(1685)
(1862)	16.25	0.09	19980706	347.15269	285.67581	35.90533	6.35633	0.5600491	1.4711693	245	12	1930-1998	0.54	M-v	0	Goffin	31581	(1862)
(1863)	15.54	0.15	19980706	268.66421	266.94596	347.51537	18.42223	0.6057131	2.2606563	87	11	1948-1996	0.56	M-v	3	Goffin	30469	(1863)
(1864)	14.85	0.15	19980706	76.13130	325.46682	6.77270	22.18278	0.6148280	1.4610147	107	12	1971-1997	0.53	M-v	3	Goffin	31713	(1864)
(1865)	16.84	0.15	19980706	178.34886	325.13290	213.03652	16.09032	0.4670001	1.0801784	89	10	1971-1992	0.54	M-v	3	Goffin	25339	(1865)
(1866)	13.0	0.15	19980706	318.19115	292.99524	63.67810	41.16916	0.5392080	1.8932770	239	18	1964-1998	0.54	M-v	2	Goffin	31273	(1866)
(1903)	10.5	0.15	19980706	109.16947	350.50655	135.60513	10.97549	0.0532416	2.9994177	52	13	1940-1998	0.74	M-v	1	Bowell	30894	(1903)
(1917)	13.9	0.15	19980706	273.94040	194.31347	188.44182	23.94413	0.5043423	2.1500698	132	13	1954-1998	0.54	M-v	2	Goffin	25648	(1917)
(1943)	15.75	0.15	19980706	258.78047	338.14720	246.45009	8.70244	0.2558912	1.4300400	273	11	1973-1997	0.53	M-v	1	Goffin	30780	(1943)
(1984)	11.1	0.15	19980706	315.00023	131.35977	186.06925	4.78824	0.0834664	3.0119604	118	18	1926-1998	1.03	M-v	1	Williams	29656	(1984)
(2061)	16.56	0.15	19980706	27.94951	156.35834	207.80475	3.76560	0.5370692	2.2648276	56	6	1960-1997	0.54	M-v	3	Goffin	29941	(2061)
(2276)	12.9	0.15	19980706	304.88169	55.05201	215.56494	2.45790	0.1687409	2.3756199	95	11	1933-1998	0.91	M-v	1	Williams	28613	(2276)
(2319)	12.2	0.15	19980706	207.97047	269.64344	112.80770	2.96826	0.0916707	2.9054913	43	14	1935-1998	0.99	M-v	1	Bowell	30076	(2319)
(2329)	14.9	0.15	19980706	310.24705	145.83408	169.50524	24.42900	0.6588592	2.4020676	88	10	1976-1998	0.53	M-v	3	Goffin	31784	(2329)
(2406)	13.5	0.15	19980706	273.83249	347.51392	12.69413	2.31171	0.1635000	2.1921784	71	14	1953-1998	0.69	M-v	1	Williams	30652	(2406)
(2415)	12.0	0.15	19980706	287.80133	204.82087	89.86333	2.37456	0.0369703	2.6592669	70	17	1952-1998	0.78	M-v	1	Bowell	29657	(2415)
(2433)	11.8	0.15	19980706	357.64528	69.00802	188.91130	10.40278	0.2188103	2.6067429	39	7	1953-1998	0.77	M-v	1	Bowell	30470	(2433)
(2479)	13.1	0.15	19980706	115.88458	156.74091	315.00124	2.92224	0.1978489	2.3876408	65	11	1931-1998	0.85	M-v	1	Williams	21974	(2479)
(2487)	13.2	0.15	19980706	185.95894	36.83422	347.77804	2.82097	0.1834255	2.3972490	82	13	1929-1998	0.78	M-v	0	Bowell	31137	(2487)
(2557)	12.5	0.15	19980706	231.69688	189.39439	188.38652	6.05768	0.1553743	2.3496722	40	9	1963-1998	1.02	M-v	2	Williams	31583	(2557)
(2642)	12.7	0.15	19980706	257.64906	164.98732	201.30122	14.47083	0.1845266	2.4256778	117	9	1961-1998	0.60	M-v	0	Bowell	31784	(2642)
(2730)	11.6	0.15	19980706	334.19301	271.32868	5.18449	6.44299	0.1291959	2.7200827	98	15	1954-1998	0.94	M-v	1	Williams	25957	(2730)
(2779)	13.3	0.15	19980706	55.56539	122.04805	80.41408	3.89241	0.0625475	2.2116517	42	9	1968-1998	1.04	M-v	2	Williams	31137	(2779)
(2788)	13.3	0.15	19980706	94.44923	132.76715	14.81605	2.63058	0.1013306	2.5592359	81	9	1954-1998	0.68	M-v	1	Williams	29658	(2788)
(2874)	13.2	0.15	19980706	227.14477	322.37484	79.33926	4.89422	0.1343106	2.2441861	37	11	1954-1998	0.79	M-v	1	Williams	30077	(2874)
(3103)	15.38	0.15	19980706	21.09229	253.80943	129.89673	20.93541	0.3545575	1.4056478	174	8	1982-1997	0.52	M-v	3	Goffin	31718	(3103)
(3131)	12.1	0.15	19980706	65.43897	142.20635	45.10177	2.41660	0.0416096	2.9223212	61	10	1954-1998	0.92	M-v	1	Williams	30290	(3131)
(3174)	11.8	0.15	19980706	136.91815	6.91403	72.33884	2.37512	0.1720874	3.1475877	39	9	1973-1998	0.84	M-v	1	Bowell	29099	(3174)
(3194)	12.0	0.15	19980706	307.58096	261.10686	64.60249	10.95199	0.0984085	3.0114386	31	9	1953-1998	1.17	M-v	1	Williams	28299	(3194)
(3232)	11.7	0.15	19980706	232.48649	115.75972	192.66481	9.84354	0.0767697	3.0248094	45	13	1951-1998	0.88	M-v	1	Williams	31719	(3232)
(3256)	12.4	0.15	19980706	164.60874	267.06061	174.72061	7.82766	0.0989431	2.7769115	65	6	1976-1998	0.74	M-v	1	Williams	26926	(3256)
(3288)	15.3	0.15	19980706	216.32160	349.22335	218.79330	5.93432	0.4579487	2.0317558	154	9	1982-1997	0.53	M-v	2	Goffin	29943	(3288)
(3361)	19.03	0.15	19980706	113.06123	301.58699	189.74678	2.68273	0.3227594	1.2092184	84	6	1982-1997	0.53	M-v	2	Goffin	25650	(3361)
(3431)	10.3	0.15	19980706	187.69943	39.18866	312.71533	12.26025	0.0377324	3.0972785	43	11	1955-1998	0.98	M-v	1	Williams	27913	(3431)
(3433)	12.9	0.15	19980706	118.84453	73.73615	337.02866	4.52488	0.1860943	2.3944206	46	10	1935-1998	0.85	M-v	1	Williams	31584	(3433)
(3444)	12.4	0.15	19980706	88.34732	82.56509	343.18075	6.44991	0.2656143	2.5554958	90	8	1980-1998	0.88	M-v	1	Williams	22594	(3444)
(3551)	16.75	0.15	19980706	317.86882	193.10861	173.97787	9.50626	0.4871314	2.0923661	151	6	1983-1996	0.54	M-v	0	Goffin	27729	(3551)
(3575)	11.9	0.15	19980706	4.18714	157.46685	71.42635	7.76831	0.1251944	2.7472185	36	12	1934-1998	0.79	M-v	1	Bowell	31721	(3575)
(3590)	13.1	0.15	19980706	116.29745	354.40419	128.79514	6.70569	0.0814226	2.2507125	73	11	1950-1998	0.69	M-v	1	Bowell	27455	(3590)
(3687)	11.5	0.15	19980706	353.45191	113.85681	225.12630	15.79347	0.2006607	2.7284010	17	7	1908-1998	0.85	M-v	2	Williams	31007	(3687)
(3756)	13.5	0.15	19980706	352.06757	99.41101	226.22328	3.53654	0.0605338	2.4191150	51	8	1953-1998	0.80	M-v	1	Williams	31103	(3756)
(3822)	13.6	0.15	19980706	302.18982	279.66124	336.20607	2.56478	0.1169095	2.2698035	36	8	1962-1998	0.74	M-v	2	Williams	31419	(3822)
(3829)	12.2	0.15	19980706	86.16670	313.81331	190.04882	7.53695	0.1642781	2.7865239	29	10	1949-1998	0.70	M-v	1	Bowell	31787	(3829)
(3874)	12.2	0.15	19980706	37.19562	312.24924	277.35821	7.66729	0.0506842	2.6806701	31	7	1955-1998	0.63	M-v	1	Williams	30782	(3874)
(4006)	12.5	0.15	19980706	176.16269	122.51517	294.43089	2.37994	0.1827065	2.5157243	50	9	1973-1998	0.79	M-v	1	Bowell	31788	(4006)
(4088)	12.5	0.15	19980706	312.90133	283.17913	35.63998	7.39598	0.0569538	2.4445652	21	7	1972-1998	0.89	M-v	1	Bowell	28888	(4088)

(4166)	12.5	0.15	19980706	187.18806	126.38574	311.89254	3.10234	0.0305843	2.6071319	31	7	1955-1998	0.78	M-v	1	Williams	31276	(4166)
(4227)	13.4	0.15	19980706	69.76918	19.81889	133.20268	2.70869	0.1555053	2.3940813	23	7	1942-1998	0.79	M-v	1	Bowell	23125	(4227)
(4246)	13.5	0.15	19980706	346.37233	239.39159	37.56773	3.07756	0.1743275	2.2153102	33	8	1968-1998	0.86	M-v	1	Bowell	31419	(4246)
(4248)	14.3	0.15	19980706	172.55043	118.62427	305.94027	5.83264	0.1040066	2.3037254	28	6	1978-1998	0.65	M-v	2	Williams	27557	(4248)
(4290)	11.5	0.15	19980706	273.51386	91.30327	244.26244	8.49706	0.0917655	3.0255139	29	6	1973-1998	0.81	M-v	1	Bowell	31007	(4290)
(4379)	12.1	0.15	19980706	226.39162	175.17982	211.44723	21.67998	0.1188526	3.1630765	31	8	1949-1998	0.79	M-v	1	Bowell	23243	(4379)
(4408)	12.9	0.15	19980706	349.19767	64.27494	220.21609	4.35535	0.1047438	2.3221091	31	7	1949-1998	0.55	M-v	1	Williams	23864	(4408)
(4447)	12.6	0.15	19980706	264.17116	193.55287	148.02086	2.68996	0.0723423	2.8555839	47	12	1974-1998	0.85	M-v	1	Williams	31725	(4447)
(4497)	11.5	0.15	19980706	231.22997	302.23458	93.53941	9.74944	0.2680808	2.4262875	45	8	1931-1998	0.91	M-v	2	Williams	29301	(4497)
(4524)	13.2	0.15	19980706	296.48584	149.07084	177.36461	7.27554	0.1328737	2.3202778	46	7	1953-1998	0.73	M-v	1	Bowell	31789	(4524)
(4545)	11.5	0.15	19980706	137.79167	74.07228	36.88102	1.81644	0.1431271	3.1356028	44	10	1952-1998	0.75	M-v	1	Williams	30662	(4545)
(4551)	14.0	0.15	19980706	357.27957	160.86651	148.38951	12.13506	0.2684193	2.4284137	20	6	1979-1998	0.90	M-v	1	Bowell	31239	(4551)
(4618)	12.9	0.15	19980706	288.84398	60.29550	343.57409	11.55040	0.2921714	2.6250148	32	6	1943-1998	0.86	M-v	1	Williams	25083	(4618)
(4644)	12.1	0.15	19980706	33.73707	205.39502	48.39118	14.13664	0.1402905	2.6077814	21	6	1951-1998	0.75	M-v	1	Williams	30689	(4644)
(4681)	11.8	0.15	19980706	193.38858	319.35012	38.25678	11.52556	0.1189867	3.0217316	55	6	1969-1998	0.86	M-v	2	Sicoli	29621	(4681)
(4716)	11.7	0.15	19980706	111.06836	104.00764	20.47036	10.16615	0.1394632	3.1760336	27	7	1954-1998	0.71	M-v	1	Williams	27122	(4716)
(4759)	11.9	0.15	19980706	223.40482	202.67003	142.69431	0.78855	0.1642138	3.1905516	64	8	1977-1998	0.94	M-v	1	Sicoli	29622	(4759)
(4772)	11.8	0.15	19980706	193.75610	193.80056	210.28903	11.53588	0.0626605	3.1624821	69	7	1971-1998	0.84	M-v	1	Williams	31789	(4772)
(4779)	12.1	0.15	19980706	78.35718	330.64257	185.82287	0.92528	0.1301651	3.1809420	57	11	1954-1998	0.99	M-v	1	Williams	29945	(4779)
(4782)	12.5	0.15	19980706	297.98830	348.41824	339.85950	1.34604	0.0721867	2.8373250	55	10	1951-1998	0.87	M-v	1	Williams	30982	(4782)
(4837)	11.6	0.15	19980706	142.67744	40.27826	327.47849	28.29973	0.1300789	3.1979741	45	5	1978-1998	0.51	M-v	1	Sicoli	27568	(4837)
(4864)	13.2	0.15	19980706	190.49928	241.96253	94.23857	3.61590	0.1751829	2.4702534	72	9	1957-1998	0.84	M-v	1	Sicoli	27568	(4864)
(4973)	11.3	0.15	19980706	156.11167	138.21937	353.35971	18.93812	0.0827697	3.4207040	28	7	1971-1998	0.74	M-v	1	Williams	30983	(4973)
(5098)	13.7	0.15	19980706	105.86421	328.03365	153.53714	9.64156	0.0733708	2.5707229	70	5	1979-1998	0.75	M-v	1	Bowell	31008	(5098)
(5107)	12.0	0.15	19980706	74.21448	276.55468	178.94655	9.03239	0.0772055	3.1359034	79	7	1987-1998	0.60	M-v	1	Williams	27919	(5107)
(5134)	12.0	0.15	19980706	322.65268	198.08487	90.59166	8.10111	0.0343483	2.7887835	66	11	1947-1998	0.72	M-v	1	Williams	29318	(5134)
(5139)	11.2	0.15	19980706	333.13646	226.77200	57.26673	2.85865	0.0305276	2.8534695	49	9	1956-1998	0.95	M-v	1	Williams	31790	(5139)
(5156)	13.5	0.15	19980706	347.39793	148.11965	132.93293	5.57175	0.1883856	2.3979485	38	7	1968-1998	0.72	M-v	1	Williams	31790	(5156)
(5187)	12.2	0.15	19980706	179.63704	281.50258	129.25172	3.01767	0.0754629	2.9251598	49	9	1954-1998	0.83	M-v	1	Bowell	31107	(5187)
(5370)	15.7	0.15	19980706	335.81593	161.18678	177.88169	19.03055	0.6327665	3.3432156	117	3	1986-1998	0.75	M-v	1	Williams	30473	(5370)
(5503)	13.1	0.15	19980706	129.77849	326.18091	160.82229	5.44370	0.1020555	2.5472694	82	6	1985-1998	0.74	M-v	1	Williams	26928	(5503)
(5546)	12.6	0.15	19980706	75.06236	242.02211	287.48689	12.16662	0.1155761	2.6206841	30	6	1976-1998	0.65	M-v	1	Williams	27457	(5546)
(5553)	13.0	0.15	19980706	63.43053	0.75056	162.30709	9.79243	0.2084976	2.7342486	40	5	1981-1998	0.77	M-v	1	Williams	27450	(5553)
(5672)	13.0	0.15	19980706	116.30675	351.29479	171.91317	10.21936	0.0522290	2.4097586	20	6	1956-1995	0.75	M-v	2	Williams	30293	(5672)
(5725)	12.5	0.15	19980706	118.70424	77.72813	55.42442	22.57106	0.0567030	2.6796625	43	5	1953-1998	0.74	M-v	1	Williams	30785	(5725)
(5857)	14.1	0.15	19980706	261.48283	193.14472	171.09731	2.20163	0.1344438	2.2590867	33	6	1975-1998	0.70	M-v	1	Bowell	31588	(5857)
(5984)	13.9	0.15	19980706	16.08136	110.77965	115.74967	5.70797	0.1098960	2.3812387	35	7	1977-1998	1.05	M-v	1	Bowell	31547	(5984)
(6013)	13.6	0.15	19980706	40.42639	330.37201	254.97366	4.20844	0.1491380	2.3721466	23	5	1981-1998	0.55	M-v	1	Williams	31144	(6013)
(6078)	13.3	0.15	19980706	282.04820	138.42267	228.93121	8.35327	0.1738672	2.8035393	22	6	1980-1998	0.80	M-v	2	Williams	31589	(6078)
(6223)	12.6	0.15	19980706	314.79428	75.71687	294.83455	3.85266	0.1215980	2.7360503	47	7	1949-1998	0.67	M-v	1	Williams	29119	(6223)
(6227)	13.1	0.15	19980706	289.50945	69.98869	205.05554	0.49697	0.1694834	3.2163660	65	8	1976-1998	0.72	M-v	1	Williams	29119	(6227)
(6232)	13.7	0.15	19980706	25.52793	287.00794	333.18538	5.95808	0.1457804	2.2434866	23	7	1977-1998	0.79	M-v	1	Williams	30786	(6232)
(6240)	13.6	0.15	19980706	92.45812	36.84209	121.87538	4.72102	0.0560656	2.2200329	36	7	1984-1998	0.77	M-v	1	Bowell	28873	(6240)
(6252)	13.9	0.15	19980706	298.72857	219.82953	104.45126	3.13545	0.0617272	2.9050740	56	7	1977-1998	0.90	M-v	1	Williams	31590	(6252)
(6378)	12.1	0.15	19980706	296.38966	304.61137	97.06661	2.86525	0.1867584	3.1624910	35	5	1987-1998	0.47	M-v	1	Williams	31794	(6378)
(6543)	14.1	0.15	19980706	260.84405	85.54577	283.71463	4.17552	0.2134786	2.2757926	44	6	1978-1998	0.76	M-v	1	Williams	29948	(6543)
(6577)	13.8	0.15	19980706	335.45505	25.01106	245.42758	23.65736	0.2012840	2.3284019	26	5	1978-1998	0.76	M-v	1	Williams	29645	(6577)
(6584)	13.5	0.15	19980706	14.25207	80.71001	167.16374	4.74092	0.0948890	2.2726914	36	6	1953-1998	0.68	M-v	1	Williams	30293	(6584)
(6587)	13.4	0.15	19980706	235.55452	32.35030	350.10326	4.93665	0.0656357	2.4544695	56	7	1951-1998	0.67	M-v	1	Williams	29646	(6587)
(6593)	12.9	0.15	19980706	195.60393	59.81293	345.26143	4.50181	0.0601708	2.7494302	55	7	1981-1998	0.79	M-v	1	Williams	30293	(6593)
(6630)	13.7	0.15	19980706	304.17203	273.04245	61.73371	6.06294	0.2010343	2.2315469	49	9	1977-1998	0.64	M-v	1	Williams	30473	(6630)
(6633)	12.8	0.15	19980706	248.98470	109.50462	272.14501	4.05507	0.1888515	2.6524734	52	5	1943-1998	0.61	M-v	1	Williams	30474	(6633)
(6708)	12.8	0.15	19980706	344.41214	193.67368	116.08840	12.09797	0.1822865	2.4447874	19	4	1979-1995	0.60	M-v	1	Williams	30474	(6708)

(6742)	13.2	0.15	19980706	33.78770	150.39766	103.25878	5.46257	0.1706305	2.3343592	33	6	1958–1998	0.70	M-v	1	Williams	31145	(6742)
(6755)	13.1	0.15	19980706	244.76767	144.39169	280.12109	4.74163	0.0442870	2.4418993	29	7	1972–1998	0.73	M-v	1	Bowell	30692	(6755)
(6772)	12.8	0.15	19980706	218.11749	103.08960	296.29110	12.68518	0.1930766	2.6627694	34	6	1986–1998	0.98	M-v	1	Williams	30788	(6772)
(6773)	12.3	0.15	19980706	339.24000	107.43116	147.95539	11.33685	0.0616910	2.9919919	62	7	1988–1998	0.67	M-v	1	Williams	30903	(6773)
(6858)	12.6	0.15	19980706	273.38748	73.47741	344.09822	13.65617	0.1872593	2.5857046	31	6	1986–1998	0.60	M-v	1	Williams	30904	(6858)
(7177)	12.7	0.15	19980706	260.29082	41.40565	333.36812	12.73178	0.1945720	2.6872725	38	6	1968–1998	0.85	M-v	1	Williams	31281	(7177)
(7287)	13.2	0.15	19980706	165.57361	302.39418	141.62812	13.99079	0.2496412	2.9127461	23	5	1979–1998	0.71	M-v	1	Williams	31252	(7287)
(7318)	12.0	0.15	19980706	280.42109	211.51902	134.24219	13.80637	0.1797106	2.6117655	31	7	1984–1998	0.68	M-v	1	Bowell	31123	(7318)
(7357)	13.7	0.15	19980706	326.51105	194.29140	148.21686	4.10242	0.1824354	2.2674161	28	5	1971–1998	0.68	M-v	1	Bowell	31424	(7357)
(7358)	14.4	0.15	19980706	329.57564	90.98185	266.46309	4.66139	0.5017368	2.1980429	142	5	1959–1998	0.53	M-v	2	Williams	31424	(7358)
(7417)	12.9	0.15	19980706	131.01156	8.94610	93.57183	1.91414	0.1707009	3.1148887	37	6	1975–1998	0.61	M-v	1	Williams	31256	(7417)
(7426)	13.3	0.15	19980706	175.86956	139.49633	281.23318	1.49056	0.1880067	2.4100412	42	7	1954–1998	0.64	M-v	1	Bowell	31256	(7426)
(7470)	13.9	0.15	19980706	30.84120	158.26989	58.87471	7.78374	0.0658601	2.2882791	47	5	1984–1998	0.66	M-v	2	Williams	31396	(7470)
(7502)	12.5	0.15	19980706	152.57003	193.76970	196.69196	1.83259	0.0690606	2.8368766	56	5	1991–1998	0.61	M-v	1	Williams	31797	(7502)
(7504)	13.0	0.15	19980706	85.58798	83.14621	51.36195	1.24434	0.1999846	3.1700157	41	5	1978–1998	0.82	M-v	1	Williams	31260	(7504)
(7522)	12.2	0.15	19980706	113.12208	2.24942	112.08344	10.35532	0.1737218	3.1973592	43	7	1951–1998	0.60	M-v	1	Bowell	31261	(7522)
(7631)	14.2	0.15	19980706	195.86631	273.73860	136.33700	4.03225	0.2816542	2.3716485	46	5	1953–1998	0.84	M-v	2	Williams	31798	(7631)
(7752)	13.2	0.15	19980706	318.85046	77.02690	280.64332	3.79613	0.1529596	2.2990227	49	8	1950–1998	0.65	M-v	1	Bowell	31801	(7752)
(7892)	12.9	0.15	19980706	258.99592	204.89087	167.98999	1.41340	0.1780811	3.2019753	30	4	1982–1998	0.77	M-v	1	Williams	31806	(7892)
(8205)	12.4	0.15	19980706	92.39001	354.25366	141.41967	1.85554	0.1654212	3.1739745	35	5	1989–1998	0.74	M-v	1	Williams	31294	(8205)
1942 TB	13.5	0.15	19980706	261.11739	221.17358	151.10249	9.38759	0.2754108	2.5446088	40	4	1942–1998	0.80	M-v	4	Marsden	30777	1942 TB
1955 RE ₁	14.0	0.15	19980706	250.00339	22.24256	319.78457	7.25321	0.2545348	2.3780837	26	2	1955–1998	0.89	M-v	4	Williams	31705	1955 RE ₁
1964 YJ	12.5	0.15	19980706	79.95420	59.07464	117.10794	11.39717	0.0342795	3.0062432	26	5	1964–1998	0.66	M-v	1	Williams	29652	1964 YJ
1969 TT ₁	14.0	0.15	19980706	247.09038	355.58978	26.53470	2.37148	0.1833192	2.4085645	39	6	1969–1998	0.85	M-v	2	Williams	30089	1969 TT ₁
1971 SB	15.0	0.15	19980706	125.87499	76.46735	355.72803	22.89503	0.0983115	1.8627401	48	4	1971–1998	0.63	M-v	2	Marsden	31779	1971 SB
1972 AU	13.0	0.15	19980706	229.17617	10.24629	342.21062	12.53407	0.1711125	2.5963141	40	4	1972–1998	0.58	M-v	2	Williams	31705	1972 AU
1973 SQ ₃	14.0	0.15	19980706	326.30198	163.25276	189.53888	6.23080	0.1557208	2.3478555	37	4	1973–1998	0.78	M-v	2	Williams	30468	1973 SQ ₃
1975 SG ₁	15.0	0.15	19980706	105.55946	48.41377	25.64908	10.07785	0.0949534	2.5992123	20	2	1975–1998	0.85	M-v	5	Williams	31706	1975 SG ₁
1975 SC ₂	12.5	0.15	19980706	156.70342	262.63092	191.13727	9.51894	0.0642762	3.4074498	19	3	1975–1998	0.62	M-v	4	Williams	30648	1975 SC ₂
1975 TE	14.5	0.15	19980706	289.43138	325.69528	24.40708	4.34200	0.2172840	2.2438649	18	3	1975–1998	0.87	M-v	4	Williams	22270	1975 TE
1976 UP ₂	15.0	0.15	19980706	199.35870	349.12497	26.45981	5.03484	0.2020341	2.2280412	38	4	1976–1998	0.73	M-v	4	Williams	31779	1976 UP ₂
1976 UN ₁₄	14.5	0.15	19980706	201.90748	334.91446	53.39421	5.37318	0.0366285	2.2189808	31	3	1976–1998	0.50	M-v	4	Williams	31779	1976 UN ₁₄
1976 UB ₁₆	14.0	0.15	19980706	252.13852	299.04033	37.70714	12.20070	0.1791745	2.8136968	30	3	1976–1998	0.79	M-v	4	Williams	31779	1976 UB ₁₆
1977 DL ₄	14.5	0.15	19980706	29.02335	213.28940	356.39002	4.46628	0.2358086	2.5705448	30	3	1977–1998	0.87	M-v	4	Williams	27908	1977 DL ₄
1977 EU ₁	14.5	0.15	19980706	20.14088	15.32776	155.21368	2.01657	0.1045187	2.6211389	38	2	1977–1998	0.66	M-v	4	Williams	31779	1977 EU ₁
1977 RK	15.0	0.15	19980706	30.39117	133.84606	46.75683	21.44646	0.0500955	1.9515483	42	5	1977–1998	0.76	M-v	2	Marsden	31779	1977 RK
1977 RL ₇	14.0	0.15	19980706	271.91801	194.95546	194.04425	13.33074	0.2428603	2.6609035	29	4	1977–1998	0.95	M-v	3	Williams	24116	1977 RL ₇
1978 EU ₉	13.0	0.15	19980706	333.72942	80.01339	157.20884	2.43535	0.0042705	2.9047911	75	5	1978–1998	0.67	M-v	3	Williams	31779	1978 EU ₉
1978 PV ₃	14.5	0.15	19980706	329.13717	23.17487	279.73857	4.08503	0.2004353	2.2551851	21	4	1978–1998	0.69	M-v	2	Williams	28881	1978 PV ₃
1978 QA ₂	14.5	0.15	19980706	248.72588	154.81899	188.17810	3.67329	0.2212766	2.2999345	62	6	1978–1998	0.93	M-v	2	Williams	31779	1978 QA ₂
1978 RK	12.5	0.15	19980706	161.43613	23.74204	1.79791	18.07773	0.1751466	3.1656874	42	4	1978–1998	0.73	M-v	2	Williams	31779	1978 RK
1978 RU	14.5	0.15	19980706	338.98660	273.14226	12.58279	4.20178	0.2519465	2.5682083	33	5	1978–1998	0.77	M-v	2	Williams	31779	1978 RU
1978 RQ ₁	14.5	0.15	19980706	283.89115	144.44529	176.59967	5.67431	0.1498835	2.2905400	32	3	1978–1998	0.71	M-v	4	Williams	31706	1978 RQ ₁
1978 RT ₆	15.5	0.15	19980706	321.43934	110.93719	165.65182	5.92693	0.1698498	2.2791687	31	2	1978–1998	0.61	M-v	4	Williams	31706	1978 RT ₆
1978 RU ₈	13.5	0.15	19980706	170.50010	225.85155	164.21132	10.89251	0.1849541	3.1276727	28	3	1978–1998	0.84	M-v	4	Williams	31706	1978 RU ₈
1978 RQ ₉	14.5	0.15	19980706	344.18003	231.94234	350.02633	6.74791	0.0591059	2.3112442	59	4	1978–1998	0.62	M-v	2	Williams	31779	1978 RQ ₉
1978 SQ ₄	14.5	0.15	19980706	164.89755	37.99978	354.56295	4.50161	0.2214042	2.3498221	53	5	1978–1998	0.71	M-v	2	Williams	31779	1978 SQ ₄
1978 TP ₂	14.5	0.15	19980706	199.16700	246.78122	160.08613	4.30331	0.1531769	2.3135417	42	4	1953–1998	0.93	M-v	3	Williams	31780	1978 TP ₂
1978 TO ₈	13.0	0.15	19980706	255.50809	163.98346	214.48842	8.87702	0.1984273	3.0591824	46	8	1978–1998	0.89	M-v	1	Williams	30684	1978 TO ₈
1978 TT ₈	13.5	0.15	19980706	295.88691	275.75492	56.23451	5.08273	0.2721858	2.5977946	44	3	1978–1998	0.73	M-v	2	Williams	31780	1978 TT ₈
1978 UL ₄	13.5	0.15	19980706	219.39067	172.35327	216.68727	12.89398	0.1982564	2.6271385	25	3	1978–1998	0.83	M-v	3	Williams	31780	1978 UL ₄
1978 UN ₄	13.0	0.15	19980706	350.78598	25.47254	213.43091	13.99574	0.0886105	3.1036702	33	3	1978–1998	0.61	M-v	4	Williams	31780	1978 UN ₄
1978 UR ₄	15.5	0.15	19980706	108.68188	136.04247	312.15728	2.46225	0.1942088	2.3599463	38	4	1978–1998	0.88	M-v	2	Williams	31780	1978 UR ₄

1978 VN ₂	13.0	0.15	19980706	250.89841	358.92155	1.92089	1.34196	0.1912398	3.0959367	34	3	1978–1998	0.65	M-v	4	Williams	31780	1978 VN ₂
1978 VX ₄	15.0	0.15	19980706	258.30692	269.61342	66.06296	4.27170	0.1468368	2.3309257	28	3	1978–1998	0.81	M-v	4	Williams	31780	1978 VX ₄
1978 VD ₉	14.5	0.15	19980706	216.14288	341.59017	34.45740	1.28762	0.0806745	2.3410583	31	3	1978–1998	0.75	M-v	5	Williams	31780	1978 VD ₉
1979 KO ₁	14.5	0.15	19980706	344.29839	5.32460	268.07393	7.26392	0.2258850	2.4393937	20	3	1979–1998	0.79	M-v	3	Williams	31780	1979 KO ₁
1979 MB ₆	15.5	0.15	19980706	204.25830	210.57931	150.26718	3.51831	0.1946701	2.2317393	25	4	1978–1998	0.97	M-v	2	Williams	31579	1979 MB ₆
1979 OA	13.5	0.15	19980706	310.08366	340.54122	298.23924	24.91333	0.3750596	2.9137318	20	4	1979–1998	0.89	M-v	2	Williams	31414	1979 OA
1979 QP	13.5	0.15	19980706	5.54647	302.30455	304.00308	1.12655	0.0307133	2.9087333	41	7	1954–1998	0.65	M-v	1	Williams	26755	1979 QP
1979 SG ₂	15.0	0.15	19980706	258.67605	58.90238	301.04711	5.52602	0.2110670	2.2115272	38	4	1979–1998	0.79	M-v	2	Williams	31780	1979 SG ₂
1979 TT ₂	13.5	0.15	19980706	211.38621	315.11163	42.30831	3.72711	0.2645406	2.5732888	30	3	1978–1998	0.68	M-v	4	Williams	31780	1979 TT ₂
1979 UC ₄	14.0	0.15	19980706	156.55310	57.01768	11.55825	3.53849	0.2322331	2.5794854	23	6	1950–1998	0.68	M-v	1	Williams	31780	1979 UC ₄
1979 XJ	15.0	0.15	19980706	303.61254	246.43001	107.07781	6.06827	0.2387986	2.1917565	58	4	1979–1998	0.63	M-v	2	Williams	29653	1979 XJ
1979 YQ	13.5	0.15	19980706	194.14528	318.15958	84.17910	9.04541	0.2444191	2.5827957	66	3	1979–1998	0.65	M-v	3	Williams	31780	1979 YQ
1980 DN	12.5	0.15	19980706	61.09861	61.25966	129.92930	8.06973	0.1077861	3.1461964	35	5	1980–1998	0.74	M-v	1	Williams	29092	1980 DN
1980 KE	14.0	0.15	19980706	273.24506	53.67782	257.14976	8.02676	0.2179413	2.3874272	42	3	1980–1998	0.81	M-v	3	Williams	31707	1980 KE
1980 PJ ₁	14.5	0.15	19980706	205.28219	130.06883	278.90549	4.54757	0.2415012	2.1427514	14	3	1980–1998	0.48	M-v	4	Williams	29653	1980 PJ ₁
1980 PV ₁	12.5	0.15	19980706	29.27608	310.73845	287.28016	6.75968	0.1812590	2.7874942	22	9	1979–1998	0.91	M-v	1	Williams	30892	1980 PV ₁
1980 RL ₂	14.5	0.15	19980706	311.72019	8.21166	311.19439	1.73438	0.2119318	2.3984942	26	3	1980–1998	0.73	M-v	4	Williams	31780	1980 RL ₂
1980 TK ₆	14.0	0.15	19980706	252.17438	149.24593	224.81529	6.47324	0.1098249	2.4193767	20	3	1980–1998	0.59	M-v	4	Williams	21966	1980 TK ₆
1980 UL	13.5	0.15	19980706	297.77954	208.87225	151.12501	23.05350	0.2073034	2.3835085	37	5	1980–1998	0.63	M-v	2	Williams	31414	1980 UL
1980 VG	12.5	0.15	19980706	307.65209	37.62502	320.21374	8.20434	0.2345610	2.7812394	22	7	1975–1998	0.97	M-v	2	Williams	29653	1980 VG
1980 VX ₂	13.5	0.15	19980706	21.82576	287.45710	225.41090	24.90027	0.0637632	2.5412895	32	7	1954–1998	0.78	M-v	1	Williams	28882	1980 VX ₂
1980 WE ₅	12.5	0.15	19980706	64.54018	192.23829	230.11860	14.16901	0.1011419	3.1321896	16	5	1974–1998	0.81	M-v	2	Williams	28314	1980 WE ₅
1981 DA ₂	13.5	0.15	19980706	167.38605	99.41024	296.13276	6.73801	0.1116192	3.1658930	26	2	1981–1998	0.91	M-v	5	Williams	31707	1981 DA ₂
1981 EP ₁	13.5	0.15	19980706	38.78701	161.90889	358.48732	11.56358	0.1728158	3.1438766	64	3	1981–1998	0.72	M-v	2	Williams	31707	1981 EP ₁
1981 EN ₄	13.0	0.15	19980706	162.68888	203.54267	252.34027	9.89180	0.0524376	3.0583614	27	5	1981–1998	0.77	M-v	3	Williams	26418	1981 EN ₄
1981 EF ₅	14.0	0.15	19980706	115.27353	223.96559	224.68744	10.50208	0.2134559	2.5963296	38	7	1954–1998	0.76	M-v	1	Williams	31780	1981 EF ₅
1981 EW ₅	14.0	0.15	19980706	196.92066	189.39096	223.84668	12.62067	0.1505929	2.5520795	27	2	1981–1998	0.86	M-v	4	Williams	31708	1981 EW ₅
1981 EO ₇	13.5	0.15	19980706	162.92655	210.68865	200.00748	13.32287	0.1062461	2.5972187	66	4	1954–1998	0.92	M-v	3	Williams	31780	1981 EO ₇
1981 EF ₈	13.0	0.15	19980706	114.51698	211.60452	214.41902	7.43885	0.1601838	3.1721319	71	3	1981–1998	0.77	M-v	3	Williams	31780	1981 EF ₈
1981 EU ₉	15.0	0.15	19980706	300.56600	87.83901	214.18410	4.49035	0.1833349	2.2491600	63	2	1981–1998	0.78	M-v	4	Williams	31780	1981 EU ₉
1981 EC ₁₀	14.0	0.15	19980706	17.01228	32.85315	211.00975	6.95635	0.1328689	3.0875521	32	5	1978–1998	0.69	M-v	1	Williams	29315	1981 EC ₁₀
1981 EM ₁₀	13.0	0.15	19980706	209.63666	15.75767	335.43126	8.72171	0.0696422	3.1771833	46	3	1981–1998	0.80	M-v	4	Williams	31708	1981 EM ₁₀
1981 EO ₁₀	14.5	0.15	19980706	179.73341	194.03109	196.35325	14.43554	0.0854882	2.6105108	26	2	1981–1998	0.95	M-v	5	Williams	31708	1981 EO ₁₀
1981 EE ₁₁	16.0	0.15	19980706	346.78142	316.02540	320.22089	2.90744	0.1572990	2.2329392	29	3	1979–1998	0.77	M-v	4	Williams	22270	1981 EE ₁₁
1981 EH ₁₁	13.5	0.15	19980706	214.08613	359.12416	344.47036	13.74764	0.1835859	2.6422768	69	3	1981–1998	0.95	M-v	3	Williams	31780	1981 EH ₁₁
1981 ER ₁₁	15.0	0.15	19980706	66.89757	213.73632	290.13700	2.40041	0.0652143	2.6094352	36	3	1979–1998	0.99	M-v	4	Williams	31780	1981 ER ₁₁
1981 EG ₁₂	15.0	0.15	19980706	31.66636	7.03105	220.55050	7.29691	0.1437959	2.5732770	29	3	1981–1998	1.06	M-v	4	Williams	26394	1981 EG ₁₂
1981 EP ₁₂	14.5	0.15	19980706	172.79453	155.59953	259.41175	5.11076	0.0728536	2.2427589	33	3	1981–1998	0.95	M-v	3	Williams	31580	1981 EP ₁₂
1981 EZ ₁₂	15.0	0.15	19980706	156.75179	133.49995	278.31113	4.52316	0.1212231	2.2551025	30	2	1981–1998	0.78	M-v	5	Williams	31709	1981 EZ ₁₂
1981 EQ ₁₃	15.5	0.15	19980706	22.21536	203.45039	337.57784	12.40221	0.2331461	2.6288986	37	2	1981–1998	0.89	M-v	3	Williams	31709	1981 EQ ₁₃
1981 EV ₁₃	13.5	0.15	19980706	305.80131	69.94201	207.35714	9.97169	0.1678743	3.1787098	49	2	1981–1998	0.74	M-v	4	Williams	31710	1981 EV ₁₃
1981 EY ₁₃	14.5	0.15	19980706	264.44644	149.98879	209.98915	8.37075	0.0966457	3.0609840	19	3	1981–1998	0.74	M-v	4	Williams	20328	1981 EY ₁₃
1981 ES ₁₄	15.0	0.15	19980706	356.30795	318.53771	299.63765	4.24136	0.1318554	2.5842220	42	6	1978–1998	0.85	M-v	1	Williams	29132	1981 ES ₁₄
1981 EB ₁₅	15.0	0.15	19980706	123.16656	215.77521	257.64915	2.58679	0.1386704	2.5724962	21	3	1981–1998	0.80	M-v	4	Williams	22697	1981 EB ₁₅
1981 EN ₁₅	15.5	0.15	19980706	94.96719	175.01128	284.46091	2.37596	0.1059416	2.2668676	23	3	1979–1998	0.75	M-v	3	Williams	31521	1981 EN ₁₅
1981 ED ₁₆	15.5	0.15	19980706	25.95743	290.47584	268.31822	3.58192	0.1447286	2.2559431	34	2	1981–1998	0.68	M-v	4	Williams	31710	1981 ED ₁₆
1981 EQ ₁₆	14.0	0.15	19980706	108.63781	86.99098	340.09099	13.33963	0.1120510	3.2050980	35	3	1981–1998	0.91	M-v	4	Williams	31780	1981 EQ ₁₆
1981 EL ₁₇	15.0	0.15	19980706	338.79021	43.54299	192.42625	14.09846	0.0774161	2.6211518	34	2	1981–1998	0.78	M-v	5	Williams	31780	1981 EL ₁₇
1981 EM ₁₇	14.0	0.15	19980706	277.54228	153.36775	200.26802	7.08287	0.2417635	2.5533242	60	4	1981–1998	0.71	M-v	3	Williams	31780	1981 EM ₁₇
1981 EE ₁₈	14.5	0.15	19980706	81.94733	106.02051	356.80926	4.77889	0.1728234	3.1608172	35	4	1979–1998	0.86	M-v	2	Williams	31580	1981 EE ₁₈
1981 EG ₁₈	15.0	0.15	19980706	259.79230	325.03088	345.83507	4.71250	0.0620581	2.2622277	27	3	1981–1998	0.83	M-v	4	Williams	31580	1981 EG ₁₈
1981 EP ₁₈	14.5	0.15	19980706	8.49557	34.39933	185.80204	8.52516	0.1287289	3.1353355	42	3	1981–1998	0.88	M-v	4	Williams	31781	1981 EP ₁₈
1981 ET ₁₈	15.5	0.15	19980706	72.23039	138.31756	341.92121	4.03497	0.1716361	2.6161686	41	3	1979–1998	0.86	M-v	3	Williams	31781	1981 ET ₁₈

1981 EH ₁₉	15.0	0.15	19980706	46.43276	201.52349	2.69195	3.43667	0.0927260	2.2294640	37	5	1979–1998	0.75	M-v	2	Williams	23347	1981 EH ₁₉
1981 EK ₂₀	14.5	0.15	19980706	314.07891	265.86504	358.84894	11.30424	0.1659739	2.6242293	47	2	1981–1998	0.86	M-v	5	Williams	31781	1981 EK ₂₀
1981 EN ₂₀	16.0	0.15	19980706	104.98166	300.16802	149.44404	2.60987	0.1882018	2.2540248	30	3	1976–1998	0.98	M-v	3	Williams	31781	1981 EN ₂₀
1981 ET ₂₀	15.0	0.15	19980706	13.84134	191.32020	356.87661	8.99509	0.1444698	2.6270769	44	3	1981–1998	0.77	M-v	4	Williams	31781	1981 ET ₂₀
1981 ET ₂₁	15.5	0.15	19980706	77.57531	297.97997	167.19379	4.97537	0.2128638	2.6204244	37	2	1981–1998	0.73	M-v	5	Williams	31781	1981 ET ₂₁
1981 EH ₂₂	15.0	0.15	19980706	330.05056	44.92282	207.63567	1.99954	0.0876816	2.6113829	41	2	1981–1998	0.90	M-v	5	Williams	31781	1981 EH ₂₂
1981 EG ₂₃	13.5	0.15	19980706	56.17749	101.72184	3.32915	0.91152	0.1771315	3.2082382	40	2	1981–1998	0.74	M-v	4	Williams	31781	1981 EG ₂₃
1981 EM ₂₃	14.0	0.15	19980706	140.50147	42.52135	3.38291	9.95846	0.2093158	3.1515775	35	3	1981–1998	1.02	M-v	4	Williams	31781	1981 EM ₂₃
1981 EQ ₂₃	14.0	0.15	19980706	344.40991	85.82580	173.25222	6.18018	0.0935496	3.1124232	40	3	1981–1998	0.69	M-v	4	Williams	24226	1981 EQ ₂₃
1981 ES ₂₃	15.0	0.15	19980706	203.21552	242.74499	155.56095	1.49175	0.1005698	2.5692837	29	4	1981–1998	0.97	M-v	2	Williams	31781	1981 ES ₂₃
1981 ET ₂₃	15.0	0.15	19980706	229.80063	356.56914	6.42835	6.23431	0.1978528	2.2393536	22	3	1981–1998	0.93	M-v	5	Williams	31781	1981 ET ₂₃
1981 EV ₂₃	14.5	0.15	19980706	115.16199	104.65028	358.82970	7.10456	0.1546186	2.5861330	36	4	1979–1998	0.97	M-v	2	Williams	31781	1981 EV ₂₃
1981 EZ ₂₃	15.5	0.15	19980706	337.39389	16.42915	210.77139	2.91820	0.0636364	2.6272247	16	5	1977–1998	0.80	M-v	2	Williams	21967	1981 EZ ₂₃
1981 EN ₂₄	15.0	0.15	19980706	116.69881	197.63840	254.86191	1.78221	0.1142473	2.2514009	74	3	1981–1998	0.76	M-v	3	Williams	31781	1981 EN ₂₄
1981 EH ₂₅	15.5	0.15	19980706	42.62754	10.69820	175.63282	4.55789	0.1145786	2.5961180	35	4	1981–1998	0.71	M-v	3	Williams	31781	1981 EH ₂₅
1981 EF ₂₇	15.0	0.15	19980706	345.47213	50.65763	186.35257	3.97877	0.1134166	2.6158798	45	4	1977–1998	0.89	M-v	3	Williams	31781	1981 EF ₂₇
1981 EU ₂₇	16.0	0.15	19980706	330.89644	94.73698	171.47082	6.16149	0.2560321	2.2646837	39	2	1981–1998	0.83	M-v	4	Williams	31781	1981 EU ₂₇
1981 EJ ₂₈	14.5	0.15	19980706	268.77718	186.64417	169.09105	1.86980	0.1839090	2.2220438	23	3	1981–1998	0.85	M-v	4	Williams	31224	1981 EJ ₂₈
1981 ER ₂₉	14.5	0.15	19980706	65.09347	309.00210	192.97832	13.29820	0.1360849	2.6139554	33	2	1981–1998	0.77	M-v	4	Williams	31710	1981 ER ₂₉
1981 ET ₂₉	14.0	0.15	19980706	40.49309	278.53789	226.38759	4.58840	0.1015363	3.2016074	32	3	1978–1998	0.85	M-v	4	Williams	31781	1981 ET ₂₉
1981 EO ₃₀	14.5	0.15	19980706	340.37096	74.05605	174.98878	12.29503	0.1691361	2.6126630	55	2	1981–1998	0.80	M-v	4	Williams	31781	1981 EO ₃₀
1981 EP ₃₀	13.0	0.15	19980706	199.41222	223.65325	174.41388	20.56741	0.0232719	3.1010912	20	5	1981–1998	0.80	M-v	2	Williams	31781	1981 EP ₃₀
1981 EF ₃₁	15.0	0.15	19980706	138.63564	261.39138	161.28682	4.23800	0.0538246	2.2647149	46	2	1981–1998	0.79	M-v	5	Williams	31781	1981 EF ₃₁
1981 EU ₃₈	15.0	0.15	19980706	351.48869	43.33524	204.25794	3.17052	0.1338708	2.2509725	57	2	1981–1998	0.72	M-v	4	Williams	31710	1981 EU ₃₈
1981 EC ₃₉	14.0	0.15	19980706	310.07900	77.40613	178.61603	26.02647	0.1063018	3.1812776	33	2	1981–1998	0.86	M-v	5	Williams	31781	1981 EC ₃₉
1981 EY ₃₉	16.5	0.15	19980706	63.37721	345.79671	190.16789	0.96950	0.0957728	2.2359289	22	4	1971–1998	0.86	M-v	3	Williams	28882	1981 EY ₃₉
1981 ED ₄₀	14.0	0.15	19980706	88.91818	279.64707	178.61723	11.05511	0.2631594	3.1415827	33	3	1981–1998	1.03	M-v	4	Williams	31781	1981 ED ₄₀
1981 EJ ₄₂	14.5	0.15	19980706	31.85836	350.99524	184.39153	11.33039	0.1242069	3.1654902	30	3	1981–1998	0.92	M-v	3	Williams	31781	1981 EJ ₄₂
1981 ER ₄₂	14.0	0.15	19980706	202.59822	30.56764	12.66092	1.56587	0.1011175	3.0780774	16	3	1978–1998	0.75	M-v	5	Williams	21968	1981 ER ₄₂
1981 EZ ₄₂	15.5	0.15	19980706	283.30534	86.31030	188.36246	0.95702	0.2305315	2.2968508	22	4	1981–1998	0.69	M-v	2	Williams	28581	1981 EZ ₄₂
1981 ET ₄₃	14.0	0.15	19980706	59.14026	340.83248	191.01546	27.70087	0.1088834	3.1157289	24	3	1978–1998	1.07	M-v	3	Williams	22271	1981 ET ₄₃
1981 ER ₄₅	16.5	0.15	19980706	70.95182	302.72762	192.87209	6.51794	0.1049419	2.2595451	42	2	1981–1998	0.82	M-v	5	Williams	31781	1981 ER ₄₅
1981 EE ₄₇	14.0	0.15	19980706	236.13928	214.15698	162.12446	6.01698	0.2109512	2.5561757	39	4	1981–1998	0.65	M-v	2	Williams	31781	1981 EE ₄₇
1981 QE ₂	15.0	0.15	19980706	309.76210	174.03793	152.26230	7.56489	0.2263386	2.2981689	26	4	1981–1998	0.77	M-v	2	Williams	29132	1981 QE ₂
1981 RF ₂	11.5	0.15	19980706	12.85160	32.32025	255.22926	14.26407	0.1412494	3.2209589	12	4	1981–1998	0.43	M-v	2	Williams	29653	1981 RF ₂
1981 SL	14.5	0.15	19980706	237.39338	140.35449	196.17318	6.93847	0.2568288	2.3656674	37	5	1981–1998	0.69	M-v	1	Williams	31781	1981 SL
1981 SD ₂	14.0	0.15	19980706	184.68468	345.65999	35.16410	6.39861	0.1302752	2.3850758	60	3	1981–1998	0.67	M-v	3	Williams	31781	1981 SD ₂
1981 SE ₉	14.5	0.15	19980706	247.89325	214.35235	114.28215	3.26360	0.2418481	2.3577597	20	3	1981–1998	0.90	M-v	4	Williams	31711	1981 SE ₉
1981 UK ₁₁	14.5	0.15	19980706	202.05783	215.90701	141.99580	3.00722	0.2066305	2.3979485	24	4	1981–1998	0.80	M-v	2	Williams	31580	1981 UK ₁₁
1981 UW ₂₁	12.5	0.15	19980706	215.33118	274.61565	125.19495	5.33540	0.0767563	2.7802286	26	7	1955–1998	0.82	M-v	2	Williams	30287	1981 UW ₂₁
1981 UL ₂₉	14.0	0.15	19980706	277.92282	130.80098	214.43969	14.08531	0.2262785	2.7330260	17	3	1981–1998	0.81	M-v	4	Williams	23970	1981 UL ₂₉
1981 VF	14.0	0.15	19980706	233.67858	320.69172	32.28381	4.87505	0.2489551	2.3699836	36	4	1981–1998	0.92	M-v	3	Williams	31782	1981 VF
1981 WF ₉	15.0	0.15	19980706	281.53891	141.81650	206.41998	6.23098	0.1351337	2.3377920	17	3	1981–1998	0.74	M-v	4	Williams	27726	1981 WF ₉
1982 BU	13.0	0.15	19980706	170.62324	351.40799	101.94119	27.18161	0.2023028	2.3977070	12	3	1982–1998	0.82	M-v	4	Williams	22223	1982 BU
1982 QY ₁	13.0	0.15	19980706	218.49664	135.69618	244.30387	7.01775	0.1244954	2.6515267	45	3	1982–1998	0.63	M-v	3	Williams	31782	1982 QY ₁
1982 RR	14.0	0.15	19980706	284.36039	186.69941	174.11321	14.26729	0.3014894	2.5862891	30	4	1982–1998	0.86	M-v	3	Williams	30685	1982 RR
1982 SC	13.5	0.15	19980706	259.98160	353.40233	348.61150	9.89072	0.2430626	2.6315051	29	3	1982–1998	0.98	M-v	4	Williams	31711	1982 SC
1982 SM ₂	14.5	0.15	19980706	227.24630	355.15994	348.76538	5.41215	0.1956570	2.2762834	42	3	1982–1998	0.84	M-v	4	Williams	31782	1982 SM ₂
1982 SJ ₇	13.5	0.15	19980706	247.54404	153.77709	177.30579	6.77050	0.2789787	2.6610568	25	3	1982–1998	0.78	M-v	2	Williams	31782	1982 SJ ₇
1982 SC ₈	14.0	0.15	19980706	304.37792	323.56017	343.68025	3.30553	0.1748510	2.2321273	21	3	1982–1998	0.82	M-v	4	Williams	31711	1982 SC ₈
1982 SG ₁₂	14.5	0.15	19980706	131.34396	236.38735	184.19828	6.43053	0.1168186	2.3065452	53	5	1977–1998	0.79	M-v	3	Williams	31782	1982 SG ₁₂
1982 VC ₃	14.5	0.15	19980706	308.27321	261.09486	75.73845	5.90186	0.2745936	2.6016045	25	4	1982–1998	0.85	M-v	3	Williams	22075	1982 VC ₃
1982 VD ₅	15.0	0.15	19980706	177.58340	209.64754	227.95679	3.19141	0.1522997	2.2797367	27	6	1977–1998	0.88	M-v	2	Williams	29940	1982 VD ₅

1983 BD	12.0	0.15	19980706	211.61521	258.79829	115.41743	15.18893	0.1556862	2.7631265	59	5	1974–1998	0.65	M-v	2	Williams	31782	1983 BD
1983 CZ ₂	14.0	0.15	19980706	45.38770	192.89831	319.56863	6.48720	0.1755307	2.4098613	48	3	1979–1998	0.76	M-v	2	Williams	31782	1983 CZ ₂
1983 RL ₃	15.0	0.15	19980706	214.31340	67.20195	295.15447	3.06705	0.1424976	2.1700806	67	3	1976–1998	0.76	M-v	4	Williams	31782	1983 RL ₃
1983 RL ₄	13.5	0.15	19980706	158.37446	213.08420	166.54081	17.63865	0.2721415	2.6353785	35	4	1981–1998	0.71	M-v	2	Williams	31782	1983 RL ₄
1984 DZ	14.5	0.15	19980706	330.16241	259.60148	345.81900	7.78641	0.2085507	2.3173023	67	4	1953–1998	0.79	M-v	3	Williams	31782	1984 DZ
1984 EU ₁	15.0	0.15	19980706	78.33656	169.62812	333.91172	3.58308	0.1390052	2.2836955	42	4	1984–1998	0.58	M-v	1	Williams	31782	1984 EU ₁
1984 HH ₁	14.5	0.15	19980706	322.16334	83.06864	166.72851	2.44358	0.1948085	2.3442663	28	3	1984–1998	0.69	M-v	5	Williams	31782	1984 HH ₁
1984 HM ₁	14.0	0.15	19980706	61.22966	159.70947	24.97758	2.52907	0.1109308	2.2799356	37	6	1984–1998	0.60	M-v	1	Williams	30287	1984 HM ₁
1984 SV ₅	13.0	0.15	19980706	227.39017	344.13160	1.48579	9.00941	0.0828213	3.0397971	86	3	1984–1998	0.79	M-v	4	Williams	31782	1984 SV ₅
1984 SC ₆	14.5	0.15	19980706	291.35926	209.64070	96.46060	3.31653	0.2079160	2.4013628	73	4	1984–1998	0.80	M-v	2	Williams	31782	1984 SC ₆
1985 RP	14.5	0.15	19980706	223.99768	226.06356	166.92825	8.01032	0.2298223	2.2925975	21	4	1978–1998	0.77	M-v	4	Williams	21970	1985 RP
1985 RQ ₃	14.0	0.15	19980706	344.12402	121.28089	161.21181	10.65264	0.2570800	2.7317067	49	4	1984–1998	0.64	M-v	1	Williams	29910	1985 RQ ₃
1985 RJ ₅	15.0	0.15	19980706	114.22833	337.60402	52.67350	2.83333	0.2483536	2.4278707	22	3	1985–1998	0.69	M-v	5	Williams	31415	1985 RJ ₅
1985 TN	14.5	0.15	19980706	238.85080	4.89292	25.87158	4.98802	0.1609300	2.2843023	23	5	1985–1998	0.89	M-v	2	Williams	29655	1985 TN
1985 TS	14.5	0.15	19980706	251.21872	359.56823	5.41030	3.78998	0.1243822	2.2937191	31	4	1978–1998	0.73	M-v	4	Williams	31782	1985 TS
1985 UT	12.5	0.15	19980706	228.95363	254.14057	58.09177	8.11211	0.1033812	2.9868069	41	3	1975–1998	0.64	M-v	3	Marsden	31581	1985 UT
1985 UJ ₃	14.5	0.15	19980706	252.61153	222.16060	107.86731	1.26900	0.2412906	2.3177473	56	4	1978–1998	0.76	M-v	4	Williams	31782	1985 UJ ₃
1985 UF ₅	14.0	0.15	19980706	118.90298	224.70840	205.25612	4.11618	0.1987766	2.4169457	66	5	1981–1998	0.76	M-v	2	Williams	31782	1985 UF ₅
1985 UG ₅	14.0	0.15	19980706	204.15612	341.12348	73.64884	9.42873	0.1660881	2.3200730	21	5	1978–1998	0.80	M-v	2	Williams	22077	1985 UG ₅
1985 VF ₁	14.5	0.15	19980706	157.78158	151.59907	272.19359	1.21958	0.2146346	2.3587491	44	4	1985–1998	0.79	M-v	2	Williams	31782	1985 VF ₁
1986 AT ₂	12.5	0.15	19980706	117.08099	291.13475	147.98170	19.19333	0.1500891	3.1682485	49	4	1986–1998	0.56	M-v	3	Williams	31782	1986 AT ₂
1986 EP ₅	13.0	0.15	19980706	342.71840	115.28317	165.11493	2.13940	0.1481530	3.1928036	40	5	1982–1998	0.83	M-v	1	Williams	29655	1986 EP ₅
1986 PX	15.5	0.15	19980706	295.60214	152.59610	195.64947	2.75534	0.1783767	2.1148123	28	7	1980–1998	0.91	M-v	2	Williams	29316	1986 PX
1986 QZ	14.0	0.15	19980706	214.79327	230.47690	119.12889	3.97744	0.1895912	2.2044849	62	4	1986–1998	0.64	M-v	3	Williams	31581	1986 QZ
1986 QF ₁	14.5	0.15	19980706	176.87700	15.19588	9.47353	5.27011	0.1389991	2.2158755	80	2	1986–1998	0.61	M-v	5	Williams	31782	1986 QF ₁
1986 QU ₂	13.5	0.15	19980706	337.18283	198.05537	21.61944	3.62783	0.0341344	2.7264950	62	2	1986–1998	0.57	M-v	4	Williams	31782	1986 QU ₂
1986 QG ₃	13.5	0.15	19980706	203.04636	344.32620	13.65306	5.12840	0.1481487	2.7470007	46	2	1986–1998	0.87	M-v	5	Williams	31782	1986 QG ₃
1986 RP ₂	13.5	0.15	19980706	295.44735	208.72246	144.61917	12.38175	0.2035623	2.5895693	27	6	1980–1998	0.97	M-v	3	Williams	31416	1986 RP ₂
1986 RW ₅	14.5	0.15	19980706	216.63126	138.82531	218.02326	3.50857	0.1711061	2.2099377	37	3	1986–1998	0.71	M-v	4	Williams	31712	1986 RW ₅
1987 BR ₁	14.0	0.15	19980706	171.57813	172.22168	273.07445	3.69057	0.0950017	2.2497239	38	3	1987–1998	0.67	M-v	4	Williams	28583	1987 BR ₁
1987 BW ₁	15.5	0.15	19980706	118.21343	211.66176	243.56383	3.99289	0.1549000	2.3112075	55	3	1987–1998	0.82	M-v	3	Williams	31713	1987 BW ₁
1987 DO	15.0	0.15	19980706	47.71455	357.93927	144.01205	2.72673	0.1732726	2.3679038	47	3	1987–1998	0.84	M-v	3	Williams	31782	1987 DO
1987 DD ₆	15.0	0.15	19980706	54.75314	41.84411	155.19140	4.15183	0.0913842	2.3055072	48	3	1987–1998	0.98	M-v	4	Williams	18811	1987 DD ₆
1987 KF ₁	15.5	0.15	19980706	348.06785	103.39196	167.16329	11.44776	0.2948576	2.3943784	33	2	1987–1998	0.58	M-v	4	Williams	31713	1987 KF ₁
1987 QF ₃	14.0	0.15	19980706	330.09196	169.56467	135.31429	5.41616	0.0996506	2.4432570	41	4	1987–1998	0.85	M-v	2	Williams	29655	1987 QF ₃
1987 QE ₇	13.5	0.15	19980706	179.58863	180.40736	191.37998	11.83980	0.1863353	2.6242727	34	2	1987–1998	0.78	M-v	5	Williams	31782	1987 QE ₇
1987 SC ₁	14.0	0.15	19980706	188.75046	261.98223	139.70471	5.35327	0.2548728	2.5880557	34	4	1987–1998	0.78	M-v	1	Williams	31782	1987 SC ₁
1987 SG ₂	13.5	0.15	19980706	162.06520	277.11624	167.19512	6.81714	0.1696081	2.5652955	42	6	1975–1998	0.92	M-v	1	Williams	25339	1987 SG ₂
1987 SE ₃	14.0	0.15	19980706	183.37481	341.24993	93.21343	4.65664	0.1203283	2.5339167	35	5	1975–1998	0.77	M-v	1	Williams	29655	1987 SE ₃
1987 SN ₁₂	14.0	0.15	19980706	239.85388	183.78221	145.03068	1.54361	0.2119146	2.5676882	48	5	1979–1998	0.65	M-v	3	Williams	31581	1987 SN ₁₂
1987 WO ₁	13.5	0.15	19980706	227.04232	158.21629	234.58700	6.64695	0.0372343	2.5736776	39	6	1987–1998	0.75	M-v	1	Williams	29133	1987 WO ₁
1987 XC	13.5	0.15	19980706	263.19715	285.12361	55.51663	16.52103	0.2654078	2.5578236	40	5	1987–1998	0.80	M-v	2	Williams	28315	1987 XC
1988 CK ₄	13.0	0.15	19980706	20.13959	345.50769	291.40964	12.03018	0.1541619	2.6872747	23	4	1954–1998	0.76	M-v	2	Williams	22951	1988 CK ₄
1988 DF ₂	13.5	0.15	19980706	170.21730	92.83193	350.94868	2.95862	0.0665406	2.6773507	36	6	1971–1998	0.80	M-v	1	Williams	29133	1988 DF ₂
1988 DF ₃	14.5	0.15	19980706	147.98591	120.40246	266.13842	6.58112	0.1274571	2.2435767	24	2	1988–1998	0.65	M-v	6	Williams	31377	1988 DF ₃
1988 PC ₁	13.0	0.15	19980706	247.10099	128.82532	243.59642	19.05973	0.2176813	3.1484901	25	4	1955–1998	0.75	M-v	1	Williams	31581	1988 PC ₁
1988 PD ₁	14.0	0.15	19980706	257.84391	178.21200	172.51591	25.51471	0.2179948	2.3358347	43	4	1988–1998	0.81	M-v	3	Williams	31783	1988 PD ₁
1988 PN ₁	14.5	0.15	19980706	213.97569	200.01606	155.81319	3.01360	0.1993639	2.4137631	27	2	1988–1998	0.81	M-v	4	Williams	31783	1988 PN ₁
1988 RK	14.0	0.15	19980706	202.34128	193.29614	176.46180	12.67265	0.1860510	2.4268175	44	4	1954–1998	0.81	M-v	2	Williams	31783	1988 RK
1988 RG ₁	10.5	0.15	19980706	321.60807	158.10481	159.90780	23.85578	0.0649013	5.2705728	45	9	1950–1998	0.83	M-v	0	Williams	27119	1988 RG ₁
1988 RM ₃	14.0	0.15	19980706	244.94514	354.30167	356.18615	8.58737	0.1451043	2.3833450	33	2	1988–1998	0.71	M-v	5	Williams	31713	1988 RM ₃
1988 RW ₃	13.5	0.15	19980706	295.68196	293.54371	22.15013	1.69662	0.1442603	3.1749265	29	4	1981–1998	0.68	M-v	2	Williams	21972	1988 RW ₃
1988 RZ ₅	14.5	0.15	19980706	253.91079	166.03006	170.80027	3.37006	0.1135678	2.3637026	74	3	1988–1998	0.78	M-v	3	Williams	31713	1988 RZ ₅

1988 RL ₆	14.5	0.15	19980706	240.65233	180.26778	160.01586	7.33156	0.1484940	2.3929660	48	2	1988–1998	0.57	M-v	4	Williams	31783	1988 RL ₆
1988 RM ₇	14.5	0.15	19980706	328.40784	6.29618	297.48242	1.35165	0.1929935	3.0458023	37	4	1988–1998	0.81	M-v	2	Williams	22969	1988 RM ₇
1988 RF ₉	15.0	0.15	19980706	40.27164	148.24501	97.81361	2.52030	0.1662845	2.2503280	42	8	1950–1998	0.80	M-v	1	Williams	29656	1988 RF ₉
1988 SN	13.5	0.15	19980706	228.60494	21.00658	1.14812	6.82629	0.1331749	2.3831287	38	3	1988–1998	0.86	M-v	3	Williams	31783	1988 SN
1988 SN ₁	14.5	0.15	19980706	281.11516	210.55009	114.79969	7.55125	0.1651673	2.3430616	47	4	1988–1998	0.80	M-v	2	Williams	31783	1988 SN ₁
1988 SM ₂	14.0	0.15	19980706	283.83003	164.94526	140.42377	1.95138	0.1407158	3.2372822	20	3	1988–1998	0.77	M-v	4	Williams	31714	1988 SM ₂
1988 ST ₂	13.5	0.15	19980706	297.32739	228.61166	80.76851	2.24514	0.1317607	3.1847557	46	3	1981–1998	0.69	M-v	4	Williams	31714	1988 ST ₂
1988 TE	14.0	0.15	19980706	231.67194	97.63709	261.68965	1.17428	0.2243257	2.4032440	58	4	1976–1998	0.96	M-v	2	Williams	31783	1988 TE
1988 TG	14.0	0.15	19980706	183.76859	197.17388	204.36740	25.11595	0.2762972	2.4451697	50	3	1988–1998	0.84	M-v	3	Williams	31783	1988 TG
1988 TM ₁	14.0	0.15	19980706	192.87119	193.53765	213.40186	1.79759	0.1878221	2.4202245	34	4	1982–1998	0.80	M-v	1	Williams	31783	1988 TM ₁
1988 VH ₁	14.0	0.15	19980706	121.82223	182.07078	239.16448	4.52761	0.2952369	2.5574350	74	5	1984–1998	0.75	M-v	3	Williams	31783	1988 VH ₁
1988 VR ₃	14.0	0.15	19980706	231.99156	194.24796	183.34268	2.24990	0.2042931	2.4136751	47	4	1988–1998	0.81	M-v	3	Williams	31783	1988 VR ₃
1988 VN ₅	14.5	0.15	19980706	164.49552	281.82980	160.82836	2.54817	0.1661312	2.4358138	41	3	1988–1998	0.64	M-v	3	Williams	29912	1988 VN ₅
1988 VE ₇	14.0	0.15	19980706	142.28689	292.24358	138.69637	6.69467	0.2184399	2.5251134	44	5	1976–1998	0.67	M-v	3	Williams	31783	1988 VE ₇
1988 VM ₉	14.0	0.15	19980706	152.78822	60.42812	27.77780	7.10153	0.1732843	2.4412925	55	6	1969–1998	0.78	M-v	2	Williams	29134	1988 VM ₉
1988 XL	14.0	0.15	19980706	233.75527	120.14382	220.68718	3.05677	0.1318552	2.4878093	52	2	1988–1998	0.66	M-v	5	Williams	31783	1988 XL
1988 XB ₂	14.5	0.15	19980706	247.18328	15.00602	354.07676	3.13061	0.1961060	2.3889882	20	3	1988–1998	0.84	M-v	3	Williams	29610	1988 XB ₂
1989 AW ₅	14.0	0.15	19980706	117.51059	354.19265	95.64287	3.11430	0.1081053	2.6078304	43	3	1989–1998	0.81	M-v	4	Williams	31783	1989 AW ₅
1989 AG ₇	14.0	0.15	19980706	340.15168	121.82806	134.79018	12.68168	0.1364313	2.6138676	34	2	1989–1998	0.58	M-v	4	Williams	31714	1989 AG ₇
1989 BE ₁	13.5	0.15	19980706	193.16959	332.54679	108.16409	4.05194	0.1577098	2.4501481	25	7	1980–1998	0.74	M-v	1	Marsden	31416	1989 BE ₁
1989 GM	13.5	0.15	19980706	5.75719	140.51215	115.88912	17.83647	0.1598499	2.6613836	43	6	1989–1998	0.71	M-v	1	Marsden	26189	1989 GM
1989 GS ₄	14.0	0.15	19980706	312.48546	95.41820	176.31986	2.34550	0.1501514	2.7570995	63	3	1989–1998	0.63	M-v	3	Williams	31783	1989 GS ₄
1989 RL	14.5	0.15	19980706	242.15282	155.28811	176.94666	3.09138	0.1813350	2.2221761	31	2	1989–1998	0.92	M-v	4	Williams	31783	1989 RL
1989 SO	12.0	0.15	19980706	177.00660	152.82307	254.22852	4.88091	0.1654860	3.1865510	47	4	1987–1998	0.80	M-v	2	Williams	31783	1989 SO
1989 SR	12.5	0.15	19980706	249.99170	130.43499	240.15981	8.88435	0.0981155	2.9873684	23	3	1989–1998	0.99	M-v	4	Williams	23973	1989 SR
1989 SZ ₁	15.0	0.15	19980706	347.10909	101.88280	158.89687	4.17566	0.1599157	2.1946134	45	4	1953–1998	0.81	M-v	3	Williams	31783	1989 SZ ₁
1989 SV ₂	13.5	0.15	19980706	54.64627	146.00049	44.20845	10.41716	0.0380325	3.0671954	41	3	1989–1998	0.88	M-v	4	Williams	26419	1989 SV ₂
1989 SD ₃	14.5	0.15	19980706	206.82096	340.84227	41.95513	4.95836	0.1557842	2.2532873	44	3	1989–1998	0.82	M-v	4	Williams	31783	1989 SD ₃
1989 SN ₃	13.5	0.15	19980706	233.19889	185.42926	173.53204	5.35374	0.1740747	3.0876379	29	3	1989–1998	0.95	M-v	4	Williams	31783	1989 SN ₃
1989 SP ₃	14.5	0.15	19980706	70.45072	298.54649	192.37226	22.09920	0.3187868	2.3655826	34	2	1989–1998	0.89	M-v	5	Williams	31714	1989 SP ₃
1989 SV ₃	15.5	0.15	19980706	122.22986	260.42040	159.68019	4.32220	0.2183112	2.3586550	56	4	1989–1998	0.88	M-v	1	Williams	31783	1989 SV ₃
1989 SB ₄	15.0	0.15	19980706	96.86542	344.05672	121.52221	4.08107	0.1737470	2.3312660	49	3	1989–1998	0.84	M-v	2	Williams	31714	1989 SB ₄
1989 SC ₄	13.0	0.15	19980706	72.32369	323.04534	191.96094	21.57362	0.0614965	3.1592694	37	3	1989–1998	0.72	M-v	2	Williams	26739	1989 SC ₄
1989 SM ₄	13.5	0.15	19980706	248.71752	248.85513	109.12705	2.51683	0.1314825	3.0458346	32	4	1989–1998	0.87	M-v	2	Williams	31783	1989 SM ₄
1989 SA ₁₀	15.0	0.15	19980706	113.95284	75.82292	4.65396	7.65906	0.0804393	2.2968609	39	2	1989–1998	0.63	M-v	5	Williams	31783	1989 SA ₁₀
1989 TW	14.5	0.15	19980706	235.34933	84.50325	285.00566	4.63766	0.1616744	2.2251895	27	3	1989–1998	0.88	M-v	4	Williams	31783	1989 TW
1989 TT ₂	13.0	0.15	19980706	228.31382	234.74405	125.58340	6.28053	0.1654152	3.1222131	30	3	1989–1998	0.70	M-v	4	Williams	31783	1989 TT ₂
1989 TY ₄	15.5	0.15	19980706	307.53164	115.98375	164.04115	5.92672	0.1569846	2.2289237	65	4	1989–1998	0.84	M-v	2	Williams	31783	1989 TY ₄
1989 TP ₇	15.5	0.15	19980706	82.61571	18.84633	140.28329	5.40570	0.0743172	2.2390015	30	3	1984–1998	0.71	M-v	4	Williams	25062	1989 TP ₇
1989 TY ₁₀	14.5	0.15	19980706	199.82180	180.22678	197.87759	4.91566	0.2227187	2.2717525	37	6	1955–1998	0.92	M-v	2	Williams	31783	1989 TY ₁₀
1989 TO ₁₅	15.5	0.15	19980706	145.40542	221.15303	199.57153	2.57514	0.2314492	2.3100530	31	3	1989–1998	0.57	M-v	4	Williams	25080	1989 TO ₁₅
1989 UM ₁	14.5	0.15	19980706	223.01709	306.89291	55.66096	3.06206	0.1933637	2.2652478	52	3	1989–1998	0.83	M-v	4	Williams	31783	1989 UM ₁
1989 UP ₁	13.5	0.15	19980706	170.07649	304.94869	81.88485	6.71024	0.1998782	2.3262090	22	5	1982–1998	0.95	M-v	3	Williams	28316	1989 UP ₁
1989 UV ₁	13.5	0.15	19980706	231.29851	319.02524	20.56967	0.74230	0.2185958	3.1141232	33	5	1978–1998	0.86	M-v	2	Williams	31783	1989 UV ₁
1989 UU ₃	14.5	0.15	19980706	196.11496	209.84583	190.04037	3.35766	0.1746700	2.2675822	34	5	1989–1998	0.93	M-v	2	Williams	31784	1989 UU ₃
1989 WR	14.0	0.15	19980706	225.34979	327.53264	25.90752	6.83994	0.1814511	2.2704591	40	4	1955–1998	0.78	M-v	2	Williams	31582	1989 WR
1989 WZ ₁	14.0	0.15	19980706	133.22509	353.03525	57.95930	3.27430	0.1916826	2.3859898	30	2	1989–1998	0.86	M-v	4	Williams	31784	1989 WZ ₁
1989 WS ₂	13.5	0.15	19980706	193.25547	318.38560	107.20877	7.40249	0.1359693	2.2541451	23	4	1989–1998	0.79	M-v	2	Williams	29134	1989 WS ₂
1989 WU ₂	13.0	0.15	19980706	223.79806	320.51496	84.01371	3.00909	0.1921011	3.0905577	39	8	1978–1998	0.73	M-v	1	Williams	29657	1989 WU ₂
1989 WK ₄	14.5	0.15	19980706	97.71163	45.03998	107.90856	5.13741	0.1015951	2.2864591	29	6	1980–1998	0.96	M-v	1	Williams	28613	1989 WK ₄
1989 YV ₄	15.0	0.15	19980706	112.54979	74.44791	33.87114	1.57432	0.1269329	2.3973446	28	5	1976–1998	0.78	M-v	2	Williams	31784	1989 YV ₄
1989 YX ₆	14.0	0.15	19980706	126.57922	326.11189	113.11808	5.17865	0.2051367	2.3815943	48	4	1989–1998	0.75	M-v	3	Williams	31784	1989 YX ₆
1990 AD	11.5	0.15	19980706	234.33097	303.13400	100.99053	16.03120	0.2162770	3.1431893	34	4	1990–1998	0.80	M-v	2	Williams	29941	1990 AD

1990 BF	13.5	0.15	19980706	130.05239	156.04784	324.36327	4.46932	0.1035001	2.3363494	32	6	1958–1998	0.72	M-v	1	Williams	27933	1990 BF
1990 BC ₂	14.5	0.15	19980706	55.44141	313.93129	203.80275	5.98134	0.0694126	2.4284717	57	3	1990–1998	0.69	M-v	3	Williams	31784	1990 BC ₂
1990 DW ₂	12.0	0.15	19980706	39.04018	262.30346	338.00058	1.95854	0.0251019	3.3650872	31	6	1978–1998	0.73	M-v	1	Williams	30895	1990 DW ₂
1990 EK	13.5	0.15	19980706	80.33743	248.95064	184.40699	7.40271	0.3011820	2.5408897	28	3	1964–1998	0.65	M-v	3	Williams	31784	1990 EK
1990 EC ₁	15.5	0.15	19980706	32.98464	6.10467	204.64088	9.87911	0.1162529	2.4400486	29	3	1990–1998	0.63	M-v	5	Williams	23514	1990 EC ₁
1990 EM ₁	14.0	0.15	19980706	281.49987	92.52677	234.37084	5.38797	0.1561430	2.4307583	61	3	1990–1998	0.57	M-v	2	Williams	31784	1990 EM ₁
1990 GS	14.0	0.15	19980706	252.63167	308.39669	359.33117	11.42625	0.0625128	2.5350870	44	5	1954–1998	0.77	M-v	3	Williams	31784	1990 GS
1990 HP	15.0	0.15	19980706	12.03040	187.61677	32.23278	21.55539	0.0506762	1.9404974	47	4	1980–1998	0.70	M-v	2	Williams	31784	1990 HP
1990 KD	14.5	0.15	19980706	342.64238	164.00483	101.70493	13.76712	0.2509598	2.5442698	34	2	1990–1998	0.63	M-v	4	Williams	31715	1990 KD
1990 KN ₁	16.0	0.15	19980706	108.41519	255.39437	240.24671	19.14532	0.0706926	1.9282633	34	3	1990–1998	0.72	M-v	3	Williams	28614	1990 KN ₁
1990 OZ	14.0	0.15	19980706	313.82899	94.02214	182.22274	12.81861	0.1586315	2.6806415	42	2	1990–1998	0.64	M-v	4	Williams	31784	1990 OZ
1990 OY ₁	13.5	0.15	19980706	350.05153	209.76998	72.98801	5.80423	0.1701135	2.5983986	18	4	1989–1998	0.79	M-v	2	Williams	30652	1990 OY ₁
1990 OO ₂	12.5	0.15	19980706	314.45375	353.72649	330.36960	15.07795	0.1389813	2.6010205	28	9	1975–1998	0.79	M-v	2	Williams	29316	1990 OO ₂
1990 OE ₄	13.5	0.15	19980706	255.26130	113.75232	210.96994	7.36357	0.3027646	2.7754974	20	4	1953–1998	0.87	M-v	2	Williams	31784	1990 OE ₄
1990 QR	13.0	0.15	19980706	337.16054	123.44676	169.21232	13.55871	0.1709517	2.6193381	54	4	1990–1998	0.98	M-v	3	Williams	29657	1990 QR
1990 QR ₁	13.5	0.15	19980706	266.54479	194.05565	129.46648	1.13179	0.0655392	2.7836236	73	3	1990–1998	0.72	M-v	4	Williams	31784	1990 QR ₁
1990 QF ₂	13.5	0.15	19980706	248.05407	182.06097	131.58530	3.10077	0.0466641	2.8795629	42	4	1988–1998	0.78	M-v	2	Williams	31715	1990 QF ₂
1990 QZ ₅	13.0	0.15	19980706	172.53589	246.05591	159.88888	12.96002	0.1576314	2.8584058	76	3	1988–1998	0.78	M-v	3	Williams	31784	1990 QZ ₅
1990 QO ₆	14.0	0.15	19980706	296.54016	179.21898	157.72846	13.69186	0.1718487	2.6542050	30	3	1977–1998	0.63	M-v	3	Williams	22273	1990 QO ₆
1990 QK ₇	13.5	0.15	19980706	115.97551	272.92034	156.45031	10.39027	0.1029161	2.9814965	44	3	1990–1998	0.65	M-v	3	Williams	31784	1990 QK ₇
1990 QU ₇	13.5	0.15	19980706	109.21629	309.53370	148.05901	7.37629	0.1866457	2.9089084	39	3	1990–1998	0.55	M-v	3	Williams	25974	1990 QU ₇
1990 QB ₈	14.0	0.15	19980706	116.03460	331.41584	151.03524	6.54431	0.0544690	2.7575268	24	3	1990–1998	0.85	M-v	4	Williams	23515	1990 QB ₈
1990 QX ₈	13.5	0.15	19980706	196.16670	340.76240	17.86538	2.11680	0.0710780	2.8949612	51	3	1990–1998	0.87	M-v	4	Williams	31784	1990 QX ₈
1990 QM ₉	14.5	0.15	19980706	299.55255	281.89460	14.05568	4.44666	0.0546400	2.7463555	30	3	1990–1998	0.79	M-v	4	Williams	31784	1990 QM ₉
1990 QW ₉	14.0	0.15	19980706	357.87320	104.23558	171.19983	11.29240	0.2825962	2.5968449	25	3	1990–1998	0.71	M-v	4	Williams	24895	1990 QW ₉
1990 RF	11.5	0.15	19980706	106.11949	196.75087	174.65369	16.43903	0.0588007	3.2157755	35	4	1990–1998	0.63	M-v	1	Williams	25649	1990 RF
1990 RD ₁	12.5	0.15	19980706	81.79781	245.32435	169.68923	9.57595	0.0718199	3.1690641	36	4	1985–1998	0.71	M-v	1	Williams	31379	1990 RD ₁
1990 RK ₂	15.0	0.15	19980706	200.18516	162.22817	176.88285	2.35915	0.0686119	2.1298817	25	5	1990–1998	0.70	M-v	2	Williams	31583	1990 RK ₂
1990 RO ₆	14.0	0.15	19980706	240.12779	302.66702	356.03739	1.69946	0.0857015	2.9247093	38	3	1986–1998	0.73	M-v	5	Williams	31379	1990 RO ₆
1990 SH ₁	13.5	0.15	19980706	250.32722	176.95216	207.10407	9.04756	0.2880490	2.7318817	37	8	1904–1998	0.88	M-v	2	Williams	29658	1990 SH ₁
1990 SB ₆	14.0	0.15	19980706	172.89280	265.94204	125.20546	3.26973	0.1073117	2.9427461	43	4	1990–1998	0.85	M-v	2	Williams	31784	1990 SB ₆
1990 SH ₇	14.0	0.15	19980706	213.78935	253.28176	92.57067	3.07786	0.0759790	2.9160181	43	3	1990–1998	0.70	M-v	4	Williams	31784	1990 SH ₇
1990 SS ₇	13.0	0.15	19980706	131.06378	350.11480	87.80410	3.30890	0.0968514	2.9284681	32	2	1990–1998	0.69	M-v	5	Williams	31716	1990 SS ₇
1990 SS ₈	14.0	0.15	19980706	217.30338	159.93592	163.84532	10.47369	0.0923912	2.9759380	18	2	1990–1998	0.80	M-v	5	Williams	31716	1990 SS ₈
1990 SJ ₁₆	12.5	0.15	19980706	134.77681	72.04194	297.88720	5.20156	0.2153809	3.1013999	20	5	1952–1998	0.67	M-v	2	Williams	29658	1990 SJ ₁₆
1990 TS ₁	13.5	0.15	19980706	150.96987	52.23995	346.33045	5.64347	0.1910948	3.0380033	32	3	1990–1998	0.67	M-v	4	Williams	31583	1990 TS ₁
1990 TC ₄	13.5	0.15	19980706	165.87434	160.32182	227.68372	1.43193	0.0947450	3.0383221	50	3	1990–1998	0.73	M-v	4	Williams	31784	1990 TC ₄
1990 TT ₄	13.0	0.15	19980706	132.77714	234.99504	163.46746	10.82603	0.2257011	3.1522205	35	2	1990–1998	0.82	M-v	4	Williams	31784	1990 TT ₄
1990 TE ₇	13.5	0.15	19980706	195.30826	166.76336	211.37824	9.08898	0.0927148	2.9736665	39	4	1980–1998	0.72	M-v	3	Williams	31784	1990 TE ₇
1990 TG ₈	13.0	0.15	19980706	107.78600	61.62065	38.52426	17.38010	0.2235293	3.0945827	45	3	1990–1998	0.74	M-v	2	Williams	31784	1990 TG ₈
1990 UB ₁	12.0	0.15	19980706	131.74182	15.46741	32.90393	14.76202	0.1500783	3.1484355	40	3	1990–1998	0.68	M-v	3	Williams	31784	1990 UB ₁
1990 UD ₃	13.5	0.15	19980706	262.95018	142.17157	228.22504	7.85700	0.2915681	2.7473884	16	4	1981–1998	0.95	M-v	2	Williams	26925	1990 UD ₃
1990 VS ₅	13.0	0.15	19980706	244.60402	313.79795	97.99236	10.44613	0.1546249	2.7616838	26	4	1973–1998	0.63	M-v	1	Williams	26925	1990 VS ₅
1990 VK ₆	13.0	0.15	19980706	224.14220	144.94480	193.41508	12.13063	0.1888743	3.0313542	39	4	1979–1998	0.81	M-v	4	Williams	31784	1990 VK ₆
1990 VX ₆	14.0	0.15	19980706	219.56398	249.78253	101.84589	11.23535	0.1127173	2.9835266	22	3	1990–1998	0.59	M-v	2	Williams	31784	1990 VX ₆
1990 VZ ₆	13.0	0.15	19980706	116.92321	71.99158	24.29742	8.48161	0.1972555	3.1234664	31	4	1976–1998	0.82	M-v	2	Williams	31784	1990 VZ ₆
1990 VF ₈	13.0	0.15	19980706	284.40839	328.28065	25.08346	8.33303	0.1806390	2.7358940	13	3	1990–1998	0.54	M-v	4	Williams	31530	1990 VF ₈
1990 VH ₁₂	13.0	0.15	19980706	203.14305	171.90831	199.82859	9.42555	0.0584480	3.0340555	57	3	1979–1998	0.71	M-v	3	Williams	31784	1990 VH ₁₂
1990 VN ₁₄	13.0	0.15	19980706	111.25441	301.45878	127.58713	2.23379	0.1653263	3.1744513	39	3	1986–1998	0.61	M-v	2	Williams	31784	1990 VN ₁₄
1990 WM ₁	14.0	0.15	19980706	168.74838	279.50899	139.97559	6.87592	0.1335000	2.9865487	15	3	1990–1998	0.49	M-v	3	Williams	23860	1990 WM ₁
1990 WB ₄	12.0	0.15	19980706	118.73043	205.17432	270.59449	9.59809	0.0804233	3.0089628	31	4	1990–1998	0.73	M-v	1	Williams	29134	1990 WB ₄
1990 WR ₅	13.5	0.15	19980706	235.43175	240.28092	97.82831	10.09900	0.0888991	3.0014992	32	3	1990–1998	0.72	M-v	3	Williams	31716	1990 WR ₅
1990 WC ₉	12.5	0.15	19980706	162.19966	339.32651	65.94568	12.33038	0.0615942	3.0425551	44	3	1990–1998	0.60	M-v	3	Williams	31583	1990 WC ₉

1991 AB ₂	14.0	0.15	19980706	40.45730	332.58230	175.68184	4.02787	0.1251333	2.2673221	29	3	1991–1998	0.60	M-v	3	Williams	31785	1991 AB ₂
1991 AY ₂	15.5	0.15	19980706	357.34589	253.48896	328.52074	0.74822	0.1013935	2.2410921	43	3	1991–1998	0.69	M-v	3	Williams	31785	1991 AY ₂
1991 BX	12.5	0.15	19980706	134.60465	219.41561	246.31101	4.12159	0.1466903	3.1516781	26	5	1989–1998	1.03	M-v	1	Williams	29658	1991 BX
1991 CX	14.5	0.15	19980706	74.49870	303.94779	228.25594	2.77926	0.0662851	2.2040115	51	7	1955–1998	0.76	M-v	1	Williams	28885	1991 CX
1991 CR ₁	13.0	0.15	19980706	187.02054	313.32916	111.18485	7.86581	0.0875167	3.1482897	24	4	1984–1998	0.62	M-v	1	Williams	29658	1991 CR ₁
1991 ED	14.5	0.15	19980706	300.57399	242.15562	35.25402	7.30107	0.1073907	2.2899509	28	3	1981–1998	0.69	M-v	4	Marsden	31785	1991 ED
1991 ED ₂	14.5	0.15	19980706	60.79070	343.25235	162.20945	4.70127	0.0962283	2.2658056	58	2	1991–1998	0.56	M-v	4	Williams	31785	1991 ED ₂
1991 EN ₂	12.5	0.15	19980706	289.76110	181.29033	207.15744	1.41834	0.0947209	2.9291428	39	5	1991–1998	0.64	M-v	1	Williams	30289	1991 EN ₂
1991 EX ₂	15.0	0.15	19980706	123.91919	106.44901	345.73197	8.04401	0.0054716	2.2642034	49	2	1991–1998	0.55	M-v	4	Williams	31785	1991 EX ₂
1991 FS	14.5	0.15	19980706	50.87917	109.21399	35.72589	4.79093	0.1773167	2.3105562	28	2	1991–1998	0.60	M-v	4	Williams	31785	1991 FS
1991 FJ ₂	15.0	0.15	19980706	53.17359	356.60245	186.86182	2.97537	0.0936538	2.2421973	45	4	1949–1998	0.55	M-v	2	Williams	31785	1991 FJ ₂
1991 FN ₂	13.5	0.15	19980706	182.53703	331.06362	158.07852	3.80440	0.1003512	2.9990801	41	4	1988–1998	0.59	M-v	2	Williams	27120	1991 FN ₂
1991 FT ₂	15.0	0.15	19980706	150.86905	80.21137	9.55858	4.07033	0.0688487	2.2205237	32	3	1991–1998	0.82	M-v	4	Williams	31785	1991 FT ₂
1991 GO ₁	14.0	0.15	19980706	93.78653	251.32982	192.04237	22.70260	0.3136397	2.3405278	67	3	1975–1998	0.79	M-v	3	Williams	31785	1991 GO ₁
1991 GR ₂	14.0	0.15	19980706	290.86034	295.09123	18.57088	2.21330	0.1877864	2.3006054	82	4	1971–1998	0.65	M-v	2	Williams	31785	1991 GR ₂
1991 GU ₃	14.0	0.15	19980706	249.96401	122.00230	196.62746	6.88435	0.0933425	2.3588119	27	3	1981–1998	0.80	M-v	4	Williams	31716	1991 GU ₃
1991 GY ₄	15.0	0.15	19980706	8.27195	196.87223	59.04476	2.08018	0.0639820	2.2391210	30	4	1991–1998	0.79	M-v	2	Williams	29135	1991 GY ₄
1991 GC ₇	15.0	0.15	19980706	73.38054	137.69270	28.44492	5.18316	0.1086282	2.2662535	33	5	1953–1998	0.71	M-v	2	Williams	27934	1991 GC ₇
1991 GL ₇	15.0	0.15	19980706	156.89039	169.39499	251.82444	3.94421	0.0440273	2.3208056	37	2	1991–1998	0.68	M-v	5	Williams	31717	1991 GL ₇
1991 GP ₇	14.5	0.15	19980706	211.06331	81.34039	328.51035	2.39292	0.0936433	2.2315298	23	3	1991–1998	0.83	M-v	5	Williams	22083	1991 GP ₇
1991 GE ₈	14.5	0.15	19980706	116.47225	96.09410	15.71682	5.58547	0.0969443	2.2849128	45	3	1989–1998	0.70	M-v	3	Williams	31785	1991 GE ₈
1991 GJ ₈	15.5	0.15	19980706	63.58442	154.60966	17.97630	7.90519	0.0359208	2.2873514	34	4	1991–1998	0.64	M-v	2	Williams	31717	1991 GJ ₈
1991 GW ₈	16.5	0.15	19980706	350.33754	290.80450	308.00909	1.37776	0.1988993	2.3302935	43	3	1991–1998	0.81	M-v	5	Williams	31785	1991 GW ₈
1991 GF ₉	15.5	0.15	19980706	338.09675	89.06379	172.51484	4.43545	0.1214626	2.2926186	36	3	1977–1998	0.72	M-v	4	Williams	31717	1991 GF ₉
1991 GN ₉	15.5	0.15	19980706	87.52841	25.02453	88.35646	1.82664	0.1533395	2.3186777	60	3	1991–1998	0.76	M-v	3	Williams	31785	1991 GN ₉
1991 GN ₁₀	14.5	0.15	19980706	266.63599	243.19237	101.50506	4.77300	0.1827915	2.2710520	54	4	1991–1998	0.67	M-v	2	Williams	31785	1991 GN ₁₀
1991 JF	14.0	0.15	19980706	313.18715	23.24956	239.37884	6.21125	0.1020963	2.3774320	29	2	1991–1998	0.63	M-v	5	Williams	31717	1991 JF
1991 LB	14.5	0.15	19980706	331.67679	121.62946	218.87237	4.82734	0.1948733	2.2258149	19	3	1991–1998	0.30	M-v	3	Williams	25957	1991 LB
1991 LR	14.0	0.15	19980706	299.99789	189.23102	116.23497	14.96288	0.2324818	2.3809527	39	2	1991–1998	0.71	M-v	4	Williams	31717	1991 LR
1991 LV ₂	14.5	0.15	19980706	269.42143	222.69396	101.71749	3.40395	0.1890859	2.4098778	27	3	1991–1998	0.71	M-v	4	Williams	31785	1991 LV ₂
1991 NB ₁	14.0	0.15	19980706	279.58837	71.40782	238.05591	7.65246	0.2440155	2.4726509	26	2	1991–1998	0.82	M-v	4	Williams	31717	1991 NB ₁
1991 NV ₁	13.5	0.15	19980706	255.54376	135.47435	253.29838	6.17669	0.1214701	2.3816735	36	5	1988–1998	0.62	M-v	1	Williams	31583	1991 NV ₁
1991 NU ₃	14.0	0.15	19980706	241.88890	96.08682	286.56892	5.72116	0.1793219	2.4289273	28	3	1991–1998	0.58	M-v	4	Williams	25730	1991 NU ₃
1991 NB ₄	14.0	0.15	19980706	237.38018	157.00132	271.34993	3.72741	0.0897693	2.2854632	27	4	1991–1998	0.65	M-v	2	Williams	26189	1991 NB ₄
1991 NG ₅	15.0	0.15	19980706	324.44696	358.92146	292.89504	4.34395	0.2254884	2.3815819	22	2	1991–1998	0.65	M-v	4	Williams	31717	1991 NG ₅
1991 PH ₂	15.0	0.15	19980706	237.47592	244.51060	82.18171	1.33190	0.0864971	2.5528757	35	3	1991–1998	0.69	M-v	4	Williams	31583	1991 PH ₂
1991 PL ₂	15.0	0.15	19980706	301.52220	312.84920	338.96254	4.08491	0.1932207	2.4517257	42	2	1991–1998	0.86	M-v	4	Williams	31785	1991 PL ₂
1991 PQ ₂	15.0	0.15	19980706	335.28397	279.49333	14.77339	1.97658	0.1193878	2.3705930	17	4	1984–1998	0.64	M-v	2	Williams	30655	1991 PQ ₂
1991 PK ₃	14.0	0.15	19980706	227.62943	288.59720	57.89394	2.38768	0.1076152	2.5398705	47	3	1991–1998	0.71	M-v	4	Williams	31785	1991 PK ₃
1991 PH ₁₀	13.5	0.15	19980706	183.73203	275.94302	116.19031	1.67317	0.1500743	2.6186842	57	3	1991–1998	0.75	M-v	4	Williams	31785	1991 PH ₁₀
1991 PJ ₁₁	13.5	0.15	19980706	245.11712	87.07877	241.77223	2.88506	0.2005559	2.5903409	31	2	1991–1998	0.85	M-v	4	Williams	31785	1991 PJ ₁₁
1991 PO ₁₁	14.0	0.15	19980706	12.08455	109.51961	187.10216	6.35717	0.1234243	2.3337853	26	4	1984–1998	0.79	M-v	3	Williams	29914	1991 PO ₁₁
1991 PL ₁₃	14.5	0.15	19980706	297.38378	47.01802	268.06735	1.62708	0.1790589	2.4513950	52	3	1991–1998	0.62	M-v	2	Williams	31785	1991 PL ₁₃
1991 PG ₁₅	14.5	0.15	19980706	282.68483	247.13053	102.59424	1.66834	0.2037484	2.4302455	41	5	1990–1998	0.76	M-v	1	Williams	29943	1991 PG ₁₅
1991 PL ₁₆	14.0	0.15	19980706	254.71548	323.56531	350.62606	12.24147	0.1786248	2.5920517	29	2	1991–1998	0.81	M-v	4	Williams	31785	1991 PL ₁₆
1991 QF	14.0	0.15	19980706	230.32605	316.59153	42.24786	16.91624	0.3162881	2.5263665	25	4	1991–1998	0.65	M-v	2	Williams	31785	1991 QF
1991 RO ₂	15.0	0.15	19980706	301.43973	131.04938	206.00196	5.59782	0.2819315	2.4266773	47	3	1971–1998	0.65	M-v	3	Williams	31785	1991 RO ₂
1991 RA ₄	14.5	0.15	19980706	24.23464	27.53453	214.14995	7.71531	0.1151410	2.4708881	22	3	1991–1998	0.59	M-v	4	Williams	26169	1991 RA ₄
1991 RG ₄	16.0	0.15	19980706	308.62025	57.85213	279.56502	1.51394	0.2249520	2.4154266	27	3	1991–1998	0.76	M-v	4	Williams	29659	1991 RG ₄
1991 RN ₁₁	14.5	0.15	19980706	222.25680	299.76425	107.70230	3.20495	0.1749995	2.4286328	26	4	1988–1998	0.96	M-v	2	Williams	29659	1991 RN ₁₁
1991 RB ₁₃	14.0	0.15	19980706	166.46559	16.23739	344.12147	7.66344	0.2301985	2.7876351	27	3	1977–1998	0.70	M-v	4	Williams	31381	1991 RB ₁₃
1991 RM ₁₅	15.0	0.15	19980706	331.26908	4.15728	309.42767	2.09924	0.2234636	2.3867880	20	4	1980–1998	0.63	M-v	2	Williams	29659	1991 RM ₁₅
1991 RK ₁₆	14.0	0.15	19980706	235.48322	283.55523	61.64581	2.85448	0.1371426	2.5943833	33	2	1991–1998	0.57	M-v	4	Williams	31785	1991 RK ₁₆

1991 RQ ₁₉	15.5	0.15	19980706	302.16602	30.70154	306.17037	3.40267	0.2465920	2.4159673	17	3	1991–1998	0.68	M-v	2	Marsden	26399	1991 RQ ₁₉
1991 RP ₂₃	13.5	0.15	19980706	292.64341	265.96225	9.88386	15.02668	0.0906298	2.5926773	25	2	1991–1998	0.65	M-v	5	Marsden	31718	1991 RP ₂₃
1991 RD ₂₄	14.0	0.15	19980706	4.08892	138.41986	121.43492	5.61074	0.1052835	2.4185324	44	7	1979–1998	0.74	M-v	1	Williams	31417	1991 RD ₂₄
1991 RE ₂₅	14.5	0.15	19980706	227.09073	250.99567	136.94250	7.15693	0.2301522	2.5586369	25	3	1991–1998	0.77	M-v	4	Williams	29614	1991 RE ₂₅
1991 RT ₂₆	13.0	0.15	19980706	231.03444	161.55152	194.70133	13.20272	0.1669133	2.6184775	52	3	1991–1998	0.66	M-v	3	Williams	31786	1991 RT ₂₆
1991 RQ ₂₇	15.0	0.15	19980706	318.09241	212.70409	111.16741	4.61737	0.2232775	2.4306754	27	4	1991–1998	0.70	M-v	2	Williams	29317	1991 RQ ₂₇
1991 SO	15.0	0.15	19980706	208.03577	352.58137	54.38459	7.74984	0.3308983	2.5520804	13	4	1979–1998	0.50	M-v	4	Williams	31418	1991 SO
1991 SR	13.5	0.15	19980706	174.31809	266.88846	134.78466	15.22458	0.1084396	2.6134037	27	2	1991–1998	0.67	M-v	4	Williams	31718	1991 SR
1991 SR ₁	13.5	0.15	19980706	219.76193	158.27215	208.41245	12.79923	0.1645597	2.6075969	65	3	1949–1998	0.70	M-v	3	Williams	31786	1991 SR ₁
1991 TV ₁	14.0	0.15	19980706	238.59564	329.75069	52.32953	8.40495	0.3091279	2.5425935	42	5	1987–1998	0.77	M-v	2	Williams	31786	1991 TV ₁
1991 TC ₂	15.0	0.15	19980706	129.25420	55.38001	26.93577	24.97569	0.1198231	1.9210276	21	2	1991–1998	0.83	M-v	4	Williams	31718	1991 TC ₂
1991 TD ₄	13.5	0.15	19980706	242.42287	160.42352	174.89719	17.91426	0.2667230	2.6137348	16	2	1991–1998	0.92	M-v	6	Williams	31718	1991 TD ₄
1991 TE ₄	14.0	0.15	19980706	209.45607	352.90579	23.47947	15.19298	0.2161533	2.6574433	22	2	1991–1998	0.74	M-v	4	Williams	31786	1991 TE ₄
1991 TL ₁₃	14.5	0.15	19980706	230.71825	337.05830	13.22886	9.56495	0.1385159	2.6021719	19	2	1991–1998	0.76	M-v	4	Williams	31718	1991 TL ₁₃
1991 UC ₃	14.0	0.15	19980706	189.29425	182.16905	190.50618	3.10148	0.1915066	2.7363008	30	6	1955–1998	0.89	M-v	1	Williams	31584	1991 UC ₃
1991 VV ₁	14.0	0.15	19980706	299.83913	124.99174	229.08473	13.30100	0.2272020	2.4481767	11	3	1991–1998	0.73	M-v	4	Williams	28299	1991 VV ₁
1991 VP ₄	13.5	0.15	19980706	74.94873	309.69150	110.99599	6.73677	0.1598865	3.1109021	36	3	1980–1998	0.41	M-v	4	Williams	31275	1991 VP ₄
1991 VW ₅	14.0	0.15	19980706	335.10391	181.44189	103.32748	9.19896	0.1849494	2.5620019	46	4	1989–1998	0.76	M-v	2	Williams	28615	1991 VW ₅
1991 VC ₆	13.0	0.15	19980706	272.09737	203.58218	102.06500	8.61015	0.2477709	2.6624915	30	3	1991–1998	0.61	M-v	3	Williams	31718	1991 VC ₆
1991 VJ ₆	14.0	0.15	19980706	184.21850	181.69529	194.26455	10.40547	0.1379805	2.7924215	33	2	1991–1998	0.99	M-v	5	Williams	31719	1991 VJ ₆
1991 VZ ₈	14.5	0.15	19980706	204.27805	315.95825	59.89018	6.84559	0.1525043	2.6872418	23	2	1991–1998	0.75	M-v	5	Williams	31719	1991 VZ ₈
1991 VL ₁₀	14.0	0.15	19980706	167.26794	186.61804	165.68564	2.17467	0.0838964	2.9090686	16	3	1976–1998	0.40	M-v	5	Williams	30290	1991 VL ₁₀
1991 VY ₁₂	13.5	0.15	19980706	191.12925	147.90859	239.49592	4.21948	0.1736269	2.7310879	31	2	1991–1998	0.90	M-v	5	Williams	31719	1991 VY ₁₂
1991 WB	13.0	0.15	19980706	184.68422	315.07515	79.17086	35.98472	0.3296882	2.7476471	36	3	1977–1998	0.75	M-v	2	Williams	31786	1991 WB
1991 XD	14.5	0.15	19980706	162.02264	11.52685	65.46098	22.70669	0.1015045	1.9371857	36	2	1991–1998	0.61	M-v	3	Williams	31719	1991 XD
1991 XH	13.0	0.15	19980706	247.73703	238.29193	134.16842	13.88937	0.1633130	2.6096654	42	6	1984–1998	0.55	M-v	2	Williams	31584	1991 XH
1991 YO	13.5	0.15	19980706	270.10695	258.04401	103.83371	14.30596	0.1893880	2.6230203	26	4	1990–1998	0.81	M-v	1	Williams	26563	1991 YO
1992 AY	13.0	0.15	19980706	67.97749	18.14438	100.89720	15.38128	0.1517769	3.1276408	27	2	1992–1998	0.79	M-v	4	Williams	31719	1992 AY
1992 CZ ₁	12.5	0.15	19980706	46.22565	198.67349	322.32379	3.54955	0.1368128	3.1360273	47	3	1986–1998	0.76	M-v	5	Williams	31719	1992 CZ ₁
1992 CP ₂	13.5	0.15	19980706	351.69971	71.44154	197.87512	5.86983	0.0098404	2.7848709	33	4	1992–1998	0.63	M-v	2	Williams	29943	1992 CP ₂
1992 DC ₃	13.0	0.15	19980706	202.51370	234.58502	158.99592	2.44949	0.0918808	2.9672029	58	4	1992–1998	0.68	M-v	2	Williams	31786	1992 DC ₃
1992 DW ₅	13.0	0.15	19980706	221.55425	296.75343	42.31049	1.93197	0.2010349	3.2217183	23	5	1977–1998	0.62	M-v	2	Williams	31720	1992 DW ₅
1992 DX ₅	13.0	0.15	19980706	252.98461	207.83079	100.22152	2.61757	0.1069256	3.2478609	19	2	1992–1998	0.65	M-v	6	Williams	31786	1992 DX ₅
1992 DO ₆	14.0	0.15	19980706	248.20291	213.99002	123.14368	3.08236	0.0734474	3.0911657	43	4	1992–1998	0.76	M-v	1	Williams	31786	1992 DO ₆
1992 DO ₇	14.5	0.15	19980706	352.61455	121.13951	104.69099	3.43711	0.0906486	3.1675318	18	3	1992–1998	0.79	M-v	4	Williams	27713	1992 DO ₇
1992 DO ₈	14.0	0.15	19980706	118.57097	248.25998	178.53893	11.00945	0.0819681	3.2178315	13	2	1992–1998	0.69	M-v	6	Williams	31533	1992 DO ₈
1992 EB ₂	14.5	0.15	19980706	343.36015	65.68151	156.32285	5.96270	0.1133155	3.2248334	30	3	1992–1998	0.86	M-v	4	Williams	31786	1992 EB ₂
1992 ED ₄	13.5	0.15	19980706	65.05165	10.30667	114.01375	2.68767	0.1385126	3.1892789	46	2	1992–1998	0.50	M-v	4	Williams	31786	1992 ED ₄
1992 EG ₄	14.5	0.15	19980706	85.68822	32.66045	76.36554	3.07390	0.1300530	3.1462713	40	2	1992–1998	0.81	M-v	5	Williams	31786	1992 EG ₄
1992 ER ₄	14.0	0.15	19980706	310.21899	243.10691	69.29368	3.17560	0.0466934	2.8900853	22	3	1992–1998	0.65	M-v	5	Williams	29099	1992 ER ₄
1992 EK ₇	14.0	0.15	19980706	50.15073	135.76945	43.15345	6.63029	0.1417932	3.0809706	33	3	1992–1998	0.69	M-v	4	Williams	31786	1992 EK ₇
1992 EH ₁₁	13.0	0.15	19980706	98.53486	308.83961	155.33119	2.15925	0.1405298	3.1224060	35	3	1992–1998	0.77	M-v	4	Williams	31786	1992 EH ₁₁
1992 EY ₁₁	14.0	0.15	19980706	54.63105	70.38453	70.66907	2.53575	0.1262023	3.1982877	51	3	1992–1998	0.55	M-v	3	Williams	31786	1992 EY ₁₁
1992 EQ ₂₇	14.0	0.15	19980706	322.82618	131.41370	166.82654	1.87897	0.0707020	2.9223338	32	6	1989–1998	0.75	M-v	1	Williams	29317	1992 EQ ₂₇
1992 ER ₂₈	14.0	0.15	19980706	253.75201	220.46051	108.93172	2.50875	0.1492840	3.1073442	23	4	1989–1998	0.86	M-v	2	Williams	31786	1992 ER ₂₈
1992 EU ₂₈	13.0	0.15	19980706	276.41237	250.59383	48.95979	1.70411	0.1816652	3.2054590	30	2	1992–1998	0.64	M-v	6	Williams	31786	1992 EU ₂₈
1992 GQ	13.0	0.15	19980706	70.51392	67.28302	100.13990	9.32099	0.1636296	3.1210337	21	3	1992–1998	0.82	M-v	5	Williams	29299	1992 GQ
1992 GM ₂	15.0	0.15	19980706	293.46637	343.43783	301.56213	0.98446	0.0932878	2.1300410	29	2	1992–1998	0.70	M-v	5	Williams	31720	1992 GM ₂
1992 GZ ₄	13.5	0.15	19980706	234.58854	308.36579	73.64287	2.41988	0.0306851	3.1473725	25	5	1989–1998	0.79	M-v	1	Williams	29317	1992 GZ ₄
1992 HA ₅	12.5	0.15	19980706	303.38808	236.77021	88.36075	2.13136	0.1668464	3.1907385	38	8	1953–1998	0.70	M-v	1	Williams	29660	1992 HA ₅
1992 OV ₂	14.5	0.15	19980706	151.04151	289.88513	128.76980	8.58639	0.0875454	2.3161603	33	6	1987–1998	0.91	M-v	1	Williams	31584	1992 OV ₂
1992 OB ₃	15.0	0.15	19980706	312.09803	323.35923	305.64532	5.82652	0.1052398	2.2447516	21	2	1992–1998	0.67	M-v	6	Williams	31720	1992 OB ₃
1992 PC	15.0	0.15	19980706	264.42617	158.19005	196.81898	4.77502	0.2162531	2.1995182	35	4	1991–1998	0.72	M-v	3	Williams	31786	1992 PC

1992 PJ	15.0	0.15	19980706	9.67194	336.31096	270.45123	2.89022	0.0786268	2.1659582	31	4	1979–1998	0.61	M-v	2	Williams	29660	1992 PJ
1992 PH ₁	15.5	0.15	19980706	347.99197	320.95737	305.61607	4.16646	0.1006940	2.1709563	29	3	1991–1998	0.74	M-v	4	Williams	31786	1992 PH ₁
1992 PZ ₁	15.0	0.15	19980706	281.30324	144.03425	172.06854	4.89229	0.2160828	2.2249744	39	2	1992–1998	0.64	M-v	4	Williams	31786	1992 PZ ₁
1992 PO ₂	14.5	0.15	19980706	227.99850	149.11058	208.99997	6.10338	0.1427357	2.2934994	57	2	1992–1998	0.59	M-v	4	Williams	31786	1992 PO ₂
1992 PQ ₂	14.5	0.15	19980706	222.96051	104.36511	268.55594	5.74781	0.1272091	2.2754172	20	4	1982–1998	0.71	M-v	1	Williams	28848	1992 PQ ₂
1992 QS ₁	13.5	0.15	19980706	187.70016	310.36947	80.50345	8.88839	0.1229951	2.3666828	39	4	1983–1998	0.50	M-v	1	Marsden	31786	1992 QS ₁
1992 RM	14.5	0.15	19980706	277.05877	353.75757	5.43042	2.53321	0.1942356	2.2003597	28	4	1979–1998	0.64	M-v	2	Williams	29136	1992 RM
1992 RP ₃	14.5	0.15	19980706	69.53619	305.20056	164.54028	12.83388	0.1560007	2.4706124	22	2	1992–1998	0.67	M-v	5	Williams	31720	1992 RP ₃
1992 RS ₃	15.0	0.15	19980706	284.06454	103.79463	205.16706	2.34119	0.1406282	2.2607664	42	2	1992–1998	0.62	M-v	4	Williams	31786	1992 RS ₃
1992 RZ ₃	15.5	0.15	19980706	328.23276	46.91489	205.46923	0.65744	0.1193821	2.2779127	44	3	1992–1998	0.69	M-v	5	Williams	31786	1992 RZ ₃
1992 RL ₇	15.0	0.15	19980706	161.24484	312.46859	112.06726	2.75368	0.1780916	2.3656171	34	5	1974–1998	0.91	M-v	2	Williams	31786	1992 RL ₇
1992 SE	14.0	0.15	19980706	122.01668	220.69265	184.77232	12.86218	0.2802760	2.5684950	39	2	1992–1998	0.81	M-v	4	Williams	31786	1992 SE
1992 SF	15.0	0.15	19980706	240.03473	17.09877	3.16104	5.84334	0.1872382	2.2629770	29	5	1975–1998	0.67	M-v	2	Williams	31786	1992 SF
1992 SO	14.5	0.15	19980706	267.27936	79.11623	244.53175	5.75413	0.1644166	2.3197204	30	2	1992–1998	0.58	M-v	4	Williams	31720	1992 SO
1992 SK ₁₃	14.5	0.15	19980706	247.42045	59.60972	308.02052	4.56878	0.1809317	2.2746475	32	4	1954–1998	0.65	M-v	2	Williams	29136	1992 SK ₁₃
1992 SY ₁₄	14.0	0.15	19980706	212.44186	164.29003	239.52726	7.70487	0.1088649	2.2733791	29	4	1982–1998	0.79	M-v	2	Williams	28887	1992 SY ₁₄
1992 UJ	15.0	0.15	19980706	134.95967	95.22453	308.02140	2.36166	0.1883776	2.5434880	27	4	1988–1998	0.69	M-v	3	Williams	31585	1992 UJ
1992 UX	14.0	0.15	19980706	230.21057	305.38752	66.99113	7.62871	0.1269919	2.3394929	46	3	1992–1998	0.75	M-v	3	Williams	31787	1992 UX
1992 UY	14.5	0.15	19980706	229.70229	206.86107	179.78817	6.51820	0.1819770	2.3101947	39	3	1992–1998	0.85	M-v	3	Williams	31787	1992 UY
1992 UN ₂	15.0	0.15	19980706	189.08147	358.91991	50.30834	3.03848	0.1985133	2.3866192	29	4	1988–1998	0.89	M-v	3	Williams	31787	1992 UN ₂
1992 UT ₂	14.0	0.15	19980706	272.22854	260.20481	71.53093	6.98287	0.2103396	2.2762541	40	3	1978–1998	0.64	M-v	3	Williams	31721	1992 UT ₂
1992 UW ₂	14.5	0.15	19980706	269.21136	284.81689	54.05863	5.93463	0.2150450	2.2806973	48	2	1992–1998	0.76	M-v	4	Williams	31721	1992 UW ₂
1992 UD ₃	13.5	0.15	19980706	190.35696	180.53313	230.35593	8.15651	0.1569769	2.3740418	40	6	1955–1998	0.96	M-v	2	Williams	31787	1992 UD ₃
1992 UE ₄	14.5	0.15	19980706	193.99593	313.76152	90.87834	3.74117	0.2386422	2.3797176	20	4	1981–1998	0.50	M-v	2	Williams	29661	1992 UE ₄
1992 UJ ₆	14.5	0.15	19980706	242.08818	185.31119	205.55426	6.55746	0.1974053	2.2872745	28	3	1992–1998	0.70	M-v	3	Williams	29943	1992 UJ ₆
1992 UZ ₆	14.0	0.15	19980706	151.93405	120.87484	273.08618	3.77762	0.1792408	2.5372184	21	2	1992–1998	0.79	M-v	5	Williams	31721	1992 UZ ₆
1992 WJ	14.0	0.15	19980706	132.23524	87.12633	26.15948	2.56796	0.1542187	2.4223961	21	4	1988–1998	0.79	M-v	2	Williams	29917	1992 WJ
1992 WX	13.5	0.15	19980706	258.84087	209.15417	131.20744	5.73900	0.2083636	2.3549394	39	3	1952–1998	0.63	M-v	3	Williams	31787	1992 WX
1992 WC ₁	14.5	0.15	19980706	297.51365	81.27806	265.51337	4.71285	0.1908971	2.2378343	26	5	1955–1998	0.70	M-v	1	Williams	30290	1992 WC ₁
1992 WJ ₂	14.5	0.15	19980706	286.78392	273.46053	51.50789	7.12571	0.1483118	2.3272283	50	4	1991–1998	0.78	M-v	2	Williams	31787	1992 WJ ₂
1992 WC ₃	14.0	0.15	19980706	283.20429	271.26119	81.13911	5.72021	0.1869915	2.2708876	38	6	1951–1998	0.72	M-v	1	Williams	27730	1992 WC ₃
1992 YH	13.0	0.15	19980706	147.65998	339.33667	70.07084	13.84143	0.1937772	2.5898653	45	4	1989–1998	0.65	M-v	3	Williams	31787	1992 YH
1992 YS	14.5	0.15	19980706	265.78272	249.15410	116.22246	4.80770	0.1615007	2.3072136	30	5	1983–1998	0.71	M-v	2	Williams	29661	1992 YS
1992 YY	12.5	0.15	19980706	13.58237	324.14745	268.56151	11.39703	0.0885677	2.5313130	55	4	1959–1998	0.64	M-v	2	Williams	31787	1992 YY
1992 YC ₂	14.5	0.15	19980706	150.40268	105.36962	287.13359	1.62650	0.2200661	2.6204275	24	4	1989–1998	0.91	M-v	3	Williams	31585	1992 YC ₂
1992 YJ ₂	14.0	0.15	19980706	240.40938	289.04324	90.35484	7.55738	0.1322531	2.3888338	40	3	1992–1998	0.68	M-v	3	Williams	25975	1992 YJ ₂
1992 YM ₂	14.0	0.15	19980706	231.64780	286.26582	86.42765	7.95038	0.0983485	2.4469748	39	3	1992–1998	0.55	M-v	3	Williams	31787	1992 YM ₂
1992 YE ₄	14.5	0.15	19980706	172.93254	240.24367	150.65855	4.08260	0.2361256	2.5794118	37	3	1979–1998	0.91	M-v	4	Williams	31787	1992 YE ₄
1993 AJ	13.0	0.15	19980706	158.24106	287.00970	116.92164	13.89779	0.2017088	2.6266526	35	3	1991–1998	0.59	M-v	3	Williams	31787	1993 AJ
1993 BA	12.5	0.15	19980706	316.53270	183.33693	114.27049	14.74860	0.0615978	2.5677978	36	4	1975–1998	0.67	M-v	2	Williams	31787	1993 BA
1993 BR ₂	14.0	0.15	19980706	47.94557	125.11760	355.20228	4.66967	0.1982227	2.8656247	31	3	1991–1998	0.68	M-v	3	Williams	31787	1993 BR ₂
1993 BW ₂	17.5	0.15	19980706	231.96456	287.40076	121.17628	21.91728	0.3061314	1.3351964	127	3	1993–1998	0.61	M-v	2	Williams	31787	1993 BW ₂
1993 BR ₃	14.0	0.15	19980706	106.01460	8.79095	120.67053	13.11652	0.1017840	2.6158422	42	3	1993–1998	0.60	M-v	3	Williams	31787	1993 BR ₃
1993 BM ₅	13.5	0.15	19980706	274.46400	186.58841	96.35262	1.83857	0.0632390	2.8016001	32	2	1993–1998	0.68	M-v	5	Williams	31722	1993 BM ₅
1993 BL ₇	14.0	0.15	19980706	112.47532	181.10621	261.55158	2.86039	0.0689207	2.7558286	57	4	1991–1998	0.72	M-v	1	Williams	31787	1993 BL ₇
1993 CR ₁	13.5	0.15	19980706	68.03721	24.67390	149.44038	13.65886	0.1049988	2.6695358	28	3	1993–1998	0.76	M-v	2	Williams	28850	1993 CR ₁
1993 DV	14.0	0.15	19980706	136.21887	199.17311	262.73812	2.51715	0.1856819	2.6071985	25	3	1993–1998	0.89	M-v	6	Williams	29136	1993 DV
1993 FO	13.0	0.15	19980706	240.13526	128.19349	192.87007	1.17463	0.1707968	3.0430478	28	4	1979–1998	0.81	M-v	2	Williams	31787	1993 FO
1993 FW	7.0	0.15	19980706	321.58601	48.29885	187.93395	7.77216	0.0446166	43.4785896	61	6	1993–1998	0.51	M-v	4	Marsden	30092	1993 FW
1993 FN ₁	13.0	0.15	19980706	6.08929	142.41619	147.39649	8.86096	0.1895810	2.6037195	34	7	1952–1998	0.67	M-v	1	Williams	30291	1993 FN ₁
1993 FX ₂	14.0	0.15	19980706	220.13592	240.79728	115.56608	3.19700	0.0993356	2.8945905	33	2	1993–1998	0.59	M-v	5	Williams	31787	1993 FX ₂
1993 FG ₅	14.0	0.15	19980706	36.55951	101.62022	62.02126	2.82602	0.0595575	2.9347399	33	2	1993–1998	0.64	M-v	5	Williams	31787	1993 FG ₅
1993 FH ₅	14.0	0.15	19980706	141.59208	23.70672	45.69332	2.85286	0.0339559	2.8746473	50	3	1993–1998	0.78	M-v	5	Williams	31787	1993 FH ₅

1993 FT ₅	12.5	0.15	19980706	33.08216	336.82012	167.46435	9.85138	0.0466740	3.0582107	27	4	1977–1998	0.65	M-v	2	Williams	31722	1993 FT ₅
1993 FU ₆	14.5	0.15	19980706	17.77018	100.82481	79.98970	3.33383	0.0432921	2.9459818	25	3	1990–1998	0.71	M-v	4	Williams	31723	1993 FU ₆
1993 FM ₇	14.0	0.15	19980706	143.60393	312.75901	109.17665	3.42428	0.0161486	2.9067200	37	3	1990–1998	0.73	M-v	2	Williams	31787	1993 FM ₇
1993 FO ₈	13.5	0.15	19980706	134.68765	12.27332	88.23619	4.61322	0.0692640	2.7400827	38	3	1993–1998	0.69	M-v	4	Williams	31787	1993 FO ₈
1993 FQ ₁₀	13.5	0.15	19980706	108.43690	57.97026	21.47309	10.31731	0.1042885	2.9654974	28	3	1975–1998	0.66	M-v	4	Williams	31787	1993 FQ ₁₀
1993 FP ₁₁	14.0	0.15	19980706	110.00042	13.48015	78.15507	3.22853	0.0275988	2.9359877	25	2	1993–1998	0.63	M-v	5	Williams	31787	1993 FP ₁₁
1993 FF ₁₆	14.0	0.15	19980706	329.55032	233.60589	56.05271	5.70474	0.0898549	2.7356994	19	3	1993–1998	0.61	M-v	5	Williams	26173	1993 FF ₁₆
1993 FW ₁₆	14.5	0.15	19980706	253.30197	246.71316	71.21668	2.93002	0.0978808	2.9515492	17	2	1993–1998	0.75	M-v	7	Williams	31536	1993 FW ₁₆
1993 FM ₁₉	12.5	0.15	19980706	140.42566	290.71766	120.57155	7.17738	0.2234830	2.9289652	35	6	1982–1998	0.73	M-v	1	Williams	31787	1993 FM ₁₉
1993 FX ₂₀	14.0	0.15	19980706	245.32177	155.09117	179.54989	1.90082	0.0878758	2.9212758	33	2	1993–1998	0.92	M-v	6	Williams	31787	1993 FX ₂₀
1993 FF ₂₁	14.0	0.15	19980706	141.03080	95.62820	355.61141	3.07543	0.0603709	2.7930102	15	3	1993–1998	0.57	M-v	4	Williams	31787	1993 FF ₂₁
1993 FA ₂₃	13.0	0.15	19980706	154.46451	187.85262	211.08360	5.50136	0.0394932	3.0214492	38	3	1977–1998	0.77	M-v	4	Williams	31787	1993 FA ₂₃
1993 FS ₂₃	14.5	0.15	19980706	257.51925	19.30577	329.99106	2.31618	0.0859513	2.7891113	23	5	1990–1998	0.56	M-v	1	Williams	31787	1993 FS ₂₃
1993 FZ ₂₃	13.0	0.15	19980706	252.09011	298.49652	11.80615	16.49990	0.2195563	3.1320167	16	2	1993–1998	0.47	M-v	5	Williams	31723	1993 FZ ₂₃
1993 FZ ₂₄	14.5	0.15	19980706	255.79575	5.91881	340.82799	3.85545	0.0822588	2.7897782	18	4	1993–1998	0.73	M-v	1	Williams	29944	1993 FZ ₂₄
1993 FW ₂₆	13.5	0.15	19980706	228.51128	339.43608	356.71672	9.59860	0.0892204	2.9920140	40	2	1993–1998	0.68	M-v	4	Williams	31787	1993 FW ₂₆
1993 FX ₂₆	14.0	0.15	19980706	19.06461	240.30176	296.87220	2.79516	0.0715378	2.9937942	23	3	1993–1998	0.86	M-v	5	Williams	31536	1993 FX ₂₆
1993 FS ₂₇	14.0	0.15	19980706	238.76761	156.05494	211.61460	6.03593	0.0777588	2.7355878	36	3	1993–1998	0.61	M-v	3	Williams	31787	1993 FS ₂₇
1993 FE ₃₁	11.5	0.15	19980706	253.85288	92.98499	181.65762	21.63723	0.0559129	3.2113296	14	3	1993–1998	0.67	M-v	3	Williams	25731	1993 FE ₃₁
1993 FQ ₃₂	13.5	0.15	19980706	218.02020	312.44877	46.02234	2.55713	0.0994742	2.9303861	28	2	1993–1998	0.80	M-v	6	Williams	31723	1993 FQ ₃₂
1993 FU ₃₃	13.5	0.15	19980706	96.63626	88.36674	55.10199	4.63790	0.0903217	2.7530192	34	6	1970–1998	0.61	M-v	1	Williams	29662	1993 FU ₃₃
1993 FO ₃₆	13.5	0.15	19980706	313.63842	120.04094	179.96770	9.62342	0.1328532	2.7854264	46	6	1976–1998	0.66	M-v	2	Williams	27936	1993 FO ₃₆
1993 FK ₃₇	14.0	0.15	19980706	184.64597	350.23160	42.24732	2.55604	0.0801471	2.8825188	30	3	1993–1998	0.66	M-v	4	Williams	31723	1993 FK ₃₇
1993 FF ₄₀	13.5	0.15	19980706	220.40594	160.71856	176.84638	10.72488	0.0458455	2.9934890	26	2	1993–1998	0.75	M-v	5	Williams	31788	1993 FF ₄₀
1993 FR ₄₁	14.0	0.15	19980706	291.10948	108.23018	172.02011	1.08236	0.1621641	3.0045110	15	2	1993–1998	0.57	M-v	6	Williams	31537	1993 FR ₄₁
1993 FC ₄₂	13.5	0.15	19980706	290.24447	253.63619	11.00480	9.71038	0.0542806	3.0334446	24	2	1993–1998	0.55	M-v	4	Williams	31723	1993 FC ₄₂
1993 FB ₄₄	13.5	0.15	19980706	158.92594	203.80375	213.26300	1.51189	0.0510905	2.8638716	39	2	1993–1998	0.86	M-v	5	Williams	31724	1993 FB ₄₄
1993 FZ ₄₄	14.5	0.15	19980706	70.93583	335.07742	155.79289	2.08036	0.1076445	2.8925300	36	2	1993–1998	0.63	M-v	5	Williams	31788	1993 FZ ₄₄
1993 FJ ₄₈	14.5	0.15	19980706	341.62698	32.08944	192.64149	1.38866	0.0330382	2.9264324	24	2	1993–1998	0.78	M-v	6	Williams	31537	1993 FJ ₄₈
1993 FF ₄₉	14.0	0.15	19980706	91.24277	78.29747	6.00769	6.61734	0.2404016	2.9393233	47	3	1993–1998	0.65	M-v	3	Williams	31788	1993 FF ₄₉
1993 FH ₄₉	14.0	0.15	19980706	146.79752	227.69708	190.54921	1.64337	0.0763511	2.8953281	55	4	1990–1998	0.88	M-v	3	Williams	31788	1993 FH ₄₉
1993 FC ₅₁	14.5	0.15	19980706	210.61891	47.68026	320.92611	1.21763	0.0706838	2.8599976	37	3	1993–1998	0.73	M-v	5	Williams	31788	1993 FC ₅₁
1993 FZ ₅₇	14.5	0.15	19980706	227.60300	162.59693	216.42742	2.20587	0.1023843	2.7096030	15	3	1993–1998	0.59	M-v	4	Williams	29137	1993 FZ ₅₇
1993 FR ₅₈	13.5	0.15	19980706	145.44480	190.51778	237.00725	1.01255	0.0901974	2.8325934	76	5	1986–1998	0.77	M-v	2	Williams	31788	1993 FR ₅₈
1993 FF ₇₆	14.5	0.15	19980706	216.90884	135.97067	235.28875	1.20206	0.0061150	2.8486554	23	4	1993–1998	0.70	M-v	1	Williams	31788	1993 FF ₇₆
1993 FX ₈₁	13.0	0.15	19980706	46.63009	69.73221	83.62422	6.62336	0.1256278	2.9397256	39	5	1982–1998	0.81	M-v	2	Williams	31788	1993 FX ₈₁
1993 FF ₈₂	14.0	0.15	19980706	33.22632	168.56135	28.21917	4.72410	0.0117258	2.8074892	54	4	1986–1998	0.77	M-v	3	Williams	31788	1993 FF ₈₂
1993 FL ₈₂	14.5	0.15	19980706	16.91516	43.05596	157.97293	4.52307	0.0866965	2.8779106	18	2	1993–1998	0.95	M-v	5	Williams	31724	1993 FL ₈₂
1993 GL	13.0	0.15	19980706	342.78764	206.13581	48.87092	2.74998	0.0288923	2.8659847	52	3	1993–1998	0.56	M-v	4	Williams	31788	1993 GL
1993 GR	13.0	0.15	19980706	36.42489	171.39381	39.85708	4.29222	0.1249017	2.8086560	36	6	1976–1998	0.86	M-v	2	Williams	29944	1993 GR
1993 HR	12.5	0.15	19980706	311.78963	296.81692	19.23353	7.67466	0.1484740	2.8025805	27	6	1971–1998	0.84	M-v	2	Williams	30451	1993 HR
1993 HJ ₃	13.5	0.15	19980706	108.75509	359.74700	104.67979	3.20222	0.0326356	2.8988876	47	3	1993–1998	0.74	M-v	4	Williams	31788	1993 HJ ₃
1993 KB ₂	12.0	0.15	19980706	317.63689	97.79929	176.03874	18.20386	0.1599997	3.1059121	60	3	1992–1998	0.76	M-v	3	Williams	31788	1993 KB ₂
1993 LE	13.0	0.15	19980706	340.91959	144.33388	132.13245	11.92013	0.0815144	3.0214266	29	3	1993–1998	0.58	M-v	5	Williams	29103	1993 LE
1993 MK	14.0	0.15	19980706	257.81067	236.90360	112.46472	24.49622	0.0920122	1.9438492	25	3	1992–1998	0.51	M-v	3	Williams	31788	1993 MK
1993 OV	14.5	0.15	19980706	199.92443	170.98675	248.03659	19.56954	0.1183881	1.9129094	24	4	1991–1998	0.81	M-v	2	Williams	28888	1993 OV
1993 OW ₁	14.5	0.15	19980706	274.27290	212.69676	128.08508	27.35275	0.0962652	1.9414027	27	4	1992–1998	0.60	M-v	2	Williams	31788	1993 OW ₁
1993 OH ₅	14.0	0.15	19980706	358.09783	113.66123	142.72488	0.86965	0.1113399	3.1173052	30	3	1993–1998	0.72	M-v	6	Williams	29301	1993 OH ₅
1993 PZ ₂	12.0	0.15	19980706	212.67216	120.10977	220.91082	4.85034	0.2638778	3.9416593	37	7	1978–1998	0.93	M-v	1	Williams	31586	1993 PZ ₂
1993 PK ₇	13.5	0.15	19980706	315.30196	231.52871	87.79655	0.20952	0.1926383	3.2189979	21	3	1976–1998	0.84	M-v	4	Williams	28616	1993 PK ₇
1993 QB ₃	14.5	0.15	19980706	125.50871	250.30177	146.72414	20.13691	0.2991777	2.2308122	19	2	1993–1998	0.96	M-v	4	Williams	31586	1993 QB ₃
1993 TU ₂₀	14.5	0.15	19980706	345.17014	142.16931	28.03959	9.14919	0.1589120	2.3104958	22	4	1988–1998	0.83	M-v	2	Williams	25340	1993 TU ₂₀
1993 TJ ₂₄	16.5	0.15	19980706	164.73322	264.55760	123.30658	2.25475	0.1179079	2.1759731	19	3	1993–1998	0.54	M-v	4	Williams	27715	1993 TJ ₂₄

1993 WB	15.5	0.15	19980706	75.31998	123.10673	337.88270	1.74185	0.1829119	2.3314340	61	3	1993–1998	0.88	M-v	4	Williams	31788	1993 WB
1993 XQ ₁	14.5	0.15	19980706	203.34337	200.47635	204.48641	2.15736	0.0515480	2.1655172	32	4	1989–1998	0.75	M-v	2	Williams	31788	1993 XQ ₁
1993 YG	15.0	0.15	19980706	131.99025	138.64058	286.45124	2.80151	0.1403347	2.3107152	35	2	1993–1998	0.76	M-v	5	Williams	31788	1993 YG
1994 AC	14.5	0.15	19980706	179.99737	160.89070	255.35898	3.15334	0.0929466	2.1779167	46	3	1991–1998	0.58	M-v	3	Williams	31788	1994 AC
1994 AG	15.0	0.15	19980706	130.98905	246.51495	192.91240	1.48440	0.1532913	2.2707489	46	3	1994–1998	0.80	M-v	4	Williams	31788	1994 AG
1994 AS	13.0	0.15	19980706	182.96298	202.16232	31.78188	1.80847	0.1631927	3.1083664	23	4	1981–1997	0.66	M-v	1	Williams	31788	1994 AS
1994 AU	15.0	0.15	19980706	104.01447	37.42756	37.72055	2.56601	0.1752861	2.3752441	30	2	1994–1998	0.83	M-v	5	Williams	31539	1994 AU
1994 AG ₁	15.0	0.15	19980706	44.96746	14.86388	159.50984	5.12728	0.1680838	2.3609580	38	2	1994–1998	0.68	M-v	4	Williams	31724	1994 AG ₁
1994 AS ₂	15.0	0.15	19980706	130.37354	35.57419	355.02435	1.85631	0.2124882	2.4297292	40	3	1994–1998	0.65	M-v	4	Williams	31586	1994 AS ₂
1994 AE ₃	16.0	0.15	19980706	13.48806	226.40974	332.55755	2.41817	0.1104176	2.3503173	41	2	1994–1998	0.68	M-v	5	Williams	31788	1994 AE ₃
1994 AB ₈	16.0	0.15	19980706	44.47061	127.01199	31.46290	1.75671	0.1203065	2.3988629	22	2	1994–1998	0.71	M-v	4	Williams	31788	1994 AB ₈
1994 AK ₁₆	14.0	0.15	19980706	78.82573	264.90226	213.63994	6.61229	0.1013835	2.3910164	27	2	1994–1998	0.69	M-v	4	Williams	31724	1994 AK ₁₆
1994 BW	15.0	0.15	19980706	356.94050	123.35382	104.98017	7.30693	0.0916718	2.3225471	37	3	1991–1998	0.56	M-v	4	Williams	31788	1994 BW
1994 BX	15.0	0.15	19980706	34.13912	122.44457	75.32598	7.54592	0.0971051	2.3340257	44	3	1994–1998	0.52	M-v	3	Williams	31788	1994 BX
1994 BY	14.0	0.15	19980706	105.28892	107.98741	35.96715	5.16547	0.1100740	2.2246885	24	4	1989–1998	0.67	M-v	2	Williams	28888	1994 BY
1994 BF ₁	14.0	0.15	19980706	131.33042	51.24160	358.75611	3.69380	0.1996552	2.4234765	36	2	1994–1998	0.75	M-v	5	Williams	31540	1994 BF ₁
1994 CL	13.5	0.15	19980706	332.49887	255.61929	356.66728	10.94347	0.1309608	2.4195192	68	3	1994–1998	0.64	M-v	3	Williams	31789	1994 CL
1994 CA ₁	15.0	0.15	19980706	307.51866	66.98156	196.00915	4.48437	0.0671965	2.3989021	64	3	1994–1998	0.67	M-v	3	Williams	31586	1994 CA ₁
1994 CJ ₂	15.0	0.15	19980706	329.29854	84.62527	130.98423	7.67002	0.1371670	2.5653515	29	3	1991–1998	0.68	M-v	4	Williams	31276	1994 CJ ₂
1994 CS ₈	10.0	0.15	19980706	124.91217	20.11416	120.10994	6.91182	0.0202702	5.2566557	28	7	1988–1998	0.64	M-v	1	Williams	30291	1994 CS ₈
1994 CD ₉	13.5	0.15	19980706	127.27630	59.65271	6.17920	23.75061	0.2423714	2.3308436	56	3	1989–1998	0.57	M-v	4	Williams	31789	1994 CD ₉
1994 CK ₁₀	15.0	0.15	19980706	153.67084	354.20115	92.56319	3.67409	0.0976646	2.2833410	25	3	1994–1998	1.01	M-v	5	Williams	28852	1994 CK ₁₀
1994 CM ₁₁	14.5	0.15	19980706	10.73407	204.21301	39.60156	1.98845	0.2037312	2.3545940	25	3	1991–1998	0.69	M-v	4	Williams	25218	1994 CM ₁₁
1994 CM ₁₃	14.0	0.15	19980706	212.79316	325.59013	22.72825	6.74116	0.1460609	2.4853381	25	4	1976–1998	0.82	M-v	3	Williams	31586	1994 CM ₁₃
1994 CN ₁₃	14.0	0.15	19980706	253.10033	260.67045	65.06852	3.63664	0.1869641	2.4542904	20	2	1994–1998	0.80	M-v	6	Williams	31540	1994 CN ₁₃
1994 CL ₁₄	14.0	0.15	19980706	235.49695	263.97265	107.25794	5.32201	0.1133471	2.3014393	35	4	1990–1998	0.80	M-v	2	Williams	28852	1994 CL ₁₄
1994 DS	14.5	0.15	19980706	170.07020	32.55974	52.34959	4.50653	0.1118330	2.2671683	34	7	1954–1998	0.80	M-v	2	Williams	30291	1994 DS
1994 EB	14.5	0.15	19980706	78.88000	320.86011	172.56245	6.56924	0.0789278	2.4687807	66	4	1990–1998	0.68	M-v	3	Williams	31789	1994 EB
1994 EP	14.5	0.15	19980706	43.82854	120.84604	64.69031	4.92064	0.0968816	2.4306813	41	3	1992–1998	0.58	M-v	2	Williams	31789	1994 EP
1994 ER	14.5	0.15	19980706	167.99263	335.11641	114.97597	6.48156	0.1242590	2.2697365	28	7	1980–1998	0.88	M-v	2	Williams	28888	1994 ER
1994 EL ₂	14.5	0.15	19980706	8.69289	193.79579	2.27916	12.61312	0.1926963	2.5485462	32	2	1994–1998	0.73	M-v	4	Williams	31725	1994 EL ₂
1994 ES ₂	7.5	0.15	19980706	278.27368	103.14695	154.79336	1.06679	0.1142922	45.5256215	31	4	1994–1998	0.46	M-v	4	Marsden	26581	1994 ES ₂
1994 EC ₅	14.5	0.15	19980706	271.34807	328.71223	345.76088	6.14318	0.0599393	2.4147338	54	2	1994–1998	0.61	M-v	5	Williams	31789	1994 EC ₅
1994 EO ₆	14.5	0.15	19980706	193.93981	317.70394	74.06145	5.08475	0.0988424	2.3604405	33	2	1994–1998	0.93	M-v	5	Williams	31725	1994 EO ₆
1994 EG ₇	15.0	0.15	19980706	113.40808	337.35228	120.72036	7.02256	0.0976543	2.4147853	27	3	1990–1998	0.78	M-v	4	Williams	31789	1994 EG ₇
1994 EJ ₇	14.0	0.15	19980706	221.48323	293.05897	90.18237	5.99932	0.1443579	2.2896497	60	3	1994–1998	0.54	M-v	4	Williams	31789	1994 EJ ₇
1994 FF	14.0	0.15	19980706	79.20701	79.08425	129.17751	6.03325	0.1350354	2.2597218	20	3	1994–1998	0.55	M-v	3	Williams	29137	1994 FF
1994 GB ₉	14.5	0.15	19980706	79.21767	25.38613	175.12169	2.40941	0.1279985	2.3010456	24	3	1980–1998	1.05	M-v	4	Williams	23791	1994 GB ₉
1994 GD ₉	14.5	0.15	19980706	77.13579	303.04391	198.55654	22.58315	0.3172851	2.4456658	29	6	1988–1998	0.74	M-v	2	Williams	29944	1994 GD ₉
1994 HA	13.5	0.15	19980706	322.66529	69.81858	201.36525	14.37603	0.1406348	2.5883253	96	5	1990–1998	0.66	M-v	2	Williams	31789	1994 HA
1994 JB	15.0	0.15	19980706	314.27103	222.68291	65.96446	3.15778	0.1882577	2.5465293	31	2	1994–1998	0.64	M-v	5	Williams	31726	1994 JB
1994 JN	14.0	0.15	19980706	318.60197	87.25702	201.64785	13.62127	0.1959187	2.5893056	64	4	1990–1998	0.74	M-v	2	Williams	31789	1994 JN
1994 JR	13.5	0.15	19980706	332.61058	167.92214	82.85919	15.08352	0.1200319	2.5861433	55	3	1994–1998	0.63	M-v	3	Williams	31726	1994 JR
1994 JR ₁	7.5	0.15	19980706	2.36489	103.42384	144.86426	3.80082	0.1170233	39.3628811	33	4	1994–1998	0.42	M-v	4	Marsden	30291	1994 JR ₁
1994 JS ₁	14.5	0.15	19980706	21.66757	22.22274	168.82111	19.44871	0.3510239	2.6032725	63	3	1994–1998	0.61	M-v	2	Williams	31789	1994 JS ₁
1994 JU ₈	14.0	0.15	19980706	322.18793	58.25101	231.29328	15.78869	0.1216365	2.5221127	30	2	1994–1998	0.69	M-v	5	Williams	31726	1994 JU ₈
1994 JE ₉	14.0	0.15	19980706	356.08727	149.71399	118.84227	6.75287	0.1114360	2.4511233	33	3	1994–1998	0.52	M-v	4	Williams	29301	1994 JE ₉
1994 JG ₉	14.0	0.15	19980706	303.67861	202.30532	123.68649	8.98170	0.3069731	2.5514727	45	7	1954–1998	0.63	M-v	3	Williams	29318	1994 JG ₉
1994 KA	12.5	0.15	19980706	335.05061	251.53847	69.12812	23.31025	0.2720656	2.3585804	25	3	1994–1998	0.83	M-v	2	Williams	27121	1994 KA
1994 LH	15.0	0.15	19980706	347.85212	103.95060	134.75678	11.44795	0.2032857	2.6658188	27	2	1994–1998	0.47	M-v	3	Williams	31541	1994 LH
1994 NC	13.0	0.15	19980706	243.30303	236.71919	165.98216	11.97492	0.1781966	2.6870106	54	6	1981–1998	0.64	M-v	1	Williams	29945	1994 NC
1994 NR ₁	12.0	0.15	19980706	156.29167	302.68292	133.04135	11.45228	0.1903934	2.9930572	37	3	1994–1998	0.72	M-v	4	Williams	29663	1994 NR ₁
1994 PV	13.0	0.15	19980706	259.71162	182.34166	148.58604	6.19537	0.1503557	3.1350055	39	3	1994–1998	0.65	M-v	4	Williams	31789	1994 PV

1994 PB ₂	13.0	0.15	19980706	281.18603	6.90920	334.84457	1.38214	0.0714829	2.8559996	40	4	1975–1998	0.62	M-v	1	Williams	26581	1994 PB ₂
1994 PA ₁₀	15.0	0.15	19980706	334.79581	124.05449	154.01273	8.21396	0.1953657	2.8064672	24	4	1993–1998	0.59	M-v	1	Williams	29318	1994 PA ₁₀
1994 PJ ₁₃	13.0	0.15	19980706	202.59648	229.27320	159.48576	1.28404	0.1515693	3.2080137	29	3	1980–1998	0.87	M-v	5	Williams	31726	1994 PJ ₁₃
1994 PQ ₁₄	14.0	0.15	19980706	335.42821	50.34176	194.58284	4.00549	0.1052223	3.1061567	73	2	1994–1998	0.76	M-v	4	Williams	31726	1994 PQ ₁₄
1994 PG ₁₇	13.5	0.15	19980706	291.07720	28.98709	261.93641	2.16892	0.1868923	3.0767859	53	3	1994–1998	0.69	M-v	4	Williams	31789	1994 PG ₁₇
1994 PW ₁₇	14.0	0.15	19980706	273.98629	174.92329	136.73789	0.79749	0.1822467	3.0915259	27	3	1992–1998	0.92	M-v	4	Williams	31587	1994 PW ₁₇
1994 PY ₁₇	14.5	0.15	19980706	295.76554	110.48336	207.03772	1.58672	0.0755595	2.9290984	29	3	1994–1998	0.88	M-v	5	Williams	29945	1994 PY ₁₇
1994 PT ₁₉	13.5	0.15	19980706	278.97691	119.67486	183.40521	1.83479	0.1680875	3.1176428	49	3	1992–1998	0.71	M-v	4	Williams	31789	1994 PT ₁₉
1994 PF ₂₀	14.5	0.15	19980706	341.41914	269.26555	344.10431	11.00561	0.2231147	2.9052308	36	3	1978–1998	0.65	M-v	3	Williams	31727	1994 PF ₂₀
1994 PN ₂₁	13.5	0.15	19980706	182.91167	288.21031	145.07378	2.29365	0.1663850	3.0905337	34	6	1951–1998	0.92	M-v	1	Williams	30689	1994 PN ₂₁
1994 PO ₂₅	14.0	0.15	19980706	331.37941	223.31770	51.29279	2.71974	0.0515921	2.9137615	22	3	1994–1998	0.81	M-v	4	Williams	31240	1994 PO ₂₅
1994 PC ₃₄	13.0	0.15	19980706	301.43968	135.70743	155.89080	10.42228	0.0670828	2.9935654	47	3	1993–1998	0.66	M-v	3	Williams	31789	1994 PC ₃₄
1994 PD ₃₈	13.5	0.15	19980706	342.92287	71.75729	153.09835	7.57918	0.1613436	3.0966879	33	3	1992–1998	0.88	M-v	3	Williams	31789	1994 PD ₃₈
1994 RB ₁₇	13.5	0.15	19980706	289.45102	179.42860	152.59496	2.62152	0.0722619	2.8725827	39	7	1979–1998	0.78	M-v	1	Williams	29945	1994 RB ₁₇
1994 SH ₃	14.0	0.15	19980706	254.37613	112.35018	209.84561	1.21830	0.1434616	3.3382295	29	3	1994–1998	0.63	M-v	4	Williams	31789	1994 SH ₃
1994 TP	13.0	0.15	19980706	227.60411	194.93415	202.16549	7.27335	0.1191161	3.1380131	36	5	1977–1998	0.75	M-v	1	Williams	30092	1994 TP
1994 TX ₁₂	13.5	0.15	19980706	290.09833	321.15319	353.50807	0.79464	0.1691665	3.1744308	33	4	1977–1998	0.49	M-v	1	Williams	31789	1994 TX ₁₂
1994 UN ₁	12.5	0.15	19980706	235.31195	155.83516	218.01404	9.96086	0.1062159	3.3570627	49	4	1988–1998	0.86	M-v	2	Williams	31789	1994 UN ₁
1994 UH ₂	13.0	0.15	19980706	256.82117	310.23538	64.54187	3.12839	0.2018879	3.1541423	26	4	1988–1998	0.78	M-v	1	Williams	30663	1994 UH ₂
1994 VY	14.5	0.15	19980706	92.29898	291.91525	256.19036	8.81367	0.0296304	2.9680646	35	4	1994–1998	0.42	M-v	1	Williams	29945	1994 VY
1994 VR ₆	14.0	0.15	19980706	320.03217	280.98939	51.79431	30.34861	0.4262370	2.7367053	164	4	1994–1998	0.69	M-v	2	Williams	31789	1994 VR ₆
1994 WQ ₃	12.5	0.15	19980706	334.23610	170.79189	168.53158	8.40756	0.1527299	2.9091381	30	4	1994–1998	0.62	M-v	2	Williams	30093	1994 WQ ₃
1995 CG	14.5	0.15	19980706	298.29696	163.08901	137.76993	24.48902	0.0749969	1.9607251	23	2	1995–1998	0.46	M-v	4	Williams	31789	1995 CG
1995 CK	14.5	0.15	19980706	54.49071	313.16638	114.43310	7.44941	0.0884242	2.3365284	24	3	1993–1998	0.49	M-v	2	Williams	31789	1995 CK
1995 CS ₁	16.0	0.15	19980706	5.98218	71.95305	197.65134	23.09450	0.0775662	1.8596639	33	4	1980–1998	0.66	M-v	2	Williams	28889	1995 CS ₁
1995 FA ₁	15.0	0.15	19980706	334.19301	29.49596	217.49399	1.63378	0.1281301	2.1607043	50	3	1995–1998	0.62	M-v	3	Williams	31789	1995 FA ₁
1995 GA	15.5	0.15	19980706	304.30125	109.19089	137.04937	8.13435	0.1156907	2.2308011	24	2	1994–1998	0.56	M-v	4	Williams	31240	1995 GA
1995 HK	14.5	0.15	19980706	354.81545	76.73355	132.31118	2.59198	0.0938461	2.2151004	35	3	1995–1998	0.81	M-v	3	Williams	31789	1995 HK
1995 JG	14.5	0.15	19980706	169.06330	49.61364	35.38037	21.68466	0.0529694	1.9790735	37	3	1995–1998	0.59	M-v	2	Williams	29138	1995 JG
1995 KF	15.0	0.15	19980706	290.99339	118.96485	127.45178	22.76249	0.2796450	2.4246894	42	3	1991–1998	0.68	M-v	3	Marsden	25533	1995 KF
1995 OD	15.5	0.15	19980706	310.08382	341.60756	323.30635	1.29197	0.0524187	2.2944548	88	3	1995–1998	0.69	M-v	3	Williams	29138	1995 OD
1995 OJ	15.0	0.15	19980706	23.16705	72.43787	125.53279	3.08395	0.1738512	2.3442180	89	3	1980–1998	0.63	M-v	3	Williams	31789	1995 OJ
1995 OE ₁	14.5	0.15	19980706	146.90829	255.52570	153.83377	2.49241	0.0640714	2.8623779	61	3	1995–1998	0.64	M-v	3	Williams	31587	1995 OE ₁
1995 ON ₄	14.5	0.15	19980706	329.93824	104.62035	135.98195	2.77656	0.1116867	2.5654606	34	2	1995–1998	0.72	M-v	5	Williams	31790	1995 ON ₄
1995 PK	14.5	0.15	19980706	272.17680	235.15560	132.33528	5.20560	0.1293431	2.2274049	35	4	1992–1998	0.75	M-v	3	Williams	29664	1995 PK
1995 QK	15.5	0.15	19980706	270.17033	132.79611	231.20625	3.31082	0.1718074	2.3145049	19	4	1988–1998	0.63	M-v	3	Williams	28856	1995 QK
1995 QR	14.5	0.15	19980706	277.06602	278.57922	38.12392	2.72810	0.1775230	2.4387325	41	2	1995–1998	0.67	M-v	4	Williams	31728	1995 QR
1995 QB ₁	14.5	0.15	19980706	55.92963	298.38616	191.23681	2.01015	0.2006365	3.0461502	46	2	1995–1998	0.67	M-v	4	Williams	31543	1995 QB ₁
1995 QC ₂	13.5	0.15	19980706	266.67849	328.47225	338.92703	15.61968	0.1707860	2.5964670	31	4	1977–1998	0.73	M-v	2	Williams	31790	1995 QC ₂
1995 QH ₂	14.5	0.15	19980706	307.74600	276.04793	45.62086	6.89040	0.1372085	2.2747558	27	4	1964–1998	0.70	M-v	1	Williams	29946	1995 QH ₂
1995 QJ ₃	13.5	0.15	19980706	181.46739	184.16369	188.37459	13.36005	0.0717869	2.9384815	51	3	1995–1998	0.70	M-v	3	Williams	31790	1995 QJ ₃
1995 QQ ₃	14.5	0.15	19980706	229.30392	231.86245	134.44705	5.64181	0.1520272	2.5551060	44	6	1987–1998	0.62	M-v	1	Williams	31790	1995 QQ ₃
1995 QT ₃	16.5	0.15	19980706	315.81395	329.96570	327.42416	2.94235	0.2403337	2.2975269	21	2	1995–1998	0.70	M-v	4	Williams	31728	1995 QT ₃
1995 QW ₃	15.0	0.15	19980706	290.86802	88.74463	245.59555	20.99907	0.1524310	2.3140465	34	3	1995–1998	0.66	M-v	2	Williams	29108	1995 QW ₃
1995 QP ₁₀	13.5	0.15	19980706	55.32954	327.40299	162.76720	13.37720	0.1176746	3.0987421	39	3	1987–1998	0.56	M-v	3	Williams	31790	1995 QP ₁₀
1995 RK	15.0	0.15	19980706	308.10578	59.09978	248.91593	5.18724	0.1129229	2.3727322	47	3	1995–1998	0.68	M-v	3	Williams	31790	1995 RK
1995 SG	15.5	0.15	19980706	216.30747	166.38383	236.38642	1.34394	0.1352403	2.5407746	47	4	1991–1998	0.52	M-v	1	Williams	29946	1995 SG
1995 SH	14.0	0.15	19980706	37.22514	9.02700	188.95932	13.53803	0.0932079	2.6200869	79	3	1995–1998	0.49	M-v	2	Williams	31790	1995 SH
1995 SO	14.5	0.15	19980706	105.87968	285.01826	190.13147	10.11752	0.0925479	2.9937917	30	2	1995–1998	0.44	M-v	3	Williams	31728	1995 SO
1995 SC ₂	14.5	0.15	19980706	232.99559	223.61801	161.34330	6.73108	0.1257298	2.4035463	56	3	1995–1998	0.58	M-v	3	Marsden	29664	1995 SC ₂
1995 SL ₂	13.5	0.15	19980706	191.98830	240.12538	161.98308	13.23352	0.1814476	2.6445639	40	3	1995–1998	0.67	M-v	2	Williams	31790	1995 SL ₂
1995 SP ₂	15.5	0.15	19980706	288.06114	266.53203	81.79276	7.78779	0.1514589	2.3952806	42	3	1995–1998	0.53	M-v	3	Williams	29318	1995 SP ₂
1995 SX ₂	14.5	0.15	19980706	288.85237	280.70665	42.10460	3.50802	0.1918628	2.4243550	35	2	1995–1998	0.68	M-v	4	Williams	31790	1995 SX ₂

1995 SA ₃	14.5	0.15	19980706	285.22416	106.97350	253.45495	6.51851	0.2261232	2.2584582	38	7	1958–1998	0.73	M-v	2	Williams	26192	1995 SA ₃
1995 SL ₃	16.0	0.15	19980706	311.05526	52.85280	248.66926	0.61423	0.1802508	2.4262637	56	3	1995–1998	0.63	M-v	3	Williams	31790	1995 SL ₃
1995 SZ ₃	14.5	0.15	19980706	276.84170	170.22763	202.66140	6.12121	0.2397947	2.3459414	26	5	1959–1998	0.79	M-v	2	Williams	30093	1995 SZ ₃
1995 ST ₄	13.5	0.15	19980706	270.94498	214.11044	153.26142	6.91570	0.1502450	2.3656217	23	4	1955–1998	0.67	M-v	1	Williams	25966	1995 ST ₄
1995 SZ ₄	14.0	0.15	19980706	206.41410	167.51192	203.31467	2.73123	0.1160913	2.5857452	88	3	1995–1998	0.72	M-v	2	Williams	31790	1995 SZ ₄
1995 SG ₅	13.0	0.15	19980706	225.42022	326.17374	20.73936	16.60029	0.2353003	2.7916858	25	5	1981–1998	0.63	M-v	1	Williams	31587	1995 SG ₅
1995 SH ₅	14.0	0.15	19980706	172.06851	94.74656	297.32438	0.67544	0.1027780	2.9894025	75	3	1995–1998	0.51	M-v	3	Williams	31790	1995 SH ₅
1995 SR ₉	14.5	0.15	19980706	97.67647	94.72940	355.83440	12.96192	0.1254127	3.1528756	51	2	1995–1998	0.82	M-v	3	Williams	31790	1995 SR ₉
1995 SX ₁₉	13.0	0.15	19980706	225.91501	164.92895	184.61389	1.89706	0.0800094	2.8904657	57	3	1993–1998	0.58	M-v	4	Williams	31790	1995 SX ₁₉
1995 SD ₂₄	14.5	0.15	19980706	252.20582	161.47100	163.91343	5.11019	0.1052137	2.7533149	34	2	1995–1998	0.69	M-v	4	Williams	31790	1995 SD ₂₄
1995 SO ₂₆	13.5	0.15	19980706	101.05438	277.27310	197.15452	9.90784	0.0584785	2.9953446	39	2	1995–1998	0.56	M-v	3	Williams	31790	1995 SO ₂₆
1995 SR ₂₆	14.0	0.15	19980706	230.07887	144.82420	201.26895	1.70644	0.0712426	2.8791698	46	4	1985–1998	0.87	M-v	3	Williams	31790	1995 SR ₂₆
1995 SM ₂₉	13.0	0.15	19980706	163.88075	338.47923	55.28800	2.80767	0.1670903	3.1949565	37	4	1978–1998	0.97	M-v	2	Williams	31790	1995 SM ₂₉
1995 SV ₄₃	13.5	0.15	19980706	172.18009	193.78810	202.38499	7.43871	0.1206020	3.0290107	21	2	1995–1998	0.68	M-v	4	Williams	31728	1995 SV ₄₃
1995 ST ₄₈	14.5	0.15	19980706	342.65508	115.77738	98.08641	2.44826	0.1582273	2.9774762	37	2	1995–1998	0.62	M-v	4	Williams	31790	1995 ST ₄₈
1995 SK ₅₁	14.0	0.15	19980706	353.02968	208.82947	2.60902	2.16553	0.1112537	3.0342353	37	2	1995–1998	0.53	M-v	5	Williams	31728	1995 SK ₅₁
1995 SV ₅₃	14.5	0.15	19980706	57.97955	279.52605	209.03920	1.34122	0.0666794	2.9478597	41	2	1995–1998	0.69	M-v	4	Williams	31790	1995 SV ₅₃
1995 SM ₅₄	13.5	0.15	19980706	238.37331	231.68021	102.28356	3.25891	0.0779145	2.8615480	62	3	1995–1998	0.68	M-v	4	Williams	31790	1995 SM ₅₄
1995 SQ ₅₄	15.5	0.15	19980706	304.18357	257.45363	75.08286	4.09606	0.1915686	2.3433657	23	4	1988–1998	0.70	M-v	2	Williams	29946	1995 SQ ₅₄
1995 TC	14.0	0.15	19980706	270.43690	341.89461	313.63123	0.89273	0.0168545	2.9063540	94	3	1995–1998	0.58	M-v	3	Williams	31790	1995 TC
1995 TG	12.5	0.15	19980706	191.74628	301.34812	60.81145	12.18589	0.1707042	3.1062427	117	3	1995–1998	0.57	M-v	2	Williams	31790	1995 TG
1995 TN	13.5	0.15	19980706	161.74071	47.70063	1.85939	10.39030	0.0336551	3.0551187	91	3	1995–1998	0.64	M-v	3	Williams	31790	1995 TN
1995 TS	14.5	0.15	19980706	280.72677	1.18154	357.15761	0.60692	0.1857408	2.4257223	33	6	1976–1998	0.78	M-v	2	Williams	29664	1995 TS
1995 TT	13.0	0.15	19980706	220.91358	323.55006	29.05646	10.62042	0.1140323	2.9890496	66	2	1995–1998	0.58	M-v	4	Williams	31790	1995 TT
1995 UL	13.5	0.15	19980706	263.49378	329.80433	357.21266	4.65454	0.0689916	2.7542971	69	3	1995–1998	0.58	M-v	4	Williams	31790	1995 UL
1995 UB ₁	13.5	0.15	19980706	67.42327	282.19681	242.63830	8.50978	0.0202719	2.9830879	51	3	1995–1998	0.58	M-v	3	Williams	31790	1995 UB ₁
1995 UJ ₁	13.0	0.15	19980706	196.52237	174.79162	196.35445	10.10026	0.0951809	2.9835876	59	2	1995–1998	0.46	M-v	3	Williams	31790	1995 UJ ₁
1995 UP ₂	13.5	0.15	19980706	107.20682	101.29337	25.23138	10.59545	0.0614209	2.9905894	82	3	1995–1998	0.49	M-v	3	Williams	31790	1995 UP ₂
1995 UR ₂	14.0	0.15	19980706	229.09400	97.68238	273.92879	4.68391	0.2642566	2.7120994	48	4	1992–1998	0.44	M-v	2	Williams	29665	1995 UR ₂
1995 UK ₃	13.0	0.15	19980706	148.33654	212.66672	248.61865	14.35814	0.0985762	2.8637319	46	3	1995–1998	0.46	M-v	2	Williams	29319	1995 UK ₃
1995 UZ ₃	13.0	0.15	19980706	203.20742	340.52725	32.62814	22.48881	0.0222101	3.1004039	40	2	1995–1998	0.75	M-v	4	Williams	31729	1995 UZ ₃
1995 UN ₄	14.0	0.15	19980706	305.50726	95.46959	239.60630	5.41927	0.1662246	2.4711585	20	3	1987–1998	0.79	M-v	2	Williams	26760	1995 UN ₄
1995 UU ₄	12.5	0.15	19980706	222.56064	138.00896	230.43305	9.64667	0.1109532	2.9993814	53	3	1989–1998	0.59	M-v	3	Williams	31790	1995 UU ₄
1995 UF ₆	13.5	0.15	19980706	273.99054	274.45964	48.95438	12.50988	0.1876671	2.6758686	52	3	1995–1998	0.67	M-v	3	Williams	31790	1995 UF ₆
1995 UH ₆	13.5	0.15	19980706	244.41623	337.79357	34.69037	6.65144	0.0431829	2.7227304	31	4	1993–1998	0.53	M-v	1	Williams	29946	1995 UH ₆
1995 UL ₆	15.0	0.15	19980706	306.33769	354.06859	340.24611	2.21832	0.1888153	2.4246651	27	7	1971–1998	0.91	M-v	2	Williams	29139	1995 UL ₆
1995 UP ₆	14.0	0.15	19980706	277.40021	92.20045	229.96597	13.42322	0.1628633	2.5642140	60	3	1995–1998	0.63	M-v	3	Williams	31790	1995 UP ₆
1995 UE ₆	13.5	0.15	19980706	118.21358	58.30833	29.90673	8.43534	0.0144007	3.0791471	58	3	1995–1998	0.71	M-v	3	Williams	31790	1995 UE ₆
1995 UE ₈	14.0	0.15	19980706	46.46306	170.18971	35.89606	8.33381	0.0619043	2.8051687	17	4	1988–1998	0.78	M-v	4	Williams	29923	1995 UE ₈
1995 UG ₈	13.5	0.15	19980706	272.89297	5.50899	317.32088	1.10540	0.0611263	2.8757271	36	3	1995–1998	0.51	M-v	4	Williams	31729	1995 UG ₈
1995 UJ ₈	13.5	0.15	19980706	155.28173	197.44283	228.28112	11.47315	0.1706035	3.1855413	16	3	1978–1998	0.80	M-v	4	Williams	31790	1995 UJ ₈
1995 UW ₈	12.5	0.15	19980706	183.78155	12.61888	66.30465	13.75782	0.0977182	2.7456714	40	6	1986–1998	0.91	M-v	2	Williams	30292	1995 UW ₈
1995 UZ ₈	12.5	0.15	19980706	137.05666	80.23738	12.23523	9.04850	0.1885398	3.0974446	19	4	1992–1998	0.69	M-v	1	Williams	29319	1995 UZ ₈
1995 UA ₉	13.5	0.15	19980706	233.00080	321.90118	12.46218	4.37794	0.0804767	3.0685459	45	3	1984–1998	0.73	M-v	3	Williams	31790	1995 UA ₉
1995 US ₁₁	14.5	0.15	19980706	258.42150	313.29565	12.06817	12.21442	0.2740604	2.6294633	24	4	1978–1998	0.53	M-v	2	Williams	31420	1995 US ₁₁
1995 UX ₄₄	13.5	0.15	19980706	159.53536	47.64855	23.12469	1.91470	0.0856111	2.9525728	17	3	1995–1998	0.51	M-v	3	Williams	31790	1995 UX ₄₄
1995 UD ₄₅	12.5	0.15	19980706	205.05230	331.93623	48.53531	12.42132	0.1554896	2.9989668	32	4	1981–1998	0.70	M-v	2	Williams	31790	1995 UD ₄₅
1995 VK	14.5	0.15	19980706	318.03667	141.64726	180.46233	2.40160	0.2076008	2.4413063	46	6	1987–1998	0.54	M-v	1	Williams	31588	1995 VK
1995 VL	14.0	0.15	19980706	273.61115	284.95943	60.62016	12.60187	0.1718107	2.6372416	34	3	1978–1998	0.76	M-v	3	Williams	31790	1995 VL
1995 VT ₁	12.5	0.15	19980706	182.34535	151.02378	242.89803	8.80560	0.1176863	3.1746121	24	3	1978–1998	0.75	M-v	4	Williams	31790	1995 VT ₁
1995 VU ₁₈	11.5	0.15	19980706	42.32426	144.56944	117.31035	10.82556	0.0454184	3.0243887	44	4	1992–1998	0.55	M-v	1	Williams	30093	1995 VU ₁₈
1995 WA	13.5	0.15	19980706	320.95216	78.30188	229.90608	14.41970	0.1087318	2.6357538	32	4	1982–1998	0.59	M-v	2	Williams	26582	1995 WA
1995 WH	14.0	0.15	19980706	264.66326	243.65616	101.70094	3.44942	0.0488603	2.8661023	54	5	1983–1998	0.59	M-v	1	Williams	31790	1995 WH

1995 WL	13.5	0.15	19980706	254.73639	234.96381	107.78037	3.38556	0.0967428	2.9439834	44	3	1995–1998	0.67	M-v	4	Williams	31791	1995 WL
1995 WT	12.5	0.15	19980706	175.17959	164.32279	256.34642	7.38654	0.2329054	3.1191498	31	6	1950–1998	0.77	M-v	2	Williams	31791	1995 WT
1995 WX ₁	13.0	0.15	19980706	41.68732	318.66427	239.63174	14.47609	0.1626281	3.1709604	47	3	1995–1998	0.72	M-v	3	Williams	29139	1995 WX ₁
1995 WM ₃	15.5	0.15	19980706	287.51918	273.99581	68.78412	1.50237	0.1232250	2.5820213	42	4	1991–1998	0.65	M-v	1	Williams	29319	1995 WM ₃
1995 WJ ₅	12.5	0.15	19980706	19.60709	15.98394	262.94630	8.53128	0.0803614	2.5813913	28	3	1990–1998	0.42	M-v	4	Williams	26582	1995 WJ ₅
1995 WZ ₆	13.0	0.15	19980706	204.54362	338.80133	67.76632	11.15953	0.0932089	3.0007776	36	3	1995–1998	0.50	M-v	3	Williams	29305	1995 WZ ₆
1995 WM ₇	14.0	0.15	19980706	222.78597	305.59823	77.88282	10.05590	0.1174842	2.9773461	28	2	1995–1998	0.67	M-v	4	Williams	31791	1995 WM ₇
1995 WX ₈	13.5	0.15	19980706	210.95020	279.54707	78.36885	2.22889	0.1809332	3.1760281	24	3	1983–1998	0.65	M-v	4	Williams	31729	1995 WX ₈
1995 WO ₁₅	15.0	0.15	19980706	86.97640	128.59843	27.27667	2.39180	0.0171159	2.7593588	21	4	1993–1998	0.53	M-v	1	Williams	29319	1995 WO ₁₅
1995 WO ₄₂	13.0	0.15	19980706	183.48643	342.18083	45.12026	18.48094	0.1264736	3.1075886	33	3	1995–1998	0.68	M-v	3	Williams	31729	1995 WO ₄₂
1995 XT	12.5	0.15	19980706	153.15189	348.26526	115.25775	2.29181	0.1357040	3.0787052	30	6	1989–1998	0.85	M-v	1	Williams	30292	1995 XT
1995 XX	13.5	0.15	19980706	342.80817	244.85796	31.31690	9.53849	0.0338543	3.0855582	23	4	1976–1998	0.70	M-v	2	Williams	29319	1995 XX
1995 XE ₁	12.5	0.15	19980706	179.71742	356.46517	70.41901	6.86868	0.0154056	3.1662370	37	4	1989–1998	0.57	M-v	1	Williams	29665	1995 XE ₁
1995 XJ ₁	12.0	0.15	19980706	210.07657	133.38978	270.46016	8.74395	0.0695107	3.0266218	27	4	1989–1998	0.68	M-v	2	Williams	26572	1995 XJ ₁
1995 XB ₂	14.0	0.15	19980706	320.72630	267.05655	46.87872	2.16101	0.0385567	2.3519640	36	4	1990–1998	0.79	M-v	2	Williams	30093	1995 XB ₂
1995 XP ₂	14.5	0.15	19980706	290.51625	180.11531	210.40761	2.43561	0.1838127	2.2655120	48	4	1978–1998	0.59	M-v	2	Williams	30784	1995 XP ₂
1995 YF	14.0	0.15	19980706	338.07732	205.72259	127.83066	3.15409	0.2007931	2.3882359	14	3	1987–1998	0.46	M-v	3	Williams	26413	1995 YF
1995 YK	13.5	0.15	19980706	224.26891	297.67355	101.46989	10.95524	0.1808364	2.9729458	36	3	1995–1998	0.74	M-v	4	Williams	29628	1995 YK
1995 YO	13.0	0.15	19980706	208.81224	297.58696	109.27447	10.36598	0.0841211	3.1711478	32	4	1954–1998	0.75	M-v	1	Williams	27731	1995 YO
1995 YY ₂	12.5	0.15	19980706	235.52734	269.35631	100.29098	10.78978	0.2384273	3.1428899	26	4	1955–1998	0.79	M-v	2	Williams	31791	1995 YY ₂
1996 AY ₁	14.0	0.15	19980706	211.63200	274.97442	121.30747	17.24616	0.1775880	3.2136317	36	3	1996–1998	0.41	M-v	3	Williams	31791	1996 AY ₁
1996 AD ₂	13.5	0.15	19980706	259.64325	278.00019	94.29217	12.01019	0.1326825	2.9843728	68	3	1996–1998	0.53	M-v	3	Marsden	31588	1996 AD ₂
1996 AY ₃	12.0	0.15	19980706	223.39652	258.38016	138.27917	17.66671	0.2689666	3.1771357	45	3	1996–1998	0.54	M-v	3	Williams	29666	1996 AY ₃
1996 OM ₂	14.5	0.15	19980706	95.37078	126.70694	260.73025	7.93782	0.2240850	2.7369720	25	2	1996–1998	0.70	M-v	4	Williams	31729	1996 OM ₂
1996 PZ ₆	15.0	0.15	19980706	232.06418	266.31492	86.77487	23.81186	0.1166154	1.9467620	43	3	1977–1998	0.77	M-v	3	Williams	31791	1996 PZ ₆
1996 PA ₇	14.0	0.15	19980706	168.32651	303.45444	85.96060	25.39653	0.3520032	2.3246913	45	2	1996–1998	0.60	M-v	3	Williams	31791	1996 PA ₇
1996 PX ₈	15.5	0.15	19980706	148.26300	253.25647	150.83926	5.86792	0.3026578	2.2906242	31	3	1994–1998	0.98	M-v	4	Williams	31588	1996 PX ₈
1996 QH	15.0	0.15	19980706	144.35560	82.44107	322.92746	5.37860	0.1821460	2.2576868	58	2	1996–1998	0.58	M-v	4	Williams	31545	1996 QH
1996 QP ₁	15.0	0.15	19980706	175.53228	176.22718	162.92737	2.69037	0.2390332	2.4175843	18	2	1996–1998	0.57	M-v	4	Williams	31243	1996 QP ₁
1996 RW	15.0	0.15	19980706	80.68469	182.45126	260.86873	2.10210	0.2026082	2.5930315	31	2	1996–1998	0.60	M-v	4	Williams	31791	1996 RW
1996 RG ₁	14.5	0.15	19980706	205.68569	18.16503	9.13587	5.75543	0.1651579	2.1809604	56	4	1991–1998	0.57	M-v	3	Williams	31791	1996 RG ₁
1996 RE ₄	12.5	0.15	19980706	193.22947	306.25717	26.68719	12.75397	0.1696752	2.6068340	51	4	1975–1998	0.47	M-v	2	Williams	31791	1996 RE ₄
1996 RO ₄	15.5	0.15	19980706	102.64256	343.61007	114.35646	1.63354	0.2088018	2.3374566	30	2	1996–1998	0.85	M-v	4	Williams	31729	1996 RO ₄
1996 RH ₂₅	15.5	0.15	19980706	83.28512	119.31379	350.33070	4.75713	0.1828346	2.3561189	53	2	1996–1998	0.63	M-v	4	Williams	31730	1996 RH ₂₅
1996 SA ₁	15.5	0.15	19980706	114.72318	87.24086	11.81950	9.15864	0.1007196	2.2165749	53	2	1996–1998	0.57	M-v	4	Williams	31730	1996 SA ₁
1996 SG ₄	15.5	0.15	19980706	125.54848	171.10987	274.16128	3.08711	0.2071045	2.5800148	38	4	1989–1998	0.64	M-v	2	Williams	31791	1996 SG ₄
1996 SJ ₄	14.5	0.15	19980706	207.63845	337.50151	343.84684	5.06991	0.2006638	2.2325224	36	5	1976–1998	0.66	M-v	3	Williams	31278	1996 SJ ₄
1996 SU ₄	15.0	0.15	19980706	58.34449	122.63813	20.26686	6.72487	0.0779050	2.3920783	47	2	1996–1998	0.58	M-v	4	Williams	31791	1996 SU ₄
1996 SH ₆	14.5	0.15	19980706	14.28704	355.40556	195.17760	7.94682	0.0641117	2.2964268	49	2	1996–1998	0.66	M-v	4	Williams	31791	1996 SH ₆
1996 SS ₆	13.0	0.15	19980706	197.50416	249.88591	67.53907	3.05724	0.0536813	2.9149492	73	4	1981–1998	0.56	M-v	3	Williams	31791	1996 SS ₆
1996 TR	15.0	0.15	19980706	172.75280	205.81852	175.17393	7.02021	0.1281839	2.3575114	34	2	1996–1998	0.79	M-v	4	Williams	31791	1996 TR
1996 TQ ₁	15.0	0.15	19980706	168.84263	193.66788	186.63359	2.10859	0.2134166	2.3746723	30	3	1995–1998	0.80	M-v	4	Williams	29320	1996 TQ ₁
1996 TB ₆	13.0	0.15	19980706	145.41730	345.72539	31.79395	12.21814	0.3080576	2.7310428	72	4	1978–1998	0.57	M-v	3	Williams	31588	1996 TB ₆
1996 TD ₇	15.5	0.15	19980706	43.14956	154.11350	33.50198	6.36780	0.1003929	2.2594891	59	3	1991–1998	0.55	M-v	3	Williams	31730	1996 TD ₇
1996 TQ ₇	16.0	0.15	19980706	20.47010	84.51784	100.10408	5.55872	0.0656841	2.2923976	38	2	1996–1998	0.83	M-v	4	Marsden	31791	1996 TQ ₇
1996 TM ₉	15.5	0.15	19980706	219.38473	355.29643	0.48885	0.88218	0.0271706	2.1910312	68	2	1996–1998	0.62	M-v	4	Williams	31791	1996 TM ₉
1996 TL ₁₀	15.0	0.15	19980706	195.69053	44.87083	320.80720	4.77266	0.1818723	2.2557655	45	4	1971–1998	0.82	M-v	2	Williams	31791	1996 TL ₁₀
1996 TO ₁₀	14.0	0.15	19980706	173.55973	305.55265	88.89196	6.11468	0.1772224	2.2329831	28	3	1989–1998	0.66	M-v	3	Williams	31791	1996 TO ₁₀
1996 TS ₁₀	15.0	0.15	19980706	179.44614	356.90116	38.83201	5.67353	0.1417699	2.2020572	44	2	1996–1998	0.79	M-v	4	Williams	31792	1996 TS ₁₀
1996 TU ₁₁	15.0	0.15	19980706	161.63012	342.37750	70.98329	7.97364	0.0969340	2.2722620	42	2	1996–1998	0.57	M-v	3	Williams	31792	1996 TU ₁₁
1996 TN ₁₂	15.0	0.15	19980706	106.77169	230.37488	241.21371	1.45489	0.1672243	2.3548153	81	3	1992–1998	0.57	M-v	3	Williams	31792	1996 TN ₁₂
1996 TQ ₁₂	15.5	0.15	19980706	266.70170	158.45686	189.90050	25.98664	0.0518133	1.8395315	31	3	1991–1998	0.66	M-v	3	Williams	31792	1996 TQ ₁₂
1996 TG ₁₃	15.0	0.15	19980706	98.54163	121.73080	342.29148	2.15177	0.1552867	2.4626509	36	2	1996–1998	0.92	M-v	4	Williams	31792	1996 TG ₁₃

1996 TT ₁₄	14.0	0.15	19980706	210.27066	238.94009	121.46774	3.39093	0.1953343	2.1880952	33	2	1996–1998	0.64	M-v	4	Williams	31792	1996 TT ₁₄
1996 TC ₁₅	14.0	0.15	19980706	229.28781	268.37538	85.03732	9.87167	0.1406895	2.6989838	47	3	1994–1998	0.60	M-v	2	Williams	31589	1996 TC ₁₅
1996 TG ₁₅	15.0	0.15	19980706	159.64949	332.69533	65.77126	3.29382	0.1995736	2.3672000	22	2	1996–1998	0.76	M-v	4	Williams	31547	1996 TG ₁₅
1996 TF ₁₈	16.0	0.15	19980706	45.30853	150.31771	25.91982	5.99800	0.0910430	2.2891868	20	2	1996–1998	0.64	M-v	4	Williams	31731	1996 TF ₁₈
1996 TS ₁₈	15.5	0.15	19980706	56.68869	144.26165	17.07905	1.47659	0.0884788	2.3468431	33	3	1987–1998	0.83	M-v	4	Williams	31731	1996 TS ₁₈
1996 TX ₂₈	15.5	0.15	19980706	106.33921	4.87653	78.97031	6.33123	0.0767131	2.4827604	27	2	1996–1998	0.94	M-v	5	Marsden	31731	1996 TX ₂₈
1996 TL ₂₉	14.5	0.15	19980706	155.90156	196.17040	214.33228	4.17948	0.1939194	2.3920604	40	3	1985–1998	0.81	M-v	4	Williams	31731	1996 TL ₂₉
1996 TF ₃₀	18.0	0.15	19961004	37.87195	295.91803	35.67095	4.00506	0.2393279	2.3417327	15	1	14 days	0.18		D	Williams		1996 TF ₃₀
1996 TY ₄₆	15.0	0.15	19980706	165.71474	116.38558	282.43743	0.33937	0.0395019	2.3941333	24	2	1996–1998	0.69	M-v	5	Williams	31547	1996 TY ₄₆
1996 TY ₆₄	16.0	0.15	19980706	97.85042	167.11528	288.95174	0.21643	0.1366386	2.5302020	26	2	1996–1998	0.72	M-v	4	Williams	31547	1996 TY ₆₄
1996 UD	14.0	0.15	19980706	160.69048	7.33425	47.07384	6.43262	0.1695548	2.3290894	57	4	1983–1998	0.65	M-v	3	Williams	31792	1996 UD
1996 UF	14.5	0.15	19980706	225.91077	201.51283	149.72428	1.59342	0.1553993	2.1750306	41	3	1988–1998	0.65	M-v	3	Williams	31792	1996 UF
1996 UM	15.0	0.15	19980706	221.94116	200.56292	190.56200	21.97841	0.0828991	1.9475879	25	3	1985–1998	0.59	M-v	3	Williams	31792	1996 UM
1996 UN	15.5	0.15	19980706	81.44791	304.12463	199.39381	4.78831	0.1407235	2.2236020	86	2	1996–1998	0.57	M-v	3	Williams	31792	1996 UN
1996 UC ₃	13.0	0.15	19980706	73.06727	103.83389	302.55574	4.29792	0.2291136	4.0038538	34	3	1980–1998	0.59	M-v	4	Williams	31279	1996 UC ₃
1996 UF ₄	14.0	0.15	19980706	151.74553	315.26663	44.79438	4.67050	0.1078549	2.8157975	49	4	1982–1998	0.45	M-v	2	Williams	31279	1996 UF ₄
1996 VN	14.5	0.15	19980706	72.42741	120.43439	358.31652	5.40096	0.2102279	2.6838788	88	2	1996–1998	0.53	M-v	3	Williams	31792	1996 VN
1996 VW	15.0	0.15	19980706	160.53547	199.91088	220.70499	3.48030	0.1214143	2.2461421	29	2	1996–1998	0.52	M-v	4	Williams	31548	1996 VW
1996 VF ₁	16.0	0.15	19980706	133.30347	40.72622	31.24259	3.78877	0.1548667	2.4068961	46	2	1996–1998	0.62	M-v	4	Williams	31792	1996 VF ₁
1996 VM ₁	13.5	0.15	19980706	95.72213	62.99256	54.47879	7.06045	0.1007294	2.4468371	44	3	1990–1998	0.71	M-v	2	Williams	31732	1996 VM ₁
1996 VD ₂	14.0	0.15	19980706	131.67888	16.55576	59.33083	9.78434	0.1398936	2.5462574	26	2	1996–1998	0.67	M-v	4	Williams	31732	1996 VD ₂
1996 VG ₂	14.5	0.15	19980706	168.12937	209.54733	192.43572	1.90014	0.2049712	2.4077708	42	4	1981–1998	0.79	M-v	3	Williams	31792	1996 VG ₂
1996 VT ₂	15.5	0.15	19980706	109.68674	262.36996	222.39497	1.56914	0.1716719	2.3275936	23	3	1994–1998	0.43	M-v	4	Williams	28599	1996 VT ₂
1996 VW ₂	14.5	0.15	19980706	152.42173	56.99331	19.86060	4.77385	0.0978296	2.2680438	40	4	1981–1998	0.67	M-v	2	Williams	31792	1996 VW ₂
1996 VK ₃	14.0	0.15	19980706	118.80213	205.19607	226.64626	2.55385	0.0771072	2.7433462	46	4	1991–1998	0.74	M-v	3	Williams	31792	1996 VK ₃
1996 VL ₃	14.0	0.15	19980706	167.56943	134.89297	246.44565	2.61157	0.1002833	2.6511148	35	3	1987–1998	0.75	M-v	4	Williams	31792	1996 VL ₃
1996 VN ₃	13.5	0.15	19980706	91.97494	5.66070	72.80401	2.12379	0.2218222	3.1945336	56	3	1984–1998	0.68	M-v	3	Williams	31792	1996 VN ₃
1996 VN ₄	13.5	0.15	19980706	19.99685	301.14032	218.37975	1.18448	0.0404329	2.9353086	46	3	1994–1998	0.68	M-v	4	Williams	31792	1996 VN ₄
1996 VR ₄	13.5	0.15	19980706	153.81204	347.59060	60.54038	8.61669	0.1961506	2.5750240	29	2	1996–1998	0.61	M-v	4	Williams	31732	1996 VR ₄
1996 VT ₄	14.5	0.15	19980706	117.12103	216.58162	271.14778	4.46276	0.0549585	2.2566887	34	3	1994–1998	0.52	M-v	2	Williams	30670	1996 VT ₄
1996 VX ₄	14.5	0.15	19980706	216.64705	16.48002	331.32570	1.87994	0.2291328	2.3626111	26	2	1996–1998	0.84	M-v	5	Williams	31792	1996 VX ₄
1996 VB ₅	13.5	0.15	19980706	235.56157	287.35545	51.35864	6.42366	0.0463085	2.2287181	84	3	1986–1998	0.61	M-v	3	Williams	31792	1996 VB ₅
1996 VM ₅	14.5	0.15	19980706	53.81641	73.27075	88.73543	5.03990	0.0703443	2.4428406	99	3	1992–1998	0.57	M-v	2	Williams	31792	1996 VM ₅
1996 VT ₅	14.0	0.15	19980706	175.24926	326.06030	89.92672	7.56966	0.1000769	2.3016189	50	3	1989–1998	0.79	M-v	3	Williams	31792	1996 VT ₅
1996 VU ₅	13.5	0.15	19980706	112.69349	279.95612	137.04895	2.21051	0.1697991	3.1367412	40	4	1990–1998	0.63	M-v	2	Williams	31792	1996 VU ₅
1996 VV ₅	14.0	0.15	19980706	207.04618	147.69677	207.55802	5.69691	0.0997173	2.5322665	48	3	1979–1998	0.85	M-v	4	Williams	31792	1996 VV ₅
1996 VX ₅	14.5	0.15	19980706	141.49831	180.37256	233.73507	5.17870	0.1904545	2.6241799	37	3	1989–1998	0.77	M-v	4	Williams	31792	1996 VX ₅
1996 VA ₆	13.5	0.15	19980706	156.69958	327.80529	84.76291	14.38202	0.1402554	2.5620214	34	3	1992–1998	0.76	M-v	3	Williams	31792	1996 VA ₆
1996 VB ₆	13.5	0.15	19980706	129.29837	296.21093	126.20161	3.07890	0.0570263	2.8884588	69	4	1981–1998	0.63	M-v	3	Williams	31792	1996 VB ₆
1996 VP ₆	14.0	0.15	19980706	152.82811	65.26934	326.36903	4.96895	0.1938137	2.5177709	51	4	1984–1998	0.86	M-v	3	Williams	31792	1996 VP ₆
1996 VU ₇	14.5	0.15	19980706	182.94808	313.36552	68.08994	3.61494	0.1874084	2.4425064	38	3	1992–1998	0.85	M-v	4	Williams	31792	1996 VU ₇
1996 VF ₈	13.5	0.15	19980706	130.07809	33.45183	33.43124	13.76051	0.1605673	2.6025949	31	2	1996–1998	0.65	M-v	3	Williams	31732	1996 VF ₈
1996 VH ₈	14.0	0.15	19980706	181.37268	11.32294	24.26876	7.16032	0.1456731	2.2835420	72	4	1982–1998	0.60	M-v	4	Williams	31792	1996 VH ₈
1996 VJ ₈	14.5	0.15	19980706	136.43947	79.06810	344.66121	4.42895	0.1698413	2.5355614	51	4	1976–1998	0.75	M-v	3	Williams	31792	1996 VJ ₈
1996 VQ ₈	14.5	0.15	19980706	179.08672	188.79625	183.87928	3.16721	0.2026277	2.4337697	20	2	1996–1998	0.70	M-v	5	Williams	31549	1996 VQ ₈
1996 VU ₈	15.0	0.15	19980706	164.61221	216.38239	207.87744	6.13275	0.1316708	2.2391172	44	3	1995–1998	0.81	M-v	4	Williams	31792	1996 VU ₈
1996 VZ ₈	15.0	0.15	19980706	205.17069	223.59433	144.17788	1.97993	0.1610550	2.2668247	30	2	1996–1998	0.87	M-v	4	Williams	31792	1996 VZ ₈
1996 VC ₉	14.0	0.15	19980706	191.04876	314.19060	76.00618	6.97098	0.1838541	2.2577756	42	2	1996–1998	0.73	M-v	4	Williams	31733	1996 VC ₉
1996 VG ₁₁	15.0	0.15	19980706	51.72281	185.92918	339.28746	6.70727	0.1461001	2.3110125	25	2	1996–1998	0.48	M-v	4	Williams	31733	1996 VG ₁₁
1996 VX ₁₅	14.5	0.15	19980706	21.17974	356.01089	202.86865	1.73602	0.1590750	2.3890990	88	3	1987–1998	0.65	M-v	3	Williams	31793	1996 VX ₁₅
1996 VG ₃₀	13.5	0.15	19980706	93.52048	227.78242	246.68729	7.79497	0.2043884	2.7015889	48	3	1987–1998	0.65	M-v	3	Williams	31793	1996 VG ₃₀
1996 VO ₃₀	14.0	0.15	19980706	199.22915	129.36112	248.34451	3.42780	0.1919959	2.2635446	71	4	1962–1998	0.72	M-v	4	Williams	31793	1996 VO ₃₀
1996 VP ₃₀	13.5	0.15	19980706	158.13310	154.76983	233.42643	11.89372	0.2470067	2.5892984	21	2	1996–1998	0.98	M-v	4	Williams	31733	1996 VP ₃₀

1996 VA ₃₁	15.0	0.15	19980706	116.67184	59.39304	33.27431	6.05110	0.1366737	2.5671369	19	2	1996–1998	0.75	M-v	4	Williams	31733	1996 VA ₃₁
1996 WA	15.0	0.15	19980706	177.55885	37.39720	32.29560	4.01337	0.1355057	2.2055424	28	4	1984–1998	0.84	M-v	2	Williams	28891	1996 WA
1996 WX	16.0	0.15	19980706	142.29371	47.06843	46.39632	6.88565	0.1112612	2.2417632	27	2	1996–1998	0.36	M-v	4	Marsden	31733	1996 WX
1996 WC ₂	14.5	0.15	19980706	28.22395	119.49291	69.90299	8.02554	0.0329884	2.3835357	71	3	1991–1998	0.70	M-v	3	Marsden	31793	1996 WC ₂
1996 WE ₃	15.0	0.15	19980706	348.39958	11.61519	238.87527	5.37609	0.0903250	2.2851933	56	2	1996–1998	0.63	M-v	4	Williams	31733	1996 WE ₃
1996 XY	13.5	0.15	19980706	320.56353	158.49192	83.35475	10.70092	0.0567006	2.7767856	34	3	1989–1998	0.75	M-v	4	Williams	31793	1996 XY
1996 XC ₁	14.5	0.15	19980706	302.48621	96.65646	197.99318	2.05853	0.0587447	2.2911468	34	3	1991–1998	0.64	M-v	4	Williams	31734	1996 XC ₁
1996 XD ₁	15.0	0.15	19980706	310.14022	217.80191	93.77680	3.28230	0.1679557	2.1394068	44	3	1977–1998	0.48	M-v	4	Williams	31793	1996 XD ₁
1996 XT ₁	13.5	0.15	19980706	213.72549	271.42741	79.83328	3.23139	0.0773587	2.8771769	59	3	1994–1998	0.63	M-v	3	Williams	31793	1996 XT ₁
1996 XU ₁	13.0	0.15	19980706	63.85899	107.53974	93.78560	7.93100	0.1597432	2.4144088	19	5	1977–1998	0.43	M-v	1	Williams	31422	1996 XU ₁
1996 XV ₁	14.0	0.15	19980706	271.65385	45.25325	283.83421	5.80835	0.1296741	2.3501972	27	3	1989–1998	0.70	M-v	3	Williams	31793	1996 XV ₁
1996 XE ₂	14.0	0.15	19980706	95.59101	50.96137	75.27105	7.35014	0.0586377	2.3811668	71	3	1985–1998	0.62	M-v	2	Williams	31793	1996 XE ₂
1996 XF ₂	14.0	0.15	19980706	125.81349	350.65269	75.07932	14.71704	0.1468328	2.7824384	37	2	1996–1998	0.56	M-v	3	Williams	31734	1996 XF ₂
1996 XG ₂	15.5	0.15	19980706	88.64538	55.62869	102.19116	1.86578	0.0489016	2.2645112	35	5	1977–1998	0.73	M-v	1	Williams	28870	1996 XG ₂
1996 XM ₂	14.5	0.15	19980706	264.58104	248.93729	82.76061	5.00952	0.2402737	2.2121187	50	2	1996–1998	0.50	M-v	3	Marsden	31793	1996 XM ₂
1996 XX ₂	14.0	0.15	19980706	164.55745	27.69068	23.04314	2.34613	0.1417379	2.5292653	33	2	1996–1998	0.74	M-v	5	Williams	31734	1996 XX ₂
1996 XB ₃	14.0	0.15	19980706	265.82574	182.25868	139.48673	3.20263	0.2051754	2.4204602	37	3	1988–1998	0.45	M-v	3	Williams	31793	1996 XB ₃
1996 XF ₃	14.0	0.15	19980706	330.22570	119.46793	128.13504	1.66207	0.1038660	2.9134745	48	3	1993–1998	0.65	M-v	5	Williams	31793	1996 XF ₃
1996 XS ₅	13.5	0.15	19980706	74.40726	32.25865	97.62076	6.04530	0.1149408	3.1046602	30	2	1996–1998	0.75	M-v	4	Williams	31735	1996 XS ₅
1996 XY ₅	12.5	0.15	19980706	116.35043	301.94781	86.79452	6.48273	0.2311875	3.9476069	18	3	1980–1998	0.50	M-v	4	Williams	31793	1996 XY ₅
1996 XF ₆	13.5	0.15	19980706	72.10667	91.86960	41.81541	2.18244	0.1674917	3.1694202	36	4	1987–1998	0.59	M-v	1	Williams	31793	1996 XF ₆
1996 XH ₆	13.5	0.15	19980706	183.64526	244.45206	109.84192	3.20580	0.1072490	2.9014045	19	2	1996–1998	0.58	M-v	4	Williams	31735	1996 XH ₆
1996 XE ₁₂	14.0	0.15	19980706	229.27681	302.70086	42.41673	2.58537	0.1051609	2.9023583	33	3	1993–1998	0.68	M-v	4	Williams	31793	1996 XE ₁₂
1996 XM ₁₃	14.0	0.15	19980706	293.31307	193.67956	79.30238	3.47057	0.0616100	2.6522861	30	2	1996–1998	0.67	M-v	5	Williams	31735	1996 XM ₁₃
1996 XJ ₁₅	14.5	0.15	19980706	291.30389	210.47407	97.34319	6.49143	0.1742569	2.4301315	29	3	1991–1998	0.47	M-v	5	Williams	29119	1996 XJ ₁₅
1996 XT ₁₆	16.0	0.15	19980706	120.96852	220.73910	251.41185	1.53166	0.1590590	2.3748066	17	3	1989–1998	0.33	M-v	3	Williams	28872	1996 XT ₁₆
1996 XA ₁₈	15.0	0.15	19980706	43.12861	112.71899	56.27927	5.94283	0.1246462	2.6039498	43	3	1994–1998	0.51	M-v	3	Williams	31793	1996 XA ₁₈
1996 XH ₁₈	13.5	0.15	19980706	157.04174	300.03406	122.98326	10.27844	0.1594691	2.7751834	36	3	1993–1998	0.65	M-v	3	Williams	29119	1996 XH ₁₈
1996 XS ₁₈	14.0	0.15	19980706	96.70224	21.54807	80.40916	2.78110	0.0902123	3.0764838	72	2	1996–1998	0.63	M-v	3	Williams	31793	1996 XS ₁₈
1996 XU ₁₈	13.0	0.15	19980706	100.71754	334.76495	123.72567	2.43160	0.1490638	3.1665846	68	2	1996–1998	0.46	M-v	3	Williams	31793	1996 XU ₁₈
1996 XW ₁₈	14.5	0.15	19980706	324.16928	192.19203	115.44726	7.77437	0.1309838	2.2955684	61	3	1995–1998	0.46	M-v	3	Marsden	31793	1996 XW ₁₈
1996 XJ ₁₉	13.5	0.15	19980706	49.49021	324.48499	211.98034	2.97206	0.0417184	2.7050782	43	3	1991–1998	0.63	M-v	4	Williams	31793	1996 XJ ₁₉
1996 XQ ₁₉	14.0	0.15	19980706	153.17710	139.80329	255.09665	2.40412	0.0843027	2.7876346	43	2	1996–1998	0.81	M-v	4	Williams	31793	1996 XQ ₁₉
1996 XD ₂₀	15.0	0.15	19980706	177.79293	300.23743	101.21766	6.56095	0.1124879	2.4266442	36	2	1996–1998	0.52	M-v	4	Williams	31793	1996 XD ₂₀
1996 XM ₂₁	15.5	0.15	19980706	28.58598	178.28073	4.14908	6.38950	0.1413481	2.5746033	38	2	1996–1998	0.64	M-v	4	Williams	31735	1996 XM ₂₁
1996 XS ₂₅	13.0	0.15	19980706	311.32920	155.79503	101.72724	20.27330	0.1860339	3.1132317	38	2	1996–1998	0.48	M-v	3	Williams	31793	1996 XS ₂₅
1996 XU ₂₅	13.5	0.15	19980706	155.34565	171.80980	219.09743	1.81462	0.0612172	2.8923389	40	3	1981–1998	0.75	M-v	4	Williams	31793	1996 XU ₂₅
1996 XH ₂₆	15.5	0.15	19980706	165.36851	250.39339	200.45109	0.57092	0.1079231	2.3408981	28	3	1994–1998	0.37	M-v	3	Marsden	29320	1996 XH ₂₆
1996 XA ₂₇	12.0	0.15	19980706	133.18010	65.16663	310.38543	15.26172	0.2335329	3.1226592	30	3	1981–1998	0.50	M-v	4	Williams	31392	1996 XA ₂₇
1996 XU ₃₀	14.5	0.15	19980706	162.74194	188.95417	242.92878	9.27344	0.0975047	2.3404982	28	3	1978–1998	0.66	M-v	4	Williams	31793	1996 XU ₃₀
1996 XW ₃₀	14.5	0.15	19980706	338.54799	32.60632	261.51773	3.80104	0.1181345	2.1661936	27	5	1989–1998	0.70	M-v	2	Williams	29140	1996 XW ₃₀
1996 XX ₃₀	14.0	0.15	19980706	157.36039	183.80235	241.30979	3.65188	0.2129523	2.5992910	20	4	1979–1998	0.59	M-v	1	Williams	29667	1996 XX ₃₀
1996 XD ₃₁	14.1	0.15	19961223	66.43952	261.48090	117.89676	4.98925	0.1555799	2.3318631	9	1	32 days	0.61			Asher		1996 XD ₃₁
1996 XH ₃₁	14.5	0.15	19980706	179.82339	147.29175	271.88653	1.61086	0.1813084	2.4014257	19	3	1992–1998	0.56	M-v	4	Williams	29667	1996 XH ₃₁
1996 XQ ₃₂	14.5	0.15	19980706	138.66978	247.96368	221.55469	3.98568	0.0979555	2.2477036	31	5	1974–1998	0.66	M-v	2	Williams	31590	1996 XQ ₃₂
1996 YF	14.5	0.15	19980706	184.29933	357.89813	77.95084	5.72398	0.1211160	2.2567796	27	5	1980–1998	0.81	M-v	2	Williams	29667	1996 YF
1996 YJ	14.0	0.15	19980706	236.47668	89.75314	280.97615	6.26555	0.1361112	2.3246460	22	4	1989–1998	0.55	M-v	1	Williams	29140	1996 YJ
1996 YU	14.5	0.15	19980706	167.26862	281.69141	130.00556	4.52929	0.0926551	2.7905225	21	3	1995–1998	0.56	M-v	4	Williams	31736	1996 YU
1996 YG ₁	15.0	0.15	19980706	347.55484	189.04740	77.22082	12.85252	0.1192964	2.4844822	74	2	1996–1998	0.54	M-v	3	Williams	31793	1996 YG ₁
1996 YH ₁	15.0	0.15	19980706	321.08196	150.80832	127.69609	7.27443	0.1134747	2.5285748	56	2	1996–1998	0.47	M-v	4	Williams	31793	1996 YH ₁
1996 YV ₁	14.5	0.15	19980706	163.20763	116.50605	330.65821	1.57250	0.1826728	2.6304625	42	4	1993–1998	0.64	M-v	1	Williams	31422	1996 YV ₁
1996 YC ₂	14.5	0.15	19980706	175.24259	86.75385	301.81042	6.38550	0.1659072	2.2829360	25	2	1996–1998	0.65	M-v	4	Williams	31736	1996 YC ₂
1996 YD ₂	12.5	0.15	19980706	91.87420	110.45644	4.28033	12.21680	0.1061965	3.0320468	61	3	1972–1998	0.65	M-v	2	Williams	31793	1996 YD ₂

1996 YF ₂	13.0	0.15	19980706	213.49087	83.79552	288.19001	4.71298	0.2256426	2.5209524	44	3	1991–1998	0.69	M-v	4	Williams	31794	1996 YF ₂
1996 YY ₂	13.0	0.15	19980706	168.95162	302.25694	75.41249	2.33138	0.1799352	3.0991671	35	2	1996–1998	0.92	M-v	5	Williams	31794	1996 YY ₂
1996 YD ₃	13.5	0.15	19980706	307.34999	273.52265	351.51399	9.46563	0.0763314	3.0297745	57	2	1996–1998	0.63	M-v	3	Williams	31794	1996 YD ₃
1996 YH ₃	11.5	0.15	19980706	166.63974	261.39137	64.68305	16.93826	0.0928235	3.2144367	50	4	1979–1998	0.45	M-v	2	Williams	31279	1996 YH ₃
1997 AH	14.0	0.15	19980706	188.32209	311.96876	93.02536	6.25976	0.1797662	2.4598700	26	4	1988–1998	0.59	M-v	4	Williams	31794	1997 AH
1997 AU	13.5	0.15	19980706	220.51251	339.72360	20.65736	2.17411	0.0868691	2.8815923	44	3	1993–1998	0.72	M-v	4	Williams	31794	1997 AU
1997 AD ₁	14.5	0.15	19980706	186.79239	294.60102	118.98699	3.97727	0.1660928	2.4768811	31	2	1997–1998	0.84	M-v	5	Williams	31736	1997 AD ₁
1997 AK ₁	14.0	0.15	19980706	164.51403	15.20194	89.10690	5.40503	0.0806026	2.2750056	30	4	1989–1998	0.81	M-v	2	Williams	29320	1997 AK ₁
1997 AY ₁	13.5	0.15	19980706	167.56170	27.16078	56.00954	5.51757	0.0342007	2.4826973	35	5	1954–1998	0.59	M-v	1	Williams	29667	1997 AY ₁
1997 AZ ₁	13.0	0.15	19980706	137.49382	59.15470	4.42999	5.90783	0.1080430	3.1962137	52	2	1997–1998	0.79	M-v	4	Williams	31794	1997 AZ ₁
1997 AB ₂	14.0	0.15	19980706	31.55219	113.38425	104.63940	15.45943	0.0152338	2.5657348	42	3	1993–1998	0.56	M-v	3	Williams	29947	1997 AB ₂
1997 AO ₂	13.0	0.15	19980706	114.85797	13.59354	92.60757	11.80549	0.0721454	2.9777221	36	3	1980–1998	0.66	M-v	3	Williams	29320	1997 AO ₂
1997 AR ₂	13.0	0.15	19980706	98.53902	4.91406	116.57302	2.36555	0.1393531	3.1714028	40	4	1980–1998	0.67	M-v	2	Williams	31794	1997 AR ₂
1997 AG ₃	13.0	0.15	19980706	276.86149	185.25160	111.78158	3.47742	0.0814759	3.0881751	29	2	1996–1998	0.50	M-v	5	Williams	31736	1997 AG ₃
1997 AE ₄	13.0	0.15	19980706	99.83066	11.40062	126.46508	6.80201	0.2032122	2.8654223	34	5	1981–1998	0.65	M-v	1	Williams	29121	1997 AE ₄
1997 AM ₄	14.0	0.15	19980706	343.68182	143.89888	133.03043	13.82054	0.1495330	2.6779082	32	2	1997–1998	0.60	M-v	4	Williams	31736	1997 AM ₄
1997 AO ₄	13.5	0.15	19980706	294.12885	186.43430	125.15314	5.89200	0.1034650	2.7423514	47	4	1991–1998	0.60	M-v	2	Williams	31794	1997 AO ₄
1997 AT ₄	14.5	0.15	19980706	226.16143	87.92242	299.84127	5.15204	0.1219243	2.3891750	27	3	1990–1998	0.67	M-v	4	Williams	29141	1997 AT ₄
1997 AB ₅	14.5	0.15	19980706	153.70812	61.84976	30.79684	6.51704	0.1658206	2.4174081	23	4	1973–1998	0.62	M-v	2	Williams	29320	1997 AB ₅
1997 AR ₅	12.5	0.15	19980706	163.39403	297.77279	111.98935	14.29519	0.2009474	2.9293862	38	2	1997–1998	0.69	M-v	4	Williams	31737	1997 AR ₅
1997 AQ ₆	14.5	0.15	19980706	203.66771	7.50961	68.29422	24.37966	0.0300129	1.8251232	29	2	1997–1998	0.60	M-v	3	Williams	31737	1997 AQ ₆
1997 AH ₇	14.5	0.15	19980706	208.55580	265.92696	151.50197	7.16555	0.0945062	2.3284875	31	4	1990–1998	0.63	M-v	1	Williams	29667	1997 AH ₇
1997 AK ₇	14.0	0.15	19980706	341.19809	155.64409	133.09112	14.30505	0.1729976	2.5937935	32	3	1976–1998	0.66	M-v	4	Williams	29634	1997 AK ₇
1997 AD ₁₀	15.0	0.15	19980706	283.88515	191.91646	145.27729	4.13320	0.1991835	2.4071975	36	4	1950–1998	0.72	M-v	2	Williams	31794	1997 AD ₁₀
1997 AN ₁₂	14.5	0.15	19980706	38.68214	325.44487	205.79097	7.38694	0.0412197	2.5762080	56	2	1997–1998	0.45	M-v	3	Williams	31794	1997 AN ₁₂
1997 AP ₁₂	14.0	0.15	19980706	88.20411	211.90993	292.23576	11.64759	0.0719730	2.7694730	17	3	1994–1998	0.59	M-v	3	Williams	29124	1997 AP ₁₂
1997 AP ₁₄	14.5	0.15	19980706	198.83130	248.22446	147.20121	0.98290	0.1639217	2.6841129	47	3	1995–1998	0.80	M-v	4	Williams	31422	1997 AP ₁₄
1997 AS ₁₆	13.5	0.15	19980706	79.17093	87.88770	47.96446	2.45101	0.0345356	3.0451156	46	3	1992–1998	0.66	M-v	3	Williams	31794	1997 AS ₁₆
1997 AP ₁₇	13.5	0.15	19980706	294.04296	193.85187	95.35001	10.74360	0.0537459	2.9909641	51	3	1989–1998	0.69	M-v	4	Williams	31794	1997 AP ₁₇
1997 AT ₁₈	13.5	0.15	19980706	131.52597	79.57896	352.52610	9.27605	0.0285015	3.1136718	67	2	1997–1998	0.53	M-v	4	Williams	31794	1997 AT ₁₈
1997 AM ₁₉	14.0	0.15	19980706	321.95595	158.28524	146.14298	3.18929	0.0322944	2.3052362	30	5	1985–1998	0.80	M-v	2	Williams	29947	1997 AM ₁₉
1997 AN ₂₁	14.0	0.15	19980706	171.30917	117.99499	311.84450	13.16483	0.1316517	2.5683620	32	3	1993–1998	0.70	M-v	4	Williams	29320	1997 AN ₂₁
1997 AA ₂₂	14.0	0.15	19980706	148.58661	71.39066	340.19944	10.08819	0.1084188	3.0085900	25	2	1997–1998	0.78	M-v	4	Williams	31737	1997 AA ₂₂
1997 AM ₂₂	14.5	0.15	19980706	165.13339	300.87130	131.63704	3.42708	0.2600681	2.4511835	31	4	1984–1998	0.61	M-v	3	Williams	30094	1997 AM ₂₂
1997 AQ ₂₂	13.5	0.15	19980706	45.20977	86.29198	120.95480	8.53285	0.1604218	2.7776130	28	3	1993–1998	0.57	M-v	3	Williams	29126	1997 AQ ₂₂
1997 BB ₁	11.5	0.15	19980706	253.14059	357.28728	254.43190	11.45402	0.0879658	3.1895412	26	4	1973–1998	0.57	M-v	2	Williams	31590	1997 BB ₁
1997 BY ₁	13.5	0.15	19980706	238.60894	238.01502	131.73961	12.97885	0.1867057	2.5510425	32	4	1991–1998	0.82	M-v	2	Williams	29636	1997 BY ₁
1997 BZ ₁	14.5	0.15	19980706	254.33657	291.73731	65.87277	1.63456	0.0730606	2.5756912	37	4	1989–1998	0.69	M-v	1	Williams	31794	1997 BZ ₁
1997 BD ₂	13.5	0.15	19980706	232.61724	267.97155	128.86339	10.05987	0.1413986	2.2910501	41	5	1983–1998	0.64	M-v	1	Williams	29667	1997 BD ₂
1997 BU ₃	13.0	0.15	19980706	359.69337	163.15541	100.68453	2.79122	0.1277912	3.1180850	24	5	1976–1998	0.84	M-v	1	Williams	29638	1997 BU ₃
1997 BV ₄	14.0	0.15	19980706	57.20266	136.58803	353.53953	18.22389	0.2010120	3.1417901	30	3	1995–1998	0.56	M-v	3	Williams	31737	1997 BV ₄
1997 BF ₇	13.5	0.15	19980706	130.02813	120.11055	336.51687	0.72123	0.0703908	3.0294063	24	3	1992–1998	0.55	M-v	5	Williams	31144	1997 BF ₇
1997 BC ₉	14.0	0.15	19980706	337.82998	186.99605	140.73831	4.23892	0.2340805	2.2309948	21	5	1978–1998	0.85	M-v	3	Williams	29927	1997 BC ₉
1997 BD ₉	13.5	0.15	19980706	53.30229	83.32160	113.04753	2.54523	0.1285261	3.2112117	23	3	1986–1998	0.88	M-v	4	Williams	29638	1997 BD ₉
1997 BG ₉	13.5	0.15	19980706	168.74276	105.37378	325.80696	1.04771	0.0611199	2.8561878	46	4	1976–1998	0.84	M-v	2	Williams	31794	1997 BG ₉
1997 CB	14.5	0.15	19980706	306.31608	191.29857	156.59263	11.34348	0.2793284	2.3480544	36	2	1997–1998	0.45	M-v	3	Williams	31590	1997 CB
1997 CE ₁	13.5	0.15	19980706	256.57525	3.75356	10.59488	7.11490	0.2386489	2.3314469	26	5	1981–1998	0.72	M-v	2	Williams	29947	1997 CE ₁
1997 CQ ₁	13.5	0.15	19980706	153.57997	269.15753	142.74982	19.14666	0.1595581	3.2246844	52	2	1997–1998	0.40	M-v	3	Williams	31794	1997 CQ ₁
1997 CR ₁	14.0	0.15	19980706	178.96518	270.04523	137.01593	3.25176	0.0718963	2.9232569	39	2	1997–1998	0.39	M-v	4	Williams	31737	1997 CR ₁
1997 CV ₁	15.0	0.15	19980706	329.65782	197.77180	110.51642	2.62871	0.1581269	2.1313066	59	3	1992–1998	0.57	M-v	3	Williams	31794	1997 CV ₁
1997 CY ₂	14.0	0.15	19980706	111.29513	3.41036	120.60848	3.76637	0.1973254	3.1058429	27	4	1979–1998	0.53	M-v	1	Williams	29947	1997 CY ₂
1997 CA ₃	13.5	0.15	19980706	164.01357	319.56251	100.36843	3.59387	0.1777175	3.1586089	23	3	1995–1998	0.81	M-v	4	Williams	31794	1997 CA ₃
1997 CF ₃	15.0	0.15	19980706	66.68310	56.80131	162.56072	5.61252	0.0899669	2.3609415	18	4	1990–1998	0.51	M-v	1	Williams	29948	1997 CF ₃

1997 CN ₅	13.5	0.15	19980706	58.28772	337.68171	210.07525	5.30935	0.0623121	2.8113831	35	4	1976–1998	0.48	M-v	1	Williams	29948	1997 CN ₅
1997 CB ₁₃	15.0	0.15	19980706	323.96746	189.47026	129.14060	4.06187	0.1520242	2.1780883	22	3	1976–1998	0.47	M-v	4	Williams	29128	1997 CB ₁₃
1997 CK ₁₃	12.5	0.15	19980706	46.49797	120.60805	101.16833	2.89282	0.1189729	3.1025749	40	3	1986–1998	0.56	M-v	3	Williams	29667	1997 CK ₁₃
1997 CN ₁₃	14.5	0.15	19980706	341.27018	163.37622	135.46790	7.81622	0.1268603	2.3213663	36	3	1977–1998	0.46	M-v	3	Williams	31794	1997 CN ₁₃
1997 CA ₁₇	13.5	0.15	19980706	133.27480	159.29394	283.95209	7.83825	0.1479836	3.1995101	49	3	1994–1998	0.58	M-v	3	Williams	31794	1997 CA ₁₇
1997 CF ₁₇	13.5	0.15	19980706	116.82930	176.31468	284.77697	3.94952	0.1412006	3.1860736	36	3	1995–1998	0.55	M-v	3	Williams	31794	1997 CF ₁₇
1997 CM ₁₉	14.0	0.15	19980706	357.08530	218.03135	81.30896	13.52715	0.1655926	2.6816078	17	3	1990–1998	0.31	M-v	3	Marsden	31794	1997 CM ₁₉
1997 CA ₂₀	13.0	0.15	19980706	124.23409	337.20267	145.04401	10.24133	0.0545955	3.1641440	26	4	1988–1998	0.69	M-v	2	Williams	29641	1997 CA ₂₀
1997 CE ₂₀	14.5	0.15	19980706	276.01180	256.20206	104.19794	5.38633	0.1409970	2.5628284	25	3	1995–1998	0.61	M-v	5	Williams	29641	1997 CE ₂₀
1997 CB ₂₂	13.0	0.15	19980706	8.99799	280.96442	348.80157	6.73972	0.0876544	2.7871350	40	6	1980–1998	0.83	M-v	1	Williams	29948	1997 CB ₂₂
1997 CF ₂₂	14.0	0.15	19980706	291.24400	173.41965	158.95230	5.70256	0.0298688	2.7896940	47	2	1997–1998	0.42	M-v	3	Williams	31738	1997 CF ₂₂
1997 CK ₂₂	14.5	0.15	19980706	132.26644	335.64158	148.44530	13.68300	0.1144864	2.6933204	34	2	1997–1998	0.29	M-v	3	Marsden	31738	1997 CK ₂₂
1997 CD ₂₆	15.0	0.15	19980706	14.29561	96.61940	136.73366	10.95083	0.0529175	2.9650465	17	3	1992–1998	0.54	M-v	4	Williams	29312	1997 CD ₂₆
1997 CU ₂₆	6.5	0.15	19980706	328.23252	241.96702	300.47291	23.41855	0.1680801	15.7131288	286	2	1997–1998	0.48	M-v	3	Williams	31794	1997 CU ₂₆
1997 CU ₂₈	14.0	0.15	19980706	167.92490	120.55825	306.98916	2.79226	0.1974893	2.6627082	23	3	1989–1998	0.60	M-v	5	Williams	29642	1997 CU ₂₈
1997 EB ₁	15.5	0.15	19980706	36.23184	347.59724	277.39693	6.00730	0.0837433	2.3559001	26	3	1973–1998	0.52	M-v	3	Williams	29643	1997 EB ₁
1997 ET ₁	13.5	0.15	19980706	171.89558	305.15687	84.87464	3.19277	0.0855104	2.8441372	83	5	1981–1998	0.63	M-v	3	Williams	31794	1997 ET ₁
1997 EJ ₆	13.5	0.15	19980706	38.54211	149.22816	52.30070	11.32493	0.1445178	3.1977147	63	2	1997–1998	0.52	M-v	3	Williams	31794	1997 EJ ₆
1997 EE ₇	14.0	0.15	19980706	229.01257	188.91391	181.73780	15.19866	0.1017050	3.0701345	22	3	1989–1998	0.55	M-v	3	Williams	29313	1997 EE ₇
1997 EO ₇	13.0	0.15	19980706	318.85805	321.09761	330.21740	9.20859	0.1709973	3.1610558	40	2	1997–1998	0.42	M-v	3	Marsden	31794	1997 EO ₇
1997 EQ ₁₇	12.5	0.15	19980706	68.95290	23.38206	165.30271	24.27271	0.1415989	3.1656230	15	3	1992–1998	0.64	M-v	3	Williams	29644	1997 EQ ₁₇
1997 EQ ₂₅	13.5	0.15	19980706	330.66825	108.23594	176.59427	12.24113	0.1032949	3.3510276	34	3	1993–1998	0.74	M-v	4	Williams	29948	1997 EQ ₂₅
1997 FC	12.5	0.15	19980706	43.72221	92.18632	129.41989	11.83979	0.0578850	2.9947707	29	3	1996–1998	0.70	M-v	3	Williams	31794	1997 FC
1997 FN	12.0	0.15	19980706	274.35018	310.34200	62.37437	12.56785	0.0585980	2.9840566	24	5	1953–1998	0.53	M-v	1	Williams	30094	1997 FN
1997 FU	13.0	0.15	19980706	210.92988	6.50186	48.24092	13.99502	0.1386216	2.5912128	39	4	1981–1998	0.88	M-v	3	Williams	31423	1997 FU
1997 FH ₁	13.5	0.15	19980706	315.48993	326.63591	350.34242	12.73915	0.1894107	2.6067348	35	5	1982–1998	0.56	M-v	3	Marsden	30094	1997 FH ₁
1997 GD ₂₀	13.0	0.15	19980706	291.43229	264.88459	96.49323	1.00316	0.2796061	3.0219793	35	8	1967–1998	0.91	M-v	1	Williams	31010	1997 GD ₂₀
1997 GO ₂₄	11.0	0.15	19980706	320.07662	87.79676	226.08888	14.45583	0.1273406	5.1722026	37	4	1989–1998	0.65	M-v	1	Williams	31114	1997 GO ₂₄
1997 GQ ₂₇	12.5	0.15	19980706	299.67048	270.21813	113.15807	14.12881	0.1890333	2.5924723	26	4	1990–1998	0.58	M-v	2	Williams	30462	1997 GQ ₂₇
1997 JA ₁₁	13.0	0.15	19970512	244.47612	233.25227	149.91035	14.97255	0.3086878	3.1384763	12	1	28 days	0.45		D	Williams		1997 JA ₁₁
1997 LF ₅	15.5	0.15	19970601	198.50668	279.60737	129.98155	10.68413	0.1121343	2.9994049	12	1	30 days	0.27		D	Williams		1997 LF ₅
1997 PV ₅	16.0	0.15	19980706	355.48133	93.26682	354.11312	3.71772	0.0308466	2.1847328	11	1	62 days	0.15	M-v	5D	Williams		1997 PV ₅
1997 SN ₅	17.5	0.15	19970929	18.98200	164.64984	166.78202	2.52058	0.2354795	2.6651567	8	1	7 days	0.93		E	Williams		1997 SN ₅
1997 SW ₃₃	13.0	0.15	19980706	21.82677	47.77867	37.82002	4.98694	0.1464655	3.1314430	42	4	1977–1998	0.64	M-v	2	Williams	31280	1997 SW ₃₃
1997 SX ₃₃	13.0	0.15	19980706	53.52681	3.80411	38.74013	0.96446	0.1851861	3.1030893	31	4	1975–1998	0.61	M-v	1	Williams	31280	1997 SX ₃₃
1997 VZ ₄	14.5	0.15	19980706	151.63910	253.90605	55.03021	6.31894	0.1920636	2.2690060	21	2	1992–1998	0.74	M-v	5	Marsden	31117	1997 VZ ₄
1997 WT ₂₂	19.0	0.15	19980706	68.84532	74.57856	72.07469	8.16048	0.3062336	1.4855551	143	1	171 days	0.51	M-v	4	Williams	31796	1997 WT ₂₂
1997 WO ₂₃	15.0	0.15	19980706	13.94398	51.29724	111.94184	7.65823	0.1277995	2.7522931	42	1	96 days	0.52	M-v	4	Williams	31424	1997 WO ₂₃
1997 WC ₃₁	16.0	0.15	19971128	30.39869	186.14804	190.79159	2.42141	0.1556590	2.1281827	13	1	9 days	0.37			Williams		1997 WC ₃₁
1997 WV ₄₄	14.0	0.15	19971128	300.58417	275.91822	236.06521	6.58625	0.1726771	2.8064116	16	1	31 days	0.54		D	Williams		1997 WV ₄₄
1997 XH	14.5	0.15	19980706	328.57923	272.82024	319.44055	5.61831	0.1423620	2.2275278	20	1	90 days	0.71	M-v	5	Williams	31796	1997 XH
1997 XX ₃	12.0	0.15	19980706	275.98306	137.74840	159.08519	5.36962	0.1888959	3.9471054	49	2	1997–1998	0.75	M-v	4	Williams	31796	1997 XX ₃
1997 XY ₃	13.5	0.15	19980706	107.42568	321.98401	136.62988	5.19954	0.0302002	2.7961510	26	1	139 days	0.44	M-v	5	Williams	31796	1997 XY ₃
1997 XV ₄	15.0	0.15	19980706	97.25301	317.86278	128.83461	2.25530	0.0915096	2.2498325	28	1	88 days	0.71	M-v	6	Williams	31796	1997 XV ₄
1997 XX ₄	16.0	0.15	19980706	39.33993	25.17000	127.23802	8.83866	0.1307470	2.3699936	24	2	1991–1998	0.50	M-v	3	Williams	31738	1997 XX ₄
1997 XZ ₄	16.0	0.15	19980706	127.88508	303.34699	119.70965	0.66271	0.0385200	2.1923093	15	1	88 days	0.46	M-v	6	Williams	31796	1997 XZ ₄
1997 XR ₈	15.0	0.15	19980706	78.90979	336.63409	87.29593	2.27364	0.1647859	3.1329301	14	1	61 days	0.42	M-v	6	Williams	31796	1997 XR ₈
1997 XY ₈	15.5	0.15	19980706	108.86370	20.00356	72.80780	1.28601	0.0914468	2.4419754	44	1	134 days	0.57	M-v	4	Williams	31796	1997 XY ₈
1997 XA ₉	14.0	0.15	19980706	117.66934	309.43548	128.83461	2.99188	0.0665448	2.9007921	48	2	1990–1998	0.53	M-v	4	Williams	31796	1997 XA ₉
1997 XD ₉	14.5	0.15	19980706	29.81665	36.36728	144.38721	9.91692	0.2103063	2.7602224	41	3	1984–1998	0.78	M-v	2	Williams	31738	1997 XD ₉
1997 XH ₉	13.5	0.15	19980706	158.91982	337.64705	54.55680	3.56206	0.1811011	3.0506242	27	1	133 days	0.62	M-v	6	Williams	31796	1997 XH ₉
1997 XE ₁₁	14.5	0.15	19980706	100.48262	260.44087	178.10044	8.53235	0.2142924	2.3199039	31	1	108 days	0.72	M-v	5	Williams	31796	1997 XE ₁₁
1997 YQ ₅	15.0	0.15	19980706	81.17630	295.54431	115.20736	6.66186	0.2484020	2.6254957	48	3	1979–1998	0.68	M-v	4	Williams	31796	1997 YQ ₅

1997 YN ₇	13.0	0.15	19980706	134.35048	274.87783	110.67126	15.57468	0.1254623	2.6027107	17	1	108 days	0.50	M-v	5	Williams	31591	1997 YN ₇
1997 YF ₁₀	14.5	0.15	19980706	28.48384	98.89652	50.36040	3.47972	0.2442029	2.3007019	27	1	131 days	0.50	M-v	5	Williams		1997 YF ₁₀
1997 YF ₁₁	15.0	0.15	19980706	320.48515	114.85779	106.10269	7.50322	0.1215740	2.3449226	33	1	85 days	0.38	M-v	4	Williams		1997 YF ₁₁
1997 YV ₁₃	13.5	0.15	19980706	80.04707	131.71853	266.81471	4.98136	0.3871667	2.5977542	23	1	145 days	0.62	M-v	4	Williams	31797	1997 YV ₁₃
1998 AX ₄	14.5	0.15	19980706	109.89461	331.39561	93.45416	24.33606	0.0799971	1.9621238	32	1	134 days	0.54	M-v	4	Williams	31797	1998 AX ₄
1998 AH ₅	13.5	0.15	19980706	35.75604	355.17273	140.94466	2.62718	0.1240496	3.1171600	12	1	109 days	0.22	M-v	5	Williams		1998 AH ₅
1998 AF ₆	15.5	0.15	19980706	38.62305	12.20006	155.47163	7.17224	0.1295307	2.3329453	26	1	101 days	0.50	M-v	4	Williams		1998 AF ₆
1998 AH ₆	14.0	0.15	19980706	338.09240	223.64990	2.17810	1.27358	0.0509636	2.9031867	34	1	101 days	0.42	M-v	4	Williams	31797	1998 AH ₆
1998 AJ ₆	15.0	0.15	19980706	160.58959	43.13337	2.85072	2.87649	0.0597879	2.1950700	46	4	1986–1998	0.62	M-v	2	Williams	31797	1998 AJ ₆
1998 AL ₇	14.5	0.15	19980706	25.83841	267.55440	243.02272	1.26649	0.1410164	2.4156809	14	3	1976–1998	0.86	M-v	5	Williams	31797	1998 AL ₇
1998 AK ₈	16.5	0.15	19980706	64.71878	11.61896	126.85811	48.23002	0.1818921	1.7977626	148	1	128 days	0.43	M-v	4	Williams	31592	1998 AK ₈
1998 AV ₉	15.0	0.15	19980706	75.86320	209.49930	312.16504	0.51023	0.0656697	2.1718962	17	1	138 days	0.47	M-v	6	Williams		1998 AV ₉
1998 BO ₁	14.5	0.15	19980706	87.47486	84.41839	347.39731	5.30491	0.0967079	2.3429119	41	5	1950–1998	0.51	M-v	1	Williams	31592	1998 BO ₁
1998 BT ₁	15.0	0.15	19980706	111.32223	50.78886	357.87838	4.25267	0.1296577	2.1588111	29	3	1984–1998	0.58	M-v	2	Williams	31592	1998 BT ₁
1998 BT ₃	17.5	0.15	19980127	17.71043	340.36373	122.73908	1.93160	0.2173919	3.0689377	12	1	19 days	0.30			Williams		1998 BT ₃
1998 BB ₇	15.0	0.15	19980706	337.61717	229.55435	345.49214	6.16414	0.0762324	2.3969073	35	2	1996–1998	0.54	M-v	4	Williams	31398	1998 BB ₇
1998 BN ₈	15.5	0.15	19980706	358.17290	198.54424	1.20098	4.52610	0.1027602	2.2401477	36	2	1996–1998	0.48	M-v	4	Williams	31398	1998 BN ₈
1998 BX ₈	14.5	0.15	19980706	48.10340	136.29527	340.09044	10.67067	0.0684529	3.0122997	38	2	1990–1998	0.77	M-v	4	Williams	31593	1998 BX ₈
1998 BL ₉	13.5	0.15	19980706	112.26920	273.07482	141.03290	11.94993	0.1909357	2.6801298	23	2	1989–1998	0.47	M-v	4	Williams	31738	1998 BL ₉
1998 BS ₁₃	13.5	0.15	19980706	7.34137	254.28736	257.45238	3.07908	0.0452963	2.7855612	49	1	137 days	0.67	M-v	4	Williams	31798	1998 BS ₁₃
1998 BS ₁₅	13.5	0.15	19980706	83.18117	99.39576	337.79127	6.49381	0.1824151	2.2648993	22	3	1981–1998	0.49	M-v	3	Williams	31738	1998 BS ₁₅
1998 BX ₂₄	15.0	0.15	19980706	359.82455	44.86824	149.73172	5.47009	0.2073292	2.5705020	33	2	1996–1998	0.67	M-v	4	Williams	31593	1998 BX ₂₄
1998 BY ₂₄	14.0	0.15	19980706	252.70980	2.02180	279.05119	1.21570	0.0155419	2.8440969	30	2	1996–1998	0.54	M-v	4	Williams	31400	1998 BY ₂₄
1998 BH ₂₅	14.5	0.15	19980706	340.24679	140.80473	69.46919	2.88393	0.0749340	2.4433968	33	3	1983–1998	0.56	M-v	3	Williams	31593	1998 BH ₂₅
1998 BK ₂₅	13.5	0.15	19980706	194.18409	256.12444	87.31692	6.59920	0.1454407	2.3895810	17	1	111 days	0.75	M-v	5	Nakano		1998 BK ₂₅
1998 BP ₂₅	14.0	0.15	19980706	348.17669	61.84338	131.92330	2.96904	0.1484934	3.1509940	35	2	1982–1998	0.66	M-v	4	Williams	31798	1998 BP ₂₅
1998 BE ₂₆	14.0	0.15	19980706	137.46469	243.82385	173.19304	10.54391	0.1080267	2.9793353	41	2	1975–1998	0.78	M-v	4	Williams	31798	1998 BE ₂₆
1998 BH ₂₆	14.0	0.15	19980706	319.54022	277.01217	356.41597	15.71447	0.1889342	2.5295696	76	2	1991–1998	0.71	M-v	4	Williams	31798	1998 BH ₂₆
1998 BJ ₂₆	16.0	0.15	19980706	69.15778	107.91766	26.24801	1.65463	0.1275223	2.3935528	26	1	82 days	0.65	M-v	6	Williams		1998 BJ ₂₆
1998 BK ₂₆	15.5	0.15	19980706	314.65149	120.56328	159.93497	5.82572	0.1538025	2.2280766	27	1	82 days	0.62	M-v	5	Williams		1998 BK ₂₆
1998 BL ₂₆	15.0	0.15	19980706	341.13748	88.86098	143.13245	3.02195	0.0343658	2.7401172	56	3	1991–1998	0.70	M-v	3	Williams	31798	1998 BL ₂₆
1998 BG ₃₁	13.5	0.15	19980127	192.57625	353.01472	309.10705	8.90231	0.1577374	2.5572777	20	1	26 days	0.52			Williams		1998 BG ₃₁
1998 BE ₃₃	14.5	0.15	19980706	108.83011	257.43039	167.83322	10.28154	0.2860904	2.6955491	41	3	1983–1998	0.72	M-v	3	Williams	31798	1998 BE ₃₃
1998 BB ₃₇	15.0	0.15	19980706	229.24405	0.38384	308.74813	3.22732	0.1956148	2.2772490	21	1	118 days	0.50	M-v	4	Gnadig		1998 BB ₃₇
1998 BU ₄₁	14.5	0.15	19980706	73.96596	152.83357	304.72599	7.85768	0.1586712	2.3692766	45	3	1971–1998	0.64	M-v	3	Williams	31556	1998 BU ₄₁
1998 BB ₄₂	13.5	0.15	19980706	111.91351	34.12103	14.62553	6.70359	0.1307624	2.6025515	48	5	1981–1998	0.74	M-v	2	Williams	31798	1998 BB ₄₂
1998 CA ₁	14.0	0.15	19980706	181.78392	28.39603	327.58017	7.48608	0.2283023	2.2017432	33	2	1983–1998	0.46	M-v	4	Williams	31594	1998 CA ₁
1998 CL ₁	14.5	0.15	19980706	46.67135	227.40247	254.46958	2.21054	0.1752919	3.0633587	34	2	1993–1998	0.73	M-v	4	Williams	31799	1998 CL ₁
1998 CR ₁	14.5	0.15	19980706	295.90533	115.42523	157.66840	5.40027	0.1751435	2.5265057	60	1	104 days	0.55	M-v	4	Williams		1998 CR ₁
1998 CV ₁	12.5	0.15	19980706	86.87807	296.63674	111.60076	8.38882	0.2060475	3.9238568	43	3	1989–1998	0.75	M-v	3	Williams	31404	1998 CV ₁
1998 CZ ₁	14.0	0.15	19980706	356.42738	137.64539	95.01703	13.39715	0.1151946	2.6050332	52	2	1994–1998	0.58	M-v	4	Williams	31799	1998 CZ ₁
1998 CA ₂	14.5	0.15	19980706	56.35336	89.06594	64.39665	15.16998	0.1569059	2.5884072	42	1	108 days	0.59	M-v	4	Williams	31799	1998 CA ₂
1998 CC ₂	14.5	0.15	19980706	66.19875	138.64905	319.82401	5.57159	0.2124144	2.5493346	49	3	1990–1998	0.62	M-v	3	Williams	31799	1998 CC ₂
1998 CF ₂	15.5	0.15	19980706	172.73188	64.79987	304.76945	6.34075	0.0840918	2.3128491	37	2	1996–1998	0.53	M-v	4	Williams	31405	1998 CF ₂
1998 CR ₂	13.0	0.15	19980706	187.57497	186.26954	165.71797	10.20229	0.0966107	3.0564734	41	2	1995–1998	0.53	M-v	4	Williams	31799	1998 CR ₂
1998 CC ₃	15.0	0.15	19980706	219.98943	0.99323	335.38320	3.66575	0.0666867	2.1499182	28	3	1993–1998	0.72	M-v	4	Williams	31799	1998 CC ₃
1998 CS ₃	15.0	0.15	19980706	100.24995	282.21927	152.76125	5.06453	0.1732993	2.2928358	27	3	1991–1998	0.87	M-v	3	Williams	31739	1998 CS ₃
1998 DA	13.5	0.15	19980706	262.68739	179.25442	97.38298	6.32630	0.0529162	2.6931715	45	3	1987–1998	0.56	M-v	3	Williams	31799	1998 DA
1998 DO	14.0	0.15	19980706	106.02053	253.83194	160.88971	12.96031	0.1610139	2.7780231	25	1	66 days	0.63	M-v	6	Williams	31799	1998 DO
1998 DT	14.0	0.15	19980706	196.10631	77.95321	265.53000	0.87196	0.0899977	3.0507741	54	3	1995–1998	0.64	M-v	3	Williams	31800	1998 DT
1998 DL ₁	13.5	0.15	19980706	94.06984	251.88039	180.88821	12.69593	0.1605039	2.4316714	39	3	1981–1998	0.62	M-v	2	Williams	31739	1998 DL ₁
1998 DL ₄	14.5	0.15	19980706	42.03728	173.22379	314.29480	13.03878	0.1595681	2.8664525	27	1	76 days	0.44	M-v	4	Williams		1998 DL ₄
1998 DW ₅	14.5	0.15	19980706	324.70590	268.53445	328.69938	22.03688	0.2084988	3.1353336	21	2	1994–1998	0.75	M-v	5	Williams	31407	1998 DW ₅

1998 DZ ₅	14.5	0.15	19980706	32.52639	348.61635	165.18326	4.53391	0.1745423	2.5528990	36	4	1990–1998	0.66	M-v	3	Williams	31800	1998 DZ ₅
1998 DA ₆	15.0	0.15	19980706	75.18675	184.82791	276.89950	1.21882	0.1451070	2.4217430	26	2	1994–1998	0.80	M-v	6	Williams	31800	1998 DA ₆
1998 DJ ₇	14.5	0.15	19980706	41.41750	30.17840	127.14807	3.05256	0.0107700	2.8684841	46	3	1990–1998	0.74	M-v	4	Williams	31800	1998 DJ ₇
1998 DL ₈	14.0	0.15	19980706	244.50353	94.69616	211.76158	4.15586	0.0540856	2.8162128	27	2	1994–1998	0.53	M-v	5	Williams	31800	1998 DL ₈
1998 DR ₈	13.5	0.15	19980706	97.97934	114.81381	246.42109	5.41294	0.2010403	2.2676998	52	5	1966–1998	0.70	M-v	2	Williams	31595	1998 DR ₈
1998 DF ₉	16.0	0.15	19980706	29.52640	109.27298	69.73000	5.00317	0.0640812	2.1830630	26	2	1995–1998	0.67	M-v	4	Marsden	31741	1998 DF ₉
1998 DS ₉	13.5	0.15	19980706	307.52967	144.17140	158.75579	24.32789	0.1934358	2.3635014	49	1	96 days	0.41	M-v	4	Williams	31801	1998 DS ₉
1998 DT ₉	15.5	0.15	19980706	243.46175	345.98234	345.03496	2.03567	0.1184007	2.1311899	41	2	1996–1998	0.60	M-v	5	Williams	31558	1998 DT ₉
1998 DV ₉	18.0	0.15	19980706	56.44274	0.59593	130.51711	8.68818	0.4339708	1.7453598	106	1	98 days	0.56	M-v	4	Marsden	31801	1998 DV ₉
1998 DJ ₁₀	13.5	0.15	19980706	79.62514	106.47303	348.75639	2.02257	0.1932580	2.8984697	48	3	1986–1998	0.52	M-v	3	Williams	31801	1998 DJ ₁₀
1998 DQ ₁₀	15.0	0.15	19980308	253.62119	139.48139	163.57998	6.28923	0.1692610	2.3092359	35	1	56 days	0.58			Williams		1998 DQ ₁₀
1998 DT ₁₀	14.0	0.15	19980706	0.31210	307.25489	258.90990	2.19163	0.1790591	2.4612566	115	3	1971–1998	0.73	M-v	2	Williams	31801	1998 DT ₁₀
1998 DE ₁₁	15.5	0.15	19980706	1.19493	329.96844	227.80598	2.54721	0.0776621	2.1513388	34	3	1992–1998	0.45	M-v	4	Williams	31741	1998 DE ₁₁
1998 DJ ₁₁	11.5	0.15	19980706	220.25295	356.88611	327.97715	4.61591	0.0527190	3.8953925	56	4	1976–1998	0.68	M-v	3	Williams	31801	1998 DJ ₁₁
1998 DT ₁₁	14.5	0.15	19980706	359.57170	60.44674	147.97725	5.30794	0.1811032	2.5586472	42	1	63 days	0.46	M-v	5	Williams	31801	1998 DT ₁₁
1998 DU ₁₁	13.0	0.15	19980706	308.99688	169.23703	88.54911	2.25453	0.1617187	3.0907735	45	2	1993–1998	0.69	M-v	5	Williams	31801	1998 DU ₁₁
1998 DZ ₁₂	14.0	0.15	19980706	75.43030	109.35239	357.90133	7.37528	0.1541582	2.5719194	66	2	1992–1998	0.56	M-v	4	Williams	31801	1998 DZ ₁₂
1998 DL ₁₃	13.0	0.15	19980308	81.02470	297.72051	133.21402	7.36103	0.1284856	3.1444612	29	1	29 days	1.29			Williams		1998 DL ₁₃
1998 DQ ₁₃	13.5	0.15	19980706	34.69089	56.97166	107.87067	2.48370	0.1135890	3.0374499	54	2	1980–1998	0.60	M-v	4	Williams	31801	1998 DQ ₁₃
1998 DU ₁₃	16.5	0.15	19980706	71.72750	133.41369	3.84976	7.00383	0.0491502	2.3371916	38	2	1960–1998	0.82	M-v	5	Williams	31801	1998 DU ₁₃
1998 DV ₁₃	14.0	0.15	19980308	311.61439	58.18958	177.79528	19.03613	0.0565522	3.1141749	31	1	52 days	1.01			Williams		1998 DV ₁₃
1998 DZ ₁₃	16.0	0.15	19980706	310.18448	183.75534	103.17766	1.59168	0.1850786	2.2845028	35	2	1981–1998	0.68	M-v	4	Williams	31801	1998 DZ ₁₃
1998 DA ₁₄	16.0	0.15	19980308	25.68912	334.94088	180.99770	2.02355	0.1712772	2.3130131	16	1	54 days	0.48			Williams		1998 DA ₁₄
1998 DB ₁₄	14.5	0.15	19980308	301.36498	250.89404	19.52244	12.99711	0.1330664	2.6796748	16	1	54 days	0.55			Williams		1998 DB ₁₄
1998 DC ₁₄	16.0	0.15	19980706	15.61432	44.34923	174.91514	2.91110	0.1083782	2.2192297	20	1	78 days	0.51	M-v	5	Williams		1998 DC ₁₄
1998 DD ₁₄	13.5	0.15	19980706	271.72059	136.24620	196.94051	11.51146	0.2131781	3.1651270	23	1	78 days	0.61	M-v	5	Williams		1998 DD ₁₄
1998 DE ₁₄	13.5	0.15	19980706	276.88098	301.62015	26.43871	12.57123	0.2032816	3.0898122	36	1	87 days	0.48	M-v	4	Williams		1998 DE ₁₄
1998 DR ₁₄	14.5	0.15	19980706	28.90490	208.29889	301.01411	11.40767	0.0921816	3.0731939	25	2	1996–1998	0.41	M-v	3	Williams	31741	1998 DR ₁₄
1998 DF ₁₅	14.5	0.15	19980308	99.60571	256.36370	163.06526	6.29036	0.0484318	2.7850613	24	1	32 days	0.83			Williams		1998 DF ₁₅
1998 DR ₁₅	15.0	0.15	19980706	143.48002	55.81243	358.17834	6.15055	0.0709238	2.2978265	42	4	1982–1998	0.70	M-v	3	Williams	31801	1998 DR ₁₅
1998 DE ₁₆	16.0	0.15	19980706	321.40262	110.37639	142.45829	3.82736	0.1185066	2.2715951	28	2	1995–1998	0.76	M-v	5	Williams	31802	1998 DE ₁₆
1998 DX ₁₇	14.0	0.15	19980706	179.21808	307.06162	73.69228	2.92601	0.0566063	2.6891797	31	2	1996–1998	0.66	M-v	6	Williams	31742	1998 DX ₁₇
1998 DF ₂₀	14.0	0.15	19980706	134.21299	240.42568	169.23726	13.10585	0.1732460	2.6657401	71	1	79 days	0.61	M-v	5	Williams	31802	1998 DF ₂₀
1998 DG ₂₀	14.0	0.15	19980706	334.73399	157.56368	95.77163	8.53211	0.0970183	2.4813922	53	1	91 days	0.48	M-v	4	Williams	31802	1998 DG ₂₀
1998 DS ₂₀	15.0	0.15	19980706	343.33279	54.37688	175.62831	15.52410	0.1474705	3.1902521	30	2	1992–1998	0.86	M-v	4	Williams	31802	1998 DS ₂₀
1998 DN ₂₃	16.5	0.15	19980706	10.24905	42.86652	185.02714	2.56943	0.2268425	2.3223665	29	1	78 days	0.51	M-v	5	Williams	31802	1998 DN ₂₃
1998 DV ₂₃	15.5	0.15	19980706	36.89367	166.87136	25.70242	8.44598	0.0769277	2.3672183	28	1	78 days	0.61	M-v	4	Williams		1998 DV ₂₃
1998 DC ₂₄	13.5	0.15	19980706	71.42001	268.03329	182.85301	13.68061	0.2438081	2.6763276	30	3	1994–1998	0.64	M-v	2	Williams	31802	1998 DC ₂₄
1998 DQ ₃₂	14.0	0.15	19980308	203.48158	347.57892	349.20023	9.69032	0.2076175	2.5888541	12	1	27 days	0.52			Williams		1998 DQ ₃₂
1998 DA ₃₃	15.0	0.15	19980706	12.88704	203.52964	5.97757	4.64802	0.0668169	2.6603477	35	2	1995–1998	0.67	M-v	4	Williams	31742	1998 DA ₃₃
1998 DR ₃₃	15.5	0.15	19980308	357.88111	8.31833	163.84001	13.51074	0.2011024	2.5475435	39	1	35 days	0.90			Marsden		1998 DR ₃₃
1998 DT ₃₃	15.5	0.15	19980706	58.57604	341.56884	157.46684	5.80698	0.0593414	2.3893980	38	3	1992–1998	0.82	M-v	4	Williams	31802	1998 DT ₃₃
1998 DU ₃₃	14.5	0.15	19980706	71.33323	71.17935	46.53088	2.10698	0.1329346	2.4026429	32	3	1994–1998	0.71	M-v	4	Williams	31743	1998 DU ₃₃
1998 DX ₃₃	13.0	0.15	19980706	299.46758	214.30349	41.78986	2.55325	0.0184203	2.8563399	38	3	1994–1998	0.60	M-v	4	Williams	31802	1998 DX ₃₃
1998 DZ ₃₃	14.5	0.15	19980706	20.93979	14.25517	165.70585	12.17879	0.1463589	2.5766740	40	1	77 days	0.61	M-v	4	Williams	31802	1998 DZ ₃₃
1998 DA ₃₄	14.5	0.15	19980706	349.95343	206.67958	4.86551	5.17937	0.0316248	2.4909714	33	3	1982–1998	0.76	M-v	4	Williams	31802	1998 DA ₃₄
1998 DB ₃₄	15.0	0.15	19980706	340.27762	103.37429	150.20583	4.77099	0.2935873	2.3645226	40	2	1995–1998	0.62	M-v	4	Williams	31563	1998 DB ₃₄
1998 DC ₃₄	15.5	0.15	19980308	296.29334	240.84712	5.76088	2.57871	0.1236032	2.3808538	22	1	28 days	1.02			Williams		1998 DC ₃₄
1998 DE ₃₄	13.5	0.15	19980706	43.21985	138.97098	2.30443	1.00284	0.1581465	3.0483863	36	2	1993–1998	0.72	M-v	5	Williams	31803	1998 DE ₃₄
1998 DF ₃₄	13.5	0.15	19980706	213.68461	199.89596	148.81554	6.37774	0.1696792	2.3560254	24	2	1992–1998	0.70	M-v	5	Williams	31564	1998 DF ₃₄
1998 DG ₃₄	14.5	0.15	19980706	153.10439	14.62876	16.68768	3.74428	0.1964831	2.3945977	34	2	1992–1998	0.87	M-v	6	Williams	31803	1998 DG ₃₄
1998 DH ₃₄	11.5	0.15	19980706	251.07948	222.10186	76.30953	3.21274	0.0484922	3.9520351	30	1	61 days	0.88	M-v	6	Williams	31803	1998 DH ₃₄
1998 DN ₃₄	13.0	0.15	19980706	20.82389	67.10788	102.28709	3.52351	0.0692271	3.2130849	36	2	1989–1998	0.79	M-v	4	Williams	31803	1998 DN ₃₄

1998 DO ₃₄	15.0	0.15	19980308	299.14586	104.71399	149.57474	8.98995	0.2143746	2.5226999	24	1	35 days	0.86		Marsden		1998 DO ₃₄
1998 DT ₃₄	14.5	0.15	19980308	223.27042	303.00838	15.98785	5.43062	0.1883244	2.2222162	13	1	27 days	1.05		Williams		1998 DT ₃₄
1998 DV ₃₄	14.5	0.15	19980706	331.85342	73.76093	155.14796	3.62076	0.0389188	2.7484128	38	2	1995–1998	0.72	M-v	5	Williams	31803 1998 DV ₃₄
1998 DA ₃₅	15.0	0.15	19980308	271.02951	144.41373	124.37416	4.43923	0.0821109	2.5869832	14	1	24 days	0.94		Williams		1998 DA ₃₅
1998 DH ₃₅	14.5	0.15	19980706	39.77423	160.62538	356.80694	13.74368	0.0912164	2.5748494	30	1	61 days	0.52	M-v	4	Williams	31803 1998 DH ₃₅
1998 DM ₃₅	15.5	0.15	19980308	47.25780	137.56213	332.39190	5.13705	0.1745803	2.4293494	46	1	52 days	0.97		Williams		1998 DM ₃₅
1998 DE ₃₆	15.5	0.15	19980308	319.96251	193.39446	21.11890	5.44293	0.1156392	2.2523212	18	1	52 days	0.77		Williams		1998 DE ₃₆
1998 ED	14.5	0.15	19980706	281.84542	266.65178	33.23903	13.44111	0.1849516	2.5549070	17	1	62 days	0.41	M-v	5	Williams	1998 ED
1998 EU	14.5	0.15	19980308	315.05005	32.37487	181.00535	9.05461	0.0164778	3.1559701	13	1	24 days	0.71		Williams		1998 EU
1998 EP ₁	15.5	0.15	19980706	82.89405	282.03335	190.99106	2.78941	0.0827793	2.2628863	38	3	1991–1998	0.48	M-v	4	Williams	31564 1998 EP ₁
1998 ES ₁	14.0	0.15	19980308	128.22954	217.49677	190.18883	5.15791	0.2334584	2.5924136	16	1	23 days	0.82		Williams		1998 ES ₁
1998 EF ₂	14.0	0.15	19980706	266.03569	151.18571	167.06602	2.56392	0.0434620	2.9137649	27	2	1996–1998	0.50	M-v	4	Williams	31743 1998 EF ₂
1998 EJ ₂	15.0	0.15	19980328	253.40684	136.56844	188.63921	11.95225	0.1772073	2.6822834	13	1	51 days	0.87		Williams		1998 EJ ₂
1998 EL ₂	15.0	0.15	19980706	295.04953	156.60505	157.15354	2.70134	0.1897687	2.2813543	30	1	75 days	0.72	M-v	5	Williams	1998 EL ₂
1998 EP ₂	15.5	0.15	19980706	43.31266	173.36258	2.33382	2.30309	0.1537624	2.4390919	45	1	75 days	0.66	M-v	4	Williams	1998 EP ₂
1998 ER ₂	16.0	0.15	19980328	312.39736	62.76421	193.06085	6.46527	0.0875336	2.3198006	16	1	51 days	0.68		Williams		1998 ER ₂
1998 ES ₂	17.0	0.15	19980328	25.41300	330.34400	188.28352	12.43909	0.2339064	2.3885256	15	1	53 days	0.67		Williams		1998 ES ₂
1998 EW ₂	14.5	0.15	19980706	299.74570	277.91185	19.45500	9.90481	0.0881205	2.5572728	26	1	75 days	0.56	M-v	5	Williams	1998 EW ₂
1998 EX ₂	15.5	0.15	19980328	308.80009	74.51052	194.46928	11.33321	0.1423741	2.7561777	19	1	57 days	0.48		Williams		1998 EX ₂
1998 EC ₃	16.5	0.15	19980706	359.45788	128.36452	128.38018	8.36436	0.5130370	2.1312654	242	1	92 days	0.59	M-v	4	Marsden	31803 1998 EC ₃
1998 ED ₃	14.5	0.15	19980706	77.90652	29.88527	103.53479	7.04500	0.0841849	2.4799136	32	1	75 days	0.40	M-v	4	Williams	31803 1998 ED ₃
1998 EP ₃	13.5	0.15	19980706	284.96154	300.56222	6.83375	9.42121	0.1762088	2.6520219	50	2	1996–1998	0.56	M-v	4	Williams	31803 1998 EP ₃
1998 ER ₃	15.5	0.15	19980706	40.32460	147.90703	25.11416	2.30342	0.1453228	2.4189027	58	3	1977–1998	0.68	M-v	3	Williams	31743 1998 ER ₃
1998 ES ₃	13.5	0.15	19980706	356.70300	194.59385	21.05669	13.62927	0.1023625	2.6105004	40	1	76 days	0.46	M-v	4	Williams	31803 1998 ES ₃
1998 EN ₅	16.0	0.15	19980328	20.44128	68.75842	108.18460	6.65831	0.0577915	2.3129225	18	1	53 days	0.59		Williams		1998 EN ₅
1998 EL ₆	13.5	0.15	19980308	161.38978	186.07214	175.99091	11.94964	0.1261563	3.0703695	18	1	24 days	1.11		Williams		1998 EL ₆
1998 EP ₆	14.5	0.15	19980706	27.08516	215.19040	325.05487	2.01992	0.1034225	2.1886861	44	6	1943–1998	0.61	M-v	2	Williams	31803 1998 EP ₆
1998 ER ₆	15.5	0.15	19980706	26.36521	200.86229	336.95342	4.08689	0.0829510	2.2957009	41	3	1977–1998	0.63	M-v	4	Williams	31803 1998 ER ₆
1998 EX ₆	14.0	0.15	19980706	335.22877	166.69185	76.76580	3.05352	0.1690814	2.4269485	61	3	1953–1998	0.62	M-v	4	Williams	31804 1998 EX ₆
1998 EB ₈	16.0	0.15	19980706	336.86417	182.62571	65.33825	1.51838	0.1162723	2.1989908	47	2	1996–1998	0.49	M-v	5	Williams	31804 1998 EB ₈
1998 EJ ₈	14.0	0.15	19980308	248.49230	127.82292	171.11223	6.67699	0.1523960	2.5366621	38	1	59 days	0.76		Williams		1998 EJ ₈
1998 EV ₈	14.0	0.15	19980706	352.00978	209.80768	41.61733	35.67859	0.1525599	2.7899956	58	1	89 days	0.54	M-v	4	Marsden	1998 EV ₈
1998 EX ₈	15.0	0.15	19980706	56.75316	99.31279	38.24436	11.41424	0.2121548	2.6799004	25	1	76 days	0.58	M-v	4	Williams	1998 EX ₈
1998 EZ ₈	14.5	0.15	19980706	325.53168	200.44817	47.72128	9.51669	0.1437920	2.5628332	36	1	84 days	0.60	M-v	5	Williams	31804 1998 EZ ₈
1998 EA ₉	15.0	0.15	19980706	331.92371	157.99618	111.76042	9.03036	0.2351130	2.5661290	44	1	68 days	0.51	M-v	4	Williams	1998 EA ₉
1998 EB ₉	14.5	0.15	19980308	227.56301	196.94270	100.47464	7.53286	0.1046127	2.4520509	14	1	12 days	1.09		Williams		1998 EB ₉
1998 EG ₉	12.5	0.15	19980308	97.68731	217.45387	120.11745	4.87636	0.0939569	2.4873968	10	1	14 days	0.21		Williams		1998 EG ₉
1998 EE ₁₀	14.5	0.15	19980706	296.53610	268.92744	22.71549	4.51301	0.1510041	2.2635354	41	2	1981–1998	0.54	M-v	5	Williams	31744 1998 EE ₁₀
1998 EP ₁₀	15.0	0.15	19980706	129.81810	298.90131	122.09395	7.43711	0.0464034	2.5995112	23	3	1991–1998	0.74	M-v	4	Williams	31744 1998 EP ₁₀
1998 EQ ₁₀	15.0	0.15	19980706	253.43523	249.28528	70.23901	4.44471	0.1807815	2.2964533	27	2	1995–1998	0.76	M-v	6	Williams	31744 1998 EQ ₁₀
1998 ER ₁₀	14.5	0.15	19980308	60.40129	334.46315	106.29873	3.73918	0.2452835	3.0494042	13	1	25 days	0.83		Williams		1998 ER ₁₀
1998 EV ₁₀	14.0	0.15	19980308	89.62479	276.69121	130.00549	9.25752	0.2938843	2.8038551	18	1	32 days	0.71		Marsden		1998 EV ₁₀
1998 EZ ₁₀	14.0	0.15	19980308	229.74667	291.87517	18.92039	7.33124	0.1587345	2.3420963	16	1	28 days	1.25		Williams		1998 EZ ₁₀
1998 EE ₁₁	14.5	0.15	19980328	326.51121	180.37532	46.29033	4.16493	0.2811191	2.7858347	21	1	58 days	1.02		Marsden		1998 EE ₁₁
1998 EG ₁₁	15.0	0.15	19980308	331.35743	71.16820	132.17955	5.88074	0.0934351	2.4795046	27	1	36 days	0.99		Marsden		1998 EG ₁₁
1998 EL ₁₁	15.5	0.15	19980308	321.31437	190.00585	38.81530	5.79004	0.2408779	2.6186649	18	1	32 days	1.20		Marsden		1998 EL ₁₁
1998 EN ₁₁	13.5	0.15	19980308	312.53463	73.92216	160.15834	26.29255	0.1674656	3.1378786	12	1	33 days	0.56		Williams		1998 EN ₁₁
1998 EP ₁₁	14.0	0.15	19980706	348.58320	218.46547	7.55367	13.42161	0.1802892	2.4774079	41	2	1996–1998	0.75	M-v	3	Williams	31804 1998 EP ₁₁
1998 ES ₁₁	15.0	0.15	19980308	13.19894	107.75784	46.18900	4.21752	0.0794975	2.5194006	24	1	36 days	1.16		Marsden		1998 ES ₁₁
1998 ET ₁₁	14.5	0.15	19980308	233.44064	288.26856	23.86296	7.40538	0.2084065	2.2906208	24	1	35 days	1.35		Marsden		1998 ET ₁₁
1998 EU ₁₁	13.0	0.15	19980308	153.58263	232.62627	133.35092	8.23919	0.2709744	2.5549100	24	1	36 days	0.92		Marsden		1998 EU ₁₁
1998 EV ₁₁	15.0	0.15	19980308	250.42477	238.59632	50.94747	6.66665	0.1125610	2.3662871	18	1	33 days	1.07		Marsden		1998 EV ₁₁
1998 EW ₁₁	12.5	0.15	19980706	210.62525	209.31349	132.59550	8.61605	0.0650039	3.1618283	28	2	1993–1998	1.00	M-v	5	Marsden	31744 1998 EW ₁₁

1998 EX ₁₁	15.0	0.15	19980308	283.13117	130.03226	132.38558	7.61907	0.1400598	2.3544310	21	1	33 days	1.16		Marsden	1998 EX ₁₁
1998 EY ₁₁	14.5	0.15	19980308	265.30739	267.88515	17.85162	8.67736	0.1985214	2.3720735	21	1	35 days	1.16		Marsden	1998 EY ₁₁
1998 EA ₁₂	15.5	0.15	19980706	359.36951	130.94451	83.60884	3.47940	0.1596711	2.3678942	28	1	62 days	0.68	M-v 5	Williams	1998 EA ₁₂
1998 ED ₁₂	15.0	0.15	19980308	268.11121	233.99283	38.37902	6.96220	0.1022825	2.2962802	27	1	36 days	0.76		Marsden	1998 ED ₁₂
1998 EE ₁₂	14.0	0.15	19980308	264.46575	195.78672	84.74238	6.01265	0.1440709	2.3104736	33	1	52 days	1.05		Marsden	1998 EE ₁₂
1998 EF ₁₂	15.0	0.15	19980706	41.42173	122.18785	36.94916	4.93456	0.1558263	2.2934075	35	2	1977–1998	0.62	M-v 3	Williams	31744 1998 EF ₁₂
1998 EG ₁₂	14.5	0.15	19980308	154.05960	266.61336	103.01082	6.72389	0.1316074	2.2662745	27	1	36 days	1.01		Marsden	1998 EG ₁₂
1998 EK ₁₂	13.5	0.15	19980706	214.77179	315.07009	27.45433	10.39607	0.0943668	2.7038950	39	3	1969–1998	0.89	M-v 4	Marsden	31745 1998 EK ₁₂
1998 EL ₁₂	13.5	0.15	19980308	282.78352	116.58167	140.27540	11.03264	0.0770294	2.9925183	23	1	36 days	0.94		Marsden	1998 EL ₁₂
1998 EN ₁₂	13.5	0.15	19980308	326.08612	74.18901	136.02921	10.83831	0.0793619	3.1141215	18	1	33 days	0.78		Marsden	1998 EN ₁₂
1998 EO ₁₂	14.0	0.15	19980308	11.82280	135.93945	18.18647	11.77273	0.1315216	3.1351501	24	1	36 days	0.56		Marsden	1998 EO ₁₂
1998 EP ₁₂	13.5	0.15	19980308	231.11512	227.54478	75.36908	5.46387	0.0420608	2.7897240	21	1	33 days	0.84		Marsden	1998 EP ₁₂
1998 EU ₁₂	15.5	0.15	19980706	313.49392	253.09999	18.40995	6.26724	0.1724226	2.2926443	22	1	64 days	0.64	M-v 5	Williams	1998 EU ₁₂
1998 EZ ₁₂	14.0	0.15	19980706	305.19537	250.73548	12.90710	9.37453	0.0956761	2.7567875	31	1	60 days	0.59	M-v 5	Williams	1998 EZ ₁₂
1998 EA ₁₃	13.0	0.15	19980706	265.09446	213.79274	88.65018	2.28981	0.1393417	3.2400100	19	2	1992–1998	0.94	M-v 5	Williams	31805 1998 EA ₁₃
1998 EV ₁₃	15.5	0.15	19980706	29.81813	137.54968	39.57065	3.27145	0.1460247	2.3200101	27	1	74 days	0.74	M-v 4	Williams	31805 1998 EV ₁₃
1998 EX ₁₃	13.0	0.15	19980706	233.04704	199.21122	128.07996	4.50833	0.0694690	3.0771011	36	2	1994–1998	0.77	M-v 5	Williams	31805 1998 EX ₁₃
1998 EY ₁₃	15.0	0.15	19980308	80.47664	70.30979	13.41864	7.15293	0.0743236	2.2723957	21	1	48 days	0.60		Williams	1998 EY ₁₃
1998 EG ₁₄	15.0	0.15	19980706	97.98500	317.60502	121.64471	3.30917	0.2690296	2.2417494	40	3	1963–1998	0.73	M-v 4	Williams	31745 1998 EG ₁₄
1998 EL ₁₄	15.0	0.15	19980308	333.10693	213.12957	3.89494	12.70687	0.2465241	2.6369329	49	1	33 days	0.72		Williams	1998 EL ₁₄
1998 ER ₁₄	15.0	0.15	19980706	275.70505	217.13831	93.60851	4.69726	0.1809895	2.1553434	26	1	63 days	0.66	M-v 5 D	Williams	1998 ER ₁₄
1998 ES ₁₄	13.0	0.15	19980706	177.86885	2.64239	13.08341	10.58495	0.1066436	3.0227600	30	2	1993–1998	0.74	M-v 5	Williams	31805 1998 ES ₁₄
1998 EV ₁₄	15.0	0.15	19980328	52.90754	278.82288	197.54055	15.64134	0.1783801	2.6777917	32	1	47 days	1.11		Williams	1998 EV ₁₄
1998 ED ₂₁	14.5	0.15	19980308	61.32075	289.06547	157.52177	9.16560	0.1208887	2.3747687	14	1	18 days	0.87		Williams	1998 ED ₂₁
1998 FG	16.0	0.15	19980706	82.68102	225.40954	248.95784	7.24852	0.0513479	2.4101174	25	1	62 days	0.57	M-v 5	Williams	1998 FG
1998 FJ	15.5	0.15	19980706	315.33014	3.09622	277.95553	1.17150	0.1468972	2.1535523	53	1	61 days	0.44	M-v 5	Williams	1998 FJ
1998 FK ₁	16.0	0.15	19980706	46.05787	183.40093	345.35470	5.04839	0.0813326	2.2301563	53	1	61 days	0.51	M-v 4	Williams	1998 FK ₁
1998 FO ₁	13.0	0.15	19980328	190.11810	199.54395	159.13677	10.65337	0.0938119	2.9755356	14	1	31 days	0.36		Williams	1998 FO ₁
1998 FS ₁	16.0	0.15	19980328	272.43008	141.09531	145.98274	4.30647	0.1149479	2.2164120	24	1	31 days	1.15		Williams	1998 FS ₁
1998 FY ₁	16.0	0.15	19980328	122.81293	354.67550	63.94867	3.82829	0.0649343	2.1927607	19	1	30 days	0.85		Williams	1998 FY ₁
1998 FD ₂	15.5	0.15	19980706	21.76518	40.03618	141.48665	3.71209	0.0455802	2.5385534	29	1	75 days	0.68	M-v 5	Williams	1998 FD ₂
1998 FG ₂	21.5	0.15	19980706	117.66552	94.99560	2.64449	4.10386	0.3565232	1.2987836	99	1	70 days	0.64	M-v 6	Marsden	1998 FG ₂
1998 FK ₂	15.0	0.15	19980706	215.02569	177.17502	182.46644	22.18310	0.0820654	1.9312946	55	2	1990–1998	0.66	M-v 4	Williams	31805 1998 FK ₂
1998 FQ ₂	14.5	0.15	19980706	297.89850	279.54483	23.72585	3.88709	0.1918033	2.2782605	72	3	1961–1998	0.62	M-v 3	Williams	31745 1998 FQ ₂
1998 FX ₂	18.5	0.15	19980706	27.79304	17.02033	181.25645	9.99405	0.4943121	2.1490369	488	1	78 days	0.53	M-v 4	Williams	31805 1998 FX ₂
1998 FA ₃	16.0	0.15	19980706	349.68266	92.93946	162.54538	5.49505	0.2145947	2.5915021	35	1	70 days	0.59	M-v 4	Williams	1998 FA ₃
1998 FB ₃	14.5	0.15	19980706	309.18867	191.85418	105.41445	4.09614	0.1497172	2.6016681	48	2	1995–1998	0.47	M-v 4	Williams	31805 1998 FB ₃
1998 FC ₃	16.0	0.15	19980706	41.49777	117.74957	62.85122	4.84675	0.1958331	2.3572271	29	2	1994–1998	0.50	M-v 4	Williams	31746 1998 FC ₃
1998 FD ₃	15.0	0.15	19980706	162.16035	273.10410	148.94529	5.00014	0.1329578	2.2984658	41	3	1989–1998	0.75	M-v 4	Williams	31746 1998 FD ₃
1998 FE ₃	14.5	0.15	19980706	136.05466	349.28669	93.51714	4.74099	0.1078556	2.6466730	28	1	70 days	0.60	M-v 5	Williams	1998 FE ₃
1998 FK ₃	14.5	0.15	19980706	97.17405	313.23877	151.62106	14.58718	0.1298339	2.5883440	25	1	143 days	0.53	M-v 4	Williams	31806 1998 FK ₃
1998 FL ₃	22.0	0.15	19980706	342.55849	121.20679	180.21749	26.42759	0.2484391	1.2612593	19	1	69 days	0.54	M-v 6	Marsden	1998 FL ₃
1998 FF ₄	15.0	0.15	19980706	84.30614	28.79497	122.40425	7.13214	0.0593127	2.3210147	19	1	67 days	0.53	M-v 5	Williams	1998 FF ₄
1998 FT ₄	15.0	0.15	19980328	26.34401	164.20048	351.03539	7.46617	0.0969482	2.7942474	37	1	31 days	1.07		Williams	1998 FT ₄
1998 FW ₄	19.0	0.15	19980706	47.09719	75.26564	3.22007	3.56541	0.7284081	2.4981741	32	1	72 days	0.78	M-v 6	Marsden	1998 FW ₄
1998 FZ ₄	15.5	0.15	19980706	20.88239	98.40198	106.86588	5.43869	0.1198703	2.3445530	38	1	62 days	0.60	M-v 4	Marsden	1998 FZ ₄
1998 FA ₅	15.5	0.15	19980417	20.42809	158.11926	6.22606	11.40179	0.1244741	2.5357650	40	1	57 days	0.67		Marsden	1998 FA ₅
1998 FJ ₅	16.0	0.15	19980417	70.95795	305.22637	181.14939	23.63938	0.0323596	1.9174027	25	1	53 days	0.85		Williams	1998 FJ ₅
1998 FK ₅	15.5	0.15	19980417	224.23758	323.09111	22.03732	24.14002	0.1205940	1.7752372	32	1	59 days	0.58		Williams	1998 FK ₅
1998 FL ₅	21.5	0.15	19980706	83.69821	297.45873	186.01397	14.52153	0.3648324	1.5445750	63	1	70 days	0.61	M-v 5	Marsden	1998 FL ₅
1998 FM ₅	16.0	0.15	19980706	40.87285	311.44684	177.07907	11.50549	0.5546280	2.2652741	375	1	69 days	0.56	M-v 4	Williams	31806 1998 FM ₅
1998 FN ₅	15.0	0.15	19980417	31.28717	259.15236	263.28131	11.62298	0.1125721	2.6392641	22	1	56 days	0.27		Williams	1998 FN ₅
1998 FO ₅	14.5	0.15	19980417	352.51461	69.69104	134.08369	4.78637	0.0577703	2.6159757	75	1	59 days	0.61		Williams	1998 FO ₅

1998 FP ₅	14.0	0.15	19980417	14.03628	93.60638	90.65175	6.49553	0.1163065	3.1747577	36	1	53 days	0.63		Marsden	1998 FP ₅
1998 FQ ₅	15.0	0.15	19980706	324.89446	234.83182	41.22349	11.31469	0.2066448	2.4445634	47	1	65 days	0.59	M-v 5	Marsden	1998 FQ ₅
1998 FB ₆	16.0	0.15	19980706	322.77300	120.63811	153.46777	3.87341	0.1860622	2.2412990	40	2	1992–1998	0.70	M-v 4	Williams	1998 FB ₆
1998 FK ₆	16.0	0.15	19980328	49.07818	69.29862	54.27939	3.11937	0.1484420	2.4106992	28	1	33 days	1.03		Williams	1998 FK ₆
1998 FL ₆	14.5	0.15	19980328	172.22860	332.95291	39.67745	5.36062	0.1961916	2.4882077	15	1	33 days	0.70		Williams	1998 FL ₆
1998 FB ₈	14.0	0.15	19980308	182.68869	230.45711	108.51798	2.37284	0.1451182	3.0045933	14	1	5 days	1.11		D Williams	1998 FB ₈
1998 FO ₈	12.5	0.15	19980328	335.15725	208.21727	14.67794	16.70118	0.1864388	3.1618907	38	1	43 days	0.49		Williams	1998 FO ₈
1998 FV ₈	15.5	0.15	19980706	333.69894	184.92055	81.87791	2.38230	0.1590778	2.4005340	31	2	1994–1998	0.69	M-v 6	Williams	1998 FV ₈
1998 FX ₈	15.5	0.15	19980328	341.18535	96.01671	126.71702	2.84419	0.1095629	2.7753809	15	1	31 days	0.75		Williams	1998 FX ₈
1998 FZ ₈	14.0	0.15	19980706	108.79769	341.80770	124.42499	3.08447	0.0479760	2.9168494	32	4	1960–1998	0.82	M-v 1	Williams	1998 FZ ₈
1998 FA ₉	15.5	0.15	19980328	199.73880	311.68299	53.81039	4.97560	0.1715106	2.1577731	14	1	31 days	0.73		Williams	1998 FA ₉
1998 FC ₉	15.0	0.15	19980706	147.45862	267.53682	166.63720	5.43756	0.0853975	2.2039212	44	2	1973–1998	0.78	M-v 5	Williams	1998 FC ₉
1998 FD ₉	13.0	0.15	19980328	186.33108	339.83868	38.18829	13.28566	0.1502519	3.1109352	14	1	31 days	0.61		Williams	1998 FD ₉
1998 FF ₉	14.5	0.15	19980706	293.57391	231.60665	82.91229	3.83603	0.1877998	2.4426982	39	4	1991–1998	0.86	M-v 2	Williams	1998 FF ₉
1998 FW ₉	16.0	0.15	19980706	334.03572	62.41811	194.87486	12.68995	0.1804203	2.3218674	45	2	1991–1998	0.88	M-v 4	Williams	1998 FW ₉
1998 FA ₁₀	14.5	0.15	19980706	86.07760	121.74337	355.23801	15.80190	0.0459260	2.6710674	43	1	79 days	0.72	M-v 5	Williams	1998 FA ₁₀
1998 FB ₁₀	14.5	0.15	19980706	309.39967	73.41631	208.33401	6.28187	0.1933625	2.5732765	45	2	1994–1998	0.69	M-v 4	Williams	1998 FB ₁₀
1998 FF ₁₀	15.5	0.15	19980328	341.67123	5.99690	204.52123	5.19084	0.1444808	2.2394294	30	1	59 days	0.71		Williams	1998 FF ₁₀
1998 FH ₁₀	13.5	0.15	19980706	99.82823	91.77365	359.72323	21.98044	0.1045758	3.2176543	41	1	79 days	0.55	M-v 4	Williams	1998 FH ₁₀
1998 FU ₁₀	14.0	0.15	19980706	289.47680	297.43641	357.38240	8.65458	0.1371782	2.7828245	46	2	1990–1998	0.62	M-v 4	Williams	1998 FU ₁₀
1998 FV ₁₀	15.0	0.15	19980328	239.56170	39.96899	277.38754	1.42741	0.1018456	2.3133395	30	1	31 days	0.79		Williams	1998 FV ₁₀
1998 FX ₁₀	14.0	0.15	19980328	133.07756	61.75578	352.22803	5.20856	0.0130585	2.7439888	25	1	31 days	0.52		Williams	1998 FX ₁₀
1998 FA ₁₁	16.0	0.15	19980706	273.25879	206.86006	145.38261	5.50378	0.1924244	2.2480336	14	1	60 days	0.52	M-v 7	Williams	1998 FA ₁₁
1998 FB ₁₁	14.5	0.15	19980328	353.33531	65.67351	161.69033	6.49766	0.1191891	2.7252248	13	1	30 days	0.29		Williams	1998 FB ₁₁
1998 FG ₁₁	13.5	0.15	19980706	286.08414	274.02538	34.38643	15.08473	0.1147409	2.5909344	46	3	1987–1998	0.68	M-v 3	Williams	1998 FG ₁₁
1998 FH ₁₁	15.5	0.15	19980706	359.86073	97.48045	130.03252	8.77487	0.1284570	2.3459950	27	3	1987–1998	0.64	M-v 4	Williams	1998 FH ₁₁
1998 FJ ₁₁	15.0	0.15	19980417	326.52815	161.03226	86.02383	7.55394	0.1892196	2.5369198	24	1	55 days	0.50		Williams	1998 FJ ₁₁
1998 FO ₁₁	14.0	0.15	19980706	15.44714	19.13699	179.51427	12.97897	0.0514320	2.6201790	46	1	62 days	0.41	M-v 5	Williams	1998 FO ₁₁
1998 FP ₁₁	14.5	0.15	19980706	23.84270	25.88461	168.23454	5.96945	0.1143730	2.4002155	52	2	1983–1998	0.48	M-v 4	Williams	1998 FP ₁₁
1998 FQ ₁₁	14.0	0.15	19980706	20.71728	212.45371	333.59896	11.87018	0.2092881	2.5889674	40	4	1973–1998	0.67	M-v 2	Williams	1998 FQ ₁₁
1998 FR ₁₁	16.0	0.15	19980706	349.77501	157.77565	130.41899	6.58852	0.7100049	2.8006456	54	1	85 days	0.56	M-v 4	Williams	1998 FR ₁₁
1998 FS ₁₁	20.0	0.15	19980706	25.59242	166.44019	25.60909	4.37965	0.4170088	2.3156868	53	1	39 days	0.52	M-v 5	Marsden	1998 FS ₁₁
1998 FY ₁₁	13.5	0.15	19980706	334.99001	86.73262	159.61653	8.34547	0.1508053	2.6504928	40	3	1982–1998	0.61	M-v 4	Williams	1998 FY ₁₁
1998 FA ₁₂	15.0	0.15	19980308	0.65952	147.61531	29.32132	8.53692	0.0485877	2.3238856	41	1	56 days	0.46		Williams	1998 FA ₁₂
1998 FG ₁₂	21.0	0.15	19980706	47.43315	97.47511	22.63496	8.64943	0.5808643	2.2386173	42	1	39 days	0.53	M-v 6	Marsden	1998 FG ₁₂
1998 FH ₁₂	19.0	0.15	19980706	180.95934	284.39590	108.63810	3.53054	0.5398175	1.0922775	42	1	66 days	0.49	M-v 6	Marsden	1998 FH ₁₂
1998 FN ₁₂	14.5	0.15	19980308	313.60413	222.24911	8.49612	1.62564	0.1326740	2.9258532	12	1	4 days	0.24		E Williams	1998 FN ₁₂
1998 FY ₁₃	13.0	0.15	19980706	8.92864	6.59101	181.92313	10.55237	0.0479927	2.9972640	42	2	1993–1998	0.74	M-v 4	Williams	1998 FY ₁₃
1998 FB ₁₄	14.0	0.15	19980328	269.81165	125.21836	167.64456	12.06347	0.2130342	2.7250291	40	1	30 days	1.05		Williams	1998 FB ₁₄
1998 FC ₁₄	15.0	0.15	19980308	321.13134	210.82270	7.43507	12.61711	0.0678386	2.5312126	34	1	48 days	0.76		Williams	1998 FC ₁₄
1998 FG ₁₄	16.5	0.15	19980328	232.69530	136.05820	180.97795	22.41328	0.0407932	1.9147259	29	1	40 days	0.79		Williams	1998 FG ₁₄
1998 FX ₁₄	15.0	0.15	19980706	29.42028	187.04956	347.76008	5.65539	0.0895905	3.0596652	30	1	68 days	0.67	M-v 5	Williams	1998 FX ₁₄
1998 FY ₁₄	14.0	0.15	19980706	313.51113	285.35013	0.84670	13.23984	0.2506919	2.6696740	52	1	145 days	0.55	M-v 4	Williams	1998 FY ₁₄
1998 FZ ₁₄	15.0	0.15	19980417	302.61053	5.06033	267.22126	5.93736	0.1629160	2.8310198	39	1	57 days	0.82		Williams	1998 FZ ₁₄
1998 FD ₁₅	14.5	0.15	19980706	348.59331	24.17173	215.51585	2.30399	0.1657509	2.3062059	45	3	1977–1998	0.66	M-v 4	Williams	1998 FD ₁₅
1998 FF ₁₅	14.0	0.15	19980328	292.88310	230.45726	16.43273	9.52847	0.1161693	2.6235560	48	1	28 days	0.38		Williams	1998 FF ₁₅
1998 FG ₁₅	16.5	0.15	19980328	292.73545	247.57041	14.71954	20.22946	0.0523748	1.9231023	48	1	31 days	0.69		Williams	1998 FG ₁₅
1998 FH ₁₅	13.5	0.15	19980706	237.06141	346.19294	354.14610	12.01728	0.1079232	2.7440469	40	2	1990–1998	0.55	M-v 4	Williams	1998 FH ₁₅
1998 FK ₁₅	16.0	0.15	19980706	27.52394	14.07734	171.19450	5.71803	0.1591657	2.3927245	25	1	69 days	0.39	M-v 4	Williams	1998 FK ₁₅
1998 FN ₁₅	16.0	0.15	19980417	13.16881	316.60124	219.38298	14.02144	0.1827655	2.7281517	38	1	51 days	0.69		Williams	1998 FN ₁₅
1998 FO ₁₅	15.0	0.15	19980706	58.89826	147.22475	359.01070	2.45200	0.1185132	2.4213703	54	1	98 days	0.58	M-v 4	Williams	1998 FO ₁₅
1998 FU ₁₅	15.0	0.15	19980328	289.49470	313.71248	316.38165	2.08146	0.1000559	2.6367939	30	1	31 days	1.26		Williams	1998 FU ₁₅
1998 FV ₁₅	15.0	0.15	19980328	215.59050	333.07648	5.32087	4.66065	0.1172063	2.2154955	38	1	31 days	0.87		Williams	1998 FV ₁₅

1998 FW ₁₅	15.0	0.15	19980706	17.81906	141.25219	59.69348	10.45288	0.1667547	2.3854160	26	1	63 days	0.57	M-v	4	Williams	1998 FW ₁₅
1998 FB ₁₆	15.0	0.15	19980328	60.21960	296.14031	192.11878	6.20376	0.1724416	2.4153003	23	1	34 days	0.70			Williams	1998 FB ₁₆
1998 FF ₁₆	15.0	0.15	19980706	328.78598	106.33402	161.21423	2.48041	0.1852913	2.3948090	68	2	1995–1998	0.61	M-v	4	Williams	31807 1998 FF ₁₆
1998 FH ₁₆	13.5	0.15	19980706	44.51153	6.65645	139.66952	1.71398	0.1033771	3.1357476	30	1	68 days	0.63	M-v	5	Marsden	1998 FH ₁₆
1998 FQ ₂₀	14.5	0.15	19980308	287.03717	96.51889	152.10445	12.47360	0.1013585	2.6789587	18	1	6 days	1.12		E	Williams	1998 FQ ₂₀
1998 FS ₂₀	16.0	0.15	19980308	336.18065	93.88081	103.17447	3.17298	0.1549151	2.4204881	21	1	27 days	1.00			Williams	1998 FS ₂₀
1998 FV ₂₀	14.5	0.15	19980706	118.30883	323.47135	94.27487	2.38581	0.1785536	2.4224571	23	3	1989–1998	0.66	M-v	5	Williams	31748 1998 FV ₂₀
1998 FH ₂₃	14.5	0.15	19980706	219.98083	223.62503	114.18510	3.08291	0.0601463	2.4343946	25	2	1996–1998	0.64	M-v	5	Williams	31748 1998 FH ₂₃
1998 FK ₂₆	15.0	0.15	19980706	65.45862	343.11447	147.79264	4.02061	0.0806797	2.2890569	24	1	62 days	0.52	M-v	5	Williams	1998 FK ₂₆
1998 FP ₂₆	14.5	0.15	19980706	183.10931	4.63526	5.23588	7.77663	0.1856951	2.2845926	22	2	1958–1998	0.91	M-v	6	Williams	31748 1998 FP ₂₆
1998 FT ₂₆	15.0	0.15	19980706	352.44875	208.70339	359.68272	13.94833	0.0981822	2.7318502	26	3	1971–1998	0.80	M-v	5	Williams	31748 1998 FT ₂₆
1998 FA ₂₇	14.5	0.15	19980308	58.28603	121.82691	341.55617	6.92476	0.0705269	2.6427747	21	1	26 days	0.73			Williams	1998 FA ₂₇
1998 FD ₂₇	15.0	0.15	19980308	71.95650	269.27668	179.05617	14.61655	0.0723630	2.6082444	16	1	12 days	0.93			Williams	1998 FD ₂₇
1998 FM ₂₇	13.0	0.15	19980706	95.84602	205.02898	236.80616	3.12813	0.1197478	3.0532895	29	3	1980–1998	0.61	M-v	5	Williams	31748 1998 FM ₂₇
1998 FT ₂₇	15.0	0.15	19980308	281.59217	349.81212	260.32321	1.97819	0.0149473	2.2925446	18	1	12 days	1.12		E	Williams	1998 FT ₂₇
1998 FX ₂₇	15.5	0.15	19980706	47.07983	210.53822	306.72059	1.99033	0.0620319	2.2027556	25	2	1960–1998	0.58	M-v	5	Williams	31749 1998 FX ₂₇
1998 FY ₂₇	14.0	0.15	19980706	48.79935	200.31559	297.01312	2.64326	0.1092795	3.0243807	36	2	1977–1998	0.83	M-v	5	Williams	31749 1998 FY ₂₇
1998 FC ₂₈	14.5	0.15	19980308	145.87306	193.87739	183.41805	6.06821	0.1093476	2.3751969	18	1	12 days	0.67			Williams	1998 FC ₂₈
1998 FG ₂₈	14.0	0.15	19980706	132.58693	141.26135	274.72653	0.96082	0.0553395	2.8289755	32	2	1977–1998	0.80	M-v	6	Williams	31749 1998 FG ₂₈
1998 FK ₂₈	14.0	0.15	19980706	333.87274	4.00497	220.75403	1.25962	0.0820196	3.1248837	35	2	1995–1998	0.63	M-v	5	Williams	31749 1998 FK ₂₈
1998 FW ₂₉	14.5	0.15	19980706	128.33931	97.71092	327.96684	6.50944	0.0863488	2.3657979	25	3	1978–1998	0.65	M-v	3	Williams	31749 1998 FW ₂₉
1998 FZ ₂₉	15.0	0.15	19980706	327.60002	46.16309	211.38413	4.88928	0.1631711	2.2350035	34	2	1995–1998	0.53	M-v	4	Williams	31808 1998 FZ ₂₉
1998 FD ₃₀	14.5	0.15	19980328	269.51234	71.58916	215.82309	4.00716	0.1733942	2.1782980	22	1	29 days	0.52			Williams	1998 FD ₃₀
1998 FF ₃₀	15.0	0.15	19980328	55.74958	276.56516	195.75415	7.23940	0.0962782	2.4210435	22	1	29 days	0.63			Williams	1998 FF ₃₀
1998 FK ₃₀	13.5	0.15	19980308	71.84365	89.95794	333.93811	5.84189	0.3163555	2.6813063	18	1	12 days	0.59			Williams	1998 FK ₃₀
1998 FL ₃₀	14.5	0.15	19980308	295.00189	35.06353	216.99413	2.20969	0.1393986	2.4131518	25	1	55 days	0.74			Williams	1998 FL ₃₀
1998 FK ₃₁	15.5	0.15	19980328	9.69915	157.63361	8.29138	12.52074	0.1002416	2.4117220	21	1	28 days	0.59			Williams	1998 FK ₃₁
1998 FZ ₃₁	14.0	0.15	19980308	325.62388	224.72891	351.09990	14.34118	0.1188966	2.5346495	18	1	12 days	0.53			Williams	1998 FZ ₃₁
1998 FE ₃₂	15.5	0.15	19980308	9.21502	321.39516	198.56209	6.66972	0.1558851	2.4037718	32	1	54 days	1.12			Williams	1998 FE ₃₂
1998 FF ₃₂	12.5	0.15	19980328	182.64138	129.27473	225.83647	4.60199	0.0802911	3.3741738	24	1	30 days	0.91			Williams	1998 FF ₃₂
1998 FP ₃₂	14.0	0.15	19980706	202.63098	27.97232	332.41931	2.83999	0.2294777	2.3465061	36	4	1949–1998	0.68	M-v	3	Williams	31749 1998 FP ₃₂
1998 FV ₃₂	14.0	0.15	19980308	78.87531	248.22971	172.73044	0.17407	0.2964424	2.4824992	21	1	6 days	0.59		E	Williams	1998 FV ₃₂
1998 FM ₃₄	14.5	0.15	19980706	36.91482	329.18722	198.91426	5.87901	0.0711738	2.4068975	38	2	1991–1998	0.52	M-v	4	Williams	31750 1998 FM ₃₄
1998 FS ₃₄	14.5	0.15	19980706	29.77387	228.42956	295.79122	3.04019	0.1351634	3.1495184	23	2	1995–1998	0.88	M-v	4	Williams	31750 1998 FS ₃₄
1998 FD ₃₈	15.0	0.15	19980706	143.03464	61.99861	346.98442	7.49018	0.1060766	2.3168711	41	3	1991–1998	0.57	M-v	3	Williams	31750 1998 FD ₃₈
1998 FT ₃₉	14.0	0.15	19980706	337.65346	238.12919	346.55969	5.21560	0.1124675	3.2134550	42	3	1960–1998	0.86	M-v	4	Williams	31750 1998 FT ₃₉
1998 FX ₃₉	14.0	0.15	19980706	297.87832	81.01746	213.78709	4.28918	0.2703700	2.5507398	34	3	1978–1998	0.70	M-v	4	Williams	31750 1998 FX ₃₉
1998 FG ₄₀	15.0	0.15	19980706	37.42014	165.47425	359.29974	1.13988	0.1158244	2.4250983	25	2	1994–1998	0.59	M-v	5	Williams	31750 1998 FG ₄₀
1998 FT ₄₁	13.0	0.15	19980706	350.74227	21.46345	189.66320	10.12772	0.0530694	3.0199472	47	2	1977–1998	0.54	M-v	5	Williams	31808 1998 FT ₄₁
1998 FH ₄₂	15.0	0.15	19980706	300.55284	304.56371	342.69162	9.04484	0.1782571	2.4611634	40	3	1971–1998	0.86	M-v	4	Williams	31751 1998 FH ₄₂
1998 FJ ₄₂	15.5	0.15	19980706	17.37971	302.53493	254.74929	2.21375	0.1789711	2.3541422	46	1	77 days	0.76	M-v	4	Williams	1998 FJ ₄₂
1998 FO ₄₂	16.0	0.15	19980706	24.71671	337.04997	213.04120	3.12899	0.1096280	2.1940603	31	2	1996–1998	0.73	M-v	5	Williams	31751 1998 FO ₄₂
1998 FT ₄₂	13.5	0.15	19980706	127.69792	65.87167	350.06496	10.55846	0.1565404	3.0512504	34	1	133 days	0.71	M-v	5	Williams	31809 1998 FT ₄₂
1998 FV ₄₂	14.0	0.15	19980706	267.85491	53.95689	242.73953	1.26611	0.0230438	2.8367554	44	2	1994–1998	0.65	M-v	5	Williams	31751 1998 FV ₄₂
1998 FW ₄₂	14.5	0.15	19980706	96.20839	267.39432	192.85664	5.83883	0.1080865	2.4062091	46	3	1992–1998	0.57	M-v	2	Williams	31809 1998 FW ₄₂
1998 FA ₄₃	14.0	0.15	19980706	315.11596	25.33155	233.40058	1.11250	0.1182044	2.9731166	20	2	1993–1998	1.02	M-v	6	Williams	31570 1998 FA ₄₃
1998 FV ₄₃	14.0	0.15	19980706	307.41863	260.20174	359.48828	9.63899	0.0512575	2.9730890	32	2	1993–1998	0.70	M-v	5	Williams	31751 1998 FV ₄₃
1998 FL ₄₄	14.5	0.15	19980706	309.28823	269.88038	3.33240	13.49880	0.1564634	2.6174256	32	2	1995–1998	0.49	M-v	4	Williams	31751 1998 FL ₄₄
1998 FR ₄₆	14.0	0.15	19980328	205.29143	341.46398	3.23511	27.06584	0.1833614	2.7155178	25	1	29 days	0.73			Williams	1998 FR ₄₆
1998 FE ₄₇	15.5	0.15	19980706	60.81725	154.06991	349.24327	6.69227	0.0881915	2.3747301	38	1	101 days	0.69	M-v	4	Williams	31809 1998 FE ₄₇
1998 FK ₄₇	14.5	0.15	19980706	275.44282	315.27485	352.55736	7.37700	0.1262374	2.3300503	36	1	78 days	0.68	M-v	5	Williams	31809 1998 FK ₄₇
1998 FR ₄₇	14.0	0.15	19980706	238.62573	6.16015	337.28568	6.79016	0.2286137	2.2126935	40	3	1943–1998	0.63	M-v	4	Williams	31751 1998 FR ₄₇
1998 FZ ₄₇	15.0	0.15	19980706	22.52118	208.95833	341.48112	5.58229	0.0848263	2.3016398	43	2	1977–1998	0.61	M-v	4	Williams	31809 1998 FZ ₄₇

1998 FE ₄₈	13.5	0.15	19980706	257.74729	321.65660	355.32212	17.99729	0.1478623	3.1597986	32	1	81 days	0.92	M-v	5	Williams	31809	1998 FE ₄₈
1998 FL ₄₈	15.0	0.15	19980328	269.80759	10.28493	268.41293	3.28720	0.0359054	2.5179605	30	1	30 days	1.13			Williams		1998 FL ₄₈
1998 FO ₄₈	14.5	0.15	19980706	17.59824	243.82541	309.11828	3.29500	0.0881195	2.5354970	42	1	66 days	0.69	M-v	5	Williams	31809	1998 FO ₄₈
1998 FX ₄₈	14.0	0.15	19980328	75.29348	241.26318	210.11447	4.56841	0.1536757	3.1144049	23	1	30 days	0.90			Williams		1998 FX ₄₈
1998 FB ₄₉	15.0	0.15	19980706	291.43399	332.93200	328.13790	2.14617	0.1764140	2.2112532	54	4	1986–1998	0.56	M-v	2	Williams	31752	1998 FB ₄₉
1998 FD ₄₉	14.5	0.15	19980706	107.68249	87.61445	357.68614	13.37019	0.1279984	2.5661933	51	1	65 days	0.69	M-v	5	Williams	31809	1998 FD ₄₉
1998 FK ₄₉	15.0	0.15	19980706	19.59035	351.46971	198.20822	2.23218	0.1236116	2.6143877	41	2	1994–1998	0.57	M-v	5	Williams	31809	1998 FK ₄₉
1998 FL ₄₉	15.0	0.15	19980706	293.39201	312.59608	345.10887	2.01569	0.1464367	2.1954815	57	2	1976–1998	0.50	M-v	4	Williams	31752	1998 FL ₄₉
1998 FO ₄₉	14.5	0.15	19980706	185.94977	25.00696	358.08884	7.83591	0.1038070	2.3053334	47	1	84 days	0.49	M-v	4	Williams	31809	1998 FO ₄₉
1998 FS ₄₉	15.5	0.15	19980328	338.41224	210.50755	1.40360	2.66679	0.1234252	2.4270058	35	1	40 days	0.70			Williams		1998 FS ₄₉
1998 FA ₅₁	14.5	0.15	19980328	282.43622	261.29279	9.02937	15.08790	0.0856240	2.5762484	27	1	31 days	0.53			Williams		1998 FA ₅₁
1998 FK ₅₁	14.0	0.15	19980706	13.57116	177.55672	11.17840	15.80419	0.1319897	3.0664091	31	2	1995–1998	0.51	M-v	3	Williams	31752	1998 FK ₅₁
1998 FZ ₅₂	13.5	0.15	19980706	220.69782	147.81471	197.45647	3.76567	0.0628178	3.0988147	35	2	1995–1998	0.65	M-v	5	Williams	31809	1998 FZ ₅₂
1998 FG ₅₃	14.5	0.15	19980706	300.17149	297.96222	339.58156	3.70756	0.0367188	2.3031196	44	2	1978–1998	0.56	M-v	5	Williams	31809	1998 FG ₅₃
1998 FN ₅₃	15.0	0.15	19980308	124.84717	183.98968	223.44055	3.04994	0.0854979	2.1471852	27	1	54 days	0.93			Williams		1998 FN ₅₃
1998 FT ₅₃	13.0	0.15	19980706	230.10922	356.99949	348.97263	12.13142	0.1751691	2.6418370	51	4	1961–1998	0.56	M-v	2	Williams	31752	1998 FT ₅₃
1998 FX ₅₃	16.0	0.15	19980328	24.26117	255.93334	252.54553	2.95337	0.2250443	2.5425331	36	1	47 days	1.01			Williams		1998 FX ₅₃
1998 FD ₅₄	14.0	0.15	19980328	46.33707	299.94552	192.89049	10.06415	0.0811856	2.9799050	31	1	47 days	0.67			Williams		1998 FD ₅₄
1998 FE ₅₄	15.5	0.15	19980328	69.15214	274.75108	192.06070	9.05676	0.0932884	2.3619562	27	1	31 days	0.76			Williams		1998 FE ₅₄
1998 FK ₅₄	14.0	0.15	19980706	110.03797	91.42605	357.62888	11.00797	0.0548077	2.9814706	40	1	85 days	0.66	M-v	5	Williams	31810	1998 FK ₅₄
1998 FM ₅₄	14.5	0.15	19980706	269.39039	329.62984	351.22898	5.29677	0.1993257	2.4139644	46	3	1969–1998	0.79	M-v	4	Williams	31752	1998 FM ₅₄
1998 FN ₅₄	14.5	0.15	19980328	81.18721	248.80435	192.32085	6.29588	0.2070124	2.4328868	48	1	43 days	0.60			Williams		1998 FN ₅₄
1998 FT ₅₄	14.0	0.15	19980328	55.32779	289.28777	184.73630	16.18756	0.1634906	2.7602813	25	1	43 days	0.42			Williams		1998 FT ₅₄
1998 FU ₅₄	15.5	0.15	19980328	74.65454	279.60502	181.54436	7.62242	0.0955074	2.2872952	22	1	31 days	1.08			Williams		1998 FU ₅₄
1998 FD ₅₅	14.5	0.15	19980328	90.18297	74.08323	15.17219	8.72452	0.0506449	2.9997963	19	1	31 days	1.29			Williams		1998 FD ₅₅
1998 FK ₅₅	13.0	0.15	19980328	82.54135	278.45670	176.75852	16.47517	0.0732411	3.2439588	22	1	31 days	0.49			Williams		1998 FK ₅₅
1998 FP ₅₅	15.5	0.15	19980328	347.00030	119.23113	83.51769	2.33340	0.1338260	2.3982577	22	1	31 days	0.59			Williams		1998 FP ₅₅
1998 FR ₅₅	14.0	0.15	19980706	111.71619	268.21340	169.06978	12.95339	0.1352385	3.0876185	22	1	79 days	0.79	M-v	5	Williams		1998 FR ₅₅
1998 FX ₅₅	14.5	0.15	19980328	150.95774	270.25452	116.01779	3.61674	0.1713820	2.2346253	19	1	31 days	0.56			Williams		1998 FX ₅₅
1998 FZ ₅₅	14.5	0.15	19980328	264.14398	246.60359	51.77398	4.32444	0.1567315	2.2364734	19	1	31 days	0.78			Williams		1998 FZ ₅₅
1998 FG ₅₆	14.5	0.15	19980706	289.02055	143.05055	160.54011	7.79196	0.1999432	2.5615952	20	1	79 days	0.64	M-v	5	Williams		1998 FG ₅₆
1998 FH ₅₆	15.0	0.15	19980328	250.77990	153.22967	152.51739	5.88849	0.0936022	2.5299667	19	1	31 days	1.18			Williams		1998 FH ₅₆
1998 FJ ₅₆	13.5	0.15	19980706	274.24341	251.35704	42.45142	4.30496	0.0093501	2.8042145	38	4	1981–1998	0.54	M-v	1	Williams	31753	1998 FJ ₅₆
1998 FO ₅₆	14.5	0.15	19980328	298.70807	248.76341	13.94986	9.31361	0.1382061	3.1744625	21	1	31 days	1.10			Williams		1998 FO ₅₆
1998 FZ ₅₆	14.5	0.15	19980328	35.79942	137.98799	9.46146	8.74738	0.0575513	2.9711280	20	1	31 days	1.13			Williams		1998 FZ ₅₆
1998 FA ₅₇	14.0	0.15	19980328	72.37170	298.06535	173.86840	1.96662	0.0289135	2.9118250	25	1	31 days	0.80			Williams		1998 FA ₅₇
1998 FB ₅₇	15.0	0.15	19980308	244.36628	135.71740	181.36013	2.35005	0.2052748	2.2284860	26	1	53 days	0.70			Williams		1998 FB ₅₇
1998 FD ₅₇	15.0	0.15	19980328	328.18009	62.38617	178.26680	3.30890	0.2608401	3.0290983	23	1	31 days	0.56			Williams		1998 FD ₅₇
1998 FE ₅₇	14.5	0.15	19980328	91.60956	277.93872	176.25396	2.16812	0.0168768	2.8815553	18	1	31 days	1.05			Williams		1998 FE ₅₇
1998 FG ₅₇	15.5	0.15	19980308	76.79851	279.92309	178.70754	5.78471	0.0554185	2.2629696	28	1	53 days	0.57			Williams		1998 FG ₅₇
1998 FJ ₅₇	14.0	0.15	19980328	168.17281	8.53020	8.89601	16.04400	0.1135118	2.6268487	31	1	31 days	0.65			Williams		1998 FJ ₅₇
1998 FK ₅₇	15.5	0.15	19980706	22.61273	190.18113	357.66607	3.63882	0.1555765	2.6045904	25	1	80 days	0.63	M-v	5	Williams		1998 FK ₅₇
1998 FM ₅₇	15.0	0.15	19980328	282.27218	298.10770	350.38979	3.61183	0.2012937	2.3160365	19	1	31 days	0.46			Williams		1998 FM ₅₇
1998 FN ₅₇	15.5	0.15	19980706	60.14557	312.25544	195.61978	5.57271	0.1153039	2.2982970	35	2	1996–1998	0.62	M-v	4	Williams	31810	1998 FN ₅₇
1998 FO ₅₇	16.0	0.15	19980706	37.79916	182.24465	353.79198	7.22468	0.1822489	2.2266609	36	1	78 days	0.43	M-v	4	Williams	31810	1998 FO ₅₇
1998 FP ₅₇	14.0	0.15	19980328	34.40434	312.75363	193.51612	13.60943	0.1041418	3.1418087	24	1	31 days	1.05			Williams		1998 FP ₅₇
1998 FR ₅₇	13.0	0.15	19980706	198.99843	43.85088	322.93762	3.89115	0.1157496	3.2383704	45	4	1989–1998	0.68	M-v	2	Williams	31753	1998 FR ₅₇
1998 FU ₅₇	14.5	0.15	19980328	347.07312	4.20033	200.33971	8.74359	0.0887421	2.8003533	24	1	31 days	0.70			Williams		1998 FU ₅₇
1998 FY ₅₇	14.0	0.15	19980328	266.29089	294.09290	357.47458	8.30783	0.0774479	3.0022663	18	1	31 days	1.60			Williams		1998 FY ₅₇
1998 FA ₅₈	13.5	0.15	19980328	253.70515	111.13158	193.89649	10.39108	0.0994615	2.9739143	33	1	31 days	0.62			Williams		1998 FA ₅₈
1998 FB ₅₈	14.0	0.15	19980328	90.61094	255.05151	188.65182	25.14524	0.1217022	3.1811693	16	1	31 days	1.38			Williams		1998 FB ₅₈
1998 FC ₅₈	15.0	0.15	19980328	274.71954	302.40274	350.81354	2.11303	0.1754363	2.4394685	19	1	31 days	0.99			Williams		1998 FC ₅₈
1998 FD ₅₈	15.0	0.15	19980328	60.83395	173.23125	302.36090	1.00781	0.1108943	2.4180325	20	1	31 days	8.57			Williams		1998 FD ₅₈

1998 FF ₅₈	16.0	0.15	19980328	45.50376	256.12721	221.47034	1.27195	0.2523107	2.5541913	18	1	31 days	1.05		Williams	1998 FF ₅₈
1998 FG ₅₈	14.5	0.15	19980328	249.10170	310.76147	0.85932	7.03769	0.1186562	2.3568958	20	1	31 days	0.70		Williams	1998 FG ₅₈
1998 FK ₅₈	13.5	0.15	19980706	38.48171	162.32479	5.63020	9.03626	0.0264272	2.9983175	37	1	65 days	0.53	M-v 5	Williams	1998 FK ₅₈
1998 FN ₅₈	15.5	0.15	19980328	273.98801	278.38035	12.42624	3.34698	0.1467280	2.4335631	23	1	31 days	0.93		Williams	1998 FN ₅₈
1998 FO ₅₈	14.0	0.15	19980706	129.31770	242.17849	182.75290	11.94062	0.1645401	2.6661315	43	3	1987–1998	0.69	M-v 3	Williams	1998 FO ₅₈
1998 FR ₅₈	13.5	0.15	19980328	33.48619	103.88504	45.69596	1.81128	0.0845930	3.1220297	29	1	55 days	0.49		Williams	1998 FR ₅₈
1998 FU ₅₈	15.0	0.15	19980328	134.67528	231.63650	173.26566	6.38904	0.1091438	2.3821188	19	1	31 days	0.95		Williams	1998 FU ₅₈
1998 FV ₅₈	14.0	0.15	19980328	189.80287	184.73560	175.31869	9.75152	0.0963401	3.0661759	23	1	31 days	0.89		Williams	1998 FV ₅₈
1998 FX ₅₈	15.5	0.15	19980328	83.28502	282.83472	174.98433	6.66379	0.0596175	2.2789123	24	1	31 days	0.66		Williams	1998 FX ₅₈
1998 FA ₅₉	15.0	0.15	19980706	220.17777	281.63478	74.81762	2.48101	0.1448042	2.4467475	43	3	1984–1998	0.75	M-v 4	Williams	1998 FA ₅₉
1998 FC ₅₉	14.5	0.15	19980706	265.87103	156.32447	169.54530	7.12836	0.1789685	2.2583588	46	4	1989–1998	0.67	M-v 2	Marsden	1998 FC ₅₉
1998 FH ₅₉	16.0	0.15	19980328	288.77617	239.81502	29.84313	6.77892	0.1022255	2.4024352	19	1	31 days	1.40		Williams	1998 FH ₅₉
1998 FK ₅₉	15.0	0.15	19980308	24.72996	336.98952	172.44520	12.79248	0.1293825	2.4296266	22	1	51 days	0.45		Williams	1998 FK ₅₉
1998 FM ₅₉	15.5	0.15	19980328	38.40619	37.31302	102.76973	3.43302	0.1091088	2.3700209	22	1	31 days	0.69		Williams	1998 FM ₅₉
1998 FR ₅₉	14.5	0.15	19980328	63.21714	70.31004	49.05772	5.22431	0.0560766	2.7373470	22	1	33 days	0.50		Williams	1998 FR ₅₉
1998 FU ₅₉	15.5	0.15	19980706	357.76864	52.95372	168.84908	6.86518	0.0689382	2.3572638	33	2	1996–1998	0.64	M-v 4	Williams	1998 FU ₅₉
1998 FW ₅₉	15.0	0.15	19980328	96.99351	54.95083	21.80532	8.07646	0.1311450	2.4829150	25	1	43 days	0.85		Williams	1998 FW ₅₉
1998 FY ₅₉	15.0	0.15	19980328	270.13595	274.07718	17.73362	14.80050	0.1204900	2.5766196	19	1	31 days	0.80		Williams	1998 FY ₅₉
1998 FA ₆₀	13.5	0.15	19980308	82.74857	306.62854	156.38770	3.20612	0.0267325	2.6239015	21	1	33 days	1.05		Williams	1998 FA ₆₀
1998 FB ₆₀	15.0	0.15	19980328	84.15268	1.50257	82.06856	2.11147	0.1559158	3.0935895	27	1	53 days	1.21		Williams	1998 FB ₆₀
1998 FC ₆₀	14.0	0.15	19980328	106.88900	50.85805	15.25231	12.62639	0.1536435	2.6691289	17	1	31 days	1.89		Williams	1998 FC ₆₀
1998 FD ₆₀	14.0	0.15	19980328	165.12209	245.99562	135.77346	2.75309	0.0827299	2.8330323	19	1	33 days	1.50		Williams	1998 FD ₆₀
1998 FE ₆₀	15.5	0.15	19980706	50.75869	134.74408	19.01190	4.33070	0.1774166	2.4413313	36	1	87 days	0.60	M-v 5	Williams	1998 FE ₆₀
1998 FF ₆₀	16.0	0.15	19980328	357.49846	11.18972	180.48213	1.15405	0.1267300	2.3927839	27	1	31 days	0.72		Williams	1998 FF ₆₀
1998 FG ₆₀	14.5	0.15	19980328	266.50046	281.02320	9.58616	3.77000	0.0669166	2.7938300	24	1	31 days	1.16		Williams	1998 FG ₆₀
1998 FA ₆₁	14.0	0.15	19980328	232.39683	320.31880	5.86816	14.46270	0.1118851	2.6073525	19	1	31 days	0.94		Williams	1998 FA ₆₁
1998 FD ₆₁	15.0	0.15	19980328	324.41671	47.79235	185.99833	4.87408	0.1220086	2.1708339	30	1	55 days	0.49		Williams	1998 FD ₆₁
1998 FE ₆₁	14.5	0.15	19980706	59.53981	303.22595	189.56117	8.04432	0.1661105	3.1976810	13	3	1978–1998	0.99	M-v 4	Williams	1998 FE ₆₁
1998 FH ₆₁	15.0	0.15	19980328	326.09565	34.40818	196.36652	4.54021	0.1015660	2.5268843	22	1	43 days	0.59		Williams	1998 FH ₆₁
1998 FL ₆₁	12.0	0.15	19980706	246.07424	328.15660	3.75417	10.71337	0.1093714	3.0243574	52	6	1963–1998	0.59	M-v 1	Williams	1998 FL ₆₁
1998 FN ₆₁	15.0	0.15	19980308	16.76225	330.12732	191.11530	23.44601	0.1357784	2.5631390	33	1	54 days	0.81		Williams	1998 FN ₆₁
1998 FO ₆₁	15.5	0.15	19980706	340.40073	28.27416	219.23972	2.73165	0.1246489	2.3894491	47	2	1977–1998	0.84	M-v 5	Williams	1998 FO ₆₁
1998 FP ₆₁	15.0	0.15	19980328	266.94790	98.55062	199.02241	6.77538	0.1317739	2.2789437	19	1	31 days	0.71		Williams	1998 FP ₆₁
1998 FQ ₆₁	16.5	0.15	19980328	346.59936	215.62338	353.70714	5.48172	0.1861311	2.2999649	18	1	31 days	0.95		Williams	1998 FQ ₆₁
1998 FR ₆₁	15.0	0.15	19980328	312.15182	306.43032	302.14815	1.47276	0.1136286	2.6054570	25	1	31 days	0.86		Williams	1998 FR ₆₁
1998 FT ₆₁	15.0	0.15	19980706	337.03702	2.68248	254.83592	1.47148	0.1809765	2.4057354	42	2	1991–1998	0.60	M-v 5	Williams	1998 FT ₆₁
1998 FY ₆₁	14.5	0.15	19980706	120.77480	201.91294	242.21189	3.66227	0.0692050	2.7235840	43	2	1971–1998	0.80	M-v 6	Williams	1998 FY ₆₁
1998 FC ₆₂	15.5	0.15	19980328	315.12103	43.26907	204.79421	9.45631	0.1375198	2.4261668	25	1	33 days	0.96		Williams	1998 FC ₆₂
1998 FD ₆₂	15.0	0.15	19980328	287.78972	284.26609	349.04697	6.22212	0.0951756	2.3480396	31	1	43 days	0.50		Williams	1998 FD ₆₂
1998 FE ₆₂	14.0	0.15	19980308	139.94875	36.37966	0.18872	14.32666	0.1787644	2.5530005	22	1	51 days	0.73		Williams	1998 FE ₆₂
1998 FF ₆₂	14.0	0.15	19980706	316.89664	266.17788	357.53943	10.85873	0.0686235	2.7077198	44	2	1980–1998	0.50	M-v 4	Williams	1998 FF ₆₂
1998 FG ₆₂	14.0	0.15	19980328	26.20786	224.27770	286.41410	2.55195	0.2177453	3.2904836	26	1	39 days	0.76		Williams	1998 FG ₆₂
1998 FL ₆₂	14.5	0.15	19980328	210.79578	124.48825	219.15096	4.73537	0.0521398	2.3599211	24	1	33 days	1.21		Williams	1998 FL ₆₂
1998 FM ₆₂	13.0	0.15	19980328	188.38921	166.23187	199.55395	17.36982	0.1445826	2.7757781	28	1	42 days	0.76		Williams	1998 FM ₆₂
1998 FN ₆₂	13.5	0.15	19980706	89.08649	123.77749	353.32737	9.23574	0.0502465	3.0213077	47	2	1995–1998	0.55	M-v 3	Williams	1998 FN ₆₂
1998 FO ₆₂	13.5	0.15	19980706	189.64749	169.74162	211.24879	5.04339	0.1200467	2.8028724	37	3	1979–1998	0.69	M-v 5	Williams	1998 FO ₆₂
1998 FU ₆₂	14.0	0.15	19980706	180.68106	79.90655	309.58460	1.47858	0.0704628	2.7661983	32	3	1977–1998	0.82	M-v 4	Williams	1998 FU ₆₂
1998 FV ₆₂	14.0	0.15	19980328	265.13976	94.80262	200.27271	9.40525	0.0735413	2.9715220	27	1	33 days	0.95		Williams	1998 FV ₆₂
1998 FX ₆₂	14.5	0.15	19980706	86.64699	107.36163	7.56528	13.32064	0.1146871	2.6367689	51	1	60 days	0.67	M-v 5	Williams	1998 FX ₆₂
1998 FY ₆₂	14.0	0.15	19980706	131.95027	248.41112	187.91869	13.90420	0.0564428	2.5597561	51	1	78 days	0.57	M-v 4	Williams	1998 FY ₆₂
1998 FC ₆₃	13.5	0.15	19980706	0.88210	37.52719	172.35000	1.29333	0.1000205	3.2190713	62	4	1978–1998	0.72	M-v 2	Williams	1998 FC ₆₃
1998 FD ₆₃	14.5	0.15	19980328	342.38267	202.37038	10.55275	16.29253	0.1328141	3.2057708	23	1	31 days	0.97		Williams	1998 FD ₆₃
1998 FG ₆₃	14.0	0.15	19980706	5.10961	62.31413	142.38048	2.16015	0.0480708	3.0967444	35	2	1995–1998	0.54	M-v 4	Williams	1998 FG ₆₃

1998 FK ₆₃	15.0	0.15	19980706	335.38864	210.96446	46.22031	2.85356	0.1645461	2.4333234	54	3	1991–1998	0.62	M-v	3	Williams	31755	1998 FK ₆₃
1998 FP ₆₃	14.0	0.15	19980706	327.54795	130.41110	124.02292	2.93116	0.1369187	3.0926077	36	2	1994–1998	0.68	M-v	5	Williams	31755	1998 FP ₆₃
1998 FQ ₆₃	14.0	0.15	19980328	246.92732	277.86058	44.97858	5.22218	0.2076285	2.8477194	25	1	44 days	0.71			Williams		1998 FQ ₆₃
1998 FR ₆₃	15.5	0.15	19980706	86.05057	327.23956	142.91415	3.46607	0.1767854	2.4163588	31	2	1994–1998	0.80	M-v	5	Marsden	31755	1998 FR ₆₃
1998 FS ₆₃	15.0	0.15	19980328	191.91537	330.59010	29.56287	7.62018	0.1483396	2.2007476	30	1	33 days	1.12			Williams		1998 FS ₆₃
1998 FT ₆₃	16.0	0.15	19980706	33.98760	50.43045	129.81769	2.89982	0.1548978	2.3351144	36	1	81 days	0.51	M-v	4	Williams	31811	1998 FT ₆₃
1998 FX ₆₃	15.5	0.15	19980328	341.15328	143.87102	69.56143	3.40900	0.1258049	2.4125547	26	1	33 days	0.90			Williams		1998 FX ₆₃
1998 FZ ₆₃	14.5	0.15	19980328	248.17631	276.20334	37.75110	6.77919	0.1232880	2.3408269	30	1	42 days	0.58			Williams		1998 FZ ₆₃
1998 FD ₆₄	14.0	0.15	19980328	86.26242	12.06911	77.00506	3.34544	0.1414279	3.0779169	22	1	38 days	0.74			Williams		1998 FD ₆₄
1998 FF ₆₄	15.0	0.15	19980328	140.97177	9.05038	35.45663	7.09202	0.0806693	2.4545182	32	1	39 days	1.15			Williams		1998 FF ₆₄
1998 FH ₆₄	14.0	0.15	19980706	17.38610	52.64806	138.81629	2.68888	0.1506330	3.1475781	50	3	1992–1998	0.77	M-v	4	Williams	31811	1998 FH ₆₄
1998 FL ₆₄	14.0	0.15	19980706	242.65468	280.90551	53.13180	3.41825	0.0680070	2.9192553	34	2	1993–1998	0.90	M-v	6	Williams	31755	1998 FL ₆₄
1998 FM ₆₄	14.0	0.15	19980706	326.28603	100.02641	156.68844	1.20373	0.1398349	3.1039836	36	3	1982–1998	0.64	M-v	4	Williams	31756	1998 FM ₆₄
1998 FN ₆₄	16.0	0.15	19980328	34.29254	135.50589	14.52017	6.84771	0.0835230	2.3059727	17	1	33 days	0.80			Williams		1998 FN ₆₄
1998 FP ₆₄	14.0	0.15	19980328	257.75862	140.87871	183.16882	13.32520	0.3122945	2.5710898	31	1	33 days	0.98			Williams		1998 FP ₆₄
1998 FR ₆₄	14.5	0.15	19980706	124.04283	254.94954	179.45530	1.86552	0.1546006	2.5368282	36	3	1979–1998	0.85	M-v	4	Williams	31756	1998 FR ₆₄
1998 FS ₆₄	16.5	0.15	19980328	354.80300	15.62473	182.25509	2.28671	0.1763612	2.2921846	21	1	42 days	0.62			Williams		1998 FS ₆₄
1998 FU ₆₄	14.0	0.15	19980328	350.13332	18.04593	186.39043	10.79353	0.1296307	3.0322432	40	1	44 days	0.59			Williams		1998 FU ₆₄
1998 FY ₆₄	14.0	0.15	19980328	321.73141	231.14674	7.41909	15.00400	0.1019568	2.8519276	50	1	45 days	0.56			Williams		1998 FY ₆₄
1998 FZ ₆₄	14.5	0.15	19980328	303.57601	254.35795	5.61099	7.03055	0.1148428	2.2615578	32	1	41 days	0.51			Williams		1998 FZ ₆₄
1998 FC ₆₅	15.5	0.15	19980328	323.62765	43.87271	193.72904	5.56380	0.1230218	2.2763147	42	1	42 days	0.47			Williams		1998 FC ₆₅
1998 FE ₆₅	14.5	0.15	19980328	64.83405	125.69940	352.01058	4.36763	0.0897788	2.3100470	43	1	42 days	0.48			Williams		1998 FE ₆₅
1998 FH ₆₅	15.0	0.15	19980706	327.41053	46.34139	221.10208	1.74559	0.1290308	2.2801305	68	2	1991–1998	0.53	M-v	5	Williams	31756	1998 FH ₆₅
1998 FJ ₆₅	16.0	0.15	19980328	8.52188	193.36188	346.66862	4.11666	0.1499776	2.2500575	30	1	33 days	0.74			Williams		1998 FJ ₆₅
1998 FK ₆₅	15.0	0.15	19980328	291.80117	64.22409	216.33324	4.83982	0.1768808	2.2293174	28	1	35 days	0.81			Williams		1998 FK ₆₅
1998 FN ₆₅	14.5	0.15	19980328	301.65102	51.76892	209.10657	10.16848	0.0960335	2.9226277	34	1	39 days	1.32			Williams		1998 FN ₆₅
1998 FP ₆₅	14.0	0.15	19980706	315.90308	64.16720	212.45407	7.65433	0.1609187	2.7355848	32	2	1990–1998	0.59	M-v	4	Williams	31756	1998 FP ₆₅
1998 FS ₆₅	15.5	0.15	19980328	345.20025	317.22844	253.93224	2.36077	0.1093985	2.2878004	44	1	42 days	0.57			Williams		1998 FS ₆₅
1998 FT ₆₅	15.0	0.15	19980706	316.25150	287.98724	355.52055	6.28256	0.1513074	2.2096098	56	2	1992–1998	0.61	M-v	4	Williams	31756	1998 FT ₆₅
1998 FV ₆₅	15.5	0.15	19980328	303.31015	58.28104	204.98626	5.91676	0.1362406	2.2868709	36	1	41 days	0.64			Williams		1998 FV ₆₅
1998 FY ₆₅	14.5	0.15	19980706	86.82524	201.44065	280.87572	1.48915	0.0771764	2.5777432	68	2	1996–1998	0.63	M-v	4	Williams	31811	1998 FY ₆₅
1998 FC ₆₆	14.0	0.15	19980706	285.36085	121.59654	196.72034	10.32632	0.2219950	2.3578585	70	3	1973–1998	0.57	M-v	3	Williams	31756	1998 FC ₆₆
1998 FD ₆₆	14.0	0.15	19980328	290.60441	73.04876	199.07792	6.24069	0.0822245	2.4174819	46	1	42 days	0.47			Williams		1998 FD ₆₆
1998 FF ₆₆	14.5	0.15	19980328	310.74155	243.56901	9.44164	3.78830	0.1128062	2.5687042	54	1	42 days	0.57			Williams		1998 FF ₆₆
1998 FG ₆₆	12.5	0.15	19980417	220.15750	150.14797	195.72122	11.08388	0.1245904	3.0495492	49	1	57 days	0.60			Williams		1998 FG ₆₆
1998 FH ₆₆	13.5	0.15	19980328	289.89791	19.13218	255.62732	0.21955	0.1010779	3.2444860	33	1	31 days	0.94			Williams		1998 FH ₆₆
1998 FJ ₆₆	14.0	0.15	19980328	325.65237	218.46943	12.36556	9.66002	0.0638672	2.5310776	36	1	42 days	0.60			Williams		1998 FJ ₆₆
1998 FL ₆₆	14.5	0.15	19980706	314.42976	268.05122	20.05550	0.77597	0.1967906	2.3303005	53	3	1977–1998	0.61	M-v	4	Williams	31757	1998 FL ₆₆
1998 FM ₆₆	14.5	0.15	19980328	57.07451	113.31168	11.71811	13.75359	0.1015073	2.6152473	46	1	39 days	0.67			Williams		1998 FM ₆₆
1998 FO ₆₆	15.0	0.15	19980706	147.48136	254.74564	167.15871	1.67736	0.1177731	2.2736094	42	3	1986–1998	0.72	M-v	3	Williams	31757	1998 FO ₆₆
1998 FQ ₆₆	15.0	0.15	19980328	178.49024	351.86798	20.61404	7.95277	0.1463666	2.3185632	17	1	33 days	1.22			Williams		1998 FQ ₆₆
1998 FS ₆₆	15.0	0.15	19980328	55.96596	298.46578	184.45385	12.34862	0.1281910	2.7563951	22	1	33 days	0.86			Williams		1998 FS ₆₆
1998 FT ₆₆	14.0	0.15	19980328	30.15349	127.76361	26.24304	6.35582	0.1211806	3.1736177	32	1	41 days	0.59			Williams		1998 FT ₆₆
1998 FU ₆₆	14.0	0.15	19980328	189.95313	190.05732	173.78804	6.05667	0.0811492	2.7065797	16	1	31 days	0.73			Williams		1998 FU ₆₆
1998 FY ₆₆	14.0	0.15	19980706	190.14560	216.70130	169.45083	7.93825	0.0611183	2.4464513	37	2	1994–1998	0.51	M-v	5	Williams	31812	1998 FY ₆₆
1998 FZ ₆₆	16.5	0.15	19980328	306.72486	133.11290	132.63350	2.94757	0.1982642	2.3561094	28	1	39 days	1.15			Williams		1998 FZ ₆₆
1998 FC ₆₇	15.0	0.15	19980328	0.50557	13.40759	177.57975	14.14577	0.1102383	2.6085576	24	1	35 days	0.60			Williams		1998 FC ₆₇
1998 FE ₆₇	14.5	0.15	19980328	171.35621	344.90184	33.60027	7.32531	0.1331760	2.3677031	25	1	33 days	1.00			Williams		1998 FE ₆₇
1998 FF ₆₇	15.5	0.15	19980706	342.40732	119.41372	129.82523	3.30907	0.1512031	2.4001801	54	3	1994–1998	0.49	M-v	2	Williams	31757	1998 FF ₆₇
1998 FH ₆₇	15.0	0.15	19980328	353.91910	165.36331	32.98955	7.78298	0.0636890	2.4598186	28	1	41 days	0.52			Williams		1998 FH ₆₇
1998 FN ₆₇	16.0	0.15	19980328	1.70265	116.31447	72.05076	3.85981	0.2033342	2.7813399	24	1	44 days	0.65			Williams		1998 FN ₆₇
1998 FO ₆₇	15.0	0.15	19980328	72.47503	13.87289	93.30215	3.95343	0.1064091	2.7393267	16	1	31 days	0.84			Williams		1998 FO ₆₇
1998 FP ₆₇	16.5	0.15	19980328	12.88485	69.98710	102.24545	3.21444	0.1740984	2.3805128	30	1	33 days	1.28			Williams		1998 FP ₆₇

1998 FQ ₆₇	13.0	0.15	19980417	267.37603	196.51530	103.03348	3.60570	0.0926119	2.9511760	45	1	57 days	0.66	Williams	1998 FQ ₆₇
1998 FR ₆₇	15.0	0.15	19980328	296.28600	178.47959	87.00557	3.06306	0.0938972	2.2119765	31	1	42 days	0.56	Williams	1998 FR ₆₇
1998 FV ₆₇	13.5	0.15	19980706	338.39260	106.83446	146.16236	3.96821	0.2102120	3.0437054	51	2	1989–1998	0.60	M-v 4 Williams	31757 1998 FV ₆₇
1998 FW ₆₇	15.5	0.15	19980328	326.94056	64.64690	164.69420	3.79701	0.0688480	2.3983700	36	1	44 days	0.94	Williams	1998 FW ₆₇
1998 FY ₆₇	13.0	0.15	19980706	311.58221	85.40312	180.99217	8.76447	0.1017505	3.9669520	37	3	1989–1998	0.83	M-v 3 Williams	31757 1998 FY ₆₇
1998 FF ₆₈	14.0	0.15	19980706	14.06351	272.50476	286.85649	0.03814	0.1162051	3.1072566	55	3	1993–1998	0.56	M-v 5 Williams	31757 1998 FF ₆₈
1998 FJ ₆₈	15.5	0.15	19980328	44.97499	101.22982	28.36525	0.34248	0.1943734	2.3380562	39	1	41 days	0.72	Williams	1998 FJ ₆₈
1998 FM ₆₈	15.0	0.15	19980328	316.21660	40.86239	206.06337	5.67144	0.1041711	2.4394555	50	1	43 days	0.58	Williams	1998 FM ₆₈
1998 FO ₆₈	14.5	0.15	19980706	310.02338	328.36915	326.71769	1.85208	0.2100753	2.4050815	70	3	1991–1998	0.70	M-v 3 Williams	31758 1998 FO ₆₈
1998 FP ₆₈	14.5	0.15	19980328	69.24925	115.34316	3.34918	14.01344	0.0577687	2.6473475	47	1	33 days	0.94	Williams	1998 FP ₆₈
1998 FS ₆₈	14.5	0.15	19980706	310.10630	36.17984	250.15518	3.13285	0.1143026	2.2589222	58	2	1994–1998	0.63	M-v 5 Williams	31812 1998 FS ₆₈
1998 FU ₆₈	14.0	0.15	19980417	340.35365	20.03098	205.58806	11.37586	0.1249822	2.6478128	73	1	57 days	0.81	Williams	1998 FU ₆₈
1998 FX ₆₈	12.0	0.15	19980706	283.33954	96.05621	207.61984	12.97073	0.1519434	3.9626635	47	1	74 days	0.68	M-v 5 Williams	1998 FX ₆₈
1998 FY ₆₈	15.0	0.15	19980328	24.33569	299.07436	221.31967	3.99415	0.1847457	3.0886263	16	1	33 days	1.03	Williams	1998 FY ₆₈
1998 FZ ₆₈	14.5	0.15	19980706	312.05966	81.73553	199.32034	9.45861	0.1286818	2.5869624	58	2	1991–1998	0.65	M-v 4 Williams	31758 1998 FZ ₆₈
1998 FA ₆₉	14.5	0.15	19980328	278.86132	301.33623	355.07649	2.93984	0.1835963	2.2215621	52	1	33 days	0.55	Williams	1998 FA ₆₉
1998 FC ₆₉	14.5	0.15	19980706	110.00022	95.78597	357.42055	3.16987	0.1377528	2.6290330	33	2	1997–1998	0.63	M-v 4 Williams	31758 1998 FC ₆₉
1998 FD ₆₉	14.5	0.15	19980706	108.26129	108.31279	344.96671	2.07862	0.1795498	2.3776734	30	3	1994–1998	0.64	M-v 3 Williams	31758 1998 FD ₆₉
1998 FE ₆₉	14.0	0.15	19980706	352.72261	235.68053	359.72116	1.87434	0.1018065	2.4116868	46	3	1953–1998	0.58	M-v 4 Williams	31758 1998 FE ₆₉
1998 FF ₆₉	15.5	0.15	19980328	34.51439	325.31215	185.41053	0.96113	0.1268376	2.3881082	22	1	51 days	1.17	Williams	1998 FF ₆₉
1998 FG ₆₉	13.0	0.15	19980706	256.41085	133.14319	196.57674	10.22211	0.1081507	2.9902152	53	1	63 days	0.67	M-v 5 Williams	1998 FG ₆₉
1998 FH ₆₉	13.5	0.15	19980417	2.98066	148.25897	47.51568	0.82190	0.1162748	3.1168051	35	1	57 days	0.80	Williams	1998 FH ₆₉
1998 FJ ₆₉	14.5	0.15	19980417	303.58928	104.05053	192.22108	27.85789	0.3490204	2.6472754	33	1	57 days	0.91	Williams	1998 FJ ₆₉
1998 FQ ₆₉	14.0	0.15	19980417	205.71229	178.95893	182.41076	11.81731	0.2510220	2.4151020	37	1	57 days	1.05	Williams	1998 FQ ₆₉
1998 FR ₆₉	14.0	0.15	19980417	58.91076	56.76280	63.15753	3.04975	0.1769418	3.0526783	35	1	57 days	0.98	Williams	1998 FR ₆₉
1998 FT ₆₉	15.5	0.15	19980328	28.89013	2.77363	154.95692	2.87520	0.0984434	2.2539870	28	1	41 days	0.94	Williams	1998 FT ₆₉
1998 FU ₆₉	14.5	0.15	19980328	326.37403	213.47892	26.33310	8.18503	0.1680615	2.7798803	32	1	42 days	0.69	Williams	1998 FU ₆₉
1998 FW ₆₉	15.5	0.15	19980417	334.43149	186.55184	46.07659	4.86966	0.1260413	2.2881552	45	1	57 days	0.65	Williams	1998 FW ₆₉
1998 FX ₆₉	14.5	0.15	19980706	317.86183	145.73546	133.77169	3.95595	0.1617992	2.4604261	55	3	1991–1998	0.62	M-v 2 Williams	31759 1998 FX ₆₉
1998 FA ₇₀	15.5	0.15	19980417	269.88679	255.08085	63.00476	4.07981	0.2686456	2.3469276	22	1	57 days	1.02	Williams	1998 FA ₇₀
1998 FF ₇₀	13.0	0.15	19980706	47.87455	28.08807	136.26333	4.90536	0.0135679	3.0996510	47	3	1990–1998	0.73	M-v 4 Williams	31759 1998 FF ₇₀
1998 FH ₇₀	15.5	0.15	19980328	296.59301	183.23677	97.18024	3.66630	0.2101044	2.3759418	18	1	33 days	1.27	Williams	1998 FH ₇₀
1998 FJ ₇₀	14.0	0.15	19980706	162.24126	292.33504	116.76689	2.65479	0.0981269	2.6387608	62	3	1987–1998	0.73	M-v 4 Williams	31759 1998 FJ ₇₀
1998 FK ₇₀	15.0	0.15	19980328	30.01086	331.34704	176.47048	9.39163	0.2178053	2.5386528	22	1	33 days	0.59	Williams	1998 FK ₇₀
1998 FL ₇₀	15.5	0.15	19980328	31.05074	126.78986	28.24927	5.30036	0.1067511	2.2793072	38	1	42 days	0.64	Williams	1998 FL ₇₀
1998 FM ₇₀	14.5	0.15	19980706	280.40640	271.50831	50.11771	2.66066	0.2106115	2.4115518	39	2	1969–1998	0.72	M-v 4 Williams	31759 1998 FM ₇₀
1998 FO ₇₀	15.0	0.15	19980706	127.30050	279.28506	164.02669	3.72509	0.1025865	2.3233210	36	3	1978–1998	0.85	M-v 5 Williams	31759 1998 FO ₇₀
1998 FP ₇₀	14.0	0.15	19980706	21.72634	106.27659	79.72962	1.71310	0.2457056	3.3013413	56	3	1993–1998	0.76	M-v 4 Williams	31759 1998 FP ₇₀
1998 FQ ₇₀	14.0	0.15	19980706	146.25869	29.77046	33.12915	5.96035	0.0906644	2.7474218	37	2	1991–1998	0.71	M-v 5 Williams	31760 1998 FQ ₇₀
1998 FR ₇₀	15.5	0.15	19980706	68.99134	115.78348	22.66752	6.89975	0.1468603	2.3992906	47	2	1996–1998	0.63	M-v 4 Williams	31760 1998 FR ₇₀
1998 FS ₇₀	13.5	0.15	19980328	293.81699	261.00739	21.47585	13.61526	0.1801996	3.1694463	32	1	42 days	0.87	Williams	1998 FS ₇₀
1998 FT ₇₀	15.0	0.15	19980706	352.60945	210.45301	32.72203	3.53187	0.2368703	2.6358486	45	2	1981–1998	0.59	M-v 4 Williams	31760 1998 FT ₇₀
1998 FU ₇₀	14.5	0.15	19980417	55.19943	311.99660	190.89992	21.84493	0.0288270	2.5564729	30	1	57 days	0.79	Williams	1998 FU ₇₀
1998 FV ₇₀	15.0	0.15	19980328	9.45232	13.82188	169.43275	2.69729	0.0964360	2.3400128	34	1	42 days	0.52	Williams	1998 FV ₇₀
1998 FZ ₇₀	14.0	0.15	19980706	351.01237	223.48361	15.15413	14.59474	0.1430598	2.6189932	55	3	1981–1998	0.61	M-v 3 Williams	31760 1998 FZ ₇₀
1998 FA ₇₁	12.5	0.15	19980417	143.45255	36.58932	18.94722	15.57389	0.0380352	3.1639545	54	1	57 days	0.60	Williams	1998 FA ₇₁
1998 FD ₇₁	14.5	0.15	19980706	89.66633	122.24708	349.70887	1.94657	0.1777724	2.4768556	43	4	1982–1998	0.66	M-v 4 Williams	31813 1998 FD ₇₁
1998 FE ₇₁	15.5	0.15	19980328	30.45495	169.38641	348.32630	3.41539	0.1040827	2.2962529	21	1	33 days	1.10	Williams	1998 FE ₇₁
1998 FG ₇₁	15.5	0.15	19980706	14.73663	219.00662	354.54790	6.16170	0.1287766	2.2616137	43	1	160 days	0.58	M-v 4 Williams	1998 FG ₇₁
1998 FH ₇₁	13.0	0.15	19980706	294.40159	83.17010	208.55509	9.87379	0.0790368	3.0020878	36	2	1990–1998	0.63	M-v 4 Williams	31760 1998 FH ₇₁
1998 FK ₇₁	15.5	0.15	19980328	322.37487	356.48676	246.53318	1.37612	0.1163750	2.3241137	17	1	33 days	1.19	Williams	1998 FK ₇₁
1998 FL ₇₁	14.0	0.15	19980706	78.34890	136.82961	0.54258	5.76408	0.0840576	2.3753998	36	2	1992–1998	0.65	M-v 5 Williams	31760 1998 FL ₇₁
1998 FM ₇₁	13.0	0.15	19980417	51.92842	114.01474	18.73522	15.85900	0.1757749	3.1794369	50	1	57 days	0.46	Williams	1998 FM ₇₁

1998 FP ₇₁	14.0	0.15	19980328	325.41385	219.89695	22.63043	8.97672	0.1234297	3.1385456	30	1	33 days	0.91		Williams		1998 FP ₇₁
1998 FR ₇₁	13.0	0.15	19980417	347.56223	168.76421	49.32921	2.43636	0.1264375	3.9615944	47	1	57 days	1.28		Williams		1998 FR ₇₁
1998 FX ₇₁	16.0	0.15	19980308	295.83259	246.71195	8.64027	15.96702	0.1119778	2.6353341	18	1	9 days	1.21		Williams		1998 FX ₇₁
1998 FD ₇₂	13.0	0.15	19980328	160.03055	58.10534	322.83260	4.82401	0.3189425	3.1644606	16	1	33 days	1.27		Williams		1998 FD ₇₂
1998 FM ₇₂	14.5	0.15	19980328	127.28746	215.05037	202.22450	2.73772	0.0977480	2.5154235	21	1	33 days	1.64		Williams		1998 FM ₇₂
1998 FO ₇₂	14.0	0.15	19980706	352.14256	211.65366	13.61375	5.72833	0.0679697	2.9009888	64	2	1995–1998	0.64	M-v	4	Williams	31761 1998 FO ₇₂
1998 FP ₇₂	15.5	0.15	19980706	42.73695	195.65044	339.69767	2.39769	0.1148054	2.2752049	46	2	1991–1998	0.69	M-v	5	Williams	31761 1998 FP ₇₂
1998 FS ₇₂	15.5	0.15	19980706	42.12859	106.11730	68.95681	7.16591	0.0770741	2.4687474	44	2	1997–1998	0.71	M-v	4	Williams	31761 1998 FS ₇₂
1998 FT ₇₂	14.5	0.15	19980328	312.51443	191.76702	61.92307	4.24158	0.2916574	2.9393369	13	1	3 days	1.12		E Marsden		1998 FT ₇₂
1998 FV ₇₂	14.0	0.15	19980328	101.70305	269.16247	165.59567	10.52534	0.0714296	3.0025681	31	1	24 days	0.72		Williams		1998 FV ₇₂
1998 FW ₇₂	14.0	0.15	19980328	79.15481	81.62316	30.75286	0.96704	0.1206252	3.0518761	16	1	27 days	0.96		Williams		1998 FW ₇₂
1998 FX ₇₂	14.5	0.15	19980328	101.28698	259.65372	201.79400	8.94096	0.0533462	3.0972459	16	1	27 days	1.09		Williams		1998 FX ₇₂
1998 FY ₇₂	15.5	0.15	19980417	84.06640	9.28475	109.62510	1.06665	0.0739744	2.5176634	19	1	58 days	0.50		Williams		1998 FY ₇₂
1998 FZ ₇₂	16.0	0.15	19980328	327.50661	45.88773	199.03598	8.51065	0.0867280	2.6188854	14	1	27 days	0.65		Williams		1998 FZ ₇₂
1998 FA ₇₃	15.0	0.15	19980328	106.22115	68.26587	21.82126	7.22557	0.0597942	2.3306934	26	1	53 days	0.73		Williams		1998 FA ₇₃
1998 FB ₇₃	16.5	0.15	19980328	15.38341	154.41661	25.51838	6.04354	0.1483890	2.2191615	20	1	24 days	1.19		Williams		1998 FB ₇₃
1998 FD ₇₃	15.0	0.15	19980706	5.98903	132.30486	94.22763	4.05588	0.2616447	3.0223561	30	1	63 days	0.38	M-v	4	Williams	1998 FD ₇₃
1998 FF ₇₃	16.0	0.15	19980706	219.93225	359.14869	5.30206	19.56912	0.0877281	1.9391417	39	2	1971–1998	0.82	M-v	5	Williams	31761 1998 FF ₇₃
1998 FO ₇₃	15.0	0.15	19980706	86.16783	186.51960	255.51369	3.34110	0.1100842	2.3111057	23	1	109 days	0.65	M-v	5	Williams	31813 1998 FO ₇₃
1998 FP ₇₃	13.5	0.15	19980706	93.98936	341.37778	119.78634	3.84123	0.1350237	3.0567614	67	3	1992–1998	0.54	M-v	3	Williams	31813 1998 FP ₇₃
1998 FR ₇₃	14.0	0.15	19980417	98.53242	16.27934	40.29496	5.90505	0.1632525	2.3768665	45	1	56 days	0.93		Williams		1998 FR ₇₃
1998 FZ ₇₃	14.5	0.15	19980706	343.52290	5.94302	247.56274	1.42409	0.1704199	2.4161401	49	2	1991–1998	0.66	M-v	5	Williams	31761 1998 FZ ₇₃
1998 FA ₇₄	15.0	0.15	19980706	77.03839	115.90242	25.20163	6.52575	0.0682580	2.2342705	46	3	1976–1998	0.61	M-v	3	Williams	31761 1998 FA ₇₄
1998 FC ₇₄	14.5	0.15	19980417	174.83376	278.72270	103.81765	3.67462	0.1433415	2.1784733	45	1	55 days	0.87		D Williams		1998 FC ₇₄
1998 FD ₇₄	15.0	0.15	19980706	31.61753	120.94104	66.45454	3.49878	0.1446104	2.2055167	61	3	1985–1998	0.70	M-v	3	Williams	31762 1998 FD ₇₄
1998 FE ₇₄	15.5	0.15	19980308	347.56215	59.49411	137.16872	3.11588	0.1433972	2.7898277	14	1	12 days	1.02		Williams		1998 FE ₇₄
1998 FF ₇₄	13.0	0.15	19980328	163.75197	298.91383	78.87390	3.11021	0.1432510	3.2508485	16	1	31 days	1.10		Williams		1998 FF ₇₄
1998 FG ₇₄	15.0	0.15	19980417	221.38404	91.73434	256.17112	9.31382	0.0592792	3.1618109	20	1	50 days	0.45		Williams		1998 FG ₇₄
1998 FO ₇₄	14.5	0.15	19980706	340.69903	51.92217	159.57719	9.51402	0.0808658	2.7574806	45	1	74 days	0.58	M-v	5	Williams	1998 FO ₇₄
1998 FX ₇₄	12.5	0.15	19980417	295.50619	265.48792	14.44014	9.86097	0.1234257	3.1596450	48	1	57 days	0.78		Williams		1998 FX ₇₄
1998 FZ ₇₄	13.0	0.15	19980706	129.10437	63.22691	16.76952	10.13125	0.0868060	2.9744823	40	2	1980–1998	0.58	M-v	5	Williams	31762 1998 FZ ₇₄
1998 FC ₇₅	14.0	0.15	19980706	323.35285	71.95241	198.05380	8.74917	0.1240486	2.7574744	37	2	1995–1998	0.51	M-v	4	Williams	31762 1998 FC ₇₅
1998 FF ₇₅	13.5	0.15	19980706	178.27837	15.71659	25.77239	7.31626	0.1056487	2.3567085	46	2	1992–1998	0.63	M-v	4	Williams	31762 1998 FF ₇₅
1998 FG ₇₅	14.5	0.15	19980417	258.39366	128.90718	189.97125	6.03945	0.1336935	2.3624175	34	1	55 days	0.96		Williams		1998 FG ₇₅
1998 FL ₇₅	15.0	0.15	19980417	263.67004	276.42781	41.26545	3.19733	0.1796298	2.2367272	40	1	57 days	1.22		Williams		1998 FL ₇₅
1998 FO ₇₅	13.0	0.15	19980706	161.55821	216.95963	191.48786	13.58030	0.1337050	3.1534087	39	2	1995–1998	0.68	M-v	4	Williams	31762 1998 FO ₇₅
1998 FP ₇₅	14.5	0.15	19980328	256.68973	267.10272	45.94451	3.64328	0.1090338	2.4587195	16	1	29 days	0.69		Williams		1998 FP ₇₅
1998 FK ₇₆	16.5	0.15	19980328	347.72376	103.67229	103.30188	4.82224	0.1078844	2.2995731	17	1	31 days	1.30		Williams		1998 FK ₇₆
1998 FM ₇₆	15.0	0.15	19980417	9.11183	100.48296	86.77598	4.58905	0.1242448	2.3103638	28	1	55 days	0.74		Williams		1998 FM ₇₆
1998 FN ₇₆	14.5	0.15	19980328	145.11823	272.88010	127.96918	5.56088	0.1115911	2.4585230	24	1	31 days	1.13		Williams		1998 FN ₇₆
1998 FQ ₇₆	14.0	0.15	19980417	157.37148	335.60355	59.18513	6.74881	0.1133203	2.5777556	24	1	53 days	1.22		Williams		1998 FQ ₇₆
1998 FR ₇₆	14.5	0.15	19980706	54.19815	29.03858	129.67659	4.93508	0.0812057	2.4747702	27	2	1982–1998	0.56	M-v	5	Williams	31763 1998 FR ₇₆
1998 FS ₇₆	16.5	0.15	19980417	314.49303	218.52007	43.86629	7.95591	0.1911088	2.3298723	27	1	53 days	0.76		Williams		1998 FS ₇₆
1998 FV ₇₆	15.5	0.15	19980328	6.32331	81.93765	100.71064	3.62645	0.2178391	3.0792165	18	1	40 days	1.15		Williams		1998 FV ₇₆
1998 FY ₇₆	15.5	0.15	19980417	21.13784	119.14415	48.61232	6.21244	0.1909116	2.5627147	34	1	53 days	1.09		Williams		1998 FY ₇₆
1998 FA ₇₇	13.0	0.15	19980417	67.85369	71.90077	50.32025	7.96792	0.0663573	3.0933332	37	1	56 days	0.69		Williams		1998 FA ₇₇
1998 FB ₇₇	14.0	0.15	19980417	354.75045	137.84070	67.41689	5.72638	0.1263519	3.0909669	31	1	53 days	0.81		Williams		1998 FB ₇₇
1998 FF ₇₇	15.5	0.15	19980328	273.80512	169.96940	124.26838	5.94792	0.1374469	2.2657392	19	1	31 days	0.76		Williams		1998 FF ₇₇
1998 FG ₇₇	14.0	0.15	19980417	254.23884	245.31244	76.46836	6.86868	0.1803676	2.3673814	27	1	53 days	0.59		Williams		1998 FG ₇₇
1998 FM ₇₇	15.5	0.15	19980417	351.04130	146.94193	63.79688	6.14802	0.0837816	2.3446132	28	1	56 days	0.72		Williams		1998 FM ₇₇
1998 FN ₇₇	14.0	0.15	19980706	266.15738	199.21036	136.66671	5.25008	0.2125126	2.1860681	38	4	1978–1998	0.67	M-v	2	Williams	31763 1998 FN ₇₇
1998 FO ₇₇	12.5	0.15	19980417	231.09605	281.95245	50.38295	9.45057	0.0576580	3.4966930	24	1	53 days	1.02		Williams		1998 FO ₇₇
1998 FR ₇₇	15.0	0.15	19980328	77.79893	8.91901	87.19216	3.99753	0.1801969	2.3962627	16	1	29 days	1.06		Williams		1998 FR ₇₇

1998 FS ₇₇	14.5	0.15	19980417	308.57427	102.28515	164.45732	8.02848	0.1462376	2.5628620	32	1	53 days	0.88		Williams	1998 FS ₇₇
1998 FV ₇₇	14.5	0.15	19980417	259.30135	144.69602	175.99318	13.83799	0.1799820	2.6341148	28	1	53 days	1.34		Williams	1998 FV ₇₇
1998 FW ₇₇	14.5	0.15	19980417	326.57338	190.28674	50.83527	7.91040	0.0977685	2.5931195	23	1	53 days	0.72		Williams	1998 FW ₇₇
1998 FX ₇₇	15.5	0.15	19980328	64.87329	16.30268	100.18461	4.87040	0.1148561	2.2325667	19	1	31 days	0.77		Williams	1998 FX ₇₇
1998 FY ₇₇	15.5	0.15	19980328	57.43853	17.28674	109.54072	5.20645	0.0952542	2.2446633	23	1	28 days	0.55		Williams	1998 FY ₇₇
1998 FZ ₇₇	15.0	0.15	19980417	264.59155	180.30862	126.47955	5.92898	0.0976389	2.2595674	28	1	53 days	0.84		Williams	1998 FZ ₇₇
1998 FD ₇₈	16.0	0.15	19980706	326.93840	123.35969	159.82664	8.48426	0.2165081	2.1966803	34	2	1992-1998	0.95	M-v 4	Williams	31763 1998 FD ₇₈
1998 FG ₇₈	14.5	0.15	19980417	65.24192	9.25124	100.22007	4.82325	0.2351728	2.6000932	29	1	53 days	1.09		Williams	1998 FG ₇₈
1998 FH ₇₈	14.5	0.15	19980328	315.15526	69.86270	175.98598	13.39598	0.0381145	2.6411623	20	1	31 days	0.90		Williams	1998 FH ₇₈
1998 FJ ₇₈	15.0	0.15	19980706	182.94355	302.94243	92.82203	4.17993	0.1585303	2.2061632	28	2	1986-1998	0.79	M-v 5	Williams	31763 1998 FJ ₇₈
1998 FK ₇₈	15.5	0.15	19980417	294.87459	135.36916	150.02413	5.25102	0.1668008	2.2591975	29	1	53 days	0.93		Williams	1998 FK ₇₈
1998 FL ₇₈	14.5	0.15	19980706	326.22119	159.39696	105.27934	3.42236	0.0487983	2.1848319	31	1	163 days	0.56	M-v 5	Williams	1998 FL ₇₈
1998 FM ₇₈	15.0	0.15	19980417	259.90712	247.10616	71.04751	4.34948	0.1561361	2.1818259	25	1	53 days	1.29		Williams	1998 FM ₇₈
1998 FN ₇₈	14.0	0.15	19980706	92.44615	78.73377	33.72659	13.58831	0.1294445	2.6467753	33	1	65 days	0.57	M-v 5	Williams	1998 FN ₇₈
1998 FP ₇₈	14.0	0.15	19980328	277.18882	251.23468	39.60044	13.68525	0.0853946	3.1982655	16	1	29 days	0.94		Williams	1998 FP ₇₈
1998 FR ₇₈	12.0	0.15	19980417	173.31447	210.08741	178.60878	15.59938	0.1084506	3.2250714	33	1	53 days	0.64		Williams	1998 FR ₇₈
1998 FS ₇₈	15.0	0.15	19980328	183.87449	261.13629	114.59893	4.65306	0.1584286	2.3130394	19	1	29 days	1.09		Williams	1998 FS ₇₈
1998 FV ₇₈	14.5	0.15	19980706	314.92755	209.32650	80.37771	5.22035	0.1629983	2.2354111	32	1	61 days	0.44	M-v 5	Williams	1998 FV ₇₈
1998 FX ₇₈	15.0	0.15	19980417	253.90153	175.32227	148.81825	6.76717	0.1454693	2.2693871	24	1	53 days	1.07		Williams	1998 FX ₇₈
1998 FY ₇₈	15.5	0.15	19980328	302.00219	127.04065	144.60027	6.32807	0.1540203	2.3537403	19	1	31 days	0.91		Williams	1998 FY ₇₈
1998 FB ₇₉	14.5	0.15	19980328	271.27006	151.74968	154.12721	13.36439	0.1699361	2.6832023	19	1	31 days	1.34		Williams	1998 FB ₇₉
1998 FD ₇₉	14.5	0.15	19980328	41.31031	111.48028	35.82715	16.96284	0.1017096	2.6265165	20	1	29 days	0.62		Williams	1998 FD ₇₉
1998 FE ₇₉	14.5	0.15	19980417	77.82055	54.75774	41.97138	12.72547	0.2441935	2.4353751	28	1	53 days	0.48		Williams	1998 FE ₇₉
1998 FG ₇₉	15.5	0.15	19980328	11.02171	86.24704	99.22253	4.81879	0.0556878	2.3263189	18	1	29 days	0.97		Williams	1998 FG ₇₉
1998 FJ ₇₉	14.5	0.15	19980328	258.42495	152.12442	154.86660	7.33518	0.0554505	2.4176016	30	1	31 days	0.81		Williams	1998 FJ ₇₉
1998 FK ₇₉	14.5	0.15	19980328	297.28760	100.04854	175.62816	12.13982	0.1199395	2.6310009	23	1	31 days	0.79		Williams	1998 FK ₇₉
1998 FL ₇₉	15.5	0.15	19980328	310.80442	106.61062	149.83950	6.58501	0.0931277	2.3788083	27	1	31 days	0.88		Williams	1998 FL ₇₉
1998 FM ₇₉	15.5	0.15	19980417	345.17123	190.71376	35.07825	9.38814	0.1805457	2.3946934	33	1	53 days	0.82		Williams	1998 FM ₇₉
1998 FN ₇₉	15.0	0.15	19980417	349.85009	123.83604	93.62325	3.88219	0.1246167	2.4536622	30	1	53 days	0.76		Williams	1998 FN ₇₉
1998 FP ₇₉	14.0	0.15	19980706	244.00585	289.39364	59.06276	6.80014	0.1069508	2.4576738	20	1	65 days	0.45	M-v 4	Williams	1998 FP ₇₉
1998 FQ ₇₉	14.0	0.15	19980328	228.35522	233.53767	108.96368	5.18783	0.1266700	2.7841230	19	1	29 days	1.14		Williams	1998 FQ ₇₉
1998 FT ₇₉	14.5	0.15	19980706	309.58963	117.00571	178.88743	12.80582	0.1422342	2.6061996	30	1	70 days	0.71	M-v 5	Williams	1998 FT ₇₉
1998 FU ₇₉	15.5	0.15	19980706	146.47836	4.39424	64.25986	4.41877	0.0962687	2.1815759	32	2	1993-1998	0.70	M-v 5	Williams	31764 1998 FU ₇₉
1998 FV ₇₉	15.5	0.15	19980417	92.41865	37.63463	61.42195	6.05014	0.0937418	2.2370868	28	1	53 days	1.12		Williams	1998 FV ₇₉
1998 FA ₈₀	15.0	0.15	19980328	223.89277	286.27967	57.32594	6.94946	0.1208277	2.3825765	17	1	29 days	1.29		Williams	1998 FA ₈₀
1998 FE ₈₀	15.5	0.15	19980328	318.20668	98.69231	141.26438	5.14555	0.1513855	2.2894118	19	1	27 days	0.47		Williams	1998 FE ₈₀
1998 FG ₈₀	16.0	0.15	19980328	336.81072	131.07346	83.40333	3.70279	0.1329761	2.3017298	24	1	27 days	0.94		Williams	1998 FG ₈₀
1998 FJ ₈₀	14.5	0.15	19980328	46.80330	345.52577	130.62717	5.73133	0.2116242	3.0070968	19	1	27 days	0.76		Williams	1998 FJ ₈₀
1998 FK ₈₀	13.5	0.15	19980328	122.03372	26.74434	21.53344	15.58287	0.1449082	2.8463230	22	1	27 days	0.82		Williams	1998 FK ₈₀
1998 FH ₈₂	13.5	0.15	19980706	88.98541	48.40911	32.48597	12.64580	0.1557114	2.6985739	19	1	67 days	0.50	M-v 6	Williams	1998 FH ₈₂
1998 FV ₈₃	15.0	0.15	19980308	344.79668	57.72599	126.03347	3.79207	0.0847996	2.2098513	23	1	29 days	0.60		Williams	1998 FV ₈₃
1998 FQ ₈₇	12.5	0.15	19980328	255.86873	252.94707	26.15058	12.88834	0.0336436	3.1570110	15	1	10 days	0.87	E	Marsden	1998 FQ ₈₇
1998 FU ₈₇	15.0	0.15	19980328	107.64434	17.44494	43.29284	7.19496	0.0504550	2.3248138	15	1	10 days	1.00		Marsden	1998 FU ₈₇
1998 FV ₈₇	15.0	0.15	19980328	48.58899	39.30893	79.36450	5.23649	0.0799066	2.3769948	15	1	10 days	0.83		Marsden	1998 FV ₈₇
1998 FX ₈₇	15.5	0.15	19980328	59.40285	352.72900	113.23835	5.17270	0.0871469	2.2963196	12	1	9 days	1.33	E	Marsden	1998 FX ₈₇
1998 FV ₈₈	12.0	0.15	19980308	232.64768	287.65013	24.06186	16.48592	0.2468709	3.2227282	17	1	2 days	0.83	E	Williams	1998 FV ₈₈
1998 FB ₉₀	15.0	0.15	19980328	72.14712	12.40603	80.84408	5.80833	0.0953719	2.2143872	15	1	10 days	0.51		Marsden	1998 FB ₉₀
1998 FC ₉₀	14.0	0.15	19980328	17.38784	121.16760	32.13165	10.49359	0.0851161	3.0634394	15	1	10 days	0.61		Marsden	1998 FC ₉₀
1998 FE ₉₀	15.0	0.15	19980328	41.20483	93.57815	23.35421	11.04515	0.1909693	2.6924533	15	1	10 days	0.48		Marsden	1998 FE ₉₀
1998 FF ₉₀	12.5	0.15	19980328	156.28721	326.27576	42.43941	6.97006	0.1723279	3.1284448	15	1	10 days	0.84	E	Marsden	1998 FF ₉₀
1998 FG ₉₀	14.0	0.15	19980328	187.12618	268.12584	80.31886	4.57387	0.1321646	2.5356396	15	1	10 days	0.74		Marsden	1998 FG ₉₀
1998 FO ₉₀	15.0	0.15	19980328	318.53809	162.33450	72.84653	3.59569	0.1897325	2.4513793	15	1	10 days	0.64		Marsden	1998 FO ₉₀
1998 FP ₉₀	13.5	0.15	19980308	95.06616	64.59500	4.06370	21.95827	0.0537496	2.6748870	22	1	51 days	0.50		Williams	1998 FP ₉₀

1998 FR ₉₀	14.0	0.15	19980328	228.19940	213.13335	104.03945	4.49163	0.1292355	2.3066005	15	1	10 days	1.03		Marsden	1998 FR ₉₀
1998 FS ₉₀	14.0	0.15	19980328	155.31938	258.01676	115.90278	4.86693	0.1557128	2.3113044	15	1	10 days	0.82		Marsden	1998 FS ₉₀
1998 FT ₉₀	15.0	0.15	19980328	342.75433	182.84498	13.68839	13.44436	0.0983243	2.5825051	15	1	10 days	0.86		Marsden	1998 FT ₉₀
1998 FU ₉₀	14.5	0.15	19980328	328.18201	196.60028	24.89562	8.17578	0.1804770	2.5774594	21	1	37 days	0.49		Marsden	1998 FU ₉₀
1998 FV ₉₀	14.5	0.15	19980328	225.29635	228.35362	98.00705	5.15754	0.2543088	2.2770155	15	1	10 days	0.91		Marsden	1998 FV ₉₀
1998 FW ₉₀	15.0	0.15	19980328	87.43896	25.80775	51.40756	5.66629	0.1026433	2.2167982	15	1	10 days	0.80		Marsden	1998 FW ₉₀
1998 FX ₉₀	14.5	0.15	19980328	67.81864	58.22990	46.64996	6.66584	0.0304321	2.3763391	15	1	10 days	0.55		Marsden	1998 FX ₉₀
1998 FY ₉₀	14.5	0.15	19980328	124.94889	296.21985	100.30394	6.23417	0.1712481	2.3873525	14	1	10 days	0.94		Marsden	1998 FY ₉₀
1998 FB ₉₁	14.0	0.15	19980328	347.78652	132.60010	56.95927	7.24665	0.0584993	2.5822847	15	1	10 days	0.42		Marsden	1998 FB ₉₁
1998 FC ₉₁	14.0	0.15	19980328	292.88965	205.16133	43.88465	9.73361	0.0701432	3.1394935	12	1	10 days	0.91		Marsden	1998 FC ₉₁
1998 FO ₉₂	13.0	0.15	19980328	147.16647	228.68895	149.37361	10.39917	0.1917545	2.7426594	15	1	10 days	0.80		Marsden	1998 FO ₉₂
1998 FP ₉₂	16.0	0.15	19980328	324.35607	182.97639	36.80886	5.89235	0.0933932	2.2925940	15	1	10 days	0.90		Marsden	1998 FP ₉₂
1998 FU ₉₂	14.5	0.15	19980328	153.56140	214.66336	165.06815	19.89338	0.0736766	2.5156868	15	1	10 days	1.25	E	Marsden	1998 FU ₉₂
1998 FW ₉₆	15.5	0.15	19980706	30.32244	325.58384	201.40920	11.39524	0.2464576	2.6104587	34	1	81 days	0.51	M-v 4	Williams	31814 1998 FW ₉₆
1998 FK ₉₈	15.5	0.15	19980308	33.70443	210.65955	281.45156	5.33317	0.1155520	2.2690556	25	1	53 days	0.74		Williams	1998 FK ₉₈
1998 FR ₉₈	14.5	0.15	19980328	341.88422	299.57587	272.34759	6.75540	0.2433987	2.9044147	22	1	24 days	0.64		Williams	1998 FR ₉₈
1998 FU ₉₈	13.5	0.15	19980308	122.33860	86.16636	315.87900	10.05179	0.1413322	2.8670699	21	1	53 days	0.92		Williams	1998 FU ₉₈
1998 FU ₉₉	14.5	0.15	19980328	57.55000	172.29668	297.20135	5.29948	0.1475906	2.5294266	21	1	19 days	0.71		Williams	1998 FU ₉₉
1998 FM ₁₀₀	14.5	0.15	19980706	53.05771	280.59697	222.92167	12.31448	0.1404351	2.6626267	31	2	1994–1998	0.60	M-v 4	Williams	31764 1998 FM ₁₀₀
1998 FU ₁₀₁	14.0	0.15	19980328	195.77072	87.91851	263.32485	3.58156	0.1236740	2.4329561	17	1	19 days	0.77		Williams	1998 FU ₁₀₁
1998 FT ₁₀₂	14.5	0.15	19980706	356.07651	6.69297	211.04504	14.76717	0.0759404	2.6153201	29	1	78 days	0.58	M-v 4	Williams	31815 1998 FT ₁₀₂
1998 FE ₁₀₃	13.5	0.15	19980328	8.16731	317.88338	218.59038	9.08018	0.0383343	3.0589556	17	1	19 days	0.79		Williams	1998 FE ₁₀₃
1998 FG ₁₀₃	15.5	0.15	19980328	5.74677	314.79435	223.97134	5.99097	0.0935156	2.4772100	16	1	19 days	1.14		Williams	1998 FG ₁₀₃
1998 FN ₁₀₃	15.5	0.15	19980308	33.11616	170.30491	324.18545	4.70754	0.1483759	2.2506114	25	1	54 days	0.55		Williams	1998 FN ₁₀₃
1998 FD ₁₀₄	14.5	0.15	19980706	328.33282	58.14003	207.05454	16.12781	0.2326319	2.7277535	35	2	1971–1998	0.68	M-v 4	Williams	31765 1998 FD ₁₀₄
1998 FE ₁₀₄	13.0	0.15	19980328	165.20503	144.88379	236.59899	9.02212	0.0312877	3.0965316	19	1	20 days	0.71		Williams	1998 FE ₁₀₄
1998 FG ₁₀₄	15.5	0.15	19980328	305.29579	289.06086	326.80521	9.26265	0.1306433	2.3028464	17	1	37 days	0.54		Williams	1998 FG ₁₀₄
1998 FO ₁₀₄	14.0	0.15	19980417	31.79413	288.74711	220.34095	11.88664	0.1813065	2.4167061	26	1	41 days	0.57		Williams	1998 FO ₁₀₄
1998 FZ ₁₀₄	13.0	0.15	19980328	93.30823	203.96067	244.30479	9.36512	0.0611940	3.0496748	19	1	20 days	0.44		Williams	1998 FZ ₁₀₄
1998 FK ₁₀₅	13.5	0.15	19980328	320.40997	18.82546	222.54254	9.87177	0.1669625	3.1498636	22	1	32 days	0.56		Williams	1998 FK ₁₀₅
1998 FL ₁₀₅	13.5	0.15	19980706	355.44502	283.14336	301.11786	5.07923	0.0828391	2.4045972	34	5	1983–1998	0.63	M-v 2	Williams	31766 1998 FL ₁₀₅
1998 FM ₁₀₅	16.5	0.15	19980328	348.22870	240.07058	323.95690	5.87520	0.1518508	2.3134803	22	1	25 days	0.58		Williams	1998 FM ₁₀₅
1998 FO ₁₀₅	16.0	0.15	19980328	4.84275	235.27488	304.78920	3.92934	0.2135783	2.5968860	18	1	20 days	0.94		Williams	1998 FO ₁₀₅
1998 FT ₁₀₅	16.0	0.15	19980328	306.90244	2.51128	244.70392	3.84734	0.0717703	2.2274552	22	1	20 days	1.32		Williams	1998 FT ₁₀₅
1998 FX ₁₀₅	15.5	0.15	19980328	70.16550	223.19928	241.45451	4.87429	0.1182864	2.2262386	19	1	20 days	1.13		Williams	1998 FX ₁₀₅
1998 FA ₁₀₆	15.5	0.15	19980328	78.34995	156.79437	298.90270	4.53862	0.1278600	2.4566632	18	1	20 days	0.92		Williams	1998 FA ₁₀₆
1998 FB ₁₀₆	15.5	0.15	19980417	232.88161	85.93764	248.44494	5.48623	0.1722308	2.2266455	19	1	33 days	1.15		Williams	1998 FB ₁₀₆
1998 FD ₁₀₆	15.5	0.15	19980328	288.84781	294.52621	335.79602	6.12905	0.0937870	2.3703327	17	1	20 days	0.95		Williams	1998 FD ₁₀₆
1998 FH ₁₀₆	14.5	0.15	19980328	159.96316	96.64732	288.63698	4.18931	0.1225815	2.4585718	17	1	20 days	1.43		Williams	1998 FH ₁₀₆
1998 FK ₁₀₆	15.0	0.15	19980706	319.62808	45.20622	226.33007	6.91476	0.1265577	2.3325042	27	2	1991–1998	0.73	M-v 5	Williams	31766 1998 FK ₁₀₆
1998 FN ₁₀₆	15.5	0.15	19980328	358.54523	198.55660	353.73682	13.43554	0.0904607	2.6666900	18	1	20 days	1.04		Williams	1998 FN ₁₀₆
1998 FP ₁₀₆	15.5	0.15	19980706	20.44248	308.67430	246.35010	4.44899	0.1681919	2.5537179	31	2	1996–1998	0.56	M-v 4	Williams	31766 1998 FP ₁₀₆
1998 FR ₁₀₆	15.5	0.15	19980328	46.00732	144.84548	346.56574	8.71281	0.1369862	2.3337530	23	1	20 days	0.48		Williams	1998 FR ₁₀₆
1998 FT ₁₀₆	15.5	0.15	19980308	44.16549	169.76340	320.92506	6.00316	0.0963586	2.4110253	22	1	53 days	0.78		Williams	1998 FT ₁₀₆
1998 FV ₁₀₆	14.0	0.15	19980328	254.99069	327.04589	335.21921	8.77031	0.0651599	2.6876484	19	1	20 days	0.64		Williams	1998 FV ₁₀₆
1998 FW ₁₀₆	14.0	0.15	19980328	39.29272	284.69543	212.87931	12.73584	0.1480317	3.1826421	19	1	19 days	0.90		Williams	1998 FW ₁₀₆
1998 FB ₁₀₇	15.0	0.15	19980328	88.06656	229.89641	214.57103	15.09632	0.1366890	2.6506924	17	1	20 days	1.18		Williams	1998 FB ₁₀₇
1998 FD ₁₀₇	15.5	0.15	19980328	290.58455	300.75889	344.90965	10.84180	0.2334257	2.3236778	18	1	20 days	0.73		Williams	1998 FD ₁₀₇
1998 FG ₁₀₇	14.5	0.15	19980328	220.47173	70.95632	266.57854	6.00746	0.1377056	2.3866823	18	1	20 days	1.03		Williams	1998 FG ₁₀₇
1998 FH ₁₀₇	13.0	0.15	19980328	235.01135	79.22496	242.37079	8.40101	0.0862094	2.9908045	19	1	20 days	0.49		Williams	1998 FH ₁₀₇
1998 FK ₁₀₇	13.5	0.15	19980308	20.69287	201.61987	322.04313	8.20136	0.0356539	3.0827002	23	1	53 days	0.47		Williams	1998 FK ₁₀₇
1998 FP ₁₀₈	15.5	0.15	19980328	294.07496	21.66902	250.85189	5.32069	0.1483463	2.3446297	18	1	20 days	1.22		Williams	1998 FP ₁₀₈
1998 FU ₁₀₈	14.5	0.15	19980308	167.86717	56.83709	318.36427	5.77835	0.1400602	2.3297089	21	1	52 days	0.67		Williams	1998 FU ₁₀₈

1998 FV ₁₀₈	15.5	0.15	19980328	56.54278	196.55463	286.94240	4.41061	0.0981697	2.3224280	19	1	20 days	0.85		Williams		1998 FV ₁₀₈
1998 FB ₁₀₉	14.0	0.15	19980706	100.43721	133.73907	331.24636	5.47425	0.0823116	2.5494262	38	2	1979–1998	0.45	M-v 4	Williams	31767	1998 FB ₁₀₉
1998 FC ₁₀₉	14.0	0.15	19980328	69.15554	213.42878	259.00364	4.24226	0.0808922	2.5475453	20	1	20 days	0.86		Williams		1998 FC ₁₀₉
1998 FD ₁₀₉	13.5	0.15	19980328	184.03473	148.95433	218.41067	8.76635	0.0610720	2.9796265	29	1	22 days	1.26		Williams		1998 FD ₁₀₉
1998 FG ₁₀₉	14.0	0.15	19980328	242.55725	357.38760	324.43610	5.87344	0.1428950	2.3862973	19	1	20 days	0.52		Williams		1998 FG ₁₀₉
1998 FJ ₁₀₉	15.5	0.15	19980328	291.10074	291.94758	339.14916	6.80363	0.1009332	2.3345243	18	1	20 days	0.80		Williams		1998 FJ ₁₀₉
1998 FN ₁₀₉	14.5	0.15	19980328	312.02229	319.41184	282.69392	4.45718	0.0427491	2.1756167	20	1	20 days	0.54		Williams		1998 FN ₁₀₉
1998 FO ₁₀₉	14.5	0.15	19980328	155.27573	82.14974	308.23167	5.85793	0.1363248	2.3795529	18	1	20 days	1.06		Williams		1998 FO ₁₀₉
1998 FR ₁₀₉	15.5	0.15	19980328	58.06402	156.72467	323.01360	6.59786	0.1305608	2.5476743	18	1	20 days	1.03		Williams		1998 FR ₁₀₉
1998 FD ₁₁₀	14.5	0.15	19980328	287.58564	348.77815	290.42216	6.75785	0.1421725	2.4997659	23	1	20 days	0.85		Williams		1998 FD ₁₁₀
1998 FQ ₁₁₀	15.5	0.15	19980328	317.27589	27.42191	238.15062	8.85629	0.3098670	2.6390479	19	1	20 days	0.86		Williams		1998 FQ ₁₁₀
1998 FT ₁₁₀	14.5	0.15	19980328	252.74310	85.98938	231.94575	10.32554	0.1890885	2.6224626	17	1	20 days	0.87		Williams		1998 FT ₁₁₀
1998 FP ₁₁₁	14.5	0.15	19980706	62.19712	285.90981	213.25786	21.83390	0.2752480	2.3649346	33	2	1978–1998	0.52	M-v 4	Williams	31767	1998 FP ₁₁₁
1998 FS ₁₁₁	15.0	0.15	19980417	297.44307	341.80294	307.63806	4.94334	0.1811309	2.2014098	24	1	55 days	0.54		Williams		1998 FS ₁₁₁
1998 FE ₁₁₂	13.0	0.15	19980417	148.39850	176.94136	230.47580	13.85026	0.0502966	2.5650257	27	1	55 days	0.58		Williams		1998 FE ₁₁₂
1998 FZ ₁₁₂	15.0	0.15	19980328	50.02006	271.70197	224.31076	13.38989	0.1405940	2.5615348	17	1	30 days	0.85		Williams		1998 FZ ₁₁₂
1998 FD ₁₁₃	13.0	0.15	19980417	265.20335	88.24141	220.24850	22.11987	0.1138404	3.1335563	23	1	46 days	1.10		Williams		1998 FD ₁₁₃
1998 FH ₁₁₃	12.0	0.15	19980417	225.48813	90.33624	252.47265	8.74567	0.1129607	3.0114342	27	1	55 days	0.53		Williams		1998 FH ₁₁₃
1998 FK ₁₁₃	14.0	0.15	19980328	24.04593	263.07941	261.72448	6.67093	0.1050062	3.0437071	18	1	20 days	0.75		Williams		1998 FK ₁₁₃
1998 FQ ₁₁₃	13.0	0.15	19980417	43.38277	255.28403	253.52098	5.08887	0.0718056	3.1722513	28	1	55 days	0.70		Williams		1998 FQ ₁₁₃
1998 FS ₁₁₃	15.0	0.15	19980328	266.67913	54.47381	253.84324	5.70680	0.2033893	2.2672594	19	1	20 days	1.03		Williams		1998 FS ₁₁₃
1998 FX ₁₁₃	15.0	0.15	19980328	57.20188	177.93178	297.68752	4.41722	0.1858084	2.3886169	21	1	26 days	0.87		Williams		1998 FX ₁₁₃
1998 FA ₁₁₄	14.0	0.15	19980417	343.64392	319.01685	262.45250	5.49361	0.1364110	2.5690491	30	1	46 days	1.11		Williams		1998 FA ₁₁₄
1998 FB ₁₁₄	14.5	0.15	19980417	304.13173	49.93185	216.87234	14.66914	0.1176491	2.6398108	26	1	46 days	1.04		Williams		1998 FB ₁₁₄
1998 FC ₁₁₄	15.0	0.15	19980417	41.47557	268.20491	236.47066	6.41106	0.1590041	2.3324756	38	1	55 days	0.87		Williams		1998 FC ₁₁₄
1998 FD ₁₁₄	14.5	0.15	19980417	136.60595	140.32334	275.77314	5.94758	0.1055208	2.2924476	34	1	55 days	0.61		Williams		1998 FD ₁₁₄
1998 FJ ₁₁₄	14.5	0.15	19980417	290.65111	22.06490	260.58086	5.81720	0.1027622	2.3133148	23	1	46 days	0.92		Williams		1998 FJ ₁₁₄
1998 FK ₁₁₄	14.5	0.15	19980417	298.54396	12.29015	274.13515	5.49434	0.2063035	2.4174202	23	1	46 days	0.73		Williams		1998 FK ₁₁₄
1998 FL ₁₁₄	14.5	0.15	19980328	347.61741	343.09466	230.06941	11.40405	0.1351480	2.6363661	11	1	30 days	0.42		Williams		1998 FL ₁₁₄
1998 FX ₁₁₄	14.5	0.15	19980706	344.00994	18.07262	230.00098	11.07287	0.1196306	2.5546109	28	1	64 days	0.67	M-v 5	Williams		1998 FX ₁₁₄
1998 FE ₁₁₅	13.5	0.15	19980706	15.16473	345.03065	225.05331	11.27963	0.1363147	2.6695510	36	1	64 days	0.53	M-v 4	Williams		1998 FE ₁₁₅
1998 FG ₁₁₅	14.5	0.15	19980328	73.44668	227.20312	252.17123	5.78605	0.0768465	2.4152009	25	1	30 days	0.73		Williams		1998 FG ₁₁₅
1998 FH ₁₁₅	13.5	0.15	19980328	193.39903	104.22918	270.19463	5.16696	0.2281591	2.2811754	19	1	22 days	0.57		Williams		1998 FH ₁₁₅
1998 FJ ₁₁₅	15.5	0.15	19980328	345.13111	333.29365	245.65353	5.42064	0.0980366	2.2669685	19	1	22 days	1.02		Williams		1998 FJ ₁₁₅
1998 FK ₁₁₅	14.0	0.15	19980328	192.80152	125.65170	248.23551	5.91265	0.1456045	2.2958310	18	1	22 days	0.90		Williams		1998 FK ₁₁₅
1998 FM ₁₁₅	16.0	0.15	19980328	37.02023	157.93872	350.29791	6.76462	0.1969182	2.3741926	17	1	20 days	0.82		Williams		1998 FM ₁₁₅
1998 FO ₁₁₅	15.0	0.15	19980417	343.34987	322.35458	264.78661	3.58406	0.0805906	2.2139223	31	1	52 days	0.63		Williams		1998 FO ₁₁₅
1998 FP ₁₁₅	14.5	0.15	19980328	20.46574	172.14876	358.24915	9.08272	0.2041021	3.0273207	13	1	30 days	0.77		Williams		1998 FP ₁₁₅
1998 FR ₁₁₅	13.5	0.15	19980328	83.85616	112.04566	346.86823	10.51643	0.1274002	3.0797077	17	1	20 days	1.34		Williams		1998 FR ₁₁₅
1998 FS ₁₁₅	15.0	0.15	19980328	320.94115	245.38814	358.32362	13.42156	0.1206931	2.6231345	23	1	36 days	0.54		Williams		1998 FS ₁₁₅
1998 FV ₁₁₅	14.5	0.15	19980328	39.35872	147.05452	355.66202	13.13016	0.1282222	2.5286300	23	1	20 days	0.75		Williams		1998 FV ₁₁₅
1998 FC ₁₁₆	14.0	0.15	19980328	206.34136	151.67246	213.94088	24.89377	0.2209720	2.2828585	18	1	22 days	1.05		Williams		1998 FC ₁₁₆
1998 FG ₁₁₆	15.0	0.15	19980328	106.50901	213.20629	223.06232	6.56285	0.0757012	2.2339628	35	1	39 days	0.65		Williams		1998 FG ₁₁₆
1998 FS ₁₁₆	15.0	0.15	19980328	252.48929	74.45483	239.47257	5.65425	0.1191365	2.4049243	22	1	22 days	1.33		Williams		1998 FS ₁₁₆
1998 FW ₁₁₆	13.5	0.15	19980417	239.23434	98.84189	236.62258	10.06432	0.1133247	2.9917591	24	1	52 days	1.19		Williams		1998 FW ₁₁₆
1998 FY ₁₁₆	13.5	0.15	19980417	281.03450	21.75796	276.37930	5.23128	0.1475440	2.6998249	35	1	52 days	0.55		Williams		1998 FY ₁₁₆
1998 FB ₁₁₇	15.0	0.15	19980328	90.06952	163.18148	295.56578	3.40911	0.0514078	2.1674971	39	1	39 days	0.67		Williams		1998 FB ₁₁₇
1998 FE ₁₁₇	14.5	0.15	19980417	247.17825	92.32972	234.21637	5.68997	0.1336537	2.2925978	41	1	52 days	1.16		Williams		1998 FE ₁₁₇
1998 FC ₁₁₇	14.5	0.15	19980706	160.60546	90.82895	322.25073	4.06473	0.1186339	2.3124317	47	3	1987–1998	0.69	M-v 4	Williams	31768	1998 FC ₁₁₇
1998 FF ₁₁₇	14.5	0.15	19980417	299.92022	61.07855	211.67203	11.71542	0.1254196	2.7361177	44	1	52 days	1.23		Williams		1998 FF ₁₁₇
1998 FG ₁₁₇	13.5	0.15	19980417	250.01351	114.26105	211.52027	12.38258	0.1873237	2.6372101	51	1	53 days	0.70		Williams		1998 FG ₁₁₇
1998 FH ₁₁₇	14.5	0.15	19980706	337.85305	308.47188	302.02904	3.98946	0.0835580	2.5796593	26	2	1991–1998	0.80	M-v 5	Williams	31768	1998 FH ₁₁₇
1998 FL ₁₁₇	14.5	0.15	19980417	10.09983	333.17800	217.80948	13.25275	0.0923962	2.5466198	44	1	52 days	0.93		Williams		1998 FL ₁₁₇

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1998 FP ₁₁₇	15.0	0.15	19980417	331.42517	15.68961	232.82980	10.51202	0.1474301	2.5589859	15	1	56 days	1.02		Williams	1998 FP ₁₁₇
1998 FT ₁₁₇	16.0	0.15	19980328	38.36359	209.90548	304.89354	2.87615	0.1202636	2.2566395	30	1	31 days	0.76		Williams	1998 FT ₁₁₇
1998 FW ₁₁₇	17.0	0.15	19980328	342.25285	242.20904	342.43500	4.83999	0.2260089	2.2103663	15	1	31 days	0.69		Williams	1998 FW ₁₁₇
1998 FX ₁₁₇	15.0	0.15	19980417	307.94656	354.88995	274.14857	3.77781	0.1220247	2.3921548	40	1	52 days	0.79		Williams	1998 FX ₁₁₇
1998 FY ₁₁₇	15.0	0.15	19980706	298.75357	37.56881	270.51408	3.80892	0.1714518	2.3083865	34	3	1991–1998	0.84	M-v 4	Williams	1998 FY ₁₁₇
1998 FZ ₁₁₇	15.5	0.15	19980328	349.72087	281.29581	291.11650	3.59655	0.1372248	2.4765200	24	1	30 days	0.76		Williams	1998 FZ ₁₁₇
1998 FB ₁₁₈	15.0	0.15	19980417	283.33992	306.36643	350.61842	6.20725	0.1232844	2.2866894	28	1	52 days	0.82		Williams	1998 FB ₁₁₈
1998 FD ₁₁₈	13.5	0.15	19980328	50.80813	276.09773	225.67368	8.96029	0.1055312	2.9848132	20	1	22 days	1.04		Williams	1998 FD ₁₁₈
1998 FG ₁₁₈	12.5	0.15	19980706	38.09005	241.54469	296.92211	3.97036	0.0547157	3.0410018	27	2	1971–1998	0.51	M-v 5	Williams	1998 FG ₁₁₈
1998 FH ₁₁₈	14.0	0.15	19980706	184.44210	50.98730	345.84361	5.72309	0.1302570	2.4286590	40	2	1988–1998	0.75	M-v 5	Williams	1998 FH ₁₁₈
1998 FJ ₁₁₈	15.0	0.15	19980417	41.33479	275.48229	233.36280	5.69954	0.1519028	2.4407980	41	1	52 days	0.66		Williams	1998 FJ ₁₁₈
1998 FK ₁₁₈	13.5	0.15	19980417	24.93587	318.79072	217.23709	12.89992	0.0385151	3.1966074	31	1	52 days	0.98		Williams	1998 FK ₁₁₈
1998 FN ₁₁₈	14.5	0.15	19980417	216.75585	140.19101	206.15583	22.04952	0.0411317	2.4224133	36	1	52 days	0.78		Williams	1998 FN ₁₁₈
1998 FP ₁₁₈	14.0	0.15	19980706	67.15759	194.26807	310.87632	3.93689	0.0563023	2.8443722	26	2	1995–1998	0.71	M-v 4	Williams	1998 FP ₁₁₈
1998 FR ₁₁₈	15.5	0.15	19980328	20.49716	222.86718	303.11110	3.23508	0.1744733	2.3707883	23	1	30 days	0.67		Williams	1998 FR ₁₁₈
1998 FV ₁₁₈	15.0	0.15	19980328	69.40436	230.56877	250.34331	4.02794	0.0620263	2.4387430	24	1	37 days	0.77		Williams	1998 FV ₁₁₈
1998 FX ₁₁₈	13.5	0.15	19980328	101.17070	98.81015	350.01518	6.91316	0.0836953	3.1091597	19	1	30 days	1.07		Williams	1998 FX ₁₁₈
1998 FY ₁₁₈	14.0	0.15	19980417	49.19001	143.22696	9.08528	9.28502	0.1088631	2.8108625	22	1	46 days	1.29		Williams	1998 FY ₁₁₈
1998 FK ₁₂₁	13.0	0.15	19980328	239.50474	280.69289	39.64322	5.78349	0.1508597	3.9261718	16	1	31 days	1.26		Williams	1998 FK ₁₂₁
1998 FN ₁₂₁	14.0	0.15	19980328	99.57034	259.91577	173.14576	9.24363	0.1462041	2.7680853	33	1	33 days	0.73		Williams	1998 FN ₁₂₁
1998 FP ₁₂₁	14.0	0.15	19980328	47.34168	317.03721	182.00812	5.67720	0.0285154	2.7825893	24	1	33 days	0.65		Williams	1998 FP ₁₂₁
1998 FS ₁₂₁	15.0	0.15	19980706	18.33945	230.64583	333.77429	2.59908	0.0021801	2.1284607	65	4	1962–1998	0.51	M-v 3	Williams	1998 FS ₁₂₁
1998 FT ₁₂₁	15.0	0.15	19980328	303.41131	75.89370	185.46273	5.02942	0.1472545	2.2626775	24	1	43 days	0.53		Williams	1998 FT ₁₂₁
1998 FZ ₁₂₁	13.5	0.15	19980706	237.96643	170.77215	166.42923	10.29437	0.0923516	2.9919835	40	1	79 days	0.65	M-v 4	Williams	1998 FZ ₁₂₁
1998 FA ₁₂₂	15.5	0.15	19980328	354.43831	27.30397	172.59438	12.59066	0.2716033	3.0268474	16	1	31 days	0.99		Williams	1998 FA ₁₂₂
1998 FB ₁₂₂	15.5	0.15	19980328	299.48125	191.62916	79.35884	3.28875	0.1876467	2.4006585	21	1	33 days	0.58		Williams	1998 FB ₁₂₂
1998 FC ₁₂₂	14.0	0.15	19980706	117.61214	296.12903	137.67756	4.85014	0.2048721	2.6167381	37	2	1989–1998	0.82	M-v 5	Williams	1998 FC ₁₂₂
1998 FF ₁₂₂	15.5	0.15	19980328	95.48775	251.18181	196.23534	5.78678	0.0834014	2.4265039	16	1	33 days	1.17		Williams	1998 FF ₁₂₂
1998 FM ₁₂₂	15.0	0.15	19980328	264.99136	102.08898	197.02703	5.83644	0.0985421	2.5388084	29	1	41 days	1.02		Williams	1998 FM ₁₂₂
1998 FS ₁₂₂	16.0	0.15	19980328	44.93159	67.73314	67.30465	3.58641	0.1238967	2.4085365	37	1	44 days	0.82		Williams	1998 FS ₁₂₂
1998 FT ₁₂₂	13.5	0.15	19980328	135.30326	17.68163	26.79856	13.35760	0.1725680	2.5674640	28	1	42 days	0.67		Williams	1998 FT ₁₂₂
1998 FU ₁₂₂	15.0	0.15	19980328	292.11646	106.74646	179.77431	7.39432	0.2287215	2.4330625	31	1	44 days	0.71		Williams	1998 FU ₁₂₂
1998 FV ₁₂₂	15.0	0.15	19980417	338.93744	34.07759	194.37408	11.80327	0.1414874	2.6172633	39	1	57 days	0.78		Williams	1998 FV ₁₂₂
1998 FY ₁₂₂	14.5	0.15	19980417	329.07112	58.20077	186.68900	15.71323	0.1968208	2.7486900	45	1	57 days	0.71		Williams	1998 FY ₁₂₂
1998 FA ₁₂₃	14.0	0.15	19980417	317.56868	134.01188	120.10120	3.32836	0.1466280	3.1981719	27	1	57 days	0.98		Williams	1998 FA ₁₂₃
1998 FC ₁₂₃	15.5	0.15	19980328	292.90648	212.07447	60.50656	4.87908	0.1145568	2.5518899	20	1	44 days	0.80		Williams	1998 FC ₁₂₃
1998 FD ₁₂₃	15.0	0.15	19980417	321.20600	90.00256	182.68439	13.08676	0.3362946	2.7582767	28	1	57 days	0.97		Williams	1998 FD ₁₂₃
1998 FG ₁₂₃	13.5	0.15	19980417	125.29374	57.73709	4.98434	13.35582	0.1598670	2.5880753	39	1	57 days	0.69		Williams	1998 FG ₁₂₃
1998 FH ₁₂₃	15.5	0.15	19980328	344.91560	297.55531	284.39068	1.81659	0.2607931	2.5911302	25	1	41 days	0.70		Williams	1998 FH ₁₂₃
1998 FQ ₁₂₃	13.0	0.15	19980328	253.10713	128.77129	187.44651	6.44079	0.1643693	3.3655506	17	1	31 days	0.87		Williams	1998 FQ ₁₂₃
1998 FC ₁₂₄	13.0	0.15	19980328	254.40064	271.55317	20.40980	14.13914	0.1381166	2.6585268	15	1	10 days	1.04		Marsden	1998 FC ₁₂₄
1998 FE ₁₂₄	14.5	0.15	19980328	60.86793	351.00973	109.48489	7.61115	0.1252523	2.7951938	15	1	10 days	1.07		Marsden	1998 FE ₁₂₄
1998 FR ₁₂₄	13.5	0.15	19980706	242.49983	192.88593	149.77962	2.54948	0.0809001	2.8332118	36	2	1993–1998	0.82	M-v 5	Williams	1998 FR ₁₂₄
1998 FG ₁₂₅	15.0	0.15	19980417	346.86957	181.75256	35.54165	13.43960	0.0843594	2.5231144	31	1	53 days	1.01		Williams	1998 FG ₁₂₅
1998 FJ ₁₂₅	15.0	0.15	19980417	18.90535	96.61663	77.37232	4.81692	0.2237262	2.5810136	29	1	53 days	0.83		Williams	1998 FJ ₁₂₅
1998 FL ₁₂₅	13.5	0.15	19980706	350.56326	26.46793	202.25835	13.45248	0.0963131	2.5796350	40	3	1991–1998	0.82	M-v 3	Williams	1998 FL ₁₂₅
1998 FT ₁₂₅	14.5	0.15	19980328	336.27204	221.85892	357.37864	15.51779	0.0729903	2.8642952	18	1	20 days	1.06		Williams	1998 FT ₁₂₅
1998 FL ₁₂₆	14.5	0.15	19980328	305.74041	65.36884	189.73939	18.31481	0.1702892	3.1210460	17	1	28 days	1.16		Williams	1998 FL ₁₂₆
1998 FM ₁₂₆	15.0	0.15	19980706	10.67139	1.10234	189.99867	4.38593	0.1585809	2.2326575	27	2	1996–1998	0.47	M-v 4	Williams	1998 FM ₁₂₆
1998 FN ₁₂₆	15.0	0.15	19980328	278.45999	0.84913	292.78189	2.72628	0.1593267	2.1567192	51	1	39 days	0.60		Williams	1998 FN ₁₂₆
1998 FT ₁₂₆	14.5	0.15	19980328	358.07056	152.38261	34.87023	12.41939	0.1295258	2.6966458	16	1	27 days	0.47		Williams	1998 FT ₁₂₆
1998 FB ₁₂₇	13.5	0.15	19980417	6.88272	85.78274	105.11235	22.94742	0.0424534	3.1841430	21	1	55 days	0.65		Williams	1998 FB ₁₂₇
1998 FC ₁₂₇	15.0	0.15	19980328	277.14017	219.80506	58.54908	7.28330	0.0922564	2.3140291	29	1	29 days	0.83	D	Williams	1998 FC ₁₂₇

1998 FL ₁₂₇	16.0	0.15	19980308	47.90729	84.91921	9.87215	9.39015	0.2478025	2.3776706	11	1	2 days	0.86	E	Williams	1998 FL ₁₂₇	
1998 FM ₁₂₇	16.0	0.15	19980308	45.44578	70.86513	22.97730	7.54469	0.2792035	2.5511259	10	1	2 days	0.82	E	Williams	1998 FM ₁₂₇	
1998 GA	14.5	0.15	19980706	65.76885	101.99320	29.13361	4.07245	0.1345058	2.4263355	31	2	1992–1998	0.54	M-v	5	Williams	31770 1998 GA
1998 GE	14.5	0.15	19980417	28.32972	114.00492	27.58131	30.59896	0.2987499	2.6240299	14	1	45 days	0.88			Williams	1998 GE
1998 GS	14.5	0.15	19980328	212.07704	321.43108	22.08875	14.54119	0.1209673	2.6392920	15	1	19 days	0.88			Williams	1998 GS
1998 GW	14.5	0.15	19980417	95.63213	348.21615	123.61243	8.28426	0.1462191	2.5797412	25	1	51 days	0.66			Williams	1998 GW
1998 GY	17.0	0.15	19980417	21.62778	206.76152	327.00950	6.26346	0.1924140	2.2776197	28	1	51 days	0.97			Williams	1998 GY
1998 GZ	15.5	0.15	19980706	11.09072	173.45023	32.07749	6.54840	0.0556067	2.2742986	28	2	1996–1998	0.51	M-v	4	Williams	31770 1998 GZ
1998 GA ₁	15.5	0.15	19980706	36.66161	106.78287	68.68547	2.69197	0.0846106	2.5178218	36	1	62 days	0.71	M-v	4	Williams	1998 GA ₁
1998 GG ₁	15.5	0.15	19980417	325.05417	41.58894	216.20567	7.84583	0.1383978	2.7651620	31	1	43 days	0.67			Williams	1998 GG ₁
1998 GH ₁	15.0	0.15	19980417	315.23732	214.48225	41.74963	8.36345	0.1776218	2.7904907	37	1	49 days	0.58			Williams	1998 GH ₁
1998 GJ ₁	15.0	0.15	19980706	216.97136	229.88576	131.81127	4.90860	0.0769026	2.3614505	49	1	145 days	0.54	M-v	4	Williams	31818 1998 GJ ₁
1998 GL ₁	14.0	0.15	19980417	77.19814	102.52323	26.56373	16.03864	0.0562948	2.5546391	36	1	46 days	0.50			Williams	1998 GL ₁
1998 GM ₁	13.5	0.15	19980706	197.57544	138.16869	198.01581	4.89806	0.0144745	2.4901590	20	2	1995–1998	0.45	M-v	4	Williams	31771 1998 GM ₁
1998 GN ₁	15.5	0.15	19980328	41.02397	42.42949	91.50249	2.54097	0.1146933	2.4262735	20	1	17 days	0.49			Marsden	1998 GN ₁
1998 GO ₁	15.0	0.15	19980417	1.40328	72.89400	146.71137	8.77076	0.1419195	2.2980314	36	1	51 days	0.18			Williams	1998 GO ₁
1998 GS ₆	15.0	0.15	19980417	4.99942	101.99350	84.41503	13.18553	0.2113512	2.5651742	24	1	44 days	0.60			Williams	1998 GS ₆
1998 GT ₆	14.0	0.15	19980328	1.31435	80.09191	105.53712	14.61958	0.2139521	2.6224936	17	1	28 days	0.47			Williams	1998 GT ₆
1998 GD ₇	13.5	0.15	19980417	338.59787	130.46788	92.61931	15.34119	0.1455810	3.0567880	20	1	44 days	0.69			Williams	1998 GD ₇
1998 GN ₇	12.5	0.15	19980706	232.19871	222.55549	131.24566	13.85438	0.1902125	2.6413294	36	4	1950–1998	0.69	M-v	2	Williams	31771 1998 GN ₇
1998 GX ₇	15.0	0.15	19980328	43.71070	325.13408	165.79402	24.80118	0.2124740	2.3243192	20	1	28 days	0.73			Williams	1998 GX ₇
1998 GZ ₇	13.0	0.15	19980328	5.59985	57.87309	129.97186	21.44544	0.0450346	3.2070532	19	1	28 days	0.70			Williams	1998 GZ ₇
1998 GH ₈	12.5	0.15	19980417	253.52271	234.83778	89.77348	14.10191	0.1808923	2.7747955	26	1	44 days	0.50			Williams	1998 GH ₈
1998 GK ₈	13.0	0.15	19980328	119.95386	256.96388	170.88995	27.70391	0.1406394	3.2108341	16	1	22 days	0.75			Williams	1998 GK ₈
1998 GL ₈	13.0	0.15	19980328	66.15494	337.79391	141.40901	14.44210	0.1175036	3.2179399	17	1	22 days	0.61			Williams	1998 GL ₈
1998 GN ₈	15.0	0.15	19980417	344.32217	130.48928	96.66629	10.43698	0.2245700	2.7062959	22	1	44 days	0.73			Williams	1998 GN ₈
1998 GP ₈	15.0	0.15	19980328	355.59570	96.47500	106.24847	11.65353	0.2283218	2.6669215	18	1	22 days	0.67			Williams	1998 GP ₈
1998 GR ₈	14.5	0.15	19980328	331.91950	152.53509	81.68849	14.56461	0.1496979	2.8040631	17	1	22 days	0.97			Williams	1998 GR ₈
1998 GT ₈	13.5	0.15	19980417	238.30859	255.18157	69.31619	21.26459	0.0521036	2.4254296	22	1	44 days	0.53			Williams	1998 GT ₈
1998 GW ₈	15.0	0.15	19980417	346.64864	142.47307	78.02549	13.44872	0.1173159	2.5914542	26	1	44 days	0.79			Williams	1998 GW ₈
1998 GX ₈	14.5	0.15	19980417	357.42840	84.00762	124.43125	12.23641	0.1927653	2.6514470	26	1	49 days	0.68	D		Williams	1998 GX ₈
1998 GY ₈	14.5	0.15	19980417	27.21443	35.24688	126.67550	13.54989	0.2162673	2.6117611	25	1	44 days	0.88			Williams	1998 GY ₈
1998 GA ₉	14.0	0.15	19980417	356.88462	98.30623	107.02067	15.72676	0.0746249	2.6218912	25	1	44 days	0.88			Williams	1998 GA ₉
1998 GC ₉	15.0	0.15	19980328	75.04480	30.79806	86.37736	12.26154	0.0590162	2.5684762	19	1	22 days	0.85			Williams	1998 GC ₉
1998 GD ₉	14.0	0.15	19980706	305.51520	152.28454	147.82033	14.23451	0.1781633	2.5319448	29	1	69 days	0.54	M-v	5	Williams	1998 GD ₉
1998 GE ₉	13.5	0.15	19980706	327.22495	118.31059	150.94712	15.18291	0.1158012	2.6287956	25	1	69 days	0.52	M-v	4	Williams	1998 GE ₉
1998 GF ₉	13.5	0.15	19980417	191.45270	292.36591	83.49375	15.21166	0.1404564	2.6063871	23	1	44 days	1.15			Williams	1998 GF ₉
1998 GG ₉	14.0	0.15	19980417	320.00651	191.69750	65.46159	20.63106	0.1569289	3.1330165	22	1	44 days	0.81			Williams	1998 GG ₉
1998 GH ₉	14.0	0.15	19980417	317.31987	151.82851	101.08497	14.04935	0.0607020	2.6611703	24	1	44 days	0.73			Williams	1998 GH ₉
1998 GM ₉	14.5	0.15	19980328	18.94531	108.50501	68.39904	19.99050	0.0690724	2.4463952	18	1	22 days	0.50			Williams	1998 GM ₉
1998 GN ₉	13.5	0.15	19980417	279.43746	203.25471	95.53848	15.80151	0.1073693	2.6344603	23	1	44 days	0.67			Williams	1998 GN ₉
1998 GO ₉	13.5	0.15	19980328	259.73603	203.09460	120.10287	15.42439	0.1757856	3.1580343	21	1	22 days	0.58			Williams	1998 GO ₉
1998 GP ₉	14.5	0.15	19980417	6.59300	127.02948	70.91449	16.15585	0.0395634	2.5391938	25	1	44 days	0.80			Williams	1998 GP ₉
1998 GD ₁₀	15.0	0.15	19980328	352.63789	119.19016	89.88418	16.62618	0.2449246	3.0882447	19	1	28 days	0.71			Williams	1998 GD ₁₀
1998 GF ₁₀	14.5	0.15	19980417	306.10328	180.86094	103.49005	13.92899	0.2263047	2.6271778	22	1	44 days	0.95			Williams	1998 GF ₁₀
1998 GL ₁₀	18.0	0.15	19980706	26.72525	287.38465	193.37341	8.67212	0.6670506	3.1852514	20	1	34 days	0.70	M-v	6	Marsden	1998 GL ₁₀
1998 GO ₁₀	14.5	0.15	19980417	301.97937	316.28026	325.52936	1.43020	0.1862743	2.5683802	26	1	27 days	0.53			Williams	1998 GO ₁₀
1998 GW ₁₀	15.0	0.15	19980328	303.94234	216.35150	28.00731	7.06933	0.1186901	2.2708634	14	1	9 days	1.24	E		Williams	1998 GW ₁₀
1998 GG ₁₁	16.0	0.15	19980328	318.84469	246.93980	1.49122	5.72247	0.1520201	2.3096632	38	1	39 days	0.99			Williams	1998 GG ₁₁
1998 GJ ₁₁	15.0	0.15	19980328	37.95662	116.36461	358.12821	30.81221	0.2137781	2.5976659	22	1	25 days	0.70			Williams	1998 GJ ₁₁
1998 GK ₁₁	15.5	0.15	19980328	28.40037	309.81140	182.31248	13.69842	0.1912218	2.4590974	17	1	31 days	0.84			Williams	1998 GK ₁₁
1998 HA	15.0	0.15	19980706	21.21465	160.11821	47.82510	15.05051	0.0929633	2.5713006	29	1	69 days	0.57	M-v	4	Williams	1998 HA
1998 HK	16.5	0.15	19980417	30.22396	315.92784	206.37986	21.44523	0.0967067	1.9472753	30	1	52 days	0.92			Williams	1998 HK

1998 HT	15.0	0.15	19980417	269.90936	179.81125	140.11041	4.74323	0.2105973	2.6664573	18	1	9 days	0.89		Williams	1998 HT	
1998 HU	16.0	0.15	19980417	9.46994	9.62583	182.15670	8.95765	0.2127327	2.7275791	22	1	10 days	0.72		Williams	1998 HU	
1998 HW	13.5	0.15	19980417	67.18415	293.52182	188.74176	14.10989	0.1591835	2.7467170	27	1	37 days	0.68		Williams	1998 HW	
1998 HX	14.0	0.15	19980706	292.31019	194.19567	113.35736	4.33246	0.1005245	2.3917363	38	1	65 days	0.60	M-v	5	Williams	1998 HX
1998 HC ₁	15.5	0.15	19980417	11.14467	38.38090	168.27296	11.63915	0.1066150	2.6153312	13	1	6 days	0.49		Williams	1998 HC ₁	
1998 HE ₁	13.0	0.15	19980706	315.41692	267.13449	12.43977	7.68577	0.1221633	3.1944296	46	2	1992-1998	0.67	M-v	4	Williams	31771 1998 HE ₁
1998 HH ₁	23.0	0.15	19980417	0.11234	359.33580	203.78350	16.06239	0.5139358	2.1585152	39	1	17 days	0.99		Marsden	1998 HH ₁	
1998 HK ₁	19.5	0.15	19980706	12.19756	24.15529	213.85968	7.94098	0.4265010	2.1580632	114	1	63 days	0.62	M-v	4	Marsden	1998 HK ₁
1998 HL ₁	19.0	0.15	19980706	266.98151	148.40679	213.64392	20.04735	0.1871900	1.2461661	48	1	32 days	0.71	M-v	5	Marsden	1998 HL ₁
1998 HP ₁	17.0	0.15	19980417	334.25761	191.69181	54.86190	5.35238	0.1243588	2.3501762	22	1	29 days	0.74		Williams	1998 HP ₁	
1998 HD ₂	13.0	0.15	19980417	18.55367	335.44383	212.45932	16.47626	0.0707334	3.1833890	40	1	54 days	0.88		Williams	1998 HD ₂	
1998 HE ₂	13.5	0.15	19980706	111.56901	49.63545	62.78913	10.44948	0.0582101	3.0645791	43	1	70 days	0.68	M-v	5	Williams	1998 HE ₂
1998 HX ₂	15.5	0.15	19980507	115.07847	245.79598	202.24445	21.62282	0.1592494	1.9576577	28	1	32 days	0.46		Williams	1998 HX ₂	
1998 HB ₃	16.5	0.15	19980507	45.66817	307.09647	221.73572	23.24441	0.0852725	1.9128810	26	1	33 days	0.65		Williams	1998 HB ₃	
1998 HC ₃	14.5	0.15	19980417	58.70516	315.22269	177.24115	13.68558	0.0806786	2.9822862	14	1	10 days	0.22		Marsden	1998 HC ₃	
1998 HD ₃	14.0	0.15	19980507	39.38587	134.71617	38.75359	5.93051	0.0964190	3.1910818	53	1	37 days	0.71		Williams	1998 HD ₃	
1998 HE ₃	21.5	0.15	19980706	336.90800	308.93830	53.92811	3.40468	0.4410961	0.8786904	105	1	24 days	0.62	M-v	8	Williams	1998 HE ₃
1998 HF ₃	14.5	0.15	19980507	297.75840	112.17759	194.08661	12.98302	0.1575669	3.0486160	35	1	42 days	0.46		Williams	1998 HF ₃	
1998 HG ₃	15.5	0.15	19980507	279.30847	164.32154	168.15951	6.71661	0.2278010	2.2006182	28	1	38 days	0.55		Marsden	1998 HG ₃	
1998 HH ₃	16.0	0.15	19980417	58.81166	78.01233	72.89075	0.77272	0.0499332	2.2002262	33	1	30 days	1.17		Marsden	1998 HH ₃	
1998 HL ₃	20.0	0.15	19980706	316.17048	187.92477	163.90527	2.66368	0.3662745	1.1286264	58	1	36 days	0.68	M-v	7	Williams	1998 HL ₃
1998 HM ₃	18.5	0.15	19980706	284.44864	137.00890	210.87268	39.33078	0.0622218	1.2465223	108	1	46 days	0.56	M-v	6	Marsden	1998 HM ₃
1998 HO ₃	14.5	0.15	19980417	306.12171	84.07892	191.14350	14.63952	0.1363278	2.6063176	19	1	29 days	0.63		Williams	1998 HO ₃	
1998 HP ₃	15.5	0.15	19980417	346.50070	71.33167	156.52639	4.02838	0.2397283	2.5639918	29	1	52 days	0.61		Williams	1998 HP ₃	
1998 HA ₄	15.0	0.15	19980417	23.69917	93.34730	80.48110	5.18324	0.1629626	2.5419075	25	1	53 days	0.89		Williams	1998 HA ₄	
1998 HH ₄	15.0	0.15	19980507	248.16910	276.58109	75.34305	7.59761	0.1307863	2.4194665	19	1	33 days	1.18		Williams	1998 HH ₄	
1998 HO ₄	17.5	0.15	19980417	348.05056	18.26242	215.31036	18.03504	0.2222881	2.5992318	21	1	10 days	0.39		Marsden	1998 HO ₄	
1998 HT ₄	15.0	0.15	19980417	305.10160	224.96424	47.98709	5.86809	0.0632634	2.2567217	27	1	15 days	0.57		Williams	1998 HT ₄	
1998 HX ₄	14.0	0.15	19980417	259.11081	142.50855	187.99520	13.45754	0.2313447	2.7537969	14	1	6 days	0.63		Williams	1998 HX ₄	
1998 HN ₅	16.0	0.15	19980417	64.10891	85.50597	43.83027	14.00047	0.1068175	2.5468112	23	1	57 days	1.24		Williams	1998 HN ₅	
1998 HO ₅	15.5	0.15	19980507	137.39094	280.83787	162.52240	5.16247	0.1175307	2.2631575	18	1	32 days	1.19		Williams	1998 HO ₅	
1998 HT ₅	15.5	0.15	19980417	320.38343	141.84181	123.14238	2.85127	0.2085003	2.4128501	23	1	25 days	0.80		Williams	1998 HT ₅	
1998 HA ₆	16.0	0.15	19980706	18.17062	157.73985	57.06149	7.36293	0.1226213	2.2380294	31	1	62 days	0.69	M-v	5	Williams	1998 HA ₆
1998 HE ₆	13.5	0.15	19980328	147.17909	228.83444	180.79548	7.89840	0.1106763	3.2281585	20	1	30 days	0.85		Williams	1998 HE ₆	
1998 HK ₆	15.5	0.15	19980417	296.82217	107.84423	190.19859	11.34275	0.2314393	2.6479686	15	1	3 days	0.74		E Williams	1998 HK ₆	
1998 HM ₆	16.0	0.15	19980417	297.52194	122.64346	177.73561	6.58530	0.2556135	2.2771768	22	1	11 days	0.69		Williams	1998 HM ₆	
1998 HN ₆	16.0	0.15	19980507	345.25877	150.47130	100.10503	3.21582	0.1807299	2.3566160	27	1	32 days	0.75		Williams	1998 HN ₆	
1998 HR ₆	14.5	0.15	19980507	246.43992	281.75169	72.00943	9.36487	0.0912606	3.0576500	18	1	32 days	0.78		Williams	1998 HR ₆	
1998 HS ₆	15.0	0.15	19980507	231.66197	278.50880	85.64424	7.06435	0.0352680	2.7255932	18	1	32 days	0.80		Williams	1998 HS ₆	
1998 HT ₆	16.0	0.15	19980507	293.56227	230.88009	93.37744	5.48195	0.2225873	2.5778139	14	1	32 days	0.82		Williams	1998 HT ₆	
1998 HU ₆	15.5	0.15	19980507	283.17041	244.23418	87.43337	6.46501	0.1928943	2.3958069	23	1	32 days	0.73		Williams	1998 HU ₆	
1998 HV ₆	14.5	0.15	19980507	2.38435	354.76065	222.04809	5.49340	0.1551047	2.5497123	43	1	33 days	0.88		Williams	1998 HV ₆	
1998 HW ₆	13.0	0.15	19980706	180.99446	337.55763	71.82929	14.25834	0.0236313	2.8164121	44	2	1996-1998	0.62	M-v	4	Williams	31771 1998 HW ₆
1998 HY ₆	15.0	0.15	19980417	8.08028	132.91502	52.84607	5.82926	0.1191301	2.3790177	28	1	31 days	0.60		Williams	1998 HY ₆	
1998 HG ₇	15.0	0.15	19980417	296.73050	248.99278	48.17023	24.07717	0.2296828	2.2807252	16	1	24 days	0.89		Williams	1998 HG ₇	
1998 HK ₇	14.0	0.15	19980507	57.02658	74.62837	51.93045	22.68131	0.2839007	2.3378076	23	1	32 days	0.53		Williams	1998 HK ₇	
1998 HL ₇	15.5	0.15	19980507	40.53460	115.66603	56.63952	23.00950	0.0576676	1.9772590	16	1	31 days	0.55		Williams	1998 HL ₇	
1998 HO ₇	17.0	0.15	19980507	321.71913	214.92411	48.60381	24.39093	0.0415865	1.8277535	35	1	34 days	0.64		Williams	1998 HO ₇	
1998 HP ₇	15.5	0.15	19980507	43.16885	75.88995	67.86580	21.44640	0.3360436	2.3870932	14	1	40 days	0.58		Williams	1998 HP ₇	
1998 HR ₇	14.5	0.15	19980507	333.04811	72.85259	209.38967	29.90854	0.3347424	2.7527599	22	1	42 days	0.64		Williams	1998 HR ₇	
1998 HS ₇	16.0	0.15	19980706	41.57056	96.39593	60.14029	14.58211	0.4475253	2.7498559	20	1	31 days	0.54	M-v	6	Williams	1998 HS ₇
1998 HU ₇	14.0	0.15	19980417	51.43428	109.04580	24.54614	10.57305	0.1974404	2.8200666	18	1	4 days	0.91		E Williams	1998 HU ₇	
1998 HV ₇	12.5	0.15	19980417	137.27712	179.34486	231.14011	1.29808	0.2893244	2.8452977	24	1	5 days	0.70		E Williams	1998 HV ₇	

1998 HW ₇	15.0	0.15	19980706	308.89931	84.11956	224.70457	5.06608	0.1912953	2.2692624	48	3	1985–1998	0.60	M-v	4	Williams	31771	1998 HW ₇
1998 HY ₇	14.0	0.15	19980417	335.56256	141.29936	92.45229	16.85270	0.2346145	2.6969179	18	1	6 days	0.58			Williams		1998 HY ₇
1998 HZ ₇	17.0	0.15	19980706	11.54480	358.08073	214.60215	23.15938	0.4371717	3.2406751	81	1	43 days	0.64	M-v	4	Marsden		1998 HZ ₇
1998 HD ₈	15.5	0.15	19980507	21.30557	37.86609	162.11295	4.28877	0.0595763	2.2030055	39	1	36 days	0.75			Williams		1998 HD ₈
1998 HE ₈	14.0	0.15	19980417	330.44371	36.47076	210.99892	6.81980	0.0732432	2.4420284	29	1	30 days	0.77			Williams		1998 HE ₈
1998 HH ₈	16.0	0.15	19980507	2.48373	161.56849	55.87868	5.54086	0.0797748	2.3051522	33	1	37 days	0.72			Williams		1998 HH ₈
1998 HK ₈	14.5	0.15	19980706	224.46218	4.64059	3.99759	0.61772	0.0883958	2.9675073	25	2	1997–1998	0.67	M-v	4	Williams	31771	1998 HK ₈
1998 HL ₈	16.0	0.15	19980507	313.21853	220.95600	57.69152	7.62368	0.1284076	2.3551115	30	1	40 days	0.87			Williams		1998 HL ₈
1998 HN ₈	15.0	0.15	19980417	307.53115	139.16813	126.96722	3.44726	0.0833588	2.4095575	24	1	29 days	0.73			Williams		1998 HN ₈
1998 HT ₈	14.5	0.15	19980507	191.02565	321.99829	60.49761	7.72232	0.1190659	2.2686254	22	1	41 days	0.56			Williams		1998 HT ₈
1998 HV ₈	15.0	0.15	19980417	30.02663	81.18241	93.53980	4.52746	0.0384262	2.4467399	16	1	8 days	0.34			Williams		1998 HV ₈
1998 HY ₈	14.5	0.15	19980417	292.24870	187.52052	104.76739	4.56510	0.1509599	2.5682785	19	1	10 days	0.51			Williams		1998 HY ₈
1998 HH ₉	14.0	0.15	19980417	163.12568	285.82681	127.47287	10.22086	0.1893324	2.7638607	13	1	7 days	0.79			Williams		1998 HH ₉
1998 HQ ₉	14.5	0.15	19980417	295.34370	219.62344	84.44957	14.87827	0.1695160	3.1501027	13	1	7 days	1.24	E		Williams		1998 HQ ₉
1998 HR ₉	14.0	0.15	19980417	282.57991	243.01923	87.51571	14.70115	0.2698551	2.6532355	13	1	7 days	0.88			Williams		1998 HR ₉
1998 HW ₉	16.0	0.15	19980417	315.50035	164.49592	105.65212	3.62378	0.2031821	2.3252332	16	1	6 days	0.57			Williams		1998 HW ₉
1998 HB ₁₀	14.5	0.15	19980417	148.90099	258.89569	144.41389	5.24553	0.2891167	2.4883543	13	1	4 days	1.07	E		Williams		1998 HB ₁₀
1998 HM ₁₀	15.5	0.15	19980417	327.29311	183.07276	45.51644	4.77505	0.0207474	2.9797480	21	1	16 days	0.51			Williams		1998 HM ₁₀
1998 HV ₁₀	14.5	0.15	19980417	326.78417	202.33290	31.56050	11.90300	0.0701856	3.0123998	14	1	7 days	0.57			Williams		1998 HV ₁₀
1998 HY ₁₀	13.5	0.15	19980417	256.80464	275.89215	48.31113	11.42758	0.1463587	3.0120023	16	1	7 days	0.77			Williams		1998 HY ₁₀
1998 HB ₁₁	14.0	0.15	19980417	289.76170	262.34893	40.70371	18.68126	0.2267926	2.6098985	16	1	7 days	0.46			Williams		1998 HB ₁₁
1998 HC ₁₁	15.0	0.15	19980417	341.22732	154.67466	76.85180	6.41168	0.1182046	3.2183454	17	1	14 days	1.02			Williams		1998 HC ₁₁
1998 HE ₁₁	13.5	0.15	19980417	224.39517	310.30513	44.64735	18.54958	0.1740086	3.1865769	19	1	14 days	0.75			Williams		1998 HE ₁₁
1998 HA ₁₂	15.5	0.15	19980417	342.24902	264.11159	328.06535	2.31092	0.1295799	2.5951113	16	1	5 days	0.86	E		Williams		1998 HA ₁₂
1998 HE ₁₂	14.5	0.15	19980417	8.82377	181.91329	17.53537	8.22757	0.0783305	2.5629771	19	1	6 days	0.51			Williams		1998 HE ₁₂
1998 HJ ₁₂	14.5	0.15	19980417	310.00216	257.48108	17.20498	7.84533	0.1456455	3.1100334	18	1	6 days	0.97	E		Williams		1998 HJ ₁₂
1998 HL ₁₂	15.5	0.15	19980417	354.76160	211.31447	5.79975	4.00710	0.1306913	2.7453233	15	1	5 days	1.14	E		Williams		1998 HL ₁₂
1998 HU ₁₂	14.0	0.15	19980417	340.65700	167.71252	48.51621	24.30719	0.1511075	3.0089659	24	1	43 days	0.59			Williams		1998 HU ₁₂
1998 HW ₁₂	16.0	0.15	19980417	335.67770	121.51799	125.92218	9.09262	0.1963817	2.3347789	16	1	2 days	0.53			Williams		1998 HW ₁₂
1998 HZ ₁₂	14.5	0.15	19980328	295.85498	161.49074	108.21112	5.81578	0.2556862	2.2117264	15	1	17 days	0.54			Marsden		1998 HZ ₁₂
1998 HA ₁₃	15.0	0.15	19980507	297.15481	82.80654	236.59710	5.23163	0.2976202	2.3752242	30	1	33 days	0.54			Williams		1998 HA ₁₃
1998 HT ₁₃	15.0	0.15	19980328	273.33397	311.00436	341.09662	6.12590	0.1158321	2.5366027	26	1	33 days	1.13			Williams		1998 HT ₁₃
1998 HY ₁₃	16.0	0.15	19980417	259.19815	233.77167	90.89183	4.62118	0.1504600	2.1891914	34	1	11 days	1.06			Williams		1998 HY ₁₃
1998 HA ₁₄	16.0	0.15	19980507	2.49568	134.26958	74.58359	26.31305	0.1437144	2.3132787	14	1	34 days	0.85			Williams		1998 HA ₁₄
1998 HC ₁₄	15.5	0.15	19980417	345.09837	99.62078	135.75458	9.30512	0.1862316	2.5716472	14	1	3 days	0.41			Williams		1998 HC ₁₄
1998 HD ₁₄	21.0	0.15	19980417	87.37054	260.49054	184.12373	7.80999	0.3133858	0.9644836	50	1	21 days	0.58			Williams		1998 HD ₁₄
1998 HF ₁₄	15.0	0.15	19980417	296.33533	183.72703	112.11352	5.83880	0.2082903	3.2194905	10	1	4 days	0.64	E		Williams		1998 HF ₁₄
1998 HT ₁₄	16.0	0.15	19980417	238.95497	191.23917	140.97725	3.06035	0.1804714	2.3997760	12	1	16 days	0.41			Williams		1998 HT ₁₄
1998 HA ₁₅	16.0	0.15	19980328	64.58872	9.25055	95.82074	2.49119	0.1877454	2.3299828	35	1	44 days	1.24			Williams		1998 HA ₁₅
1998 HC ₁₅	14.5	0.15	19980417	58.24755	81.95708	36.31517	8.81221	0.1763797	2.7973596	40	1	55 days	1.13			Williams		1998 HC ₁₅
1998 HG ₁₅	16.0	0.15	19980507	275.26730	259.58321	77.83098	6.01205	0.2209614	2.2090521	14	1	34 days	0.84			Williams		1998 HG ₁₅
1998 HJ ₁₅	13.5	0.15	19980507	97.51902	61.23504	58.08483	21.12174	0.1044148	3.1825281	24	1	34 days	0.84			Williams		1998 HJ ₁₅
1998 HK ₁₅	15.5	0.15	19980417	201.37926	326.84272	64.15539	14.37255	0.1919003	2.6659930	9	1	30 days	0.17			Williams		1998 HK ₁₅
1998 HT ₁₅	14.0	0.15	19980417	3.75037	20.54434	181.25633	10.87779	0.1431002	3.1833631	29	1	55 days	0.90			Williams		1998 HT ₁₅
1998 HC ₁₆	15.5	0.15	19980417	301.09505	224.32446	62.45690	8.72540	0.1945565	2.6090537	14	1	6 days	1.28			Williams		1998 HC ₁₆
1998 HD ₁₆	16.0	0.15	19980417	87.05353	355.82898	112.84233	5.01093	0.0985813	2.5411642	10	1	5 days	1.37	E		Williams		1998 HD ₁₆
1998 HF ₁₆	17.0	0.15	19980417	50.46377	25.92183	114.64945	4.39747	0.1609808	2.3129877	10	1	5 days	1.39			Williams		1998 HF ₁₆
1998 HG ₁₆	13.5	0.15	19980417	224.91948	248.45222	108.39892	6.13188	0.2199383	3.1868156	11	1	5 days	0.67	E		Williams		1998 HG ₁₆
1998 HJ ₁₆	16.5	0.15	19980417	332.70509	160.31324	87.85382	5.32315	0.2009908	2.5431208	11	1	5 days	0.59			Williams		1998 HJ ₁₆
1998 HM ₁₆	16.5	0.15	19980417	283.54339	187.56500	100.45495	2.99235	0.1301490	2.7840714	9	1	9 days	0.49			Williams		1998 HM ₁₆
1998 HW ₁₆	16.5	0.15	19980417	319.89461	88.78398	168.41280	7.18481	0.0972644	2.4069280	13	1	4 days	1.05			Williams		1998 HW ₁₆
1998 HA ₁₇	16.0	0.15	19980328	31.50882	131.05276	7.25160	32.49001	0.2378492	2.6221728	23	1	22 days	1.22			Williams		1998 HA ₁₇
1998 HV ₁₇	15.0	0.15	19980328	133.30686	66.80682	346.35065	6.29343	0.0962274	2.3505270	29	1	33 days	1.03			Williams		1998 HV ₁₇

1998 HC ₁₈	14.0	0.15	19980417	269.42282	38.02349	265.34644	3.39761	0.1275866	2.7628903	41	1	55 days	1.29		Williams	1998 HC ₁₈
1998 HG ₁₈	15.5	0.15	19980417	297.30922	33.75475	256.80718	3.82380	0.2614903	2.5468196	16	1	4 days	1.04		Williams	1998 HG ₁₈
1998 HO ₁₈	14.5	0.15	19980328	29.75936	285.98962	226.53913	5.07874	0.1693723	2.7173334	43	1	38 days	0.58		Williams	1998 HO ₁₈
1998 HP ₁₈	14.0	0.15	19980328	310.68401	240.29851	8.03333	10.00136	0.0581008	3.0149075	31	1	33 days	1.11		Williams	1998 HP ₁₈
1998 HQ ₁₈	15.0	0.15	19980706	326.44203	34.23366	223.79299	4.77993	0.0585504	2.4324358	40	2	1995–1998	0.74	M-v 4	Williams	31772 1998 HQ ₁₈
1998 HR ₁₈	16.0	0.15	19980706	334.50204	276.75814	350.18198	4.40002	0.2113044	2.3918534	50	3	1994–1998	0.76	M-v 3	Williams	31772 1998 HR ₁₈
1998 HV ₁₈	15.0	0.15	19980417	45.89721	257.09379	242.87781	3.86933	0.1023766	2.5323893	29	1	31 days	0.78		Williams	1998 HV ₁₈
1998 HW ₁₈	16.5	0.15	19980328	24.26681	309.45832	207.65650	5.40164	0.1845398	2.2752755	28	1	31 days	1.16		Williams	1998 HW ₁₈
1998 HX ₁₈	15.5	0.15	19980328	301.82753	249.03473	11.97050	7.17026	0.0901675	2.2486263	36	1	42 days	0.57		Williams	1998 HX ₁₈
1998 HY ₁₈	14.5	0.15	19980706	83.18299	107.26408	3.92263	6.10630	0.1930999	2.6407359	60	1	148 days	0.67	M-v 5	Williams	31821 1998 HY ₁₈
1998 HK ₁₉	14.0	0.15	19980328	133.33249	193.26648	217.50588	8.68194	0.1521006	2.5635278	34	1	33 days	0.93		Williams	1998 HK ₁₉
1998 HL ₁₉	15.0	0.15	19980417	29.83274	322.16936	201.96822	12.26437	0.0761873	2.5780256	37	1	57 days	1.27		Williams	1998 HL ₁₉
1998 HP ₁₉	15.0	0.15	19980328	260.22296	304.89664	2.95514	10.98797	0.1653298	2.5848685	18	1	44 days	0.62		D Williams	1998 HP ₁₉
1998 HQ ₁₉	14.5	0.15	19980308	236.08807	113.80236	210.35323	7.41971	0.1747675	2.2701669	33	1	54 days	0.77		Williams	1998 HQ ₁₉
1998 HS ₁₉	14.5	0.15	19980507	123.93388	328.11498	118.84401	6.30456	0.1222078	2.4426274	30	1	36 days	0.56		Williams	1998 HS ₁₉
1998 HX ₁₉	15.0	0.15	19980328	40.39239	130.27582	8.78251	6.24341	0.1483688	2.7734465	30	1	31 days	1.16		Williams	1998 HX ₁₉
1998 HC ₂₀	15.0	0.15	19980417	224.90092	332.57671	27.68452	2.21790	0.1764846	2.1535563	40	1	25 days	0.76		Williams	1998 HC ₂₀
1998 HH ₂₀	15.5	0.15	19980706	5.58945	16.16929	199.18255	14.88638	0.1269899	2.4585530	31	1	60 days	0.50	M-v 5	Williams	31821 1998 HH ₂₀
1998 HO ₂₀	15.5	0.15	19980417	16.14228	138.71722	28.22390	9.14477	0.2672585	2.8010732	17	1	3 days	0.57		E Williams	1998 HO ₂₀
1998 HP ₂₀	16.0	0.15	19980417	306.87322	116.83777	156.21829	2.99109	0.2246708	2.2972292	17	1	3 days	0.87		E Williams	1998 HP ₂₀
1998 HR ₂₀	14.5	0.15	19980417	61.30507	63.93703	53.56323	6.72374	0.1380476	2.4927791	19	1	3 days	0.83		E Williams	1998 HR ₂₀
1998 HC ₂₁	14.5	0.15	19980328	111.94740	11.55352	55.59615	4.51771	0.1055698	2.2357324	18	1	33 days	0.89		Williams	1998 HC ₂₁
1998 HA ₂₂	15.5	0.15	19980328	308.34735	43.45635	221.69335	4.58521	0.2090237	2.5464001	30	1	40 days	1.18		Williams	1998 HA ₂₂
1998 HC ₂₂	15.0	0.15	19980417	355.27111	353.61122	209.50420	5.34519	0.0805658	2.3794546	18	1	11 days	0.74		Williams	1998 HC ₂₂
1998 HD ₂₂	15.5	0.15	19980328	315.07208	237.94983	15.11948	13.82442	0.1731067	2.5936355	20	1	31 days	0.84		Williams	1998 HD ₂₂
1998 HJ ₂₂	17.0	0.15	19980328	356.69147	171.09490	24.46460	6.23243	0.1675656	2.3481511	22	1	31 days	1.26		Williams	1998 HJ ₂₂
1998 HK ₂₂	16.0	0.15	19980328	13.53586	148.05548	25.31202	6.17444	0.1419652	2.6016773	23	1	31 days	1.42		Williams	1998 HK ₂₂
1998 HS ₂₂	15.0	0.15	19980328	333.45111	193.22579	30.11985	12.08311	0.1185227	2.5997953	24	1	39 days	0.63		Williams	1998 HS ₂₂
1998 HD ₂₃	15.5	0.15	19980417	124.11376	24.59391	40.67903	7.70812	0.0819085	2.1447898	17	1	3 days	0.61		Williams	1998 HD ₂₃
1998 HF ₂₃	14.0	0.15	19980417	244.05227	293.76179	30.02137	11.14891	0.1399092	3.1277318	17	1	26 days	0.61		Williams	1998 HF ₂₃
1998 HK ₂₃	16.0	0.15	19980328	306.25472	209.84308	51.29112	3.84881	0.1535156	2.2289260	29	1	33 days	1.20		Williams	1998 HK ₂₃
1998 HL ₂₃	16.0	0.15	19980328	324.36658	50.21849	187.97473	11.61233	0.1347002	2.6087696	20	1	42 days	1.09		Williams	1998 HL ₂₃
1998 HN ₂₃	14.5	0.15	19980706	327.10070	204.86061	60.77570	14.64337	0.0643899	2.5836974	36	1	61 days	0.61	M-v 4	Williams	1998 HN ₂₃
1998 HO ₂₃	14.0	0.15	19980706	26.97888	35.76414	155.88854	8.41302	0.2001756	2.9398127	37	1	60 days	0.58	M-v 4	Williams	1998 HO ₂₃
1998 HQ ₂₃	15.5	0.15	19980507	312.52827	61.38442	230.00974	22.34006	0.1103140	2.4121599	27	1	26 days	0.55		Williams	1998 HQ ₂₃
1998 HR ₂₃	16.0	0.15	19980507	10.13630	1.80086	217.49929	1.58551	0.1533431	2.4573052	34	1	39 days	0.92		Williams	1998 HR ₂₃
1998 HS ₂₃	15.0	0.15	19980706	178.11075	321.78469	108.72135	0.69570	0.0727966	2.2790431	25	2	1992–1998	0.57	M-v 5	Williams	31772 1998 HS ₂₃
1998 HY ₂₃	16.0	0.15	19980417	314.73346	6.35017	250.08087	2.28877	0.1406157	2.2539063	14	1	10 days	0.60		Williams	1998 HY ₂₃
1998 HC ₂₄	15.0	0.15	19980507	78.25416	24.02756	114.88971	4.03773	0.0939546	2.5585146	27	1	33 days	0.96		Williams	1998 HC ₂₄
1998 HG ₂₄	15.5	0.15	19980507	330.49266	77.99241	186.05858	3.78510	0.1125364	2.1677348	37	1	33 days	0.54		Williams	1998 HG ₂₄
1998 HK ₂₄	16.0	0.15	19980417	189.81079	219.07699	179.96342	14.02967	0.1791668	2.5661780	7	1	9 days	0.22		Williams	1998 HK ₂₄
1998 HN ₂₄	16.5	0.15	19980507	353.10073	105.98532	132.88128	9.09642	0.1887020	3.0563330	10	1	34 days	0.24		Williams	1998 HN ₂₄
1998 HP ₂₄	13.0	0.15	19980507	281.77062	260.63071	66.71006	17.75909	0.1888195	3.1902945	49	1	33 days	0.54		Williams	1998 HP ₂₄
1998 HR ₂₄	15.5	0.15	19980507	297.83431	260.71135	48.55392	5.69152	0.2278866	2.1920704	30	1	31 days	0.68		Williams	1998 HR ₂₄
1998 HV ₂₄	15.5	0.15	19980328	29.82285	90.54192	65.44295	3.10952	0.0776546	2.5169143	22	1	38 days	0.98		Williams	1998 HV ₂₄
1998 HY ₂₄	17.0	0.15	19980328	343.74668	147.84327	67.57881	3.05622	0.1953455	2.3226304	33	1	42 days	1.29		Williams	1998 HY ₂₄
1998 HA ₂₆	16.0	0.15	19980328	327.66813	174.39804	57.40334	4.63367	0.1230813	2.3762833	17	1	44 days	1.29		Williams	1998 HA ₂₆
1998 HG ₂₆	15.0	0.15	19980507	244.84076	233.43284	127.57676	3.74027	0.2009102	2.3602806	18	1	34 days	0.90		Williams	1998 HG ₂₆
1998 HZ ₂₆	14.5	0.15	19980417	237.67396	264.76396	60.60040	5.44467	0.0865078	2.8068973	14	1	10 days	0.81		Williams	1998 HZ ₂₆
1998 HB ₂₇	17.0	0.15	19980417	25.42800	99.59343	59.62588	4.84543	0.2073047	2.5860180	9	1	12 days	0.14		Williams	1998 HB ₂₇
1998 HL ₂₇	15.0	0.15	19980507	8.49932	94.09555	124.91730	3.87864	0.0707398	2.3576985	26	1	34 days	0.57		Williams	1998 HL ₂₇
1998 HP ₂₇	17.5	0.15	19980417	332.46151	1.90001	230.92951	5.40097	0.1651426	2.6426904	8	1	11 days	0.34		Williams	1998 HP ₂₇
1998 HQ ₂₇	14.5	0.15	19980328	242.95977	93.70310	234.04954	4.93612	0.2295298	2.2854431	43	1	45 days	0.93		Williams	1998 HQ ₂₇

1998 HR ₂₇	15.5	0.15	19980328	219.21488	22.98908	319.47228	3.32281	0.1771897	2.2748667	20	1	31 days	1.11	Williams	1998 HR ₂₇
1998 HA ₂₈	14.0	0.15	19980328	212.86007	116.27097	231.72773	3.77056	0.1584114	3.1391272	17	1	31 days	1.08	Williams	1998 HA ₂₈
1998 HV ₂₈	16.0	0.15	19980417	178.01922	200.81541	176.29291	7.35990	0.1693501	2.3391570	9	1	6 days	0.31	E Williams	1998 HV ₂₈
1998 HC ₂₉	14.0	0.15	19980507	101.51374	358.56946	48.39032	13.31262	0.1178706	2.7792834	19	1	18 days	0.55	Williams	1998 HC ₂₉
1998 HD ₂₉	14.5	0.15	19980417	326.21611	30.88022	212.68247	11.77096	0.1244089	2.5973689	44	1	55 days	0.75	Williams	1998 HD ₂₉
1998 HE ₂₉	15.5	0.15	19980328	356.36554	192.92293	6.54325	7.57802	0.0855457	2.3549564	33	1	31 days	0.88	Williams	1998 HE ₂₉
1998 HY ₂₉	14.5	0.15	19980328	265.88910	237.20415	56.05318	2.14997	0.0447155	2.7497774	23	1	33 days	1.03	Williams	1998 HY ₂₉
1998 HZ ₂₉	15.0	0.15	19980328	59.71036	326.42404	166.64370	3.29959	0.0090681	2.6546904	16	1	31 days	1.10	Williams	1998 HZ ₂₉
1998 HE ₃₀	14.0	0.15	19980328	85.12443	317.04030	147.84148	4.98470	0.0258383	2.8013170	18	1	33 days	0.77	Williams	1998 HE ₃₀
1998 HF ₃₀	15.0	0.15	19980328	252.46954	196.27837	125.69037	3.41944	0.2117667	2.3774323	18	1	44 days	0.99	Williams	1998 HF ₃₀
1998 HL ₃₀	15.0	0.15	19980706	81.22791	65.67998	64.09456	5.43461	0.1120642	2.2538007	36	1	134 days	0.67	M-v 5 Williams	1998 HL ₃₀
1998 HN ₃₀	14.5	0.15	19980328	310.87471	142.49871	102.04285	3.11343	0.0205452	2.7161809	25	1	33 days	1.36	Williams	1998 HN ₃₀
1998 HO ₃₀	15.0	0.15	19980417	248.21545	254.85818	75.87413	3.39291	0.2060908	2.1393659	34	1	55 days	0.91	Williams	1998 HO ₃₀
1998 HQ ₃₁	15.0	0.15	19980417	288.15197	353.89173	305.55870	3.24121	0.2862254	2.7020327	15	1	11 days	0.74	Williams	1998 HQ ₃₁
1998 HR ₃₁	13.5	0.15	19980507	110.04448	345.22588	101.29080	9.82285	0.0449310	3.0466015	10	1	18 days	0.44	Williams	1998 HR ₃₁
1998 HT ₃₁	21.0	0.15	19980706	3.88353	80.46725	213.87389	6.80345	0.6957765	2.5333052	126	1	10 days	0.69	M-v 7 Williams	1998 HT ₃₁
1998 HU ₃₁	16.0	0.15	19980507	106.09921	246.72077	222.03300	20.93002	0.0922868	1.9286240	23	1	41 days	0.67	Williams	1998 HU ₃₁
1998 HV ₃₁	16.0	0.15	19980507	12.51809	348.14332	220.34747	24.92715	0.1693289	2.3178159	33	1	41 days	0.82	Williams	1998 HV ₃₁
1998 HX ₃₁	16.0	0.15	19980328	331.17836	214.56242	21.95250	4.51292	0.2125673	2.3662444	27	1	35 days	0.69	Williams	1998 HX ₃₁
1998 HY ₃₁	15.5	0.15	19980706	322.44860	32.63320	242.36820	2.60889	0.1256097	2.2320276	80	2	1997-1998	0.66	M-v 4 Williams	31772 1998 HY ₃₁
1998 HB ₃₂	14.0	0.15	19980328	1.51175	377.9637	214.69084	8.62787	0.1816913	3.1772367	29	1	38 days	0.59	Williams	1998 HB ₃₂
1998 HK ₃₂	15.5	0.15	19980328	3.43275	343.32585	205.81320	4.19827	0.1763074	2.5382825	28	1	31 days	1.10	Williams	1998 HK ₃₂
1998 HN ₃₂	15.0	0.15	19980328	270.38496	102.89637	195.37034	6.14007	0.1227839	2.3212096	33	1	31 days	0.95	Williams	1998 HN ₃₂
1998 HO ₃₂	13.5	0.15	19980706	77.17932	283.97745	195.78685	16.69091	0.1473996	3.1362182	50	3	1990-1998	0.78	M-v 3 Williams	31772 1998 HO ₃₂
1998 HQ ₃₂	15.5	0.15	19980328	7.87426	351.08491	192.88736	4.59069	0.1326469	2.4623426	27	1	33 days	0.96	Williams	1998 HQ ₃₂
1998 HS ₃₂	14.5	0.15	19980417	260.04649	121.67006	197.29545	2.20423	0.1746519	2.5627714	32	1	55 days	1.18	Williams	1998 HS ₃₂
1998 HU ₃₂	15.0	0.15	19980417	285.50941	253.85264	40.15830	2.55183	0.1605692	2.3114978	28	1	55 days	0.91	Williams	1998 HU ₃₂
1998 HM ₃₃	13.5	0.15	19980328	213.74638	343.66042	4.76115	11.96544	0.0665531	2.9840922	30	1	31 days	1.05	Williams	1998 HM ₃₃
1998 HO ₃₃	14.0	0.15	19980417	251.79585	116.63813	211.21891	23.45177	0.1931085	2.3282284	28	1	45 days	0.81	Williams	1998 HO ₃₃
1998 HR ₃₃	13.5	0.15	19980328	29.42892	278.07469	244.11515	4.57914	0.1044836	3.1796467	26	1	36 days	0.91	Williams	1998 HR ₃₃
1998 HU ₃₃	14.5	0.15	19980417	321.03568	244.18496	7.06750	4.64235	0.1139078	2.6096941	23	1	55 days	1.23	Williams	1998 HU ₃₃
1998 HY ₃₃	15.5	0.15	19980706	342.99125	53.49833	211.67742	8.65142	0.2493761	2.3482398	26	1	67 days	0.52	M-v 5 Williams	1998 HY ₃₃
1998 HE ₃₄	14.0	0.15	19980328	312.49086	212.42714	36.15138	2.65719	0.0506763	2.9519637	17	1	31 days	1.20	Williams	1998 HE ₃₄
1998 HF ₃₄	13.5	0.15	19980328	348.04388	184.64929	24.60982	10.51281	0.0193606	2.9769040	20	1	30 days	0.86	Williams	1998 HF ₃₄
1998 HL ₃₄	15.5	0.15	19980417	268.05925	257.13826	53.02808	4.09042	0.1557639	2.2561144	22	1	55 days	1.00	Williams	1998 HL ₃₄
1998 HM ₃₄	14.0	0.15	19980328	83.76306	287.20032	182.18144	10.90428	0.0202368	3.1807807	18	1	33 days	1.05	Williams	1998 HM ₃₄
1998 HQ ₃₄	14.5	0.15	19980417	196.63422	196.18097	167.51101	6.36685	0.0290901	2.7443459	20	1	58 days	0.87	Williams	1998 HQ ₃₄
1998 HR ₃₄	14.5	0.15	19980328	249.10267	220.63802	106.67415	3.19168	0.2205800	2.3613421	19	1	31 days	1.01	Williams	1998 HR ₃₄
1998 HT ₃₄	15.0	0.15	19980417	278.32146	143.44800	157.37820	5.57003	0.1696277	2.3150154	22	1	55 days	1.31	Williams	1998 HT ₃₄
1998 HK ₃₅	13.0	0.15	19980417	51.94951	327.32118	175.57628	10.60438	0.0511184	3.0056627	28	1	55 days	0.76	Williams	1998 HK ₃₅
1998 HP ₃₅	14.0	0.15	19980328	167.70199	209.09315	177.68344	9.43730	0.0883777	2.5383928	19	1	31 days	0.71	Williams	1998 HP ₃₅
1998 HQ ₃₅	15.0	0.15	19980328	290.46404	92.84395	185.05899	12.39547	0.1094388	2.5123118	17	1	31 days	1.00	Williams	1998 HQ ₃₅
1998 HW ₃₅	14.0	0.15	19980417	118.15575	306.24152	130.13928	2.38296	0.0611624	2.6791025	24	1	55 days	0.89	Williams	1998 HW ₃₅
1998 HY ₃₅	14.5	0.15	19980417	294.88745	214.52593	66.67434	2.90449	0.1313602	2.2894546	31	1	52 days	0.61	Williams	1998 HY ₃₅
1998 HA ₃₆	14.0	0.15	19980417	127.74487	12.68919	52.53605	4.95455	0.0881336	2.7338841	28	1	55 days	0.72	Williams	1998 HA ₃₆
1998 HR ₃₆	14.0	0.15	19980328	19.17070	139.24060	30.22397	9.30138	0.1695680	3.1505124	24	1	31 days	0.66	Williams	1998 HR ₃₆
1998 HT ₃₆	15.0	0.15	19980328	295.16068	241.44197	26.76446	8.93102	0.0578153	2.4491079	24	1	31 days	1.09	Williams	1998 HT ₃₆
1998 HV ₃₆	15.5	0.15	19980417	339.39064	32.83073	202.35426	6.51730	0.2096336	2.5272172	35	1	55 days	1.06	Williams	1998 HV ₃₆
1998 HZ ₃₆	14.5	0.15	19980417	282.68369	277.20789	25.91199	5.02954	0.1963056	2.4720000	18	1	5 days	4.04	E Williams	1998 HZ ₃₆
1998 HM ₃₇	16.0	0.15	19980328	331.62323	336.52820	258.41237	2.73373	0.1517069	2.3362782	33	1	39 days	0.88	Williams	1998 HM ₃₇
1998 HN ₃₇	14.5	0.15	19980328	77.48421	92.41397	13.23755	13.01258	0.1381346	2.6959096	27	1	31 days	1.09	Williams	1998 HN ₃₇
1998 HP ₃₇	16.5	0.15	19980328	355.03155	249.30705	314.08872	1.81551	0.1516891	2.3715492	22	1	36 days	1.21	Williams	1998 HP ₃₇
1998 HQ ₃₇	14.0	0.15	19980417	95.18913	79.13023	7.19094	7.31281	0.2048743	2.3219548	18	1	5 days	0.89	E Williams	1998 HQ ₃₇

1998 HR ₃₇	14.0	0.15	19980417	116.53637	97.76095	334.55027	3.43650	0.1611204	2.4451119	31	1	52 days	1.05		Williams	1998 HR ₃₇
1998 HT ₃₇	13.0	0.15	19980328	91.40631	94.65426	1.49290	9.31867	0.1083113	3.2283941	37	1	34 days	0.97		Williams	1998 HT ₃₇
1998 HY ₃₇	15.5	0.15	19980417	287.15308	25.53869	270.13880	2.75359	0.1616247	2.1700462	32	1	52 days	0.81		Williams	1998 HY ₃₇
1998 HZ ₃₇	15.0	0.15	19980417	255.99210	40.03428	273.62332	2.89668	0.0453430	2.1886491	17	1	5 days	0.98	E	Williams	1998 HZ ₃₇
1998 HE ₃₈	15.0	0.15	19980417	310.15780	34.41071	238.31610	3.11101	0.1788913	2.2530613	18	1	5 days	0.57	E	Williams	1998 HE ₃₈
1998 HG ₃₈	14.0	0.15	19980417	90.91460	91.48250	19.21072	15.57341	0.0286916	2.5610640	42	1	52 days	0.67		Williams	1998 HG ₃₈
1998 HM ₃₈	15.5	0.15	19980417	330.78630	30.00038	215.22663	3.69699	0.1639897	2.3067394	17	1	5 days	0.55	E	Williams	1998 HM ₃₈
1998 HN ₃₈	14.0	0.15	19980417	127.10561	56.26976	16.34648	4.76117	0.0589572	2.2732688	21	1	5 days	0.99	E	Williams	1998 HN ₃₈
1998 HG ₃₉	13.5	0.15	19980417	92.41280	71.88789	25.28127	18.29766	0.1258279	2.6799246	13	1	5 days	0.56	E	Williams	1998 HG ₃₉
1998 HJ ₃₉	15.0	0.15	19980417	327.65760	60.16093	189.42056	1.78686	0.1737800	2.4112875	32	1	55 days	0.85		Williams	1998 HJ ₃₉
1998 HK ₃₉	14.0	0.15	19980417	304.92024	235.12328	30.79329	5.09957	0.0705509	2.7351270	33	1	55 days	0.51		Williams	1998 HK ₃₉
1998 HN ₃₉	15.0	0.15	19980417	49.32694	93.79413	46.17061	1.69455	0.1550973	2.3975999	13	1	5 days	0.61	E	Williams	1998 HN ₃₉
1998 HO ₃₉	14.0	0.15	19980417	56.22872	106.11942	27.12622	13.65437	0.1406641	3.0877878	24	1	52 days	0.92		Williams	1998 HO ₃₉
1998 HD ₄₀	14.5	0.15	19980706	17.82432	168.30846	35.32655	8.99251	0.1581990	2.6740182	36	1	64 days	0.51	M-v 4	Williams	1998 HD ₄₀
1998 HE ₄₀	12.5	0.15	19980417	101.60050	59.36697	33.13455	9.91183	0.0778996	3.1705166	26	1	52 days	0.99		Williams	1998 HE ₄₀
1998 HJ ₄₁	18.0	0.15	19980706	310.90330	120.12983	211.92788	38.86995	0.1248644	1.3631905	74	1	40 days	0.59	M-v 6	Williams	1998 HJ ₄₁
1998 HN ₄₁	15.5	0.15	19980417	30.47430	119.30549	50.18747	13.13985	0.1145905	2.7227190	17	1	13 days	0.77		Williams	1998 HN ₄₁
1998 HT ₄₁	18.0	0.15	19980417	19.18447	28.92270	147.83621	2.89630	0.0794998	2.1873592	9	1	9 days	0.27		Williams	1998 HT ₄₁
1998 HY ₄₁	16.5	0.15	19980417	349.68694	154.70558	67.53397	5.93953	0.1687503	2.5621957	16	1	10 days	0.89		Williams	1998 HY ₄₁
1998 HA ₄₂	14.5	0.15	19980417	307.52070	93.67710	181.46853	9.63016	0.1421157	3.1279468	15	1	10 days	0.76		Williams	1998 HA ₄₂
1998 HC ₄₂	16.0	0.15	19980417	253.14079	267.52662	67.18736	7.19198	0.1970981	2.2264764	15	1	10 days	0.97		Williams	1998 HC ₄₂
1998 HE ₄₂	15.0	0.15	19980328	46.91818	347.72066	150.55757	4.86785	0.1807293	2.5971557	23	1	39 days	0.50		Williams	1998 HE ₄₂
1998 HM ₄₂	16.5	0.15	19980507	278.67459	137.80342	169.26130	5.03158	0.2095673	2.2518933	16	1	28 days	0.28		Williams	1998 HM ₄₂
1998 HO ₄₂	14.0	0.15	19980417	80.61205	5.86180	99.31866	10.02337	0.1106712	2.7860436	24	1	53 days	0.73		Williams	1998 HO ₄₂
1998 HP ₄₂	13.0	0.15	19980417	135.14178	339.96046	69.72062	14.23031	0.1844010	2.5957254	16	1	23 days	0.48		Williams	1998 HP ₄₂
1998 HQ ₄₂	13.5	0.15	19980507	318.77088	201.90671	64.55949	21.81558	0.0306399	3.1964690	24	1	31 days	0.64		Williams	1998 HQ ₄₂
1998 HA ₄₃	14.5	0.15	19980417	324.67639	68.03884	183.26498	9.09686	0.1102381	2.7848541	27	1	25 days	0.84		Williams	1998 HA ₄₃
1998 HH ₄₃	16.0	0.15	19980706	344.66825	157.22374	118.65978	6.03786	0.2379932	2.3414109	29	1	120 days	0.62	M-v 4	Williams	1998 HH ₄₃
1998 HK ₄₃	16.0	0.15	19980417	329.53426	78.48677	182.88950	6.32541	0.2856305	2.2552279	27	1	52 days	0.81		Williams	1998 HK ₄₃
1998 HL ₄₃	13.0	0.15	19980507	118.64438	251.67339	201.82682	9.69295	0.0889015	2.9962535	34	1	37 days	0.68		Williams	1998 HL ₄₃
1998 HO ₄₃	14.5	0.15	19980706	300.87282	117.74822	180.76006	6.59505	0.1234064	2.3414051	34	1	75 days	0.54	M-v 4	Williams	1998 HO ₄₃
1998 HU ₄₃	14.0	0.15	19980417	139.52630	16.99485	38.01339	7.22130	0.1372981	2.1946885	33	1	55 days	0.51		Williams	1998 HU ₄₃
1998 HH ₄₄	16.0	0.15	19980417	348.33822	187.03875	35.37638	6.55149	0.1926472	2.3837339	33	1	55 days	0.82		Williams	1998 HH ₄₄
1998 HP ₄₄	14.5	0.15	19980417	46.59880	106.66355	33.30001	4.32827	0.1920396	2.5319675	18	1	5 days	0.59	E	Williams	1998 HP ₄₄
1998 HH ₄₅	13.5	0.15	19980417	167.50271	103.75256	292.98221	3.63493	0.0374770	2.7576754	32	1	52 days	0.83		Williams	1998 HH ₄₅
1998 HL ₄₅	14.0	0.15	19980328	53.38590	175.78894	329.08940	3.90841	0.0294526	2.7615433	22	1	36 days	0.70		Williams	1998 HL ₄₅
1998 HQ ₄₅	14.0	0.15	19980328	244.59391	68.26967	250.55235	5.47909	0.0176398	2.7645241	23	1	36 days	0.68		Williams	1998 HQ ₄₅
1998 HR ₄₅	16.0	0.15	19980328	342.07523	310.93861	270.32193	3.46706	0.1053062	2.2582083	22	1	36 days	0.92		Williams	1998 HR ₄₅
1998 HT ₄₅	15.0	0.15	19980417	236.57528	343.76410	348.55007	4.27287	0.0303575	2.2624473	17	1	5 days	0.99	E	Williams	1998 HT ₄₅
1998 HQ ₄₆	13.0	0.15	19980417	97.52863	262.45785	197.07617	16.40266	0.0752528	3.0421844	18	1	2 days		E	Williams	1998 HQ ₄₆
1998 HT ₄₆	14.0	0.15	19980417	301.98594	158.03152	109.40030	2.60045	0.0450104	2.9613476	21	1	30 days	0.67		Williams	1998 HT ₄₆
1998 HQ ₄₇	13.5	0.15	19980417	76.28996	69.16124	41.73189	22.89582	0.1334391	2.6404047	20	1	4 days	0.49		Williams	1998 HQ ₄₇
1998 HR ₄₇	13.0	0.15	19980417	249.47997	171.96185	152.28205	9.84989	0.0958684	3.0417308	20	1	4 days	0.83	E	Williams	1998 HR ₄₇
1998 HT ₄₇	12.5	0.15	19980417	137.49013	352.15895	57.50132	10.65397	0.2648271	2.6593455	20	1	4 days	1.19	E	Williams	1998 HT ₄₇
1998 HU ₄₇	13.5	0.15	19980417	83.53565	57.99452	56.01326	10.74775	0.0530818	2.6957380	30	1	53 days	0.74		Williams	1998 HU ₄₇
1998 HG ₄₈	14.5	0.15	19980417	265.51895	237.93502	87.90944	6.27797	0.2515189	2.1873407	19	1	4 days	0.47		Williams	1998 HG ₄₈
1998 HH ₄₉	21.5	0.15	19980706	352.70163	287.51458	23.76119	8.38714	0.5014581	1.5490563	12	1	32 days	0.58	M-v 7	Marsden	1998 HH ₄₉
1998 HK ₄₉	22.5	0.15	19980417	37.59454	81.46420	57.36286	7.92408	0.3426972	1.4022852	15	1	5 days	0.58		Marsden	1998 HK ₄₉
1998 HL ₄₉	17.5	0.15	19980706	101.55513	238.65164	206.54303	11.04116	0.6360612	1.7431651	25	1	30 days	0.42	M-v 7	Williams	1998 HL ₄₉
1998 HN ₄₉	15.5	0.15	19980507	344.42227	35.37716	215.78621	3.45644	0.1147748	2.3029801	42	1	39 days	0.46		Williams	1998 HN ₄₉
1998 HO ₄₉	15.0	0.15	19980507	23.98196	62.16237	136.97216	7.01730	0.0865771	2.4100568	24	1	31 days	0.57		Williams	1998 HO ₄₉
1998 HP ₄₉	16.5	0.15	19980507	201.96443	147.74368	237.29780	20.13254	0.1102407	1.7148461	16	1	24 days	0.68		Williams	1998 HP ₄₉
1998 HK ₅₀	15.0	0.15	19980417	296.63623	123.58852	177.63403	12.42420	0.1463275	2.7989560	13	1	10 days	1.31		Williams	1998 HK ₅₀

1998 HT ₅₀	14.5	0.15	19980706	81.36634	110.79599	18.86384	13.19123	0.1296165	2.6969597	30	1	62 days	0.60	M-v 5	Williams	1998 HT ₅₀
1998 HU ₅₀	15.5	0.15	19980417	310.87568	20.12884	251.47985	3.11601	0.1865247	2.3043553	16	1	10 days	0.51	D	Williams	1998 HU ₅₀
1998 HW ₅₀	14.5	0.15	19980417	268.48261	329.31803	350.41950	4.04663	0.1935995	2.2470086	31	1	52 days	1.09		Williams	1998 HW ₅₀
1998 HX ₅₀	15.0	0.15	19980328	271.12986	5.03280	306.57010	3.74742	0.1887869	2.2369736	24	1	36 days	0.92		Williams	1998 HX ₅₀
1998 HZ ₅₀	14.5	0.15	19980507	75.62630	253.38211	226.43606	6.74166	0.1763458	2.8007741	19	1	42 days	0.74		Williams	1998 HZ ₅₀
1998 HC ₅₁	15.0	0.15	19980417	289.15230	72.62421	219.38167	12.22568	0.0825841	2.6120380	16	1	9 days	0.74		Williams	1998 HC ₅₁
1998 HD ₅₁	16.0	0.15	19980417	74.06438	60.85535	58.88869	0.23832	0.1864288	2.3323922	19	1	10 days	0.87		Williams	1998 HD ₅₁
1998 HE ₅₁	15.5	0.15	19980507	282.54096	105.66983	213.44002	3.90832	0.1758754	2.1722906	27	1	31 days	0.61		Williams	1998 HE ₅₁
1998 HF ₅₁	14.5	0.15	19980507	164.12014	5.90447	51.30534	3.85007	0.0419599	2.3578088	33	1	33 days	0.90		Williams	1998 HF ₅₁
1998 HH ₅₁	15.0	0.15	19980507	74.94683	70.67519	66.96292	3.95750	0.1180565	2.2785889	29	1	32 days	0.54		Williams	1998 HH ₅₁
1998 HJ ₅₁	14.0	0.15	19980507	236.24404	251.70202	103.50967	6.59155	0.1439328	2.3844818	36	1	42 days	0.80		Williams	1998 HJ ₅₁
1998 HK ₅₁	14.5	0.15	19980507	1.97973	62.51198	156.53660	7.59931	0.1462627	3.1382362	23	1	42 days	0.55		Williams	1998 HK ₅₁
1998 HN ₅₁	15.0	0.15	19980507	115.25904	285.45396	173.84772	4.62072	0.0659827	2.3279274	26	1	33 days	0.65		Williams	1998 HN ₅₁
1998 HO ₅₁	15.5	0.15	19980507	316.59742	174.37997	98.82793	3.74165	0.0972622	2.2575227	32	1	36 days	0.67		Williams	1998 HO ₅₁
1998 HQ ₅₁	14.0	0.15	19980328	266.57069	134.54873	179.47103	3.01715	0.2506400	2.6717782	36	1	40 days	0.97		Williams	1998 HQ ₅₁
1998 HR ₅₁	15.5	0.15	19980417	321.42171	166.86062	82.19999	2.89166	0.1212560	2.1665121	34	1	55 days	0.75		Williams	1998 HR ₅₁
1998 HS ₅₁	14.5	0.15	19980507	303.09957	240.73466	47.03853	7.05441	0.1327558	2.2628302	22	1	32 days	0.68		Williams	1998 HS ₅₁
1998 HT ₅₁	14.5	0.15	19980507	277.17147	250.27944	65.99145	3.86307	0.1489035	2.2907277	24	1	34 days	0.74		Williams	1998 HT ₅₁
1998 HU ₅₁	14.5	0.15	19980507	292.62187	248.63062	59.34616	5.17845	0.2105646	2.3623854	24	1	34 days	0.61		Williams	1998 HU ₅₁
1998 HV ₅₁	14.0	0.15	19980417	68.33277	293.75956	197.67452	3.20384	0.1103356	2.6845219	16	1	10 days	0.36		Williams	1998 HV ₅₁
1998 HW ₅₁	15.5	0.15	19980417	33.87908	111.09484	52.55321	6.17511	0.1749404	2.4259646	16	1	10 days	0.58		Williams	1998 HW ₅₁
1998 HY ₅₁	15.5	0.15	19980417	312.90878	225.53806	57.69163	5.09817	0.2413504	2.3543535	26	1	25 days	1.09		Williams	1998 HY ₅₁
1998 HZ ₅₁	14.0	0.15	19980417	57.69589	320.22164	188.46742	6.29049	0.0664582	2.7940240	16	1	10 days	0.62		Williams	1998 HZ ₅₁
1998 HA ₅₂	16.5	0.15	19980417	331.44128	51.82046	202.27859	4.93927	0.1936313	2.3411398	16	1	10 days	0.61		Williams	1998 HA ₅₂
1998 HB ₅₂	14.0	0.15	19980507	307.79864	70.44546	215.86468	21.41883	0.1688403	3.1941627	24	1	32 days	0.50		Williams	1998 HB ₅₂
1998 HD ₅₂	16.0	0.15	19980417	312.76473	123.50762	156.26869	0.66416	0.2041826	2.3775354	16	1	10 days	0.66		Williams	1998 HD ₅₂
1998 HE ₅₂	14.5	0.15	19980417	294.46303	48.50850	238.62771	0.99512	0.0926382	2.9129148	16	1	10 days	0.75		Williams	1998 HE ₅₂
1998 HH ₅₂	14.5	0.15	19980417	224.68955	330.48226	35.69584	7.94819	0.2841885	2.1610756	16	1	10 days	0.43		Williams	1998 HH ₅₂
1998 HJ ₅₂	14.5	0.15	19980507	108.06629	59.39684	33.13129	7.78870	0.1625832	2.5688389	31	1	40 days	0.76		Williams	1998 HJ ₅₂
1998 HK ₅₂	14.0	0.15	19980507	24.68203	132.31806	64.83601	10.72153	0.1711196	3.1400855	37	1	29 days	0.57		Williams	1998 HK ₅₂
1998 HL ₅₂	13.5	0.15	19980507	332.70596	195.98759	62.50654	14.41317	0.0192277	2.5740892	29	1	32 days	0.70		Williams	1998 HL ₅₂
1998 HO ₅₂	15.0	0.15	19980507	306.20607	222.61078	74.15911	4.31200	0.1811360	2.2100277	17	1	24 days	1.12		Williams	1998 HO ₅₂
1998 HP ₅₂	15.5	0.15	19980507	340.23741	131.35242	123.10180	2.26434	0.2032195	2.2827680	30	1	32 days	1.00		Williams	1998 HP ₅₂
1998 HP ₅₃	14.5	0.15	19980328	280.21732	146.08215	140.20458	2.81633	0.0720890	2.9321526	19	1	31 days	1.20		Williams	1998 HP ₅₃
1998 HU ₅₃	15.5	0.15	19980328	344.82684	92.39427	131.87871	3.10508	0.3027393	3.0217491	19	1	31 days	1.15		Williams	1998 HU ₅₃
1998 HX ₅₃	14.5	0.15	19980328	26.95335	342.33982	186.52399	11.09012	0.0500101	2.9847149	19	1	31 days	1.09		Williams	1998 HX ₅₃
1998 HR ₆₃	13.5	0.15	19980417	242.34420	246.83990	87.39599	4.37775	0.0936589	2.7779098	13	1	29 days	0.39		Williams	1998 HR ₆₃
1998 HO ₆₈	13.0	0.15	19980507	193.55751	88.60570	294.28790	3.03180	0.0986014	3.0816291	16	1	36 days	0.49		Williams	1998 HO ₆₈
1998 HQ ₆₈	14.5	0.15	19980417	198.83583	139.55661	236.53040	6.29076	0.1252032	2.3502205	18	1	29 days	0.57		Williams	1998 HQ ₆₈
1998 HO ₇₂	15.5	0.15	19980417	339.14334	318.44258	279.45656	0.93344	0.1608730	2.5115218	13	1	25 days	1.82		Williams	1998 HO ₇₂
1998 HZ ₇₂	15.0	0.15	19980507	46.71035	273.46919	248.88492	5.35342	0.0623168	3.0172281	13	1	35 days	0.96		Williams	1998 HZ ₇₂
1998 HV ₇₈	14.5	0.15	19980417	241.73035	101.43908	253.06232	4.78535	0.2913102	2.2431775	15	1	27 days	0.44		Williams	1998 HV ₇₈
1998 HW ₇₈	13.5	0.15	19980507	159.96563	178.71830	233.80250	9.13762	0.0812319	2.9859088	19	1	41 days	0.78		Williams	1998 HW ₇₈
1998 HL ₇₉	15.5	0.15	19980417	75.09638	248.77739	244.03266	4.70828	0.0327785	2.2014256	19	1	8 days	0.70		Williams	1998 HL ₇₉
1998 HP ₇₉	15.7	0.15	19980417	302.64113	310.70393	332.13956	2.89098	0.1247254	2.5298815	11	1	6 days	0.68		Nakano	1998 HP ₇₉
1998 HT ₇₉	15.0	0.15	19980507	333.85072	309.35545	295.84988	2.34867	0.0367717	2.7928892	18	1	40 days	0.76		Williams	1998 HT ₇₉
1998 HY ₇₉	14.5	0.15	19980507	275.16451	338.85846	344.97655	2.99239	0.1882777	2.6363370	18	1	39 days	0.80		Williams	1998 HY ₇₉
1998 HH ₈₀	14.5	0.15	19980507	233.93085	338.01598	20.58404	5.84595	0.1883916	2.2966315	18	1	36 days	0.45		Williams	1998 HH ₈₀
1998 HM ₈₀	16.5	0.15	19980507	36.49532	134.42433	23.96079	7.04057	0.2557717	2.6325066	18	1	39 days	0.72		Williams	1998 HM ₈₀
1998 HN ₈₃	17.0	0.15	19980417	334.53346	193.19000	57.78123	7.72312	0.2350309	2.2864555	14	1	2 days	1.26	E	Williams	1998 HN ₈₃
1998 HO ₈₃	14.5	0.15	19980417	331.47691	58.28012	197.20296	16.79193	0.2124513	3.0096178	20	1	2 days	0.67	E	Williams	1998 HO ₈₃
1998 HQ ₈₃	15.5	0.15	19980417	337.77018	191.16679	51.26597	12.77156	0.1768719	2.5661307	20	1	2 days	1.22	E	Williams	1998 HQ ₈₃
1998 HR ₈₃	15.0	0.15	19980417	305.34038	226.26050	69.85709	7.60165	0.2732882	2.6386031	19	1	2 days	1.00	E	Williams	1998 HR ₈₃

1998 HS ₈₃	15.5	0.15	19980417	7.23903	33.98263	165.16656	6.30905	0.2445110	3.0509799	22	1	3 days	1.13	E	Williams	1998 HS ₈₃
1998 HX ₈₅	15.5	0.15	19980507	16.71623	179.01656	18.43876	2.85923	0.1150031	2.3753984	20	1	35 days	0.54		Williams	1998 HX ₈₅
1998 HH ₈₆	16.5	0.15	19980507	325.34059	43.30325	216.91010	6.00115	0.0907999	2.2311150	21	1	31 days	1.05		Williams	1998 HH ₈₆
1998 HL ₈₆	15.0	0.15	19980507	217.51514	342.03781	24.83911	8.16610	0.1006471	2.4058304	19	1	32 days	0.94		Williams	1998 HL ₈₆
1998 HB ₈₇	15.5	0.15	19980507	307.99212	16.86645	278.62067	2.20085	0.2296306	2.3153676	21	1	40 days	0.65		Williams	1998 HB ₈₇
1998 HE ₈₇	15.5	0.15	19980507	222.33385	102.46475	257.85218	3.49006	0.0561791	2.2428091	18	1	40 days	0.70		Williams	1998 HE ₈₇
1998 HH ₈₇	15.0	0.15	19980507	260.79527	88.86734	244.64778	4.97165	0.1465829	2.4719056	14	1	36 days	0.67		Williams	1998 HH ₈₇
1998 HV ₈₇	13.5	0.15	19980507	282.86001	83.92410	231.45290	11.83008	0.1739420	3.0202618	23	1	40 days	0.74		Williams	1998 HV ₈₇
1998 HZ ₈₇	15.0	0.15	19980507	242.45363	119.32832	229.61390	13.76529	0.1319769	2.5920099	20	1	40 days	1.00		Williams	1998 HZ ₈₇
1998 HB ₈₈	15.0	0.15	19980507	315.77322	55.38652	234.41014	8.27603	0.2519910	2.4516352	29	1	41 days	0.38		Williams	1998 HB ₈₈
1998 HD ₈₈	15.0	0.15	19980507	38.39813	296.33431	237.10228	5.76844	0.1016098	2.2541764	27	1	41 days	0.68		Williams	1998 HD ₈₈
1998 HP ₈₈	15.0	0.15	19980507	291.51954	279.19803	28.88950	7.37339	0.1754514	2.2890660	23	1	32 days	0.30		Williams	1998 HP ₈₈
1998 HV ₈₈	15.5	0.15	19980507	299.35074	254.10628	34.67726	8.79114	0.0896866	2.7472713	20	1	40 days	1.17		Williams	1998 HV ₈₈
1998 HA ₈₉	15.5	0.15	19980507	303.41892	254.94859	37.01827	12.69772	0.1611486	2.5327030	30	1	40 days	1.41		Williams	1998 HA ₈₉
1998 HJ ₈₉	17.5	0.15	19980507	354.42389	25.96799	205.37630	6.05702	0.2438412	2.1237801	26	1	33 days	0.87		Williams	1998 HJ ₈₉
1998 HQ ₈₉	14.5	0.15	19980417	326.45425	101.18739	168.48984	6.76866	0.2898763	3.1805784	13	1	2 days	1.11	E	Williams	1998 HQ ₈₉
1998 HO ₉₀	13.0	0.15	19980507	234.48540	146.40296	202.30525	21.31321	0.0587377	3.1793313	25	1	33 days	0.73		Williams	1998 HO ₉₀
1998 HV ₉₀	15.0	0.15	19980706	52.88231	103.50034	71.11288	7.16688	0.0777454	2.4215875	24	1	70 days	0.68	M-v 5	Williams	1998 HV ₉₀
1998 HL ₉₁	14.5	0.15	19980507	281.23497	136.71025	177.31025	6.85599	0.1348827	2.3482964	26	1	36 days	0.47		Williams	1998 HL ₉₁
1998 HR ₉₁	15.0	0.15	19980507	59.65007	6.56705	138.00276	2.98643	0.1495440	2.3753908	24	1	33 days	1.01		Williams	1998 HR ₉₁
1998 HX ₉₁	14.0	0.15	19980507	184.74044	227.18278	168.68279	5.08337	0.0756257	2.4168657	22	1	33 days	0.88		Williams	1998 HX ₉₁
1998 HB ₉₂	16.0	0.15	19980507	311.97120	88.47834	193.34758	6.17335	0.1418115	2.2754865	24	1	33 days	1.04		Williams	1998 HB ₉₂
1998 HD ₉₂	15.0	0.15	19980507	343.83999	124.90965	117.17217	2.24156	0.1400063	2.5216544	26	1	33 days	0.63		Williams	1998 HD ₉₂
1998 HM ₉₂	14.5	0.15	19980507	42.72259	328.23488	206.27099	13.24607	0.0332807	2.6091910	26	1	33 days	0.75		Williams	1998 HM ₉₂
1998 HQ ₉₂	13.5	0.15	19980507	354.18274	170.57414	56.23583	1.69797	0.1103832	3.2315935	24	1	31 days	0.74		Williams	1998 HQ ₉₂
1998 HV ₉₂	17.0	0.15	19980507	337.65871	216.18459	33.32426	3.86734	0.1245487	2.2730079	21	1	40 days	0.98		Williams	1998 HV ₉₂
1998 HX ₉₂	16.0	0.15	19980507	107.21396	79.88132	19.51843	3.33010	0.1288755	2.2307610	18	1	40 days	0.94		Williams	1998 HX ₉₂
1998 HZ ₉₂	15.5	0.15	19980507	271.98679	329.58763	343.28316	1.29997	0.0390879	2.2674369	27	1	40 days	0.78		Williams	1998 HZ ₉₂
1998 HY ₉₃	13.0	0.15	19980507	309.09810	275.31763	7.10528	5.02308	0.1109791	3.1903362	23	1	33 days	0.81		Williams	1998 HY ₉₃
1998 HB ₉₄	14.5	0.15	19980507	358.29336	359.14179	225.02118	12.58890	0.1328164	2.5561729	27	1	33 days	0.96		Williams	1998 HB ₉₄
1998 HJ ₉₄	12.5	0.15	19980417	131.87745	214.91717	222.99223	15.67676	0.0917554	3.1734374	20	1	29 days	0.65		Marsden	1998 HJ ₉₄
1998 HK ₉₄	14.5	0.15	19980507	247.16745	102.68819	247.67889	1.71287	0.1780260	2.3923015	22	1	33 days	0.96		Williams	1998 HK ₉₄
1998 HR ₉₄	14.0	0.15	19980507	317.70685	59.42586	216.90200	12.26833	0.1491260	2.6795262	31	1	33 days	0.62		Williams	1998 HR ₉₄
1998 HV ₉₄	15.5	0.15	19980507	2.71511	5.03603	212.78365	12.64492	0.1380630	2.7070127	28	1	33 days	1.10		Williams	1998 HV ₉₄
1998 HB ₉₅	14.0	0.15	19980507	291.36291	217.69790	79.72155	3.24066	0.0761948	2.9306411	30	1	37 days	0.67		Williams	1998 HB ₉₅
1998 HC ₉₅	15.0	0.15	19980507	111.71286	7.67106	92.64678	3.50619	0.0797639	2.2141626	22	1	33 days	0.94		Williams	1998 HC ₉₅
1998 HS ₉₅	15.0	0.15	19980507	44.30585	5.51374	158.50159	2.79393	0.1388398	2.4343578	31	1	37 days	0.70		Williams	1998 HS ₉₅
1998 HA ₉₆	14.5	0.15	19980507	258.26945	139.76505	198.76143	14.59174	0.1563325	2.6079679	17	1	33 days	1.11		Williams	1998 HA ₉₆
1998 HC ₉₆	14.5	0.15	19980507	146.09916	243.70602	183.58328	8.08144	0.1241306	2.2734576	26	1	33 days	0.79		Williams	1998 HC ₉₆
1998 HG ₉₆	13.0	0.15	19980507	284.49510	109.81436	200.86651	18.29156	0.1226505	3.2412227	32	1	42 days	0.67		Williams	1998 HG ₉₆
1998 HH ₉₆	15.5	0.15	19980507	341.37989	162.58549	86.00927	5.18203	0.1800957	2.5412166	22	1	33 days	0.92		Williams	1998 HH ₉₆
1998 HL ₉₆	15.5	0.15	19980507	33.28681	102.03937	79.89839	5.11739	0.0979229	2.2731138	31	1	37 days	0.61		Williams	1998 HL ₉₆
1998 HO ₉₆	14.5	0.15	19980507	72.14303	62.98265	64.62485	6.85793	0.1862554	2.5558821	23	1	33 days	0.71		Williams	1998 HO ₉₆
1998 HS ₉₆	14.5	0.15	19980507	311.51869	95.70963	184.45957	5.87174	0.1026768	2.4532078	34	1	42 days	0.56		Williams	1998 HS ₉₆
1998 HV ₉₆	15.5	0.15	19980507	357.43990	173.68412	51.18567	8.27863	0.0601335	2.2975747	23	1	33 days	0.64		Williams	1998 HV ₉₆
1998 HY ₉₆	15.0	0.15	19980507	55.37309	343.28385	168.91175	2.26403	0.1333194	2.4365852	24	1	33 days	0.89		Williams	1998 HY ₉₆
1998 HZ ₉₆	14.0	0.15	19980507	305.69100	235.84477	43.82251	15.01177	0.0464385	2.6392012	31	1	33 days	0.61		Williams	1998 HZ ₉₆
1998 HB ₉₇	14.5	0.15	19980507	286.42778	109.55178	187.71596	3.41593	0.0202306	2.7716475	22	1	33 days	0.98		Williams	1998 HB ₉₇
1998 HD ₉₇	14.5	0.15	19980507	317.32453	217.72538	55.46386	3.35964	0.1037849	2.6771689	23	1	33 days	0.80		Williams	1998 HD ₉₇
1998 HG ₉₇	13.5	0.15	19980507	285.71772	262.53220	52.47377	5.97270	0.1654386	3.1359634	26	1	37 days	1.11		Williams	1998 HG ₉₇
1998 HH ₉₇	14.0	0.15	19980507	149.13832	212.18554	212.82572	8.32193	0.1552018	2.5721840	20	1	33 days	0.73		Williams	1998 HH ₉₇
1998 HO ₉₇	15.5	0.15	19980507	352.18348	228.30007	5.76943	2.32736	0.1618883	2.3607084	25	1	33 days	0.64		Williams	1998 HO ₉₇
1998 HQ ₉₇	13.5	0.15	19980507	233.31281	346.16844	9.54072	2.04459	0.0777342	2.9017916	25	1	33 days	1.02		Williams	1998 HQ ₉₇

1998 HR ₉₇	15.5	0.15	19980507	313.88348	310.58041	329.24796	1.82096	0.1243157	2.2204991	26	1	33 days	0.72	Williams	1998 HR ₉₇
1998 HU ₉₇	13.5	0.15	19980507	98.90690	92.11673	22.02525	10.37942	0.0877832	3.1247977	25	1	33 days	1.11	Williams	1998 HU ₉₇
1998 HW ₉₇	15.0	0.15	19980507	5.02988	330.06623	245.77806	6.89669	0.1488405	2.5484502	27	1	33 days	0.74	Williams	1998 HW ₉₇
1998 HZ ₉₇	15.5	0.15	19980507	3.42729	198.31640	20.20581	8.32063	0.2021813	2.4641217	20	1	33 days	0.78	Williams	1998 HZ ₉₇
1998 HA ₉₈	14.0	0.15	19980507	287.96641	298.10540	19.74675	11.62474	0.1988829	2.6418726	20	1	33 days	0.82	Williams	1998 HA ₉₈
1998 HB ₉₈	15.5	0.15	19980507	13.94689	277.85289	288.41779	4.16800	0.0959474	2.3756364	17	1	33 days	0.75	Williams	1998 HB ₉₈
1998 HD ₉₈	13.0	0.15	19980507	148.54793	50.42045	17.53595	10.69064	0.1412393	3.0487850	19	1	33 days	1.24	Williams	1998 HD ₉₈
1998 HF ₉₈	16.0	0.15	19980507	310.51407	299.43830	347.28385	4.03299	0.1346115	2.3118885	20	1	33 days	1.05	Williams	1998 HF ₉₈
1998 HG ₉₈	15.0	0.15	19980507	42.72455	269.48853	263.93026	4.62490	0.0972479	2.2743237	23	1	33 days	0.53	Williams	1998 HG ₉₈
1998 HJ ₉₈	15.5	0.15	19980507	323.43634	269.87076	357.41001	3.42405	0.0941147	2.1980281	27	1	33 days	0.61	Williams	1998 HJ ₉₈
1998 HK ₉₈	16.0	0.15	19980507	341.73022	235.95280	16.61217	5.25170	0.2074715	2.3260343	26	1	33 days	0.88	Williams	1998 HK ₉₈
1998 HP ₉₈	13.5	0.15	19980507	311.23273	49.25533	223.87710	5.32637	0.0142274	2.8438927	25	1	33 days	0.90	Williams	1998 HP ₉₈
1998 HQ ₉₈	15.5	0.15	19980507	332.97755	215.63132	47.49411	3.52363	0.1979137	2.4285206	27	1	33 days	0.76	Williams	1998 HQ ₉₈
1998 HR ₉₈	15.0	0.15	19980507	4.32619	176.03301	41.23209	8.49422	0.1329795	2.3864286	27	1	33 days	0.67	Williams	1998 HR ₉₈
1998 HS ₉₈	15.0	0.15	19980507	346.53174	31.25254	213.85080	7.24459	0.2255387	2.7003051	20	1	33 days	0.63	Williams	1998 HS ₉₈
1998 HT ₉₈	14.0	0.15	19980507	33.03646	124.00332	63.28211	1.86609	0.0392579	2.7703194	23	1	33 days	0.58	Williams	1998 HT ₉₈
1998 HU ₉₈	14.5	0.15	19980507	195.97249	342.71070	45.95633	6.19132	0.0651519	2.3710027	26	1	34 days	1.04	Williams	1998 HU ₉₈
1998 HY ₉₈	16.0	0.15	19980507	306.32072	97.63447	202.36156	3.57507	0.2125600	2.2048536	20	1	33 days	0.86	Williams	1998 HY ₉₈
1998 HB ₉₉	15.5	0.15	19980507	318.25936	72.65234	200.77908	6.27905	0.1081262	2.2798679	26	1	33 days	0.81	Williams	1998 HB ₉₉
1998 HC ₉₉	15.0	0.15	19980507	273.41042	264.35511	65.26187	4.46469	0.1834848	2.2483352	23	1	33 days	0.77	Williams	1998 HC ₉₉
1998 HE ₉₉	14.0	0.15	19980507	141.15398	239.92840	198.86204	8.24189	0.0269571	2.6342590	31	1	42 days	0.73	Williams	1998 HE ₉₉
1998 HG ₉₉	16.0	0.15	19980507	3.80546	114.01244	103.56790	2.20354	0.1334264	2.3926115	18	1	33 days	1.12	Williams	1998 HG ₉₉
1998 HJ ₉₉	14.0	0.15	19980507	305.74286	179.72226	108.95703	3.20348	0.1236474	3.0909430	23	1	33 days	0.94	Williams	1998 HJ ₉₉
1998 HO ₉₉	15.5	0.15	19980507	327.53139	75.16037	185.27610	6.37608	0.0840330	2.3773036	24	1	33 days	0.90	Williams	1998 HO ₉₉
1998 HQ ₉₉	14.5	0.15	19980507	349.33170	186.24715	49.79247	15.05249	0.1179555	2.6239296	30	1	33 days	0.69	Williams	1998 HQ ₉₉
1998 HR ₉₉	15.0	0.15	19980507	26.40878	29.46431	163.01364	4.89394	0.0667054	2.7201159	22	1	33 days	1.07	Williams	1998 HR ₉₉
1998 HV ₉₉	14.5	0.15	19980507	50.14474	81.41795	68.81331	9.98442	0.2148279	3.0932546	20	1	33 days	0.85	Williams	1998 HV ₉₉
1998 HW ₉₉	15.0	0.15	19980507	346.72322	184.08239	55.79208	14.18220	0.1234505	2.7021836	19	1	33 days	1.06	Williams	1998 HW ₉₉
1998 HC ₁₀₀	15.0	0.15	19980507	357.72124	99.06444	126.91162	4.42019	0.0903164	2.5141411	31	1	42 days	0.53	Williams	1998 HC ₁₀₀
1998 HE ₁₀₀	14.0	0.15	19980507	257.39407	156.22561	188.69216	9.18725	0.1763317	2.7759018	20	1	33 days	0.65	Williams	1998 HE ₁₀₀
1998 HG ₁₀₀	14.5	0.15	19980507	6.63579	161.78689	52.64453	15.14243	0.1012685	2.5819766	34	1	33 days	0.59	Williams	1998 HG ₁₀₀
1998 HH ₁₀₀	13.5	0.15	19980507	252.40645	273.04742	78.82635	5.88496	0.2171431	2.4651382	20	1	33 days	0.97	Williams	1998 HH ₁₀₀
1998 HL ₁₀₀	14.0	0.15	19980507	66.67439	298.68154	204.86645	12.78670	0.1145565	2.6679633	29	1	36 days	0.92	Williams	1998 HL ₁₀₀
1998 HO ₁₀₀	13.0	0.15	19980507	298.11649	241.54688	52.19300	15.64215	0.0815206	3.1742021	34	1	33 days	0.64	Williams	1998 HO ₁₀₀
1998 HS ₁₀₀	13.5	0.15	19980507	113.99340	296.85217	163.21092	2.91327	0.0931296	3.0534190	19	1	33 days	1.33	Williams	1998 HS ₁₀₀
1998 HW ₁₀₀	16.0	0.15	19980507	331.40059	61.06813	203.41903	3.72408	0.1718291	2.2113835	26	1	37 days	0.76	Williams	1998 HW ₁₀₀
1998 HY ₁₀₀	15.5	0.15	19980507	333.72684	203.62405	53.73482	3.20392	0.1173255	2.2445402	19	1	33 days	0.57	Williams	1998 HY ₁₀₀
1998 HZ ₁₀₀	13.5	0.15	19980507	104.90131	55.32550	48.03098	12.06895	0.1487955	3.0495654	19	1	33 days	1.04	Williams	1998 HZ ₁₀₀
1998 HB ₁₀₁	16.0	0.15	19980507	35.98863	318.95920	217.56905	6.51744	0.1426943	2.3775536	17	1	37 days	0.79	Williams	1998 HB ₁₀₁
1998 HD ₁₀₁	13.0	0.15	19980507	158.86450	17.73663	43.76741	10.53320	0.0932028	3.1885818	17	1	33 days	0.99	Williams	1998 HD ₁₀₁
1998 HU ₁₀₁	17.0	0.15	19980507	351.18418	4.26120	240.36846	6.40784	0.2075489	2.2955885	28	1	31 days	0.53	Williams	1998 HU ₁₀₁
1998 HV ₁₀₁	16.5	0.15	19980417	357.49212	319.71947	269.73695	4.73195	0.1272800	2.6138064	7	1	6 days	0.33	Williams	1998 HV ₁₀₁
1998 HW ₁₀₁	15.0	0.15	19980507	14.33737	179.97596	31.60569	6.47862	0.0551505	2.2133425	29	1	32 days	0.48	Williams	1998 HW ₁₀₁
1998 HX ₁₀₁	14.0	0.15	19980507	357.38453	183.02284	50.73778	12.60090	0.0616116	3.1234919	9	1	23 days	0.71	Williams	1998 HX ₁₀₁
1998 HY ₁₀₁	16.5	0.15	19980507	335.99829	51.87391	214.47528	2.79648	0.2114980	2.3242586	16	1	29 days	0.93	Williams	1998 HY ₁₀₁
1998 HZ ₁₀₁	16.0	0.15	19980507	337.82620	25.81303	230.46458	5.96483	0.0855912	2.3150693	20	1	32 days	0.87	Williams	1998 HZ ₁₀₁
1998 HB ₁₀₂	16.0	0.15	19980507	5.88001	178.42803	43.01796	7.45173	0.1633256	2.2255220	24	1	32 days	1.16	Williams	1998 HB ₁₀₂
1998 HC ₁₀₂	13.5	0.15	19980507	320.49016	233.45548	43.11937	11.01289	0.0703680	2.9934471	16	1	29 days	1.00	Williams	1998 HC ₁₀₂
1998 HE ₁₀₂	13.5	0.15	19980507	85.49372	157.56129	346.15898	1.43628	0.0207663	2.8524717	26	1	29 days	1.20	Williams	1998 HE ₁₀₂
1998 HF ₁₀₂	15.5	0.15	19980507	348.27824	328.98973	276.16700	1.68382	0.1198498	2.1434163	26	1	29 days	0.82	Williams	1998 HF ₁₀₂
1998 HG ₁₀₂	16.0	0.15	19980507	344.39322	26.20411	225.79585	4.23225	0.1589638	2.4504416	22	1	29 days	1.39	Williams	1998 HG ₁₀₂
1998 HJ ₁₀₂	15.5	0.15	19980507	317.08325	242.98989	44.81522	6.48331	0.1593919	2.2777508	28	1	32 days	0.92	Williams	1998 HJ ₁₀₂
1998 HL ₁₀₂	14.0	0.15	19980507	339.31217	207.16397	53.51889	11.30648	0.1695810	3.1721488	31	1	32 days	1.28	Williams	1998 HL ₁₀₂

1998 HR ₁₀₂	16.0	0.15	19980507	335.85018	274.19443	351.21070	1.46370	0.1695563	2.4196020	16	1	29 days	1.00		Williams	1998 HR ₁₀₂
1998 HS ₁₀₂	16.0	0.15	19980507	296.06767	301.71629	18.25160	2.31359	0.2052864	3.0414935	11	1	39 days	0.42		Williams	1998 HS ₁₀₂
1998 HV ₁₀₂	14.5	0.15	19980507	263.94240	287.09980	57.66141	9.70771	0.1511680	2.6709055	15	1	29 days	0.98		Williams	1998 HV ₁₀₂
1998 HW ₁₀₂	14.0	0.15	19980507	53.47989	18.11165	146.38626	1.42942	0.1429688	3.1796138	25	1	29 days	0.81		Williams	1998 HW ₁₀₂
1998 HX ₁₀₂	15.5	0.15	19980507	349.45039	175.56870	69.45372	3.64270	0.1349526	2.4356911	15	1	29 days	0.48		Williams	1998 HX ₁₀₂
1998 HA ₁₀₃	14.5	0.15	19980507	61.77574	275.65768	222.51161	9.14821	0.2850886	3.0942043	23	1	38 days	1.13		Williams	1998 HA ₁₀₃
1998 HE ₁₀₃	15.5	0.15	19980507	331.80050	230.06672	41.78249	6.64041	0.1808173	2.2009319	21	1	29 days	0.51		Williams	1998 HE ₁₀₃
1998 HG ₁₀₃	15.5	0.15	19980507	279.50540	232.58997	102.26187	0.73618	0.1901196	2.3101166	24	1	29 days	0.96		Williams	1998 HG ₁₀₃
1998 HG ₁₀₅	15.0	0.15	19980417	31.00837	76.01088	91.50719	5.71198	0.1058295	2.3523164	15	1	3 days	0.31		Williams	1998 HG ₁₀₅
1998 HJ ₁₀₅	14.5	0.15	19980417	301.71450	138.35621	137.63928	5.62314	0.1123649	2.6234270	15	1	3 days	0.55		Williams	1998 HJ ₁₀₅
1998 HR ₁₀₇	14.0	0.15	19980417	102.52080	313.14977	122.08017	5.22710	0.2892356	2.5208996	17	1	3 days	0.76	E	Williams	1998 HR ₁₀₇
1998 HT ₁₀₇	15.0	0.15	19980417	277.82314	226.39716	69.94403	7.22299	0.0652534	2.3008471	18	1	3 days	0.89	E	Williams	1998 HT ₁₀₇
1998 HX ₁₀₇	14.0	0.15	19980417	56.06442	79.67140	51.29827	13.21127	0.1825273	2.6895196	18	1	3 days	0.62		Williams	1998 HX ₁₀₇
1998 HC ₁₀₈	14.5	0.15	19980507	269.36518	221.76278	92.66810	7.29188	0.0989438	2.2136035	16	1	31 days	0.53		Williams	1998 HC ₁₀₈
1998 HU ₁₀₈	17.0	0.15	19980706	0.90277	195.10179	63.54721	9.31310	0.5060167	2.7533647	108	1	41 days	0.52	M-v 4	Marsden	1998 HU ₁₀₈
1998 HK ₁₀₉	14.0	0.15	19980417	17.71470	359.58538	186.46127	28.12051	0.1360646	3.1608579	23	1	53 days	0.85		Williams	1998 HK ₁₀₉
1998 HN ₁₁₀	14.5	0.15	19980417	35.68498	45.02539	107.39729	6.18918	0.2362063	3.2669821	17	1	3 days	1.03	E	Williams	1998 HN ₁₁₀
1998 HX ₁₁₂	14.5	0.15	19980417	352.53655	48.30326	171.19250	11.56943	0.1266627	2.5556642	23	1	53 days	0.53		Williams	1998 HX ₁₁₂
1998 HB ₁₁₃	13.0	0.15	19980706	23.89003	126.19065	71.08100	12.52581	0.1189673	3.1200193	30	1	61 days	0.59	M-v 4	Williams	1998 HB ₁₁₃
1998 HQ ₁₁₄	14.0	0.15	19980507	341.36619	146.93886	89.87399	12.38777	0.0972693	3.0500304	16	1	31 days	0.72		Williams	1998 HQ ₁₁₄
1998 HQ ₁₁₇	16.0	0.15	19980706	3.09869	106.45452	133.63060	5.19439	0.1374651	2.1922307	36	1	87 days	0.62	M-v 4	Williams	1998 HQ ₁₁₇
1998 HU ₁₁₇	15.5	0.15	19980706	21.63480	106.81545	107.08441	5.72237	0.1083209	2.2636093	29	1	61 days	0.83	M-v 5	Williams	1998 HU ₁₁₇
1998 HG ₁₁₉	15.0	0.15	19980507	296.67793	223.11496	77.56731	11.03385	0.1685593	2.6111438	27	1	33 days	0.90		Williams	1998 HG ₁₁₉
1998 HR ₁₁₉	13.0	0.15	19980507	250.64808	271.14616	77.28461	11.37065	0.1913988	3.1934082	30	1	36 days	0.77		Williams	1998 HR ₁₁₉
1998 HS ₁₁₉	14.0	0.15	19980507	151.29821	355.32790	64.99119	15.25375	0.1845196	2.5730913	21	1	33 days	0.78		Williams	1998 HS ₁₁₉
1998 HZ ₁₁₉	13.0	0.15	19980507	77.13408	42.08864	88.62886	13.13675	0.0906584	3.2082441	21	1	40 days	0.57		Williams	1998 HZ ₁₁₉
1998 HA ₁₂₀	14.5	0.15	19980507	6.28193	86.22941	125.04396	11.19192	0.1193930	3.1133968	14	1	40 days	0.71		Williams	1998 HA ₁₂₀
1998 HZ ₁₂₀	14.5	0.15	19980507	62.57428	73.44508	71.88525	13.54494	0.1173460	2.6619800	25	1	33 days	0.86		Williams	1998 HZ ₁₂₀
1998 HN ₁₂₁	15.5	0.15	19980507	286.75144	136.20309	173.90432	7.39952	0.1152396	2.3419477	18	1	31 days	0.69		Williams	1998 HN ₁₂₁
1998 HP ₁₂₁	16.0	0.15	19980507	30.49637	85.35304	100.88970	5.70906	0.1067896	2.2540243	18	1	31 days	1.48		Williams	1998 HP ₁₂₁
1998 HV ₁₂₁	13.0	0.15	19980507	228.81093	243.38656	116.49444	10.91972	0.0961802	3.0279282	17	1	40 days	0.55		Williams	1998 HV ₁₂₁
1998 HC ₁₂₂	13.0	0.15	19980507	299.81180	159.63729	128.20767	11.24918	0.0691006	2.9809570	17	1	40 days	0.39		Williams	1998 HC ₁₂₂
1998 HE ₁₂₂	15.0	0.15	19980507	22.47427	105.98343	80.83890	13.96149	0.2084447	2.6821547	14	1	40 days	0.54		Williams	1998 HE ₁₂₂
1998 HK ₁₂₂	14.0	0.15	19980507	263.23916	245.90212	87.64357	15.14140	0.1432015	2.5277929	13	1	40 days	0.58		Williams	1998 HK ₁₂₂
1998 HW ₁₂₂	13.0	0.15	19980507	92.86437	36.31955	89.90661	9.61105	0.0424066	2.7634794	17	1	31 days	0.32		Williams	1998 HW ₁₂₂
1998 HX ₁₂₂	15.0	0.15	19980507	22.56933	106.51300	91.10672	8.49484	0.0810918	2.4665414	17	1	31 days	0.78		Williams	1998 HX ₁₂₂
1998 HA ₁₂₃	16.0	0.15	19980507	333.24868	182.56325	77.76387	7.29586	0.1531967	2.2384878	18	1	31 days	0.75		Williams	1998 HA ₁₂₃
1998 HC ₁₂₃	13.0	0.15	19980507	196.44725	189.00461	205.02339	20.44919	0.1936695	3.1314188	16	1	31 days	0.93		Williams	1998 HC ₁₂₃
1998 HD ₁₂₃	15.5	0.15	19980507	65.64772	8.90845	139.59727	4.83958	0.0938727	2.1993092	27	1	40 days	0.79		Williams	1998 HD ₁₂₃
1998 HE ₁₂₃	14.5	0.15	19980507	302.30228	212.86363	80.83100	7.83715	0.1136677	2.4017308	17	1	31 days	0.67		Williams	1998 HE ₁₂₃
1998 HL ₁₂₃	14.0	0.15	19980507	37.33018	102.58419	65.86116	19.94957	0.2016619	3.1902497	24	1	46 days	0.69		Williams	1998 HL ₁₂₃
1998 HN ₁₂₃	15.0	0.15	19980507	287.63150	203.02879	109.43398	8.95599	0.1406821	2.3286437	17	1	45 days	0.53		Williams	1998 HN ₁₂₃
1998 HP ₁₂₃	15.5	0.15	19980507	350.39525	139.12771	99.12354	8.86066	0.1937633	2.5395103	13	1	40 days	0.66		Williams	1998 HP ₁₂₃
1998 HJ ₁₂₄	15.5	0.15	19980507	351.45227	63.66981	177.74472	7.99949	0.2624491	2.3553543	14	1	40 days	0.44		Williams	1998 HJ ₁₂₄
1998 HL ₁₂₄	14.0	0.15	19980507	105.04366	352.68358	101.13450	7.49096	0.2752672	2.6395963	17	1	31 days	1.03		Williams	1998 HL ₁₂₄
1998 HO ₁₂₄	14.5	0.15	19980507	96.52527	321.47052	155.80286	6.09339	0.1200321	2.4104996	24	1	40 days	0.50		Williams	1998 HO ₁₂₄
1998 HP ₁₂₄	14.5	0.15	19980507	91.22205	20.03917	115.67537	6.36729	0.0040394	2.7440286	15	1	31 days	0.93		Williams	1998 HP ₁₂₄
1998 HR ₁₂₄	14.5	0.15	19980417	273.07699	261.62528	68.85464	18.54622	0.1778327	2.8562150	23	1	50 days	0.99		Williams	1998 HR ₁₂₄
1998 HS ₁₂₄	16.0	0.15	19980507	359.60405	91.26404	137.08605	5.40094	0.1602140	2.2387846	20	1	40 days	0.44		Williams	1998 HS ₁₂₄
1998 HX ₁₂₄	15.0	0.15	19980507	354.64892	70.37721	161.66668	11.88241	0.0592533	2.4474221	14	1	40 days	0.36		Williams	1998 HX ₁₂₄
1998 HG ₁₂₅	14.5	0.15	19980507	309.98390	117.04788	177.46609	14.57120	0.1691811	2.6039462	17	1	40 days	0.47		Williams	1998 HG ₁₂₅
1998 HH ₁₂₅	15.5	0.15	19980706	33.08211	57.08916	152.37624	8.37332	0.0681431	2.2191025	18	1	73 days	0.62	M-v 4	Williams	1998 HH ₁₂₅
1998 HJ ₁₂₅	15.0	0.15	19980507	352.49347	58.13851	180.10264	12.30231	0.1564319	2.5730794	13	1	40 days	0.37		Williams	1998 HJ ₁₂₅

1998 HU ₁₂₅	13.0	0.15	19980507	239.55832	273.36608	87.17302	11.32998	0.1187693	2.9750962	20	1	32 days	0.80	Williams	1998 HU ₁₂₅
1998 HL ₁₂₆	15.5	0.15	19980507	34.17085	305.72610	225.23555	21.44811	0.2998687	2.4237728	25	1	29 days	0.62	Williams	1998 HL ₁₂₆
1998 HB ₁₂₇	15.5	0.15	19980417	87.99222	79.69777	3.56217	11.24175	0.2476569	2.4095847	13	1	4 days	1.25	E Williams	1998 HB ₁₂₇
1998 HD ₁₂₇	14.5	0.15	19980417	305.61952	23.60073	260.82322	7.54371	0.2645490	2.9676474	12	1	2 days	1.10	E Williams	1998 HD ₁₂₇
1998 HE ₁₂₇	15.5	0.15	19980328	18.17711	177.46692	355.00595	5.67604	0.0932725	2.3603424	23	1	33 days	0.72	Williams	1998 HE ₁₂₇
1998 HO ₁₂₇	15.5	0.15	19980328	81.77294	260.55495	204.48936	6.42393	0.0651650	2.3173458	33	1	31 days	1.15	Williams	1998 HO ₁₂₇
1998 HV ₁₂₇	15.5	0.15	19980328	29.78917	139.09742	15.54908	11.85416	0.1276996	2.6408162	20	1	33 days	1.35	Williams	1998 HV ₁₂₇
1998 HY ₁₂₇	15.0	0.15	19980328	219.82103	321.70058	18.97762	4.62504	0.0747843	2.4238253	18	1	29 days	0.89	Williams	1998 HY ₁₂₇
1998 HC ₁₂₈	15.5	0.15	19980417	60.87412	280.98323	196.13739	8.10648	0.2056079	2.4213816	15	1	4 days	1.54	E Williams	1998 HC ₁₂₈
1998 HZ ₁₂₉	14.0	0.15	19980328	219.79525	278.15251	53.31474	1.40007	0.0486805	3.1216510	25	1	31 days	1.13	Williams	1998 HZ ₁₂₉
1998 HB ₁₃₀	15.5	0.15	19980328	358.90515	167.96591	20.41323	2.55022	0.0897303	2.7595631	20	1	31 days	1.16	Williams	1998 HB ₁₃₀
1998 HN ₁₃₀	15.5	0.15	19980328	42.83387	117.29270	14.96222	12.89798	0.1192552	2.7132141	26	1	31 days	1.23	Williams	1998 HN ₁₃₀
1998 HV ₁₃₁	14.0	0.15	19980417	50.68758	56.68368	67.01934	6.94506	0.1909704	3.1499406	14	1	5 days	1.04	E Williams	1998 HV ₁₃₁
1998 HW ₁₃₁	12.5	0.15	19980417	98.09182	40.92968	28.61086	20.50260	0.2323012	3.2105262	14	1	3 days	0.92	E Williams	1998 HW ₁₃₁
1998 HB ₁₃₂	15.0	0.15	19980417	303.96912	174.36070	88.35106	5.50249	0.1216235	2.5692500	14	1	5 days	0.92	E Williams	1998 HB ₁₃₂
1998 HC ₁₃₂	13.5	0.15	19980417	76.73391	1.24120	104.82711	5.58391	0.0920225	2.9880354	14	1	5 days	0.65	E Williams	1998 HC ₁₃₂
1998 HJ ₁₃₂	13.0	0.15	19980417	111.69406	12.62063	38.49370	7.63505	0.2755757	2.4198656	15	1	2 days	0.37	E Williams	1998 HJ ₁₃₂
1998 HQ ₁₃₂	15.0	0.15	19980328	308.21530	141.50643	112.35609	3.33070	0.1713940	2.3897612	28	1	40 days	0.58	Williams	1998 HQ ₁₃₂
1998 HP ₁₃₃	15.0	0.15	19980417	188.34336	211.97502	157.64503	8.42399	0.1753266	2.3013104	12	1	3 days	1.19	E Williams	1998 HP ₁₃₃
1998 HQ ₁₃₃	16.0	0.15	19980417	33.79607	51.54723	100.18050	4.58010	0.1504472	2.5618883	13	1	5 days	0.86	E Williams	1998 HQ ₁₃₃
1998 HR ₁₃₃	13.0	0.15	19980417	135.28252	302.53809	99.18687	6.33411	0.2615430	2.9161631	14	1	5 days	0.77	E Williams	1998 HR ₁₃₃
1998 HS ₁₃₃	13.0	0.15	19980417	157.26012	230.91813	161.16372	11.18543	0.1431181	2.9739455	14	1	5 days	1.16	E Williams	1998 HS ₁₃₃
1998 HT ₁₃₃	15.0	0.15	19980417	279.27890	225.40483	72.09287	6.04662	0.1748499	2.3339363	13	1	5 days	1.47	E Williams	1998 HT ₁₃₃
1998 HV ₁₃₃	15.0	0.15	19980417	321.74859	151.29605	88.98651	5.54574	0.0965533	2.7719481	12	1	5 days	1.17	E Williams	1998 HV ₁₃₃
1998 HW ₁₃₃	14.5	0.15	19980417	50.63500	18.64841	96.39260	5.36687	0.2732620	2.6811634	14	1	5 days	0.72	E Williams	1998 HW ₁₃₃
1998 HY ₁₃₃	15.0	0.15	19980417	336.50544	83.84683	141.93035	6.29174	0.1191651	2.5259713	14	1	5 days	0.76	E Williams	1998 HY ₁₃₃
1998 HZ ₁₃₃	15.0	0.15	19980417	230.82956	258.36103	73.79205	6.20562	0.0963224	2.3435945	14	1	5 days	0.72	E Williams	1998 HZ ₁₃₃
1998 HG ₁₃₄	14.5	0.15	19980417	277.91653	180.09546	120.54601	6.04642	0.2030804	2.5304961	13	1	5 days	0.73	E Williams	1998 HG ₁₃₄
1998 HH ₁₃₄	15.0	0.15	19980417	321.44308	116.26010	122.62545	5.65241	0.0537683	2.3841116	14	1	5 days	0.78	E Williams	1998 HH ₁₃₄
1998 HJ ₁₃₄	15.0	0.15	19980417	342.13198	93.08657	126.83785	5.37752	0.1196553	2.3138219	14	1	5 days	0.73	E Williams	1998 HJ ₁₃₄
1998 HL ₁₃₄	13.0	0.15	19980417	324.36601	91.28575	146.21151	8.88193	0.0956935	3.2010257	14	1	5 days	0.39	E Williams	1998 HL ₁₃₄
1998 HM ₁₃₄	15.5	0.15	19980417	202.25314	245.52647	110.86522	6.03932	0.0699407	2.3157061	12	1	5 days	0.87	E Williams	1998 HM ₁₃₄
1998 HO ₁₃₄	15.0	0.15	19980417	237.93364	246.36779	78.66251	6.84372	0.0803566	2.4006744	12	1	5 days	1.10	E Williams	1998 HO ₁₃₄
1998 HP ₁₃₄	13.0	0.15	19980417	40.41558	103.43506	46.39596	12.72384	0.0229980	3.2344399	14	1	5 days	0.57	E Williams	1998 HP ₁₃₄
1998 HR ₁₃₄	14.5	0.15	19980417	102.04283	12.35152	75.23343	7.33500	0.0455644	2.3736963	13	1	5 days	0.60	E Williams	1998 HR ₁₃₄
1998 HS ₁₃₄	14.5	0.15	19980417	278.37075	113.84750	172.20166	15.26777	0.0762285	2.4916831	12	1	5 days	0.74	E Williams	1998 HS ₁₃₄
1998 HV ₁₃₄	15.0	0.15	19980417	297.73140	118.77453	164.27350	11.62584	0.2351703	2.7399027	14	1	5 days	1.01	E Williams	1998 HV ₁₃₄
1998 HW ₁₃₅	13.5	0.15	19980328	342.65218	176.35722	30.27166	10.43363	0.0231764	2.9753633	22	1	28 days	0.69	Williams	1998 HW ₁₃₅
1998 HS ₁₃₆	12.5	0.15	19980328	272.46509	253.42783	36.27339	11.59145	0.0811354	3.9980622	18	1	31 days	0.78	Williams	1998 HS ₁₃₆
1998 HR ₁₃₇	14.0	0.15	19980328	23.08213	55.25807	116.25845	3.09498	0.0268916	2.9546480	19	1	31 days	0.89	Williams	1998 HR ₁₃₇
1998 HA ₁₃₈	14.5	0.15	19980417	289.05489	122.30334	166.91452	8.63933	0.1360782	2.7816772	14	1	4 days	1.40	E Williams	1998 HA ₁₃₈
1998 HW ₁₃₉	14.5	0.15	19980417	0.61821	150.60442	52.55219	13.57987	0.1103366	3.0714682	15	1	3 days	0.91	E Williams	1998 HW ₁₃₉
1998 HL ₁₄₀	15.0	0.15	19980417	314.73533	217.78664	63.39180	11.51751	0.2898667	2.6765396	15	1	3 days	0.90	E Williams	1998 HL ₁₄₀
1998 HW ₁₄₀	14.5	0.15	19980706	358.17446	161.53408	73.54923	8.31313	0.2529854	3.0981755	30	1	62 days	0.72	M-v 4 Williams	1998 HW ₁₄₀
1998 HX ₁₄₀	15.5	0.15	19980417	357.85567	32.05088	178.90612	11.34190	0.1097634	2.4459359	14	1	3 days	0.70	E Williams	1998 HX ₁₄₀
1998 HG ₁₄₁	16.0	0.15	19980417	314.10940	169.44994	98.93858	6.02100	0.1519805	2.2518015	15	1	3 days	0.63	E Williams	1998 HG ₁₄₁
1998 HM ₁₄₁	15.0	0.15	19980417	207.99469	182.34291	181.82768	13.38968	0.0404397	2.4132222	14	1	3 days	0.79	E Williams	1998 HM ₁₄₁
1998 HB ₁₄₃	13.5	0.15	19980706	342.06442	214.86907	32.80041	16.21986	0.0509847	3.1980237	28	1	65 days	0.59	M-v 5 Williams	1998 HB ₁₄₃
1998 HK ₁₄₃	14.5	0.15	19980507	309.82881	123.77108	153.58139	7.49928	0.1056193	2.3350952	20	1	33 days	1.49	Williams	1998 HK ₁₄₃
1998 HV ₁₄₃	15.0	0.15	19980507	211.80639	343.52940	29.60636	7.51253	0.1203698	2.4114504	21	1	40 days	0.73	Williams	1998 HV ₁₄₃
1998 HD ₁₄₄	15.0	0.15	19980417	47.59919	359.51605	134.91766	7.58464	0.2899909	3.0384537	14	1	3 days	0.96	E Williams	1998 HD ₁₄₄
1998 HF ₁₄₄	15.0	0.15	19980417	307.89491	141.48804	141.30864	6.88673	0.1697163	2.6964274	19	1	3 days	0.90	E Williams	1998 HF ₁₄₄
1998 HP ₁₄₄	15.0	0.15	19980507	33.11772	136.45503	36.47675	5.98036	0.1905200	2.5622283	27	1	33 days	0.78	Williams	1998 HP ₁₄₄

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1998 HQ ₁₄₄	15.5	0.15	19980507	328.64611	55.96344	214.08801	12.65312	0.2290894	2.6699481	24	1	42 days	0.77	Williams	1998 HQ ₁₄₄
1998 HW ₁₄₄	16.0	0.15	19980507	310.86878	140.59397	142.14620	4.39132	0.1354770	2.2313004	18	1	33 days	1.33	Williams	1998 HW ₁₄₄
1998 HX ₁₄₄	14.5	0.15	19980417	76.82854	63.22961	55.64386	15.43476	0.1579419	2.7204970	14	1	2 days	1.04	E Williams	1998 HX ₁₄₄
1998 HF ₁₄₅	14.5	0.15	19980507	13.55957	107.80339	96.74433	7.41905	0.0704284	2.4285937	32	1	42 days	0.79	Williams	1998 HF ₁₄₅
1998 HK ₁₄₅	16.0	0.15	19980507	327.50020	189.71635	75.81323	7.31522	0.1622206	2.3518992	26	1	33 days	0.79	Williams	1998 HK ₁₄₅
1998 HO ₁₄₅	15.5	0.15	19980507	25.91021	46.28356	144.16169	4.05550	0.0959634	2.5571062	26	1	33 days	0.94	Williams	1998 HO ₁₄₅
1998 HP ₁₄₅	13.5	0.15	19980507	7.18706	346.90414	225.83339	9.68892	0.1637215	3.1475370	34	1	33 days	0.58	Williams	1998 HP ₁₄₅
1998 HS ₁₄₅	14.5	0.15	19980507	334.05191	172.63845	77.04551	10.03817	0.0485889	2.9805005	16	1	33 days	1.19	Williams	1998 HS ₁₄₅
1998 HD ₁₄₆	15.5	0.15	19980507	23.44631	52.75189	139.42563	4.59355	0.1459523	2.2969926	29	1	42 days	0.73	Williams	1998 HD ₁₄₆
1998 HE ₁₄₆	16.5	0.15	19980507	328.94948	138.15084	126.43143	4.13690	0.1424697	2.2580949	18	1	33 days	1.25	Williams	1998 HE ₁₄₆
1998 HG ₁₄₆	16.0	0.15	19980507	339.65376	171.01794	82.85971	4.52447	0.1973099	2.5758704	16	1	33 days	0.93	Williams	1998 HG ₁₄₆
1998 HJ ₁₄₆	15.0	0.15	19980507	46.79732	121.51318	43.44994	10.87416	0.1280062	2.3473383	29	1	33 days	0.58	Williams	1998 HJ ₁₄₆
1998 HK ₁₄₆	16.0	0.15	19980417	21.53027	30.59702	153.98130	5.55839	0.1234345	2.4704897	12	1	3 days	1.24	E Williams	1998 HK ₁₄₆
1998 HM ₁₄₆	14.0	0.15	19980507	224.47419	213.96917	148.82005	2.03596	0.0506040	2.8051345	18	1	33 days	1.00	Williams	1998 HM ₁₄₆
1998 HX ₁₄₆	14.5	0.15	19980507	6.06965	105.31868	105.12035	11.81334	0.1480317	2.7016970	15	1	40 days	0.71	Williams	1998 HX ₁₄₆
1998 HS ₁₄₇	13.5	0.15	19980507	258.74941	240.68163	90.62640	10.63022	0.0514143	2.9702701	15	1	31 days	0.56	Williams	1998 HS ₁₄₇
1998 HT ₁₄₇	14.5	0.15	19980706	327.91078	105.60254	184.07130	14.13602	0.1929364	2.6734627	22	1	70 days	0.60	M-v 4 Williams	1998 HT ₁₄₇
1998 HV ₁₄₇	16.5	0.15	19980507	322.14614	225.95078	49.20085	25.65742	0.1921687	2.3311288	23	1	33 days	0.96	Williams	1998 HV ₁₄₇
1998 HY ₁₄₇	16.0	0.15	19980507	345.67210	204.71365	45.54593	1.58274	0.1227319	2.1447969	28	1	30 days	0.89	Williams	1998 HY ₁₄₇
1998 HA ₁₄₈	14.5	0.15	19980507	109.24179	235.31367	239.77386	3.59353	0.0821057	2.1771534	19	1	29 days	1.27	Williams	1998 HA ₁₄₈
1998 HB ₁₄₈	14.0	0.15	19980507	318.06916	141.89485	148.85085	1.37456	0.1626481	3.2232844	15	1	29 days	0.70	Williams	1998 HB ₁₄₈
1998 HC ₁₄₈	15.5	0.15	19980507	2.77833	180.67316	49.25031	7.87652	0.0568331	2.3424778	12	1	30 days	1.47	Williams	1998 HC ₁₄₈
1998 HD ₁₄₈	13.5	0.15	19980507	165.46612	190.97776	234.62600	11.94716	0.1413312	2.5993187	25	1	30 days	1.48	Williams	1998 HD ₁₄₈
1998 HE ₁₄₈	15.0	0.15	19980507	338.59160	54.88453	210.63314	2.72027	0.2049651	2.6124280	27	1	39 days	0.71	Williams	1998 HE ₁₄₈
1998 HS ₁₄₈	15.5	0.15	19980507	316.82468	283.37221	7.53675	0.81557	0.1456118	2.5456895	18	1	29 days	1.11	Williams	1998 HS ₁₄₈
1998 HU ₁₄₈	15.5	0.15	19980507	326.07657	48.88625	240.40479	3.04396	0.2515841	2.5514647	16	1	29 days	0.58	Williams	1998 HU ₁₄₈
1998 HW ₁₄₈	14.5	0.15	19980507	263.12656	3.53283	338.34881	0.58388	0.0832577	2.6361580	14	1	29 days	0.82	Williams	1998 HW ₁₄₈
1998 HY ₁₄₈	14.0	0.15	19980507	345.62250	194.63743	56.92902	15.13968	0.0746302	2.6016994	23	1	39 days	0.53	Williams	1998 HY ₁₄₈
1998 HZ ₁₄₈	14.5	0.15	19980507	18.24674	336.00557	235.82938	12.31505	0.1239811	2.6017700	22	1	30 days	1.09	Williams	1998 HZ ₁₄₈
1998 HB ₁₄₉	14.5	0.15	19980507	276.87250	229.60893	113.25132	1.42677	0.2144175	2.3404774	16	1	29 days	0.78	Williams	1998 HB ₁₄₉
1998 HC ₁₄₉	12.5	0.15	19980507	198.88755	349.86245	56.52921	14.89303	0.2422371	2.9952915	15	1	29 days	1.00	Williams	1998 HC ₁₄₉
1998 HE ₁₄₉	14.5	0.15	19980507	332.41676	229.84306	42.85773	12.18343	0.1740066	2.6887555	16	1	29 days	0.84	Williams	1998 HE ₁₄₉
1998 HG ₁₄₉	15.5	0.15	19980507	281.97777	70.17357	265.61537	4.69924	0.2111973	2.2470034	27	1	29 days	1.41	Williams	1998 HG ₁₄₉
1998 HJ ₁₄₉	16.5	0.15	19980507	336.84154	255.05238	11.93752	2.22679	0.1892586	2.3284169	19	1	29 days	1.22	Williams	1998 HJ ₁₄₉
1998 HL ₁₄₉	14.5	0.15	19980507	21.10706	175.82084	31.51414	5.77222	0.1263268	2.5504108	19	1	29 days	1.40	Williams	1998 HL ₁₄₉
1998 HQ ₁₄₉	15.0	0.15	19980507	357.70975	335.71557	262.50594	6.70041	0.0988635	2.5429628	19	1	29 days	0.80	Williams	1998 HQ ₁₄₉
1998 HS ₁₄₉	16.5	0.15	19980507	324.27168	27.64300	259.57194	4.23690	0.2071735	2.2733003	21	1	30 days	0.93	Williams	1998 HS ₁₄₉
1998 HT ₁₄₉	14.0	0.15	19980507	304.45482	263.71193	43.67608	9.38006	0.1488915	2.7710121	16	1	29 days	0.43	Williams	1998 HT ₁₄₉
1998 HR ₁₅₀	13.5	0.15	19980507	115.92847	251.65089	206.51913	12.46335	0.1404830	2.6852767	22	1	34 days	0.50	Williams	1998 HR ₁₅₀
1998 HW ₁₅₀	14.5	0.15	19980507	243.28756	205.80379	162.64742	5.13741	0.2372005	2.2987338	20	1	34 days	0.85	Williams	1998 HW ₁₅₀
1998 JE	14.5	0.15	19980706	259.31980	238.02713	99.93116	3.80002	0.0908518	2.3199639	20	1	67 days	0.54	M-v 5 Williams	1998 JE
1998 JH	15.0	0.15	19980417	107.49299	262.43910	188.97117	12.50128	0.1124554	2.5488848	16	1	11 days	1.14	Williams	1998 JH
1998 JK	15.0	0.15	19980417	354.04482	133.48757	68.38016	3.23013	0.1470006	2.3998413	18	1	28 days	0.67	Williams	1998 JK
1998 JP	15.5	0.15	19980417	294.69497	297.34795	2.06686	6.57185	0.1859375	2.2578173	19	1	11 days	0.38	Williams	1998 JP
1998 JS	15.0	0.15	19980417	278.36435	47.00199	266.54855	4.63151	0.1611798	2.2739352	19	1	11 days	0.43	Williams	1998 JS
1998 JT	14.5	0.15	19980417	259.23975	86.69171	251.13337	6.16101	0.2239401	2.2572001	19	1	11 days	0.41	Williams	1998 JT
1998 JX	16.0	0.15	19980507	331.53736	34.35894	225.84630	5.08361	0.1735452	2.2694539	33	1	42 days	1.00	Williams	1998 JX
1998 JY	14.5	0.15	19980417	255.55383	128.01661	214.54333	22.42307	0.2432775	2.2966942	19	1	11 days	0.36	Williams	1998 JY
1998 JZ	15.0	0.15	19980706	340.79804	214.91128	47.65556	12.46171	0.1545111	2.6761061	31	1	62 days	0.76	M-v 5 Williams	1998 JZ
1998 JB ₁	15.5	0.15	19980507	309.01783	225.97365	56.48342	6.82257	0.1273846	2.3831955	27	1	32 days	0.51	Williams	1998 JB ₁
1998 JH ₁	14.5	0.15	19980507	311.62645	19.43057	258.53347	8.04179	0.0488729	2.4513310	15	1	23 days	0.41	Williams	1998 JH ₁
1998 JJ ₁	15.5	0.15	19980507	148.73087	201.30406	229.28643	19.89367	0.0929239	1.9330724	25	1	23 days	0.65	Williams	1998 JJ ₁
1998 JL ₁	16.0	0.15	19980507	21.28693	183.29617	14.22440	2.62956	0.1306093	2.3784242	18	1	29 days	0.91	Williams	1998 JL ₁

1998 JM ₁	14.0	0.15	19980507	194.08941	72.44207	320.08890	1.83702	0.0527979	2.3808368	16	1	23 days	0.70		Williams	1998 JM ₁
1998 JN ₁	14.5	0.15	19980507	70.78263	101.43402	40.58030	14.58506	0.1077647	2.4368056	19	1	29 days	0.64		Williams	1998 JN ₁
1998 JO ₁	13.5	0.15	19980507	309.80960	228.33679	59.83919	2.10145	0.1323797	3.2388209	35	1	32 days	0.40		Williams	1998 JO ₁
1998 JP ₁	16.5	0.15	19980417	295.80730	240.24196	62.86407	3.69883	0.1772724	2.4112099	9	1	4 days	0.34	E	Williams	1998 JP ₁
1998 JQ ₁	15.5	0.15	19980706	27.24304	355.41793	217.17589	9.71617	0.0962518	2.3127091	23	1	61 days	0.46	M-v 5	Williams	1998 JQ ₁
1998 JR ₁	15.0	0.15	19980507	130.06718	233.77891	214.36757	11.48118	0.0884789	2.3536674	32	1	36 days	0.97		Williams	1998 JR ₁
1998 JS ₁	15.5	0.15	19980507	343.05676	52.24900	193.61088	6.13457	0.1010191	2.4271884	16	1	23 days	0.62		Williams	1998 JS ₁
1998 JT ₁	15.0	0.15	19980507	293.92988	207.64685	107.07330	3.35855	0.2065939	2.4205026	19	1	23 days	0.53		Williams	1998 JT ₁
1998 JZ ₁	15.5	0.15	19980507	327.30717	246.53904	41.35795	5.82110	0.2898257	2.1558962	18	1	27 days	0.80		Williams	1998 JZ ₁
1998 JB ₂	15.0	0.15	19980507	296.13349	245.37455	61.17146	5.53936	0.1009600	2.3868009	35	1	29 days	0.63		Williams	1998 JB ₂
1998 JF ₂	15.5	0.15	19980507	203.82042	289.20397	103.99664	4.72959	0.1307406	2.1987707	20	1	23 days	0.71		Williams	1998 JF ₂
1998 JH ₂	17.0	0.15	19980507	273.59562	284.96842	51.69722	6.59302	0.4450494	2.1565047	18	1	18 days	0.30		Williams	1998 JH ₂
1998 JJ ₂	17.5	0.15	19980417	335.20366	300.72892	311.82029	1.90778	0.1695808	2.3579570	9	1	8 days	0.52		Williams	1998 JJ ₂
1998 JP ₂	15.0	0.15	19980507	296.63050	215.32430	93.24617	8.87682	0.1680723	2.2692346	32	1	40 days	0.54		Williams	1998 JP ₂
1998 JQ ₂	14.0	0.15	19980417	285.59590	165.01679	154.95920	8.16819	0.1992435	2.6873770	13	1	12 days	0.56		Williams	1998 JQ ₂
1998 JS ₂	15.5	0.15	19980417	34.39641	76.67145	92.78765	7.76636	0.2009805	2.4171453	32	1	52 days	0.66		Williams	1998 JS ₂
1998 JW ₂	15.5	0.15	19980507	340.11126	132.34969	121.45548	6.12659	0.1142073	2.3070853	19	1	40 days	0.65		Williams	1998 JW ₂
1998 JD ₃	14.5	0.15	19980507	320.12818	210.70391	73.96753	14.35678	0.1558145	2.6526889	19	1	23 days	0.64		Williams	1998 JD ₃
1998 JF ₃	14.0	0.15	19980417	192.80897	221.62948	171.66364	7.95526	0.0510003	2.4619756	13	1	12 days	0.82		Williams	1998 JF ₃
1998 JJ ₃	15.5	0.15	19980507	27.25946	100.18945	98.22432	6.32634	0.0682556	2.2390317	27	1	30 days	0.61		Williams	1998 JJ ₃
1998 JK ₃	13.5	0.15	19980417	267.34128	214.69110	123.25527	6.33888	0.1579860	3.1231848	24	1	59 days	0.70		Williams	1998 JK ₃
1998 JL ₃	14.0	0.15	19980507	146.85109	245.25156	197.25966	8.82034	0.1340947	2.7591330	25	1	22 days	0.49		Williams	1998 JL ₃
1998 JM ₃	17.5	0.15	19980417	307.55190	198.32915	94.94665	8.10417	0.1069826	2.5796536	9	1	5 days	0.15		Williams	1998 JM ₃
1998 JO ₃	14.5	0.15	19980507	131.90276	18.00300	76.99541	15.89562	0.1200176	2.5803612	21	1	18 days	0.91		Williams	1998 JO ₃
1998 JQ ₃	16.0	0.15	19980507	179.76660	208.74789	210.06542	12.08740	0.1268511	2.6393622	9	1	2 days	0.64	E	Williams	1998 JQ ₃
1998 JS ₃	17.0	0.15	19980507	0.36079	98.10727	138.53077	5.19477	0.1266481	2.8356865	9	1	2 days	0.56	E	Williams	1998 JS ₃
1998 JU ₃	17.5	0.15	19980507	34.13779	48.13065	142.26305	4.79564	0.1580884	2.4031672	9	1	2 days	0.10	E	Williams	1998 JU ₃
1998 JW ₃	17.0	0.15	19980507	301.25921	310.32763	357.13097	1.46959	0.1572612	2.1691669	17	1	20 days	0.56		Williams	1998 JW ₃
1998 JZ ₃	17.0	0.15	19980507	350.80968	183.77743	64.31061	25.05727	0.1932784	2.2732418	20	1	27 days	0.78		Williams	1998 JZ ₃
1998 JA ₄	16.5	0.15	19980507	301.86033	224.81350	93.31668	8.12928	0.2129611	2.2549201	15	1	17 days	1.12		Williams	1998 JA ₄
1998 JD ₄	14.5	0.15	19980507	149.38297	349.25115	82.13570	13.39149	0.0834717	2.9896477	16	1	16 days	0.41		Marsden	1998 JD ₄
1998 JE ₄	14.5	0.15	19980507	337.42612	21.86846	235.61676	12.98238	0.1587181	2.7173780	31	1	41 days	0.77		Williams	1998 JE ₄
1998 JF ₄	15.0	0.15	19980507	77.41223	24.49337	111.04945	4.33944	0.1527972	2.6182387	19	1	32 days	0.89		Williams	1998 JF ₄
1998 JG ₄	16.5	0.15	19980507	353.58794	46.74123	193.19851	2.47247	0.1478431	2.4042837	21	1	16 days	0.64		Williams	1998 JG ₄
1998 JH ₄	15.5	0.15	19980507	304.02644	207.00228	85.81879	3.72181	0.0473414	2.6926065	27	1	18 days	0.80		Williams	1998 JH ₄
1998 JJ ₄	15.5	0.15	19980507	289.92918	116.81547	223.62492	9.93810	0.3302923	2.4318211	17	1	16 days	0.53		Williams	1998 JJ ₄
1998 JL ₄	17.0	0.15	19980507	352.89877	65.89458	173.59682	3.94203	0.1522878	2.2946518	16	1	39 days	0.80		Williams	1998 JL ₄
1998 KA	14.0	0.15	19980507	40.50931	300.15761	239.50492	3.65186	0.1188662	3.1472011	33	1	39 days	0.64		Williams	1998 KA
1998 KB	15.5	0.15	19980507	290.52996	125.78666	193.88536	0.96683	0.1406813	2.5442292	10	1	17 days	0.21		Marsden	1998 KB
1998 KC	15.5	0.15	19980507	21.69541	107.53096	67.99723	23.14101	0.2700051	2.4123144	16	1	30 days	0.67		Williams	1998 KC
1998 KF	15.5	0.15	19980507	247.33679	77.45940	267.58277	3.80024	0.1862465	2.9955105	12	1	15 days	0.45		Williams	1998 KF
1998 KH	18.4	0.15	19980527	34.96692	64.11047	45.07328	26.33017	0.7133845	1.6527679	51	1	11 days	0.73		Nakano	1998 KH
1998 KJ	13.0	0.15	19980507	300.77823	179.44390	76.29154	11.12563	0.0674025	3.0318751	13	1	9 days	0.24		Williams	1998 KJ
1998 KM	16.5	0.15	19980507	343.78925	206.55774	43.07556	5.34417	0.0376196	2.2212149	14	1	6 days	1.35	E	Williams	1998 KM
1998 KU	15.0	0.15	19980527	354.51206	155.21256	96.69992	8.04418	0.0817905	2.3031281	20	1	15 days	0.66		Williams	1998 KU
1998 KV	16.6	0.15	19980527	19.88140	320.95448	253.37122	5.83050	0.1882713	2.6435228	9	1	6 days	0.33		Nakano	1998 KV
1998 KX	15.0	0.15	19980527	76.54338	47.48495	114.48862	7.68017	0.1103457	2.5458264	9	1	11 days	0.23		Marsden	1998 KX
1998 KY	15.0	0.15	19980507	286.77385	270.66595	46.46342	26.18947	0.1391181	1.9552050	15	1	2 days	0.52		Williams	1998 KY
1998 KZ	15.5	0.15	19980507	262.68817	288.00510	48.99414	22.43582	0.1027833	1.9731238	15	1	2 days	0.57	E	Williams	1998 KZ
1998 KB ₁	16.5	0.15	19980507	343.79329	99.16195	160.38367	11.92789	0.1386161	2.5346531	9	1	8 days	0.29		Williams	1998 KB ₁
1998 KE ₁	13.0	0.15	19980507	285.12163	254.87469	55.84274	11.84073	0.0751799	3.0516254	21	1	32 days	0.53		Williams	1998 KE ₁
1998 KF ₁	16.0	0.15	19980507	339.61597	52.47415	203.63441	1.72861	0.1581567	2.3566877	14	1	6 days	0.80	E	Williams	1998 KF ₁
1998 KH ₁	14.5	0.15	19980507	299.53107	97.04126	220.46394	9.23036	0.2399829	2.7411141	19	1	6 days	0.81	E	Williams	1998 KH ₁

1998 KL ₁	14.5	0.15	19980507	349.57926	207.75823	32.89257	2.49466	0.0418301	2.6784655	25	1	32 days	0.75		Williams	1998 KL ₁
1998 KO ₁	14.5	0.15	19980507	49.54823	295.83974	228.06933	6.14713	0.1226834	2.5100101	16	1	6 days	0.93	E	Williams	1998 KO ₁
1998 KP ₁	14.5	0.15	19980507	293.44471	120.60206	191.63303	1.22910	0.1777799	2.5320718	26	1	32 days	0.77		Williams	1998 KP ₁
1998 KQ ₁	15.5	0.15	19980507	332.59538	41.03701	227.82311	9.67295	0.2271999	2.7005358	14	1	6 days	1.27		Williams	1998 KQ ₁
1998 KR ₁	13.5	0.15	19980507	288.10787	270.56012	51.32998	13.20407	0.2008833	2.6941199	29	1	32 days	0.47		Williams	1998 KR ₁
1998 KB ₂	16.0	0.15	19980507	262.16906	114.79452	223.56952	16.38265	0.1131188	1.8937566	13	1	3 days	0.59	E	Williams	1998 KB ₂
1998 KC ₂	15.5	0.15	19980507	45.34304	290.39852	219.73989	20.88762	0.3149363	2.3600068	25	1	41 days	0.42		Williams	1998 KC ₂
1998 KK ₂	14.0	0.15	19980507	172.31313	340.68599	79.43509	16.10710	0.1209749	2.2299199	16	1	2 days	0.85	E	Williams	1998 KK ₂
1998 KP ₂	14.0	0.15	19980527	117.34742	59.77430	67.29467	23.42338	0.0210763	2.5740655	14	1	12 days	0.70	E	Williams	1998 KP ₂
1998 KQ ₂	14.5	0.15	19980527	357.84910	0.96494	249.50292	23.31936	0.1092599	2.2858082	22	1	12 days	0.42		Williams	1998 KQ ₂
1998 KU ₂	17.0	0.15	19980706	343.04886	119.13433	206.67238	4.88581	0.5535541	2.2489734	129	1	44 days	0.43	M-v 5	Marsden	1998 KU ₂
1998 KV ₂	16.9	0.15	19980527	96.91341	50.38576	66.91289	13.05319	0.3327930	1.5942063	31	1	8 days	0.83		Asher	1998 KV ₂
1998 KZ ₂	16.0	0.15	19980507	6.25805	193.74580	14.99009	5.27527	0.1050160	3.1989343	8	1	9 days	0.33	E	Williams	1998 KZ ₂
1998 KA ₃	16.5	0.15	19980527	272.01583	101.59466	234.21971	10.08144	0.2074660	2.2657185	7	1	9 days	0.15		Williams	1998 KA ₃
1998 KB ₃	15.5	0.15	19980527	229.74134	131.53631	224.93837	24.38972	0.0718335	3.1039018	7	1	9 days	0.16		Williams	1998 KB ₃
1998 KD ₃	21.0	0.15	19980527	11.21345	323.91722	241.75384	29.27393	0.5129226	2.0549975	160	1	14 days	0.95		Williams	1998 KD ₃
1998 KE ₃	15.5	0.15	19980527	21.71154	130.60825	62.99585	47.99554	0.2565106	2.0589001	127	1	13 days	0.82		Marsden	1998 KE ₃
1998 KF ₃	19.0	0.15	19980527	18.53473	332.42462	226.71255	27.09512	0.4212105	2.1278542	60	1	15 days	0.80		Williams	1998 KF ₃
1998 KG ₃	22.5	0.15	19980527	115.53333	267.43086	208.10191	5.46208	0.1182383	1.1611972	18	1	10 days	0.38		Williams	1998 KG ₃
1998 KM ₃	19.0	0.15	19980507	315.69302	85.58749	263.19752	4.83000	0.6323859	1.7301718	23	1	4 days	1.02		Williams	1998 KM ₃
1998 KN ₃	18.5	0.15	19980527	328.16466	68.83107	316.47537	2.36019	0.8882706	1.6051336	53	1	8 days	1.03		Williams	1998 KN ₃
1998 KO ₃	19.3	0.15	19980527	16.11388	75.24716	65.21248	54.49287	0.7706239	2.5958699	60	1	6 days	0.62		Asher	1998 KO ₃
1998 KS ₃	15.5	0.15	19980507	54.02068	329.66739	206.04744	4.17721	0.0048235	2.0068091	9	1	2 days	0.91	E	Williams	1998 KS ₃
1998 KY ₃	17.0	0.15	19980507	354.11260	9.15161	228.88626	22.57723	0.0564989	2.1178961	9	1	2 days	1.33	E	Williams	1998 KY ₃
1998 KZ ₃	15.0	0.15	19980507	353.46651	117.17301	122.66511	4.26946	0.1150610	2.5407401	18	1	2 days	0.68	E	Williams	1998 KZ ₃
1998 KA ₄	14.0	0.15	19980507	166.57593	353.41519	69.48423	17.29439	0.1352336	2.4216569	19	1	2 days	0.90	E	Williams	1998 KA ₄
1998 KB ₄	15.0	0.15	19980507	268.98982	178.28673	165.13198	2.77114	0.1732230	2.4005011	25	1	23 days	0.96		Williams	1998 KB ₄
1998 KE ₄	13.5	0.15	19980507	177.65283	217.73484	199.36121	4.22157	0.1141060	2.6979784	19	1	2 days	0.63	E	Williams	1998 KE ₄
1998 KJ ₄	15.5	0.15	19980507	356.27927	123.71702	113.50047	2.74368	0.1194662	2.8418243	9	1	2 days	0.73	E	Williams	1998 KJ ₄
1998 KK ₄	15.0	0.15	19980507	356.80257	43.03895	195.09232	4.45286	0.1485261	2.6492986	19	1	2 days	0.64	E	Williams	1998 KK ₄
1998 KL ₄	13.5	0.15	19980507	351.19424	18.86737	227.27090	18.28282	0.1032801	3.0719578	19	1	2 days	0.46	E	Williams	1998 KL ₄
1998 KM ₄	16.0	0.15	19980507	357.19837	143.61965	93.77332	5.16617	0.1288429	2.2739487	22	1	19 days	0.43		Williams	1998 KM ₄
1998 KN ₄	14.5	0.15	19980507	329.90490	199.30830	83.39790	11.27197	0.2373406	2.7558301	19	1	2 days	0.45	E	Williams	1998 KN ₄
1998 KO ₄	14.0	0.15	19980507	323.95794	150.43286	131.31151	3.85492	0.1269161	2.5927275	23	1	29 days	0.37		Williams	1998 KO ₄
1998 KP ₄	15.5	0.15	19980507	0.77072	24.06180	209.93634	8.49955	0.1580935	2.3867132	24	1	29 days	0.67		Williams	1998 KP ₄
1998 KR ₄	14.5	0.15	19980507	166.96472	357.71664	70.15743	15.10267	0.1280760	2.6687153	9	1	2 days	0.92	E	Williams	1998 KR ₄
1998 KS ₄	16.0	0.15	19980507	40.19123	91.30835	90.10787	4.33409	0.1620066	2.3193498	9	1	2 days	0.49	E	Williams	1998 KS ₄
1998 KT ₄	15.0	0.15	19980507	355.43019	156.59001	86.55459	6.32547	0.1497149	2.9524407	9	1	2 days	0.42	E	Williams	1998 KT ₄
1998 KU ₄	15.0	0.15	19980507	293.32519	255.33118	76.34296	6.92813	0.2458466	2.3604136	19	1	2 days	0.53	E	Williams	1998 KU ₄
1998 KX ₄	14.0	0.15	19980507	288.79547	222.91505	106.91527	3.53179	0.2015182	3.0530595	18	1	2 days	0.93	E	Williams	1998 KX ₄
1998 KP ₅	13.5	0.15	19980507	183.47700	270.65836	151.07104	15.58598	0.1838617	3.1666376	9	1	11 days	0.16		Williams	1998 KP ₅
1998 KQ ₅	16.5	0.15	19980507	6.68173	125.81600	94.11056	13.58989	0.1398704	3.1036143	9	1	10 days	0.27		Williams	1998 KQ ₅
1998 KU ₅	16.0	0.15	19980507	224.45295	240.91568	146.70513	14.72145	0.1306547	2.6401879	9	1	12 days	0.14		Williams	1998 KU ₅
1998 KX ₅	16.5	0.15	19980527	273.27337	69.00134	256.04626	3.73389	0.1271533	2.2431029	8	1	7 days	0.18		Williams	1998 KX ₅
1998 KY ₅	16.0	0.15	19980527	177.97897	15.49012	28.49675	7.11007	0.1774228	2.3738375	8	1	7 days	0.38	E	Williams	1998 KY ₅
1998 KF ₆	20.0	0.15	19980507	357.42810	149.97400	81.21903	7.96067	0.3597192	2.0649065	32	1	6 days	1.08		Williams	1998 KF ₆
1998 KN ₆	15.0	0.15	19980527	345.36031	184.96299	82.81290	31.00365	0.1402315	2.5631151	15	1	11 days	1.11		Williams	1998 KN ₆
1998 KO ₆	14.0	0.15	19980507	355.97800	151.07381	86.59515	7.73239	0.1439952	2.9205183	16	1	2 days	0.54	E	Williams	1998 KO ₆
1998 KP ₆	14.5	0.15	19980507	321.70806	65.97895	212.04294	7.28598	0.0819404	2.7305967	23	1	29 days	0.76		Williams	1998 KP ₆
1998 KR ₆	15.5	0.15	19980507	354.29683	25.46019	214.54373	4.31087	0.0929897	2.2133493	15	1	2 days	1.01	E	Williams	1998 KR ₆
1998 KS ₆	15.5	0.15	19980527	79.72670	44.18531	100.12669	4.45744	0.1327825	2.3465457	10	1	12 days	0.79		Williams	1998 KS ₆
1998 KU ₆	16.0	0.15	19980507	331.93717	77.51334	196.23792	5.45003	0.1813603	2.1530040	23	1	29 days	0.65		Williams	1998 KU ₆
1998 KV ₆	14.5	0.15	19980527	297.02600	229.70768	97.89648	7.88359	0.2062647	2.2682825	20	1	12 days	0.81		Williams	1998 KV ₆

1998 KW ₆	15.0	0.15	19980507	28.21700	86.73156	110.67440	3.00998	0.1592719	2.3937282	23	1	29 days	0.69	Williams	1998 KW ₆
1998 KY ₆	16.0	0.15	19980527	1.60743	12.60275	226.15868	9.88695	0.2116556	2.3988824	20	1	12 days	0.74	Williams	1998 KY ₆
1998 KZ ₆	15.0	0.15	19980507	171.54603	346.23751	76.20405	9.27319	0.1242712	2.4531759	14	1	2 days	1.34	E Williams	1998 KZ ₆
1998 KA ₇	15.5	0.15	19980507	19.66147	331.35944	231.27001	12.46495	0.2432027	2.8213008	16	1	2 days	0.88	E Williams	1998 KA ₇
1998 KB ₇	15.0	0.15	19980507	276.87296	117.65895	212.37322	6.58251	0.0922777	2.4612001	16	1	2 days	0.80	E Williams	1998 KB ₇
1998 KC ₇	14.5	0.15	19980507	304.97554	253.94178	69.69808	21.74704	0.2899648	3.1702129	16	1	2 days	0.79	E Williams	1998 KC ₇
1998 KD ₇	14.5	0.15	19980507	356.22389	157.28210	82.93173	13.13624	0.1176037	3.1208196	18	1	2 days	1.01	E Williams	1998 KD ₇
1998 KG ₇	15.0	0.15	19980507	1.02469	71.01980	156.42184	2.42567	0.1320955	2.4273536	28	1	36 days	0.53	Williams	1998 KG ₇
1998 KJ ₇	14.0	0.15	19980507	278.37852	173.47525	146.35419	2.97239	0.0660754	2.9744846	15	1	2 days	0.87	E Williams	1998 KJ ₇
1998 KK ₇	15.5	0.15	19980507	75.04500	297.21056	206.59801	6.68525	0.1119008	2.2474886	25	1	23 days	0.57	Williams	1998 KK ₇
1998 KL ₇	16.0	0.15	19980507	22.52513	357.69949	198.28578	4.18557	0.2151618	2.4411355	16	1	2 days	0.75	Williams	1998 KL ₇
1998 KM ₇	14.0	0.15	19980507	3.16400	152.49195	75.19900	13.32190	0.0956884	3.1495464	19	1	19 days	0.71	Williams	1998 KM ₇
1998 KN ₇	15.0	0.15	19980507	165.87037	346.66338	77.36350	9.76517	0.0945795	2.2833602	15	1	2 days	0.99	E Williams	1998 KN ₇
1998 KP ₇	15.0	0.15	19980507	161.81484	334.05779	96.15816	6.14495	0.1060836	2.2659808	16	1	2 days	1.16	E Williams	1998 KP ₇
1998 KQ ₇	15.5	0.15	19980507	29.76472	339.11843	214.30641	8.90142	0.1669275	2.4085774	24	1	29 days	0.91	Williams	1998 KQ ₇
1998 KR ₇	15.0	0.15	19980507	356.69231	153.33240	85.70591	10.75143	0.1330536	2.6010062	15	1	2 days	0.63	E Williams	1998 KR ₇
1998 KS ₇	14.5	0.15	19980507	168.25293	351.67054	69.23256	10.50536	0.1258626	2.4403361	18	1	2 days	0.82	E Williams	1998 KS ₇
1998 KU ₇	15.0	0.15	19980507	336.54500	46.14357	227.10709	8.63028	0.2572849	2.6925230	16	1	2 days	0.73	E Williams	1998 KU ₇
1998 KW ₇	13.0	0.15	19980527	7.61973	13.12392	219.11872	8.06654	0.0501258	3.0380243	21	1	12 days	0.47	Williams	1998 KW ₇
1998 KY ₇	14.0	0.15	19980507	290.13859	259.23295	77.23374	12.49469	0.2550891	2.7445090	15	1	2 days	0.37	E Williams	1998 KY ₇
1998 KZ ₇	13.0	0.15	19980527	280.13449	261.89268	74.23688	17.75090	0.1248243	3.1629437	20	1	12 days	0.50	Williams	1998 KZ ₇
1998 KC ₈	15.0	0.15	19980527	116.64246	215.14945	261.37473	5.74359	0.0829183	2.3197513	20	1	12 days	1.01	Williams	1998 KC ₈
1998 KD ₈	15.0	0.15	19980507	354.62435	357.03065	242.85514	4.87127	0.1412751	2.3368076	16	1	3 days	1.07	E Williams	1998 KD ₈
1998 KJ ₈	14.0	0.15	19980507	356.93917	142.04358	94.07501	8.99467	0.1402560	2.9029254	16	1	2 days	0.51	E Williams	1998 KJ ₈
1998 KK ₈	13.5	0.15	19980507	308.59875	91.06918	202.03803	10.31900	0.0753497	2.9997250	23	1	29 days	0.51	Williams	1998 KK ₈
1998 KM ₈	14.0	0.15	19980507	323.85520	93.76944	195.38454	8.92192	0.2040284	2.8481706	14	1	29 days	0.69	Williams	1998 KM ₈
1998 KN ₈	14.0	0.15	19980527	31.75424	127.37829	75.58863	22.07154	0.0808806	3.1106385	14	1	11 days	1.18	Williams	1998 KN ₈
1998 KP ₈	13.5	0.15	19980527	236.41804	236.96471	141.16194	9.38299	0.1796833	2.7397684	19	1	11 days	0.86	Williams	1998 KP ₈
1998 KQ ₈	16.0	0.15	19980527	1.59983	142.08159	96.38319	10.27396	0.2471683	2.5357688	20	1	11 days	1.04	Williams	1998 KQ ₈
1998 KR ₈	14.5	0.15	19980527	12.08062	94.44729	130.57331	7.36050	0.1450999	2.4429305	21	1	11 days	0.43	Williams	1998 KR ₈
1998 KT ₈	14.0	0.15	19980507	326.67807	163.32019	117.80231	9.13940	0.1888124	2.7992941	13	1	29 days	0.46	Williams	1998 KT ₈
1998 KY ₈	14.5	0.15	19980507	347.91169	99.08355	151.33406	7.96402	0.1656388	2.3124273	24	1	31 days	0.46	Williams	1998 KY ₈
1998 KB ₉	14.5	0.15	19980507	281.58135	205.95190	116.13389	3.67595	0.1195713	2.6023562	29	1	36 days	0.78	Williams	1998 KB ₉
1998 KC ₉	14.5	0.15	19980507	323.70692	106.01344	183.33313	15.98965	0.2219895	3.1276466	16	1	5 days	0.70	Williams	1998 KC ₉
1998 KH ₉	18.5	0.15	19980527	350.70492	184.99721	82.78782	17.72188	0.4602959	2.2181440	101	1	10 days	0.51	Williams	1998 KH ₉
1998 KJ ₉	19.5	0.15	19980527	323.10937	259.75427	98.87453	10.84679	0.6340628	1.4327585	144	1	12 days	0.58	Williams	1998 KJ ₉
1998 KK ₉	15.5	0.15	19980527	318.31285	197.87741	100.14345	3.54815	0.1403216	2.3310289	37	1	13 days	0.83	Williams	1998 KK ₉
1998 KL ₉	16.0	0.15	19980527	75.68714	292.55503	216.05269	11.66807	0.2433139	2.5545118	9	1	6 days	0.31	Marsden	1998 KL ₉
1998 KM ₉	15.5	0.15	19980527	132.79954	336.08702	137.04550	7.53817	0.0705780	2.3698356	9	1	6 days	0.47	Marsden	1998 KM ₉
1998 KN ₉	13.5	0.15	19980527	5.06403	48.08880	227.26864	16.08446	0.0478685	2.5227815	8	1	6 days	0.22	Marsden	1998 KN ₉
1998 KP ₉	12.5	0.15	19980507	359.92171	147.65208	28.17179	15.32385	0.0711049	2.5708756	11	1	10 days	0.25	Williams	1998 KP ₉
1998 KT ₉	14.5	0.15	19980507	129.08590	188.84110	259.67891	11.83300	0.1481427	2.4312791	17	1	3 days	0.81	Williams	1998 KT ₉
1998 KW ₉	13.0	0.15	19980527	298.37001	35.05878	286.56750	9.14781	0.2144954	3.1656892	10	1	11 days	0.11	Williams	1998 KW ₉
1998 KZ ₉	15.5	0.15	19980527	311.56721	261.52357	51.80304	4.21659	0.1713160	2.2598929	22	1	12 days	0.51	Williams	1998 KZ ₉
1998 KA ₁₀	14.5	0.15	19980507	201.37193	247.29134	141.36837	4.73827	0.1658000	2.2848470	34	1	41 days	0.65	Williams	1998 KA ₁₀
1998 KC ₁₀	16.5	0.15	19980527	332.43882	113.96803	172.66032	2.94714	0.1841943	2.2922097	19	1	12 days	0.84	Williams	1998 KC ₁₀
1998 KD ₁₀	14.5	0.15	19980507	229.04893	304.27974	57.70978	9.12711	0.1008337	2.4177008	19	1	6 days	1.25	Williams	1998 KD ₁₀
1998 KF ₁₀	14.5	0.15	19980507	247.54125	171.44685	174.64095	5.19209	0.0558095	2.7158997	42	1	36 days	0.74	Williams	1998 KF ₁₀
1998 KL ₁₀	17.0	0.15	19980507	314.12879	135.47441	153.91258	9.48115	0.1390891	3.0112117	9	1	14 days	0.13	Williams	1998 KL ₁₀
1998 KR ₁₀	16.0	0.15	19980527	108.96154	323.15150	152.93804	10.56832	0.0893194	3.1090923	9	1	11 days	0.73	Williams	1998 KR ₁₀
1998 KS ₁₀	16.5	0.15	19980527	38.88812	20.64755	171.04037	11.12588	0.0625644	3.0042229	9	1	11 days	0.30	Williams	1998 KS ₁₀
1998 KT ₁₀	16.0	0.15	19980507	94.65964	37.33802	94.06862	14.65327	0.0368115	2.5782603	9	1	7 days	0.16	Williams	1998 KT ₁₀
1998 KU ₁₀	15.5	0.15	19980527	255.18493	217.65517	132.40873	10.92119	0.0962567	3.1121759	9	1	11 days	0.16	Williams	1998 KU ₁₀

1998 KV ₁₀	14.5	0.15	19980527	100.36106	3.01117	127.28824	10.90052	0.0466814	3.0260371	9	1	11 days	0.13	Williams	1998 KV ₁₀
1998 KX ₁₀	15.5	0.15	19980527	269.35291	200.81693	145.92541	9.52037	0.1915780	2.5578713	9	1	11 days	0.20	Williams	1998 KX ₁₀
1998 KY ₁₀	16.0	0.15	19980527	259.00483	190.24190	157.14203	10.68568	0.1089634	2.9750156	9	1	11 days	0.20	Williams	1998 KY ₁₀
1998 KA ₁₁	15.5	0.15	19980527	290.38747	239.90248	92.38565	16.07360	0.2398888	2.7260529	9	1	11 days	0.12	Williams	1998 KA ₁₁
1998 KE ₁₁	14.5	0.15	19980527	334.55357	122.05004	153.95908	14.45790	0.0968170	3.1306161	12	1	10 days	0.48	Williams	1998 KE ₁₁
1998 KF ₁₁	19.0	0.15	19980527	343.68461	116.48243	160.11076	11.20679	0.2962728	2.7354827	9	1	9 days	0.13	Williams	1998 KF ₁₁
1998 KT ₁₁	16.0	0.15	19980527	261.25866	201.68216	141.42691	10.12340	0.0705213	2.5181744	9	1	8 days	0.23	Williams	1998 KT ₁₁
1998 KU ₁₁	16.5	0.15	19980527	13.76179	112.36942	108.45366	12.39560	0.0636996	2.6002767	9	1	10 days	0.18	Williams	1998 KU ₁₁
1998 KH ₁₂	16.5	0.15	19980527	259.50410	161.41871	189.80776	13.07157	0.1300519	2.7286665	9	1	6 days	0.44	Williams	1998 KH ₁₂
1998 KL ₁₂	13.0	0.15	19980507	214.45693	222.85727	162.87879	10.98962	0.1172906	3.0053744	16	1	6 days	0.55	Williams	1998 KL ₁₂
1998 KD ₁₇	16.5	0.15	19980527	67.82937	292.72680	220.15521	27.20683	0.2465143	2.6116014	8	1	5 days	0.22	Williams	1998 KD ₁₇
1998 KH ₁₇	16.5	0.15	19980527	346.82829	71.34540	220.33329	22.33381	0.4256306	2.3314322	87	1	11 days	0.50	Williams	1998 KH ₁₇
1998 KJ ₁₇	23.5	0.15	19980706	15.73269	163.84655	76.18033	9.13853	0.4817941	1.9874829	59	1	8 days	0.66	M-v 6 Marsden	1998 KJ ₁₇
1998 KK ₁₇	16.5	0.15	19980527	50.37605	334.29168	141.22610	11.18427	0.5271689	1.4342253	82	1	10 days	0.61	Williams	1998 KK ₁₇
1998 KS ₁₉	13.5	0.15	19980507	174.79885	216.94378	194.32393	9.09941	0.0694885	2.6496472	23	1	41 days	0.47	Williams	1998 KS ₁₉
1998 KK ₂₆	15.0	0.15	19980527	34.07073	316.86039	281.93591	12.25557	0.1260201	2.5543009	9	1	10 days	0.11	Williams	1998 KK ₂₆
1998 KM ₂₆	14.0	0.15	19980527	77.53121	96.24489	32.81344	16.14355	0.1175256	3.3998290	9	1	5 days	0.17	Williams	1998 KM ₂₆
1998 KN ₂₆	16.5	0.15	19980527	295.13063	271.19500	37.46929	13.12271	0.1782207	2.6576024	9	1	5 days	0.61	Williams	1998 KN ₂₆
1998 KR ₂₆	14.5	0.15	19980527	162.55040	221.85640	222.51980	32.01853	0.1779298	2.7247781	9	1	5 days	0.11	Williams	1998 KR ₂₆
1998 KT ₂₆	13.0	0.15	19980527	130.48895	347.92578	115.16533	20.82160	0.1418272	3.2068955	9	1	6 days	0.53	Williams	1998 KT ₂₆
1998 KW ₂₆	15.0	0.15	19980527	323.46103	238.63626	74.21407	13.77538	0.2954515	2.6098726	22	1	12 days	0.84	Williams	1998 KW ₂₆
1998 KY ₂₆	25.5	0.15	19980706	355.92862	209.17773	84.51122	1.48145	0.2019405	1.2328815	209	1	11 days	0.56	M-v 4 Williams	1998 KY ₂₆
1998 KZ ₂₆	15.5	0.15	19980527	233.62409	330.58680	44.87622	10.68694	0.1242888	2.5318288	8	1	8 days	0.45	E Williams	1998 KZ ₂₆
1998 KM ₂₉	13.5	0.15	19980527	46.63004	343.88346	202.65440	9.92361	0.0547998	3.1879597	12	1	12 days	0.93	Williams	1998 KM ₂₉
1998 KL ₃₁	14.0	0.15	19980527	350.26042	170.86957	81.94359	14.33377	0.1299015	2.6687856	17	1	12 days	0.74	Williams	1998 KL ₃₁
1998 KO ₃₁	14.5	0.15	19980527	80.43925	4.97304	147.52459	4.22334	0.0663079	2.4008530	18	1	12 days	1.08	Williams	1998 KO ₃₁
1998 KV ₃₁	13.5	0.15	19980527	320.59928	214.79484	69.12495	12.60510	0.0618301	2.8637884	16	1	12 days	1.24	E Williams	1998 KV ₃₁
1998 KE ₃₂	16.0	0.15	19980527	318.43463	236.72677	67.91666	4.67353	0.2326919	2.6993827	10	1	10 days	0.39	Williams	1998 KE ₃₂
1998 KN ₃₂	15.0	0.15	19980527	100.81122	60.45606	64.38273	2.99874	0.1334900	2.3498652	19	1	12 days	0.77	Williams	1998 KN ₃₂
1998 KL ₃₃	15.5	0.15	19980527	51.23190	133.14593	50.53896	7.16162	0.0861558	2.2668833	17	1	12 days	0.96	Williams	1998 KL ₃₃
1998 KS ₃₃	13.0	0.15	19980527	279.87405	93.10514	238.94637	5.95565	0.0895483	3.1168665	12	1	12 days	1.06	E Williams	1998 KS ₃₃
1998 KT ₃₃	15.5	0.15	19980507	339.22925	195.92640	68.86959	3.67186	0.1861176	2.4159510	18	1	36 days	1.14	Williams	1998 KT ₃₃
1998 KB ₃₄	14.0	0.15	19980507	343.33613	86.31238	171.30962	4.04695	0.1204239	3.1241856	16	1	29 days	0.83	Williams	1998 KB ₃₄
1998 KH ₃₄	16.0	0.15	19980706	21.29867	95.00091	134.35463	4.86036	0.1185996	2.3078896	18	1	65 days	0.63	M-v 5 Williams	1998 KH ₃₄
1998 KN ₃₄	14.0	0.15	19980527	6.94438	153.53964	76.44592	20.52572	0.1780359	3.1813987	18	1	12 days	0.61	Williams	1998 KN ₃₄
1998 KR ₃₄	16.0	0.15	19980527	348.49278	80.88142	176.94432	4.93916	0.1304656	2.3483053	15	1	12 days	1.13	Williams	1998 KR ₃₄
1998 KV ₃₄	14.5	0.15	19980527	37.08722	107.13652	91.44057	11.52387	0.0907137	2.7382949	14	1	12 days	0.78	Williams	1998 KV ₃₄
1998 KK ₃₅	13.5	0.15	19980527	315.59636	223.86516	68.63337	10.10699	0.0704923	2.9817339	14	1	12 days	0.74	Williams	1998 KK ₃₅
1998 KO ₃₅	13.5	0.15	19980527	284.48093	94.75763	235.70013	12.64714	0.1089952	3.2267992	13	1	12 days	0.48	E Williams	1998 KO ₃₅
1998 KU ₃₅	16.0	0.15	19980527	352.25162	223.50333	33.68424	1.36609	0.2695331	2.7390588	14	1	12 days	0.72	Williams	1998 KU ₃₅
1998 KA ₃₆	14.0	0.15	19980527	87.64776	252.04611	244.41059	11.30466	0.1698585	2.5982982	15	1	12 days	1.02	Williams	1998 KA ₃₆
1998 KQ ₃₆	16.0	0.15	19980527	340.17305	223.40246	47.66921	1.91651	0.1494703	2.1883780	14	1	12 days	0.80	Williams	1998 KQ ₃₆
1998 KT ₃₆	15.0	0.15	19980527	34.64391	306.19694	256.12505	3.95934	0.1011485	2.3033273	14	1	12 days	0.57	Williams	1998 KT ₃₆
1998 KA ₃₇	16.0	0.15	19980527	26.05938	356.82136	211.13582	2.49121	0.1545720	2.3574407	14	1	12 days	1.14	Williams	1998 KA ₃₇
1998 KB ₃₇	14.5	0.15	19980527	290.80053	249.20650	70.15385	14.66155	0.0638709	2.6278641	14	1	12 days	1.15	Williams	1998 KB ₃₇
1998 KL ₃₇	14.5	0.15	19980527	155.63848	237.89665	206.50649	5.92921	0.0707300	2.2904410	18	1	12 days	0.82	Williams	1998 KL ₃₇
1998 KM ₃₇	15.0	0.15	19980527	336.12751	167.44585	115.31774	3.87263	0.2408241	2.6556505	18	1	12 days	0.73	Williams	1998 KM ₃₇
1998 KR ₃₇	13.5	0.15	19980527	334.55397	193.25832	76.85856	22.72575	0.0447685	3.1398238	17	1	12 days	0.72	Williams	1998 KR ₃₇
1998 KU ₃₇	15.5	0.15	19980507	312.61021	199.31112	93.09348	9.91412	0.0662098	2.6496900	23	1	26 days	1.19	Williams	1998 KU ₃₇
1998 KX ₃₇	14.5	0.15	19980527	347.96759	171.00861	88.77818	9.52413	0.1414531	2.7866057	14	1	12 days	0.84	Williams	1998 KX ₃₇
1998 KB ₃₈	15.5	0.15	19980527	4.51901	112.82208	125.72116	3.74089	0.1230296	2.4911601	13	1	12 days	0.76	Williams	1998 KB ₃₈
1998 KD ₃₈	13.0	0.15	19980527	267.46271	284.63073	77.92915	14.90912	0.2376149	2.9020946	13	1	12 days	0.66	Williams	1998 KD ₃₈
1998 KK ₃₈	13.0	0.15	19980527	268.79009	102.93434	239.06097	7.49449	0.0494106	3.0135967	15	1	12 days	1.07	E Williams	1998 KK ₃₈

1998 KP ₃₈	13.5	0.15	19980527	327.48957	228.83390	58.84986	8.65375	0.1425107	2.9637145	15	1	12 days	0.53	Williams	1998 KP ₃₈
1998 KQ ₃₈	15.0	0.15	19980527	50.16256	156.79318	25.05586	2.51378	0.1367567	2.3540445	14	1	12 days	0.89	Williams	1998 KQ ₃₈
1998 KU ₃₈	14.5	0.15	19980527	109.05823	224.64157	263.36913	7.14557	0.0861373	2.5796869	13	1	12 days	0.67	Williams	1998 KU ₃₈
1998 KM ₃₉	16.0	0.15	19980527	351.21887	53.99975	203.59964	0.65965	0.1538423	2.1665837	14	1	12 days	0.45	Williams	1998 KM ₃₉
1998 KE ₄₀	14.0	0.15	19980527	168.92488	307.25683	126.47179	4.42355	0.1285524	2.2654447	12	1	12 days	0.69	Williams	1998 KE ₄₀
1998 KF ₄₀	13.5	0.15	19980527	97.83922	268.81448	226.04911	12.49722	0.1174279	2.6086391	15	1	12 days	0.60	Williams	1998 KF ₄₀
1998 KV ₄₀	14.0	0.15	19980527	178.25602	342.58944	85.14684	12.14434	0.0817374	2.9879382	14	1	12 days	0.99	Williams	1998 KV ₄₀
1998 KZ ₄₀	14.0	0.15	19980527	134.25188	255.43463	213.65381	3.55041	0.0333565	2.7410260	14	1	12 days	0.77	Williams	1998 KZ ₄₀
1998 KB ₄₁	16.5	0.15	19980527	15.26353	63.21678	162.01973	1.10679	0.1507398	2.3491797	14	1	12 days	0.91	Williams	1998 KB ₄₁
1998 KG ₄₁	14.0	0.15	19980527	204.62396	330.64567	76.33097	2.91421	0.1269470	2.2837380	14	1	12 days	0.66	Williams	1998 KG ₄₁
1998 KH ₄₁	15.0	0.15	19980527	41.45442	122.97081	66.60243	6.42696	0.1731072	2.6305739	15	1	12 days	0.98	Williams	1998 KH ₄₁
1998 KM ₄₁	14.5	0.15	19980527	87.81503	95.41346	56.84747	7.21646	0.0636696	2.2700871	15	1	12 days	0.46	Williams	1998 KM ₄₁
1998 KZ ₄₁	16.5	0.15	19980527	287.08669	298.17058	22.25773	4.82246	0.2104449	2.4798352	9	1	6 days	0.20	E Williams	1998 KZ ₄₁
1998 KQ ₄₃	15.5	0.15	19980527	295.32769	247.22728	66.14178	24.42892	0.0176809	1.9332612	15	1	12 days	0.97	Williams	1998 KQ ₄₃
1998 KB ₄₄	16.0	0.15	19980527	29.01447	152.22220	56.07852	1.71548	0.1531575	2.3521132	14	1	12 days	0.94	Williams	1998 KB ₄₄
1998 KD ₄₄	15.5	0.15	19980527	14.58714	341.28053	250.14166	5.77465	0.0644132	2.4454916	13	1	12 days	0.94	Williams	1998 KD ₄₄
1998 KF ₄₄	14.5	0.15	19980527	299.17026	76.53887	245.44512	9.86946	0.1273513	2.8310207	14	1	12 days	0.91	Williams	1998 KF ₄₄
1998 KL ₄₄	15.5	0.15	19980527	351.33853	183.05560	75.42296	6.62036	0.1302532	2.2673243	13	1	12 days	0.85	E Williams	1998 KL ₄₄
1998 KQ ₄₄	15.5	0.15	19980527	13.51318	11.47236	218.77601	5.49843	0.1044028	2.3997514	14	1	12 days	0.73	Williams	1998 KQ ₄₄
1998 KT ₄₄	14.5	0.15	19980527	300.26930	129.92360	198.29111	6.72418	0.1945394	2.6820855	15	1	12 days	1.36	Williams	1998 KT ₄₄
1998 KW ₄₄	13.0	0.15	19980527	60.73337	310.57721	224.85852	13.58160	0.1174370	3.1916969	14	1	12 days	0.73	Williams	1998 KW ₄₄
1998 KY ₄₄	14.0	0.15	19980527	63.35374	82.92006	94.77025	11.20773	0.0674790	2.9828108	13	1	12 days	0.88	Williams	1998 KY ₄₄
1998 KJ ₄₅	15.0	0.15	19980527	303.19912	256.88573	75.07891	14.41909	0.2463013	2.6659258	13	1	12 days	0.83	Williams	1998 KJ ₄₅
1998 KM ₄₅	15.0	0.15	19980527	24.79393	335.95662	242.16818	4.49198	0.0935810	2.2429112	13	1	12 days	0.81	Williams	1998 KM ₄₅
1998 KV ₄₅	13.5	0.15	19980527	348.10379	195.38165	69.24312	21.89774	0.0850080	2.9207434	13	1	12 days	0.62	Williams	1998 KV ₄₅
1998 KW ₄₅	16.0	0.15	19980527	50.10568	108.42538	83.06447	7.09795	0.0721409	2.2485266	14	1	12 days	0.85	Williams	1998 KW ₄₅
1998 KZ ₄₅	16.0	0.15	19980527	4.18758	73.14373	169.99991	2.75915	0.1135280	2.4137619	12	1	12 days	1.08	Williams	1998 KZ ₄₅
1998 KF ₄₆	15.5	0.15	19980527	333.07598	122.52592	160.26308	4.69760	0.1235620	2.6237450	12	1	12 days	1.02	Williams	1998 KF ₄₆
1998 KH ₄₇	12.5	0.15	19980527	322.37534	182.85650	119.39652	2.70469	0.1531476	3.2482733	13	1	12 days	0.98	E Williams	1998 KH ₄₇
1998 KH ₄₇	13.5	0.15	19980527	57.83407	313.33156	235.93516	11.98621	0.0465063	3.0535322	14	1	12 days	0.84	Williams	1998 KH ₄₇
1998 KT ₄₇	13.5	0.15	19980527	355.61236	174.30408	82.35707	19.82115	0.0515084	3.2007751	12	1	12 days	1.39	E Williams	1998 KT ₄₇
1998 KV ₄₇	14.5	0.15	19980527	151.31631	236.80114	218.85075	5.02845	0.0984544	2.3823123	11	1	12 days	0.99	Williams	1998 KV ₄₇
1998 KW ₄₇	14.0	0.15	19980527	3.61298	38.73592	208.51447	2.79303	0.1299076	2.5299631	15	1	12 days	0.89	Williams	1998 KW ₄₇
1998 KY ₄₇	15.5	0.15	19980527	341.02572	143.33584	132.31928	4.76425	0.1264008	2.2447504	15	1	12 days	0.64	Williams	1998 KY ₄₇
1998 KZ ₄₇	15.0	0.15	19980527	348.26927	158.80032	108.69599	7.24653	0.1151020	2.2623823	14	1	12 days	0.75	Williams	1998 KZ ₄₇
1998 KJ ₄₈	14.0	0.15	19980527	299.89260	173.17999	160.76650	5.17682	0.1973322	3.1387010	13	1	12 days	0.88	Williams	1998 KJ ₄₈
1998 KW ₄₈	14.0	0.15	19980507	12.25007	124.91455	90.49409	12.55544	0.1394627	2.6798638	20	1	29 days	0.49	Williams	1998 KW ₄₈
1998 KS ₄₉	14.0	0.15	19980527	355.11506	85.90661	160.39807	14.90211	0.1141877	2.6187489	13	1	12 days	0.46	Williams	1998 KS ₄₉
1998 KY ₄₉	14.0	0.15	19980527	280.47940	199.50613	130.51679	10.59196	0.0926753	3.0080328	13	1	11 days	0.94	Williams	1998 KY ₄₉
1998 KD ₅₀	13.0	0.15	19980527	299.39022	128.21727	183.73889	11.26731	0.0911882	3.3965063	18	1	11 days	1.05	Williams	1998 KD ₅₀
1998 KH ₅₀	14.0	0.15	19980527	280.10244	190.47433	134.50441	11.62631	0.0379582	3.1162275	13	1	12 days	0.77	Williams	1998 KH ₅₀
1998 KP ₅₀	14.5	0.15	19980527	22.50867	64.56806	148.43389	12.81351	0.1163492	2.7216807	12	1	11 days	0.95	Williams	1998 KP ₅₀
1998 KQ ₅₀	13.0	0.15	19980527	166.12484	254.88348	178.98510	15.44572	0.0477723	3.1993146	13	1	11 days	0.80	Williams	1998 KQ ₅₀
1998 KR ₅₀	14.0	0.15	19980527	327.12538	178.03063	105.82183	15.52196	0.1475506	2.7023415	18	1	12 days	0.53	Williams	1998 KR ₅₀
1998 KT ₅₀	13.0	0.15	19980527	179.66808	260.42186	161.77445	13.02990	0.0460916	3.1682399	14	1	11 days	0.85	Williams	1998 KT ₅₀
1998 KU ₅₀	14.5	0.15	19980527	351.28474	148.62226	101.76803	17.04648	0.0908597	3.1476934	13	1	11 days	1.07	Williams	1998 KU ₅₀
1998 KV ₅₀	15.0	0.15	19980527	335.20577	81.87792	194.29493	13.04074	0.1506053	2.6051361	13	1	12 days	0.56	Williams	1998 KV ₅₀
1998 KX ₅₀	15.0	0.15	19980527	326.64980	182.14492	100.47033	15.20581	0.1087250	2.5971194	13	1	11 days	0.55	Williams	1998 KX ₅₀
1998 KE ₅₁	15.0	0.15	19980527	28.91108	2.88541	205.84093	13.03080	0.1094682	2.7022553	16	1	11 days	0.60	Williams	1998 KE ₅₁
1998 KF ₅₁	14.0	0.15	19980527	84.59584	290.89869	214.49384	15.02240	0.1266790	2.5381783	15	1	11 days	0.61	Williams	1998 KF ₅₁
1998 KN ₅₁	14.0	0.15	19980527	266.58388	227.64148	123.07152	11.59881	0.1231064	2.9753137	13	1	11 days	0.98	Williams	1998 KN ₅₁
1998 KT ₅₁	14.5	0.15	19980527	27.15665	40.09049	170.54246	11.19562	0.0879069	2.7016964	13	1	12 days	0.50	Williams	1998 KT ₅₁
1998 KX ₅₁	16.0	0.15	19980527	29.47718	42.59505	156.39199	10.16959	0.2055278	2.3493279	20	1	12 days	0.98	Williams	1998 KX ₅₁

1998 KJ ₅₂	13.0	0.15	19980507	87.16826	332.12174	181.08280	10.42469	0.0144760	3.1559453	18	1	28 days	0.95	Williams	1998 KJ ₅₂
1998 KQ ₅₂	15.0	0.15	19980527	93.66365	353.20789	152.90649	6.15531	0.0519952	2.3547446	17	1	11 days	0.62	Williams	1998 KQ ₅₂
1998 KV ₅₂	13.5	0.15	19980527	330.36057	100.65200	176.89652	21.35678	0.1113790	3.2029559	12	1	12 days	0.75	Williams	1998 KV ₅₂
1998 KX ₅₂	13.0	0.15	19980527	46.70423	0.77629	177.47546	15.63937	0.1628264	3.1769562	16	1	11 days	0.78	Williams	1998 KX ₅₂
1998 KB ₅₃	13.0	0.15	19980527	220.40140	207.77745	188.69596	13.00829	0.1677475	2.6676577	18	1	11 days	0.84	Williams	1998 KB ₅₃
1998 KE ₅₃	15.0	0.15	19980527	324.64819	191.13616	105.84327	15.42531	0.2097150	2.7130104	14	1	11 days	0.91	Williams	1998 KE ₅₃
1998 KF ₅₃	14.0	0.15	19980507	11.11299	83.22083	140.40321	11.17000	0.1433754	2.6590754	18	1	28 days	0.44	Williams	1998 KF ₅₃
1998 KG ₅₃	15.0	0.15	19980527	341.44952	84.36904	186.12350	14.90265	0.1469026	2.6550531	16	1	11 days	0.81	Williams	1998 KG ₅₃
1998 KS ₅₃	14.0	0.15	19980527	323.78196	158.92758	134.27635	9.86937	0.1318872	2.7774286	14	1	11 days	0.63	Williams	1998 KS ₅₃
1998 KW ₅₃	13.0	0.15	19980527	138.92467	17.16119	84.44328	23.15210	0.0719489	3.1935391	17	1	11 days	1.27	Williams	1998 KW ₅₃
1998 KY ₅₃	14.0	0.15	19980527	316.27279	186.33981	109.28074	11.09845	0.0565745	3.0321758	13	1	11 days	1.00	Williams	1998 KY ₅₃
1998 KP ₅₄	13.5	0.15	19980527	295.57603	233.26270	97.64805	13.89277	0.1582111	2.7804986	14	1	11 days	0.61	Williams	1998 KP ₅₄
1998 KW ₅₄	13.0	0.15	19980527	315.95137	130.08900	187.46398	16.45654	0.2346568	3.1247892	15	1	11 days	0.55	Williams	1998 KW ₅₄
1998 KX ₅₄	13.5	0.15	19980527	57.16557	74.69120	104.25312	23.14323	0.1087940	3.1844682	12	1	11 days	0.88	Williams	1998 KX ₅₄
1998 KB ₅₅	14.0	0.15	19980527	258.80207	203.16462	164.61338	8.92534	0.1397883	2.6950957	13	1	11 days	1.03	Williams	1998 KB ₅₅
1998 KH ₅₅	13.0	0.15	19980527	318.56482	165.46369	131.20545	17.06623	0.0713598	3.0390228	14	1	11 days	0.67	Williams	1998 KH ₅₅
1998 KX ₅₅	15.5	0.15	19980527	359.27711	50.93308	204.21280	9.25932	0.1395389	2.4054658	13	1	11 days	0.47	Williams	1998 KX ₅₅
1998 KC ₅₆	14.0	0.15	19980527	168.75046	273.37124	172.32970	12.26874	0.1292397	2.3448942	11	1	11 days	0.98	Williams	1998 KC ₅₆
1998 KK ₅₆	16.0	0.15	19980527	3.69673	127.43559	106.30452	25.80215	0.5173201	3.1892558	57	1	12 days	0.37	Williams	1998 KK ₅₆
1998 KL ₅₆	14.5	0.15	19980507	354.89951	253.40996	289.90559	1.43393	0.1129766	2.2741196	3	1	2 days	0.46	E Williams	1998 KL ₅₆
1998 KD ₅₈	15.5	0.15	19980527	207.56868	202.20626	218.14491	14.87451	0.0931265	2.5353549	14	1	7 days	0.34	Williams	1998 KD ₅₈
1998 LD	20.5	0.15	19980527	8.02262	347.59063	247.29307	22.70820	0.1768404	1.4505663	50	1	4 days	0.52	Marsden	1998 LD
1998 LE	20.5	0.15	19980527	325.65397	132.47023	237.93351	9.15474	0.7002019	1.5200142	60	1	4 days	0.56	Marsden	1998 LE
2043 P-L	15.0	0.15	19980706	322.16784	294.90063	354.00759	5.85922	0.2611824	2.4646345	60	3	1960–1998	0.73	M-v 2 Williams	31824 2043 P-L
2049 P-L	15.5	0.15	19980706	103.06465	141.91190	325.80415	3.65206	0.0837941	2.3432070	37	2	1960–1998	0.68	M-v 5 Williams	31772 2049 P-L
2053 P-L	14.0	0.15	19980706	354.13595	359.36419	223.81586	3.14275	0.1548490	2.6808136	51	2	1960–1998	0.67	M-v 5 Williams	31773 2053 P-L
2091 P-L	15.5	0.15	19980706	235.21416	133.29104	248.71458	3.51817	0.1168434	2.3202550	17	4	1960–1998	0.50	M-v 3 Williams	28891 2091 P-L
2221 P-L	17.0	0.15	19980706	310.30605	72.63325	236.79158	3.57663	0.1229498	2.1811373	18	3	1960–1998	0.80	M-v 4 Marsden	22274 2221 P-L
2508 P-L	15.5	0.15	19980706	222.91736	350.95147	10.19658	6.37775	0.2500256	2.3317702	22	4	1951–1998	0.74	M-v 3 Williams	31824 2508 P-L
2560 P-L	14.0	0.15	19980706	290.01798	144.86282	183.86172	1.09593	0.0595626	2.8853462	41	4	1960–1998	0.74	M-v 1 Williams	29321 2560 P-L
2583 P-L	14.0	0.15	19980706	259.89916	244.77285	56.89841	2.94651	0.0762808	2.9244771	22	4	1960–1998	0.56	M-v 3 Williams	31607 2583 P-L
2727 P-L	15.5	0.15	19980706	9.50609	188.99297	21.13884	4.93615	0.1457595	2.3327681	49	2	1960–1998	0.61	M-v 4 Williams	31824 2727 P-L
2821 P-L	13.0	0.15	19980706	18.29528	159.06537	116.70213	2.58236	0.1510270	3.1250150	28	5	1954–1998	0.62	M-v 1 Williams	30293 2821 P-L
3040 P-L	14.0	0.15	19980706	305.15762	57.87540	288.36807	8.03189	0.2213427	2.6381908	29	6	1960–1998	0.71	M-v 2 Williams	26582 3040 P-L
4014 P-L	15.0	0.15	19980706	135.78392	68.29724	344.41215	5.95252	0.1414700	2.2125029	41	4	1960–1998	0.66	M-v 2 Williams	31824 4014 P-L
4035 P-L	13.5	0.15	19980706	301.18305	35.78527	280.11294	3.60013	0.1385203	3.1557763	35	3	1960–1998	0.77	M-v 4 Williams	31824 4035 P-L
4053 P-L	14.5	0.15	19980706	316.76484	60.70232	214.87883	6.35157	0.1102196	2.4815185	85	2	1960–1998	0.65	M-v 4 Williams	31824 4053 P-L
4089 P-L	14.0	0.15	19980706	140.55642	161.86372	204.61640	8.60009	0.1785223	2.7276257	25	4	1960–1998	0.70	M-v 3 Williams	28892 4089 P-L
4095 P-L	15.5	0.15	19980706	104.34057	207.79335	231.62168	4.36283	0.1422268	2.7132249	23	4	1960–1998	0.59	M-v 3 Williams	28892 4095 P-L
4119 P-L	15.0	0.15	19980706	274.96985	138.71944	191.49614	4.44507	0.2167929	2.1842422	59	4	1951–1998	0.72	M-v 2 Williams	31824 4119 P-L
4134 P-L	16.5	0.15	19980706	78.75163	140.11348	351.08396	5.54267	0.0768381	2.2038202	33	2	1960–1998	0.95	M-v 6 Williams	31824 4134 P-L
4584 P-L	15.0	0.15	19980706	178.94217	218.73210	166.76976	5.88404	0.2114729	2.3427920	33	2	1960–1998	0.82	M-v 4 Williams	31824 4584 P-L
4588 P-L	15.0	0.15	19980706	295.81973	143.55326	188.13577	5.67034	0.1758251	2.3094382	33	4	1960–1998	0.59	M-v 3 Williams	31824 4588 P-L
4631 P-L	14.5	0.15	19980706	32.27538	180.30155	13.88290	7.21746	0.0475997	2.3292648	58	5	1955–1998	0.66	M-v 2 Williams	31824 4631 P-L
4695 P-L	15.0	0.15	19980706	33.58534	182.47385	3.84952	6.28478	0.0404897	2.3325599	51	2	1960–1998	0.66	M-v 4 Williams	31773 4695 P-L
4730 P-L	15.0	0.15	19980706	286.62619	290.22804	26.41008	4.76167	0.0845279	2.6639784	21	3	1960–1998	0.60	M-v 3 Williams	31824 4730 P-L
4801 P-L	14.5	0.15	19980706	293.17910	180.36977	98.83098	2.15171	0.1282900	3.2003789	19	4	1960–1998	0.81	M-v 2 Williams	31608 4801 P-L
4822 P-L	14.0	0.15	19980706	263.13439	186.17643	135.95455	2.74042	0.0286134	2.9075136	25	3	1960–1998	0.66	M-v 4 Williams	31824 4822 P-L
5016 P-L	16.0	0.15	19980706	355.02615	205.22461	14.50276	4.92821	0.1080073	2.1991498	50	4	1960–1998	0.91	M-v 3 Williams	31573 5016 P-L
6035 P-L	14.5	0.15	19980706	314.52542	299.90796	359.56942	11.30913	0.1905891	2.6512290	31	5	1960–1998	0.94	M-v 2 Williams	22495 6035 P-L
6044 P-L	13.0	0.15	19980706	323.68841	303.56562	317.55887	1.29506	0.0243823	2.9042765	34	2	1960–1998	0.69	M-v 5 Williams	31824 6044 P-L
6074 P-L	16.5	0.15	19980706	309.41320	341.10516	342.22336	0.66618	0.1479034	2.1742595	21	4	1960–1998	0.83	M-v 2 Williams	28892 6074 P-L
6286 P-L	14.0	0.15	19980706	6.38841	233.63712	322.72322	2.81419	0.1029548	3.2129033	55	4	1960–1998	0.63	M-v 2 Williams	31773 6286 P-L

6531 P-L	14.5	0.15	19980706	191.44946	19.75395	16.50072	4.71017	0.0686343	2.1949813	64	4	1960-1998	0.75	M-v	2	Williams	31824	6531 P-L
6584 P-L	14.0	0.15	19980706	2.82102	167.12841	29.97233	3.40282	0.0315711	2.6906580	53	3	1960-1998	0.59	M-v	3	Williams	31824	6584 P-L
6792 P-L	14.0	0.15	19980706	250.98079	208.86734	103.00730	3.31118	0.0529932	2.9195051	42	4	1960-1998	0.67	M-v	3	Williams	31824	6792 P-L
6833 P-L	14.5	0.15	19980706	3.22390	216.77895	352.66907	1.87179	0.0832252	2.9106969	31	3	1960-1998	0.71	M-v	5	Williams	31824	6833 P-L
7081 P-L	16.0	0.15	19980706	101.46541	106.14945	348.83617	4.96585	0.1150014	2.2111339	30	3	1960-1998	0.91	M-v	3	Williams	31608	7081 P-L
7609 P-L	15.0	0.15	19980706	347.69026	229.05848	45.98715	6.45994	0.1313445	2.3097315	25	4	1960-1998	0.77	M-v	2	Williams	24120	7609 P-L
9073 P-L	12.5	0.15	19980706	256.12778	22.55892	345.02092	4.91794	0.1509532	3.1472711	20	7	1954-1998	0.69	M-v	1	Williams	29142	9073 P-L
9509 P-L	14.5	0.15	19980706	299.98108	124.80367	187.93481	10.89656	0.2550614	2.6504478	34	3	1960-1998	0.86	M-v	3	Williams	31824	9509 P-L
1089 T-1	13.5	0.15	19980706	78.99552	127.61980	346.63634	9.23438	0.0578356	3.0804347	31	3	1971-1998	0.64	M-v	3	Williams	31773	1089 T-1
1105 T-1	14.0	0.15	19980706	99.32677	286.30018	186.97119	6.66403	0.0864531	2.7115215	45	3	1971-1998	0.77	M-v	3	Williams	31774	1105 T-1
1145 T-1	15.5	0.15	19980706	54.32865	191.75735	316.30051	3.64983	0.1297077	2.4595096	49	2	1971-1998	0.66	M-v	5	Williams	31825	1145 T-1
1166 T-1	14.0	0.15	19980706	47.50309	155.21260	0.85371	10.73216	0.0891899	3.0711467	43	2	1971-1998	0.88	M-v	4	Williams	31774	1166 T-1
1230 T-1	15.5	0.15	19980706	331.16919	301.80280	329.10449	2.20328	0.1396724	2.2440293	33	3	1971-1998	0.80	M-v	5	Williams	31825	1230 T-1
1274 T-1	14.0	0.15	19980706	238.90498	326.97798	5.53765	5.04493	0.1055251	2.7286023	68	4	1971-1998	0.91	M-v	3	Williams	31825	1274 T-1
1287 T-1	15.5	0.15	19980706	332.15985	51.31063	216.10153	1.76448	0.0192380	2.2383985	54	5	1971-1998	0.88	M-v	3	Williams	31825	1287 T-1
2114 T-1	14.5	0.15	19980706	62.57688	347.89412	178.46087	14.12062	0.1169206	2.7016699	32	2	1971-1998	0.72	M-v	4	Williams	31774	2114 T-1
2168 T-1	14.0	0.15	19980706	275.67736	176.82780	182.63848	11.78026	0.1284684	2.4180225	23	4	1971-1998	0.89	M-v	3	Williams	21951	2168 T-1
2208 T-1	15.0	0.15	19980706	349.25139	232.40809	14.73224	8.47256	0.1888422	2.4537364	54	2	1971-1998	0.70	M-v	4	Williams	31774	2208 T-1
2258 T-1	13.5	0.15	19980706	211.72798	332.01614	27.41004	8.21257	0.2431282	2.4600147	54	6	1956-1998	0.71	M-v	2	Williams	31825	2258 T-1
2301 T-1	14.5	0.15	19980706	177.90267	357.04106	22.28299	6.17318	0.1828371	2.2556920	30	2	1971-1998	0.78	M-v	5	Williams	31825	2301 T-1
3074 T-1	14.5	0.15	19980706	288.47344	159.00757	359.66737	5.34786	0.1321029	3.2003824	18	2	1971-1997	0.63	M-v	4	Williams	31774	3074 T-1
3182 T-1	14.0	0.15	19980706	197.46289	107.23896	260.97708	2.43014	0.0392854	3.0805714	41	3	1971-1998	0.68	M-v	5	Williams	31825	3182 T-1
3224 T-1	15.5	0.15	19980706	91.52428	114.34940	1.41001	7.38066	0.0520796	2.2523120	40	2	1971-1998	0.58	M-v	4	Williams	31774	3224 T-1
3243 T-1	15.0	0.15	19980706	238.28684	347.89416	357.79545	3.92110	0.1420567	2.2505678	31	3	1971-1998	0.95	M-v	5	Williams	31825	3243 T-1
3274 T-1	13.5	0.15	19980706	197.97013	189.60874	182.29479	13.22314	0.1771987	2.7258250	49	2	1971-1998	0.74	M-v	5	Williams	31825	3274 T-1
3286 T-1	14.5	0.15	19980706	54.95926	128.77843	6.97309	13.20069	0.1243999	2.7339156	59	3	1971-1998	0.93	M-v	3	Williams	31825	3286 T-1
3770 T-1	16.0	0.15	19980706	17.74144	28.60449	191.20704	6.23487	0.1292044	2.2439386	40	2	1971-1998	0.68	M-v	3	Williams	31774	3770 T-1
4111 T-1	14.5	0.15	19980706	338.16406	185.26157	46.56555	4.55521	0.1005960	3.0827413	31	2	1971-1998	0.88	M-v	5	Williams	31825	4111 T-1
4155 T-1	14.5	0.15	19980706	112.31933	20.24761	72.53081	3.04903	0.0399694	2.7241335	60	4	1971-1998	0.75	M-v	4	Williams	31825	4155 T-1
4221 T-1	14.0	0.15	19980706	25.93657	22.72887	167.94212	4.64472	0.0930020	3.0672601	39	2	1971-1998	0.80	M-v	4	Williams	31775	4221 T-1
4265 T-1	15.5	0.15	19980706	101.87811	8.23731	99.85723	2.50606	0.1054016	2.2469863	54	2	1971-1998	0.74	M-v	5	Williams	31825	4265 T-1
4266 T-1	16.5	0.15	19980706	15.19428	94.49820	146.90407	2.45787	0.1634288	2.4403307	17	3	1971-1998	0.54	M-v	4	Williams	27927	4266 T-1
4283 T-1	15.0	0.15	19980706	119.98851	46.90570	28.27068	7.80413	0.1074620	2.2547801	35	4	1971-1998	0.90	M-v	2	Williams	31825	4283 T-1
4300 T-1	16.5	0.15	19980706	26.49665	84.30522	130.27587	2.90574	0.1503238	2.4465785	28	2	1971-1998	0.69	M-v	4	Williams	31775	4300 T-1
4886 T-1	14.5	0.15	19980706	309.67782	289.50594	30.64642	6.68694	0.1487975	2.4348142	41	7	1971-1998	0.73	M-v	1	Williams	29668	4886 T-1
1003 T-2	13.5	0.15	19980706	97.60373	263.44355	218.42205	0.70915	0.1605231	3.0866378	31	4	1973-1998	0.93	M-v	1	Williams	29130	1003 T-2
1042 T-2	14.5	0.15	19980706	272.59198	140.63552	215.06180	1.90904	0.1193185	2.6485466	39	6	1973-1998	0.88	M-v	1	Williams	29668	1042 T-2
1050 T-2	13.5	0.15	19980706	107.15004	272.06996	179.13057	10.98855	0.2379092	3.1232986	55	4	1973-1998	0.87	M-v	1	Williams	31825	1050 T-2
1059 T-2	14.5	0.15	19980706	321.39014	51.82627	209.43217	3.85906	0.0429540	2.4091371	58	2	1973-1998	0.72	M-v	5	Williams	31825	1059 T-2
1070 T-2	15.0	0.15	19980706	301.82435	81.54937	187.65467	5.82599	0.0939395	2.4130528	45	3	1973-1998	0.86	M-v	4	Williams	31825	1070 T-2
1108 T-2	14.5	0.15	19980706	288.28485	313.33088	353.24736	6.36078	0.1305659	2.3964029	62	2	1973-1998	0.77	M-v	4	Williams	31775	1108 T-2
1125 T-2	14.0	0.15	19980706	122.85372	179.49446	192.67665	0.96130	0.1728215	3.1880188	28	4	1973-1998	0.83	M-v	2	Williams	29142	1125 T-2
1142 T-2	14.5	0.15	19980706	38.71239	271.81921	274.76144	1.34104	0.1513190	2.4107306	45	3	1973-1998	0.73	M-v	4	Williams	31775	1142 T-2
1167 T-2	15.5	0.15	19980706	150.80429	199.73112	240.10929	1.35503	0.0420043	2.6884801	25	5	1973-1998	0.80	M-v	2	Williams	31825	1167 T-2
1175 T-2	15.5	0.15	19980706	4.40861	337.04939	226.37631	0.80737	0.1358095	2.4195972	51	3	1973-1998	0.87	M-v	5	Williams	31825	1175 T-2
1251 T-2	13.5	0.15	19980706	128.47883	313.01845	152.32178	1.24043	0.1656424	3.0739367	75	3	1973-1998	0.86	M-v	4	Williams	22701	1251 T-2
1331 T-2	14.5	0.15	19980706	219.84926	71.25666	267.03191	1.63038	0.0824091	2.7125039	30	4	1951-1998	0.84	M-v	2	Williams	31825	1331 T-2
1364 T-2	14.5	0.15	19980706	236.78334	132.52790	200.25833	5.88170	0.0463284	2.7030165	43	2	1973-1998	0.84	M-v	5	Williams	31825	1364 T-2
1474 T-2	15.5	0.15	19980706	298.99783	67.61836	224.67428	2.63148	0.1663953	2.1837844	45	2	1973-1998	0.92	M-v	5	Williams	31825	1474 T-2
2024 T-2	14.0	0.15	19980706	88.97658	77.36929	353.77291	8.61296	0.1461825	2.7654419	41	2	1973-1998	0.67	M-v	4	Williams	31608	2024 T-2
2275 T-2	13.5	0.15	19980706	52.71622	327.99874	173.15672	2.95722	0.2298345	3.1378804	70	3	1973-1998	0.75	M-v	4	Williams	31825	2275 T-2
2280 T-2	14.5	0.15	19980706	104.04853	337.20809	177.08091	3.12323	0.0519261	2.1816932	43	7	1973-1998	1.02	M-v	2	Williams	27939	2280 T-2
3067 T-2	15.0	0.15	19980706	63.95678	60.04343	132.40988	2.21059	0.0679258	2.1768059	29	4	1973-1998	1.01	M-v	2	Williams	29949	3067 T-2

3089 T-2	14.0	0.15	19980706	13.55144	84.17202	103.23625	2.79356	0.1033468	3.0905940	42	2	1973–1998	0.79	M-v	4	Williams	31825	3089 T-2
3176 T-2	15.0	0.15	19980706	78.41280	104.20936	25.92527	4.16555	0.0587198	2.4257425	60	4	1973–1998	0.79	M-v	3	Williams	31825	3176 T-2
3198 T-2	14.0	0.15	19980706	104.66284	69.01738	34.82355	5.63228	0.1532648	3.1023035	41	3	1973–1998	0.99	M-v	3	Williams	31825	3198 T-2
3237 T-2	14.5	0.15	19980706	68.42738	92.64420	21.86529	9.85738	0.2018567	3.1424757	37	3	1973–1998	0.95	M-v	3	Williams	31825	3237 T-2
3260 T-2	14.0	0.15	19980706	124.27264	328.83204	100.59442	4.34657	0.0503754	2.7223167	32	2	1973–1998	0.76	M-v	6	Williams	31825	3260 T-2
3285 T-2	14.0	0.15	19980706	258.89304	320.15695	56.25527	3.74253	0.2296766	2.3806350	24	5	1951–1998	0.84	M-v	2	Williams	27732	3285 T-2
3305 T-2	15.5	0.15	19980706	337.21265	201.54975	48.77254	3.21843	0.1417219	2.4004088	52	2	1973–1998	0.72	M-v	4	Williams	31825	3305 T-2
4062 T-2	14.5	0.15	19980706	56.15203	329.29528	181.04112	13.06351	0.1142095	2.7158705	57	2	1973–1998	0.77	M-v	5	Williams	31775	4062 T-2
4068 T-2	15.5	0.15	19980706	134.49738	19.35908	51.99642	3.63713	0.0650107	2.7138591	32	3	1973–1998	0.89	M-v	5	Williams	31776	4068 T-2
4096 T-2	14.0	0.15	19980706	224.79769	190.06450	170.76868	10.15467	0.1224042	3.0624700	27	3	1973–1998	0.88	M-v	4	Williams	31609	4096 T-2
4159 T-2	14.0	0.15	19980706	62.85561	67.04980	66.78624	1.87192	0.1713338	3.1236137	50	2	1973–1998	0.80	M-v	5	Williams	31776	4159 T-2
4180 T-2	15.0	0.15	19980706	278.35277	264.03534	103.76412	1.79806	0.2342813	2.3722014	37	5	1973–1998	0.78	M-v	1	Williams	26193	4180 T-2
4210 T-2	14.5	0.15	19980706	68.65331	40.51333	145.59699	5.01953	0.1140051	2.6651966	27	5	1954–1998	0.93	M-v	2	Williams	29669	4210 T-2
4223 T-2	15.5	0.15	19980706	18.23211	13.44486	171.85337	11.32090	0.1257595	2.4289548	40	2	1973–1998	0.73	M-v	4	Williams	31825	4223 T-2
4306 T-2	14.5	0.15	19980706	287.93917	296.82767	18.48765	9.60346	0.2170149	2.3892597	67	3	1973–1998	0.83	M-v	4	Williams	31825	4306 T-2
5087 T-2	13.5	0.15	19980706	139.72660	174.13687	242.17110	10.28489	0.0844166	3.1110595	23	2	1973–1998	0.90	M-v	5	Williams	31776	5087 T-2
1097 T-3	13.5	0.15	19980706	178.99025	158.18942	244.55365	8.23378	0.1384977	2.7486822	25	3	1977–1998	0.77	M-v	5	Williams	24405	1097 T-3
2164 T-3	14.5	0.15	19980706	161.36141	225.20207	211.58466	7.73827	0.1797301	2.7408827	20	2	1977–1995	0.82	M-v	5	Williams	25971	2164 T-3
2247 T-3	14.5	0.15	19980706	347.00559	319.91268	306.35362	4.10900	0.2108879	2.3613303	29	4	1977–1998	0.78	M-v	3	Williams	25085	2247 T-3
2282 T-3	16.0	0.15	19980706	67.39866	268.38762	207.09064	7.41139	0.1560262	2.4497830	45	2	1977–1998	0.87	M-v	5	Williams	31609	2282 T-3
2372 T-3	14.5	0.15	19980706	341.45982	60.37386	247.78875	2.98098	0.2946413	3.0699847	34	5	1976–1998	0.71	M-v	1	Williams	29142	2372 T-3
2390 T-3	14.0	0.15	19980706	0.98837	223.71905	14.52065	7.61438	0.0692430	2.3868450	59	7	1972–1998	0.78	M-v	1	Williams	31826	2390 T-3
2395 T-3	13.5	0.15	19980706	153.56246	138.95185	283.67007	2.73081	0.0141074	3.2479947	29	3	1977–1998	0.87	M-v	3	Williams	31776	2395 T-3
3105 T-3	14.5	0.15	19980706	243.10392	172.43892	170.89691	2.71280	0.1808277	2.3921128	44	4	1977–1998	0.83	M-v	2	Williams	31826	3105 T-3
3150 T-3	14.5	0.15	19980706	171.55277	255.94830	126.84653	1.32642	0.0818302	2.7767374	34	2	1977–1998	0.88	M-v	6	Williams	31777	3150 T-3
3164 T-3	13.5	0.15	19980706	257.20648	190.02169	196.18084	12.97673	0.1119407	2.6779989	27	4	1977–1998	0.81	M-v	2	Williams	29949	3164 T-3
3468 T-3	15.0	0.15	19980706	332.18533	192.95634	49.90269	2.03854	0.1415092	2.3992592	44	3	1977–1998	0.80	M-v	4	Williams	31826	3468 T-3
3535 T-3	14.5	0.15	19980706	184.84294	37.91802	24.48455	2.42379	0.1877265	2.3922386	22	4	1955–1998	1.02	M-v	2	Williams	24915	3535 T-3
4039 T-3	15.5	0.15	19980706	314.25140	148.42627	120.17617	2.63067	0.0989215	2.1456185	42	2	1977–1998	0.67	M-v	4	Williams	31826	4039 T-3
4074 T-3	15.0	0.15	19980706	43.95794	91.43356	96.03699	3.31139	0.0838709	2.3975226	32	4	1977–1998	0.88	M-v	2	Williams	22088	4074 T-3
4102 T-3	15.0	0.15	19980706	107.93032	41.53102	66.23527	4.14502	0.0623219	2.1609339	56	2	1977–1998	0.82	M-v	5	Williams	31777	4102 T-3
4195 T-3	14.0	0.15	19980706	0.33786	81.64813	184.39211	13.86653	0.1055275	2.3607689	43	5	1977–1998	0.84	M-v	2	Williams	27732	4195 T-3
4245 T-3	14.5	0.15	19980706	137.53404	9.32384	62.22405	7.52873	0.1288969	2.4225172	38	3	1977–1998	0.84	M-v	4	Williams	31777	4245 T-3
4304 T-3	14.5	0.15	19980706	119.34876	17.17652	118.09213	4.48556	0.0273438	2.7113437	22	4	1977–1998	0.95	M-v	2	Williams	29669	4304 T-3
5090 T-3	14.5	0.15	19980706	50.09318	76.33062	81.17589	9.99275	0.0974779	2.7679617	17	2	1977–1998	0.73	M-v	5	Williams	31577	5090 T-3
5122 T-3	15.0	0.15	19980706	311.14788	192.61786	112.38837	6.94708	0.2474575	2.3566621	41	3	1977–1998	0.99	M-v	4	Williams	31826	5122 T-3
5174 T-3	13.0	0.15	19980706	2.38803	163.51583	83.71359	12.97389	0.1874722	3.1670244	43	7	1954–1998	0.72	M-v	1	Williams	26583	5174 T-3
5191 T-3	11.0	0.15	19980706	319.67319	172.29531	141.21757	12.76259	0.1300916	5.2149996	26	5	1954–1998	0.98	M-v	1	Williams	25443	5191 T-3

1996 TF₃₀ = 1996 TM₃₇ (A. Doppler)

1997 JA₁₁ = 1997 KS₂ (A. Gnädig)

1997 LF₅ = 1997 MJ₁ (A. Gnädig)

1997 PV₅ = 1997 SZ₃₄ (A. Gnädig)

1997 WV₄₄ = 1997 YY₉ (A. Gnädig)

1998 ER₁₄ = 1998 FD₁₂₇ (G. V. Williams)

1998 FB₈ = 1998 FJ₁₇ (A. Gnädig)

1998 FC₇₄ = 1998 HW₁₄₇ (G. V. Williams)

1998 FC₁₂₇ = 1998 HQ₁ (G. V. Williams)

1998 GX₈ = 1998 HZ₁₃ (G. V. Williams)

1998 HP₁₉ = 1998 HL₂₈ (G. V. Williams)

1998 HU₅₀ = 1998 HK₃₇ = 1998 HX₁₅₀ (G. V. Williams)

NEW NAMES OF MINOR PLANETS

(5255) Johnsophie = 1988 KF

Discovered 1988 May 19 by E. F. Helin at Palomar.

Named in honor of John and Sophie Karayusuf, parents of Alford S. Karayusuf, a friend of the discoverer. Under the starry skies of the Syrian Desert, they inspired their children to study the stars and planets and to wonder in amazement at the ability of mankind to explore the heavens.

(6244) Okamoto = 1990 QF

Discovered 1990 Aug. 20 by T. Seki at Geisei.

Named in honor of Hiroshi Okamoto (b. 1915), an entomologist and elementary-school teacher who inspired the discoverer with a love of the stars.

(6245) Ikufumi = 1990 SO₄

Discovered 1990 Sept. 27 by T. Urata at the Nihondaira Observatory.

Named in honor of Ikufumi Makino (b.1944), a telecommunications systems engineer and active amateur astronomer. His extensive knowledge of computer technologies has enabled him to contribute to astronomical magazines many articles about systems for making observations. He has played an important role in introducing and spreading the data-reduction tool Astrometrica in Japan. He is a collaborating member of the Nihondaira Observatory.

(6416) Nyukasayama = 1993 VY₃

Discovered 1993 Nov. 14 by M. Hirasawa and S. Suzuki at Nyukasa.

Named for a mountain in central Japan, famous for many beautiful flowers and a wonderful view. Mt. Nyukasa station, where this minor planet was discovered, is located near the top of this mountain.

(6499) Michiko = 1992 UV₆

Discovered 1992 Oct. 27 by M. Hirasawa and S. Suzuki at Nyukasa.

Named in honor of Michiko Hirasawa (b.1955), wife of the first discoverer. She is manager of Mt. Nyukasa station, where this minor planet was discovered.

(6699) Igaueno = 1987 YK

Discovered 1987 Dec. 19 by T. Seki at Geisei.

Named for a small town in Mie prefecture. A branch of the Oriental Astronomical Association was inaugurated there around the time this minor planet was discovered.

(6720) Gifu = 1990 VP₂

Discovered 1990 Nov. 11 by T. Seki at Geisei.

Named for the city of 400 000, capital of the prefecture of the same name, site of ancient battlefields and a modern public observatory.

(6738) Tanabe = 1993 FD₁

Discovered 1993 Mar. 20 by K. Endate and K. Watanabe at Kitami.

Named in honor of Hiroyoshi Tanabe (b.1928), astronomer at the National Astronomical Observatory (formerly known as the Tokyo Astronomical Observatory) during 1953–1989. Tanabe's research field is the light of the night sky. He made extensive ground-based observations of the gegenschein, the first rocket observation of the inner zodiacal light and outer corona, and he estimated the background light by making star counts in various regions of the sky. He made regular airglow observations for 33 years, Tanabe served as president of IAU Commission 21 during 1979–1982 and was an officer of the Astronomical Society of Japan for many years.

(6745) Nishiyama = 1994 JD₁

Discovered 1994 May 7 by K. Endate and K. Watanabe at Kitami.

Named in honor of Minewo Nishiyama (b.1925), amateur astronomer and president of the Chikushi Astronomical Association from 1944 to 1947. Beginning in 1944 and under the direction of H. Hirose, Nishiyama was the first amateur in Japan to make orbital calculations on minor planets. More recently he has studied the astronomical histories of Asian countries, particularly the old Burmese constellations. Name proposed by the discoverers following a suggestion from H. Oishi.

(6894) Macreid = 1986 RE₂

Discovered 1986 Sept. 5 by E. F. Helin at Palomar.

Named in honor of Macgregor S. Reid, a highly regarded manager at the Jet Propulsion Laboratory. For the past ten years he has been technical executive assistant to the director, responsible for planning and identifying issues of significance to the national space program and the laboratory's future. Reid is internationally

recognized for his activities concerning international standard-setting. This object is being named to honor him on his retirement after a 30-year career at JPL. Citation prepared by E. C. Stone.

(6965) Niyodogawa = 1990 VS₂

Discovered 1990 Nov. 11 by T. Seki at Geisei.

Named for a river, 100 km in length, that has its source at the center of Shikoku Island.

(6966) Vietoris = 1991 RD₅

Discovered 1991 Sept. 13 by L. D. Schmadel and F. Börngen at Tautenburg.

Named in honor of Leopold Vietoris (b.1891), professor emeritus of mathematics of the Leopold-Franzens-University in Innsbruck, on the occasion of his forthcoming 107th birthday. Vietoris is the oldest full member of the Austrian Academy of Sciences and a highly decorated scientist. He made fundamental contributions to algebraic and set-theory topology, and he also wrote outstanding papers on the theory of real functions and on applied mathematics. Named by the first discoverer following a suggestion by H. Haupt, who prepared the citation.

(6971) Omogokei = 1992 CT

Discovered 1992 Feb. 8 by T. Seki at Geisei.

Named for a ravine, 18 km long, at the foot of Mt. Ishizuti, the highest mountain in western Japan.

(7017) Uradowan = 1992 CE₂

Discovered 1992 Feb. 1 by T. Seki at Geisei.

Named for the bay that is the principal entrance by sea to Kochi prefecture.

(7077) Shermanschultz = 1982 VZ

Discovered 1982 Nov. 15 by E. Bowell at the Anderson Mesa Station of Lowell Observatory.

Named in honor of Sherman W. Schultz (b.1922), retired lecturer of astronomy and telescope making who taught for more than 40 years at Macalester College, St. Paul, Minnesota. An optometrist by profession, Schultz figured the mirrors and built an array of telescopes for the college observatory, and these enabled undergraduates to perform photometric observations of minor planets and variable stars that are published in the professional literature. He guided more than 250 students and college faculty to make their own telescopes. The naming of this minor planet commemorates the May 1998 dedication of the Sherman W. Schultz Observatory at Macalester College. Name proposed by the discoverer following a suggestion by R. P. Binzel, who prepared the citation.

(7094) Godaisan = 1992 RJ

Discovered 1992 Sept. 4 by T. Seki at Geisei.

Named for a small mountain on the eastern side of Kochi City.

(7274) Washioyama = 1982 FC

Discovered 1982 Mar. 21 by T. Seki at Geisei.

Named for a small mountain in the southern part of Kochi City.

(7398) Walsh = 1986 VM

Discovered 1986 Nov. 3 by A. Mrkos at Kleť.

Named in honor of Martin F. Walsh (b.1966) on the occasion of his marriage to Aurélie Machon near Paris on 1998 June 6. Name suggested by G. V. Williams, who made the identifications for this object and has known the bridegroom for more than 20 years.

(7410) Kawazoe = 1990 QG

Discovered 1990 Aug. 20 by T. Seki at Geisei.

Named in honor of Akira Kawazoe (b. 1934), a member of the Geisei Observatory staff with particular interests in meteorites and geology.

(7695) Přemysl = 1984 WA₁

Discovered 1984 Nov. 27 by A. Mrkos at Kletř.

Named for a mythical hero Přemysl, called Ploughman. He married princess Libuše, and they became the mythical founders of the royal dynasty of the Přemyslids, ruling over Bohemia until 1306. Bohemian kings Přemysl Otakar I (?–1230) and Přemysl Otakar II (?–1278) are considered the most reputable members of this dynasty. Name suggested by J. Tichá, M. Tichý and Z. Moravec.

(7805) Moons = 7610 P-L

Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Named in memory of Michèle Moons (1951–1998), well known for her work on celestial mechanics done at the department of mathematics of Facultés Universitaires N. D. de la Paix, Namur, Belgium. She was assistant editor of the journal *Celestial Mechanics and Dynamical Astronomy* for nearly ten years. In the early 1980s she developed an analytical theory of the libration of the moon that is widely used by several centers interested in analyzing the moon's motion. Her later work included studies on the effects of resonant motion in the minor planet belt. Her early death is a great loss to her family and to science. Citation prepared by J. Henrard and J. Schubart, the name being suggested by the latter.

(7886) Redman = 1993 PE

Discovered 1993 Aug. 12 by D. D. Balam at Climenhaga Observatory, University of Victoria.

Named in memory of Roderick Oliver Redman (1905–1975), professor of astronomy and longtime director of the University of Cambridge Observatories, and in honor of Russell Ormond Redman (b. 1951), a radio astronomer on the staff of the Dominion Astrophysical Observatory. The senior Redman established a lifelong association with the DAO when he obtained the observational material for his doctoral thesis there; he became renowned for his superlative observational techniques and designs for astronomical instrumentation. The junior Redman, whose association with the DAO began as a summer student assistant in 1970, has pioneered the study of minor planets at submillimeter wavelengths and is an authority in using the thermal emission spectra to study their surfaces. Citation prepared by P. A. Feldman at the request of the discoverer.

(7891) Fuchie = 1994 VJ₇

Discovered 1994 Nov. 11 by M. Hirasawa and S. Suzuki at Nyukasa.

Named in honor of the Tokyo Metropolitan Fuchie Senior High School, where the first discoverer teaches astronomy and geology. Fuchie means the bank of a large river. This place has been called Fuchie for nearly a thousand years.

(7905) Juzoitami = 1997 OX

Discovered 1997 July 24 by A. Nakamura at Kuma Kogen.

Named in memory of Juzo Itami (1933–1997), actor, translator, essayist, editor and well-known director since the great success of his first work *Osoushiki* (*Funeral*). His last work *Shizukana Seikatsu* (*Quiet Life*) is based on the novel written by Kenzaburo Oe, winner of the Nobel Prize in literature in 1994 and brother-in-law of Itami.

(7940) Erichmeyer = 1991 EO₁

Discovered 1991 Mar. 13 at the Oak Ridge Observatory.

Named in honor of Erich Meyer (b. 1951), Austrian amateur astronomer, on the occasion of his 20th anniversary as an astrometricist. Using a measuring engine he constructed himself, Meyer measured about 250 precise positions of minor planets and comets from photographic plates. Among the 2600 positions he derived after switching to CCD equipment in 1993 are some for the 1997 opposition of this object, thereby rendering it appropriate for numbering. An electrical engineer by profession, Meyer is also a well-known astrophotographer and popularizer of astronomy.

(8100) Nobeyama = 1993 XF

Discovered 1993 Dec. 4 by M. Hirasawa and S. Suzuki at Nyukasa.

Named for a village in central Japan, famous for its beautiful scenery and night sky. Nobeyama Radio Observatory is located here.

(8131) Scanlon = 1976 SC

Discovered 1976 Sept. 27 by E. F. Helin at Palomar.

Named in honor of Leo J. Scanlon (b. 1903), prominent amateur whose interest in astronomy was sparked by seeing comet 1P/Halley in 1910. A plumber by profession, he built his own astronomical equipment and instructed others in telescope making. With Chester B. Rowe he co-founded the Amateur Astronomers Association of Pittsburgh on 1929. The following year he built the first aluminum observatory dome. He observed variable stars, and he helped organize the Moonwatch team at the Allegheny Observatory in 1957. In 1985 he was happy to be able to observe comet 1P/Halley again. Name proposed by the discoverer, following a suggestion by T. P. Kohman, who prepared the citation.

(8284) Cranach = 1991 TT₁₃

Discovered 1991 Oct. 8 by F. Börngen at Tautenburg.

Named in honor of the German painter, draftsman and copper engraver Lucas Cranach the Elder (1472–1553). As a friend of Luther and Melancthon, he is reputed to be the primary master of the German Reformation period. His first work is ascertainable in Vienna; beginning in 1505, he was an esteemed court painter for the elector of Saxony Friedrich der Weise in Wittenberg. One of his best-known works is the altarpiece in the main church of Weimar, which was completed by his son Lucas Cranach the Younger.

(8289) An-Eefje = 1992 JQ₃

Discovered 1992 May 3 by H. Debehogne at the European Southern Observatory.

Named in memory of the two young Belgian women An and Eefje, whose young and hopeful lives came dramatically to an end in 1996. May their memory stand for all women throughout the world who suffer from abuse.

(8298) Loubna = 1993 SQ₁₀

Discovered 1993 Sept. 22 by H. Debehogne and E. W. Elst at the European Southern Observatory.

Named in memory of the Moroccan-Belgian girl Loubna, whose young life came abruptly to an end. May she stand as a symbol for a hopeful life in a multicultural society.

(8306) Shoko = 1995 DY₁

Discovered 1995 Feb. 24 by A. Nakamura at Kuma Kogen.

Named in honor of Shoko Sawada (b. 1962), Japanese singer and songwriter. Since her debut in 1979, she has released 52 singles and 22 albums, ranging from

touching ballads to rhythmical pop songs. Her recordings have fascinated many fans in Japan, including the discoverer of this minor planet.

(8308) Julie-Mélissa = 1996 HD₁₃

Discovered 1996 Apr. 17 by E. W. Elst at the European Southern Observatory.

Named in memory of the two Belgian children Julie and Mélissa, who were murdered tragically in 1996, symbolizing all innocent children suffering from abuse.

(8381) Hauptmann = 1992 SO₂₄

Discovered 1992 Sept. 21 by F. Börngen at Tautenburg.

Named for the dramatist and writer Gerhart Hauptmann (1862–1946), a leading personality in the field of German naturalism. His work frequently depicts social problems and the ups and downs of life, often viewed from his homeland of Silesia. Beginning in 1904, he lived on Hiddensee, a small island in the Baltic Sea, where he was also buried. Hauptmann was honored with the 1912 Nobel Prize in literature.

(8382) Mann = 1992 SQ₂₆

Discovered 1992 Sept. 23 by F. Börngen at Tautenburg.

Named in memory of Heinrich (1871–1950) and Thomas Mann (1875–1955), born in the Hanseatic town of Lübeck, both prominent German writers and social critics. In 1930, Heinrich became director of the section “Art of Creative Writing” of the Prussian Academy of Sciences. Thomas received the 1929 Nobel Prize for literature. After emigrating in 1933, they later settled in the United States.

(8407) Houlahan = 1995 ON

Discovered 1995 July 25 by P. G. Comba at Prescott.

Named in honor of Padraig Houlahan (b.1958). Although Houlahan studied astronomy, he has worked mainly as a computer expert at various institutions, lately at Lowell Observatory. When the discoverer was first attempting to do astrometry by measuring photographic prints, Houlahan suggested putting the prints through a digital scanner and measuring them with a computer. The method, although slow, gave satisfactory results. Thereafter Houlahan and the discoverer, working jointly, measured more than 200 prints, including 20 with images of this minor planet.

(8420) Angrogna = 1996 WQ

Discovered 1996 Nov. 17 by P. G. Comba at Prescott.

Named for a village nestled in the Cottian Alps, in the Piedmont region of Italy, where the discoverer’s paternal ancestors were born and lived for at least six generations.

(8432) Tamakasuga = 1997 YD₁₈

Discovered 1997 Dec. 27 by A. Nakamura at Kuma Kogen.

Named in honor of Ryoji Matsumoto (b.1972), Japanese sumo wrestler whose professional name is Tamakasuga. Born in Ehime prefecture, where this minor planet was discovered, he became a professional wrestler in 1994. In 1996 he was promoted to “Makunouchi”, the top division in the official listing of rank. Famous for his powerful “tsuki-oshi”, or pushing-thrusting style, Tamakasuga has won the Outstanding Performance Award, the Technique Prize and the Fighting Spirit Prize (twice) in his 26 tournaments.

(8552) Hyoichi = 1995 HE

Discovered 1995 Apr. 20 by A. Nakamura at Kuma Kogen.

Named in honor of Hyoichi Kohno (b.1958), Japanese adventurer, born in Ehime prefecture, where this minor planet was discovered. Since 1980, he has boated down the Yukon River; climbed Mt. McKinley (6194 m) and Cerro Aconcagua (6959 m), the highest mountains in North and South America; walked across Patagonia; walked

from Los Angeles to New York; walked from Algeria to Togo across the Sahara desert; and so on. In 1997, he became the first Japanese to walk to the North Pole alone.

(8580) Pinsky = 1996 XZ₂₅

Discovered 1996 Dec. 14 by P. G. Comba at Prescott.

Named in honor of Robert Pinsky (b.1940), poet laureate of the United States since 1997. Besides several books of poetry, Pinsky has produced a much-acclaimed new English translation of Dante’s *Inferno*. Written in slant rhyme, Pinsky’s version captures the rhythm and grandeur of the great Italian poet’s masterpiece.

(8583) Froberger = 1997 AK₆

Discovered 1997 Jan. 8 by P. G. Comba at Prescott.

Named for Johann Jacob Froberger (1616–1667), organist and the foremost German keyboard composer of his day. A pupil of Frescobaldi, he combined features of many national styles. His toccate, full of imaginative chromatic harmonies, were copied out and imitated by J. S. Bach.

EPHEMERIDES

C/1998 J1 (SOHO)						Elements MPC 31893				
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2	
1998 06 06		06 52.50	−21 38.1	1.005	0.895	52.6	64.2	7.5		
1998 06 11		07 14.34	−26 36.5	1.086	1.010	57.3	57.8	8.2		
1998 06 16		07 34.52	−30 40.8	1.174	1.119	60.9	52.5	8.8		
1998 06 21		07 53.39	−34 03.8	1.266	1.224	63.7	48.1	9.4		
1998 06 26		08 11.19	−36 55.4	1.361	1.325	65.9	44.5	9.9		
1998 07 01		08 28.11	−39 23.2	1.457	1.422	67.5	41.3	10.3		
1998 07 06		08 44.29	−41 32.6	1.555	1.517	68.7	38.6	10.8		
1998 07 11		08 59.85	−43 27.5	1.654	1.610	69.5	36.3	11.2		
1998 07 16		09 14.88	−45 11.1	1.754	1.700	70.0	34.2	11.5		
1998 07 21		09 29.48	−46 45.7	1.854	1.788	70.2	32.3	11.9		
1998 07 26		09 43.70	−48 13.1	1.955	1.874	70.2	30.7	12.2		
1998 07 31		09 57.60	−49 34.8	2.056	1.958	70.1	29.2	12.5		
1998 08 05		10 11.22	−50 51.8	2.157	2.041	69.7	27.8	12.8		
1998 08 10		10 24.60	−52 04.8	2.257	2.122	69.3	26.5	13.0		
1998 08 15		10 37.80	−53 14.5	2.358	2.202	68.6	25.4	13.3		
1998 08 20		10 50.85	−54 21.5	2.458	2.280	67.9	24.3	13.5		
1998 08 25		11 03.79	−55 26.3	2.558	2.357	67.1	23.3	13.8		
1998 08 30		11 16.63	−56 29.0	2.658	2.433	66.2	22.3	14.0		
1998 09 04		11 29.40	−57 30.0	2.756	2.508	65.3	21.4	14.2		
1998 09 09		11 42.14	−58 29.5	2.854	2.582	64.3	20.6	14.4		
1998 09 14		11 54.87	−59 27.5	2.951	2.655	63.3	19.8	14.6		
1998 09 19		12 07.62	−60 24.2	3.047	2.727	62.2	19.0	14.8		
1998 09 24		12 20.42	−61 19.8	3.141	2.798	61.1	18.3	15.0		
1998 09 29		12 33.28	−62 14.3	3.234	2.868	60.0	17.6	15.1		
1998 10 04		12 46.22	−63 07.7	3.326	2.938	59.0	17.0	15.3		
1998 10 09		12 59.28	−64 00.0	3.416	3.007	57.9	16.3	15.4		
1998 10 14		13 12.47	−64 51.2	3.504	3.075	56.9	15.8	15.6		
1998 10 19		13 25.83	−65 41.4	3.591	3.142	55.9	15.2	15.7		
1998 10 24		13 39.37	−66 30.5	3.675	3.208	54.9	14.7	15.9		
1998 10 29		13 53.11	−67 18.6	3.757	3.274	54.1	14.2	16.0		
1998 11 03		14 07.07	−68 05.4	3.836	3.340	53.3	13.8	16.2		

C/1998 K1 (Mueller)

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2	Elements	MPC	31893
1998 06 06		10 48.09	+27 30.4	3.568	3.505	78.2	16.5	15.7				
1998 06 16		10 54.82	+25 02.0	3.674	3.485	71.4	16.0	15.7				
1998 06 26		11 02.58	+22 33.3	3.779	3.468	64.7	15.4	15.8				
1998 07 06		11 11.19	+20 04.8	3.881	3.454	58.1	14.5	15.8				
1998 07 16		11 20.49	+17 36.8	3.978	3.441	51.7	13.4	15.9				
1998 07 26		11 30.37	+15 09.4	4.068	3.431	45.4	12.2	15.9				
1998 08 05		11 40.72	+12 43.0	4.150	3.424	39.1	10.8	15.9				
1998 08 15		11 51.44	+10 17.6	4.224	3.418	32.9	9.3	16.0				

1998 KN₃

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V	Elements	MPC	32087
1998 06 06		12 50.54	-13 19.1	0.402	1.272	121.4	42.9	18.7			
1998 06 11		12 16.07	-09 12.9	0.398	1.196	107.3	54.2	18.9			
1998 06 16		11 43.90	-05 04.0	0.404	1.116	93.6	65.2	19.1			
1998 06 21		11 14.39	-01 06.0	0.416	1.033	80.5	76.1	19.3			
1998 06 26		10 47.22	+02 35.1	0.434	0.945	68.1	86.7	19.6			
1998 07 01		10 21.55	+05 59.9	0.456	0.851	56.1	97.5	20.0			
1998 07 06		09 56.33	+09 12.0	0.483	0.751	44.3	109.0	20.4			
1998 07 11		09 30.50	+12 15.2	0.517	0.644	32.5	121.9	21.1			
1998 07 16		09 03.28	+15 10.4	0.562	0.529	20.6	137.5	22.4			

1998 KH

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V	Elements	MPC	32086
1998 06 06		12 57.28	-20 01.9	0.601	1.445	124.8	35.2	19.5			
1998 06 11		13 02.84	-21 23.2	0.689	1.498	121.8	35.2	19.9			
1998 06 16		13 08.49	-22 29.8	0.779	1.549	118.8	35.1	20.3			
1998 06 21		13 14.28	-23 26.6	0.870	1.599	115.7	34.9	20.6			
1998 06 26		13 20.23	-24 16.3	0.963	1.648	112.7	34.7	20.8			
1998 07 01		13 26.36	-25 01.2	1.057	1.695	109.7	34.4	21.1			
1998 07 06		13 32.66	-25 42.5	1.152	1.741	106.6	34.0	21.3			
1998 07 11		13 39.12	-26 21.1	1.248	1.785	103.6	33.6	21.5			
1998 07 16		13 45.74	-26 57.6	1.344	1.829	100.6	33.1	21.7			
1998 07 21		13 52.52	-27 32.5	1.442	1.871	97.6	32.6	21.9			
1998 07 26		13 59.46	-28 06.3	1.539	1.911	94.6	32.0	22.1			

1998 KM₃

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V	Elements	MPC	32087
1998 06 06		13 21.04	-15 14.9	0.328	1.248	129.0	39.2	18.6			
1998 06 11		13 00.91	-12 11.7	0.311	1.196	118.7	48.2	18.7			
1998 06 16		12 40.91	-08 52.5	0.296	1.143	108.1	57.6	18.7			
1998 06 21		12 20.98	-05 19.8	0.285	1.090	97.4	67.6	18.8			
1998 06 26		12 00.77	-01 34.3	0.275	1.037	86.6	78.1	19.0			
1998 07 01		11 39.60	+02 25.2	0.266	0.984	75.3	89.5	19.2			
1998 07 06		11 16.49	+06 40.5	0.260	0.931	63.6	101.9	19.6			
1998 07 11		10 50.40	+11 10.5	0.257	0.879	51.2	115.6	20.3			
1998 07 16		10 20.65	+15 45.8	0.259	0.829	38.2	130.6	21.4			

1998 KK₁₇

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V	Elements	MPC	32089
1998 06 06		13 28.30	+18 56.1	0.611	1.385	114.5	41.8	17.8			
1998 06 11		13 36.57	+16 02.0	0.671	1.423	113.6	40.8	18.0			
1998 06 16		13 44.36	+13 24.8	0.733	1.461	112.3	40.0	18.2			
1998 06 21		13 51.86	+11 01.6	0.798	1.498	110.7	39.4	18.5			

1998 06 26	13 59.19	+08 50.2	0.864	1.533	109.0	38.8	18.7
1998 07 01	14 06.44	+06 48.8	0.933	1.568	107.0	38.3	18.9
1998 07 06	14 13.65	+04 56.1	1.003	1.601	104.9	37.8	19.1
1998 07 11	14 20.87	+03 11.2	1.075	1.634	102.7	37.4	19.2
1998 07 16	14 28.13	+01 33.0	1.148	1.666	100.5	36.9	19.4
1998 07 21	14 35.43	+00 00.7	1.222	1.696	98.1	36.4	19.6
1998 07 26	14 42.82	-01 26.1	1.297	1.726	95.7	35.8	19.7
1998 07 31	14 50.30	-02 48.0	1.374	1.754	93.3	35.3	19.9
1998 08 05	14 57.88	-04 05.4	1.451	1.782	90.8	34.7	20.0
1998 08 10	15 05.55	-05 18.6	1.528	1.808	88.3	34.1	20.1
1998 08 15	15 13.32	-06 27.8	1.605	1.834	85.8	33.4	20.2
1998 08 20	15 21.20	-07 33.3	1.683	1.859	83.2	32.7	20.4
1998 08 25	15 29.20	-08 35.4	1.761	1.882	80.6	32.0	20.5
1998 08 30	15 37.30	-09 34.0	1.838	1.905	78.0	31.2	20.6
1998 09 04	15 45.52	-10 29.5	1.915	1.927	75.4	30.4	20.6
1998 09 09	15 53.84	-11 21.7	1.991	1.948	72.8	29.6	20.7
1998 09 14	16 02.26	-12 11.0	2.067	1.968	70.2	28.7	20.8
1998 09 19	16 10.79	-12 57.2	2.141	1.987	67.5	27.9	20.9
1998 09 24	16 19.43	-13 40.5	2.214	2.005	64.8	26.9	20.9
1998 09 29	16 28.16	-14 21.0	2.286	2.022	62.2	26.0	21.0
1998 10 04	16 37.00	-14 58.5	2.356	2.039	59.5	25.0	21.1

1998 HU₁₀₈

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V	Elements	MPC	32083
1998 06 06		13 36.38	-07 56.0	0.496	1.387	130.1	34.1	17.6			
1998 06 11		13 39.79	-10 03.5	0.503	1.377	126.9	36.1	17.7			
1998 06 16		13 44.58	-12 14.9	0.513	1.370	124.0	38.0	17.8			
1998 06 21		13 50.73	-14 28.3	0.525	1.365	121.3	39.5	17.8			
1998 06 26		13 58.23	-16 42.2	0.538	1.361	119.0	40.8	17.9			
1998 07 01		14 07.04	-18 54.9	0.554	1.360	116.9	41.8	18.0			
1998 07 06		14 17.10	-21 04.9	0.571	1.361	115.1	42.6	18.1			
1998 07 11		14 28.34	-23 10.4	0.590	1.364	113.4	43.2	18.2			
1998 07 16		14 40.68	-25 10.0	0.612	1.368	111.9	43.6	18.3			
1998 07 21		14 54.05	-27 02.3	0.635	1.375	110.6	43.8	18.4			
1998 07 26		15 08.38	-28 46.1	0.661	1.383	109.4	43.8	18.5			
1998 07 31		15 23.58	-30 20.4	0.689	1.394	108.3	43.8	18.6			
1998 08 05		15 39.53	-31 44.4	0.719	1.406	107.2	43.6	18.7			
1998 08 10		15 56.09	-32 57.2	0.751	1.420	106.2	43.3	18.8			
1998 08 15		16 13.13	-33 58.5	0.786	1.436	105.1	42.9	18.9			
1998 08 20		16 30.52	-34 48.0	0.824	1.453	104.1	42.5	19.0			
1998 08 25		16 48.14	-35 26.0	0.864	1.471	103.1	42.0	19.2			
1998 08 30		17 05.86	-35 52.5	0.907	1.491	102.0	41.5	19.3			
1998 09 04		17 23.54	-36 08.2	0.952	1.512	100.9	40.9	19.4			
1998 09 09		17 41.06	-36 13.6	1.000	1.534	99.7	40.3	19.5			
1998 09 14		17 58.33	-36 09.4	1.051	1.558	98.4	39.7	19.6			
1998 09 19		18 15.27	-35 56.4	1.104	1.582	97.1	39.1	19.8			
1998 09 24		18 31.84	-35 35.3	1.160	1.607	95.7	38.4	19.9			
1998 09 29		18 47.98	-35 07.2	1.218	1.633	94.2	37.7	20.0			
1998 10 04		19 03.66	-34 32.7	1.278	1.660	92.7	37.0	20.1			
1998 10 09		19 18.86	-33 52.7	1.341	1.687	91.1	36.3	20.3			
1998 10 14		19 33.58	-33 07.8	1.406	1.715	89.4	35.6	20.4			
1998 10 19		19 47.84	-32 18.7	1.473	1.743	87.6	34.8	20.5			
1998 10 24		20 01.63	-31 25.9	1.542	1.772	85.8	34.1	20.6			

1998 10 29	20 14.99	-30 30.2	1.612	1.801	83.8	33.3	20.7
1998 11 03	20 27.93	-29 31.8	1.685	1.830	81.9	32.5	20.8
1998 11 08	20 40.46	-28 31.3	1.759	1.860	79.8	31.6	20.9
1998 11 13	20 52.60	-27 29.0	1.834	1.890	77.7	30.8	21.0
1998 11 18	21 04.40	-26 25.2	1.910	1.920	75.6	29.9	21.1
1998 11 23	21 15.86	-25 20.3	1.988	1.950	73.4	29.0	21.2
1998 11 28	21 27.02	-24 14.4	2.066	1.980	71.1	28.1	21.3
1998 12 03	21 37.89	-23 07.7	2.145	2.011	68.8	27.2	21.4
1998 12 08	21 48.48	-22 00.6	2.224	2.041	66.4	26.3	21.5
1998 12 13	21 58.82	-20 53.2	2.304	2.072	64.1	25.3	21.6

1998 HZ ₇		$a, e, i = 3.24, 0.44, 23$				Elements <i>MPC</i> 32076	
Date TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06	13 46.67	+01 04.5	1.043	1.852	128.3	25.5	19.6
1998 06 11	13 50.78	+01 50.3	1.089	1.860	124.2	26.8	19.7
1998 06 16	13 55.42	+02 24.8	1.137	1.868	120.3	28.0	19.9
1998 06 21	14 00.54	+02 49.2	1.188	1.878	116.6	28.9	20.0
1998 06 26	14 06.12	+03 04.4	1.240	1.888	113.2	29.7	20.1
1998 07 01	14 12.13	+03 11.4	1.295	1.899	109.9	30.2	20.3
1998 07 06	14 18.51	+03 11.5	1.351	1.911	106.8	30.6	20.4
1998 07 11	14 25.24	+03 05.4	1.409	1.924	103.8	30.9	20.5
1998 07 16	14 32.28	+02 54.0	1.468	1.937	100.9	31.0	20.6
1998 07 21	14 39.59	+02 38.3	1.528	1.951	98.2	31.0	20.7
1998 07 26	14 47.18	+02 18.7	1.589	1.966	95.5	31.0	20.8
1998 07 31	14 55.00	+01 56.1	1.650	1.981	92.9	30.8	20.9
1998 08 05	15 03.03	+01 31.1	1.713	1.997	90.4	30.5	21.0
1998 08 10	15 11.26	+01 04.2	1.776	2.013	87.9	30.2	21.1
1998 08 15	15 19.67	+00 36.0	1.840	2.030	85.5	29.8	21.2
1998 08 20	15 28.24	+00 06.8	1.905	2.048	83.2	29.4	21.2
1998 08 25	15 36.97	-00 22.9	1.970	2.066	80.8	28.9	21.3
1998 08 30	15 45.84	-00 52.8	2.035	2.085	78.5	28.3	21.4
1998 09 04	15 54.84	-01 22.3	2.101	2.104	76.3	27.8	21.5
1998 09 09	16 03.95	-01 51.4	2.167	2.123	74.0	27.1	21.5
1998 09 14	16 13.16	-02 19.5	2.233	2.143	71.8	26.5	21.6
1998 09 19	16 22.47	-02 46.6	2.299	2.163	69.5	25.8	21.7
1998 09 24	16 31.87	-03 12.3	2.365	2.183	67.3	25.1	21.7
1998 09 29	16 41.34	-03 36.5	2.431	2.204	65.0	24.3	21.8
1998 10 04	16 50.87	-03 58.9	2.497	2.225	62.8	23.6	21.8

1998 KE ₃		$a, e, i = 2.06, 0.26, 48$				Elements <i>MPC</i> 32087	
Date TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06	14 20.61	-01 15.5	0.720	1.616	136.8	25.5	17.0
1998 06 11	14 11.40	-05 28.7	0.761	1.627	132.2	27.5	17.2
1998 06 16	14 04.13	-09 21.0	0.809	1.639	127.4	29.5	17.4
1998 06 21	13 58.67	-12 51.9	0.864	1.651	122.6	31.2	17.6
1998 06 26	13 54.87	-16 02.4	0.923	1.663	118.0	32.7	17.8
1998 07 01	13 52.59	-18 54.5	0.985	1.676	113.6	33.8	18.0
1998 07 06	13 51.67	-21 30.6	1.051	1.689	109.5	34.6	18.2
1998 07 11	13 51.95	-23 52.9	1.119	1.703	105.6	35.1	18.3
1998 07 16	13 53.30	-26 03.5	1.189	1.716	101.9	35.4	18.5
1998 07 21	13 55.64	-28 04.0	1.260	1.731	98.4	35.5	18.6
1998 07 26	13 58.87	-29 56.2	1.331	1.745	95.1	35.4	18.8
1998 07 31	14 02.92	-31 41.4	1.403	1.760	92.0	35.2	18.9
1998 08 05	14 07.72	-33 20.5	1.474	1.775	89.0	34.9	19.0

1998 08 10	14 13.22	-34 54.5	1.545	1.790	86.1	34.4	19.1
1998 08 15	14 19.38	-36 23.8	1.616	1.805	83.4	33.9	19.2
1998 08 20	14 26.18	-37 49.2	1.686	1.821	80.7	33.3	19.3
1998 08 25	14 33.61	-39 11.0	1.754	1.836	78.2	32.6	19.4
1998 08 30	14 41.63	-40 29.5	1.822	1.852	75.7	31.9	19.5
1998 09 04	14 50.23	-41 45.0	1.888	1.868	73.3	31.1	19.6
1998 09 09	14 59.41	-42 57.5	1.953	1.883	71.0	30.4	19.6
1998 09 14	15 09.16	-44 07.1	2.016	1.899	68.8	29.6	19.7
1998 09 19	15 19.49	-45 13.9	2.077	1.915	66.6	28.8	19.8
1998 09 24	15 30.41	-46 17.7	2.137	1.931	64.5	28.0	19.8
1998 09 29	15 41.90	-47 18.4	2.195	1.947	62.5	27.2	19.9
1998 10 04	15 53.97	-48 16.0	2.252	1.963	60.5	26.3	19.9

1998 KU ₂		$a, e, i = 2.25, 0.55, 5$				Elements <i>MPC</i> 32087	
Date TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06	14 39.52	-06 34.5	0.502	1.449	143.6	24.6	17.4
1998 06 11	14 33.16	-05 25.1	0.488	1.412	137.0	29.4	17.5
1998 06 16	14 27.77	-04 22.3	0.476	1.374	130.6	34.1	17.5
1998 06 21	14 23.56	-03 27.4	0.467	1.338	124.6	38.7	17.5
1998 06 26	14 20.67	-02 41.3	0.458	1.302	119.0	43.1	17.5
1998 07 01	14 19.21	-02 04.3	0.450	1.267	113.7	47.3	17.6
1998 07 06	14 19.19	-01 36.1	0.441	1.232	108.9	51.3	17.6
1998 07 11	14 20.61	-01 16.1	0.432	1.200	104.4	55.2	17.6
1998 07 16	14 23.43	-01 03.5	0.422	1.168	100.3	58.8	17.6
1998 07 21	14 27.64	-00 57.7	0.410	1.139	96.6	62.4	17.6
1998 07 26	14 33.24	-00 57.9	0.397	1.112	93.3	65.8	17.5
1998 07 31	14 40.23	-01 03.2	0.382	1.087	90.3	69.1	17.5
1998 08 05	14 48.62	-01 12.8	0.366	1.065	87.8	72.2	17.5
1998 08 10	14 58.46	-01 26.0	0.347	1.046	85.5	75.1	17.4
1998 08 15	15 09.86	-01 42.4	0.327	1.030	83.7	77.9	17.4
1998 08 20	15 23.06	-02 01.7	0.306	1.018	82.4	80.3	17.3
1998 08 25	15 38.41	-02 23.9	0.284	1.009	81.6	82.3	17.2
1998 08 30	15 56.41	-02 49.1	0.261	1.005	81.5	83.6	17.0
1998 09 04	16 17.76	-03 17.4	0.238	1.004	82.2	84.2	16.8
1998 09 09	16 43.45	-03 48.9	0.217	1.008	84.0	83.6	16.6
1998 09 14	17 14.71	-04 23.3	0.196	1.016	87.2	81.6	16.4
1998 09 19	17 52.87	-04 58.8	0.179	1.027	92.1	77.8	16.0
1998 09 24	18 38.59	-05 30.2	0.167	1.042	98.9	72.0	15.7
1998 09 29	19 30.73	-05 48.8	0.161	1.061	107.1	64.5	15.5
1998 10 04	20 25.48	-05 47.0	0.164	1.082	115.9	56.2	15.3
1998 10 09	21 17.62	-05 23.7	0.175	1.107	124.0	48.4	15.3
1998 10 14	22 03.23	-04 45.4	0.195	1.133	130.4	42.1	15.4
1998 10 19	22 41.04	-03 59.8	0.221	1.162	134.7	37.5	15.6
1998 10 24	23 11.69	-03 11.8	0.253	1.193	137.2	34.5	15.8
1998 10 29	23 36.56	-02 23.7	0.291	1.226	138.3	32.6	16.1
1998 11 03	23 57.00	-01 36.2	0.332	1.260	138.3	31.6	16.5
1998 11 08	00 14.11	-00 49.3	0.378	1.295	137.5	31.2	16.8
1998 11 13	00 28.78	-00 02.9	0.427	1.330	136.1	31.1	17.1
1998 11 18	00 41.65	+00 43.4	0.479	1.367	134.3	31.2	17.4
1998 11 23	00 53.21	+01 30.0	0.535	1.404	132.2	31.4	17.7
1998 11 28	01 03.82	+02 16.8	0.594	1.442	129.9	31.7	18.0
1998 12 03	01 13.73	+03 03.8	0.656	1.479	127.4	32.0	18.3
1998 12 08	01 23.12	+03 50.9	0.721	1.517	124.8	32.2	18.6

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1998 12 13	01 32.12	+04 38.1	0.790	1.556	122.1	32.4	18.8
1998 12 18	01 40.86	+05 25.3	0.861	1.594	119.4	32.6	19.1
1998 12 23	01 49.42	+06 12.3	0.934	1.632	116.6	32.6	19.3
1998 12 28	01 57.86	+06 59.0	1.010	1.670	113.7	32.6	19.5
1999 01 02	02 06.22	+07 45.3	1.089	1.707	110.9	32.6	19.7
1999 01 07	02 14.53	+08 31.0	1.170	1.745	108.0	32.4	19.9
1999 01 12	02 22.81	+09 16.0	1.252	1.782	105.1	32.2	20.1
1999 01 17	02 31.09	+10 00.0	1.337	1.819	102.2	31.9	20.3
1999 01 22	02 39.38	+10 43.2	1.423	1.856	99.3	31.6	20.5
1999 01 27	02 47.70	+11 25.3	1.511	1.892	96.4	31.1	20.6
1999 02 01	02 56.05	+12 06.1	1.599	1.928	93.4	30.7	20.8
1999 02 06	03 04.42	+12 45.7	1.689	1.964	90.5	30.1	20.9
1999 02 11	03 12.83	+13 23.8	1.780	1.999	87.6	29.6	21.0
1999 02 16	03 21.27	+14 00.5	1.871	2.034	84.7	28.9	21.2
1999 02 21	03 29.76	+14 35.6	1.962	2.068	81.8	28.2	21.3
1999 02 26	03 38.28	+15 09.1	2.054	2.102	78.9	27.5	21.4
1999 03 03	03 46.82	+15 40.9	2.145	2.136	76.1	26.8	21.5
1999 03 08	03 55.39	+16 10.9	2.237	2.169	73.2	26.0	21.6
1999 03 13	04 03.99	+16 39.1	2.327	2.201	70.3	25.2	21.7
1999 03 18	04 12.61	+17 05.5	2.417	2.234	67.5	24.3	21.8
1999 03 23	04 21.25	+17 29.9	2.506	2.265	64.6	23.4	21.9

1998 KO₃ $a, e, i = 2.60, 0.77, 54$ Elements *MPC* 32087

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		15 01.95	-31 17.2	0.449	1.430	153.3	18.6	19.3
1998 06 11		14 43.79	-33 53.9	0.540	1.490	145.0	23.0	19.9
1998 06 16		14 31.56	-35 36.5	0.636	1.549	138.3	25.9	20.4
1998 06 21		14 23.59	-36 47.8	0.736	1.608	132.5	27.8	20.9
1998 06 26		14 18.74	-37 40.5	0.839	1.665	127.3	29.0	21.3
1998 07 01		14 16.25	-38 21.8	0.944	1.721	122.7	29.8	21.6
1998 07 06		14 15.57	-38 56.2	1.051	1.776	118.4	30.2	22.0

1998 KH₉ $a, e, i = 2.22, 0.46, 18$ Elements *MPC* 32088

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		15 08.12	+04 42.7	0.246	1.218	142.1	30.8	17.2
1998 06 11		15 05.57	-01 43.3	0.236	1.209	141.8	31.2	17.1
1998 06 16		15 04.26	-08 51.5	0.230	1.203	140.8	32.3	17.1
1998 06 21		15 04.51	-16 22.4	0.230	1.199	138.8	33.9	17.1
1998 06 26		15 06.66	-23 52.7	0.235	1.197	136.3	35.9	17.2
1998 07 01		15 11.03	-31 00.4	0.244	1.198	133.4	38.1	17.4
1998 07 06		15 17.88	-37 29.6	0.259	1.201	130.5	40.1	17.5
1998 07 11		15 27.42	-43 11.1	0.276	1.206	127.9	41.7	17.7
1998 07 16		15 39.82	-48 02.0	0.298	1.214	125.5	43.0	18.0
1998 07 21		15 55.20	-52 02.5	0.322	1.224	123.5	43.8	18.2
1998 07 26		16 13.57	-55 15.5	0.348	1.236	121.9	44.2	18.4
1998 07 31		16 34.72	-57 44.0	0.376	1.250	120.6	44.4	18.6
1998 08 05		16 58.18	-59 31.5	0.407	1.265	119.5	44.2	18.8
1998 08 10		17 23.23	-60 41.1	0.438	1.283	118.6	43.9	18.9
1998 08 15		17 49.00	-61 16.1	0.472	1.302	117.9	43.4	19.1
1998 08 20		18 14.67	-61 20.3	0.507	1.323	117.2	42.9	19.3
1998 08 25		18 39.53	-60 57.6	0.544	1.345	116.6	42.2	19.5
1998 08 30		19 03.06	-60 12.4	0.582	1.368	115.9	41.6	19.6
1998 09 04		19 24.98	-59 08.8	0.623	1.393	115.2	40.9	19.8
1998 09 09		19 45.15	-57 50.3	0.665	1.418	114.5	40.3	20.0

1998 09 14	20 03.64	-56 20.3	0.709	1.444	113.7	39.6	20.1
1998 09 19	20 20.59	-54 41.2	0.755	1.471	112.7	39.0	20.3
1998 09 24	20 36.18	-52 55.4	0.803	1.499	111.7	38.5	20.4
1998 09 29	20 50.61	-51 04.8	0.853	1.527	110.5	37.9	20.6
1998 10 04	21 04.04	-49 11.1	0.906	1.556	109.3	37.4	20.8
1998 10 09	21 16.60	-47 15.4	0.961	1.585	107.9	36.9	20.9
1998 10 14	21 28.43	-45 18.7	1.018	1.614	106.4	36.4	21.1
1998 10 19	21 39.65	-43 21.7	1.078	1.644	104.8	35.9	21.2
1998 10 24	21 50.37	-41 25.1	1.139	1.674	103.1	35.4	21.4
1998 10 29	22 00.67	-39 29.4	1.203	1.703	101.3	34.9	21.5
1998 11 03	22 10.60	-37 34.9	1.269	1.733	99.4	34.4	21.6
1998 11 08	22 20.22	-35 42.1	1.337	1.763	97.4	33.9	21.8
1998 11 13	22 29.58	-33 50.9	1.407	1.793	95.3	33.3	21.9

1998 KD₃ $a, e, i = 2.05, 0.51, 29$ Elements *MPC* 32087

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		15 59.55	+25 29.6	0.168	1.130	130.0	43.4	19.1
1998 06 11		16 13.69	+28 53.7	0.219	1.158	125.9	45.3	19.8
1998 06 16		16 23.38	+30 34.1	0.272	1.187	123.3	45.7	20.3
1998 06 21		16 30.69	+31 18.0	0.326	1.218	121.4	45.4	20.7
1998 06 26		16 36.69	+31 26.9	0.379	1.250	120.0	44.8	21.1
1998 07 01		16 42.02	+31 12.4	0.434	1.283	118.8	43.9	21.4
1998 07 06		16 47.02	+30 41.5	0.488	1.317	117.8	43.1	21.7
1998 07 11		16 51.93	+29 58.6	0.544	1.352	116.8	42.1	22.0
1998 07 16		16 56.85	+29 06.7	0.599	1.387	115.9	41.2	22.2

C/1998 K3 (LINEAR)

Elements *MPC* 31894

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 06		16 03.65	+04 15.5	2.726	3.642	150.3	7.9	17.8	
1998 06 16		15 41.09	+05 09.0	2.828	3.664	139.9	10.3	17.9	
1998 06 26		15 21.34	+05 40.4	2.974	3.687	127.9	12.6	18.0	
1998 07 06		15 04.94	+05 52.5	3.155	3.713	115.9	14.3	18.2	
1998 07 16		14 51.92	+05 49.5	3.358	3.741	104.3	15.3	18.4	
1998 07 26		14 42.04	+05 35.5	3.575	3.770	93.2	15.6	18.5	
1998 08 05		14 34.91	+05 14.0	3.797	3.802	82.6	15.3	18.7	
1998 08 15		14 30.10	+04 47.8	4.015	3.835	72.5	14.6	18.9	
1998 08 25		14 27.21	+04 19.1	4.225	3.870	62.8	13.4	19.0	
1998 09 04		14 25.88	+03 49.6	4.420	3.906	53.6	12.0	19.1	
1998 09 14		14 25.80	+03 20.6	4.597	3.944	44.6	10.3	19.3	
1998 09 24		14 26.70	+02 53.2	4.751	3.984	36.1	8.5	19.4	

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Elements *MPC* 31894

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 06		16 05.55	-19 41.6	3.766	4.764	168.0	2.5	20.7	21.5
1998 06 16		15 59.12	-19 19.5	3.768	4.720	156.9	4.8	20.6	21.7
1998 06 26		15 53.44	-18 59.4	3.798	4.675	146.0	7.0	20.6	21.8
1998 07 06		15 48.88	-18 42.6	3.851	4.630	135.4	8.9	20.6	21.9
1998 07 16		15 45.67	-18 30.1	3.925	4.585	125.0	10.5	20.6	21.9
1998 07 26		15 43.95	-18 22.7	4.014	4.539	115.1	11.7	20.6	22.0
1998 08 05		15 43.77	-18 20.6	4.114	4.492	105.5	12.6	20.6	22.1
1998 08 15		15 45.12	-18 23.7	4.220	4.445	96.2	13.1	20.6	22.1
1998 08 25		15 47.95	-18 31.6	4.328	4.397	87.3	13.3	20.6	22.2
1998 09 04		15 52.16	-18 43.6	4.435	4.349	78.6	13.1	20.6	22.2
1998 09 14		15 57.66	-18 58.9	4.536	4.301	70.2	12.7	20.6	22.2

M.P.C. 32100

1998 JUNE 10

1998 09 24	16 04.34	-19 16.8	4.628	4.252	62.1	12.0	20.6	22.2
1998 10 04	16 12.10	-19 36.3	4.710	4.202	54.1	11.1	20.6	22.2
1998 10 14	16 20.84	-19 56.5	4.778	4.152	46.3	10.0	20.6	22.1
1998 10 24	16 30.45	-20 16.6	4.831	4.102	38.7	8.7	20.6	22.1
1998 11 03	16 40.85	-20 35.8	4.867	4.051	31.2	7.3	20.5	22.0

1998 KF ₃		$a, e, i = 2.13, 0.42, 27$				Elements <i>MPC</i> 32087		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		16 12.60	+16 44.0	0.466	1.401	139.3	28.2	19.3
1998 06 11		16 11.96	+18 28.4	0.508	1.424	135.6	29.9	19.6
1998 06 16		16 11.92	+19 37.9	0.553	1.447	132.3	31.3	19.9
1998 06 21		16 12.50	+20 19.1	0.600	1.471	129.3	32.3	20.1
1998 06 26		16 13.73	+20 37.4	0.648	1.496	126.5	33.1	20.3
1998 07 01		16 15.63	+20 37.3	0.698	1.521	124.0	33.7	20.5
1998 07 06		16 18.15	+20 22.6	0.750	1.547	121.6	34.0	20.7
1998 07 11		16 21.27	+19 56.5	0.802	1.573	119.3	34.3	20.9
1998 07 16		16 24.95	+19 21.3	0.856	1.600	117.1	34.4	21.1
1998 07 21		16 29.14	+18 38.9	0.911	1.627	115.0	34.5	21.3
1998 07 26		16 33.83	+17 51.2	0.968	1.654	113.0	34.4	21.4
1998 07 31		16 38.97	+16 59.4	1.025	1.681	111.0	34.3	21.6
1998 08 05		16 44.55	+16 05.0	1.084	1.708	109.0	34.2	21.8
1998 08 10		16 50.51	+15 08.9	1.144	1.736	107.0	34.0	21.9
1998 08 15		16 56.81	+14 11.9	1.204	1.763	105.0	33.7	22.0

1998 KV ₂		$a, e, i = 1.59, 0.33, 13$				Elements <i>MPC</i> 32087		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		16 19.95	-23 51.6	0.838	1.848	171.7	4.5	18.2
1998 06 11		16 11.24	-24 17.4	0.865	1.865	165.1	8.0	18.5
1998 06 16		16 03.50	-24 39.7	0.898	1.881	158.7	11.3	18.7
1998 06 21		15 56.90	-24 59.3	0.937	1.897	152.5	14.3	19.0
1998 06 26		15 51.54	-25 16.9	0.980	1.912	146.6	17.0	19.2
1998 07 01		15 47.46	-25 33.2	1.028	1.927	141.0	19.4	19.4
1998 07 06		15 44.65	-25 49.1	1.080	1.942	135.7	21.5	19.6
1998 07 11		15 43.05	-26 04.9	1.135	1.955	130.6	23.2	19.7
1998 07 16		15 42.58	-26 21.0	1.193	1.969	125.8	24.7	19.9
1998 07 21		15 43.16	-26 37.5	1.253	1.981	121.3	26.0	20.1
1998 07 26		15 44.71	-26 54.5	1.316	1.994	116.9	27.0	20.2
1998 07 31		15 47.15	-27 12.1	1.380	2.005	112.8	27.8	20.3
1998 08 05		15 50.41	-27 30.3	1.446	2.016	108.8	28.4	20.5
1998 08 10		15 54.39	-27 48.8	1.513	2.027	105.0	28.9	20.6
1998 08 15		15 59.03	-28 07.6	1.580	2.037	101.3	29.2	20.7
1998 08 20		16 04.28	-28 26.5	1.648	2.047	97.7	29.3	20.8
1998 08 25		16 10.10	-28 45.3	1.716	2.055	94.2	29.4	20.9
1998 08 30		16 16.42	-29 03.8	1.785	2.064	90.9	29.3	21.0
1998 09 04		16 23.21	-29 21.9	1.853	2.072	87.6	29.1	21.1
1998 09 09		16 30.42	-29 39.3	1.920	2.079	84.4	28.8	21.2
1998 09 14		16 38.02	-29 55.9	1.987	2.086	81.2	28.5	21.2
1998 09 19		16 45.99	-30 11.5	2.053	2.092	78.2	28.0	21.3
1998 09 24		16 54.30	-30 25.9	2.118	2.098	75.1	27.5	21.4
1998 09 29		17 02.92	-30 39.0	2.182	2.103	72.1	27.0	21.4
1998 10 04		17 11.82	-30 50.6	2.244	2.108	69.2	26.3	21.5
1998 10 09		17 20.98	-31 00.5	2.305	2.112	66.3	25.7	21.5
1998 10 14		17 30.39	-31 08.6	2.364	2.115	63.4	24.9	21.5

C/1998 K2 (LINEAR)

		Elements <i>MPC</i> 31893						
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1 m_2
1998 06 06		16 28.43	-35 20.1	1.524	2.521	166.0	5.6	13.4
1998 06 16		16 04.12	-39 24.9	1.523	2.480	154.6	10.1	13.4
1998 06 26		15 39.63	-42 51.5	1.561	2.443	141.9	14.9	13.3
1998 07 06		15 17.49	-45 36.6	1.630	2.411	129.8	18.9	13.4
1998 07 16		14 59.58	-47 48.4	1.721	2.383	118.8	21.9	13.5
1998 07 26		14 46.79	-49 39.1	1.827	2.361	108.9	24.0	13.5
1998 08 05		14 39.28	-51 20.2	1.941	2.343	100.2	25.2	13.6
1998 08 15		14 36.74	-53 00.1	2.057	2.331	92.4	25.7	13.7
1998 08 25		14 38.81	-54 43.7	2.171	2.324	85.7	25.7	13.8
1998 09 04		14 45.19	-56 34.1	2.281	2.323	79.7	25.3	14.0
1998 09 14		14 55.76	-58 31.6	2.384	2.327	74.6	24.6	14.1
1998 09 24		15 10.67	-60 35.7	2.479	2.337	70.1	23.8	14.2
1998 10 04		15 30.32	-62 44.4	2.566	2.352	66.4	22.9	14.3
1998 10 14		15 55.41	-64 53.9	2.645	2.372	63.4	22.1	14.4
1998 10 24		16 26.99	-66 58.4	2.717	2.398	61.0	21.3	14.5
1998 11 03		17 06.16	-68 49.5	2.783	2.428	59.1	20.5	14.6
1998 11 13		17 53.6	-70 15.7	2.843	2.462	57.8	19.9	14.7
1998 11 23		18 48.7	-71 03.4	2.901	2.501	56.8	19.3	14.8
1998 12 03		19 48.2	-71 01.0	2.957	2.544	56.2	18.8	14.9
1998 12 13		20 47.2	-70 03.3	3.014	2.591	55.7	18.3	15.0
1998 12 23		21 41.07	-68 14.3	3.073	2.641	55.4	17.8	15.2
1999 01 02		22 27.85	-65 44.7	3.136	2.695	55.0	17.4	15.3
1999 01 12		23 07.58	-62 46.5	3.203	2.751	54.5	16.9	15.4
1999 01 22		23 41.37	-59 30.6	3.275	2.811	53.9	16.4	15.6
1999 02 01		00 10.47	-56 06.2	3.353	2.872	53.2	15.9	15.7
1999 02 11		00 35.95	-52 39.9	3.435	2.936	52.2	15.4	15.9
1999 02 21		00 58.69	-49 17.0	3.522	3.002	51.1	14.9	16.0
1999 03 03		01 19.28	-46 01.7	3.611	3.070	50.0	14.3	16.2

1988 PF₁

		$a, e, i = 2.99, 0.46, 4$				Elements <i>MPC</i> 23513		
Date	TT	α_{2000}	δ_{2000}	Δ	r	Variation	V	
1998 06 06		16 29.46	-27 33.9	1.547	2.556	-1.68	+3.0	19.8
1998 06 11		16 23.98	-27 17.2	1.530	2.531	-1.67	+3.2	19.9
1998 06 16		16 18.66	-26 58.4	1.520	2.506	-1.65	+3.4	19.9
1998 06 21		16 13.66	-26 38.1	1.516	2.480	-1.62	+3.5	20.0
1998 06 26		16 09.14	-26 17.0	1.518	2.455	-1.58	+3.6	20.1
1998 07 01		16 05.22	-25 55.8	1.526	2.429	-1.54	+3.7	20.1
1998 07 06		16 02.01	-25 35.1	1.538	2.404	-1.49	+3.6	20.2
1998 07 11		15 59.58	-25 15.5	1.555	2.378	-1.45	+3.6	20.3
1998 07 16		15 57.96	-24 57.6	1.576	2.353	-1.40	+3.5	20.3
1998 07 21		15 57.19	-24 41.6	1.600	2.327	-1.36	+3.3	20.4
1998 07 26		15 57.27	-24 27.9	1.627	2.302	-1.32	+3.1	20.4
1998 07 31		15 58.22	-24 16.7	1.657	2.276	-1.28	+3.0	20.5
1998 08 05		16 00.00	-24 07.9	1.688	2.251	-1.25	+2.8	20.6
1998 08 10		16 02.59	-24 01.5	1.720	2.226	-1.22	+2.5	20.6
1998 08 15		16 05.95	-23 57.2	1.753	2.200	-1.20	+2.3	20.6
1998 08 20		16 10.06	-23 55.0	1.787	2.175	-1.18	+2.1	20.7
1998 08 25		16 14.89	-23 54.6	1.821	2.150	-1.17	+1.9	20.7
1998 08 30		16 20.41	-23 55.6	1.855	2.126	-1.16	+1.6	20.7
1998 09 04		16 26.59	-23 57.7	1.889	2.101	-1.15	+1.4	20.8
1998 09 09		16 33.38	-24 00.5	1.922	2.077	-1.15	+1.2	20.8

1998 09 14	16 40.76	-24 03.8	1.954	2.052	-1.15	+0.9	20.8
1998 09 19	16 48.70	-24 07.1	1.985	2.028	-1.15	+0.7	20.8
1998 09 24	16 57.19	-24 10.0	2.016	2.005	-1.16	+0.4	20.8
1998 09 29	17 06.20	-24 12.2	2.046	1.982	-1.17	+0.1	20.8
1998 10 04	17 15.69	-24 13.3	2.074	1.959	-1.18	-0.2	20.8
1998 10 09	17 25.65	-24 12.9	2.101	1.936	-1.19	-0.5	20.8
1998 10 14	17 36.04	-24 10.6	2.127	1.914	-1.20	-0.8	20.8

1998 LD		$a, e, i = 1.45, 0.18, 23$				Elements	MPC	32091
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		16 36.76	-04 31.8	0.199	1.205	161.4	15.6	18.3
1998 06 11		16 35.15	+03 27.3	0.216	1.209	151.7	23.5	18.7
1998 06 16		16 34.25	+09 48.9	0.238	1.215	143.5	29.8	19.1
1998 06 21		16 34.12	+14 40.2	0.263	1.221	136.8	34.8	19.5
1998 06 26		16 34.83	+18 15.9	0.291	1.228	131.3	38.5	19.8
1998 07 01		16 36.39	+20 51.1	0.321	1.236	126.8	41.2	20.1
1998 07 06		16 38.79	+22 39.3	0.352	1.245	123.1	43.2	20.4
1998 07 11		16 41.98	+23 51.0	0.384	1.254	120.0	44.6	20.6
1998 07 16		16 45.90	+24 34.0	0.416	1.263	117.4	45.6	20.8
1998 07 21		16 50.50	+24 54.3	0.449	1.274	115.2	46.2	21.0
1998 07 26		16 55.78	+24 56.3	0.481	1.284	113.2	46.6	21.2
1998 07 31		17 01.70	+24 44.0	0.514	1.295	111.5	46.8	21.4
1998 08 05		17 08.23	+24 20.2	0.546	1.307	110.0	46.8	21.5
1998 08 10		17 15.33	+23 47.3	0.579	1.319	108.7	46.7	21.7
1998 08 15		17 22.94	+23 07.0	0.611	1.331	107.4	46.6	21.8
1998 08 20		17 31.06	+22 20.8	0.643	1.343	106.3	46.3	21.9
1998 08 25		17 39.66	+21 30.0	0.676	1.355	105.2	46.0	22.1

1996 KV ₁		$a, e, i = 45.20, 0.10, 8$				Elements	MPC	31973
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		17 02.25	-20 26.4	39.767	40.781	177.3	0.1	23.1
1998 06 16		17 01.38	-20 25.5	39.776	40.780	171.3	0.2	23.1
1998 06 26		17 00.54	-20 24.8	39.813	40.779	161.7	0.4	23.1
1998 07 06		16 59.76	-20 24.2	39.877	40.778	152.0	0.7	23.2
1998 07 16		16 59.06	-20 23.8	39.967	40.777	142.4	0.9	23.2
1998 07 26		16 58.47	-20 23.7	40.080	40.776	132.7	1.0	23.2
1998 08 05		16 58.01	-20 23.8	40.213	40.775	123.0	1.2	23.2
1998 08 15		16 57.70	-20 24.1	40.361	40.774	113.4	1.3	23.3
1998 08 25		16 57.54	-20 24.7	40.521	40.773	103.7	1.4	23.3
1998 09 04		16 57.56	-20 25.7	40.687	40.772	94.1	1.4	23.3
1998 09 14		16 57.75	-20 26.8	40.856	40.771	84.4	1.4	23.3
1998 09 24		16 58.11	-20 28.2	41.022	40.770	74.8	1.4	23.3
1998 10 04		16 58.63	-20 29.8	41.180	40.769	65.1	1.3	23.3
1998 10 14		16 59.31	-20 31.6	41.326	40.768	55.4	1.2	23.3
1998 10 24		17 00.13	-20 33.5	41.456	40.767	45.6	1.0	23.3
1998 11 03		17 01.06	-20 35.6	41.565	40.765	35.9	0.8	23.3

1998 KK ₅₆		$a, e, i = 3.19, 0.52, 26$				Elements	MPC	32091
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		17 20.13	+12 56.2	0.632	1.571	143.9	22.3	17.1
1998 06 11		17 16.26	+10 00.0	0.630	1.581	146.9	20.5	17.0
1998 06 16		17 12.47	+06 48.4	0.633	1.593	149.3	19.0	17.0
1998 06 21		17 08.96	+03 25.7	0.641	1.606	150.6	18.1	17.0
1998 06 26		17 05.96	-00 02.5	0.656	1.621	150.8	17.8	17.1

1998 07 01	17 03.64	-03 30.8	0.677	1.637	149.7	18.3	17.2
1998 07 06	17 02.14	-06 54.2	0.703	1.654	147.6	19.3	17.3
1998 07 11	17 01.53	-10 08.5	0.736	1.672	144.7	20.6	17.5
1998 07 16	17 01.84	-13 10.9	0.774	1.691	141.3	22.1	17.6
1998 07 21	17 03.09	-15 59.7	0.817	1.711	137.7	23.5	17.8
1998 07 26	17 05.28	-18 34.1	0.865	1.732	134.0	24.9	18.0
1998 07 31	17 08.38	-20 53.9	0.918	1.754	130.3	26.2	18.2
1998 08 05	17 12.34	-22 59.7	0.974	1.777	126.6	27.3	18.4
1998 08 10	17 17.10	-24 52.1	1.035	1.801	123.0	28.2	18.6
1998 08 15	17 22.59	-26 32.0	1.098	1.825	119.6	28.9	18.8
1998 08 20	17 28.75	-28 00.3	1.165	1.849	116.2	29.4	18.9
1998 08 25	17 35.53	-29 18.1	1.234	1.875	112.9	29.8	19.1
1998 08 30	17 42.88	-30 26.1	1.306	1.901	109.7	30.0	19.3
1998 09 04	17 50.73	-31 25.2	1.380	1.927	106.5	30.1	19.4
1998 09 09	17 59.02	-32 16.0	1.456	1.954	103.5	30.1	19.6
1998 09 14	18 07.68	-32 59.2	1.533	1.981	100.5	30.0	19.7
1998 09 19	18 16.69	-33 35.4	1.612	2.008	97.5	29.7	19.8
1998 09 24	18 26.00	-34 05.1	1.693	2.036	94.6	29.4	20.0
1998 09 29	18 35.56	-34 28.7	1.774	2.064	91.8	29.0	20.1
1998 10 04	18 45.32	-34 46.7	1.857	2.092	88.9	28.6	20.2
1998 10 09	18 55.25	-34 59.4	1.940	2.121	86.1	28.0	20.3
1998 10 14	19 05.31	-35 07.2	2.024	2.150	83.3	27.4	20.4
1998 10 19	19 15.47	-35 10.4	2.108	2.178	80.5	26.8	20.5
1998 10 24	19 25.70	-35 09.3	2.192	2.207	77.8	26.1	20.6
1998 10 29	19 35.98	-35 04.1	2.276	2.236	75.0	25.4	20.7
1998 11 03	19 46.28	-34 55.2	2.360	2.265	72.3	24.7	20.8
1998 11 08	19 56.56	-34 42.8	2.444	2.294	69.6	23.9	20.9
1998 11 13	20 06.83	-34 27.0	2.527	2.323	66.8	23.1	20.9
1998 11 18	20 17.05	-34 08.3	2.609	2.352	64.1	22.2	21.0
1998 11 23	20 27.22	-33 46.7	2.691	2.382	61.4	21.4	21.1

C/1998 K5 (LINEAR)		Elements MPC 31894						
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1 m_2
1998 06 06		18 08.73	+16 52.6	0.235	1.197	136.6	35.6	14.6
1998 06 16		19 31.33	+37 28.6	0.191	1.106	113.5	57.4	13.8
1998 06 26		22 07.87	+52 41.6	0.200	1.033	89.1	79.7	13.6
1998 07 06		00 38.73	+51 54.1	0.250	0.984	75.4	90.3	13.9
1998 07 16		01 59.74	+46 02.7	0.319	0.964	71.5	90.2	14.4
1998 07 26		02 44.60	+40 51.4	0.392	0.976	73.0	84.5	14.9
1998 08 05		03 13.27	+36 46.3	0.462	1.017	77.2	76.5	15.4
1998 08 15		03 32.55	+33 26.8	0.524	1.084	83.3	68.1	15.9
1998 08 25		03 44.55	+30 33.5	0.577	1.171	90.8	59.7	16.5
1998 09 04		03 49.92	+27 51.8	0.621	1.272	99.9	51.4	17.0
1998 09 14		03 49.13	+25 12.6	0.661	1.382	110.3	43.0	17.5
1998 09 24		03 42.70	+22 30.5	0.701	1.499	122.2	34.5	18.0
1998 10 04		03 31.79	+19 45.2	0.748	1.619	135.1	25.8	18.5
1998 10 14		03 18.15	+17 02.3	0.810	1.741	148.8	17.3	19.0
1998 10 24		03 03.79	+14 31.5	0.892	1.865	162.6	9.2	19.5
1998 11 03		02 50.64	+12 23.3	0.999	1.989	174.8	2.6	20.0
1998 11 13		02 40.02	+10 44.1	1.132	2.112	169.5	4.9	20.5
1998 11 23		02 32.50	+09 35.5	1.290	2.236	157.8	9.6	21.0
1998 12 03		02 28.18	+08 55.0	1.471	2.358	146.6	13.3	21.6

1998 12 13	02 26.77	+08 38.1	1.674	2.479	136.1	16.0	22.1
1998 12 23	02 27.88	+08 39.8	1.893	2.599	126.3	17.8	22.5

1995 LG		$a, e, i = 1.06, 0.79, 44$				Elements <i>MPC</i> 27731		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		18 15.40	-48 23.4	0.956	1.902	149.7	15.6	20.7
1998 06 16		17 30.24	-46 42.9	0.916	1.892	156.6	12.3	20.4
1998 06 26		16 47.30	-43 15.8	0.912	1.874	152.6	14.4	20.5
1998 07 06		16 13.50	-38 41.9	0.945	1.850	141.3	20.1	20.7
1998 07 16		15 50.64	-33 58.8	1.006	1.820	128.2	26.0	21.0
1998 07 26		15 37.30	-29 45.3	1.088	1.782	115.8	30.9	21.3
1998 08 05		15 31.30	-26 16.1	1.180	1.737	104.4	34.5	21.5
1998 08 15		15 30.70	-23 30.1	1.276	1.685	94.1	36.8	21.7
1998 08 25		15 34.13	-21 20.0	1.368	1.624	84.7	38.3	21.8
1998 09 04		15 40.63	-19 37.4	1.450	1.555	76.1	39.0	21.8
1998 09 14		15 49.52	-18 14.3	1.518	1.477	68.2	39.2	21.8
1998 09 24		16 00.39	-17 03.9	1.569	1.389	60.8	39.1	21.7

1998 KH ₁₇		$a, e, i = 2.33, 0.43, 22$				Elements <i>MPC</i> 32089		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		18 31.88	+22 54.0	0.504	1.387	128.8	34.8	17.2
1998 06 16		18 35.32	+30 06.5	0.502	1.365	124.7	37.7	17.2
1998 06 26		18 36.97	+35 44.1	0.509	1.350	120.7	40.3	17.3
1998 07 06		18 38.07	+39 34.6	0.523	1.341	117.5	42.3	17.4
1998 07 16		18 40.02	+41 41.8	0.540	1.339	115.3	43.3	17.5
1998 07 26		18 44.06	+42 14.5	0.557	1.345	114.3	43.5	17.5
1998 08 05		18 51.22	+41 23.3	0.574	1.357	114.4	42.9	17.6
1998 08 15		19 01.90	+39 19.8	0.592	1.375	115.4	41.7	17.7
1998 08 25		19 16.05	+36 14.4	0.614	1.400	116.9	40.1	17.8
1998 09 04		19 33.33	+32 20.7	0.641	1.430	118.5	38.3	17.8
1998 09 14		19 53.06	+27 56.1	0.677	1.465	119.7	36.6	18.0
1998 09 24		20 14.54	+23 19.8	0.725	1.504	120.1	35.3	18.1
1998 10 04		20 37.15	+18 52.8	0.788	1.547	119.3	34.3	18.4
1998 10 14		21 00.25	+14 52.0	0.866	1.592	117.2	33.8	18.6
1998 10 24		21 23.40	+11 28.1	0.960	1.640	114.1	33.6	18.9
1998 11 03		21 46.32	+08 46.2	1.069	1.690	110.1	33.4	19.2
1998 11 13		22 08.77	+06 45.5	1.191	1.741	105.6	33.2	19.5
1998 11 23		22 30.68	+05 22.4	1.326	1.793	100.6	32.8	19.8
1998 12 03		22 52.02	+04 32.1	1.471	1.846	95.4	32.1	20.0
1998 12 13		23 12.79	+04 09.0	1.623	1.899	90.0	31.2	20.3
1998 12 23		23 33.03	+04 08.1	1.782	1.952	84.5	30.1	20.5
1999 01 02		23 52.80	+04 24.6	1.944	2.004	79.0	28.8	20.7
1999 01 12		00 12.14	+04 54.6	2.109	2.057	73.4	27.3	20.9
1999 01 22		00 31.12	+05 34.7	2.273	2.109	67.8	25.6	21.1
1999 02 01		00 49.80	+06 21.9	2.435	2.160	62.2	23.8	21.2

P/1993 X1 (Kushida-Muramatsu)					Elements <i>MPC</i> 31663				
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 06		19 38.38	−22 05.7	3.855	4.700	142.5	7.6	21.9	22.3
1998 06 16		19 33.73	−22 19.6	3.762	4.690	153.1	5.6	21.8	22.2
1998 06 26		19 27.99	−22 35.2	3.694	4.680	164.0	3.4	21.7	22.0
1998 07 06		19 21.54	−22 51.1	3.655	4.669	175.0	1.1	21.7	21.8
1998 07 16		19 14.81	−23 06.3	3.646	4.658	173.8	1.4	21.7	21.8
1998 07 26		19 08.27	−23 19.6	3.666	4.646	162.8	3.7	21.7	22.0

1998 08 05	19 02.40	-23 30.5	3.715	4.634	151.8	5.9	21.7	22.1
1998 08 15	18 57.58	-23 38.7	3.789	4.622	141.2	7.9	21.7	22.3
1998 08 25	18 54.11	-23 44.3	3.886	4.609	130.7	9.6	21.7	22.4
1998 09 04	18 52.17	-23 47.5	4.000	4.596	120.6	10.9	21.8	22.5

1998 KJ ₁₇		$a, e, i = 1.99, 0.48, 9$				Elements <i>MPC</i> 32089		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		20 13.13	-22 18.9	0.042	1.044	134.6	43.8	18.4
1998 06 11		20 59.06	-35 02.1	0.060	1.056	130.5	47.0	19.3
1998 06 16		21 25.44	-41 00.5	0.082	1.070	129.5	47.1	20.0
1998 06 21		21 40.45	-44 17.3	0.104	1.087	130.4	45.4	20.5
1998 06 26		21 48.33	-46 18.0	0.127	1.106	132.3	42.8	20.9
1998 07 01		21 51.44	-47 35.4	0.151	1.128	134.8	39.8	21.2
1998 07 06		21 51.25	-48 24.0	0.175	1.152	137.5	36.6	21.5
1998 07 11		21 48.73	-48 50.9	0.200	1.177	140.4	33.4	21.8
1998 07 16		21 44.58	-48 59.6	0.226	1.204	143.1	30.5	22.0

136P/Mueller 3					Elements <i>MPC</i> 31894				
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 06		21 37.23	-11 49.1	2.834	3.354	112.4	16.2	18.5	20.8
1998 06 16		21 39.64	-11 52.2	2.689	3.333	121.4	15.1	18.4	20.6
1998 06 26		21 40.28	-12 06.6	2.557	3.313	130.9	13.4	18.2	20.4
1998 07 06		21 39.09	-12 32.8	2.441	3.293	140.9	11.2	18.1	20.2
1998 07 16		21 36.15	-13 10.4	2.345	3.273	151.3	8.6	18.0	20.0
1998 07 26		21 31.67	-13 57.7	2.273	3.254	162.1	5.5	17.9	19.8
1998 08 05		21 26.07	-14 51.7	2.226	3.236	173.2	2.1	17.8	19.5
1998 08 15		21 19.93	-15 48.5	2.207	3.218	175.5	1.4	17.8	19.4
1998 08 25		21 13.91	-16 43.7	2.216	3.200	164.2	4.9	17.8	19.7
1998 09 04		21 08.74	-17 33.3	2.251	3.184	153.1	8.2	17.8	19.8
1998 09 14		21 04.99	-18 14.4	2.311	3.167	142.3	11.2	17.8	20.0
1998 09 24		21 03.09	-18 44.9	2.392	3.152	132.0	13.7	17.9	20.2
1998 10 04		21 03.28	-19 04.1	2.489	3.137	122.1	15.7	17.9	20.3
1998 10 14		21 05.60	-19 11.8	2.599	3.123	112.7	17.1	18.0	20.5
1998 10 24		21 09.97	-19 08.5	2.719	3.110	103.8	18.1	18.1	20.6
1998 11 03		21 16.24	-18 54.5	2.844	3.097	95.3	18.6	18.2	20.7
1998 11 13		21 24.18	-18 30.5	2.971	3.085	87.2	18.7	18.3	20.8
1998 11 23		21 33.59	-17 57.1	3.098	3.074	79.4	18.4	18.3	20.8
1998 12 03		21 44.24	-17 15.0	3.223	3.064	71.9	17.8	18.4	20.9
1998 12 13		21 55.93	-16 24.7	3.342	3.055	64.7	16.9	18.5	20.9
1998 12 23		22 08.47	-15 27.0	3.455	3.046	57.7	15.8	18.5	21.0
1999 01 02		22 21.71	-14 22.5	3.560	3.039	51.0	14.6	18.6	21.0
1999 01 12		22 35.49	-13 12.2	3.656	3.032	44.4	13.1	18.6	21.0
1999 01 22		22 49.72	-11 56.6	3.741	3.026	37.9	11.5	18.7	21.0
1999 02 01		23 04.27	-10 36.7	3.815	3.021	31.6	9.9	18.7	21.0

1993 PC		$a, e, i = 1.15, 0.47, 4$				Elements <i>MPC</i> 30782		
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	V
1998 06 06		23 16.55	−07 21.7	1.322	1.638	88.0	38.2	21.2
1998 06 16		23 26.50	−06 13.4	1.231	1.661	94.8	37.5	21.1
1998 06 26		23 33.93	−05 19.2	1.136	1.679	102.3	36.3	20.9
1998 07 06		23 38.25	−04 42.8	1.040	1.691	110.6	34.2	20.6
1998 07 16		23 38.77	−04 27.9	0.946	1.699	119.9	31.2	20.4
1998 07 26		23 34.56	−04 39.3	0.857	1.702	130.5	27.0	20.0
1998 08 05		23 24.73	−05 21.0	0.779	1.700	142.6	21.2	19.6

1998 08 15	23 08.84	-06 33.5	0.716	1.694	156.3	13.9	19.2
1998 08 25	22 47.44	-08 10.7	0.676	1.682	171.5	5.1	18.7
1998 09 04	22 22.92	-09 56.8	0.660	1.666	172.6	4.5	18.6
1998 09 14	21 58.94	-11 31.9	0.671	1.644	156.8	14.0	19.0
1998 09 24	21 39.03	-12 41.5	0.704	1.618	142.0	22.4	19.4
1998 10 04	21 25.34	-13 21.0	0.754	1.586	128.9	29.4	19.7
1998 10 14	21 18.20	-13 32.7	0.814	1.550	117.3	34.9	19.9
1998 10 24	21 17.03	-13 20.9	0.878	1.508	107.1	39.1	20.2
1998 11 03	21 20.89	-12 49.0	0.940	1.461	98.2	42.2	20.3
1998 11 13	21 28.81	-11 59.4	0.997	1.408	90.3	44.6	20.4
1998 11 23	21 40.05	-10 53.4	1.046	1.351	83.2	46.6	20.5
1998 12 03	21 54.00	-09 31.5	1.084	1.287	76.8	48.2	20.5
1998 12 13	22 10.22	-07 54.2	1.108	1.218	70.9	49.8	20.5
1998 12 23	22 28.44	-06 01.6	1.117	1.144	65.7	51.6	20.4
1999 01 02	22 48.45	-03 54.4	1.108	1.065	60.9	53.8	20.3

1996 TP ₆₆		$a, e, i = 39.77, 0.34, 6$				Elements MPC 31009	
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ
1998 06 06	01 35.17	+15 29.8	27.089	26.416	47.7	1.6	21.0
1998 06 16	01 36.30	+15 38.0	26.957	26.415	56.8	1.8	21.0
1998 06 26	01 37.25	+15 45.4	26.811	26.415	66.1	2.0	21.0
1998 07 06	01 37.98	+15 51.7	26.653	26.414	75.4	2.1	21.0
1998 07 16	01 38.49	+15 56.9	26.488	26.414	84.7	2.2	21.0
1998 07 26	01 38.77	+16 00.8	26.320	26.413	94.1	2.2	21.0
1998 08 05	01 38.81	+16 03.4	26.155	26.413	103.6	2.1	20.9
1998 08 15	01 38.62	+16 04.6	25.996	26.412	113.2	2.0	20.9
1998 08 25	01 38.19	+16 04.4	25.849	26.411	122.9	1.8	20.9
1998 09 04	01 37.56	+16 02.9	25.718	26.411	132.6	1.6	20.9
1998 09 14	01 36.75	+16 00.0	25.606	26.410	142.4	1.3	20.8
1998 09 24	01 35.78	+15 56.0	25.518	26.410	152.3	1.0	20.8
1998 10 04	01 34.70	+15 50.9	25.456	26.409	162.0	0.7	20.8
1998 10 14	01 33.55	+15 45.0	25.423	26.409	171.1	0.3	20.7
1998 10 24	01 32.38	+15 38.6	25.420	26.409	173.5	0.2	20.7
1998 11 03	01 31.24	+15 31.8	25.447	26.408	165.4	0.5	20.7
1998 11 13	01 30.17	+15 25.1	25.504	26.408	155.5	0.9	20.8
1998 11 23	01 29.23	+15 18.6	25.588	26.407	145.4	1.2	20.8
1998 12 03	01 28.44	+15 12.7	25.698	26.407	135.2	1.5	20.9
1998 12 13	01 27.86	+15 07.7	25.830	26.406	125.0	1.8	20.9
1998 12 23	01 27.49	+15 03.7	25.979	26.406	114.7	1.9	20.9
1999 01 02	01 27.37	+15 01.0	26.142	26.406	104.6	2.1	20.9
1999 01 12	01 27.50	+14 59.6	26.311	26.405	94.4	2.1	21.0
1999 01 22	01 27.88	+14 59.8	26.483	26.405	84.4	2.1	21.0
1999 02 01	01 28.51	+15 01.3	26.652	26.405	74.4	2.1	21.0
1999 02 11	01 29.37	+15 04.4	26.814	26.404	64.5	1.9	21.0
1999 02 21	01 30.44	+15 08.8	26.962	26.404	54.8	1.8	21.0
1999 03 03	01 31.69	+15 14.5	27.094	26.404	45.1	1.5	21.0
1999 03 13	01 33.10	+15 21.3	27.206	26.404	35.5	1.3	21.0

1996 TQ ₆₆		$a, e, i = 39.72, 0.13, 15$				Elements MPC 31009	
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ
1998 06 06	01 44.65	+15 40.0	35.319	34.614	45.4	1.2	22.1
1998 06 16	01 45.49	+15 46.5	35.191	34.614	54.7	1.4	22.1
1998 06 26	01 46.19	+15 52.3	35.047	34.614	64.0	1.5	22.1
1998 07 06	01 46.73	+15 57.4	34.891	34.614	73.4	1.6	22.1

1998 07 16	01 47.09	+16 01.6	34.728	34.614	82.8	1.7	22.1
1998 07 26	01 47.28	+16 04.8	34.560	34.614	92.2	1.7	22.1
1998 08 05	01 47.28	+16 07.1	34.394	34.614	101.7	1.6	22.1
1998 08 15	01 47.10	+16 08.4	34.233	34.614	111.3	1.6	22.1
1998 08 25	01 46.75	+16 08.6	34.083	34.614	121.0	1.4	22.1
1998 09 04	01 46.23	+16 07.7	33.948	34.614	130.7	1.3	22.0
1998 09 14	01 45.57	+16 06.0	33.832	34.615	140.5	1.1	22.0
1998 09 24	01 44.79	+16 03.3	33.739	34.615	150.3	0.8	22.0
1998 10 04	01 43.91	+15 59.9	33.672	34.615	160.2	0.6	21.9
1998 10 14	01 42.98	+15 55.9	33.633	34.615	169.6	0.3	21.9
1998 10 24	01 42.02	+15 51.5	33.624	34.615	175.0	0.1	21.9
1998 11 03	01 41.07	+15 46.8	33.645	34.615	167.7	0.3	21.9
1998 11 13	01 40.17	+15 42.1	33.696	34.615	157.9	0.6	21.9
1998 11 23	01 39.35	+15 37.6	33.775	34.615	147.8	0.9	22.0
1998 12 03	01 38.65	+15 33.4	33.881	34.615	137.6	1.1	22.0
1998 12 13	01 38.09	+15 29.9	34.008	34.615	127.4	1.3	22.0
1998 12 23	01 37.69	+15 27.1	34.155	34.616	117.2	1.4	22.1
1999 01 02	01 37.48	+15 25.2	34.316	34.616	107.0	1.6	22.1
1999 01 12	01 37.46	+15 24.3	34.485	34.616	96.8	1.6	22.1
1999 01 22	01 37.63	+15 24.5	34.658	34.616	86.7	1.6	22.1
1999 02 01	01 37.99	+15 25.8	34.830	34.616	76.7	1.6	22.1
1999 02 11	01 38.54	+15 28.2	34.994	34.616	66.7	1.5	22.1
1999 02 21	01 39.26	+15 31.6	35.147	34.616	56.8	1.4	22.1
1999 03 03	01 40.12	+15 36.0	35.284	34.616	47.1	1.2	22.1
1999 03 13	01 41.11	+15 41.3	35.401	34.617	37.4	1.0	22.1

1996 TL ₆₆		$a, e, i = 84.82, 0.59, 24$				Elements MPC 31421	
Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ
1998 06 06	02 17.45	+14 35.1	35.914	35.122	38.2	1.0	20.7
1998 06 16	02 18.47	+14 38.9	35.799	35.121	47.5	1.2	20.7
1998 06 26	02 19.36	+14 42.0	35.666	35.120	56.8	1.4	20.7
1998 07 06	02 20.10	+14 44.5	35.517	35.118	66.2	1.5	20.7
1998 07 16	02 20.69	+14 46.1	35.357	35.117	75.5	1.6	20.7
1998 07 26	02 21.11	+14 46.8	35.190	35.116	85.0	1.7	20.7
1998 08 05	02 21.35	+14 46.7	35.020	35.114	94.5	1.7	20.7
1998 08 15	02 21.41	+14 45.6	34.853	35.113	104.1	1.6	20.6
1998 08 25	02 21.28	+14 43.7	34.693	35.112	113.7	1.5	20.6
1998 09 04	02 20.99	+14 40.8	34.544	35.111	123.5	1.4	20.6
1998 09 14	02 20.54	+14 37.1	34.411	35.109	133.3	1.2	20.6
1998 09 24	02 19.94	+14 32.7	34.299	35.108	143.2	1.0	20.6
1998 10 04	02 19.23	+14 27.6	34.211	35.107	153.3	0.7	20.5
1998 10 14	02 18.43	+14 22.1	34.149	35.106	163.3	0.5	20.5
1998 10 24	02 17.57	+14 16.2	34.116	35.104	173.5	0.2	20.4
1998 11 03	02 16.69	+14 10.2	34.113	35.103	176.2	0.1	20.4
1998 11 13	02 15.82	+14 04.2	34.141	35.102	166.0	0.4	20.5
1998 11 23	02 15.01	+13 58.4	34.198	35.101	155.7	0.7	20.5
1998 12 03	02 14.28	+13 53.1	34.284	35.100	145.4	0.9	20.5
1998 12 13	02 13.67	+13 48.3	34.395	35.099	135.1	1.1	20.6
1998 12 23	02 13.20	+13 44.2	34.527	35.098	124.8	1.3	20.6
1999 01 02	02 12.90	+13 41.0	34.678	35.096	114.5	1.5	20.6
1999 01 12	02 12.78	+13 38.7	34.840	35.095	104.3	1.6	20.6
1999 01 22	02 12.84	+13 37.4	35.011	35.094	94.1	1.6	20.7
1999 02 01	02 13.10	+13 37.2	35.183	35.093	84.0	1.6	20.7

1999 02 11	02 13.55	+13 37.9	35.352	35.092	73.9	1.5	20.7
1999 02 21	02 14.17	+13 39.5	35.514	35.091	64.0	1.5	20.7
1999 03 03	02 14.96	+13 41.9	35.662	35.090	54.1	1.3	20.7
1999 03 13	02 15.89	+13 45.2	35.793	35.089	44.4	1.1	20.7
1999 03 23	02 16.95	+13 49.0	35.903	35.088	34.7	0.9	20.6

1996 TS₆₆

Date TT		α_{2000}	$a, e, i = 44.18, 0.13, 7$	δ_{2000}	Δ	r	Elements MPC	ϵ	ϕ	V
1998 06 06	02 18.10			+20 51.1	39.671	38.860		36.5	0.9	22.1
1998 06 16	02 19.00			+20 56.6	39.561	38.858		45.7	1.1	22.1
1998 06 26	02 19.79			+21 01.7	39.433	38.857		54.9	1.2	22.1
1998 07 06	02 20.44			+21 06.2	39.288	38.856		64.2	1.3	22.1
1998 07 16	02 20.94			+21 10.2	39.131	38.855		73.5	1.4	22.1
1998 07 26	02 21.28			+21 13.6	38.966	38.853		82.9	1.5	22.1
1998 08 05	02 21.45			+21 16.1	38.797	38.852		92.3	1.5	22.1
1998 08 15	02 21.45			+21 17.8	38.630	38.851		101.8	1.5	22.1
1998 08 25	02 21.28			+21 18.7	38.469	38.849		111.4	1.4	22.1
1998 09 04	02 20.95			+21 18.7	38.318	38.848		121.1	1.3	22.0
1998 09 14	02 20.47			+21 17.8	38.182	38.847		130.8	1.1	22.0
1998 09 24	02 19.86			+21 16.0	38.066	38.846		140.6	0.9	22.0
1998 10 04	02 19.14			+21 13.4	37.972	38.844		150.3	0.7	22.0
1998 10 14	02 18.34			+21 10.1	37.905	38.843		159.9	0.5	21.9
1998 10 24	02 17.48			+21 06.2	37.865	38.842		168.9	0.3	21.9
1998 11 03	02 16.60			+21 01.9	37.856	38.841		172.9	0.2	21.9
1998 11 13	02 15.74			+20 57.2	37.877	38.839		166.4	0.3	21.9
1998 11 23	02 14.92			+20 52.4	37.927	38.838		157.0	0.6	21.9
1998 12 03	02 14.18			+20 47.7	38.006	38.837		147.0	0.8	22.0
1998 12 13	02 13.56			+20 43.2	38.111	38.836		136.9	1.0	22.0
1998 12 23	02 13.06			+20 39.1	38.238	38.834		126.7	1.2	22.0
1999 01 02	02 12.73			+20 35.6	38.384	38.833		116.6	1.3	22.0
1999 01 12	02 12.56			+20 32.8	38.543	38.832		106.4	1.4	22.1
1999 01 22	02 12.57			+20 30.8	38.711	38.831		96.3	1.4	22.1
1999 02 01	02 12.76			+20 29.7	38.882	38.830		86.2	1.5	22.1
1999 02 11	02 13.12			+20 29.5	39.051	38.828		76.2	1.4	22.1
1999 02 21	02 13.66			+20 30.3	39.213	38.827		66.3	1.3	22.1
1999 03 03	02 14.35			+20 31.9	39.364	38.826		56.5	1.2	22.1
1999 03 13	02 15.18			+20 34.4	39.498	38.825		46.8	1.1	22.1
1999 03 23	02 16.12			+20 37.7	39.612	38.823		37.2	0.9	22.1

1994 TA

Date TT		α_{2000}	$a, e, i = 16.85, 0.30, 5$	δ_{2000}	Δ	r	Elements MPC	ϵ	ϕ	V
1998 06 06	02 39.39			+10 11.3	17.545	16.722		34.8	2.0	24.1
1998 06 16	02 41.61			+10 19.8	17.455	16.735		43.7	2.4	24.1
1998 06 26	02 43.61			+10 26.8	17.345	16.748		52.7	2.8	24.1
1998 07 06	02 45.35			+10 32.2	17.218	16.761		61.7	3.1	24.1
1998 07 16	02 46.80			+10 35.8	17.079	16.774		70.9	3.3	24.1
1998 07 26	02 47.93			+10 37.7	16.931	16.786		80.1	3.4	24.1
1998 08 05	02 48.70			+10 37.9	16.778	16.799		89.4	3.5	24.1
1998 08 15	02 49.11			+10 36.2	16.625	16.812		98.9	3.4	24.1
1998 08 25	02 49.13			+10 32.9	16.477	16.824		108.5	3.3	24.0
1998 09 04	02 48.78			+10 28.0	16.337	16.837		118.2	3.0	24.0
1998 09 14	02 48.07			+10 21.6	16.211	16.850		128.0	2.7	24.0
1998 09 24	02 47.02			+10 14.1	16.104	16.863		138.0	2.3	23.9
1998 10 04	02 45.68			+10 05.7	16.018	16.875		148.0	1.8	23.9

1998 10 14	02 44.11	+09 56.6	15.958	16.888	158.1	1.3	23.8
1998 10 24	02 42.36	+09 47.4	15.927	16.901	167.8	0.7	23.8
1998 11 03	02 40.52	+09 38.3	15.926	16.913	174.3	0.3	23.7
1998 11 13	02 38.68	+09 29.8	15.955	16.926	168.4	0.7	23.8
1998 11 23	02 36.90	+09 22.2	16.015	16.939	158.6	1.2	23.8
1998 12 03	02 35.28	+09 16.0	16.104	16.951	148.3	1.8	23.9
1998 12 13	02 33.88	+09 11.4	16.220	16.964	138.0	2.2	24.0
1998 12 23	02 32.77	+09 08.6	16.358	16.976	127.6	2.6	24.0
1999 01 02	02 31.99	+09 07.8	16.515	16.989	117.3	2.9	24.0
1999 01 12	02 31.57	+09 09.0	16.687	17.001	107.1	3.2	24.1
1999 01 22	02 31.54	+09 12.2	16.867	17.014	97.0	3.3	24.1
1999 02 01	02 31.91	+09 17.4	17.051	17.027	86.9	3.3	24.1
1999 02 11	02 32.65	+09 24.3	17.233	17.039	77.1	3.2	24.2
1999 02 21	02 33.75	+09 32.8	17.409	17.052	67.3	3.1	24.2
1999 03 03	02 35.19	+09 42.6	17.573	17.064	57.7	2.8	24.2
1999 03 13	02 36.93	+09 53.4	17.723	17.077	48.2	2.5	24.2
1999 03 23	02 38.93	+10 05.1	17.854	17.089	38.9	2.1	24.2

1997 UF₉

Date TT		α_{2000}	$a, e, i = 1.44, 0.60, 26$	δ_{2000}	Δ	r	Elements MPC	ϵ	ϕ	V
1998 06 06	04 21.38			-17 02.5	0.397	0.758		40.5	119.6	18.7
1998 06 16	04 03.04			-29 37.4	0.441	0.864		57.6	96.9	17.9
1998 06 26	03 48.79			-38 01.4	0.490	0.972		70.7	80.8	17.7
1998 07 06	03 35.77			-44 28.9	0.535	1.079		81.8	68.9	17.7
1998 07 16	03 20.00			-50 11.1	0.573	1.182		91.7	59.3	17.8
1998 07 26	02 56.75			-55 31.1	0.609	1.280		101.0	51.1	17.9
1998 08 05	02 20.51			-60 12.3	0.646	1.373		109.6	44.1	17.9
1998 08 15	01 27.97			-63 26.2	0.691	1.461		116.8	38.2	18.1
1998 08 25	00 24.62			-64 17.3	0.749	1.544		122.0	33.7	18.2
1998 09 04	23 26.40			-62 32.1	0.822	1.622		124.4	30.9	18.5
1998 09 14	22 44.81			-58 58.0	0.913	1.695		124.0	29.5	18.7
1998 09 24	22 19.84			-54 34.4	1.021	1.763		121.2	29.1	19.1
1998 10 04	22 07.14			-50 01.2	1.144	1.827		116.7	29.3	19.4
1998 10 14	22 02.62			-45 38.2	1.280	1.886		111.2	29.5	19.7
1998 10 24	22 03.50			-41 32.4	1.427	1.941		105.2	29.7	20.0
1998 11 03	22 08.05			-37 45.0	1.581	1.991		98.8	29.5	20.3
1998 11 13	22 15.11			-34 14.6	1.741	2.038		92.4	29.0	20.5
1998 11 23	22 23.95			-30 58.6	1.903	2.081		85.9	28.3	20.7
1998 12 03	22 34.09			-27 54.8	2.066	2.120		79.5	27.2	20.9
1998 12 13	22 45.16			-25 01.0	2.226	2.155		73.0	25.9	21.1
1998 12 23	22 56.93			-22 15.3	2.381	2.187		66.7	24.4	21.2
1999 01 02	23 09.25			-19 36.3	2.530	2.215		60.3	22.7	21.3

82P/Gehrels 3

Date TT		α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 26	22 26.70		-08 25.2	3.996	4.575	118.9	11.2	21.2	22.5
1998 07 06	22 25.60		-08 28.8	3.864	4.569	128.7	10.0	21.1	22.4
1998 07 16	22 23.17		-08 40.3	3.749	4.564	138.9	8.4	21.1	22.2
1998 07 26	22 19.52		-08 59.1	3.654	4.558	149.4	6.5	21.0	22.1
1998 08 05	22 14.82		-09 24.1	3.584	4.552	160.2	4.3	20.9	21.9
1998 08 15	22 09.40		-09 53.5	3.542	4.545	171.1	2.0	20.9	21.8
1998 08 25	22 03.62		-10 25.2	3.529	4.539	177.3	0.6	20.9	21.6
1998 09 04	21 57.91		-10 56.6	3.546	4.532	166.4	3.0	20.9	21.8
1998 09 14	21 52.72		-11 25.5	3.591	4.525	155.4	5.3	20.9	22.0

1998 09 24	21 48.40	−11 50.0	3.664	4.519	144.5	7.4	20.9	22.1
1998 10 04	21 45.28	−12 08.5	3.760	4.511	133.9	9.2	21.0	22.3
1998 10 14	21 43.53	−12 20.1	3.876	4.504	123.5	10.6	21.0	22.4
1998 10 24	21 43.25	−12 24.4	4.007	4.497	113.5	11.7	21.1	22.5

93P/Lovas 1

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 26	01 32.99	+13 41.7	2.176	2.023	67.7	27.7	15.8	22.5	
1998 07 06	01 53.36	+16 34.9	2.040	1.972	71.7	29.3	15.5	22.3	
1998 07 16	02 14.49	+19 30.5	1.909	1.924	75.5	30.8	15.2	22.1	
1998 07 26	02 36.44	+22 27.1	1.783	1.879	79.2	32.1	14.9	22.0	
1998 08 05	02 59.23	+25 23.1	1.664	1.838	82.8	33.2	14.6	21.8	
1998 08 15	03 22.89	+28 16.6	1.553	1.801	86.5	34.1	14.3	21.7	
1998 08 25	03 47.31	+31 05.1	1.449	1.769	90.1	34.9	14.0	21.5	
1998 09 04	04 12.31	+33 46.2	1.354	1.742	93.9	35.3	13.8	21.3	
1998 09 14	04 37.59	+36 17.5	1.266	1.720	97.8	35.4	13.5	21.1	
1998 09 24	05 02.63	+38 37.0	1.187	1.705	101.9	35.2	13.3	21.0	
1998 10 04	05 26.71	+40 43.2	1.115	1.695	106.4	34.5	13.2	20.8	
1998 10 14	05 49.00	+42 35.7	1.051	1.692	111.3	33.3	13.0	20.6	
1998 10 24	06 08.40	+44 14.8	0.996	1.695	116.8	31.6	12.9	20.5	
1998 11 03	06 23.80	+45 40.0	0.948	1.704	122.8	29.3	12.9	20.3	
1998 11 13	06 34.21	+46 50.3	0.911	1.720	129.6	26.3	12.8	20.2	
1998 11 23	06 38.86	+47 41.5	0.884	1.741	136.9	22.8	12.8	20.0	
1998 12 03	06 37.81	+48 06.4	0.871	1.768	144.4	18.9	12.9	19.9	
1998 12 13	06 32.16	+47 57.2	0.873	1.800	151.3	15.2	13.0	19.8	
1998 12 23	06 23.98	+47 08.8	0.894	1.837	156.0	12.6	13.2	19.8	
1999 01 02	06 15.96	+45 43.5	0.935	1.878	156.3	12.1	13.5	20.0	
1999 01 12	06 10.27	+43 51.5	0.997	1.922	152.1	13.8	13.7	20.2	
1999 01 22	06 08.08	+41 45.5	1.080	1.970	145.3	16.5	14.1	20.5	
1999 02 01	06 09.71	+39 37.5	1.182	2.022	137.6	19.2	14.4	20.9	
1999 02 11	06 14.75	+37 34.8	1.301	2.075	129.7	21.5	14.8	21.2	
1999 02 21	06 22.67	+35 40.6	1.436	2.131	121.9	23.2	15.2	21.5	
1999 03 03	06 32.85	+33 55.6	1.583	2.189	114.5	24.3	15.6	21.8	
1999 03 13	06 44.73	+32 18.6	1.741	2.248	107.3	25.0	16.0	22.1	
1999 03 23	06 57.87	+30 47.8	1.909	2.308	100.5	25.1	16.4	22.4	

P/1997 T3 (Lagerkvist-Carsenty)

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 26	03 48.99	+19 10.8	5.068	4.275	35.0	7.8		20.2	
1998 07 06	03 59.66	+19 47.5	4.984	4.282	41.9	9.1		20.3	
1998 07 16	04 09.88	+20 20.4	4.887	4.289	49.0	10.3		20.3	
1998 07 26	04 19.54	+20 49.5	4.778	4.297	56.2	11.3		20.3	
1998 08 05	04 28.52	+21 15.2	4.658	4.305	63.7	12.2		20.2	
1998 08 15	04 36.67	+21 37.4	4.531	4.314	71.3	12.9		20.2	
1998 08 25	04 43.86	+21 56.7	4.397	4.324	79.2	13.3		20.2	
1998 09 04	04 49.92	+22 13.1	4.259	4.333	87.5	13.4		20.1	
1998 09 14	04 54.70	+22 27.0	4.121	4.344	96.1	13.3		20.0	
1998 09 24	04 58.05	+22 38.8	3.985	4.355	105.0	12.9		20.0	
1998 10 04	04 59.84	+22 48.5	3.857	4.366	114.4	12.0		19.9	
1998 10 14	05 00.00	+22 56.3	3.739	4.378	124.3	10.9		19.8	
1998 10 24	04 58.52	+23 02.2	3.636	4.391	134.5	9.3		19.6	
1998 11 03	04 55.50	+23 05.9	3.553	4.404	145.2	7.4		19.5	
1998 11 13	04 51.15	+23 07.4	3.494	4.417	156.2	5.2		19.4	
1998 11 23	04 45.83	+23 06.7	3.462	4.431	167.5	2.8		19.2	

1998 12 03	04 40.01	+23 04.1	3.460	4.446	178.6	0.3		19.0	
1998 12 13	04 34.20	+23 00.1	3.489	4.461	169.5	2.3		19.2	
1998 12 23	04 28.92	+22 55.8	3.548	4.476	158.1	4.7		19.4	
1999 01 02	04 24.63	+22 52.3	3.635	4.492	147.0	6.9		19.6	
1999 01 12	04 21.66	+22 50.6	3.747	4.508	136.1	8.7		19.7	
1999 01 22	04 20.19	+22 51.5	3.880	4.524	125.6	10.2		19.9	
1999 02 01	04 20.33	+22 55.4	4.030	4.541	115.5	11.3		20.0	
1999 02 11	04 22.05	+23 02.5	4.191	4.559	105.7	12.0		20.1	
1999 02 21	04 25.28	+23 12.6	4.359	4.576	96.4	12.4		20.2	
1999 03 03	04 29.89	+23 25.0	4.531	4.595	87.4	12.4		20.3	
1999 03 13	04 35.74	+23 39.2	4.702	4.613	78.8	12.2		20.4	
1999 03 23	04 42.68	+23 54.5	4.869	4.632	70.5	11.7		20.5	
1999 04 02	04 50.57	+24 10.2	5.029	4.651	62.4	11.0		20.5	
1999 04 12	04 59.26	+24 25.6	5.180	4.671	54.6	10.1		20.6	
1999 04 22	05 08.63	+24 40.2	5.319	4.690	46.9	9.0		20.6	
1999 05 02	05 18.56	+24 53.3	5.445	4.711	39.5	7.8		20.6	
1999 05 12	05 28.91	+25 04.6	5.556	4.731	32.1	6.5		20.6	

C/1996 J1 (Evans-Drinkwater)

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 06 26		04 04.78	+33 22.1	7.131	6.280	30.9	4.8	18.7	
1998 07 06		04 11.39	+33 42.0	7.132	6.367	38.4	5.7	18.8	
1998 07 16		04 17.39	+34 01.5	7.114	6.453	46.2	6.5	18.9	
1998 07 26		04 22.67	+34 20.6	7.079	6.538	54.3	7.2	18.9	
1998 08 05		04 27.14	+34 39.0	7.029	6.623	62.6	7.8	18.9	
1998 08 15		04 30.69	+34 56.8	6.966	6.708	71.2	8.2	19.0	
1998 08 25		04 33.25	+35 13.5	6.895	6.792	80.0	8.4	19.0	
1998 09 04		04 34.70	+35 28.9	6.818	6.876	89.0	8.4	19.0	
1998 09 14		04 35.01	+35 42.5	6.741	6.959	98.4	8.2	19.1	
1998 09 24		04 34.12	+35 53.6	6.667	7.042	108.0	7.8	19.1	
1998 10 04		04 32.04	+36 01.6	6.603	7.125	117.8	7.1	19.1	
1998 10 14		04 28.85	+36 05.7	6.552	7.207	127.9	6.3	19.2	
1998 10 24		04 24.66	+36 05.0	6.519	7.289	138.0	5.2	19.2	
1998 11 03		04 19.67	+35 59.1	6.511	7.371	148.0	4.1	19.2	
1998 11 13		04 14.14	+35 47.7	6.529	7.452	157.4	2.9	19.3	
1998 11 23		04 08.37	+35 30.9	6.577	7.533	164.4	2.0	19.4	
1998 12 03		04 02.68	+35 09.3	6.657	7.614	165.0	1.9	19.4	
1998 12 13		03 57.37	+34 44.0	6.769	7.694	158.6	2.7	19.5	
1998 12 23		03 52.70	+34 16.4	6.911	7.774	149.4	3.7	19.6	
1999 01 02		03 48.89	+33 47.8	7.081	7.853	139.4	4.7	19.7	
1999 01 12		03 46.04	+33 19.8	7.275	7.933	129.2	5.5	19.8	
1999 01 22		03 44.24	+32 53.6	7.489	8.011	118.9	6.2	19.9	
1999 02 01		03 43.50	+32 30.1	7.718	8.090	108.9	6.6	20.0	

50P/Arend

Date	TT	α_{2000}	δ_{2000}	Δ	r	ϵ	ϕ	m_1	m_2
1998 07 06		20 38.38	−42 05.9	2.653	3.581	151.8	7.7	19.9	22.4
1998 07 16		20 29.13	−42 37.8	2.576	3.531	156.5	6.6	19.8	22.3
1998 07 26		20 18.59	−42 54.8	2.525	3.480	156.6	6.7	19.6	22.2
1998 08 05		20 07.72	−42 53.3	2.501	3.429	151.9	8.0	19.5	22.2
1998 08 15		19 57.57	−42 32.1	2.502	3.378	144.4	10.1	19.4	22.3
1998 08 25		19 49.08	−41 52.5	2.528	3.326	135.6	12.3	19.3	22.4
1998 09 04		19 42.96	−40 57.6	2.573	3.274	126.5	14.3	19.3	22.4
1998 09 14		19 39.58	−39 51.5	2.634	3.222	117.3	16.1	19.2	22.5

P/1997 V1 (Larsen)									
Date	TT	α_{2000}	δ_{2000}	Δ	r	Elements MPC 31205			
						ϵ	ϕ	m_1	m_2
1998 07 06		04 29.42	+20 56.0	4.432	3.644	34.9	9.2	17.8	
1998 07 16		04 41.98	+21 03.9	4.365	3.666	41.5	10.6	17.8	
1998 07 26		04 53.92	+21 06.4	4.286	3.688	48.3	11.9	17.8	
1998 08 05		05 05.14	+21 03.7	4.195	3.711	55.2	13.0	17.8	
1998 08 15		05 15.50	+20 56.0	4.093	3.734	62.4	13.9	17.8	
1998 08 25		05 24.85	+20 43.5	3.983	3.757	69.9	14.6	17.7	
1998 09 04		05 33.03	+20 26.9	3.866	3.781	77.6	15.1	17.7	
1998 09 14		05 39.90	+20 06.4	3.745	3.805	85.7	15.3	17.7	
1998 09 24		05 45.27	+19 42.6	3.622	3.829	94.2	15.1	17.6	
1998 10 04		05 49.00	+19 16.2	3.501	3.854	103.2	14.6	17.6	
1998 10 14		05 50.95	+18 47.6	3.385	3.879	112.5	13.7	17.5	
1998 10 24		05 51.04	+18 17.6	3.280	3.904	122.4	12.4	17.5	
1998 11 03		05 49.26	+17 46.8	3.188	3.929	132.7	10.7	17.5	
1998 11 13		05 45.73	+17 16.0	3.116	3.955	143.4	8.6	17.4	
1998 11 23		05 40.72	+16 45.9	3.068	3.981	154.3	6.2	17.4	
1998 12 03		05 34.63	+16 17.7	3.046	4.007	165.0	3.6	17.4	
1998 12 13		05 28.00	+15 52.3	3.055	4.033	172.5	1.8	17.5	
1998 12 23		05 21.41	+15 30.7	3.094	4.059	167.2	3.1	17.5	
1999 01 02		05 15.46	+15 13.8	3.164	4.086	156.7	5.5	17.6	
1999 01 12		05 10.63	+15 02.3	3.262	4.113	145.8	7.7	17.7	
1999 01 22		05 07.24	+14 56.1	3.384	4.139	135.1	9.7	17.8	
1999 02 01		05 05.51	+14 55.1	3.526	4.166	124.7	11.2	17.9	
1999 02 11		05 05.47	+14 58.5	3.684	4.193	114.6	12.4	18.1	
1999 02 21		05 07.10	+15 05.4	3.854	4.220	105.1	13.1	18.2	
1999 03 03		05 10.27	+15 14.8	4.030	4.247	95.9	13.4	18.3	
1999 03 13		05 14.83	+15 25.5	4.208	4.274	87.1	13.4	18.4	
1999 03 23		05 20.62	+15 36.6	4.386	4.301	78.6	13.1	18.5	
1999 04 02		05 27.49	+15 47.0	4.559	4.329	70.5	12.6	18.7	
1999 04 12		05 35.25	+15 56.1	4.726	4.356	62.6	11.8	18.8	
1999 04 22		05 43.77	+16 03.0	4.882	4.383	54.9	10.8	18.9	
1999 05 02		05 52.91	+16 07.1	5.028	4.410	47.5	9.7	19.0	
1999 05 12		06 02.53	+16 08.1	5.160	4.438	40.3	8.5	19.0	
1999 05 22		06 12.53	+16 05.5	5.277	4.465	33.3	7.1	19.1	

81P/Wild 2									
Date	TT	α_{2000}	δ_{2000}	Δ	r	Elements MPC 28272			
						ϵ	ϕ	m_1	m_2
1998 07 16		20 57.47	-16 29.5	2.719	3.696	161.2	5.1	17.7	22.4
1998 07 26		20 49.47	-17 07.1	2.732	3.742	172.7	2.0	17.8	22.3
1998 08 05		20 41.29	-17 44.3	2.774	3.787	175.6	1.2	17.9	22.3
1998 08 15		20 33.57	-18 18.4	2.847	3.831	164.1	4.1	18.0	22.6

2P/Encke									
Date	TT	α_{2000}	δ_{2000}	Δ	r	Elements MPC 29882			
						ϵ	ϕ	m_1	m_2
1998 07 26		22 56.14	-07 21.2	3.028	3.865	140.4	9.6		22.5
1998 08 05		22 48.00	-08 02.9	2.966	3.892	152.1	7.0		22.3
1998 08 15		22 38.59	-08 50.8	2.932	3.916	164.1	4.1		22.2
1998 08 25		22 28.44	-09 41.8	2.929	3.939	176.4	0.9		22.0
1998 09 04		22 18.21	-10 31.7	2.960	3.960	171.3	2.2		22.1
1998 09 14		22 08.56	-11 17.2	3.024	3.980	159.1	5.2		22.3
1998 09 24		22 00.08	-11 55.6	3.118	3.998	147.2	7.8		22.5

C/1997 J1 (Mueller)									
Date	TT	α_{2000}	δ_{2000}	Δ	r	Elements MPC 31482			
						ϵ	ϕ	m_1	m_2
1998 07 26		06 17.80	+12 43.6	5.959	5.107	30.2	5.7	18.5	
1998 08 05		06 21.43	+11 55.3	5.940	5.186	38.5	7.0	18.5	
1998 08 15		06 24.39	+11 04.1	5.901	5.265	47.1	8.1	18.6	
1998 08 25		06 26.57	+10 10.1	5.843	5.344	56.0	9.0	18.6	
1998 09 04		06 27.82	+09 13.1	5.770	5.422	65.0	9.7	18.6	
1998 09 14		06 28.04	+08 13.6	5.686	5.501	74.4	10.1	18.7	
1998 09 24		06 27.11	+07 11.7	5.594	5.579	84.0	10.3	18.7	
1998 10 04		06 24.94	+06 08.1	5.500	5.658	93.9	10.2	18.7	
1998 10 14		06 21.47	+05 03.5	5.411	5.736	104.1	9.7	18.8	
1998 10 24		06 16.67	+03 59.0	5.331	5.814	114.4	9.0	18.8	
1998 11 03		06 10.60	+02 56.0	5.268	5.891	124.8	7.9	18.8	
1998 11 13		06 03.39	+01 56.0	5.227	5.969	135.0	6.7	18.9	
1998 11 23		05 55.26	+01 00.9	5.214	6.046	144.5	5.4	18.9	
1998 12 03		05 46.51	+00 12.4	5.234	6.123	152.2	4.3	19.0	
1998 12 13		05 37.52	-00 28.2	5.288	6.200	156.0	3.7	19.0	
1998 12 23		05 28.68	-00 59.9	5.377	6.277	154.1	3.9	19.1	
1999 01 02		05 20.36	-01 22.4	5.502	6.353	147.6	4.8	19.2	
1999 01 12		05 12.87	-01 36.2	5.658	6.430	138.7	5.8	19.3	
1999 01 22		05 06.45	-01 42.0	5.841	6.506	129.0	6.8	19.5	
1999 02 01		05 01.24	-01 41.2	6.047	6.582	119.0	7.5	19.6	
1999 02 11		04 57.29	-01 35.3	6.269	6.657	109.1	8.1	19.7	
1999 02 21		04 54.59	-01 25.6	6.502	6.733	99.3	8.3	19.8	
1999 03 03		04 53.07	-01 13.7	6.740	6.808	89.7	8.4	20.0	

OPPOSITION DATA

Planet	Opposition	α_{2000}	δ_{2000}	V	$\dot{\alpha}$	$\dot{\delta}$	ϕ_{MIN}	MPC
1994 UD ₁	1998 05 10.0	15 06.94	-17 36.6	18.8	-0.75	+ 2.7	0.0/10.0	29663
1981 ED ₄₂	1998 05 10.0	15 07.13	-10 44.7	19.1	-0.76	+ 4.1	2.4/08.4	26922
1981 EM ₄₁	1998 05 10.0	15 07.37	-25 43.0	18.4	-0.85	+ 2.6	2.3/11.9	27102
(8918)	1998 05 10.1	15 07.37	-25 56.3	16.6	-1.12	+ 1.7	3.7/11.8	31927
(7453)	1998 05 10.1	15 07.38	-15 41.6	16.7	-1.04	+ 4.3	0.9/09.7	29077
1992 WD ₁	1998 05 10.1	15 07.57	-13 33.8	18.2	-0.99	+ 3.5	1.4/09.3	28887
1981 EQ ₂₃	1998 05 10.1	15 07.69	-09 28.2	17.9	-0.76	+ 4.4	2.7/08.1	32043
1982 JD ₂	1998 05 10.2	15 07.79	-10 24.3	17.0	-1.03	+ 2.6	3.4/08.7	31947
1978 SC ₇	1998 05 10.2	15 07.79	-32 32.3	18.0	-1.07	+ 1.2	4.7/13.3	31414
(7464)	1998 05 10.2	15 08.11	-22 10.1	19.3	-0.97	+ 2.6	1.4/11.3	29080
1981 EB ₁₄	1998 05 10.2	15 08.15	-20 29.6	18.9	-0.78	+ 4.2	0.8/11.0	31224
1998 KK ₁	1998 05 10.3	15 08.37	-17 51.0	17.8	-1.09	+ 2.8	0.1/10.4	32030
1995 SR ₂₉	1998 05 10.3	15 08.48	-16 27.6	17.3	-1.03	+ 3.2	0.5/10.1	31969
(8879)	1998 05 10.3	15 08.53	-19 38.8	17.9	-0.89	+ 3.9	0.7/10.9	31918
1997 AP	1998 05 10.4	15 08.60	-22 05.8	17.0	-1.07	+ 4.6	1.9/11.4	31981
(8921)	1998 05 10.4	15 08.65	-16 53.3	16.4	-1.07	+ 0.6	0.3/10.3	31928
1997 CU ₂₈	1998 05 10.4	15 08.92	-21 48.1	18.3	-0.92	+ 3.7	1.3/11.4	32058
1981 EP ₃₀	1998 05 10.5	15 09.03	+06 41.8	17.8	-0.71	+ 5.8	7.2/03.5	32043
(8965)	1998 05 10.5	15 09.11	-16 22.6	16.9	-0.79	+ 3.3	0.4/10.3	31938
(8858)	1998 05 10.5	15 09.12	-20 31.1	16.6	-0.99	+ 2.4	1.4/11.1	31913
1992 PH ₁	1998 05 10.5	15 09.30	-26 08.8	17.3	-1.07	+ 4.4	4.1/12.5	32049
(8947)	1998 05 10.5	15 09.31	-05 24.0	18.3	-0.84	+ 2.7	3.6/07.8	31934
1981 EJ ₂₈	1998 05 10.6	15 09.37	-14 47.0	17.3	-1.06	+ 4.8	1.2/10.0	32043
(8969)	1998 05 10.6	15 09.58	-16 06.6	17.2	-0.98	+ 4.1	0.6/10.3	31939

2114 T-1	1998 05 10.6	15 09.59 +00 33.8 18.0	-0.79 + 6.8	6.8/05.6	32092	1997 AW ₅	1998 05 12.1	15 15.32 -14 42.5 17.5	-0.80 + 2.8	1.1/11.4	31983
(8832)	1998 05 10.6	15 09.64 -07 55.4 17.7	-0.87 + 5.7	3.4/08.3	31907	1982 UA ₆	1998 05 12.1	15 15.41 -23 43.5 18.9	-0.97 + 3.1	1.7/13.4	26395
(8867)	1998 05 10.7	15 09.64 -18 24.2 17.6	-0.87 + 2.7	0.2/10.9	31915	(8929)	1998 05 12.2	15 15.71 -11 34.7 17.8	-1.02 + 2.5	2.4/10.9	31930
1981 EN ₂	1998 05 10.7	15 09.65 -23 53.6 19.6	-0.81 + 5.0	1.8/12.3	22429	1990 WB ₄	1998 05 12.3	15 15.92 -27 08.7 16.4	-0.85 + 5.1	2.8/14.6	32046
1994 PN ₁₃	1998 05 10.7	15 09.68 -19 08.7 18.8	-0.76 + 3.0	0.4/11.0	29302	1998 KN ₂₄	1998 05 12.3	15 15.94 -20 49.0 16.4	-0.92 - 0.8	0.8/12.8	32032
(7532)	1998 05 10.7	15 09.88 -26 22.1 17.2	-1.13 - 1.3	3.1/12.2	29294	1988 PC ₁	1998 05 12.3	15 16.06 -23 36.7 18.1	-0.79 + 6.4	1.5/13.8	32044
(8942)	1998 05 10.7	15 09.91 -10 59.3 18.0	-0.85 + 3.9	2.2/09.2	31933	1981 EA ₆	1998 05 12.3	15 16.09 -22 23.6 18.3	-0.81 + 4.5	1.3/13.4	26915
(8864)	1998 05 10.8	15 10.25 -20 20.6 17.2	-0.91 + 5.5	0.8/11.5	31914	1997 CV ₁₅	1998 05 12.3	15 16.31 -23 53.4 19.3	-0.93 + 3.1	1.9/13.6	29927
1150 T-2	1998 05 10.9	15 10.58 -17 58.9 17.5	-1.02 + 3.3	0.1/11.0	32036	(8851)	1998 05 12.4	15 16.40 -12 57.0 16.4	-0.85 + 0.7	1.6/11.4	31911
(7595)	1998 05 10.9	15 10.59 -21 15.4 16.1	-0.89 + 4.4	1.3/11.8	29599	(8846)	1998 05 12.4	15 16.46 -15 31.2 17.7	-0.86 + 3.0	0.8/11.9	31910
1995 UC	1998 05 10.9	15 10.63 -34 07.4 19.0	-1.13 - 0.4	5.7/13.9	26422	(8810)	1998 05 12.4	15 16.63 -15 35.1 16.7	-0.85 + 2.1	0.9/11.9	31901
1992 SF	1998 05 10.9	15 10.72 -25 09.6 18.4	-1.14 + 2.5	2.8/12.4	32049	2069 P-L	1998 05 12.5	15 16.74 -19 19.0 19.7	-0.89 + 4.0	0.4/12.8	23680
(8972)	1998 05 11.0	15 11.29 -16 50.5 17.2	-1.06 + 5.6	0.4/10.9	31940	1998 HM ₂₆	1998 05 12.5	15 17.14 -11 05.6 18.0	-0.91 + 5.0	2.6/10.9	32010
1995 WC ₇	1998 05 11.1	15 11.35 -19 32.5 18.8	-0.82 + 2.0	0.5/11.5	31791	1996 XG ₅	1998 05 12.6	15 17.24 -17 15.1 18.1	-1.04 + 2.7	0.4/12.4	31978
1994 PK ₁	1998 05 11.1	15 11.61 -07 21.8 18.1	-1.09 - 0.9	3.9/09.3	31965	1998 HE ₄₃	1998 05 12.6	15 17.35 -10 06.2 17.5	-0.94 + 4.8	3.2/10.8	32013
1993 FO ₈	1998 05 11.1	15 11.68 -13 11.8 17.3	-0.89 + 2.4	1.6/10.2	32050	1996 UM	1998 05 12.6	15 17.39 +08 36.1 17.7	-1.02 +13.4	11.5/03.8	32055
1998 JK ₄	1998 05 11.2	15 11.66 -16 43.7 16.8	-0.97 + 6.5	0.5/10.9	32029	1997 AT ₄	1998 05 12.6	15 17.42 -26 08.0 18.0	-1.04 + 4.3	2.9/14.4	32057
1986 QR ₂	1998 05 11.2	15 11.68 +02 12.3 18.4	-0.88 + 4.3	6.4/06.1	31948	1997 CY ₁₆	1998 05 12.6	15 17.49 -05 46.8 18.1	-0.72 + 4.0	3.4/09.7	29928
1996 AG ₇	1998 05 11.2	15 11.81 -13 55.7 19.0	-0.83 + 2.6	1.2/10.4	29139	(8839)	1998 05 12.7	15 17.57 -15 59.2 17.7	-0.76 + 3.9	0.6/12.2	31908
1993 FH ₁₉	1998 05 11.2	15 11.84 -09 47.8 18.6	-0.88 + 2.1	2.7/09.6	31961	(8909)	1998 05 12.7	15 17.63 -13 04.4 16.7	-0.90 + 1.8	1.7/11.7	31925
2725 P-L	1998 05 11.2	15 11.92 -16 21.1 19.5	-0.89 + 3.8	0.5/10.9	29668	1992 YY	1998 05 12.7	15 17.73 -30 18.6 15.3	-0.95 + 8.1	5.0/16.0	32049
1998 HQ ₁₂₄	1998 05 11.2	15 11.94 -08 19.2 18.0	-0.99 + 2.9	3.8/09.3	32023	1990 RD ₆	1998 05 12.7	15 17.78 -38 53.7 16.8	-1.16 + 0.2	8.3/16.5	29658
1981 EK ₂₇	1998 05 11.2	15 12.01 -25 59.5 18.0	-1.15 + 2.7	3.3/12.9	26920	(7631)	1998 05 12.8	15 17.88 -12 00.6 18.4	-0.97 + 3.7	2.0/11.5	32041
1981 EM ₂₈	1998 05 11.2	15 12.12 -54 59.8 18.7	-1.50 - 5.7	14.4/16.1	26920	1982 DU	1998 05 12.8	15 18.10 -44 30.1 17.2	-1.15 + 1.4	8.1/18.9	28883
1998 HH ₁₂₅	1998 05 11.3	15 12.17 -01 36.5 17.8	-0.94 + 4.8	7.5/07.4	32083	1990 KN ₁	1998 05 12.8	15 18.26 -23 57.6 17.6	-1.12 +19.5	2.7/14.8	32046
1995 WT	1998 05 11.3	15 12.34 -22 17.7 17.8	-0.77 + 4.1	1.1/12.4	32054	1981 EB ₃	1998 05 12.9	15 18.66 -17 40.3 18.7	-0.79 + 6.0	0.2/12.8	30779
1992 WT ₃	1998 05 11.3	15 12.34 -09 28.9 18.6	-0.97 + 2.3	2.8/09.7	29661	1991 RE ₂₅	1998 05 13.0	15 18.90 -07 19.5 18.9	-0.89 + 3.5	3.5/10.6	32048
1993 FB ₄₇	1998 05 11.4	15 12.42 -19 55.5 18.7	-0.92 + 2.9	0.7/11.9	26402	(7497)	1998 05 13.0	15 18.90 -21 36.0 17.0	-1.03 + 2.9	1.2/13.7	29089
(8818)	1998 05 11.4	15 12.46 -15 50.4 17.4	-0.88 + 3.1	0.7/11.0	31903	1981 EK ₄₂	1998 05 13.0	15 18.91 -13 56.6 19.2	-0.78 + 4.2	1.4/12.0	26922
1978 TP ₂	1998 05 11.4	15 12.77 -11 11.5 18.0	-0.98 + 4.5	2.4/10.0	32041	1997 BZ ₁	1998 05 13.0	15 19.12 -17 40.0 17.8	-0.95 + 3.0	0.2/13.0	32057
1992 EK ₇	1998 05 11.5	15 12.90 -19 22.8 17.6	-0.88 + 1.0	0.5/11.8	32048	(8885)	1998 05 13.1	15 19.24 +02 29.2 17.1	-0.89 + 6.2	8.4/07.6	31919
1998 HH ₂₇	1998 05 11.5	15 13.06 -11 02.4 18.7	-0.85 + 3.1	2.2/10.0	32010	1981 EV ₂₄	1998 05 13.1	15 19.42 -22 33.9 19.6	-0.98 + 3.0	1.5/14.1	21967
(8860)	1998 05 11.5	15 13.19 -33 01.6 16.2	-1.20 - 1.7	6.0/13.9	31913	1998 JE ₃	1998 05 13.2	15 19.51 -08 16.0 16.5	-0.91 + 6.9	4.4/10.6	32029
1998 FA ₁₁	1998 05 11.6	15 13.64 -08 14.8 19.0	-1.03 + 4.7	3.9/09.5	32063	(7578)	1998 05 13.2	15 19.52 -17 32.0 15.8	-0.90 + 2.0	0.3/13.1	29596
1993 XQ ₁	1998 05 11.7	15 13.69 -16 12.0 16.9	-1.06 + 5.2	0.8/11.3	32051	1997 EK ₆	1998 05 13.2	15 19.65 -03 40.2 18.1	-0.98 0.0	5.0/10.6	31988
1997 BG ₉	1998 05 11.7	15 13.73 -19 35.9 17.5	-0.87 + 3.3	0.5/12.1	32057	1995 QW ₃	1998 05 13.2	15 19.73 -26 42.7 17.8	-1.05 +13.6	3.3/15.7	32052
(7744)	1998 05 11.7	15 13.76 -17 54.0 16.6	-0.94 + 2.3	0.0/11.7	30256	2611 P-L	1998 05 13.2	15 19.89 -11 46.2 17.3	-0.76 + 4.0	2.1/11.7	32035
1995 WM ₇	1998 05 11.8	15 14.37 -10 50.9 18.6	-0.84 + 1.2	2.1/10.4	32054	(8931)	1998 05 13.3	15 19.87 -22 29.7 16.2	-1.07 + 3.1	1.9/14.1	31930
(8788)	1998 05 11.8	15 14.43 -20 50.0 17.2	-1.03 + 4.7	1.2/12.5	31896	1992 RD ₃	1998 05 13.3	15 19.88 -26 47.6 18.5	-1.12 + 3.7	3.1/15.0	31534
(8874)	1998 05 11.9	15 14.66 -21 37.7 16.8	-1.15 + 1.7	1.5/12.6	31917	4134 T-3	1998 05 13.3	15 20.15 -16 34.2 18.7	-0.89 + 2.6	0.5/13.0	12802
(8917)	1998 05 12.0	15 14.73 -29 25.8 16.7	-0.76 + 5.1	2.9/15.0	31927	1995 UK ₂₈	1998 05 13.4	15 20.24 -20 31.2 17.4	-1.06 + 1.3	0.9/13.8	31970
(8923)	1998 05 12.0	15 14.78 -16 42.0 16.5	-0.95 + 4.6	0.6/11.7	31928	1997 BN ₃	1998 05 13.4	15 20.29 -18 55.5 17.2	-0.84 + 2.4	0.2/13.5	31985
(7492)	1998 05 12.0	15 14.80 -15 48.5 18.5	-0.99 + 4.4	0.8/11.5	29088	(8891)	1998 05 13.4	15 20.33 -10 07.0 17.9	-0.73 + 4.2	2.1/11.4	31921
(8935)	1998 05 12.0	15 14.81 -12 27.1 18.1	-1.02 + 5.1	2.1/10.8	31931	1991 RO ₂	1998 05 13.4	15 20.33 -14 02.5 17.9	-1.00 + 6.5	1.7/12.4	32047
1994 PO ₂₅	1998 05 12.0	15 14.88 -18 02.0 17.5	-0.87 + 2.4	0.0/12.0	32052	1981 EY ₃₉	1998 05 13.4	15 20.37 -17 06.0 18.4	-1.02 + 4.3	0.6/13.2	32043
4035 P-L	1998 05 12.0	15 15.05 -22 13.0 17.7	-0.82 + 3.7	1.3/13.0	32091	(8960)	1998 05 13.4	15 20.47 -16 32.3 16.9	-0.87 + 2.0	0.7/13.1	31937
1989 TP ₁₆	1998 05 12.0	15 15.07 -17 59.2 17.5	-0.79 + 2.6	0.0/12.1	26167	(8837)	1998 05 13.4	15 20.51 -07 28.3 16.8	-0.91 + 5.0	5.4/10.9	31908
(7555)	1998 05 12.0	15 15.11 -16 47.2 18.0	-1.02 + 3.4	0.5/11.8	29590	1978 NC	1998 05 13.4	15 20.60 +25 38.9 17.3	-1.03 - 1.7	16.5/30.9	26187
1998 KJ ₁	1998 05 12.1	15 15.21 -18 14.9 17.7	-0.88 + 4.1	0.1/12.2	32030	(8819)	1998 05 13.4	15 20.66 -06 43.1 17.5	-0.83 + 5.3	3.9/10.6	31903
(8842)	1998 05 12.1	15 15.27 +00 10.1 17.4	-0.91 + 4.1	6.3/07.6	31909	1992 UY	1998 05 13.5	15 20.62 -09 56.7 18.1	-0.98 + 5.3	3.1/11.6	32049
(8913)	1998 05 12.1	15 15.31 -20 43.5 17.3	-0.69 + 2.7	0.7/12.8	31926	1997 AF ₅	1998 05 13.5	15 20.98 -08 22.1 17.7	-1.07 + 1.6	4.3/11.7	31982

1998 HT ₁₂₅	1998 05 13.5	15 21.01	-09 37.0	16.5	-0.94	+	2.5	4.2/11.8	32023
(8862)	1998 05 13.5	15 21.02	-10 42.4	17.1	-0.90	+	4.3	2.5/11.8	31914
1997 AV ₇	1998 05 13.5	15 21.06	-21 56.8	20.3	-0.90	+	4.0	1.2/14.4	30786
1994 CK ₁₀	1998 05 13.5	15 21.11	-14 14.8	18.0	-1.05	+	2.7	1.7/12.8	32051
1980 RL ₂	1998 05 13.6	15 21.41	-21 37.9	16.9	-1.04	+	3.8	1.4/14.3	32042
1994 CV ₉	1998 05 13.6	15 21.42	-05 20.3	17.3	-0.93	+	3.8	6.1/10.7	31963
4300 T-1	1998 05 13.7	15 21.43	-12 46.6	18.6	-0.91	+	3.0	2.7/12.5	32092
1995 UZ ₈	1998 05 13.7	15 21.47	-27 18.3	17.5	-0.88	+	1.6	2.5/15.5	32053
(8720)	1998 05 13.7	15 21.72	-17 09.6	16.7	-0.85	+	1.4	0.5/13.5	31692
1978 VX ₈	1998 05 13.7	15 21.76	-18 15.5	19.5	-0.77	+	2.6	0.1/13.7	29315
(8424)	1998 05 13.8	15 21.90	-12 27.5	17.1	-0.99	+	4.3	2.2/12.5	31370
1989 YC ₆	1998 05 13.8	15 21.96	-09 28.7	17.9	-1.00	+	4.6	3.4/11.8	31951
(8961)	1998 05 13.8	15 21.98	-18 56.7	17.3	-0.81	+	2.6	0.2/13.9	31937
(8821)	1998 05 13.8	15 22.05	-09 09.5	17.4	-0.80	+	3.1	2.9/11.8	31904
1994 UN ₁	1998 05 13.9	15 22.41	-14 57.4	17.5	-0.71	+	4.7	1.0/13.1	32052
1998 JH ₃	1998 05 13.9	15 22.43	-07 56.4	17.4	-0.96	+	1.3	3.7/11.9	32029
1989 GU ₆	1998 05 13.9	15 22.47	-08 36.3	17.3	-1.13	-	8.8	5.1/13.4	31950
1994 PP ₃₉	1998 05 13.9	15 22.54	-32 05.1	17.8	-0.90	+	2.7	4.0/16.9	31240
1997 AQ ₅	1998 05 13.9	15 22.57	-16 36.1	16.6	-0.91	+	1.1	0.7/13.6	31983
1995 QS	1998 05 13.9	15 22.59	-17 17.9	16.5	-1.07	-	0.3	0.6/13.8	31967
(8785)	1998 05 14.0	15 22.62	-11 55.9	17.2	-1.01	+	4.5	3.0/12.6	31896
1998 HM ₅₂	1998 05 14.0	15 22.72	-12 00.3	16.3	-1.10	+	1.4	3.0/12.8	32014
1995 WO ₁₅	1998 05 14.0	15 22.76	-20 15.7	18.5	-0.91	+	2.5	0.6/14.4	32054
1997 AG ₂₁	1998 05 14.1	15 23.31	-18 11.2	17.1	-0.96	+	3.9	0.1/14.1	31984
1981 ET ₄₃	1998 05 14.1	15 23.44	+08 55.5	18.4	-0.72	+	8.5	8.7/05.8	32043
1991 PF ₁₂	1998 05 14.2	15 23.52	-28 12.7	17.1	-1.06	+	5.6	4.2/16.4	31954
1981 EM ₁₇	1998 05 14.2	15 23.70	-12 10.1	17.7	-0.92	+	5.9	2.3/12.7	32042
(8847)	1998 05 14.2	15 23.70	-18 01.8	17.1	-0.86	+	3.6	0.2/14.1	31910
1993 FB ₅	1998 05 14.2	15 23.71	-24 03.8	17.3	-0.96	+	1.5	2.1/15.3	31960
1998 HP ₁₄₇	1998 05 14.3	15 24.05	-07 57.3	17.8	-0.87	+	1.9	3.8/12.2	32025
4588 P-L	1998 05 14.3	15 24.11	-11 20.9	17.7	-0.99	+	6.2	3.1/12.6	32091
1981 EV ₁₁	1998 05 14.3	15 24.21	-14 00.7	18.9	-0.98	+	7.8	2.0/13.2	26917
1998 JX ₂	1998 05 14.4	15 24.50	-04 02.5	17.2	-0.77	+	4.3	4.8/10.9	32029
1998 KL	1998 05 14.4	15 24.57	-11 28.7	18.0	-0.99	+	4.9	2.6/12.9	32030
1998 JA ₂	1998 05 14.5	15 24.59	-19 47.2	17.0	-0.99	+	1.5	0.5/14.7	32028
1998 JB ₄	1998 05 14.5	15 24.72	-10 50.7	16.8	-0.79	+	9.3	3.2/12.3	32029
(7628)	1998 05 14.5	15 24.73	-37 55.2	16.7	-1.11	+	1.5	6.4/18.2	29893
1985 RP	1998 05 14.5	15 24.86	-06 55.7	18.3	-0.98	+	4.8	4.1/11.9	32044
1981 DH ₁	1998 05 14.6	15 25.05	-26 06.0	18.1	-0.83	+	3.7	2.0/16.3	26394
(8964)	1998 05 14.6	15 25.07	-11 01.4	17.9	-1.04	+	4.1	3.1/13.0	31938
1981 ER ₄₂	1998 05 14.6	15 25.18	-20 12.8	18.6	-0.82	+	2.7	0.4/15.0	32043
1997 AQ ₁₁	1998 05 14.6	15 25.37	-23 19.7	19.3	-0.90	+	4.1	1.6/15.7	30786
(8973)	1998 05 14.7	15 25.37	-20 50.2	16.4	-1.01	+	0.3	1.0/15.1	31940
1997 CP ₁	1998 05 14.7	15 25.60	-10 44.7	19.9	-0.96	+	3.7	2.7/13.1	31737
(7573)	1998 05 14.7	15 25.62	-16 25.0	17.7	-0.79	+	2.5	0.6/14.3	29595
1994 PN ₃₆	1998 05 14.8	15 25.91	-03 51.2	19.2	-0.76	+	3.3	4.5/11.5	31966
1998 KW ₃	1998 05 14.8	15 25.93	-11 53.8	17.3	-0.77	+	4.1	2.4/13.3	32031
1980 PJ ₁	1998 05 14.8	15 25.95	-24 01.7	17.9	-1.13	+	5.0	1.9/16.0	32042
1992 AM ₃	1998 05 14.8	15 26.07	-37 05.0	18.5	-0.98	+	4.3	5.2/19.2	28886
1981 DN ₁	1998 05 14.8	15 26.22	-33 56.3	17.4	-1.08	+	3.7	5.3/18.1	26914
(8911)	1998 05 14.9	15 26.25	-14 26.0	16.6	-0.87	+	0.8	1.5/14.1	31925

1997 CR	1998 05 14.9	15 26.60	+02 30.9	17.7	-0.86	+	3.0	7.2/10.0	31986
(7504)	1998 05 15.0	15 26.60	-18 52.0	17.2	-0.83	+	2.6	0.0/15.0	32041
1991 VW ₅	1998 05 15.0	15 26.75	-05 17.1	16.7	-0.95	+	0.4	5.9/12.5	32048
1998 KX ₃	1998 05 15.2	15 27.37	-12 46.7	18.0	-0.79	+	2.8	1.8/13.9	32031
1997 AK ₂	1998 05 15.2	15 27.45	-18 51.8	18.3	-0.85	+	2.7	0.0/15.2	29667
1993 OW ₁	1998 05 15.3	15 27.81	+32 16.0	17.5	-1.19	-	1.5	22.3/30.0	32050
1997 CE ₁	1998 05 15.3	15 27.87	-27 11.9	17.1	-1.15	+	1.7	3.1/16.8	32057
(8902)	1998 05 15.3	15 27.91	-21 55.1	17.1	-0.91	+	0.4	1.0/15.9	31923
1990 TL ₇	1998 05 15.4	15 28.18	-18 15.3	18.9	-0.84	+	3.3	0.2/15.3	26560
(8978)	1998 05 15.4	15 28.37	-19 17.6	17.9	-0.80	+	2.8	0.1/15.5	31941
1995 OD	1998 05 15.5	15 28.55	-21 18.9	17.9	-1.05	+	3.6	1.1/16.0	32052
1995 YB	1998 05 15.5	15 28.92	-03 35.8	17.2	-0.98	+	0.5	5.6/12.7	31972
1981 DS ₁	1998 05 15.6	15 28.92	-30 47.0	18.2	-1.02	+	4.4	4.1/18.2	24580
1996 YR	1998 05 15.6	15 29.22	-10 13.6	17.9	-1.06	+	2.1	3.3/14.1	29141
1996 XP ₁₃	1998 05 15.6	15 29.26	-16 00.7	19.4	-0.95	+	1.9	0.9/15.1	30690
(8804)	1998 05 15.6	15 29.34	-22 48.7	16.3	-0.92	-	0.7	1.3/16.3	31900
1998 HD ₁₀₃	1998 05 15.7	15 29.31	-20 52.6	17.5	-0.99	+	4.1	0.8/16.1	32021
1998 HF ₁₀₃	1998 05 15.7	15 29.52	-19 48.9	17.8	-1.05	+	2.2	0.4/15.9	32021
(8829)	1998 05 15.8	15 30.01	-14 29.0	17.4	-0.79	+	2.9	1.5/14.9	31906
1998 JC ₂	1998 05 15.9	15 30.16	-15 11.6	18.2	-0.86	+	2.4	1.3/15.2	32028
1994 PY ₁₇	1998 05 15.9	15 30.19	-17 49.4	18.3	-0.84	+	3.5	0.4/15.7	32052
1997 AC ₁	1998 05 15.9	15 30.24	-20 04.0	17.2	-1.00	+	2.2	0.4/16.1	31982
1998 JD ₂	1998 05 15.9	15 30.30	-11 52.5	17.3	-0.92	+	6.3	3.5/14.2	32028
2091 P-L	1998 05 15.9	15 30.31	-20 25.1	18.5	-1.03	+	5.0	0.5/16.2	32091
4388 T-3	1998 05 16.0	15 30.49	-09 04.5	18.8	-0.88	+	3.2	3.5/13.9	29315
1995 WW ₃	1998 05 16.0	15 30.55	-37 00.8	17.8	-0.98	+	4.8	5.3/20.0	29319
1990 QB ₈	1998 05 16.0	15 30.60	-08 35.4	17.9	-0.85	+	3.3	3.6/13.8	32046
1990 UD ₃	1998 05 16.0	15 30.74	-17 39.5	17.8	-0.89	+	5.1	0.4/15.7	32046
1995 WH	1998 05 16.0	15 30.95	-15 02.1	17.9	-0.86	+	2.4	1.4/15.3	32053
1996 XV ₁₈	1998 05 16.1	15 31.05	-17 09.0	18.3	-0.93	+	4.7	0.7/15.7	31979
(8878)	1998 05 16.1	15 31.09	-10 51.7	17.2	-0.87	+	2.8	3.0/14.5	31918
1998 JE ₂	1998 05 16.2	15 31.52	-13 03.8	17.3	-0.94	+	3.1	2.7/15.1	32028
1995 CV	1998 05 16.2	15 31.68	-10 06.6	19.2	-0.52	+	2.0	1.8/14.3	31789
1995 JG	1998 05 16.3	15 31.75	-35 57.1	16.8	-1.79	-	8.2	8.1/17.3	32052
1998 JC ₄	1998 05 16.3	15 31.85	-14 25.3	17.6	-0.77	+	4.8	1.4/15.3	32029
1994 PB ₂₆	1998 05 16.3	15 31.89	-14 28.7	18.4	-0.78	+	2.3	1.3/15.4	25219
1985 TO ₃	1998 05 16.3	15 31.97	-25 27.8	18.0	-1.10	+	5.3	2.5/17.7	31948
1994 NR ₁	1998 05 16.3	15 32.03	-02 47.9	17.1	-0.77	+	2.2	4.5/13.0	32051
1998 HB ₅₁	1998 05 16.3	15 32.10	-18 10.6	17.7	-0.95	+	2.3	0.3/16.2	32014
1990 VU ₃	1998 05 16.4	15 32.08	-17 09.8	17.5	-0.82	+	2.9	0.6/16.0	29658
1991 SO	1998 05 16.4	15 32.14	-19 18.6	19.5	-0.96	+	1.8	0.1/16.5	32048
(7718)	1998 05 16.4	15 32.51	-09 26.6	15.4	-0.88	-	0.5	3.3/14.9	30073
1981 EV ₆	1998 05 16.5	15 32.53	-27 11.0	17.1	-0.85	+	3.9	2.4/18.3	26558
(7562)	1998 05 16.5	15 32.56	-15 42.9	16.5	-0.86	+	3.9	1.2/15.8	29592
(8825)	1998 05 16.5	15 32.86	+26 15.1	16.6	-1.34	-	7.6	22.2/11.6	31905
(7566)	1998 05 16.7	15 33.25	-18 03.9	17.9	-1.01	+	3.1	0.4/16.5	29593
1998 KN ₁₀	1998 05 16.7	15 33.32	-04 07.0	19.8	-0.83	+	6.9	5.3/12.9	32032
1996 XT ₁₆	1998 05 16.7	15 33.42	-19 53.3	19.0	-1.03	+	4.2	0.3/16.9	32056
1991 GC ₇	1998 05 16.7	15 33.48	-23 52.3	17.2	-1.13	+	0.9	2.1/17.5	32047
1996 WA	1998 05 16.7	15 33.61	-21 59.9	18.0	-1.14	+	2.3	1.1/17.3	32056
(8922)	1998 05 16.7	15 33.75	-22 56.2	16.6	-1.12	+	1.7	1.5/17.4	31928

1996 VT ₄	1998 05 16.8	15 33.78	-23 53.7	17.1	-1.06	+	5.5	2.0/17.8	32055
(8920)	1998 05 16.8	15 34.03	-15 14.0	17.4	-1.04	+	2.4	1.6/16.2	31928
1981 EK ₂₈	1998 05 16.9	15 34.17	-41 50.1	20.6	-1.24	+	0.5	8.6/21.1	26920
6104 P-L	1998 05 16.9	15 34.23	-16 07.1	19.2	-0.77	+	3.4	0.9/16.3	24241
1981 EY ₂	1998 05 16.9	15 34.26	-16 14.5	18.3	-0.78	+	5.3	0.9/16.2	31944
1988 XR	1998 05 17.0	15 34.53	-19 15.6	18.3	-0.99	+	3.7	0.0/17.0	23684
1981 EH ₄₈	1998 05 17.0	15 34.62	-17 46.6	17.6	-0.92	+	5.3	0.5/16.7	26923
1997 CL ₂₈	1998 05 17.0	15 34.69	-15 44.5	18.8	-0.92	+	3.5	1.2/16.3	29928
1997 CW ₁₁	1998 05 17.0	15 34.76	-21 55.9	19.9	-1.06	+	2.3	1.1/17.5	31423
(7517)	1998 05 17.1	15 34.84	-27 00.8	17.4	-1.05	+	2.4	2.5/18.5	29290
1997 AM ₂₁	1998 05 17.1	15 34.89	-05 26.9	18.2	-0.87	+	1.4	4.6/14.6	31984
1992 SX ₁	1998 05 17.1	15 34.94	-19 10.6	18.3	-1.06	+	3.1	0.0/17.1	24108
1981 EA ₃	1998 05 17.1	15 35.17	-26 36.5	18.0	-1.04	+	6.3	3.5/18.8	31944
(8782)	1998 05 17.1	15 35.19	-23 04.2	17.4	-1.05	+	3.3	1.5/17.9	31895
1998 HZ ₁₄₇	1998 05 17.2	15 35.36	-19 11.7	16.8	-0.94	+	2.4	0.0/17.2	32025
3535 T-3	1998 05 17.2	15 35.69	-21 21.9	18.2	-1.03	+	2.8	0.7/17.7	32093
1981 EQ ₄	1998 05 17.3	15 35.68	-17 37.7	18.1	-0.79	+	5.2	0.5/16.9	31945
(7470)	1998 05 17.4	15 36.09	-18 38.0	15.9	-1.12	-	1.3	0.3/17.3	32041
2164 T-3	1998 05 17.4	15 36.27	-14 34.7	18.9	-0.85	+	4.7	1.5/16.4	32093
1997 BP ₁	1998 05 17.4	15 36.28	-20 41.4	18.4	-1.05	+	3.0	0.5/17.7	29636
1997 AM ₂₂	1998 05 17.4	15 36.34	-14 13.6	18.7	-0.96	+	3.1	1.7/16.5	32057
(7403)	1998 05 17.4	15 36.47	-08 50.5	19.0	-0.88	+	1.8	3.2/15.6	28827
1996 YG ₁	1998 05 17.4	15 36.49	-10 09.6	17.5	-1.07	-	3.3	4.1/16.4	32056
(8949)	1998 05 17.5	15 36.45	-14 51.8	17.6	-0.91	+	3.6	1.7/16.6	31934
1998 HX ₁₄₇	1998 05 17.5	15 36.53	-20 02.6	18.1	-0.73	+	0.5	0.2/17.6	32025
1997 FL ₂	1998 05 17.5	15 36.59	-14 28.7	18.4	-0.96	+	3.2	1.7/16.6	31145
(8901)	1998 05 17.6	15 36.86	-21 48.8	15.9	-0.94	-	0.7	0.8/18.0	31923
1005 T-2	1998 05 17.7	15 37.46	-17 50.1	17.9	-0.81	+	3.3	0.5/17.4	32036
1997 BX	1998 05 17.8	15 37.64	-14 33.7	18.1	-0.99	+	2.8	1.7/16.9	29127
1989 TP ₇	1998 05 17.8	15 37.84	-09 10.7	18.0	-1.01	+	3.0	4.6/15.9	32045
1998 HS ₂₃	1998 05 17.8	15 38.03	-18 28.8	17.8	-1.05	+	3.4	0.4/17.7	32077
(8936)	1998 05 18.0	15 38.75	-14 05.0	17.0	-1.08	+	2.7	2.4/17.1	31931
1993 FO ₂₁	1998 05 18.0	15 38.79	-25 37.2	17.9	-0.96	+	2.0	2.1/19.2	29317
1991 RQ ₁₉	1998 05 18.1	15 39.15	-25 11.1	18.3	-1.09	+	3.7	2.4/19.2	32048
1995 PA	1998 05 18.1	15 39.21	-19 12.8	19.7	-1.07	+	2.3	0.1/18.1	25964
4647 P-L	1998 05 18.2	15 39.23	-17 20.1	16.5	-1.00	+	4.4	1.1/17.8	32036
1991 RQ ₉	1998 05 18.2	15 39.32	-22 34.1	17.4	-1.05	+	3.4	1.3/18.8	31954
1977 DL ₄	1998 05 18.2	15 39.33	-27 37.4	16.4	-0.95	+	1.3	4.0/20.0	32041
1998 HO ₁₄₈	1998 05 18.4	15 40.15	-21 41.7	17.1	-1.12	+	1.9	1.1/18.8	32026
1991 PG ₁₅	1998 05 18.4	15 40.22	-17 31.5	17.6	-1.03	+	3.0	0.8/18.1	32047
1978 RD ₂	1998 05 18.4	15 40.26	-22 35.0	18.2	-1.02	+	1.8	1.1/19.0	31943
1978 SF ₅	1998 05 18.4	15 40.36	-24 46.1	17.6	-1.19	+	0.3	2.3/19.2	31943
1990 EC ₁	1998 05 18.5	15 40.53	-09 38.3	17.9	-0.86	+	8.1	4.4/16.0	32046
1998 HF ₂₀	1998 05 18.5	15 40.58	-16 14.2	17.4	-0.91	+	4.1	1.4/17.9	32009
1995 UQ ₁₆	1998 05 18.5	15 40.66	-15 20.1	16.5	-0.96	+	0.9	1.9/17.8	31970
1998 HH ₁₄₈	1998 05 18.5	15 40.83	-21 13.1	17.5	-0.95	+	2.5	0.8/18.9	32025
1981 EW ₅	1998 05 18.6	15 40.93	-15 05.7	18.0	-0.90	+	6.7	1.5/17.6	32042
1981 ES ₁₄	1998 05 18.6	15 41.03	-26 30.9	17.6	-0.95	+	4.0	3.0/20.0	32042
1998 HE ₂₀	1998 05 18.6	15 41.04	-16 40.8	17.2	-0.84	+	3.1	0.9/18.1	32008
(7330)	1998 05 18.6	15 41.13	+03 43.7	18.0	-0.93	+	6.5	7.6/13.2	28569
(8814)	1998 05 18.6	15 41.23	-16 19.2	17.2	-0.77	+	3.5	0.9/18.0	31902

1996 YQ ₁	1998 05 18.7	15 41.23	-08 10.5	18.0	-0.92	+	2.2	3.6/16.6	29633
1998 KX ₄₈	1998 05 18.7	15 41.28	-04 29.2	16.6	-0.82	+	0.9	5.2/16.0	32034
1998 HK ₁₄₈	1998 05 18.7	15 41.49	-18 54.7	16.9	-1.00	+	0.1	0.4/18.6	32025
1997 FH ₁	1998 05 18.7	15 41.56	-40 38.2	16.8	-1.21	-	0.5	8.6/21.8	32058
1991 NU ₃	1998 05 18.8	15 41.65	-26 32.3	17.7	-1.04	+	4.3	2.5/20.0	32047
1995 TP ₂	1998 05 18.8	15 41.68	-28 09.7	18.7	-0.98	+	0.3	2.6/20.2	30784
1996 AY ₁	1998 05 18.8	15 41.79	+02 39.3	19.6	-0.74	+	1.1	5.7/14.4	32054
(8945)	1998 05 18.8	15 41.81	-37 32.2	17.7	-0.96	+	2.6	5.5/22.5	31933
1992 UP ₈	1998 05 18.9	15 42.14	-22 28.2	18.8	-1.04	+	3.6	1.0/19.5	29136
1996 XP ₁	1998 05 18.9	15 42.25	-20 50.8	18.5	-1.01	+	5.2	0.4/19.2	31112
6791 P-L	1998 05 19.0	15 42.46	-35 46.7	17.4	-1.17	-	2.5	6.9/21.1	26185
1990 OB ₄	1998 05 19.0	15 42.61	-29 36.9	17.9	-1.01	+	5.7	3.4/21.2	22082
(7438)	1998 05 19.0	15 42.64	-18 08.4	17.3	-1.08	+	0.7	0.6/18.8	28835
(8903)	1998 05 19.1	15 42.95	-07 16.7	17.4	-0.87	+	6.7	4.3/16.2	31924
1981 DT	1998 05 19.1	15 42.96	-42 11.6	18.1	-1.02	+	2.2	7.1/23.7	29653
1998 HJ ₁₄₈	1998 05 19.1	15 43.05	-17 06.4	17.6	-0.82	+	2.8	0.9/18.6	32025
(8943)	1998 05 19.2	15 43.28	-08 34.9	18.7	-0.84	+	3.5	3.6/17.0	31933
(8807)	1998 05 19.2	15 43.38	-17 49.0	17.2	-1.04	+	2.1	0.8/18.9	31900
1988 CL ₄	1998 05 19.2	15 43.58	-19 35.5	17.8	-0.88	+	5.2	0.1/19.2	31949
1993 FV ₈₀	1998 05 19.3	15 43.60	-20 41.9	17.6	-0.97	+	2.0	0.4/19.5	31962
1996 XL ₁₉	1998 05 19.3	15 43.96	-20 48.1	18.9	-1.03	+	3.4	0.4/19.6	30786
1991 RV ₁₇	1998 05 19.3	15 44.06	-23 20.9	17.4	-1.07	+	3.2	1.4/20.0	31954
1992 YJ ₂	1998 05 19.3	15 44.06	-12 51.8	17.4	-1.03	+	1.1	2.6/18.3	32049
1998 HQ ₁₄₈	1998 05 19.4	15 44.05	-19 22.8	16.6	-0.98	+	4.4	0.2/19.3	32026
(8974)	1998 05 19.4	15 44.20	-20 13.0	17.7	-1.12	+	3.1	0.2/19.5	31940
1997 EU ₁₆	1998 05 19.4	15 44.23	-20 35.8	19.9	-0.85	+	2.6	0.2/19.6	29644
1981 EM ₅	1998 05 19.4	15 44.32	-26 29.2	19.0	-0.84	+	4.3	2.0/20.9	22429
(8834)	1998 05 19.4	15 44.38	-12 17.3	17.7	-0.79	+	1.5	2.2/18.1	31907
1996 VO ₄	1998 05 19.4	15 44.45	-25 29.9	16.6	-1.80	-12.6		3.0/19.5	31976
1942 TB	1998 05 19.5	15 44.72	-05 13.9	17.7	-0.92	+	3.5	4.8/16.6	32041
1992 RK ₂	1998 05 19.5	15 44.74	-21 48.7	18.2	-1.07	+	3.8	0.8/20.0	23340
(7318)	1998 05 19.6	15 44.81	+02 09.6	15.9	-0.90	+	2.2	7.8/15.1	32041
1988 VM ₉	1998 05 19.6	15 44.82	-25 48.0	17.7	-1.09	+	1.3	2.1/20.6	32045
1998 HV ₁₄₈	1998 05 19.6	15 44.85	-21 22.3	17.8	-0.90	+	1.8	0.5/19.9	32026
1981 EE ₄₆	1998 05 19.6	15 44.91	-26 59.3	19.0	-0.88	+	2.9	2.4/21.0	22430
1988 RE ₆	1998 05 19.6	15 44.98	-18 43.3	17.7	-1.02	+	2.8	0.4/19.4	29656
1981 EE ₁₁	1998 05 19.6	15 44.99	-25 59.2	17.6	-1.04	+	3.2	3.1/20.8	32042
1997 AK ₁₃	1998 05 19.6	15 45.09	-07 42.7	16.9	-0.85	-	0.5	3.9/17.8	31984
1995 SC ₂	1998 05 19.6	15 45.12	-09 02.2	18.1	-0.95	+	3.9	4.0/17.5	32052
1978 PV ₃	1998 05 19.6	15 45.23	-25 23.2	16.2	-1.05	+	5.2	2.7/20.8	32041
1994 EW ₇	1998 05 19.7	15 45.26	+25 12.0	16.7	-0.96	-	4.1	19.6/14.9	30783
1989 SV ₂	1998 05 19.7	15 45.34	-24 03.2	17.6	-0.93	-	0.3	1.4/20.4	32045
1996 XG ₂	1998 05 19.7	15 45.53	-17 26.0	17.9	-1.05	+	2.6	1.1/19.4	32056
1997 AT ₁₇	1998 05 19.7	15 45.60	-19 59.4	19.7	-0.86	+	2.2	7.1/09.0	31144
1998 HR ₁₄₉	1998 05 19.8	15 45.67	-23 25.5	18.0	-0.98	+	2.2	1.4/20.4	32026
1996 XL ₁	1998 05 19.8	15 45.67	-13 11.9	17.6	-1.06	+	0.6	2.6/18.8	31978
1991 XH	1998 05 19.8	15 45.96	+01 24.7	17.2	-0.89	+	2.1	7.1/15.7	32048
1981 QE ₂	1998 05 19.9	15 46.11	-05 32.2	17.5	-1.01	+	4.5	6.4/16.9	32043
4603 P-L	1998 05 20.0	15 46.51	-18 12.9	18.2	-0.78	+	2.0	0.4/19.7	29141
1992 EG ₆	1998 05 20.0	15 46.53	-04 43.9	16.9	-0.81	+	1.7	5.4/17.2	31957
1985 PC	1998 05 20.0	15 46.69	-14 36.7	15.9	-0.97	+	4.7	2.6/19.0	31948

1991 RB ₂₄	1998 05 20.0	15 46.72 -11 39.8 16.9	-0.92 + 3.1	4.0/18.5	31954	1997 EL	1998 05 21.7	15 53.48 -03 55.2 17.2	-0.79 + 2.5	5.0/18.6	31987
1981 EB ₁₅	1998 05 20.1	15 46.83 -21 15.3 18.5	-0.96 + 3.9	0.5/20.4	32042	1993 FU ₃₃	1998 05 21.8	15 53.74 -21 00.2 17.0	-0.95 + 1.2	0.3/21.9	32050
1997 AS	1998 05 20.1	15 47.03 -10 36.4 16.7	-0.96 + 1.3	4.4/18.6	31982	1976 DB ₁	1998 05 21.8	15 53.91 -54 28.9 18.4	-1.83 + 3.1	15.2/28.5	28293
1995 XE ₁	1998 05 20.2	15 47.45 -17 52.0 16.9	-0.83 + 0.9	0.6/19.9	32054	1978 VD ₄	1998 05 21.8	15 53.97 -21 25.7 17.5	-0.97 + 1.3	0.5/22.1	31943
1991 PX ₆	1998 05 20.2	15 47.48 -21 05.0 17.3	-1.02 + 1.8	0.5/20.4	31954	1996 VT ₂	1998 05 21.9	15 54.36 -19 27.0 18.3	-1.06 + 3.8	0.3/21.8	32055
(7535)	1998 05 20.2	15 47.56 -23 17.6 16.8	-0.88 + 1.0	1.0/20.8	29295	(8968)	1998 05 22.0	15 54.46 -10 32.9 17.1	-0.79 + 4.7	3.1/20.0	31939
1997 EL ₆	1998 05 20.3	15 47.59 -24 24.1 18.2	-0.83 + 1.9	1.3/21.1	31988	5174 T-3	1998 05 22.0	15 54.59 -11 17.9 16.4	-0.89 - 2.6	3.5/21.0	32093
1991 YT	1998 05 20.4	15 48.08 -27 43.5 17.9	-0.94 + 5.2	2.4/22.1	27445	1997 AY ₁	1998 05 22.0	15 54.68 -21 07.0 16.6	-1.04 + 0.8	0.3/22.2	32057
1988 PG ₂	1998 05 20.4	15 48.10 -15 14.9 19.1	-1.02 + 3.1	1.7/19.6	29133	1995 QH ₂	1998 05 22.0	15 54.74 -23 51.8 16.7	-1.17 - 0.9	1.6/22.5	32052
(8908)	1998 05 20.4	15 48.27 -20 09.0 16.0	-0.93 - 0.7	0.1/20.5	31925	1988 RT ₄	1998 05 22.1	15 55.17 -17 54.5 18.7	-0.78 + 2.4	0.6/21.7	29656
1992 SY ₁₄	1998 05 20.4	15 48.27 -20 03.5 16.9	-1.04 + 6.5	0.0/20.5	32049	1993 BA	1998 05 22.2	15 55.20 +00 37.7 15.9	-0.95 - 0.9	8.3/19.1	32049
(8205)	1998 05 20.4	15 48.29 -17 14.7 16.8	-0.81 + 2.5	0.8/20.0	32041	(8881)	1998 05 22.2	15 55.52 -12 52.4 17.3	-0.87 + 3.2	2.6/20.9	31918
1993 BR ₃	1998 05 20.4	15 48.43 -00 39.3 17.8	-0.92 + 0.3	7.1/17.4	32049	1993 FE ₂₆	1998 05 22.3	15 55.77 -13 25.2 18.6	-0.87 + 4.4	2.3/21.0	323525
1998 HU ₁₄₉	1998 05 20.5	15 48.70 -24 17.1 17.3	-1.10 + 1.1	2.1/21.2	32026	4886 T-1	1998 05 22.3	15 55.87 -26 41.0 17.2	-1.12 - 0.3	2.7/23.2	32092
1990 VU ₈	1998 05 20.5	15 48.79 -04 31.6 17.2	-0.87 + 1.9	5.7/17.7	31952	1975 TE	1998 05 22.3	15 55.89 -25 11.0 17.1	-1.20 + 1.3	2.1/23.0	32041
(7621)	1998 05 20.6	15 49.14 -19 58.1 19.2	-0.82 + 2.6	0.0/20.7	29605	1981 ET ₁₁	1998 05 22.4	15 56.31 -37 56.9 21.5	-1.14 + 2.5	5.6/25.6	26917
1310 T-2	1998 05 20.6	15 49.20 -20 50.8 18.5	-1.04 + 2.5	0.3/20.8	29321	1978 NF	1998 05 22.5	15 56.73 +00 07.5 17.6	-0.97 - 1.2	8.6/19.5	31943
(8886)	1998 05 20.7	15 49.38 -09 51.9 17.4	-1.07 + 2.1	4.6/19.0	31919	1998 KZ ₈	1998 05 22.5	15 56.77 -04 36.3 16.8	-0.99 - 1.5	5.7/20.6	32032
9073 P-L	1998 05 20.8	15 49.89 -27 02.1 17.3	-0.86 + 2.1	2.0/22.1	32092	1992 RM	1998 05 22.5	15 56.82 -24 14.3 17.1	-1.18 + 2.4	1.6/23.2	32049
1998 KV ₇	1998 05 20.8	15 49.93 -15 27.7 17.8	-0.84 + 2.7	1.6/20.0	32032	(7430)	1998 05 22.6	15 56.94 -24 38.5 16.7	-0.99 + 3.8	1.4/23.4	28833
1993 OC ₂	1998 05 20.8	15 49.94 -58 55.5 16.2	-1.90 + 0.3	19.6/29.2	25228	1993 FU ₂₄	1998 05 22.6	15 57.18 -23 14.9 17.8	-0.94 + 2.5	1.1/23.2	31139
1991 TG ₂	1998 05 20.8	15 49.97 -22 16.4 18.6	-0.97 + 1.7	0.7/21.2	23518	1993 OM ₁₀	1998 05 22.6	15 57.22 -18 11.3 18.8	-0.80 + 2.4	0.6/22.3	29944
1981 EN ₄₃	1998 05 20.8	15 50.07 -33 13.1 20.2	-0.95 + 0.9	4.0/23.0	26923	1989 VM ₁	1998 05 22.7	15 57.29 -10 24.0 20.1	-1.07 + 3.1	4.1/21.0	28843
(7522)	1998 05 20.9	15 50.01 -07 51.8 17.1	-0.78 + 1.0	3.5/18.9	32041	1985 RQ ₃	1998 05 22.7	15 57.34 -00 34.8 16.6	-0.79 + 4.4	8.9/18.2	32044
1992 AV ₁	1998 05 20.9	15 50.16 +19 25.0 17.4	-1.29 - 6.2	18.0/17.4	31956	1993 HR	1998 05 22.7	15 57.38 -29 12.5 16.0	-1.02 + 0.1	3.3/23.9	32050
1990 WU ₁	1998 05 20.9	15 50.42 -09 45.6 19.1	-0.84 + 4.0	3.2/18.9	25649	1997 AW ₂	1998 05 22.8	15 57.90 -24 01.6 17.4	-0.91 + 1.3	1.2/23.4	31982
(8838)	1998 05 21.0	15 50.44 -10 59.7 16.5	-0.76 + 5.0	2.8/19.0	31908	1994 CM ₁₁	1998 05 22.9	15 58.29 -22 09.9 15.7	-0.93 + 0.8	0.9/23.2	32051
(8872)	1998 05 21.0	15 50.55 -17 54.3 17.0	-0.80 + 2.6	0.8/20.6	31916	1990 SH ₁	1998 05 22.9	15 58.43 -13 03.7 18.1	-0.87 + 4.4	2.2/21.5	32046
(8892)	1998 05 21.0	15 50.64 -20 22.2 17.9	-0.82 + 2.3	0.1/21.1	31921	2581 P-L	1998 05 23.0	15 58.43 -17 43.2 18.5	-0.88 + 1.8	0.9/22.5	26414
1991 CX	1998 05 21.0	15 50.77 -19 03.1 16.5	-1.05 + 5.0	0.5/20.9	32047	1994 WB ₁	1998 05 23.0	15 58.44 -10 47.8 16.1	-1.85 -19.8	5.5/23.7	31966
1998 KF ₄₉	1998 05 21.0	15 50.86 -09 43.8 17.8	-0.90 + 1.1	4.1/19.4	32034	4261 T-2	1998 05 23.0	15 58.75 -22 11.0 17.7	-0.97 + 1.1	0.6/23.3	24120
1997 BM ₃	1998 05 21.1	15 51.01 -30 31.0 17.6	-0.98 + 2.3	3.2/23.0	29667	1993 OV	1998 05 23.0	15 58.79 -24 32.6 16.6	-1.28 +14.9	1.8/24.1	32050
(8833)	1998 05 21.1	15 51.08 -13 19.6 16.4	-0.80 + 6.6	2.6/19.6	31907	1998 KH ₃₄	1998 05 23.0	15 58.86 -11 06.0 18.0	-0.96 + 1.7	4.6/21.6	32089
(8805)	1998 05 21.2	15 51.52 -16 20.3 17.6	-1.02 + 3.9	1.5/20.6	31900	1997 CO ₁₉	1998 05 23.1	15 58.82 -20 13.9 17.6	-0.87 + 0.3	0.1/23.1	31987
1981 DT ₃	1998 05 21.2	15 51.63 -30 41.2 18.2	-0.88 + 3.7	3.1/23.4	26914	1995 VA ₁	1998 05 23.1	15 59.16 -22 33.7 19.3	-0.87 + 2.6	0.6/23.5	26423
1998 FZ ₁₅	1998 05 21.3	15 52.04 -05 14.7 17.9	-0.87 + 9.3	5.2/17.6	31992	1997 EJ ₆	1998 05 23.2	15 59.46 -23 44.2 17.2	-0.93 - 1.4	1.1/23.6	32058
(7417)	1998 05 21.3	15 52.04 -18 39.3 17.6	-0.81 + 2.1	0.4/21.1	32041	3024 T-2	1998 05 23.2	15 59.69 -50 40.7 19.2	-1.45 - 2.3	10.6/27.1	29142
1993 FQ ₂	1998 05 21.4	15 52.08 -30 02.1 15.9	-1.07 - 0.4	3.8/22.8	27730	1992 PJ	1998 05 23.3	15 59.67 -23 23.4 16.7	-1.06 + 4.9	1.4/23.8	32049
1995 WY	1998 05 21.4	15 52.20 -17 11.1 16.8	-0.88 - 0.1	1.0/21.0	31971	(8781)	1998 05 23.4	16 00.10 -16 11.7 16.8	-0.98 + 2.9	2.1/22.7	31895
(8830)	1998 05 21.4	15 52.27 -26 00.4 16.4	-0.91 + 0.3	1.8/22.3	31906	1990 UH ₄	1998 05 23.4	16 00.32 -23 19.4 18.7	-0.98 - 1.0	0.8/23.8	26397
1996 VN ₆	1998 05 21.4	15 52.27 -45 20.8 17.2	-1.31 0.0	9.6/25.0	29666	1978 RA ₁₀	1998 05 23.4	16 00.47 -22 50.9 18.8	-1.08 + 2.8	0.8/23.8	22073
1998 KN	1998 05 21.4	15 52.30 -15 58.9 17.4	-1.05 + 2.2	2.0/20.8	32030	3285 T-2	1998 05 23.5	16 00.50 -21 14.9 17.3	-1.08 + 1.7	0.2/23.6	32093
1991 RN ₂₇	1998 05 21.4	15 52.44 -43 49.6 16.7	-1.22 + 1.5	8.9/25.7	29659	1992 EV ₁₃	1998 05 23.5	16 00.82 -20 13.4 16.4	-0.85 + 2.7	0.1/23.5	26580
1997 EM ₂₅	1998 05 21.5	15 52.39 +03 11.2 18.2	-0.87 + 1.8	7.9/17.2	31988	1996 XB ₆	1998 05 23.5	16 00.90 -11 14.6 17.8	-1.04 - 2.3	3.7/22.6	31978
1997 BF ₃	1998 05 21.5	15 52.65 -11 56.1 19.3	-1.02 + 2.7	2.9/20.1	31985	1969 TT ₁	1998 05 23.6	16 00.85 -22 53.7 17.4	-1.06 + 2.2	0.8/24.0	32041
1995 WZ ₆	1998 05 21.5	15 52.74 -17 57.8 17.5	-0.88 0.0	0.7/21.2	32054	1998 KB ₅	1998 05 23.6	16 00.85 -22 37.7 17.6	-1.00 + 7.1	1.0/24.0	32031
(7407)	1998 05 21.5	15 52.78 -22 15.6 17.1	-1.02 + 3.3	0.7/21.9	29587	1995 WO	1998 05 23.6	16 00.90 -10 15.6 17.7	-1.01 + 6.9	4.5/21.4	31971
1977 QF ₁	1998 05 21.5	15 52.81 -40 31.3 16.3	-1.20 - 0.2	7.6/24.4	29939	1981 ES ₃₃	1998 05 23.6	16 01.10 -31 28.5 18.2	-1.07 + 2.9	4.3/25.0	22697
1977 JA	1998 05 21.6	15 53.06 -19 10.5 17.0	-0.88 +26.3	0.5/21.3	31943	1998 KW ₃₄	1998 05 23.6	16 01.16 -12 26.7 17.9	-0.89 + 4.6	3.7/22.1	32033
(7386)	1998 05 21.6	15 53.22 -17 36.0 16.7	-1.04 + 1.2	1.0/21.3	28822	1997 CD ₂₆	1998 05 23.6	16 01.19 -03 45.2 19.0	-0.81 + 1.3	5.9/20.9	32058
1251 T-2	1998 05 21.7	15 53.37 -18 26.9 18.1	-0.82 + 2.5	0.5/21.4	32092	1995 PG	1998 05 23.6	16 01.24 -43 26.0 19.7	-1.22 + 2.4	7.8/27.8	29318

1997 CG ₁	1998 05 23.6	16 01.31	-15 14.5	18.0	-0.95	+ 1.3	1.8/22.9	31986
1995 DX ₂	1998 05 23.7	16 01.25	-18 52.6	17.7	-1.14	+20.2	0.9/23.2	25433
1993 FF ₁₆	1998 05 23.7	16 01.42	-21 44.3	17.1	-0.97	+ 0.2	0.4/23.9	32050
1994 PG ₂₇	1998 05 23.7	16 01.52	-18 36.4	16.3	-0.85	+ 2.2	0.7/23.4	26905
3487 T-3	1998 05 23.7	16 01.61	-24 57.7	18.0	-0.96	+ 1.9	1.5/24.5	26186
1998 KX ₆	1998 05 23.7	16 01.64	-15 25.8	17.9	-1.08	+ 2.8	2.4/22.9	32032
1997 AG	1998 05 23.7	16 01.65	-27 10.4	17.1	-1.10	+ 3.3	2.6/24.9	29141
1997 EQ ₂₅	1998 05 23.8	16 01.63	-04 03.2	18.0	-0.72	+ 3.7	5.2/20.4	32058
1058 T-2	1998 05 23.8	16 01.69	-15 44.3	17.6	-0.81	+ 3.6	1.6/22.9	26761
1995 XJ ₁	1998 05 23.8	16 02.07	-26 38.0	16.5	-0.86	+ 4.2	1.8/25.0	32054
1996 AY ₃	1998 05 23.9	16 02.07	+02 59.7	17.8	-0.72	+ 1.5	5.8/19.5	32054
1992 WC ₃	1998 05 23.9	16 02.46	-17 21.8	16.7	-1.13	+ 0.7	1.4/23.5	32049
(7472)	1998 05 24.0	16 02.61	-14 47.5	15.9	-0.89	- 0.5	2.0/23.3	29082
1992 HA ₅	1998 05 24.0	16 02.65	-19 17.0	16.5	-0.83	+ 1.8	0.5/23.8	32048
1995 UH ₆	1998 05 24.0	16 02.88	-25 50.1	17.2	-0.99	+ 0.5	1.8/24.8	32053
1996 XU ₁₄	1998 05 24.0	16 02.94	-50 38.6	17.8	-1.67	+ 3.2	13.6/29.3	29632
1981 EU ₂	1998 05 24.1	16 03.06	-36 51.8	18.9	-0.96	+ 2.9	5.3/27.0	26915
1981 EP ₂₃	1998 05 24.1	16 03.07	-44 32.2	18.9	-1.11	- 0.3	8.6/27.8	26919
1995 SG	1998 05 24.1	16 03.11	-20 29.3	19.1	-0.97	+ 3.1	0.1/24.1	32052
1995 UN ₂	1998 05 24.1	16 03.15	-17 37.7	19.4	-0.81	+ 2.2	0.9/23.6	30472
1993 DV	1998 05 24.2	16 03.37	-22 03.4	17.9	-0.96	+ 3.3	0.4/24.5	32049
1994 CO ₁	1998 05 24.2	16 03.48	-14 25.3	17.4	-0.95	+ 4.0	3.1/23.1	31963
1341 T-2	1998 05 24.2	16 03.57	-24 38.2	18.7	-0.97	+ 2.1	1.4/24.9	26185
1998 KW ₄	1998 05 24.3	16 03.76	-16 04.5	17.7	-0.92	+ 5.9	2.3/23.4	32031
(7770)	1998 05 24.3	16 03.85	-18 16.5	16.4	-0.88	+ 1.6	0.8/24.0	30263
1979 QP	1998 05 24.3	16 03.86	-22 19.4	17.1	-0.88	+ 2.6	0.6/24.6	32042
7609 P-L	1998 05 24.3	16 04.02	-24 41.2	16.8	-1.11	- 1.8	1.9/24.8	32092
1981 ER ₂₃	1998 05 24.3	16 04.04	-19 27.6	19.5	-0.97	+ 2.2	0.5/24.2	22074
1158 T-2	1998 05 24.3	16 04.14	-19 55.1	19.7	-1.01	+ 3.3	0.3/24.3	20831
1997 DR	1998 05 24.4	16 04.29	-23 07.9	18.1	-0.93	+ 1.6	0.8/24.8	31987
1998 KF ₃₆	1998 05 24.4	16 04.39	-24 24.7	17.4	-0.94	+ 2.9	1.3/25.0	32033
1989 SR	1998 05 24.5	16 04.72	-20 06.5	16.7	-0.83	+ 4.7	0.2/24.4	32045
1994 GE	1998 05 24.5	16 04.77	-19 23.1	17.5	-1.07	- 0.8	0.6/24.4	31964
1997 AB ₂	1998 05 24.5	16 04.90	-02 38.4	17.5	-0.98	- 2.1	7.1/22.6	32057
6074 P-L	1998 05 24.6	16 04.99	-22 07.4	18.3	-1.12	+ 2.9	0.6/24.8	32091
1992 DU ₇	1998 05 24.6	16 05.15	-22 12.3	17.7	-0.89	+ 1.6	0.5/24.9	31957
1997 CN ₅	1998 05 24.7	16 05.30	-16 08.7	17.0	-0.86	+ 4.1	1.7/23.9	32058
1981 WF ₉	1998 05 24.7	16 05.45	-14 17.7	17.9	-1.00	+ 5.4	2.7/23.5	32043
1997 BU ₈	1998 05 24.7	16 05.55	-18 01.5	18.3	-0.93	+ 2.6	1.1/24.3	31986
(7622)	1998 05 24.7	16 05.64	-21 15.4	18.5	-1.09	+ 1.6	9.3/05.0	29606
1994 QQ	1998 05 24.8	16 06.05	-37 13.8	16.6	-1.03	+ 1.4	6.2/27.4	29945
1992 YS	1998 05 24.9	16 06.18	-14 11.3	17.6	-1.06	+ 1.9	2.7/23.9	32049
1996 XD ₃₂	1998 05 24.9	16 06.20	-16 15.9	17.4	-1.05	- 3.0	1.8/24.5	31980
1995 SQ ₅₄	1998 05 24.9	16 06.34	-19 20.2	17.8	-1.10	+ 0.8	0.7/24.7	32053
1981 UW ₂₁	1998 05 24.9	16 06.53	-13 34.7	16.6	-0.88	+ 1.7	2.4/23.9	32043
1995 SL ₃₅	1998 05 25.0	16 06.66	-48 02.0	18.6	-1.43	- 2.9	9.6/27.8	29664
1982 RR	1998 05 25.0	16 06.87	+00 05.5	18.0	-0.92	+ 4.9	7.3/20.6	32043
2560 P-L	1998 05 25.0	16 06.91	-19 24.4	17.7	-0.87	+ 2.6	0.5/24.8	32091
1994 GW ₁₀	1998 05 25.1	16 07.04	-21 20.0	16.9	-1.11	- 1.1	0.2/25.2	31964
(7772)	1998 05 25.1	16 07.05	-15 15.1	16.2	-0.87	+ 3.0	1.9/24.2	30263
(8823)	1998 05 25.2	16 07.59	-20 54.0	17.2	-0.94	+ 5.8	0.0/25.3	31904

1988 VN ₅	1998 05 25.2	16 07.69	-16 54.7	18.2	-0.99	+ 2.8	1.4/24.7	32045
1991 TH ₃	1998 05 25.3	16 07.73	-15 19.0	20.5	-0.92	+ 4.1	1.7/24.3	30091
(7437)	1998 05 25.3	16 08.14	-11 18.7	17.5	-1.01	+ 1.7	3.8/24.0	28835
1981 EK ₉	1998 05 25.3	16 08.16	-24 03.7	17.6	-0.86	+ 2.8	1.0/25.9	31946
1998 KC ₅	1998 05 25.4	16 08.11	-17 00.4	17.4	-0.85	+ 2.2	1.2/24.8	32031
1981 EP ₄₇	1998 05 25.4	16 08.18	-06 49.2	19.4	-0.77	+ 3.6	4.1/22.8	31225
1996 TD ₁₅	1998 05 25.4	16 08.18	+02 45.2	16.8	-0.96	+ 7.4	8.6/20.3	31974
1992 HD ₅	1998 05 25.4	16 08.37	-33 00.8	16.5	-1.05	- 2.5	3.9/26.6	24393
1997 AJ ₁₃	1998 05 25.4	16 08.55	-34 09.3	18.1	-1.16	+ 1.7	5.0/27.4	29634
1981 EB ₃₂	1998 05 25.5	16 08.84	-22 48.7	19.1	-0.83	+ 4.5	0.6/25.9	26921
1998 KU ₅₁	1998 05 25.6	16 09.12	-03 31.2	17.6	-0.81	+ 1.0	6.0/22.9	32034
1984 HM ₁	1998 05 25.6	16 09.41	-24 07.9	16.1	-1.09	+ 1.6	1.5/26.1	32044
1982 VC ₃	1998 05 25.7	16 09.61	-18 56.6	17.3	-1.05	+ 0.2	0.9/25.5	32043
1995 UH ₅	1998 05 25.7	16 09.76	-24 08.8	16.3	-1.08	+ 0.1	1.3/26.2	26192
1985 UG ₅	1998 05 25.7	16 09.78	-18 27.0	17.4	-1.10	- 0.2	1.0/25.5	32044
1992 YP ₂	1998 05 25.8	16 09.79	-15 46.1	18.6	-1.03	- 0.1	1.9/25.2	28616
1981 EH ₅	1998 05 25.8	16 09.85	-19 49.1	18.2	-0.82	+ 4.6	0.4/25.6	31945
1981 EH ₁₉	1998 05 25.8	16 09.94	-27 06.1	17.0	-1.12	+ 1.7	2.9/26.7	32043
1997 AB ₅	1998 05 25.8	16 10.15	-26 58.1	18.2	-1.10	+ 0.9	2.1/26.7	32057
1995 UM ₁₆	1998 05 25.8	16 10.20	-14 59.6	20.6	-0.87	+ 2.9	2.0/24.9	29305
5141 T-2	1998 05 25.9	16 10.29	-33 13.2	16.6	-0.94	+ 3.6	4.1/28.0	28620
(8827)	1998 05 25.9	16 10.51	-11 28.7	18.0	-1.02	+ 2.9	4.1/24.4	31905
1995 QK	1998 05 26.0	16 10.56	-19 44.6	18.3	-1.06	+ 4.3	0.5/25.8	32052
1981 EJ ₆	1998 05 26.0	16 10.63	-08 01.9	19.7	-0.75	+ 4.4	3.5/23.5	26915
1996 XN ₃₂	1998 05 26.0	16 10.70	-19 02.0	19.4	-1.07	- 0.1	0.8/25.8	31980
5161 T-2	1998 05 26.0	16 10.75	-39 23.0	18.4	-1.10	+ 1.9	5.7/28.9	16038
1981 EA ₂₇	1998 05 26.0	16 10.77	-20 08.8	19.7	-0.84	+ 1.8	0.3/25.9	26920
1998 KB ₅₁	1998 05 26.0	16 10.85	-06 57.0	16.7	-0.87	+ 4.4	6.2/23.5	32034
1978 VF ₆	1998 05 26.0	16 10.98	-22 47.7	18.6	-1.04	+ 5.2	0.7/26.4	16422
(8861)	1998 05 26.1	16 11.40	-12 23.4	16.3	-0.90	+ 7.3	3.7/24.4	31914
1998 KG ₃₈	1998 05 26.2	16 11.33	-16 49.6	17.3	-0.89	+ 2.7	1.5/25.5	32033
(7708)	1998 05 26.2	16 11.36	-24 27.0	15.6	-1.01	+ 1.0	1.6/26.7	30071
1996 XQ ₃₂	1998 05 26.2	16 11.73	-18 21.6	17.3	-1.06	+ 4.5	1.1/25.8	32056
1993 FT ₁₀	1998 05 26.2	16 11.73	-13 52.0	19.1	-0.89	+ 2.6	2.7/25.2	26564
1994 UH ₂	1998 05 26.2	16 11.78	-21 08.2	17.7	-0.83	+ 1.5	0.0/26.3	32052
1978 UJ ₅	1998 05 26.2	16 11.80	-23 31.8	18.7	-1.09	+ 3.1	0.9/26.7	20806
1996 XH ₁₉	1998 05 26.2	16 11.82	-04 19.6	16.9	-1.00	- 5.0	7.4/25.2	31979
1998 KD ₅₁	1998 05 26.3	16 12.20	-06 35.4	16.9	-0.87	+ 0.3	6.2/24.4	32034
1997 AY ₇	1998 05 26.3	16 12.20	-30 29.0	17.2	-1.11	+ 4.2	4.1/27.9	30786
1981 EH ₃₃	1998 05 26.4	16 12.15	-09 18.9	18.7	-0.78	+ 3.9	3.9/24.2	26921
1991 YO	1998 05 26.4	16 12.27	-06 10.7	17.4	-0.97	- 0.7	5.3/24.6	32048
1992 YA ₁	1998 05 26.4	16 12.28	-17 49.2	17.7	-1.01	+ 2.9	1.2/25.9	29661
1993 OH ₅	1998 05 26.4	16 12.38	-19 46.6	17.5	-0.83	+ 2.1	0.5/26.2	32050
(7694)	1998 05 26.4	16 12.51	-32 35.2	16.5	-0.93	+ 3.9	3.7/28.5	30068
1998 KS ₅₁	1998 05 26.5	16 12.66	-03 30.4	17.5	-0.89	+ 5.3	7.3/22.9	32034
1991 BX	1998 05 26.5	16 12.67	-21 16.5	17.2	-0.81	+ 2.9	0.0/26.5	32047
1981 EW ₂₆	1998 05 26.5	16 12.68	-03 31.0	19.0	-0.76	+ 3.3	5.6/23.3	26920
1998 JA	1998 05 26.6	16 13.17	-08 14.3	16.7	-0.80	+ 1.6	4.8/24.6	32027
1995 VC ₁	1998 05 26.6	16 13.30	-30 52.2	18.1	-1.06	- 0.3	3.0/27.8	30666
(7591)	1998 05 26.6	16 13.32	-19 43.0	18.0	-1.01	+ 3.0	0.5/26.4	29598
1987 SG ₂	1998 05 26.8	16 13.96	-10 58.3	17.7	-0.91	+ 2.7	3.4/25.3	32044

1995 UY ₄₄	1998 05 26.8	16 14.03	-29 48.9	18.0	-1.16	- 0.8	3.2/27.7	29665	1285 T-1	1998 05 28.7	16 21.81	-22 42.4	18.8	-1.03	+ 2.9	0.4/28.9	29321
1991 GP ₇	1998 05 26.9	16 14.17	-25 20.8	17.4	-1.13	+ 2.8	1.7/27.5	32047	(7541)	1998 05 28.8	16 21.92	-13 45.5	17.5	-0.91	+ 2.6	2.9/27.6	29296
(8797)	1998 05 26.9	16 14.28	-21 04.7	17.3	-0.85	+ 2.1	0.1/26.9	31898	1991 VT ₅	1998 05 28.8	16 22.18	-10 25.2	18.6	-0.92	+ 2.3	4.2/27.2	31956
1997 CC ₂₉	1998 05 26.9	16 14.34	-21 13.5	17.1	-0.83	+ 2.1	0.0/26.9	31987	1977 TQ ₆	1998 05 28.8	16 22.23	-26 54.4	17.0	-1.11	- 2.4	2.0/29.3	21926
1981 EW ₃₇	1998 05 26.9	16 14.43	-27 41.3	19.4	-1.00	+ 3.4	2.7/28.0	26922	1995 YO	1998 05 28.8	16 22.36	-11 18.0	17.9	-0.79	+ 0.3	3.0/27.6	32054
1975 TU ₃	1998 05 26.9	16 14.61	-26 53.5	16.8	-1.20	- 1.2	2.4/27.6	31942	1992 GZ ₄	1998 05 28.9	16 22.30	-21 08.8	17.8	-0.83	+ 1.3	0.1/28.8	32048
1998 KQ ₅₁	1998 05 26.9	16 14.62	-05 03.8	18.2	-0.78	+ 2.4	4.9/24.4	32034	1990 QO ₆	1998 05 28.9	16 22.34	+00 55.8	17.7	-0.88	+ 2.6	8.4/25.0	32046
2315 T-3	1998 05 27.0	16 14.61	-19 57.1	18.9	-1.02	+ 3.2	0.5/26.8	29669	1998 KR ₄₂	1998 05 28.9	16 22.37	-03 50.2	17.6	-0.84	+ 4.6	6.7/25.8	32033
1978 VZ ₆	1998 05 27.0	16 14.88	-21 05.7	18.4	-0.83	+ 2.6	0.0/27.0	23968	1981 EB ₁₈	1998 05 28.9	16 22.62	-14 23.9	17.9	-0.89	+ 2.9	3.2/27.9	31946
1994 RB ₁₇	1998 05 27.0	16 14.93	-17 07.0	17.3	-0.87	+ 2.2	1.4/26.4	32052	1990 RT ₂	1998 05 28.9	16 22.71	-39 22.4	17.2	-1.14	+ 0.4	6.1/31.0	29611
1981 EV ₄	1998 05 27.0	16 14.97	-28 44.5	18.9	-1.07	+ 5.2	3.7/28.4	26915	1981 EY ₁₃	1998 05 29.0	16 22.83	-14 04.0	18.9	-0.80	+ 3.8	2.4/27.8	32042
1985 TN	1998 05 27.1	16 15.09	-26 41.2	17.7	-1.16	+ 1.1	2.1/27.8	32044	(7851)	1998 05 29.0	16 22.95	-29 43.9	14.7	-1.07	+ 4.6	4.2/30.0	30444
(8778)	1998 05 27.1	16 15.39	-28 49.5	15.3	-1.22	- 5.1	4.0/27.5	31894	1995 UL ₉	1998 05 29.0	16 23.10	-28 54.5	21.4	-1.03	+ 1.7	2.3/30.0	27919
1995 WX ₁	1998 05 27.1	16 15.40	-18 52.2	16.6	-0.81	+ 7.4	0.8/26.7	32054	1992 UJ ₆	1998 05 29.0	16 23.14	-14 24.1	17.9	-1.04	+ 4.4	2.7/27.9	32049
1980 TK ₆	1998 05 27.1	16 15.46	-17 27.0	17.2	-0.99	+ 5.0	1.5/26.5	32042	1990 VF ₈	1998 05 29.1	16 23.48	-30 45.9	16.8	-1.06	- 0.2	3.3/30.0	32046
1995 WU ₄	1998 05 27.2	16 15.41	-33 54.1	17.9	-1.03	+ 3.7	4.0/29.3	29319	(7892)	1998 05 29.1	16 23.53	-19 35.8	17.6	-0.81	+ 2.0	0.6/28.9	32041
(7575)	1998 05 27.2	16 15.51	-19 07.8	16.7	-1.07	+ 3.6	0.8/26.9	29595	1994 PF ₉	1998 05 29.1	16 23.54	-19 29.3	18.1	-0.80	+ 1.8	0.6/28.9	27448
1993 FA ₃₇	1998 05 27.2	16 15.59	-15 51.8	17.7	-0.91	+ 2.1	1.8/26.4	31962	1981 EO ₂₃	1998 05 29.2	16 23.58	-21 40.9	18.7	-1.11	+ 3.0	0.0/29.2	26919
1991 CR ₁	1998 05 27.2	16 15.70	-13 02.7	17.9	-0.79	+ 0.8	2.4/26.1	32047	1992 EQ ₂₇	1998 05 29.4	16 24.52	-18 40.3	17.6	-0.87	+ 2.1	1.1/29.0	32048
1997 AM ₄	1998 05 27.2	16 15.75	+01 40.7	17.1	-0.87	- 0.3	9.7/24.0	32057	1994 DS	1998 05 29.4	16 24.57	-23 42.7	17.5	-1.14	+ 0.7	0.8/29.7	32051
1997 CY	1998 05 27.2	16 15.78	-17 20.0	17.3	-0.88	+ 2.7	1.4/26.7	31986	1981 EM ₁₆	1998 05 29.4	16 24.62	-36 23.8	19.4	-0.96	+ 2.1	4.8/31.6	26918
1998 KS ₃₉	1998 05 27.3	16 15.97	-17 41.3	17.9	-0.88	+ 2.3	1.2/26.8	32033	2102 P-L	1998 05 29.4	16 24.72	-29 41.4	17.3	-1.09	+ 1.8	4.0/30.0	32035
1994 GD ₉	1998 05 27.4	16 16.58	+06 45.5	17.9	-0.97	+ 7.1	11.3/22.1	32051	1982 VD ₅	1998 05 29.4	16 24.76	-19 50.9	18.2	-1.06	+ 3.6	0.7/29.2	32043
1995 YT ₂₀	1998 05 27.6	16 17.26	-16 35.3	21.0	-0.82	+ 2.0	1.3/26.9	31545	6193 P-L	1998 05 29.5	16 24.79	-04 46.2	19.5	-0.86	+ 5.2	6.4/26.4	29321
1042 T-2	1998 05 27.6	16 17.41	-19 45.5	17.9	-0.94	+ 3.0	0.6/27.4	32092	1981 ES ₂₇	1998 05 29.5	16 24.95	-35 09.9	18.9	-1.20	- 0.1	6.9/31.1	23132
(7599)	1998 05 27.7	16 17.77	-19 01.2	17.7	-0.80	+ 3.3	0.6/27.4	29600	1993 FX ₃₁	1998 05 29.5	16 25.19	-17 09.7	16.6	-0.93	+ 1.3	1.6/29.0	26173
1995 UB ₂₁	1998 05 27.8	16 17.86	-12 27.0	17.2	-0.88	+ 6.6	4.2/26.0	31970	1993 LE	1998 05 29.6	16 25.45	-04 29.6	17.0	-0.82	+ 0.2	6.1/27.5	32050
1981 ER ₁₈	1998 05 27.8	16 18.21	-29 21.1	18.8	-1.06	+ 2.2	2.8/29.0	22429	1978 TO ₈	1998 05 29.6	16 25.47	-20 57.7	17.6	-0.84	+ 2.1	0.2/29.6	32041
1991 YU	1998 05 27.9	16 18.69	-11 52.6	17.9	-0.86	+ 1.6	3.1/26.7	26741	1995 UY ₄₀	1998 05 29.6	16 25.60	-18 15.2	19.9	-1.02	+ 4.0	1.3/29.2	27110
1994 PB ₂	1998 05 28.0	16 18.83	-23 34.5	16.7	-0.91	+ 2.1	0.8/28.4	32052	1992 FZ	1998 05 29.6	16 25.61	-34 47.9	16.0	-0.96	+ 1.1	4.2/31.4	29317
2113 P-L	1998 05 28.0	16 18.92	-19 09.6	18.7	-0.92	+ 3.3	0.8/27.7	23539	(7623)	1998 05 29.7	16 25.85	-19 55.1	16.5	-0.84	+ 1.2	0.6/29.5	29606
2053 T-3	1998 05 28.0	16 19.11	-24 04.8	18.1	-0.85	+ 3.0	0.9/28.5	22491	(7774)	1998 05 29.7	16 26.00	-20 37.2	16.6	-1.13	+ 0.2	0.4/29.7	30263
1981 EW ₂₂	1998 05 28.1	16 19.19	-17 47.9	20.5	-0.82	+ 2.3	1.0/27.6	26919	1982 UD ₆	1998 05 29.8	16 26.09	-26 25.3	17.6	-1.14	+ 3.0	1.9/30.5	29654
(8836)	1998 05 28.1	16 19.26	-08 25.6	17.2	-0.78	+ 3.4	4.3/26.0	31908	(7564)	1998 05 29.8	16 26.10	-04 23.5	16.1	-0.87	+ 1.5	6.3/27.6	29592
1990 XU	1998 05 28.1	16 19.44	-06 53.8	17.3	-0.80	+ 1.1	4.4/26.1	31952	1993 FQ ₄₃	1998 05 29.9	16 26.69	-25 43.7	18.3	-1.00	+ 1.6	1.3/30.5	30659
3434 T-3	1998 05 28.1	16 19.48	-18 49.6	20.3	-0.90	+ 2.8	0.8/27.8	29669	1995 TS	1998 05 29.9	16 26.77	-22 41.4	17.4	-1.06	+ 2.2	9.3/10.0	32053
1994 PE ₃	1998 05 28.2	16 19.54	+00 10.7	18.2	-0.81	+ 2.2	8.9/24.6	31965	(8895)	1998 05 29.9	16 26.83	-13 23.6	15.9	-0.97	+ 2.7	4.3/28.8	31922
1991 TF ₁₄	1998 05 28.2	16 19.57	-27 13.3	17.8	-1.04	+ 1.0	2.0/29.0	25639	1989 WS ₂	1998 05 30.0	16 27.13	-13 49.4	16.8	-1.08	+ 0.3	3.1/29.2	32045
1998 KE ₄₁	1998 05 28.4	16 20.42	-19 21.8	17.7	-0.83	+ 7.8	0.7/28.0	32033	1995 UE ₈	1998 05 30.0	16 27.14	-29 13.0	17.5	-1.01	- 0.7	2.8/30.8	32053
1993 CR ₁	1998 05 28.4	16 20.58	+01 06.5	17.1	-0.87	+ 1.0	8.7/25.4	32049	1988 RM ₇	1998 05 30.0	16 27.20	-23 23.9	17.8	-0.88	+ 2.2	0.6/30.3	32045
1975 SZ ₁	1998 05 28.4	16 20.66	-16 52.8	19.4	-1.05	+ 2.9	1.7/27.8	29131	(7554)	1998 05 30.1	16 27.31	-39 51.0	16.8	-1.11	- 0.4	6.4/01.4	29590
1997 CA ₂₀	1998 05 28.5	16 20.67	-06 41.1	17.7	-0.77	+ 1.3	4.5/26.4	32058	1993 PK ₇	1998 05 30.1	16 27.34	-21 37.5	17.2	-0.84	+ 1.8	0.0/30.1	32050
1981 EL ₆	1998 05 28.5	16 20.73	-18 52.9	18.7	-0.81	+ 5.4	0.9/28.0	26915	(8854)	1998 05 30.1	16 27.43	-18 18.4	16.4	-1.03	- 1.2	1.8/29.8	31912
1995 WM ₃	1998 05 28.5	16 20.81	-21 24.3	18.5	-0.99	+ 1.7	0.0/28.5	32054	1995 UK ₃	1998 05 30.2	16 27.62	-21 44.3	17.0	-0.88	+ 5.8	0.0/30.2	32053
1992 BD	1998 05 28.5	16 20.83	-06 29.7	17.5	-1.71	-15.5	7.5/29.3	31957	1995 SD ₅₃	1998 05 30.2	16 27.83	-13 29.4	19.0	-0.98	+ 3.1	3.1/29.1	30093
1993 GR	1998 05 28.5	16 21.13	-24 52.4	16.1	-0.95	+ 0.4	1.3/29.0	32050	1987 WO ₁	1998 05 30.2	16 27.91	-19 08.2	16.8	-0.94	+ 4.6	1.0/29.8	32044
1988 DF ₂	1998 05 28.5	16 21.14	-26 01.6	17.3	-0.98	+ 2.0	1.6/29.2	32044	1997 AR ₂₂	1998 05 30.2	16 28.04	-27 14.3	17.7	-1.16	+ 0.5	2.2/30.9	31794
(7661)	1998 05 28.5	16 21.15	-17 37.2	18.1	-0.87	+ 2.1	1.4/28.0	29902	2293 T-3	1998 05 30.3	16 28.09	-37 26.7	19.1	-0.97	+ 0.4	4.6/01.2	31411
1989 TY	1998 05 28.6	16 21.11	-36 42.3	17.5	-0.99	+ 2.0	5.8/30.9	31005	1981 UA	1998 05 30.3	16 28.12	-56 28.8	19.9	-1.89	- 3.6	11.8/31.7	25972
1995 YK	1998 05 28.6	16 21.37	-12 18.6	18.4	-0.84	+ 0.2	2.7/27.5	32054	2740 P-L	1998 05 30.3	16 28.41	-13 24.5	19.6	-0.90	+ 2.3	2.8/29.2	22700
1991 PL ₁₇	1998 05 28.7	16 21.56	-32 55.4	18.1	-1.15	+ 3.4	4.2/30.0	27455	1975 SC ₂	1998 05 30.5	16 29.14	-10 36.1	17.7	-0.72	+ 2.7	3.1/28.9	32041

1998 KP ₃	1998 05 30.5	16 29.32	-18 12.3	17.5	-1.01	+	5.4	1.6/30.0	32031
1986 EP ₅	1998 05 30.6	16 29.27	-18 24.7	16.6	-0.81	+	1.9	1.2/30.2	32044
(8959)	1998 05 30.6	16 29.34	-22 44.7	16.5	-0.99	+	0.1	0.5/30.7	31936
1992 WJ	1998 05 30.6	16 29.46	-24 40.9	17.4	-1.07	+	1.6	1.1/31.0	32049
(8887)	1998 05 30.6	16 29.64	+02 35.2	16.4	-0.93	-	1.2	10.0/27.9	31920
1996 YV ₁	1998 05 30.6	16 29.70	-24 09.8	18.6	-0.97	+	2.1	0.8/31.0	32056
1998 KP ₅₃	1998 05 30.7	16 29.81	-05 49.4	17.7	-0.79	-	0.2	6.0/28.9	32035
1996 YB	1998 05 30.8	16 30.28	-15 14.1	17.7	-0.94	-	0.7	2.4/30.2	31980
1993 DE ₁	1998 05 30.9	16 30.47	-36 02.8	15.7	-1.04	+	5.3	5.9/02.4	29102
1987 BR ₁	1998 05 30.9	16 30.65	-24 23.6	16.9	-1.11	+	3.8	1.0/31.3	32044
2029 T-3	1998 05 30.9	16 30.86	-35 33.3	18.6	-1.07	+	1.2	4.7/01.7	31609
1997 CY ₂	1998 05 31.1	16 31.31	-17 36.2	18.7	-0.83	+	1.2	1.3/30.6	32057
1995 XX	1998 05 31.1	16 31.45	-31 07.4	17.7	-0.95	-	0.5	3.1/01.1	32054
1990 BF	1998 05 31.1	16 31.58	-29 14.4	16.6	-1.13	+	2.8	3.0/01.1	32046
1995 VK	1998 05 31.2	16 32.08	-17 42.3	16.8	-1.00	+	2.9	1.9/30.7	32053
1995 SA ₃	1998 05 31.2	16 32.12	-22 40.2	17.0	-1.13	+	5.5	0.3/31.4	32053
1994 PO ₃₀	1998 05 31.3	16 32.16	-16 55.3	17.9	-0.87	+	3.0	1.7/30.6	31966
1988 RB ₁₁	1998 05 31.3	16 32.46	-20 36.6	19.2	-0.79	+	1.7	0.3/31.2	29656
(8944)	1998 05 31.4	16 32.87	-20 50.9	17.8	-0.84	+	1.9	0.4/31.3	31933
1991 RQ ₂₇	1998 05 31.4	16 32.88	-16 06.7	17.3	-1.03	+	0.4	2.7/30.8	32048
(7359)	1998 05 31.4	16 32.97	-17 57.9	17.1	-0.81	+	1.3	1.1/31.0	28578
1995 SP ₂	1998 05 31.5	16 33.19	-19 03.4	18.3	-1.09	-	1.3	1.2/31.3	32052
1995 UL ₆	1998 05 31.6	16 33.58	-25 58.3	17.6	-1.08	+	1.9	1.8/01.1	32053
6079 P-L	1998 05 31.6	16 33.64	-49 51.0	18.1	-1.14	+	0.1	7.3/04.1	30285
1995 WM ₄	1998 05 31.7	16 33.89	-18 16.9	17.6	-0.99	+	0.6	1.5/31.3	31972
3045 P-L	1998 05 31.7	16 33.92	-43 48.3	16.2	-1.18	+	1.7	9.0/03.4	29321
(7398)	1998 05 31.9	16 34.68	-24 43.5	16.8	-1.11	+	5.0	1.2/01.3	28826
4304 T-3	1998 05 31.9	16 34.96	-16 37.9	18.1	-0.92	+	0.8	2.0/31.4	32093
1994 PT ₃₂	1998 06 01.0	16 34.97	-06 49.5	19.2	-0.79	+	2.7	4.6/29.8	31386
1981 EL ₄₁	1998 06 01.0	16 35.42	-36 21.9	19.4	-0.99	+	0.4	4.7/02.7	24239
4266 T-1	1998 06 01.1	16 35.37	-17 13.3	18.4	-0.92	+	1.5	2.4/31.5	32092
(7401)	1998 06 01.2	16 35.83	-20 37.6	17.4	-1.04	+	2.9	0.5/01.0	28826
(7481)	1998 06 01.3	16 36.20	-03 16.9	16.1	-0.80	+	2.5	6.2/29.7	29085
1987 DD ₆	1998 06 01.3	16 36.25	-14 12.4	17.3	-1.00	+	1.7	3.6/31.4	32044
1997 AC ₇	1998 06 01.3	16 36.53	-03 38.5	17.5	-0.88	-	0.1	6.6/30.5	31983
1993 FZ ₄₆	1998 06 01.4	16 36.59	-27 19.0	19.2	-1.00	+	1.4	1.9/02.0	28887
1994 BY	1998 06 01.4	16 36.69	-27 29.8	16.6	-1.19	+	0.1	2.4/01.9	32051
1994 EO ₁	1998 06 01.4	16 36.75	-33 58.2	16.1	-1.26	-	1.8	5.2/02.4	23345
1997 FU	1998 06 01.4	16 36.79	-30 45.5	17.1	-1.12	-	1.8	3.0/02.1	32058
1987 SE ₃	1998 06 01.4	16 36.80	-19 14.0	17.7	-0.99	+	0.6	1.0/01.1	32044
1982 UQ ₁₀	1998 06 01.4	16 36.89	-25 32.1	18.7	-0.95	+	1.4	1.0/01.9	31415
1981 EG ₄₄	1998 06 01.4	16 36.91	-34 18.4	18.1	-0.96	+	0.3	3.8/02.8	21968
1995 SK	1998 06 01.5	16 37.11	-64 13.3	19.7	-2.11	-	3.1	18.2/02.7	30783
1997 AX ₅	1998 06 01.5	16 37.37	-28 34.1	18.9	-1.16	+	3.3	2.5/02.4	30786
1997 AW ₁₃	1998 06 01.6	16 37.52	-43 03.4	16.8	-1.13	+	2.2	8.5/04.5	29634
1981 EM ₂₀	1998 06 01.6	16 37.73	-32 41.9	20.5	-0.78	+	0.7	2.8/02.9	29910
1992 GQ	1998 06 01.6	16 37.86	-14 57.6	17.1	-0.86	-	0.9	2.4/01.1	32048
1989 WU ₂	1998 06 01.6	16 37.87	-21 08.2	17.9	-0.83	+	1.1	0.3/01.6	32045
1994 TP	1998 06 01.7	16 37.95	-14 19.9	17.9	-0.78	+	2.7	2.3/31.7	32052
1993 BF ₃	1998 06 01.8	16 38.24	-29 47.6	17.7	-1.06	+	2.2	2.8/02.8	29136
1992 ER ₄	1998 06 01.8	16 38.28	-22 16.4	17.6	-0.91	+	0.7	0.1/01.8	32048

1996 XJ ₁₈	1998 06 01.8	16 38.29	-05 19.1	19.9	-0.89	-	1.6	6.7/31.5	30786
1996 XW ₁₈	1998 06 01.8	16 38.52	-11 25.2	16.8	-1.03	-	1.2	5.1/32.0	32056
(7669)	1998 06 01.8	16 38.61	-11 06.5	18.2	-0.85	+	2.7	3.5/31.4	29904
1994 PN ₂₁	1998 06 01.9	16 38.72	-19 01.5	18.5	-0.81	+	1.5	0.9/01.5	32052
4180 T-2	1998 06 01.9	16 39.05	-20 29.5	18.0	-1.09	+	1.6	0.7/01.8	32093
1981 EE ₂₂	1998 06 01.9	16 39.08	-28 39.9	18.5	-0.91	+	0.8	2.2/02.7	22271
1979 MV ₃	1998 06 02.0	16 39.43	-15 44.6	19.2	-1.03	+	3.3	2.7/01.2	30778
1996 XH ₂₆	1998 06 02.1	16 39.46	-21 24.7	18.6	-1.06	+	2.2	0.3/02.0	32056
1990 QR	1998 06 02.1	16 39.50	+01 53.1	16.0	-0.84	+	3.2	10.4/29.1	32046
1995 WA	1998 06 02.2	16 39.94	-13 11.2	16.6	-0.90	+	8.2	3.6/31.5	32053
1991 PQ ₂	1998 06 02.2	16 40.03	-25 20.1	17.1	-1.05	+	1.1	1.5/02.6	32047
1996 YF	1998 06 02.3	16 40.46	-21 06.0	17.5	-1.13	-	0.1	0.4/02.2	32056
1994 AM ₃	1998 06 02.3	16 40.57	-34 06.2	16.5	-1.24	+	0.7	5.5/03.6	29318
1997 BD ₂	1998 06 02.4	16 40.89	-07 52.6	16.9	-1.04	+	0.1	5.6/01.0	32057
1997 HC ₃	1998 06 02.4	16 40.98	-16 58.5	18.3	-0.68	+	1.8	1.4/01.8	30691
1990 RD ₅	1998 06 02.5	16 41.16	-21 05.2	16.7	-0.92	+	3.1	0.4/02.4	23974
1998 KM ₄₆	1998 06 02.5	16 41.39	-13 03.0	17.6	-1.02	+	3.3	3.7/01.4	32033
1994 PE ₂	1998 06 02.6	16 41.87	-31 00.3	17.8	-1.09	+	1.6	3.4/03.6	26744
(7473)	1998 06 02.7	16 42.03	-18 33.2	16.6	-0.89	+	1.1	1.3/02.3	29082
1991 RN ₁₁	1998 06 02.7	16 42.10	-19 15.3	18.2	-1.02	+	1.1	1.1/02.4	32047
5565 P-L	1998 06 02.7	16 42.11	-28 43.2	17.7	-1.25	-	0.2	2.7/03.2	24585
1998 KM ₅₄	1998 06 02.7	16 42.26	-08 21.5	18.3	-0.94	-	2.8	6.1/01.9	32035
1993 OX ₁₁	1998 06 02.8	16 42.56	-25 08.8	18.0	-0.83	+	1.9	0.8/03.2	30782
1991 RG ₄	1998 06 02.8	16 42.63	-23 31.6	18.3	-1.07	+	2.6	0.6/03.0	32047
4821 P-L	1998 06 02.8	16 42.67	-17 27.9	19.8	-0.93	+	1.4	1.7/02.3	26423
1998 KR ₅₄	1998 06 02.9	16 42.91	-09 24.7	18.0	-1.05	-	2.3	4.9/02.1	32035
1992 UU ₅	1998 06 02.9	16 42.96	-22 20.2	18.1	-1.09	+	1.0	0.0/03.0	29661
1994 EB ₂	1998 06 02.9	16 43.06	+16 50.1	16.4	-1.00	-	7.5	17.9/04.8	27313
1995 SM ₂₁	1998 06 03.0	16 43.16	-34 42.2	18.4	-1.22	+	1.0	5.3/04.0	29664
1978 VP ₁	1998 06 03.0	16 43.21	-21 10.6	18.3	-0.81	+	2.7	0.3/02.9	29652
1995 UM ₅₀	1998 06 03.0	16 43.34	-28 29.7	20.4	-1.01	+	1.0	2.5/03.7	31107
(7320)	1998 06 03.1	16 43.65	-28 27.9	17.7	-0.86	+	1.6	1.7/03.8	28567
9099 P-L	1998 06 03.2	16 44.25	-04 27.2	18.1	-0.76	+	3.2	6.0/31.7	16036
(8855)	1998 06 03.3	16 44.73	-12 02.3	16.7	-0.90	+	3.8	5.3/02.0	31912
1997 AG ₇	1998 06 03.3	16 44.81	-18 45.2	20.4	-1.01	+	2.3	1.2/03.0	30690
3166 T-3	1998 06 03.4	16 44.94	-18 26.0	18.8	-1.03	+	2.1	1.5/03.0	22702
1992 WC ₁	1998 06 03.4	16 45.23	-24 16.6	16.7	-1.13	+	4.6	0.9/03.7	32049
1995 QG	1998 06 03.5	16 45.46	-41 01.1	20.0	-1.14	+	2.5	6.0/05.8	29107
2527 P-L	1998 06 03.7	16 46.27	-03 28.5	19.1	-0.74	+	2.5	4.9/01.2	27123
1996 AD ₂	1998 06 03.7	16 46.35	-15 37.2	17.9	-0.88	-	1.2	2.2/03.3	32054
1995 YN ₄	1998 06 03.8	16 46.54	-36 02.6	17.3	-0.98	+	1.3	4.1/05.3	29665
(7377)	1998 06 03.9	16 46.91	-31 32.9	17.1	-1.10	+	2.7	4.8/04.9	28820
1993 FF ₂₀	1998 06 03.9	16 46.98	-18 01.8	17.8	-0.94	+	0.1	1.5/03.6	29103
1997 CK ₁₂	1998 06 04.0	16 47.48	-25 20.1	20.3	-1.04	+	1.8	1.0/04.3	29128
(7556)	1998 06 04.0	16 47.48	-25 41.8	17.2	-0.91	+	1.1	1.1/04.4	29590
(7797)	1998 06 04.0	16 47.53	-03 46.4	16.1	-0.77	+	1.0	5.7/01.9	30269
1981 EK ₄₇	1998 06 04.0	16 47.60	-21 39.7	19.3	-0.70	+	1.6	0.2/04.0	26923
2168 T-1	1998 06 04.1	16 47.71	-03 43.3	17.4	-0.94	+	3.8	7.5/01.4	32092
1997 CE ₂₀	1998 06 04.1	16 47.81	-17 48.6	17.8	-0.99	+	0.1	1.8/03.7	32058
1994 PP ₃₄	1998 06 04.1	16 47.82	-24 02.9	18.0	-0.90	+	1.9	0.5/04.3	24570
1992 EH ₁₈	1998 06 04.1	16 47.95	-11 34.2	18.6	-0.83	+	2.5	3.4/02.9	30782

1979 QR ₁	1998 06 04.1	16 48.01	-24 55.6	17.4	-0.91	+	1.5	0.9/04.4	29132	(7610)	1998 06 06.7	16 58.66	-23 12.4	17.1	-0.90	+	0.5	0.2/06.8	29603
1986 PX	1998 06 04.2	16 48.08	-17 50.6	17.5	-1.14	+	3.3	2.2/03.7	32044	1992 DL ₇	1998 06 06.7	16 58.68	-20 40.0	17.2	-0.89	+	0.7	0.7/06.6	23861
4055 P-L	1998 06 04.2	16 48.12	-28 01.0	16.6	-1.08	+	2.5	2.7/04.8	28319	2174 T-3	1998 06 06.7	16 58.71	-40 11.0	18.6	-1.13	-	0.1	5.6/08.1	26193
1994 PZ ₂₇	1998 06 04.2	16 48.26	-18 54.3	18.0	-0.84	+	1.0	1.1/03.9	26422	1994 PA ₁₄	1998 06 06.8	16 59.09	-20 48.9	18.1	-0.89	+	1.6	0.6/06.7	27448
3067 T-2	1998 06 04.3	16 48.88	-18 44.0	17.0	-1.09	+	1.1	1.8/04.0	32092	1995 SB ₁	1998 06 06.9	16 59.19	-06 56.3	18.5	-1.02	+	8.4	5.5/04.2	30783
1993 FZ ₂₀	1998 06 04.4	16 49.23	-19 31.8	19.1	-0.93	+	1.8	1.0/04.2	30291	1991 RD ₂₄	1998 06 06.9	16 59.35	-15 05.5	16.3	-0.98	-	1.0	3.6/06.5	32048
1973 QO ₁	1998 06 04.4	16 49.33	-34 13.4	16.8	-1.15	+	2.4	4.7/05.7	30089	1992 UM ₆	1998 06 07.0	16 59.68	-27 02.3	17.6	-1.10	+	2.3	1.6/07.4	29136
1989 WK ₄	1998 06 04.5	16 49.52	-17 12.4	17.1	-1.08	-	0.5	2.3/04.2	32045	(7557)	1998 06 07.0	16 59.80	-16 08.0	17.4	-1.00	+	1.9	2.4/06.5	29591
1991 EF ₂	1998 06 04.6	16 49.74	-12 18.8	16.8	-1.03	+	2.4	4.8/03.5	31952	1981 EE ₃₉	1998 06 07.1	17 00.02	-12 29.4	20.5	-0.81	+	1.3	3.3/06.1	26922
1995 SL	1998 06 04.6	16 50.14	-30 23.2	18.1	-1.09	+	2.6	2.9/05.5	30093	6636 P-L	1998 06 07.1	17 00.26	-18 56.2	17.8	-0.89	+	0.4	1.3/06.9	29321
1981 EH ₁₇	1998 06 04.6	16 50.17	-09 56.3	17.9	-0.79	+	2.8	4.5/03.1	26918	1986 CB	1998 06 07.1	17 00.34	+05 25.5	18.3	-0.98	-	1.1	8.7/05.2	30288
1981 EF ₁₅	1998 06 04.8	16 50.71	-35 37.0	18.7	-0.96	+	2.1	4.5/06.3	30779	1988 RN ₃	1998 06 07.2	17 00.47	-15 46.1	18.7	-1.04	+	2.2	3.0/06.5	31416
1997 AK ₇	1998 06 04.9	16 51.21	+00 22.9	16.8	-0.90	-	2.3	10.2/03.3	32057	1995 UW ₈	1998 06 07.2	17 00.76	-26 32.1	16.6	-1.02	-	2.4	1.3/07.4	32053
1981 EA ₄₂	1998 06 04.9	16 51.43	-09 26.5	19.0	-1.04	+	2.6	5.5/03.5	23347	1990 UG ₅	1998 06 07.2	17 00.86	-10 19.6	19.8	-0.86	+	2.2	4.1/06.0	30091
1993 BN ₄	1998 06 05.0	16 51.55	-18 53.0	17.9	-1.07	+	1.1	1.4/04.7	29136	1995 SA ₂	1998 06 07.4	17 01.37	-14 52.2	20.2	-0.88	+	1.9	2.4/06.7	29664
1994 ER	1998 06 05.1	16 51.88	-15 20.9	17.7	-1.07	-	0.2	2.8/04.6	32051	1991 GC ₆	1998 06 07.4	17 01.43	-32 17.2	17.6	-1.25	-	0.5	3.9/08.0	28614
4661 P-L	1998 06 05.1	16 51.92	-23 55.9	18.0	-0.91	+	0.7	0.5/05.3	30474	1997 CT ₁₉	1998 06 07.5	17 01.76	-22 10.4	18.5	-1.05	+	1.9	0.2/07.5	30473
(7332)	1998 06 05.1	16 51.98	-17 54.3	16.6	-1.06	+	4.7	2.1/04.6	28570	1997 BP ₅	1998 06 07.5	17 01.79	-18 52.3	19.7	-1.03	+	1.1	1.4/07.2	29667
1995 ST ₄	1998 06 05.2	16 52.37	-10 55.3	16.7	-1.01	+	1.5	4.7/04.1	32053	1981 EF ₁₆	1998 06 07.9	17 03.34	-08 40.6	18.9	-0.92	+	2.9	4.7/06.4	29093
1981 EG ₁₁	1998 06 05.2	16 52.50	-16 27.1	20.2	-0.97	+	2.8	2.1/04.6	23535	1996 AG ₂	1998 06 07.9	17 03.43	-37 40.7	16.5	-0.95	+	2.6	4.3/09.5	26928
1997 CF ₂₂	1998 06 05.2	16 52.66	-13 31.8	17.8	-0.88	+	1.3	3.3/04.4	32058	(7844)	1998 06 07.9	17 03.69	-22 11.8	16.8	-1.04	+	2.5	0.2/07.9	30442
1994 JE ₉	1998 06 05.3	16 52.77	-13 35.1	16.4	-0.97	-	1.3	4.1/04.7	32051	1997 BU ₃	1998 06 07.9	17 03.74	-21 00.3	16.5	-0.85	+	0.2	0.7/07.9	32057
1995 UG ₆	1998 06 05.3	16 52.81	-26 33.6	18.1	-1.05	+	1.2	1.5/05.7	30472	(8928)	1998 06 08.0	17 04.13	-25 49.1	17.2	-1.09	-	0.2	1.2/08.3	31929
(7435)	1998 06 05.3	16 52.82	-17 54.0	16.0	-1.04	+	3.2	2.1/04.8	28835	1978 SX ₇	1998 06 08.1	17 04.41	-29 22.4	19.2	-1.01	+	1.3	2.0/08.7	29652
1995 UN ₄	1998 06 05.4	16 53.12	-20 04.8	16.6	-1.00	+	4.4	1.1/05.1	32053	1997 BV ₈	1998 06 08.1	17 04.45	-12 07.0	18.1	-1.06	+	0.3	5.2/07.4	31986
1981 EO ₃₈	1998 06 05.4	16 53.16	-03 41.3	18.8	-0.89	+	4.1	7.6/02.7	26922	1995 UL ₇	1998 06 08.2	17 04.82	-26 04.1	17.5	-1.12	+	0.6	1.3/08.5	26423
1997 AE ₄	1998 06 05.4	16 53.20	-14 21.8	17.2	-0.89	+	0.2	2.7/04.8	32057	1101 T-1	1998 06 08.2	17 04.92	-24 56.1	17.4	-0.97	+	2.5	0.8/08.5	23533
7590 P-L	1998 06 05.4	16 53.24	-29 05.7	21.1	-1.02	+	0.2	2.0/06.0	22701	1990 OO ₂	1998 06 08.2	17 04.96	-47 15.4	15.9	-1.27	+	2.3	10.0/10.5	32046
1997 BA ₃	1998 06 05.4	16 53.30	-25 04.7	18.7	-1.06	+	1.7	0.9/05.7	29637	1997 BD ₉	1998 06 08.3	17 05.01	-20 33.8	17.5	-0.83	+	0.4	0.8/08.1	32057
1992 CP ₂	1998 06 05.5	16 53.53	-14 47.6	17.2	-0.87	+	2.6	2.8/04.6	32048	(8888)	1998 06 08.3	17 05.08	-05 35.0	17.3	-0.91	-	2.5	6.5/07.8	31920
1981 EU ₁₀	1998 06 05.6	16 53.92	-30 30.1	18.6	-1.05	+	3.8	4.2/06.6	26916	1997 CS	1998 06 08.4	17 05.44	-38 42.1	16.0	-1.02	+	1.0	5.7/09.7	29639
1995 UU ₆	1998 06 05.6	16 53.93	-32 16.9	20.3	-1.14	+	1.7	3.9/06.5	30456	1981 EC ₃₀	1998 06 08.4	17 05.57	-48 15.2	19.6	-1.15	+	2.7	8.1/11.3	26920
1990 QZ ₁₇	1998 06 05.7	16 54.59	-06 44.8	15.8	-0.88	+	1.8	6.4/04.1	31952	1995 SJ ₁	1998 06 08.5	17 05.93	-29 06.8	19.5	-1.08	+	1.1	2.2/09.0	29623
1997 GD ₂₀	1998 06 05.7	16 54.69	-22 01.9	17.0	-0.91	+	1.2	0.2/05.7	32058	1981 EZ ₄	1998 06 08.5	17 06.09	-36 14.1	18.6	-1.10	+	3.7	5.5/10.0	26915
1991 PY ₁₈	1998 06 05.7	16 54.71	-28 32.1	18.2	-1.13	+	2.0	2.6/06.3	29614	1981 ER ₂	1998 06 08.6	17 06.68	+06 19.0	18.5	-0.79	+	2.8	9.6/05.9	26915
1997 CV ₁	1998 06 05.9	16 55.23	-19 17.7	16.3	-1.08		0.0	1.8/05.7	32057	1995 PK	1998 06 08.7	17 06.66	-15 11.8	17.2	-1.09	+	0.1	3.4/08.2	32052
1997 AH ₇	1998 06 06.0	16 55.68	-10 56.8	17.9	-1.01	+	1.0	4.6/05.0	32057	1981 EJ ₉	1998 06 08.8	17 07.23	-28 16.0	19.3	-1.04	+	2.2	2.1/09.3	28611
1991 GY ₄	1998 06 06.1	16 55.96	-23 45.6	16.9	-1.09	+	0.3	0.5/06.2	32047	1997 GV ₁₈	1998 06 08.9	17 07.53	-18 36.7	18.6	-0.78	+	1.5	1.2/08.5	30788
1981 EN ₄	1998 06 06.1	16 56.10	-21 53.4	17.3	-0.84	+	3.8	0.2/06.0	32042	1992 WO ₅	1998 06 08.9	17 07.60	-20 22.0	16.2	-1.07	-	0.5	1.1/08.8	29661
1979 QR ₂	1998 06 06.2	16 56.42	-24 10.3	18.3	-0.89	+	1.4	0.5/06.4	29653	1995 SS ₅₂	1998 06 09.0	17 08.05	-28 13.4	18.9	-1.04	+	0.6	2.1/09.4	31107
1993 BT ₂	1998 06 06.2	16 56.71	-31 21.2	16.3	-1.07	+	2.4	3.5/07.2	29661	1991 VO ₇	1998 06 09.0	17 08.06	-20 17.3	19.7	-0.96	+	0.8	0.9/08.9	29943
2280 T-2	1998 06 06.3	16 56.91	-16 56.6	16.9	-1.08	+	2.0	2.6/05.8	32092	1991 PE ₃	1998 06 09.0	17 08.07	-20 04.0	17.7	-1.04	+	0.5	1.0/08.9	31417
6703 P-L	1998 06 06.3	16 57.11	-16 04.5	18.6	-0.92	+	1.5	2.5/05.8	29141	4195 T-3	1998 06 09.1	17 08.28	+02 06.8	16.6	-0.89	+	3.6	11.6/06.0	32093
1997 CB	1998 06 06.4	16 57.14	-02 00.2	17.3	-1.02	+	2.1	9.2/03.8	32057	3247 T-3	1998 06 09.1	17 08.30	-16 50.1	18.5	-0.99	+	1.7	3.0/08.6	29131
1995 SZ ₃	1998 06 06.5	16 57.87	-14 25.7	17.7	-1.05	+	3.5	3.3/05.6	32053	1994 PO ₁₈	1998 06 09.2	17 08.72	-19 29.3	18.1	-0.87	+	1.0	1.1/08.9	31239
1997 AM ₁₉	1998 06 06.5	16 57.96	-17 10.3	16.5	-1.03	+	1.0	2.5/06.1	32057	1990 RA ₃	1998 06 09.3	17 09.56	-22 11.9	17.6	-0.95	+	1.5	0.3/09.3	29658
1996 XW ₃₀	1998 06 06.5	16 57.97	-23 28.7	15.9	-1.06	+	4.7	0.4/06.7	32056	1989 GM	1998 06 09.3	17 09.60	-02 23.2	16.4	-0.94	-	7.0	9.2/09.9	32045
1996 XW ₁₉	1998 06 06.6	16 58.08	-23 12.9	16.7	-1.07	+	4.1	0.2/06.7	29320	1995 SG ₄	1998 06 09.4	17 09.59	-54 19.7	18.1	-1.70	+	5.4	13.7/12.8	29623
4024 P-L	1998 06 06.6	16 58.30	-25 11.8	16.6	-0.99	+	2.4	1.0/06.9	23531	1991 SZ	1998 06 09.4	17 09.98	-28 54.4	17.3	-1.12	-	3.1	2.8/09.6	31955
1981 ER ₁₂	1998 06 06.6	16 58.43	-39 50.3	18.6	-1.01	+	1.6	6.0/08.4	26917	1975 YD	1998 06 09.6	17 10.46	-11 16.6	17.5	-0.92	+	3.4	3.7/08.4	29652
1964 YJ	1998 06 06.7	16 58.37	-10 58.9	16.7	-0.85	-	1.3	3.9/06.0	32041	1992 UH ₆	1998 06 09.6	17 10.62	-25 46.2	15.8	-1.21	-	2.3	1.3/09.7	29661

1994 PC ₁₄	1998 06 09.6	17 10.81	-23 57.8	17.2	-0.91	+	1.3	0.4/09.8	25651	1988 RH ₁₁	1998 06 11.8	17 19.71	-20 46.2	19.8	-0.56	+	0.6	0.5/11.7	15713
1988 CW ₂	1998 06 09.7	17 11.20	-22 27.3	17.9	-0.96	+	0.8	0.2/09.8	26924	1993 DD ₂	1998 06 11.9	17 19.94	-44 41.9	16.5	-1.27	-	1.2	7.8/12.6	30291
1993 FV ₁₁	1998 06 09.7	17 11.22	-20 52.5	17.0	-0.97	+	0.2	0.7/09.7	29103	1981 EA ₁₉	1998 06 11.9	17 20.02	-27 00.8	18.8	-1.05	+	0.7	1.4/12.1	26188
1984 SE ₆	1998 06 09.8	17 11.52	-29 07.2	15.5	-1.11	+	0.1	3.0/10.2	26188	4193 T-1	1998 06 11.9	17 20.28	-20 19.7	18.7	-1.04	+	0.3	1.0/11.8	22432
1991 RM ₁₅	1998 06 09.8	17 11.55	-26 15.4	16.7	-1.03	+	2.0	1.7/10.1	32047	4573 P-L	1998 06 11.9	17 20.29	-34 57.3	18.9	-0.93	-	0.3	3.5/12.5	30681
1988 RF ₄	1998 06 09.8	17 11.60	-32 22.3	17.0	-1.15	+	1.0	4.7/10.5	29656	1995 YB ₃	1998 06 12.0	17 20.37	-22 06.8	18.0	-0.83	+	0.3	0.3/12.0	29946
1985 RA ₄	1998 06 09.9	17 12.05	-35 08.6	16.8	-1.04	+	0.8	4.9/10.8	29940	1991 AH ₂	1998 06 12.0	17 20.48	-02 10.7	16.1	-0.93	-	4.3	8.1/11.9	31952
(7691)	1998 06 09.9	17 12.08	-25 06.1	17.7	-1.09	+	0.2	0.8/10.1	29909	1997 BR ₆	1998 06 12.0	17 20.55	-30 46.0	17.5	-1.16	+	1.4	2.9/12.5	30786
1991 RJ ₂₀	1998 06 09.9	17 12.08	-18 43.7	18.3	-1.07	+	0.6	1.8/09.7	26758	1991 VP ₁₂	1998 06 12.1	17 20.73	-24 24.2	17.5	-1.02	-	2.0	0.6/12.1	29615
1997 CC ₆	1998 06 10.0	17 12.41	-14 32.0	20.9	-0.85	-	0.2	2.5/09.6	30786	1996 XD ₁₉	1998 06 12.1	17 21.01	-18 40.9	16.0	-1.01	+	2.4	1.8/11.8	29632
1994 WH ₃	1998 06 10.1	17 12.79	-21 28.1	17.0	-0.84	+	0.6	0.5/10.1	29945	1986 RP ₂	1998 06 12.2	17 21.36	-04 31.0	17.0	-0.94	-	0.7	7.4/11.3	32044
1994 FY	1998 06 10.2	17 12.85	-36 25.6	16.4	-1.27	-	3.5	5.9/10.4	29619	1995 UJ ₂	1998 06 12.2	17 21.36	-28 28.0	17.5	-1.16	+	0.3	2.2/12.5	29665
1995 XT	1998 06 10.2	17 13.01	-21 04.5	17.2	-0.83	+	0.5	0.6/10.1	32054	1979 MM ₃	1998 06 12.3	17 21.91	-05 46.5	18.3	-0.88	-	2.9	5.8/12.1	30867
1994 UZ ₁₂	1998 06 10.2	17 13.16	-16 21.8	17.7	-0.81	+	0.1	2.0/09.8	27731	3040 P-L	1998 06 12.3	17 22.04	-29 22.6	17.0	-1.06	+	3.9	2.5/12.9	32091
1992 ED ₈	1998 06 10.2	17 13.17	-25 15.9	17.3	-0.91	+	1.1	0.8/10.4	25650	5191 T-3	1998 06 12.4	17 21.99	-08 57.2	17.6	-0.54	-	0.3	3.0/11.6	32093
1995 UB ₁₃	1998 06 10.2	17 13.29	-39 02.7	17.4	-1.12	-	3.3	8.3/10.6	26760	1981 EN ₁₃	1998 06 12.4	17 22.10	-23 09.0	16.1	-1.11	+	3.6	0.0/12.4	27303
1994 PP	1998 06 10.3	17 13.40	-65 39.6	17.1	-2.07	+	3.8	13.8/13.7	27937	1987 RG ₁	1998 06 12.4	17 22.23	-25 24.2	15.9	-1.07	+	0.9	1.0/12.6	30446
1991 GW ₁	1998 06 10.3	17 13.45	+07 40.5	16.5	-1.00	+	11.7	14.5/04.3	30781	(7479)	1998 06 12.5	17 22.58	-14 37.4	16.6	-1.06	+	0.2	3.6/12.2	29084
1988 RT ₁₂	1998 06 10.3	17 13.57	-15 48.3	19.1	-0.55	+	1.1	1.5/09.8	30090	1995 UW ₂	1998 06 12.5	17 22.61	-23 08.9	18.3	-1.06	+	1.5	0.0/12.5	29304
1990 AD	1998 06 10.3	17 13.61	-14 25.3	16.7	-0.82	-	1.7	2.4/10.0	32045	1981 EV ₁₂	1998 06 12.7	17 23.37	-35 23.2	18.1	-0.97	+	1.3	3.8/13.5	28838
1981 EF ₄₄	1998 06 10.4	17 14.10	-29 39.1	18.0	-0.90	+	1.4	2.5/11.0	26923	1981 EP ₃₈	1998 06 12.7	17 23.55	-08 44.4	19.4	-0.80	+	1.9	4.7/11.7	30287
1995 YZ ₁	1998 06 10.5	17 14.12	-32 33.9	18.9	-0.96	+	0.3	2.8/11.1	30784	4037 P-L	1998 06 12.8	17 23.95	-34 35.9	17.3	-1.21	+	0.6	4.6/13.4	28892
1980 DN	1998 06 10.7	17 15.03	-13 32.1	16.7	-0.82	-	0.7	3.2/10.3	32042	1991 VV ₁	1998 06 12.9	17 24.20	-10 32.0	16.9	-1.01	+	7.1	5.4/11.2	32048
1988 VL ₂	1998 06 10.8	17 15.49	-16 18.2	16.4	-1.00	+	4.6	2.6/10.1	30652	1997 BM ₈	1998 06 13.0	17 24.54	-29 14.4	16.6	-1.17	+	2.7	2.9/13.4	31113
1991 TX	1998 06 10.8	17 15.50	-25 19.0	17.0	-1.39	-	10.3	1.0/10.7	26399	1981 EF ₄₈	1998 06 13.0	17 24.76	-21 47.8	18.3	-0.70	+	0.8	0.4/13.0	21968
1991 UB ₄	1998 06 10.8	17 15.79	-17 24.0	16.2	-0.94	+	1.4	2.1/10.5	29099	1990 SY ₃	1998 06 13.2	17 25.29	-27 19.8	16.4	-1.04	+	4.8	1.6/13.6	26560
1989 UC ₅	1998 06 10.9	17 15.74	-14 33.0	20.4	-0.52	+	1.2	1.6/10.2	18118	1991 PZ ₁₂	1998 06 13.2	17 25.33	-31 00.6	17.5	-1.12	+	1.7	3.0/13.7	29942
1981 ED ₉	1998 06 10.9	17 15.89	-22 34.3	18.8	-1.13	+	3.1	0.2/10.9	26916	1990 QR ₉	1998 06 13.2	17 25.41	-17 37.0	17.7	-0.96	+	0.3	2.2/13.0	26757
1981 EL ₅	1998 06 10.9	17 15.93	-19 50.7	18.6	-0.84	+	3.1	1.0/10.6	25078	1996 AB	1998 06 13.2	17 25.47	-25 19.6	17.5	-0.83	+	1.1	0.6/13.4	26761
4764 P-L	1998 06 11.0	17 16.18	-19 42.8	17.7	-0.89	+	0.7	1.2/10.8	29668	1987 QF ₃	1998 06 13.2	17 25.58	-15 16.5	16.6	-0.98	-	0.9	3.6/13.0	32044
1991 UY ₃	1998 06 11.0	17 16.32	-18 58.0	18.7	-1.02	+	2.0	1.5/10.7	26420	1991 VD ₁	1998 06 13.2	17 25.66	-43 08.4	17.3	-1.30	-	3.2	7.4/13.2	31584
1981 EF ₂₁	1998 06 11.0	17 16.56	-07 21.8	19.3	-0.91	+	0.8	6.3/10.1	25972	1994 PJ ₂₀	1998 06 13.3	17 25.86	-23 20.6	17.4	-0.92	+	1.1	0.0/13.3	29663
1993 FO ₄	1998 06 11.1	17 16.89	-04 43.8	17.7	-0.88	+	0.9	6.4/10.0	23521	1997 AQ ₂₂	1998 06 13.3	17 25.92	-14 02.5	16.7	-0.91	-	2.5	3.7/13.3	32057
1995 OA	1998 06 11.1	17 17.01	-25 43.7	17.6	-1.10	+	3.5	1.1/11.4	29664	1978 ST ₇	1998 06 13.3	17 26.09	-31 16.2	16.9	-1.17	+	2.0	3.2/13.9	29652
1997 AA ₂	1998 06 11.2	17 17.14	-26 38.8	16.9	-1.01	+	0.4	1.3/11.4	29141	9565 P-L	1998 06 13.4	17 26.10	-16 26.1	17.0	-1.05	-	0.2	3.1/13.1	29668
4240 T-2	1998 06 11.2	17 17.25	-22 33.5	17.9	-1.08	-	0.1	0.2/11.2	30095	1997 CK ₂₂	1998 06 13.4	17 26.14	-03 54.8	18.7	-0.88	-	1.0	6.6/12.9	32058
(7701)	1998 06 11.3	17 17.50	-27 33.4	18.2	-1.03	+	0.4	1.6/11.6	30069	(8328)	1998 06 13.4	17 26.15	-14 32.5	17.4	-1.04	-	0.6	4.0/13.1	31349
1993 FX ₃₇	1998 06 11.3	17 17.71	-25 56.4	15.6	-0.99	-	0.1	1.1/11.5	23527	1997 CB ₁₃	1998 06 13.4	17 26.41	-17 02.9	16.7	-1.06	-	1.0	3.2/13.3	32058
1996 AH ₁	1998 06 11.3	17 17.71	-34 22.1	19.3	-0.90	+	2.4	3.1/12.3	30784	1992 UY ₂	1998 06 13.4	17 26.43	-16 06.7	17.5	-1.04	+	2.1	2.9/13.0	30290
1990 OY ₁	1998 06 11.4	17 17.87	-24 29.3	15.6	-0.98	-	2.8	0.7/11.4	32046	1996 XT ₁₄	1998 06 13.4	17 26.60	-21 52.7	17.7	-1.66	-	19.7	0.7/13.7	31979
1981 DA ₃	1998 06 11.4	17 17.99	-26 10.6	19.8	-0.73	+	2.0	0.8/11.7	26914	(7441)	1998 06 13.5	17 26.54	-14 42.5	17.7	-1.01	+	1.7	3.9/13.0	28836
(7552)	1998 06 11.4	17 18.09	-17 32.5	19.1	-0.96	+	0.7	2.1/11.1	29589	1995 VN	1998 06 13.5	17 26.60	-19 40.2	18.2	-1.05	+	1.1	1.4/13.3	29319
1995 WE ₆	1998 06 11.4	17 18.12	-26 10.3	18.5	-1.10	+	0.6	1.2/11.6	29665	1990 QW ₉	1998 06 13.5	17 26.63	+00 51.7	15.9	-0.70	+	1.0	12.7/11.6	32046
(7670)	1998 06 11.4	17 18.19	-18 56.2	19.4	-1.03	+	0.8	1.5/11.2	29904	1981 EG ₃	1998 06 13.5	17 26.70	-25 23.0	17.9	-0.89	+	3.4	0.7/13.7	26915
4090 P-L	1998 06 11.5	17 18.23	-29 38.1	18.8	-0.88	+	1.0	1.9/11.9	30774	4210 T-2	1998 06 13.6	17 27.06	-15 46.6	17.8	-0.93	-	0.3	2.9/13.4	32093
1986 GD	1998 06 11.5	17 18.57	-30 23.7	17.1	-1.16	-	1.4	3.0/11.8	22271	1994 PX	1998 06 13.7	17 27.72	-03 06.7	17.4	-0.86	-	0.2	7.4/12.8	30092
1988 VA ₅	1998 06 11.5	17 18.59	-25 34.7	17.0	-1.15	+	0.3	1.1/11.7	26579	1991 VL ₆	1998 06 13.7	17 27.78	-06 12.4	18.2	-0.91	+	3.1	5.9/12.4	28316
1981 EC ₁₀	1998 06 11.6	17 19.05	-14 37.7	17.6	-0.81	+	2.6	3.2/11.0	32042	1981 EL ₂₀	1998 06 13.8	17 27.99	-37 30.0	17.9	-1.00	+	1.0	5.2/14.6	29132
(7682)	1998 06 11.6	17 19.05	-31 43.2	18.5	-1.03	+	0.6	2.8/12.2	29907	1993 FE ₅₉	1998 06 13.8	17 28.11	-41 40.8	16.4	-1.31	-	1.5	8.1/13.8	29662
1997 GO ₂₄	1998 06 11.7	17 19.41	-12 39.4	17.5	-0.55	+	2.2	2.2/10.8	32058	1978 VB ₃	1998 06 13.8	17 28.12	-31 37.3	16.6	-0.97	-	2.8	2.8/13.9	27302
1990 QX ₅	1998 06 11.8	17 19.61	-39 43.9	18.6	-1.15	+	1.4	5.3/12.8	25649	1981 EG ₁₂	1998 06 13.8	17 28.25	-14 21.9	17.6	-0.91	+	3.7	4.0/13.2	32042

2664 T-3	1998 06 13.9	17 28.24	-27 10.8	19.0	-1.10	+	0.7	1.5/14.1	29949	1993 RX ₃	1998 06 17.0	17 41.19	-33 06.1	15.3	-0.94	+	4.3	3.2/17.8	26759
1992 RH ₇	1998 06 13.9	17 28.32	-29 21.0	17.4	-1.19	-	0.6	2.6/14.1	30290	1978 SS ₅	1998 06 17.0	17 41.47	-19 00.3	17.2	-0.98	+	0.9	1.7/16.9	23535
1981 EC ₃₂	1998 06 13.9	17 28.36	-22 52.0	18.0	-0.87	+	3.1	7.4/25.0	26921	1982 BU	1998 06 17.1	17 41.50	-10 36.5	17.0	-1.11	-	6.8	4.5/17.8	32043
1994 PQ ₁	1998 06 14.0	17 29.05	-25 31.6	17.4	-1.41	-	14.2	1.0/13.8	25083	1992 RX	1998 06 17.1	17 41.74	-31 26.7	15.5	-1.10	-	1.1	4.3/17.2	29136
1995 UK ₆	1998 06 14.1	17 29.24	-26 25.4	17.4	-1.12	+	0.8	1.3/14.3	30093	1997 BN ₉	1998 06 17.1	17 41.82	-10 38.2	18.6	-0.82	+	1.5	4.0/16.6	29927
1991 VE ₃	1998 06 14.1	17 29.31	-19 19.9	18.5	-0.98	-	0.1	1.3/14.0	25959	1994 CS ₈	1998 06 17.1	17 41.86	-18 31.7	16.9	-0.54	-	0.3	0.9/17.1	32051
1989 CQ ₂	1998 06 14.1	17 29.32	-09 15.0	18.5	-0.69	+	1.1	3.7/13.3	24912	1994 WG	1998 06 17.2	17 42.05	-18 20.9	16.9	-0.79	+	3.2	1.5/16.9	28318
1995 UU ₃	1998 06 14.3	17 29.87	-28 02.5	18.5	-0.98	+	0.1	1.5/14.5	30665	(7697)	1998 06 17.3	17 42.52	-25 18.3	17.6	-1.07	+	1.1	0.7/17.4	30068
1993 NS ₁	1998 06 14.3	17 30.28	-16 13.2	18.2	-0.85	-	0.8	2.1/14.2	24232	1981 EC ₁₅	1998 06 17.4	17 42.91	-32 07.5	19.3	-1.11	+	1.4	3.5/17.8	22429
1995 YN	1998 06 14.3	17 30.29	-15 46.5	16.6	-0.87	-	3.0	2.3/14.4	26907	4359 T-3	1998 06 17.4	17 43.07	-26 28.1	18.3	-1.01	-	2.1	1.2/17.5	27929
4087 P-L	1998 06 14.4	17 30.25	-26 37.0	18.1	-1.06	+	0.6	1.3/14.5	31436	1991 RA ₄	1998 06 17.6	17 43.88	-12 08.9	17.0	-0.93	+	3.1	5.1/17.0	32047
1994 PL ₂₂	1998 06 14.4	17 30.41	-19 47.9	17.9	-0.87	+	0.5	1.1/14.3	30453	1981 EP ₂	1998 06 17.6	17 43.92	-05 04.9	17.2	-0.81	+	3.6	6.3/16.3	26915
1981 EC ₇	1998 06 14.4	17 30.62	-30 39.3	19.1	-0.75	+	1.5	1.9/14.9	26916	4122 T-3	1998 06 17.8	17 44.38	-23 05.3	19.9	-1.07	-	0.7	0.1/17.8	29131
1981 EU ₁₂	1998 06 14.4	17 30.69	-20 38.7	19.1	-0.99	+	1.7	1.0/14.3	26917	1995 XB ₂	1998 06 17.8	17 44.55	-25 52.2	16.5	-1.08	-	0.5	1.1/17.9	32054
1220 T-1	1998 06 14.6	17 31.10	-24 21.3	17.0	-1.07	+	1.3	0.4/14.7	28892	1981 EJ ₂₁	1998 06 17.8	17 44.66	-10 24.5	19.4	-0.67	-	0.2	3.5/17.7	26919
1994 FB	1998 06 14.6	17 31.14	-19 30.8	17.2	-1.09	+	1.2	1.6/14.4	30291	1986 WZ	1998 06 17.9	17 45.01	-22 38.9	17.1	-0.96	+	1.2	0.3/17.9	20924
1988 UP	1998 06 14.6	17 31.49	-22 56.3	15.8	-0.87	-	0.2	0.1/14.7	22080	1993 OR ₅	1998 06 17.9	17 45.03	-22 05.6	16.8	-0.85	+	0.3	0.4/17.9	27916
2610 T-3	1998 06 14.6	17 31.49	-25 48.0	17.8	-1.09	+	1.3	1.1/14.8	22088	2064 P-L	1998 06 17.9	17 45.07	-26 08.8	18.0	-0.85	+	1.0	0.8/18.0	24409
1981 EZ ₅	1998 06 14.7	17 31.63	-20 30.4	20.0	-0.70	+	1.8	0.7/14.6	26915	(7589)	1998 06 18.0	17 45.36	-27 18.5	17.3	-1.15	+	2.4	1.5/18.2	29598
1990 TZ ₁	1998 06 14.7	17 32.00	-24 15.5	16.6	-0.96	+	1.4	0.4/14.8	26757	(7352)	1998 06 18.0	17 45.47	-16 16.8	15.7	-0.55	-	0.5	1.4/18.0	28818
2166 T-1	1998 06 14.8	17 32.13	-31 36.4	17.3	-1.25	-	0.9	3.6/15.0	25436	1993 NZ ₁	1998 06 18.0	17 45.47	-29 14.2	17.5	-0.90	+	2.1	1.7/18.3	26564
1981 EV ₁₄	1998 06 14.9	17 32.66	-27 38.7	18.2	-0.90	+	1.9	1.6/15.2	29608	1997 AK ₁	1998 06 18.0	17 45.48	-22 59.9	16.8	-1.12	-	2.0	0.2/18.1	32057
1995 QA ₃	1998 06 15.0	17 33.12	-37 04.2	15.9	-1.21	+	1.3	6.5/15.7	26176	1978 VW ₂	1998 06 18.0	17 45.53	-21 34.2	18.8	-0.82	0.0	0.5/18.0	30684	
1994 WO ₄	1998 06 15.1	17 33.32	-14 30.7	19.2	-0.83	-	0.4	3.0/14.9	26567	1981 EA ₁₈	1998 06 18.0	17 45.59	-06 40.2	19.1	-0.79	0.0	5.3/17.8	26918	
(7606)	1998 06 15.1	17 33.33	-26 01.0	17.9	-1.06	0.0	1.0/15.2	29602	1994 EQ ₁	1998 06 18.1	17 46.07	-16 58.8	17.1	-1.07	+	0.3	2.6/18.1	29662	
1988 RW ₁₀	1998 06 15.1	17 33.65	-23 57.1	18.7	-0.88	+	0.6	0.2/15.2	22825	(7374)	1998 06 18.2	17 46.05	-28 43.3	18.9	-1.04	+	0.8	1.7/18.4	28820
1979 XJ	1998 06 15.2	17 33.66	-18 34.3	16.9	-1.16	-	2.7	2.3/15.2	32042	1168 T-3	1998 06 18.2	17 46.14	-43 27.8	18.8	-1.20	+	0.1	6.7/18.4	18134
1987 DM ₆	1998 06 15.3	17 34.45	-17 13.3	17.7	-1.07	+	1.1	2.4/15.1	29940	3090 P-L	1998 06 18.2	17 46.27	-12 08.8	19.0	-0.77	+	2.2	3.0/17.7	30466
6772 P-L	1998 06 15.4	17 34.45	-19 16.6	18.6	-1.01	+	0.5	1.6/15.3	30095	1995 XJ	1998 06 18.3	17 46.46	-24 48.7	18.2	-0.95	-	2.3	0.5/18.3	29946
(7513)	1998 06 15.5	17 34.93	-27 36.8	17.3	-1.18	0.0	1.8/15.6	29289	1981 ES ₁₂	1998 06 18.3	17 46.54	-05 39.3	19.0	-0.78	+	1.6	5.2/17.6	30287	
1981 ER ₂₄	1998 06 15.5	17 35.05	-20 18.5	17.8	-1.05	+	1.4	1.5/15.4	22697	1994 NC	1998 06 18.3	17 46.93	-05 41.1	17.4	-0.88	-	0.1	5.9/18.0	32051
6303 P-L	1998 06 15.6	17 35.48	-19 52.8	17.4	-0.89	+	0.6	1.2/15.5	24764	1991 TY	1998 06 18.4	17 47.19	+03 19.6	18.3	-1.09	-	6.0	11.2/19.0	22594
3099 T-1	1998 06 15.6	17 35.59	-32 09.4	17.6	-1.23	+	1.3	3.6/16.0	28892	1993 FH ₃₆	1998 06 18.4	17 47.23	-09 14.3	16.4	-0.93	+	0.7	5.2/18.0	30659
2145 T-2	1998 06 15.6	17 35.62	-03 04.6	18.6	-0.89	+	2.0	7.2/14.3	29669	1988 QY	1998 06 18.5	17 47.44	+03 43.8	17.4	-0.55	+	2.7	5.5/16.8	30090
1971 UT ₁	1998 06 15.7	17 36.03	-19 48.3	17.1	-0.86	+	0.6	1.2/15.6	22696	1991 NV ₁	1998 06 18.5	17 47.77	-20 55.1	16.5	-1.06	+	2.9	1.0/18.5	32047
4004 P-L	1998 06 15.8	17 36.28	-31 51.2	17.4	-1.04	+	0.9	3.3/16.2	31824	1989 BE ₁	1998 06 18.6	17 47.85	-21 08.6	17.2	-1.02	-	0.9	0.8/18.6	32045
1995 UY ₁	1998 06 15.9	17 36.48	-29 32.5	18.2	-1.02	+	1.4	2.3/16.2	29946	1978 VW ₈	1998 06 18.7	17 48.29	-23 46.1	17.8	-0.85	-	0.3	0.1/18.7	28882
2058 P-L	1998 06 15.9	17 36.91	-24 08.3	17.1	-0.97	+	1.4	0.3/16.0	29668	1992 SU ₂₁	1998 06 18.7	17 48.45	-31 36.1	18.5	-0.71	-	0.1	1.7/18.9	27455
1991 EA ₄	1998 06 16.0	17 37.12	-24 09.6	18.3	-0.84	+	0.5	0.2/16.1	30781	1995 FW	1998 06 18.7	17 48.65	-61 26.6	18.8	-2.10	+	3.7	19.4/22.4	30783
2304 T-2	1998 06 16.0	17 37.30	-25 54.9	19.5	-0.88	0.0	0.8/16.2	29669	1997 FC	1998 06 18.8	17 48.59	-11 02.5	16.5	-0.84	-	2.7	4.4/19.1	32058	
4138 T-3	1998 06 16.1	17 37.58	-44 15.9	18.3	-1.09	-	2.2	5.9/16.0	31411	1993 SQ ₁₄	1998 06 18.9	17 48.97	+01 03.1	17.4	-1.22	+12.0	11.8/15.0	25642	
(8950)	1998 06 16.1	17 37.78	-31 53.4	16.4	-0.92	-	0.9	2.6/16.3	31934	(8951)	1998 06 18.9	17 49.07	-34 34.4	15.9	-0.98	-	2.0	3.8/18.8	31935
1995 XH	1998 06 16.2	17 37.96	-26 48.0	16.7	-0.97	-	0.8	1.3/16.3	29665	1995 VH ₂	1998 06 19.0	17 49.61	-18 58.0	17.8	-1.07	-	0.2	1.9/19.0	26582
1194 T-3	1998 06 16.2	17 38.24	-31 54.3	16.8	-1.13	+	2.9	4.0/16.8	29669	1995 UK ₄₄	1998 06 19.0	17 49.77	-21 08.5	16.4	-1.07	+	3.5	1.0/19.0	29665
1988 PV ₁	1998 06 16.3	17 38.32	-26 41.4	17.1	-1.15	+	2.5	1.5/16.5	22079	3164 T-3	1998 06 19.0	17 49.79	-04 14.8	17.5	-0.88	+	1.9	6.9/18.2	32093
2129 P-L	1998 06 16.4	17 38.83	-15 19.7	18.5	-0.98	+	1.4	3.1/16.1	29321	1997 AF ₈	1998 06 19.1	17 49.93	-23 51.8	19.8	-0.91	+	1.1	0.2/19.1	30786
1981 DG ₂	1998 06 16.5	17 39.41	-12 11.3	17.3	-0.83	+	3.3	4.1/15.8	29653	1503 T-2	1998 06 19.1	17 50.10	-20 46.4	20.1	-1.04	+	0.7	1.0/19.1	29668
3178 T-1	1998 06 16.6	17 39.43	-27 52.9	17.5	-1.01	-	0.3	2.2/16.7	29321	1990 EL ₈	19								

1995 CS ₁	1998 06 19.3	17 50.90 +24 28.0 18.0	-0.99 + 6.8	25.8/10.2	32052	1991 UD ₃	1998 06 22.4	18 03.52 -14 10.3 18.4	-0.94 + 0.8	3.0/22.3	30290
(8384)	1998 06 19.4	17 51.48 -14 32.9 17.4	-1.03 - 1.1	3.6/19.5	31362	1974 XW	1998 06 22.5	18 04.21 -24 49.9 17.2	-0.98 - 1.3	0.5/22.5	30089
1996 XQ ₅	1998 06 19.6	17 52.00 -24 27.2 17.2	-1.16 - 1.0	0.4/19.6	29140	1995 SU ₃	1998 06 22.5	18 04.22 -36 07.3 15.4	-1.08 + 2.9	7.0/22.9	28858
1991 SE ₂	1998 06 19.6	17 52.10 -18 23.4 16.0	-0.95 + 0.2	2.7/19.6	23517	1979 MM ₈	1998 06 22.5	18 04.30 -16 52.1 17.1	-0.98 0.0	2.9/22.6	29315
1997 CT ₅	1998 06 19.6	17 52.24 -33 32.1 17.0	-1.22 + 1.9	4.3/20.0	30786	1979 MF ₅	1998 06 22.6	18 04.54 -25 09.9 18.1	-0.94 + 1.8	0.6/22.7	30778
1993 FL ₄	1998 06 19.7	17 52.40 -20 50.7 17.3	-0.99 - 0.2	0.9/19.7	31139	1990 TV ₁₂	1998 06 22.6	18 04.66 -08 27.1 17.4	-0.55 + 2.3	3.0/22.2	30470
2372 T-3	1998 06 19.8	17 52.76 -21 32.7 17.0	-0.84 + 1.9	0.8/19.7	32093	1997 EM ₂₈	1998 06 22.8	18 05.65 -24 54.2 20.5	-0.86 - 0.2	0.5/22.9	29929
(7540)	1998 06 19.8	17 53.16 -16 30.9 16.6	-0.99 + 1.5	2.8/19.7	29296	1996 XT ₁₉	1998 06 22.9	18 05.62 -21 45.7 16.8	-1.13 + 0.8	0.8/22.9	28873
2103 P-L	1998 06 20.0	17 53.93 -19 25.8 16.9	-0.94 + 1.0	1.7/20.0	29668	1997 AQ ₆	1998 06 22.9	18 05.79 -44 49.8 16.3	-1.97 -18.1	11.1/18.9	32057
1993 FT ₁₄	1998 06 20.0	17 54.01 -17 48.0 18.3	-0.95 - 0.9	1.8/20.1	31419	1992 UT ₃	1998 06 22.9	18 05.99 -28 57.5 16.8	-1.16 - 2.2	2.2/22.8	29661
1981 EH ₂₇	1998 06 20.1	17 54.21 -45 55.5 18.2	-1.29 + 0.4	8.6/20.6	26920	1990 DU ₄	1998 06 23.0	18 06.11 -19 12.7 17.6	-1.05 - 0.1	1.6/23.1	29096
1997 FK ₄	1998 06 20.1	17 54.44 -36 15.7 18.0	-1.05 - 0.2	4.1/20.2	30766	1991 PY ₂	1998 06 23.0	18 06.25 -35 47.8 17.0	-1.21 + 2.1	4.8/23.3	30289
1994 KA	1998 06 20.2	17 54.56 -41 22.6 14.2	-1.51 -21.5	9.3/16.0	32051	1988 RL ₁₃	1998 06 23.0	18 06.39 -34 12.0 19.2	-0.65 - 1.7	2.2/22.7	30469
1996 AE ₄	1998 06 20.2	17 54.84 -20 30.6 17.6	-0.80 - 0.1	0.8/20.3	29666	1995 UN ₁₅	1998 06 23.1	18 06.71 -31 09.5 17.5	-0.97 - 7.0	4.1/22.4	30784
1995 SR ₃	1998 06 20.3	17 54.90 -33 52.8 15.7	-1.22 + 1.6	5.0/20.5	29318	1991 PB	1998 06 23.2	18 06.95 -18 51.4 15.1	-1.01 - 0.9	2.4/23.3	31006
1995 SV ₅₀	1998 06 20.3	17 54.97 -26 50.8 19.6	-1.13 + 0.1	1.4/20.4	31241	2035 T-3	1998 06 23.2	18 06.99 -31 09.5 18.3	-0.64 + 0.2	1.7/23.2	22432
1994 PK ₄	1998 06 20.3	17 55.10 -27 40.4 17.4	-0.97 + 0.6	1.8/20.4	30662	1991 LF ₁	1998 06 23.3	18 07.27 -23 56.3 16.6	-1.13 - 3.0	0.2/23.3	25974
1996 YO	1998 06 20.4	17 55.26 -22 23.2 17.6	-1.15 + 1.1	0.5/20.4	29141	1985 UK ₃	1998 06 23.3	18 07.42 -30 58.4 15.2	-1.10 - 2.9	3.9/23.0	30288
1981 EL ₁₃	1998 06 20.4	17 55.55 -10 07.6 18.7	-0.82 + 1.4	4.5/20.1	30779	1997 GB ₃₅	1998 06 23.3	18 07.47 -41 50.6 17.8	-1.01 - 0.5	5.6/23.0	29935
1995 YJ ₁	1998 06 20.5	17 56.02 -20 30.4 16.8	-0.89 - 0.6	1.0/20.6	28890	1988 BC ₄	1998 06 23.3	18 07.55 -19 39.3 17.5	-0.95 - 0.2	1.3/23.4	30686
1997 CR ₁₉	1998 06 20.6	17 56.11 -33 50.4 16.4	-1.05 - 0.7	3.7/20.6	30461	9586 P-L	1998 06 23.4	18 07.85 -17 23.3 17.7	-0.82 - 1.3	1.9/23.6	29649
1996 XD ₃	1998 06 20.7	17 56.46 -20 40.2 17.6	-1.07 - 0.9	1.3/20.7	28871	1981 EV ₂₁	1998 06 23.4	18 08.05 -38 30.6 19.4	-1.01 0.0	4.5/23.3	26919
(7493)	1998 06 20.8	17 57.11 -23 00.8 17.1	-0.99 + 1.7	0.2/20.8	29088	1997 BO ₃	1998 06 23.4	18 08.06 -24 18.5 16.8	-1.02 - 1.5	0.3/23.4	29667
3256 T-2	1998 06 20.8	17 57.18 -27 14.9 18.1	-1.06 - 1.3	1.8/20.8	29130	1992 WS ₃	1998 06 23.5	18 08.48 -25 51.5 17.7	-1.09 + 0.3	0.9/23.6	29943
1985 VE	1998 06 20.8	17 57.20 -15 26.4 16.5	-1.04 - 0.6	3.3/20.9	29655	1980 UW ₁	1998 06 23.6	18 08.62 -25 19.3 17.3	-1.09 + 0.5	0.9/23.6	21966
1992 BJ ₁	1998 06 21.0	17 58.04 -24 33.0 18.5	-0.95 - 0.8	0.3/21.1	31006	1981 DN ₂	1998 06 23.6	18 08.71 -15 55.2 18.4	-0.85 + 2.2	2.4/23.5	29093
1992 WV ₃	1998 06 21.0	17 58.14 -32 10.4 16.8	-1.18 - 0.5	3.5/21.0	28887	1977 ER ₅	1998 06 23.6	18 08.77 -23 18.6 17.4	-0.90 0.0	0.0/23.7	30684
1997 CN ₁₃	1998 06 21.2	17 58.68 -12 22.8 16.6	-0.97 - 3.6	5.4/21.7	32058	1997 CL ₁₃	1998 06 23.6	18 09.01 -13 55.1 18.6	-0.94 - 1.9	3.3/24.0	29927
1981 EH ₂	1998 06 21.2	17 58.70 -12 44.3 19.8	-0.81 + 1.5	3.2/21.0	30779	1995 YC ₁	1998 06 23.7	18 09.16 -15 26.8 17.0	-0.88 - 5.5	2.8/24.4	30093
1984 CE	1998 06 21.2	17 58.93 -17 05.7 16.9	-1.01 - 3.6	2.2/21.5	26738	1992 SB ₁₃	1998 06 23.8	18 09.63 -27 45.3 16.3	-1.15 - 1.3	1.8/23.7	28848
4517 P-L	1998 06 21.3	17 59.12 -36 41.3 15.7	-1.21 - 1.5	6.5/21.0	29948	1997 GX ₇	1998 06 23.9	18 09.93 -22 55.3 18.9	-0.82 - 0.6	6.0/24.0	30766
1997 HE ₁₄	1998 06 21.3	17 59.14 -24 45.1 16.9	-0.92 + 0.3	0.5/21.3	31010	1992 EM ₈	1998 06 23.9	18 10.01 -20 02.4 17.9	-0.94 - 2.2	1.2/24.0	29135
1979 QM ₁	1998 06 21.3	17 59.19 -21 51.3 16.9	-0.91 + 0.1	0.6/21.3	29607	1997 HO ₁	1998 06 23.9	18 10.08 -22 19.4 18.9	-0.97 0.0	0.4/24.0	30672
1995 CZ ₁	1998 06 21.4	17 59.73 -30 46.8 17.3	-1.47 +15.7	3.9/22.6	25432	1992 DE ₄	1998 06 23.9	18 10.11 -21 20.8 17.9	-0.96 - 0.6	0.8/24.0	29943
1987 VG	1998 06 21.5	18 00.00 -31 48.8 17.3	-1.14 0.0	3.3/21.5	30447	1975 SX	1998 06 23.9	18 10.18 -21 19.4 17.9	-0.82 0.0	0.7/24.0	30892
1991 RU ₈	1998 06 21.5	18 00.09 -27 19.6 16.7	-1.00 - 0.3	2.0/21.5	29614	1992 RH ₃	1998 06 24.0	18 10.21 -21 31.5 18.3	-1.13 + 0.2	0.9/24.0	29100
1988 RY ₁₀	1998 06 21.5	18 00.12 -22 23.9 18.1	-0.56 - 0.2	0.2/21.6	28884	5485 T-2	1998 06 24.0	18 10.43 -27 36.0 17.2	-1.11 + 1.7	1.6/24.1	25652
1991 AG ₂	1998 06 21.5	18 00.22 -03 33.1 18.5	-0.90 - 1.1	6.6/21.6	17833	1997 EQ ₁₇	1998 06 24.0	18 10.49 +10 36.9 17.3	-0.76 - 2.4	10.7/26.4	32058
1978 SB ₈	1998 06 21.6	18 00.35 -32 49.8 17.1	-1.23 - 1.2	4.2/21.4	31414	1981 ER ₄₇	1998 06 24.0	18 10.53 -26 49.3 17.2	-1.07 - 0.9	1.3/24.0	29653
1995 WQ	1998 06 21.7	18 00.92 -27 53.5 19.0	-1.05 - 0.5	1.5/21.7	29924	1993 OF ₉	1998 06 24.0	18 10.59 -30 10.9 17.0	-0.95 + 2.3	2.4/24.2	29137
1992 EP ₁₁	1998 06 22.0	18 02.11 -20 10.3 18.5	-0.89 - 0.6	1.1/22.1	25215	1988 VV	1998 06 24.1	18 10.73 -18 18.0 17.2	-1.06 + 1.0	2.0/24.1	26396
2232 T-2	1998 06 22.0	18 02.33 -16 34.7 17.7	-1.02 - 0.1	3.0/22.1	29669	1995 WF ₅	1998 06 24.1	18 10.84 -17 52.1 17.7	-0.93 - 0.8	1.9/24.3	30666
1997 EK	1998 06 22.1	18 02.46 -42 30.0 16.8	-1.11 - 0.6	6.5/22.0	29948	1996 AS ₂	1998 06 24.1	18 11.08 -25 38.1 19.1	-0.83 - 0.4	0.6/24.2	30093
1997 EK ₈	1998 06 22.1	18 02.48 -27 34.8 19.4	-1.08 0.0	1.4/22.1	30473	(7495)	1998 06 24.2	18 11.27 -20 00.8 18.6	-0.92 + 1.4	1.1/24.2	29089
1990 TE ₁	1998 06 22.1	18 02.66 -45 15.9 17.8	-1.34 - 3.3	8.9/20.6	29942	1992 EA ₈	1998 06 24.3	18 11.70 -21 00.4 17.4	-0.90 - 0.2	0.8/24.4	25650
1982 VL	1998 06 22.2	18 02.70 -33 30.2 16.7	-1.23 - 2.9	4.1/21.8	29654	1995 VG	1998 06 24.4	18 11.90 -23 56.0 16.7	-0.95 + 0.3	0.2/24.4	29665
1995 UW ₃	1998 06 22.2	18 03.01 -27 30.7 18.7	-1.13 - 0.3	1.6/22.2	30472	(7725)	1998 06 24.4	18 12.15 -16 56.5 17.5	-1.02 - 0.3	2.5/24.6	30251
1993 OR ₈	1998 06 22.2	18 03.07 -20 29.3 18.8	-0.84 - 0.4	0.9/22.3	30092	3541 P-L	1998 06 24.5	18 12.33 -31 23.6 15.8	-1.00 + 2.4	3.2/24.6	29668
1991 PP ₁₆	1998 06 22.3	18 03.11 -14 46.0 16.0	-1.00 - 1.3	4.0/22.4	28886	1994 PC ₃₇	1998 06 24.5	18 12.53 -24 59.9 17.9	-0.95 + 0.4	0.5/24.5	30900
1977 RL ₇	1998 06 22.3	18 03.23 -03 20.9 18.1	-0.91 + 1.5	7.1/21.7	32041	1980 UL	1998 06 24.5	18 12.58 +11 05.4 16.8	-0.98 - 4.4	14.7/26.2	32042
1988 RN ₁₁	1998 06 22.3	18 03.38 -21 40.4 18.0	-0.57 - 0.1	0.4/22.4	30288	1993 FS ₂₂	1998 06 24.6	18 12.93 -21 15.9 18.3	-0.98 + 0.4	0.8/24.7	29918

(7664)	1998 06 24.8	18 13.73	-20 51.4	16.8	-0.89	- 0.2	0.9/24.9	29903
1995 YT	1998 06 24.9	18 14.18	-19 53.8	18.1	-1.09	- 0.5	1.5/25.0	29946
1995 QB ₂	1998 06 24.9	18 14.24	-26 33.8	16.8	-1.19	+ 1.1	1.4/24.9	25732
1994 PK ₂₀	1998 06 25.0	18 14.39	-20 19.2	17.8	-0.90	- 0.5	1.1/25.1	29945
1988 RO ₁₀	1998 06 25.0	18 14.63	+03 56.6	19.9	-0.52	- 1.2	5.4/26.2	25226
1994 PW ₂₆	1998 06 25.0	18 14.75	-12 53.7	18.5	-0.90	- 1.6	3.4/25.4	29138
(7803)	1998 06 25.0	18 14.80	-21 04.9	16.9	-0.92	- 1.8	0.8/25.2	30271
1991 UE ₂	1998 06 25.1	18 14.95	-27 34.1	16.8	-1.04	- 1.2	1.5/25.0	29615
1988 CF ₇	1998 06 25.1	18 15.19	-14 21.1	16.3	-0.97	+ 2.5	3.6/25.0	24117
1988 SG ₃	1998 06 25.2	18 15.38	-28 51.4	18.9	-0.63	- 2.6	1.1/24.9	15892
1981 EF ₃₇	1998 06 25.2	18 15.47	-50 20.7	16.1	-1.34	- 0.4	11.7/24.3	29315
1996 XF ₁₄	1998 06 25.3	18 15.83	-19 42.9	16.2	-0.87	+ 0.4	2.0/25.4	29118
1995 QD ₃	1998 06 25.3	18 15.92	-25 28.3	17.6	-1.08	0.0	0.8/25.3	30472
1997 GH ₁	1998 06 25.4	18 16.34	-18 19.2	18.0	-0.98	- 0.3	2.1/25.6	29647
1994 PA ₄	1998 06 25.5	18 16.42	-17 19.8	19.0	-0.92	- 0.4	2.3/25.6	31239
1996 XG ₁₉	1998 06 25.5	18 16.56	-18 26.4	17.4	-1.09	- 1.3	2.1/25.7	28873
1988 TJ	1998 06 25.5	18 16.58	-32 57.0	17.1	-1.20	- 0.3	3.9/25.3	26419
1996 BQ ₂	1998 06 25.5	18 16.61	-08 22.2	16.8	-0.73	- 2.4	4.2/26.3	30901
1988 RV ₁	1998 06 25.6	18 17.14	-30 57.7	17.7	-1.16	- 0.7	3.1/25.5	30780
2054 P-L	1998 06 25.6	18 17.17	-16 57.6	16.9	-1.05	+ 1.3	3.0/25.7	30285
1987 QW ₂	1998 06 25.8	18 17.80	-25 04.4	16.5	-0.86	- 0.7	0.6/25.8	30469
1991 RF ₁₁	1998 06 25.8	18 17.94	-29 05.8	17.9	-1.13	+ 0.5	2.2/25.7	27120
1996 YD	1998 06 25.8	18 17.97	-26 40.7	16.8	-1.15	- 1.2	1.4/25.8	29947
1988 SP ₂	1998 06 25.8	18 17.99	-07 40.4	19.6	-0.54	- 0.6	3.4/26.4	15560
1982 RK	1998 06 25.9	18 18.07	-21 16.1	16.1	-1.13	- 2.7	0.9/26.0	30287
1995 SY ₃₀	1998 06 26.0	18 18.57	-12 26.3	19.2	-1.01	- 1.7	4.5/26.5	29624
1981 EO ₂₉	1998 06 26.1	18 19.02	-23 12.8	19.3	-0.74	+ 0.8	0.0/26.1	30755
1988 RG ₁₀	1998 06 26.1	18 19.10	-27 27.4	18.1	-0.59	- 0.1	0.8/26.0	25079
6614 P-L	1998 06 26.1	18 19.21	-21 28.7	17.4	-0.95	- 1.6	0.8/26.2	29668
1992 WZ	1998 06 26.1	18 19.25	-29 11.5	17.0	-1.18	- 2.7	2.4/25.9	29317
1997 AW ₃	1998 06 26.1	18 19.31	-17 32.4	17.4	-1.06	- 2.6	2.5/26.5	29120
1992 VN	1998 06 26.2	18 19.49	-19 56.9	16.9	-1.12	+ 2.8	1.4/26.2	28849
1993 LR ₁	1998 06 26.3	18 20.13	-31 08.3	17.1	-1.07	+ 3.7	2.9/26.6	28851
1994 RY ₁	1998 06 26.4	18 20.26	+04 51.1	15.6	-0.89	- 0.8	12.3/26.5	30783
(8004)	1998 06 26.4	18 20.27	-20 50.3	16.1	-0.84	- 0.8	1.0/26.5	30853
1992 ES ₆	1998 06 26.4	18 20.57	-20 00.3	18.0	-0.94	- 2.1	1.1/26.6	26400
1995 SS ₃₀	1998 06 26.4	18 20.59	-38 10.6	20.0	-1.21	+ 0.4	5.3/26.2	29624
1991 PX ₁₄	1998 06 26.5	18 20.92	-20 49.7	16.6	-1.04	+ 3.1	1.2/26.5	29659
1024 T-1	1998 06 26.5	18 21.03	-36 13.0	18.3	-0.62	- 0.1	2.3/26.2	28892
1991 RY ₂₁	1998 06 26.6	18 21.13	-22 32.0	15.4	-1.01	- 2.7	0.4/26.7	29659
1991 RQ ₄	1998 06 26.6	18 21.42	-27 40.7	17.9	-1.07	+ 0.5	1.7/26.6	29915
1981 ES ₃₉	1998 06 26.6	18 21.46	-23 30.5	20.8	-0.86	- 0.2	0.0/26.7	22430
1992 WD ₈	1998 06 26.7	18 21.60	-38 01.7	17.5	-1.35	+ 6.5	5.2/27.6	29661
1988 RG ₁	1998 06 26.7	18 21.66	+03 38.4	17.5	-0.51	- 1.3	5.3/28.2	32044
1994 PC ₇	1998 06 26.8	18 21.86	-11 08.2	17.3	-0.87	- 2.8	4.5/27.6	29945
1994 UA ₂	1998 06 26.8	18 21.88	-10 33.5	16.7	-0.84	+ 1.5	4.4/26.9	30292
1997 CK ₂₉	1998 06 26.8	18 22.10	-24 54.1	18.1	-1.11	- 0.4	0.6/26.8	29948
(7518)	1998 06 26.8	18 22.13	-27 18.2	16.9	-1.03	- 1.4	1.4/26.7	29291
1997 AH ₁	1998 06 26.8	18 22.16	-21 55.4	16.7	-0.98	- 5.6	0.6/27.0	30786
1990 TF ₁₃	1998 06 26.9	18 22.27	-25 58.4	16.9	-0.97	- 3.5	0.9/26.7	30895
1981 EJ ₈	1998 06 26.9	18 22.28	-21 32.3	19.7	-0.85	+ 0.1	0.5/27.0	30649

1981 EL ₂₃	1998 06 26.9	18 22.45	-18 28.4	19.2	-0.98	- 1.0	1.8/27.1	26919
(7498)	1998 06 26.9	18 22.50	-45 25.7	17.0	-1.13	+ 3.2	6.9/27.2	29089
(7651)	1998 06 26.9	18 22.53	-08 29.1	16.4	-0.84	- 1.9	6.2/27.7	29899
1997 BX ₂	1998 06 27.0	18 22.72	-18 20.8	18.2	-1.03	- 3.8	2.0/27.4	29667
1981 ET ₃₁	1998 06 27.0	18 23.13	-10 14.0	18.8	-0.79	- 0.6	3.6/27.6	27304
1995 UX ₃	1998 06 27.1	18 23.41	-34 28.9	17.3	-1.17	- 1.6	4.7/26.6	26180
1981 DD ₁	1998 06 27.1	18 23.47	-42 25.8	19.1	-1.25	+ 1.9	6.7/27.1	26914
1997 EA ₃₆	1998 06 27.1	18 23.51	-21 49.4	18.3	-1.01	- 1.4	0.6/27.3	30094
1981 ER ₃₅	1998 06 27.2	18 23.60	-26 28.0	18.3	-0.92	+ 1.5	1.0/27.2	30090
1981 EL ₂₈	1998 06 27.2	18 23.60	-21 42.3	19.2	-0.84	- 0.6	0.4/27.3	26418
1981 DC ₁	1998 06 27.2	18 23.76	-03 42.0	18.1	-0.86	+ 2.6	9.1/27.3	26914
1995 SB ₃₁	1998 06 27.2	18 23.77	-34 18.2	17.0	-1.16	+ 0.2	5.5/27.0	28318
2712 P-L	1998 06 27.2	18 23.92	-21 52.2	17.1	-0.96	- 1.8	0.6/27.4	23531
1997 AB ₁₃	1998 06 27.3	18 24.31	-26 15.8	17.5	-1.13	- 2.1	1.3/27.2	29667
1996 DE ₂	1998 06 27.3	18 24.33	-20 51.1	20.0	-0.85	- 1.0	0.8/27.5	27457
1992 ER ₈	1998 06 27.3	18 24.34	-25 42.5	15.9	-0.94	- 1.5	0.9/27.3	27713
1979 MQ ₂	1998 06 27.4	18 24.52	-14 26.4	17.8	-0.94	- 2.1	4.2/28.0	30778
1995 WF ₆	1998 06 27.4	18 24.78	-22 09.3	17.5	-1.03	- 1.4	0.5/27.5	29665
1995 UQ ₁	1998 06 27.6	18 25.29	-16 34.9	18.2	-1.07	+ 0.5	2.7/27.8	29625
1991 VH ₆	1998 06 27.6	18 25.31	-10 06.6	18.0	-0.96	- 1.0	5.6/28.1	29615
4101 T-3	1998 06 27.7	18 25.85	-50 29.3	18.7	-0.79	- 1.3	5.0/26.1	24764
1981 EP ₁₄	1998 06 27.7	18 26.06	-15 19.3	17.7	-1.01	+ 2.1	4.1/27.9	26917
1995 WB	1998 06 27.8	18 25.98	-22 30.4	17.8	-0.97	- 1.3	0.3/27.8	29627
(7563)	1998 06 27.8	18 26.39	-27 22.5	16.5	-1.02	- 3.8	1.3/27.6	29592
1995 CC ₂	1998 06 27.9	18 26.58	-34 07.9	16.5	-1.55	+13.5	5.8/29.2	25432
1988 RD ₁₂	1998 06 28.0	18 26.85	-27 46.5	18.6	-0.59	- 0.2	0.9/27.8	23246
1980 TE ₇	1998 06 28.0	18 26.89	-07 15.4	15.5	-0.90	+ 0.6	8.1/28.3	31579
1992 WY ₁	1998 06 28.0	18 27.06	-28 47.5	17.1	-1.14	- 0.6	2.2/27.8	29661
1997 FU ₂	1998 06 28.0	18 27.22	-39 41.2	17.7	-1.03	- 0.3	5.7/27.4	30766
1995 UE ₁₈	1998 06 28.1	18 27.68	-19 47.6	21.2	-1.08	0.0	1.4/28.3	30784
1995 UP ₃	1998 06 28.3	18 28.41	-31 41.9	16.2	-1.13	- 1.1	4.0/27.9	25968
1981 DS ₃	1998 06 28.3	18 28.47	-28 23.3	19.0	-0.92	+ 1.7	1.6/28.3	30779
1997 AH ₈	1998 06 28.3	18 28.48	-15 40.3	17.5	-1.04	- 3.4	3.2/28.9	30461
1991 GE ₉	1998 06 28.3	18 28.50	-22 07.3	18.5	-0.81	- 0.9	0.3/28.4	30091
(7512)	1998 06 28.6	18 29.35	-33 19.1	16.9	-1.04	+ 0.6	3.5/28.4	29289
4217 T-1	1998 06 28.6	18 29.48	-23 43.4	18.6	-1.07	- 1.9	0.2/28.6	30095
4082 T-3	1998 06 28.6	18 29.50	-01 27.8	17.0	-0.86	- 1.3	8.6/30.0	30683
1994 CD ₈	1998 06 28.7	18 30.08	-17 42.2	16.1	-1.03	+ 0.4	2.7/29.0	25651
1989 UO ₅	1998 06 28.7	18 30.15	-40 57.6	18.6	-0.67	- 1.1	3.4/27.7	28316
1982 ST ₇	1998 06 28.9	18 30.76	-28 36.4	18.4	-1.11	- 0.2	2.0/28.7	30090
1981 EZ ₁₉	1998 06 28.9	18 30.79	-29 12.2	18.7	-1.04	0.0	2.6/28.7	29094
1981 EQ ₂₀	1998 06 28.9	18 30.96	-18 50.0	18.0	-0.94	- 0.9	2.0/29.2	29940
1991 PV ₁₇	1998 06 29.0	18 31.03	-25 10.7	17.5	-1.10	- 2.0	0.8/28.9	31138
2825 P-L	1998 06 29.0	18 31.06	-21 57.5	19.0	-0.83	- 0.6	0.4/29.1	29948
4030 T-3	1998 06 29.0	18 31.30	-19 17.9	18.8	-0.93	- 1.8	1.4/29.3	27929
1994 EL ₁	1998 06 29.1	18 31.47	-20 58.5	16.4	-1.13	- 2.9	0.9/29.3	29662
1988 XR ₁	1998 06 29.1	18 31.54	-26 22.3	16.2	-1.10	- 3.6	1.2/28.9	29912
1995 VP	1998 06 29.2	18 31.89	-19 29.0	16.1	-0.92	+ 1.3	1.4/29.3	30901
1021 T-2	1998 06 29.2	18 32.09	-18 28.3	18.4	-1.04	- 0.6	2.2/29.5	23681
1988 RR ₁₀	1998 06 29.2	18 32.18	-03 09.8	19.2	-0.53	- 1.2	4.1/30.6	31004
1991 RW ₂₁	1998 06 29.3	18 32.53	-37 14.1	18.4	-1.24	+ 0.2	5.1/28.8	27444

1988 RE ₁₂	1998 06 29.4	18 32.96	-04 18.1	20.8	-0.53	- 0.8	4.0/30.5	15560	4652 P-L	1998 07 01.4	18 41.05	-31 15.2	18.2	-0.72	- 0.3	1.8/30.9	29948
1988 SJ ₃	1998 06 29.4	18 33.05	-27 15.9	19.4	-0.59	- 2.5	0.8/29.2	30469	1997 GT ₃₂	1998 07 01.5	18 41.33	-25 09.9	17.2	-0.92	- 0.8	0.7/01.4	30788
1995 UP ₇	1998 06 29.5	18 33.02	-14 47.5	16.8	-0.94	- 1.1	3.0/29.9	31008	1992 UL ₂	1998 07 01.6	18 42.01	-26 22.8	16.3	-1.20	0.0	1.5/01.5	29136
1995 TC ₈	1998 06 29.5	18 33.21	-19 46.6	15.6	-1.06	- 4.1	1.6/29.8	30665	1988 CX ₄	1998 07 01.7	18 42.30	-09 05.6	18.6	-0.88	- 0.7	5.2/02.6	15889
1995 YT ₂	1998 06 29.5	18 33.24	-25 44.4	18.9	-1.02	- 2.1	0.8/29.4	26907	1996 XZ ₃₁	1998 07 01.7	18 42.31	-25 09.3	16.3	-1.10	- 5.9	1.0/01.5	29308
1988 DG ₂	1998 06 29.6	18 33.51	-14 49.3	19.1	-0.92	- 3.0	2.9/30.3	26739	1995 WQ ₁	1998 07 01.8	18 42.76	-21 30.5	17.9	-1.04	+ 0.3	0.6/01.9	26906
2203 T-3	1998 06 29.6	18 33.52	-08 06.4	18.5	-0.77	+ 0.5	4.4/30.2	22702	1984 UN ₂	1998 07 01.8	18 42.79	-20 34.9	17.2	-0.88	- 0.8	0.9/02.0	30685
1990 SL ₂₈	1998 06 29.6	18 33.54	-24 47.8	15.3	-0.96	- 0.3	0.7/29.6	29658	1981 EZ ₂₂	1998 07 02.0	18 43.48	-28 18.9	16.3	-1.06	- 0.8	2.9/01.7	29653
1993 RC	1998 06 29.6	18 33.69	+03 07.1	18.3	-0.75	- 0.3	9.1/30.8	30782	1995 OE ₆	1998 07 02.0	18 43.50	-20 07.3	20.7	-1.06	- 2.4	1.1/02.3	29623
1995 QH	1998 06 29.6	18 33.81	-22 34.8	17.9	-1.12	+ 0.9	0.3/29.7	27110	1987 RZ	1998 07 02.0	18 43.63	-21 42.2	16.8	-0.85	- 1.5	0.5/02.2	30894
1978 TH ₇	1998 06 29.6	18 33.90	-12 38.3	16.6	-0.81	- 2.1	3.3/30.4	30090	(7745)	1998 07 02.1	18 43.83	-13 47.3	18.1	-0.86	- 2.0	2.8/02.8	30256
1988 RY ₁₁	1998 06 29.7	18 33.95	+04 27.4	20.1	-0.50	- 1.3	5.0/01.7	15892	1991 RX ₁₀	1998 07 02.1	18 43.97	-45 18.1	17.6	-1.31	- 0.4	9.5/30.6	29943
1995 YU ₉	1998 06 29.7	18 34.15	-26 15.9	17.9	-0.93	+ 2.1	1.1/29.7	30093	1997 CB ₂₂	1998 07 02.2	18 44.36	-33 32.1	16.3	-1.02	+ 0.1	4.2/01.7	32058
1988 RS ₁₂	1998 06 29.8	18 34.52	-20 20.4	20.5	-0.54	- 0.2	0.5/30.0	22431	1980 VG	1998 07 02.2	18 44.43	-32 02.0	15.7	-1.07	+ 1.4	3.6/01.9	32042
1992 LF	1998 06 29.8	18 34.56	+00 41.6	16.8	-0.77	- 3.2	7.4/01.8	31006	(7630)	1998 07 02.2	18 44.45	-21 17.5	17.1	-0.91	- 0.8	0.6/02.4	29894
1997 CK ₁₃	1998 06 29.8	18 34.57	-22 56.8	16.2	-0.86	- 1.7	0.1/29.9	32058	1985 CV ₁	1998 07 02.3	18 44.66	-25 19.5	17.7	-0.84	- 1.1	0.7/02.2	30468
1984 SU	1998 06 29.9	18 34.97	-25 10.8	17.0	-1.15	- 0.2	0.9/29.9	30468	1993 FZ ₄₁	1998 07 02.4	18 45.22	-44 44.3	17.6	-1.24	- 0.5	7.7/01.1	29662
1981 EN ₄₂	1998 06 29.9	18 35.01	-20 55.5	16.1	-0.96	- 0.4	1.2/30.1	31580	(7793)	1998 07 02.4	18 45.38	-22 20.8	17.0	-0.84	- 1.6	0.2/02.5	30268
(7626)	1998 06 29.9	18 35.07	-35 49.1	17.2	-0.94	- 1.8	3.8/29.1	29893	1993 BV ₅	1998 07 02.5	18 45.45	-31 09.6	18.0	-1.11	+ 0.9	3.4/02.1	31233
2416 T-3	1998 06 30.0	18 35.25	-23 03.4	16.9	-1.06	- 0.4	0.1/30.0	29949	(7684)	1998 07 02.5	18 45.73	-27 24.5	16.1	-0.96	- 0.4	1.7/02.3	29907
1995 UV ₈	1998 06 30.0	18 35.28	-25 26.9	17.7	-1.01	- 1.5	0.7/29.9	26746	3270 T-2	1998 07 02.5	18 45.83	-25 33.9	17.8	-1.08	- 2.2	1.0/02.4	31436
(7436)	1998 06 30.0	18 35.28	-21 42.5	15.9	-1.11	+ 0.2	0.7/30.1	28835	1997 AR	1998 07 02.6	18 46.13	-23 52.1	16.9	-1.01	+ 0.3	0.4/02.6	29320
1980 PV ₁	1998 06 30.2	18 36.14	-25 03.5	15.2	-0.96	+ 2.8	0.8/30.2	32042	1992 GC ₅	1998 07 02.7	18 46.44	-24 55.8	16.9	-0.88	- 1.6	0.6/02.6	27713
1993 CJ ₁	1998 06 30.2	18 36.16	-04 13.9	17.4	-0.90	- 3.0	6.9/01.9	29661	(7450)	1998 07 02.7	18 46.54	-46 49.3	17.0	-1.39	- 8.0	8.5/29.3	29077
1997 FZ ₃	1998 06 30.3	18 36.70	-20 41.3	17.5	-0.88	- 0.7	0.9/30.5	30461	1991 PC ₆	1998 07 02.7	18 46.76	-17 42.4	18.1	-1.03	- 3.9	2.1/03.3	29942
1989 CG ₁	1998 06 30.4	18 36.78	-34 17.6	15.3	-1.18	+ 4.5	4.5/30.6	29657	1991 RN ₄	1998 07 02.8	18 46.95	-13 44.0	17.5	-1.04	- 2.3	3.9/03.5	29659
1993 DM	1998 06 30.4	18 36.80	-23 05.6	16.5	-1.01	+ 0.9	0.0/30.4	26172	1990 DW ₂	1998 07 02.9	18 47.15	-25 23.2	16.5	-0.82	- 0.6	0.7/02.8	32046
1989 UN	1998 06 30.4	18 37.01	-29 39.5	16.3	-1.22	- 1.4	3.0/30.1	30756	1991 TE ₁	1998 07 02.9	18 47.38	-27 28.3	16.8	-1.04	- 5.6	1.6/02.4	30290
1994 UJ ₂	1998 06 30.4	18 37.02	-37 25.6	16.8	-1.03	- 3.9	4.7/29.0	29138	1991 VE ₂	1998 07 02.9	18 47.41	-04 19.2	17.0	-0.93	+ 2.0	6.7/03.6	26420
1978 VT ₄	1998 06 30.5	18 37.31	-25 05.2	18.9	-0.84	- 0.9	0.6/30.4	29939	1988 RN ₁₀	1998 07 02.9	18 47.48	-06 31.2	19.4	-0.52	- 1.7	3.3/04.5	30288
1989 SZ ₄	1998 06 30.5	18 37.36	-27 40.3	17.2	-1.18	- 2.4	2.0/30.2	30091	1973 UR ₅	1998 07 02.9	18 47.50	-27 25.0	18.2	-1.12	- 1.7	1.7/02.6	30684
1981 EC ₂₄	1998 06 30.5	18 37.38	-19 50.5	19.6	-0.71	- 0.6	0.9/30.7	31224	1984 MR	1998 07 03.0	18 47.72	-11 54.0	15.6	-0.96	- 4.4	5.4/04.0	29654
1996 EG	1998 06 30.5	18 37.42	-09 57.4	18.1	-0.78	+ 0.1	4.2/01.1	30784	1997 AV ₂	1998 07 03.0	18 47.78	-25 21.5	19.0	-1.00	- 1.7	0.8/02.9	29320
1992 EV ₃₂	1998 06 30.5	18 37.52	-18 12.8	18.4	-0.91	- 0.4	1.7/30.8	29916	3197 T-3	1998 07 03.0	18 47.94	-25 08.6	17.1	-0.88	- 1.7	0.7/02.9	30095
1989 TC ₃	1998 06 30.6	18 37.59	-12 57.3	18.7	-0.79	- 1.2	2.8/01.3	29941	1988 SW ₁	1998 07 03.1	18 48.11	-42 56.4	18.6	-0.72	- 1.4	4.2/01.4	21972
1995 TB ₈	1998 06 30.6	18 37.83	-22 14.0	17.5	-0.98	- 0.3	0.4/30.7	27560	1993 FX ₄₀	1998 07 03.1	18 48.34	-00 07.8	17.4	-0.85	- 2.0	9.3/05.4	29317
1995 VX ₄	1998 06 30.6	18 37.83	-19 43.1	17.8	-0.93	- 3.5	1.7/31.0	29319	(7524)	1998 07 03.1	18 48.40	-20 05.7	15.7	-0.91	+ 0.8	1.5/03.3	29292
4060 P-L	1998 06 30.7	18 38.05	-21 35.5	17.8	-0.96	- 0.4	0.6/30.8	22086	1989 WG ₄	1998 07 03.2	18 48.52	-22 30.3	16.5	-1.13	- 4.2	0.2/03.3	28884
1101 T-2	1998 06 30.8	18 38.64	-24 40.8	17.3	-0.88	- 0.6	0.5/30.8	30474	1981 ET ₆	1998 07 03.3	18 48.75	-31 21.0	18.8	-0.79	+ 0.7	2.3/02.9	26916
(7711)	1998 06 30.9	18 38.92	-33 30.8	18.0	-0.95	- 2.7	2.9/30.0	30071	1997 AL ₇	1998 07 03.3	18 48.78	-17 04.4	15.9	-0.98	- 2.9	2.7/03.9	29667
(7710)	1998 06 30.9	18 39.27	-30 31.0	17.3	-0.83	- 1.5	2.1/30.5	30071	1997 JM ₁₁	1998 07 03.3	18 49.01	-23 11.6	18.4	-0.70	- 1.3	0.1/03.3	30672
1994 PJ ₁₀	1998 07 01.0	18 39.41	-23 24.6	17.4	-0.96	- 0.4	0.1/01.0	30900	1990 VS ₅	1998 07 03.4	18 49.15	-23 52.2	16.9	-0.95	- 4.1	0.3/03.3	32046
1992 SQ	1998 07 01.0	18 39.74	-22 10.2	16.7	-1.15	+ 0.7	0.4/01.1	26190	1995 WN ₅	1998 07 03.4	18 49.30	-28 19.1	16.8	-0.97	- 2.8	1.9/02.9	29139
(7619)	1998 07 01.1	18 39.95	-25 25.7	17.7	-1.15	- 1.8	1.0/01.0	29605	1994 TD	1998 07 03.4	18 49.56	-16 56.5	17.9	-0.83	- 1.2	1.9/03.9	29945
2622 P-L	1998 07 01.1	18 40.11	-21 22.1	18.3	-0.81	- 1.0	0.5/01.3	26414	2026 T-3	1998 07 03.5	18 49.58	-25 02.7	18.3	-1.02	- 0.1	0.9/03.4	25437
1989 AZ ₅	1998 07 01.2	18 40.45	-21 54.8	18.6	-1.01	- 2.3	0.4/01.4	29656	1997 CH ₂₂	1998 07 03.6	18 50.21	-26 39.7	19.8	-1.02	- 0.5	1.3/03.4	29667
1997 FN	1998 07 01.3	18 40.59	-34 32.3	16.2	-0.98	- 3.9	3.8/30.2	32058	1994 QV	1998 07 03.7	18 50.49	-46 04.1	16.1	-1.33	- 0.3	9.9/01.5	29945
5568 P-L	1998 07 01.3	18 40.75	-35 42.2	16.8	-1.09	- 2.4	5.0/30.3	22601	1997 BR ₁	1998 07 03.7	18 50.80	-15 47.4	16.6	-0.86	- 4.1	2.4/04.6	30094
1995 UQ ₄	1998 07 01.3	18 40.89	-40 53.8	15.4	-1.31	- 6.7	7.7/28.9	28303	(7525)	1998 07 03.8	18 51.20	-26 49.4	16.8	-1.16	+ 1.6	1.7/03.7	29292
1997 EH ₁₅	1998 07 01.3	18 40.89	-48 20.5	19.2	-1.14	+ 0.3	7.9/30.2	30473	1995 WX ₄₂	1998 07 03.8	18 51.24	-24 44.5	17.1	-1.03	- 6.2	0.7/03.6	26572
1992 UJ ₅	1998 07 01.4	18 40.92	-22 30.0	18.1	-1.13	- 1.0	0.2/01.4	29943	4220 T-1	1998 07 03.9	18 51.54	-06 50.9	16.9	-0.80	- 1.6	5.9/05.3	30466

(7608)	1998 07 03.9	18 51.65	-27 10.8	17.9	-1.08	- 2.2	1.6/03.6	29603
4543 P-L	1998 07 04.0	18 51.83	-28 17.0	16.8	-1.06	- 1.6	2.9/03.6	28880
1992 UH ₁	1998 07 04.0	18 51.85	-28 50.7	17.6	-1.19	- 1.2	2.4/03.6	29300
1993 CK ₁	1998 07 04.1	18 52.35	-36 21.4	17.0	-1.12	- 1.9	5.2/03.1	30897
1981 EG ₉	1998 07 04.1	18 52.37	-20 24.5	18.5	-0.87	- 0.1	0.8/04.3	29910
4253 T-2	1998 07 04.2	18 52.48	-13 33.8	17.9	-0.95	- 3.6	4.7/05.1	29669
(7548)	1998 07 04.2	18 52.83	-23 23.2	16.9	-0.84	- 1.0	0.2/04.2	29588
1981 UB ₂₃	1998 07 04.3	18 52.97	-20 37.3	16.7	-0.95	- 2.1	0.8/04.5	20498
1994 VK	1998 07 04.3	18 53.20	-30 10.9	18.6	-0.86	- 1.1	2.0/03.8	28617
3109 T-1	1998 07 04.3	18 53.30	-19 37.6	17.6	-0.97	+ 0.4	1.6/04.6	24115
1995 WN ₃₃	1998 07 04.4	18 53.37	-04 11.1	18.2	-0.89	- 0.2	6.4/05.8	26761
4315 P-L	1998 07 04.4	18 53.49	-20 42.8	18.2	-0.89	- 1.0	0.8/04.6	30466
1998 NW ₁	1998 07 04.5	18 53.86	-16 32.3	15.3	-0.93	- 5.3	2.9/05.4	29663
1983 YK	1998 07 04.5	18 53.97	-10 38.6	17.2	-0.76	- 2.3	3.7/05.8	28612
1987 CG	1998 07 04.5	18 53.99	-25 17.5	16.2	-0.92	- 1.1	0.9/04.4	30469
4035 T-3	1998 07 04.6	18 54.26	-43 59.1	18.9	-0.71	- 1.3	4.2/02.5	27124
1981 EM ₁₃	1998 07 04.6	18 54.28	-15 47.9	18.5	-1.08	+ 0.3	3.2/05.1	25078
1988 SL ₃	1998 07 04.6	18 54.28	-11 42.1	17.7	-0.56	- 3.5	2.3/06.0	30090
1988 VP ₅	1998 07 04.6	18 54.34	-28 50.0	16.5	-1.11	- 4.7	2.9/03.9	29656
1996 XU ₁	1998 07 04.7	18 54.69	-25 00.6	15.5	-1.06	- 5.5	0.9/04.5	32056
1991 RR ₁₂	1998 07 04.7	18 54.81	-28 26.6	18.2	-1.15	- 1.9	2.2/04.3	30470
1981 EM ₃₇	1998 07 04.8	18 55.32	-20 53.7	18.1	-1.15	+ 0.2	0.9/05.0	27909
1039 T-3	1998 07 04.9	18 55.49	-43 10.2	17.6	-1.20	+ 1.6	8.6/03.8	29142
(7612)	1998 07 05.0	18 56.13	-11 49.9	16.3	-0.77	- 2.4	3.3/06.2	29604
1997 GL ₂₃	1998 07 05.1	18 56.30	-28 14.9	18.5	-0.86	- 1.8	1.6/04.6	30293
1994 VY	1998 07 05.1	18 56.31	-16 38.1	18.6	-0.87	+ 1.2	2.1/05.5	32052
9544 P-L	1998 07 05.1	18 56.32	-15 20.3	17.4	-0.96	- 2.4	3.2/05.8	29948
1991 CE ₁	1998 07 05.2	18 56.62	-15 22.2	16.9	-0.80	- 0.6	2.4/05.8	30781
1990 WZ	1998 07 05.2	18 56.78	-09 10.0	18.2	-0.85	- 1.2	4.7/06.4	30781
4041 T-2	1998 07 05.3	18 57.22	-26 32.9	19.2	-1.00	- 1.6	1.5/05.0	29651
2098 P-L	1998 07 05.3	18 57.32	-00 52.3	15.8	-0.87	+ 0.1	9.9/06.5	30696
1997 AP ₄	1998 07 05.4	18 57.43	-20 21.2	17.4	-1.03	- 1.4	0.9/05.6	31422
1991 BZ	1998 07 05.4	18 57.52	-23 41.4	18.2	-0.95	+ 0.2	0.3/05.4	27934
1981 EX ₃₇	1998 07 05.6	18 58.34	-15 37.0	19.1	-1.04	- 1.2	3.4/06.2	26922
4718 P-L	1998 07 05.6	18 58.58	-29 10.9	18.1	-0.98	- 1.2	2.9/05.1	25223
1993 PB ₇	1998 07 05.8	18 59.04	-22 01.1	16.1	-0.84	- 1.3	0.3/05.9	29944
(7560)	1998 07 05.9	18 59.51	-27 19.7	15.6	-1.52	+10.5	2.4/06.1	29591
1991 SS ₁	1998 07 05.9	18 59.97	-32 02.1	19.3	-1.28	- 3.6	4.0/04.9	25538
1990 SZ ₃	1998 07 06.0	18 59.94	-28 37.5	16.3	-1.08	+ 2.2	2.2/05.7	26560
1991 BH ₁	1998 07 06.0	19 00.02	-22 24.9	16.6	-0.86	- 1.4	0.1/06.1	29942
(7635)	1998 07 06.0	19 00.07	-29 28.9	15.9	-0.90	- 3.9	2.1/05.2	29895
1989 TS ₂	1998 07 06.1	19 00.31	-12 37.9	19.3	-0.52	- 1.7	2.0/07.2	30272
1996 YC ₁	1998 07 06.1	19 00.32	-20 39.6	17.2	-1.05	+ 1.5	0.9/06.2	29141
1991 PT ₁₄	1998 07 06.1	19 00.33	-19 40.0	17.2	-1.02	- 2.6	1.3/06.4	29659
(7782)	1998 07 06.1	19 00.44	-13 02.9	17.3	-0.92	+ 3.5	3.5/06.3	30265
1981 EJ ₂₉	1998 07 06.1	19 00.57	-08 25.7	18.6	-0.80	- 1.0	4.5/07.5	26920
1997 CP ₁₃	1998 07 06.2	19 00.82	-24 02.5	17.5	-1.05	- 1.1	0.5/06.1	29948
4317 T-3	1998 07 06.2	19 00.94	-11 31.9	19.1	-0.54	- 1.3	2.3/07.4	23351
3105 T-1	1998 07 06.3	19 01.10	-25 02.0	17.7	-1.06	- 0.7	1.0/06.1	26192
(7483)	1998 07 06.3	19 01.26	-24 48.6	17.1	-0.83	- 2.0	0.6/06.1	29587
(7815)	1998 07 06.3	19 01.36	-05 24.7	17.5	-0.51	- 2.3	3.3/08.5	30435

1988 VF ₂	1998 07 06.3	19 01.47	-36 32.0	16.2	-1.16	- 3.7	6.7/04.6	30894
1984 BS	1998 07 06.5	19 01.95	-21 27.5	16.0	-1.12	- 4.8	0.5/06.7	30287
1991 PX ₅	1998 07 06.5	19 02.07	-31 19.0	17.7	-1.14	+ 0.1	3.8/05.9	29299
1994 VM ₁	1998 07 06.5	19 02.12	-16 09.8	17.8	-0.81	- 1.4	1.9/07.2	30276
1996 AF ₁	1998 07 06.5	19 02.24	-17 56.7	17.0	-0.98	- 3.6	1.6/07.1	26761
1994 PV ₁₆	1998 07 06.5	19 02.34	-27 21.9	16.8	-0.98	- 0.8	1.8/06.2	29663
1988 TS ₁	1998 07 06.6	19 02.56	-20 30.0	17.9	-0.85	- 1.4	0.7/06.9	25212
1988 RO ₁₁	1998 07 06.7	19 02.85	-24 35.7	18.0	-0.90	- 1.4	0.7/06.5	29656
1995 SZ ₁	1998 07 06.7	19 02.96	-22 51.2	17.8	-1.10	- 0.5	0.1/06.7	29664
4219 T-3	1998 07 06.7	19 03.15	-21 24.8	18.5	-0.96	- 4.0	0.6/06.9	26187
1996 XL ₃₁	1998 07 06.7	19 03.17	-18 19.7	16.3	-1.02	- 3.6	2.0/07.3	28875
1971 UN ₁	1998 07 06.7	19 03.19	-20 40.1	17.4	-0.84	- 1.3	0.6/07.0	27453
1981 DD ₂	1998 07 06.8	19 03.19	-19 26.1	18.9	-0.86	+ 0.6	1.0/07.0	26914
1997 GD ₁₇	1998 07 06.8	19 03.24	-22 14.4	18.8	-1.05	- 1.0	0.2/06.9	30767
1994 FZ	1998 07 06.8	19 03.43	-23 25.4	15.2	-1.00	- 5.7	0.4/06.7	29137
1260 T-2	1998 07 06.9	19 03.68	-11 01.8	18.7	-0.89	- 2.0	4.0/08.1	30474
1995 WO ₃	1998 07 06.9	19 03.87	-20 22.6	17.8	-1.07	- 1.1	0.9/07.2	29946
1981 EY ₆	1998 07 07.0	19 04.07	-29 03.5	18.7	-0.97	+ 1.2	2.1/06.6	26916
1988 RK ₉	1998 07 07.0	19 04.29	-07 29.7	15.6	-0.80	- 5.5	5.7/09.3	29133
1994 PN ₅	1998 07 07.0	19 04.39	-19 25.8	18.3	-0.91	- 2.0	1.1/07.4	29920
1985 PA ₁	1998 07 07.1	19 04.64	-02 17.0	15.1	-0.70	- 5.2	10.2/10.5	29654
1993 OB ₁₃	1998 07 07.1	19 04.81	-19 18.2	17.4	-0.86	- 1.6	1.2/07.5	30471
1996 GE ₁₉	1998 07 07.2	19 05.13	+14 51.4	17.0	-0.53	+ 0.4	7.2/11.2	30293
1981 EJ ₁₂	1998 07 07.2	19 05.16	-21 19.3	18.8	-0.87	- 0.1	0.4/07.4	26917
1986 QN	1998 07 07.3	19 05.58	-16 37.0	17.4	-0.99	- 2.5	2.3/08.0	27727
1997 AJ ₁	1998 07 07.4	19 05.67	-26 44.8	16.8	-1.12	- 0.7	1.7/07.1	31113
1988 RM ₁₁	1998 07 07.5	19 06.02	-20 08.0	18.4	-0.55	- 1.2	0.5/07.8	25079
1985 PQ	1998 07 07.5	19 06.09	-14 20.4	15.1	-0.86	- 5.0	4.6/08.7	30469
1997 AN ₇	1998 07 07.5	19 06.20	-18 55.9	17.1	-1.07	- 1.3	1.4/07.9	29634
1983 XE	1998 07 07.5	19 06.51	-15 17.5	17.9	-0.97	- 0.2	2.6/08.2	27726
(7746)	1998 07 07.6	19 06.58	-24 24.6	15.5	-0.84	- 1.5	0.7/07.4	30256
1997 AO ₁₇	1998 07 07.6	19 06.61	-24 52.6	19.1	-1.08	- 5.7	0.9/07.3	30786
1994 YF	1998 07 07.6	19 06.70	-21 38.2	16.6	-0.86	- 2.0	0.3/07.8	30292
1995 SP ₃	1998 07 07.8	19 07.24	-15 28.8	15.6	-0.97	+ 3.5	4.0/08.0	27937
1981 EQ ₃₈	1998 07 07.8	19 07.25	-00 49.1	20.7	-0.89	- 2.6	8.3/10.6	26922
4220 T-3	1998 07 07.8	19 07.31	-52 11.9	18.8	-1.18	- 2.3	8.2/03.8	29131
4262 T-2	1998 07 07.8	19 07.38	-25 57.9	17.0	-1.07	- 4.2	1.8/07.4	24585
1997 CZ ₁₉	1998 07 07.8	19 07.50	-20 33.9	15.6	-1.05	- 3.7	0.9/08.1	29641
(7673)	1998 07 07.9	19 07.90	-19 46.0	17.7	-1.03	- 1.4	1.0/08.2	29905
1994 PR ₂₇	1998 07 08.0	19 08.24	-29 49.2	17.4	-0.99	- 1.3	2.6/07.3	29945
1996 BN ₆	1998 07 08.1	19 08.72	-26 04.6	17.1	-0.88	- 3.0	1.4/07.7	29666
5124 T-3	1998 07 08.2	19 08.90	-23 06.3	16.8	-1.05	- 5.0	0.3/08.1	29321
1997 AF ₇	1998 07 08.2	19 09.06	-18 51.8	18.9	-1.01	- 2.8	1.3/08.6	29634
1989 YE ₆	1998 07 08.2	19 09.12	-16 04.6	17.5	-1.09	+ 1.1	2.7/08.7	25956
1996 YO ₁	1998 07 08.2	19 09.17	-21 55.0	16.4	-1.03	- 0.9	0.3/08.3	29141
(7763)	1998 07 08.3	19 09.47	-21 46.2	15.3	-0.91	- 3.6	0.3/08.4	30261
(7681)	1998 07 08.4	19 09.88	-34 53.2	17.0	-1.20	- 1.3	4.8/07.3	29907
(7754)	1998 07 08.4	19 10.18	-20 04.2	16.0	-0.88	- 1.4	0.8/08.7	30259
1991 UJ ₄	1998 07 08.5	19 10.18	-25 00.1	16.4	-1.05	- 0.8	1.1/08.3	30470
(7547)	1998 07 08.5	19 10.49	-19 34.4	18.4	-0.89	- 2.0	1.0/08.9	29588
1995 VZ ₆	1998 07 08.6	19 10.63	-19 50.0	19.6	-1.01	- 1.5	1.0/08.9	30784

3163 T-1	1998 07 08.6	19 10.65	-26 29.6	19.1	-0.58	- 0.9	0.8/08.2	19879	1995 WF	1998 07 11.6	19 22.95	-09 42.5	18.5	-1.04	+ 1.4	4.9/12.5	29627
1990 HJ	1998 07 08.6	19 10.71	-27 49.5	17.2	-1.10	- 2.5	2.1/08.1	31416	1995 SX ₃	1998 07 11.6	19 23.24	-11 54.3	15.1	-0.86	+ 0.6	5.8/12.6	29664
1992 UN ₅	1998 07 08.6	19 10.77	-41 32.4	18.5	-0.81	- 2.6	4.1/06.0	30658	1995 WX ₄	1998 07 11.8	19 23.75	-15 52.6	17.7	-1.02	- 1.2	2.5/12.5	30473
1981 EF ₃₅	1998 07 08.7	19 11.28	-17 39.8	19.0	-0.97	- 2.3	1.8/09.3	29297	(7572)	1998 07 11.8	19 23.77	-26 09.8	16.1	-1.19	- 0.7	1.8/11.4	29594
4369 T-3	1998 07 08.8	19 11.36	-13 13.4	19.4	-0.52	- 1.4	1.8/09.9	25341	1995 WO ₈	1998 07 11.9	19 24.11	-09 15.8	15.7	-0.80	- 5.6	4.3/14.2	29946
(7636)	1998 07 08.8	19 11.46	-37 37.2	16.6	-1.11	- 2.1	5.4/07.1	29895	1994 PH ₃₀	1998 07 11.9	19 24.23	-08 39.8	17.8	-0.85	- 2.4	4.4/13.8	30662
3306 T-2	1998 07 08.8	19 11.74	-29 44.8	18.9	-1.21	- 2.9	3.2/08.0	24585	4874 P-L	1998 07 11.9	19 24.24	-26 29.9	18.5	-0.99	- 2.7	1.7/11.4	29668
1992 AL	1998 07 08.9	19 11.79	-10 08.9	17.0	-0.95	- 4.5	4.3/10.5	26926	1994 PW ₂₀	1998 07 12.1	19 24.97	-27 16.1	17.6	-0.97	- 1.1	1.9/11.5	30688
(7717)	1998 07 09.0	19 12.17	-29 21.9	17.6	-1.11	- 0.6	2.3/08.4	30073	1995 UP ₄	1998 07 12.1	19 24.97	-31 48.6	16.1	-1.11	- 4.7	4.0/10.6	29665
3159 T-2	1998 07 09.0	19 12.18	-05 12.5	17.6	-0.88	- 3.3	6.6/11.1	17653	1993 DT ₁	1998 07 12.2	19 25.60	-15 34.0	17.4	-0.86	- 2.1	3.1/13.1	29136
1995 VJ ₂	1998 07 09.0	19 12.54	-38 19.1	17.5	-1.18	- 6.6	6.1/06.4	29626	(7527)	1998 07 12.2	19 25.61	-28 45.5	15.5	-1.14	+ 0.9	3.4/11.7	29293
1995 SO ₅₄	1998 07 09.1	19 13.03	-20 13.5	17.7	-1.08	- 3.4	0.9/09.4	29624	1994 PU ₁₈	1998 07 12.2	19 25.69	-25 03.9	19.0	-0.96	- 1.7	1.2/11.9	29620
1994 XM	1998 07 09.2	19 13.07	-23 58.6	18.8	-0.84	- 1.6	0.5/09.0	27108	1996 BE ₁	1998 07 12.3	19 25.81	-25 32.5	18.4	-0.90	- 2.9	1.1/11.8	30667
1992 WJ ₃	1998 07 09.3	19 13.49	-12 42.2	16.1	-0.99	- 3.2	4.3/10.5	29317	1993 FN	1998 07 12.5	19 26.53	-37 48.4	19.4	-1.14	- 1.1	5.2/10.7	29944
1996 VS ₁	1998 07 09.3	19 13.75	-57 31.1	17.4	-1.98	- 8.5	15.7/01.8	29666	1997 DG	1998 07 12.5	19 26.54	-18 14.9	15.9	-1.02	+ 0.6	1.7/12.9	29667
1995 WC	1998 07 09.3	19 13.83	-12 50.2	17.6	-1.05	+ 0.3	4.3/10.1	30784	1994 PK ₁₄	1998 07 12.5	19 26.85	-27 46.9	18.8	-1.05	+ 0.2	2.3/12.0	27448
1993 FU ₁₁	1998 07 09.4	19 13.85	-20 20.1	16.3	-0.93	- 3.6	0.8/09.7	23523	1997 BS ₆	1998 07 12.6	19 26.88	-18 10.5	17.5	-1.06	- 5.4	1.5/13.2	29320
1995 TD	1998 07 09.4	19 14.02	-09 12.1	16.8	-0.94	- 2.1	6.8/10.9	30093	1991 FF	1998 07 12.8	19 27.75	-42 12.1	17.9	-1.06	+ 1.4	6.1/10.9	28614
1991 SB	1998 07 09.4	19 14.19	-18 21.0	17.0	-1.02	- 1.4	1.6/09.9	30449	1990 YY	1998 07 12.9	19 28.07	-25 05.3	18.2	-0.53	- 1.3	0.6/12.4	30781
1997 GY ₂₆	1998 07 09.4	19 14.25	-21 32.3	18.3	-0.84	- 1.8	0.3/09.6	30474	1992 AE ₁	1998 07 12.9	19 28.27	-25 17.4	16.9	-0.92	- 4.3	1.0/12.4	26190
1996 AR ₂	1998 07 09.5	19 14.55	-31 56.6	16.7	-1.13	+ 2.0	3.7/08.9	26749	(7510)	1998 07 13.0	19 28.64	-34 50.5	15.8	-1.13	- 0.3	6.6/11.6	29289
2649 P-L	1998 07 09.6	19 14.98	-04 44.8	17.2	-0.88	- 2.4	6.7/12.0	23680	1992 EO ₆	1998 07 13.1	19 28.89	-29 01.2	18.4	-1.02	- 3.0	2.5/12.1	29943
2276 T-2	1998 07 09.6	19 15.07	-26 18.7	17.5	-0.98	- 1.9	1.6/09.2	26416	1997 GP ₃₅	1998 07 13.1	19 28.97	-14 46.6	18.9	-0.79	- 1.7	2.0/14.1	30085
1996 YY	1998 07 09.7	19 15.43	-22 16.7	14.0	-1.04	+ 6.5	0.0/09.8	29320	(7634)	1998 07 13.2	19 29.31	-23 04.2	17.2	-0.85	- 2.7	0.4/13.0	30892
1990 TD ₁₂	1998 07 09.9	19 16.33	-19 43.3	18.8	-0.94	- 1.1	0.9/10.3	27711	1991 FM ₂	1998 07 13.2	19 29.33	+03 07.9	21.2	-0.71	- 2.8	5.8/17.3	30781
1995 VJ	1998 07 10.0	19 16.30	-26 35.0	18.9	-1.00	- 2.2	1.5/09.5	30473	1990 UB ₄	1998 07 13.2	19 29.50	-06 53.0	18.2	-0.85	- 2.5	5.0/15.3	30091
1990 WK ₂	1998 07 10.2	19 17.33	-22 21.5	16.5	-1.00	+ 1.5	0.0/10.2	26925	1981 EB ₂₉	1998 07 13.3	19 29.84	-06 47.5	19.8	-0.91	- 3.0	5.5/15.6	26920
1980 RC	1998 07 10.2	19 17.34	-06 25.1	18.5	-0.99	- 3.1	6.2/12.1	30468	1996 CL ₂	1998 07 13.3	19 29.94	-40 19.7	17.0	-1.00	- 1.1	5.4/10.9	29139
1983 TE ₁	1998 07 10.3	19 17.67	-12 24.0	16.6	-0.97	- 1.0	4.0/11.3	30287	1986 QZ ₂	1998 07 13.4	19 30.34	-39 39.0	15.7	-1.12	- 0.4	8.1/11.4	29655
1997 FC ₅	1998 07 10.3	19 17.78	-13 02.7	17.6	-0.88	- 2.5	3.5/11.5	30672	1981 EB ₃₀	1998 07 13.4	19 30.45	-45 47.9	18.8	-1.33	+ 3.3	10.8/11.5	26920
1991 RD ₄	1998 07 10.4	19 18.14	-13 13.6	16.1	-0.86	- 0.7	4.7/11.4	27325	1997 GL ₂₈	1998 07 13.4	19 30.50	+00 05.7	19.3	-0.74	- 0.9	6.1/16.6	30282
4780 P-L	1998 07 10.4	19 18.25	-14 54.3	19.0	-0.77	- 1.8	2.1/11.4	30474	1981 EW ₁₆	1998 07 13.7	19 31.34	-23 01.0	19.4	-0.87	- 1.9	0.4/13.5	26923
1985 VK	1998 07 10.5	19 18.50	-25 44.5	16.4	-0.93	- 3.9	1.2/10.0	30685	1997 AW ₁₈	1998 07 13.7	19 31.75	-27 26.5	16.9	-1.16	- 0.1	2.4/13.2	29635
1988 VX ₂	1998 07 10.5	19 18.53	-02 12.2	15.8	-0.78	+ 0.6	6.8/12.5	25528	1997 CU ₁₉	1998 07 13.8	19 32.08	-21 37.5	17.1	-1.04	- 3.9	9.0/24.0	31423
1988 BW	1998 07 10.6	19 18.90	-33 10.0	17.2	-1.10	+ 1.1	3.7/09.8	30288	2183 T-1	1998 07 13.9	19 32.53	-24 13.2	19.3	-1.05	- 2.8	0.9/13.6	27926
1997 CU ₅	1998 07 10.6	19 18.93	-17 46.2	18.5	-1.02	- 4.1	1.8/11.3	30786	1993 EP	1998 07 14.0	19 32.54	-38 42.2	16.9	-1.19	+ 0.8	6.2/12.4	29944
1982 VU ₂	1998 07 10.6	19 19.10	-42 26.1	15.5	-1.11	- 5.9	8.7/07.2	26418	1993 FT ₈	1998 07 14.0	19 32.56	-22 11.5	16.7	-1.02	- 3.5	0.2/13.9	28616
1994 PO ₁₆	1998 07 10.7	19 19.27	-26 23.9	17.1	-0.98	+ 0.1	1.5/10.3	29620	4636 P-L	1998 07 14.0	19 32.69	-42 00.8	18.6	-1.01	- 1.1	6.0/11.3	22701
(7475)	1998 07 10.7	19 19.58	-14 58.0	16.8	-1.02	- 3.5	2.9/11.7	29083	1995 SP	1998 07 14.0	19 32.94	-37 21.9	18.3	-1.26	- 2.2	6.3/11.9	29664
1993 FK ₂₅	1998 07 10.9	19 19.96	-19 04.9	17.4	-1.01	- 1.5	1.2/11.2	30471	1997 GO ₁	1998 07 14.1	19 32.97	-22 42.0	17.4	-1.06	- 1.4	0.4/14.0	30766
1981 EK ₃₅	1998 07 11.2	19 21.25	-21 57.6	17.7	-0.87	- 1.4	0.1/11.2	30287	4854 T-1	1998 07 14.1	19 33.00	-38 22.8	17.5	-1.00	- 2.4	5.9/11.6	28620
1992 WO ₃	1998 07 11.4	19 22.30	+08 04.5	17.9	-0.98	+ 0.7	10.2/14.3	27326	1993 FS ₂₄	1998 07 14.1	19 33.08	-28 22.7	17.9	-1.02	- 1.2	2.6/13.3	29137
1997 GP ₃₃	1998 07 11.4	19 22.32	-17 41.5	18.8	-0.91	- 2.0	1.6/12.0	29935	1981 EB ₃₁	1998 07 14.1	19 33.11	-14 02.2	19.1	-0.80	- 2.9	2.4/15.3	15704
1981 EA ₃₂	1998 07 11.4	19 22.35	-09 38.3	19.4	-0.83	+ 0.2	4.1/12.7	26921	1979 MP ₁	1998 07 14.1	19 33.40	-19 07.8	17.2	-0.96	- 2.7	1.2/14.6	26418
1981 EV ₉	1998 07 11.4	19 22.35	-21 45.9	19.0	-1.14	- 0.1	0.1/11.5	25536	1995 UN ₈	1998 07 14.2	19 33.72	-36 34.5	16.1	-1.04	- 3.2	7.9/11.8	30666
1990 EZ ₂	1998 07 11.4	19 22.41	-12 50.4	17.7	-0.73	- 1.7	2.5/12.7	27933	1997 EO ₁₇	1998 07 14.3	19 33.79	-31 50.3	17.1	-1.16	- 5.5	4.5/12.5	30786
(7656)	1998 07 11.5	19 22.40	-24 17.5	17.0	-0.86	- 2.1	0.9/11.2	29901	1998 KE ₅	1998 07 14.3	19 33.79	-00 54.5	17.0	-0.76	- 3.4	7.4/17.6	32032
1991 RG ₇	1998 07 11.5	19 22.47	-19 17.9	17.8	-1.03	- 0.7	1.1/11.8	28316	(8442)	1998 07 14.3	19 33.84	-24 25.8	18.4	-1.05	- 3.8	1.0/13.9	31374
2574 P-L	1998 07 11.5	19 22.57	-53 30.8	18.8	-1.22	- 0.7	8.8/07.4	29141	1995 YP	1998 07 14.3	19 33.93	-21 34.1	16.6	-0.88	- 3.1	0.0/14.4	29665
1994 VN	1998 07 11.5	19 22.63	-28 23.8	18.7	-0.84	- 1.7	1.7/10.8	28617	1994 YG	1998 07 14.3	19 33.99	-23 04.3	19.2	-0.85	- 1.9	0.4/14.2	24915
1995 SQ ₁	1998 07 11.5	19 22.79	-39 28.0	18.5	-1.43	+ 4.0	6.2/10.7	26176	(7659)	1998 07 14.4	19 34.26	-03 50.3	16.5	-0.87	- 6.0	7.2/18.0	29901

1988 SK ₂	1998 07 14.4	19 34.41	-20 09.8	18.5	-0.55	-	1.4	0.3/14.7	28613	1997 AM ₅	1998 07 17.2	19 45.61	-27 14.2	17.8	-1.11	-	2.4	2.3/16.4	31422
1993 FP ₂₆	1998 07 14.5	19 34.68	-23 25.9	19.0	-1.00	-	1.4	0.6/14.3	29918	2114 T-2	1998 07 17.3	19 45.88	-16 01.3	17.6	-0.99	-	3.0	1.9/18.1	29669
1988 RH ₁₃	1998 07 14.5	19 34.86	-39 51.5	17.4	-0.66	-	1.9	3.5/11.6	27324	1995 TB	1998 07 17.5	19 46.85	-28 24.2	20.1	-1.12	-	2.1	2.7/16.5	29624
1981 EK ₂₆	1998 07 14.5	19 34.92	-17 31.6	18.0	-0.92	-	3.2	1.8/15.2	15880	1997 GQ ₇	1998 07 17.5	19 47.10	-43 41.7	17.3	-1.13	-	4.0	7.5/13.1	30094
4624 P-L	1998 07 14.5	19 34.94	-18 15.6	18.9	-0.79	-	2.5	1.0/15.1	30095	1995 UX ₂	1998 07 17.6	19 47.50	-39 53.4	17.3	-1.02	-	2.1	6.9/14.7	29946
1984 UW	1998 07 14.6	19 35.07	-22 42.4	16.5	-1.00	-	0.1	0.4/14.5	21969	1994 VT ₆	1998 07 17.7	19 47.65	-24 10.1	17.5	-0.89	-	2.9	1.0/17.2	30472
1990 QE	1998 07 14.6	19 35.24	-31 02.0	16.0	-1.28	+	6.6	4.3/14.3	27728	1982 UZ ₂	1998 07 17.7	19 47.81	+10 58.1	16.7	-0.71	-	3.6	11.0/24.8	30893
6012 P-L	1998 07 14.6	19 35.28	-17 58.7	19.5	-0.79	-	1.4	1.0/15.2	24585	1974 QF	1998 07 17.7	19 47.83	-18 11.3	16.9	-1.05	-	1.2	1.5/18.2	26165
(7769)	1998 07 14.7	19 35.39	-26 55.2	15.6	-1.01	-	6.3	2.4/13.7	30262	1994 PQ ₁₁	1998 07 17.8	19 48.32	-22 41.2	17.0	-0.96	-	1.2	0.6/17.7	26422
1992 EQ ₁₄	1998 07 14.7	19 35.41	-17 35.8	16.4	-0.89	-	1.8	1.4/15.3	30091	(8335)	1998 07 17.9	19 48.58	-24 42.3	16.6	-1.10	-	0.7	1.8/17.5	31351
1991 UG ₃	1998 07 14.8	19 35.86	-24 12.2	16.1	-1.07	-	0.8	1.2/14.5	30470	4181 T-3	1998 07 17.9	19 48.75	-22 24.0	17.2	-0.92	-	5.0	0.7/17.7	21978
1997 GH ₂₇	1998 07 14.8	19 36.06	-26 30.3	18.2	-1.04	-	2.2	1.8/14.2	29648	1997 AR ₁₆	1998 07 18.0	19 48.80	-46 51.8	17.0	-1.20	+	0.8	8.4/14.9	30293
1988 VY ₂	1998 07 14.9	19 36.21	-35 34.1	15.7	-0.92	-	4.5	4.7/12.4	30090	1996 BQ ₃	1998 07 18.0	19 49.03	-25 43.8	17.5	-0.89	-	2.5	1.4/17.3	30292
4638 P-L	1998 07 14.9	19 36.37	-20 22.1	18.4	-0.93	-	2.9	0.5/15.1	29948	3039 T-3	1998 07 18.1	19 49.33	-18 27.8	18.0	-0.92	-	3.4	1.0/18.6	26417
1995 YV ₂₂	1998 07 14.9	19 36.48	-20 11.4	19.2	-0.81	-	2.2	0.4/15.2	30473	1995 YB ₁	1998 07 18.2	19 49.51	-20 11.7	16.6	-0.81	-	3.8	0.3/18.4	30666
1994 TO ₂	1998 07 14.9	19 36.62	-37 42.5	16.3	-1.06	-	3.0	6.4/12.3	29922	1981 EG ₈	1998 07 18.2	19 49.83	-20 40.3	18.8	-1.01	-	0.7	0.2/18.3	26916
(7583)	1998 07 15.0	19 36.64	-13 45.0	16.3	-0.80	-	5.2	2.7/16.4	29597	(7648)	1998 07 18.2	19 49.93	-25 52.9	17.0	-1.18	-	2.7	2.1/17.6	29899
1990 UJ ₂	1998 07 15.1	19 37.07	-18 30.0	16.1	-0.92	-	4.5	1.3/15.6	29942	1995 QV ₉	1998 07 18.4	19 50.33	-32 40.7	18.9	-1.16	-	0.2	5.5/16.9	31141
1997 GX ₁₈	1998 07 15.1	19 37.35	-20 22.9	19.9	-0.96	-	1.8	0.4/15.3	30094	1994 PD ₂	1998 07 18.4	19 50.64	-36 35.1	16.6	-1.21	+	3.7	7.2/17.0	30783
1980 FH ₅	1998 07 15.2	19 37.75	-40 28.8	17.3	-1.19	-	0.4	6.4/12.8	28882	1995 WV ₃	1998 07 18.6	19 51.19	-16 32.2	16.6	-0.92	+	1.4	1.3/19.1	26747
1982 UE ₂	1998 07 15.4	19 38.32	-30 46.5	16.4	-1.15	-	4.7	4.9/13.8	29654	1981 EN ₇	1998 07 18.6	19 51.28	-29 21.0	17.9	-0.97	+	0.3	3.0/17.5	26916
1981 EX ₄₀	1998 07 15.4	19 38.69	-35 13.8	19.4	-0.99	-	0.3	4.5/13.8	26922	1994 SZ ₉	1998 07 18.6	19 51.33	-25 38.9	19.8	-0.93	-	2.4	1.8/17.9	29621
(7853)	1998 07 15.6	19 39.01	-28 54.2	17.7	-0.92	-	1.2	2.2/14.6	30444	1993 OR ₉	1998 07 18.7	19 51.53	-18 49.5	17.8	-0.85	-	3.0	0.7/19.1	29919
1997 ES ₄₀	1998 07 15.6	19 39.40	-14 41.2	18.1	-1.02	-	2.6	2.8/16.6	30473	1982 UA ₇	1998 07 18.7	19 51.69	-38 42.2	15.7	-1.11	-	7.2	7.1/14.6	30893
2092 T-2	1998 07 15.7	19 39.67	-13 42.0	18.8	-0.90	-	2.9	2.7/16.9	26423	1995 SU	1998 07 18.7	19 51.71	-24 39.0	16.9	-1.11	0.0	1.7/18.3	29946	
1997 EL ₁₁	1998 07 15.8	19 40.12	-44 35.1	16.5	-1.13	-	6.6	9.8/10.7	30094	1994 PB ₁₄	1998 07 18.8	19 52.08	-14 04.2	17.4	-0.87	-	3.4	2.4/20.0	29663
1991 PU ₁₆	1998 07 15.8	19 40.30	-27 48.1	16.6	-1.04	-	2.4	3.0/15.0	27120	(7534)	1998 07 18.8	19 52.11	-25 13.7	14.1	-0.73	-	8.7	2.4/17.8	29295
1997 GX ₂₄	1998 07 15.9	19 40.22	-21 05.0	17.4	-0.81	-	2.6	0.1/16.0	30085	1993 EL	1998 07 18.8	19 52.20	-26 19.3	18.3	-1.04	-	8.4	2.0/17.7	29136
1997 FQ ₄	1998 07 15.9	19 40.44	-17 16.9	16.8	-0.82	-	1.0	1.4/16.5	30293	1990 UJ ₁	1998 07 18.9	19 52.36	-01 28.4	17.7	-0.88	-	0.6	6.7/21.6	29942
1988 RP ₁₂	1998 07 15.9	19 40.63	-17 37.5	18.8	-0.53	-	1.6	0.7/16.6	28085	1997 BG ₁	1998 07 18.9	19 52.45	-15 23.8	17.8	-0.92	-	4.9	1.9/20.0	30473
1981 EL ₁₆	1998 07 16.0	19 40.72	-31 33.1	17.2	-1.17	+	1.8	5.3/15.1	29608	1987 YS ₁	1998 07 19.0	19 52.78	-09 52.9	17.4	-0.89	-	5.8	3.8/21.2	30288
(7937)	1998 07 16.0	19 40.81	-22 35.6	17.2	-0.97	-	1.8	0.4/15.9	30745	1990 WS ₄	1998 07 19.0	19 52.81	-17 37.8	17.0	-0.89	-	3.3	1.2/19.6	27934
1982 UR ₁₀	1998 07 16.0	19 40.85	-24 00.9	17.8	-0.86	-	2.0	0.8/15.7	27931	1997 GB ₂₃	1998 07 19.0	19 52.87	-26 10.5	19.4	-0.97	-	3.3	1.7/18.1	29934
3289 T-2	1998 07 16.1	19 41.15	-09 17.9	16.9	-0.79	-	3.5	3.9/18.2	29669	1995 VM	1998 07 19.1	19 53.12	-41 14.0	16.3	-1.11	-	5.6	8.1/15.0	26423
1197 T-2	1998 07 16.2	19 41.55	-17 35.6	16.6	-0.88	-	1.9	2.0/16.8	24236	1997 FT ₁	1998 07 19.1	19 53.30	-21 26.1	17.8	-0.94	-	7.2	0.2/19.0	29647
1993 LF ₂	1998 07 16.2	19 41.63	-27 08.9	15.9	-0.91	-	7.1	2.4/15.1	25531	1994 AJ ₃	1998 07 19.2	19 53.92	-16 46.0	19.1	-0.63	-	2.2	0.9/20.0	27456
1982 UU ₅	1998 07 16.2	19 41.86	-18 23.5	15.5	-0.95	-	0.1	1.3/16.6	29940	1995 VG ₁₁	1998 07 19.2	19 53.94	-31 43.1	19.1	-1.02	-	3.9	3.7/17.4	26407
1981 EO ₁₉	1998 07 16.3	19 42.30	-09 19.7	18.5	-0.79	-	2.8	3.8/18.3	29609	1991 YV	1998 07 19.3	19 54.11	-23 29.0	16.3	-0.94	-	6.8	0.9/18.8	30470
1979 MA ₄	1998 07 16.4	19 42.27	-15 07.9	16.4	-0.76	-	2.2	2.2/17.4	27725	1993 QQ ₄	1998 07 19.3	19 54.19	-18 52.2	17.1	-0.80	-	2.6	0.6/19.7	29920
2120 T-1	1998 07 16.4	19 42.37	-19 25.8	17.3	-0.98	-	4.0	0.9/16.7	29142	1997 FB ₄	1998 07 19.5	19 54.88	-37 00.7	17.9	-0.99	-	1.5	5.8/16.9	30462
3013 T-2	1998 07 16.5	19 42.74	-16 06.7	17.6	-0.91	-	3.3	1.9/17.3	17836	1981 EF ₄₅	1998 07 19.5	19 54.91	-23 46.6	18.7	-0.87	-	2.6	1.0/19.0	21968
1964 VL ₁	1998 07 16.5	19 42.90	-27 47.8	17.5	-1.01	-	3.5	2.2/15.5	30647	(7570)	1998 07 19.5	19 55.14	-23 53.0	17.2	-1.03	-	2.3	1.1/19.1	29594
1171 T-2	1998 07 16.6	19 43.11	-35 46.8	17.8	-1.00	-	0.5	5.3/14.7	31269	1991 VR ₁	1998 07 19.6	19 55.36	-24 00.8	16.8	-1.09	-	1.0	1.2/19.2	26758
1995 SN ₃	1998 07 16.6	19 43.14	-28 27.2	16.0	-1.04	+	0.9	3.8/15.8	29946	1989 GJ ₄	1998 07 19.7	19 55.95	-15 30.6	17.6	-0.95	-	2.1	1.9/20.6	29912
1994 PH ₂₂	1998 07 16.6	19 43.15	-18 18.1	18.2	-0.93	-	2.8	1.1/17.1	29945	5036 T-2	1998 07 19.8	19 56.31	-12 41.1	17.1	-0.94	-	0.1	3.0/21.0	26583
1987 RB ₁	1998 07 16.8	19 44.03	-19 05.3	17.2	-0.80	-	2.1	0.9/17.2	29655	5200 T-2	1998 07 19.9	19 56.73	-21 45.3	17.0	-0.90	-	0.2	0.3/19.8	29949
(7632)	1998 07 16.8	19 44.10	-15 35.1	16.8	-1.076														

(7490)	1998 07 20.4	19 58.44 -22 58.5 18.9	-1.12 - 2.5	1.0/20.1	29088
1997 GR ₃₆	1998 07 20.5	19 58.77 -26 37.2 18.5	-0.99 - 3.9	2.0/19.4	30474
1971 FB	1998 07 20.5	19 58.90 +15 09.7 19.1	-0.90 - 4.7	11.4/29.2	22482
1988 RX ₁₂	1998 07 20.5	19 59.12 -05 37.9 17.0	-0.78 - 2.8	5.2/23.3	30090
1995 XY ₄	1998 07 20.5	19 59.18 -16 55.5 19.5	-0.91 - 4.0	1.3/21.3	30082
1981 EO ₄	1998 07 20.6	19 59.43 -19 24.9 18.0	-0.92 + 1.0	0.4/20.8	22696
(7405)	1998 07 20.7	19 59.77 -29 38.9 15.1	-0.92 - 5.9	3.7/18.9	28827
1992 SS ₁₆	1998 07 20.7	19 59.89 -19 21.5 17.3	-1.07 - 3.1	0.6/21.0	29660
4179 T-3	1998 07 20.8	20 00.12 -24 47.1 18.4	-0.55 - 1.9	0.8/20.0	23792
1997 GQ ₂₂	1998 07 20.8	20 00.17 -00 32.7 17.7	-0.76 - 1.1	6.9/24.0	31114
1981 ET ₃₅	1998 07 20.9	20 00.33 -06 42.4 19.7	-0.80 - 1.3	4.7/23.2	26921
1988 AX ₁	1998 07 20.9	20 00.45 -24 06.8 17.5	-1.05 + 0.7	1.2/20.5	21971
1988 RY ₂	1998 07 20.9	20 00.45 -07 17.7 17.6	-0.77 - 3.1	4.5/23.4	29912
1993 FZ ₂₁	1998 07 21.0	20 01.07 -24 57.6 18.2	-1.00 - 2.3	1.6/20.3	29662
1991 WD	1998 07 21.1	20 01.14 -30 10.5 18.0	-0.98 - 5.4	3.0/19.1	30470
1997 FB ₅	1998 07 21.1	20 01.21 -24 28.5 17.9	-0.99 - 2.5	1.6/20.5	30690
1996 DQ ₁	1998 07 21.2	20 01.69 -28 22.0 18.6	-0.86 - 1.7	2.2/19.9	27113
1994 GB ₉	1998 07 21.2	20 01.76 -16 49.9 17.1	-1.03 - 3.8	1.6/21.9	32051
(8425)	1998 07 21.4	20 02.71 -16 35.5 16.2	-1.03 - 4.6	1.6/22.2	31371
1997 CR ₂₁	1998 07 21.4	20 02.77 -20 22.2 18.1	-1.01 - 3.8	0.0/21.5	29667
1997 CC ₂₀	1998 07 21.5	20 03.01 -19 16.3 17.6	-0.89 - 4.4	0.4/21.8	30671
(7565)	1998 07 21.6	20 03.41 -24 53.1 17.8	-0.87 - 2.0	1.4/20.9	29592
(7567)	1998 07 21.6	20 03.59 -28 02.9 16.8	-1.14 - 2.7	3.1/20.4	29593
4021 T-3	1998 07 21.7	20 03.60 -25 30.4 18.9	-1.07 - 4.5	2.3/20.8	26417
1996 AX	1998 07 21.7	20 03.82 -22 21.3 18.0	-0.87 - 4.0	0.6/21.4	26748
1063 T-2	1998 07 21.8	20 03.91 -17 31.1 18.0	-1.01 - 3.1	1.0/22.3	30474
1997 BC ₉	1998 07 21.9	20 04.52 -16 34.6 14.8	-0.79 - 6.8	2.1/22.8	32057
1988 VG ₄	1998 07 22.0	20 05.13 -16 20.2 16.5	-0.82 - 1.1	1.2/22.7	24760
1984 UJ ₁	1998 07 22.2	20 05.80 -32 26.8 17.4	-1.17 - 3.7	5.6/19.9	30468
1983 TX	1998 07 22.2	20 05.85 -05 41.9 17.1	-0.77 - 3.0	4.5/25.0	27931
1995 VG ₁₀	1998 07 22.3	20 05.90 -18 49.8 19.4	-0.99 - 3.3	0.6/22.6	30784
1997 BP ₃	1998 07 22.3	20 06.22 -16 21.1 16.9	-1.00 - 6.2	1.6/23.2	29947
1993 BL ₁₂	1998 07 22.3	20 06.31 -24 58.3 18.5	-1.05 - 4.1	1.7/21.5	26421
1994 SO ₅	1998 07 22.3	20 06.33 -19 57.7 18.3	-0.89 - 3.1	0.1/22.4	30472
1989 GN ₄	1998 07 22.3	20 06.34 -16 35.8 16.8	-0.94 - 2.0	1.5/23.0	23972
1993 FE ₁₂	1998 07 22.3	20 06.36 -22 07.2 17.0	-1.00 - 4.2	0.7/22.0	26564
1983 AA	1998 07 22.4	20 06.78 -17 12.2 17.7	-1.24 + 3.4	1.1/22.8	21969
1988 PX ₂	1998 07 22.7	20 07.66 -06 00.5 16.8	-0.77 - 3.8	4.7/25.6	23133
1997 AX ₁₇	1998 07 22.9	20 08.48 -26 12.3 16.5	-1.13 - 4.2	2.9/21.8	29947
1994 EA ₂	1998 07 23.0	20 08.93 -08 36.0 19.2	-1.04 - 4.6	4.2/25.3	26174
1981 KJ	1998 07 23.0	20 08.94 -44 35.3 16.4	-1.03 - 2.6	8.8/18.0	30893
1990 VC ₁₅	1998 07 23.0	20 08.98 -15 08.0 16.1	-0.88 - 3.4	1.8/24.0	27934
1992 EZ ₇	1998 07 23.0	20 09.02 -07 20.2 18.2	-0.87 - 5.1	4.3/25.7	29943
1981 EX ₃₃	1998 07 23.0	20 09.14 -21 53.6 18.6	-0.91 - 0.2	0.6/22.8	26921
1997 CF ₃	1998 07 23.1	20 09.12 -13 18.9 17.7	-0.96 - 5.4	2.9/24.5	32057
2614 P-L	1998 07 23.4	20 10.53 -14 51.9 18.7	-0.89 - 3.5	2.2/24.4	29948
2184 T-1	1998 07 23.4	20 10.54 -11 49.6 19.3	-0.94 - 4.9	3.2/25.1	29650
(7877)	1998 07 23.6	20 11.27 -29 13.9 18.3	-0.99 - 1.1	2.8/22.1	30638
1991 NP ₂	1998 07 23.6	20 11.33 -24 23.1 15.6	-1.08 + 2.2	2.2/23.1	29659
2100 P-L	1998 07 23.6	20 11.50 +05 31.3 18.5	-0.77 - 4.1	9.1/29.7	30797
2072 P-L	1998 07 23.7	20 11.62 -28 55.2 19.5	-1.15 - 1.8	3.4/22.3	30094

1995 VU ₁	1998 07 23.7	20 11.72 -36 03.2 16.6	-1.02 - 5.2	5.4/20.3	30292
1986 TW ₉	1998 07 23.7	20 11.84 -19 57.4 15.8	-1.03 + 0.2	9.9/04.0	26579
1988 VT ₁	1998 07 23.9	20 12.44 -05 11.9 17.8	-0.76 - 3.8	4.4/26.9	28884
1994 GM ₁	1998 07 23.9	20 12.44 -24 41.1 15.9	-0.97 - 6.0	2.3/22.9	26191
(7639)	1998 07 24.0	20 12.67 -19 24.2 18.1	-0.79 - 2.6	0.2/24.1	29896
2258 T-2	1998 07 24.0	20 12.72 -17 54.1 17.4	-0.91 - 3.7	0.8/24.4	30696
1993 BD ₄	1998 07 24.1	20 13.34 -14 06.7 16.0	-0.54 - 4.0	1.3/25.5	31103
1994 SF ₁₂	1998 07 24.1	20 13.49 -21 09.1 17.5	-0.90 - 3.3	0.5/23.9	29945
1324 T-2	1998 07 24.2	20 13.73 -29 29.9 16.2	-1.06 - 2.1	4.5/22.6	31436
1994 UK ₅	1998 07 24.2	20 13.87 -24 24.0 17.5	-0.91 - 3.2	1.5/23.4	29945
1995 WQ ₇	1998 07 24.2	20 13.92 -21 14.7 16.9	-1.05 - 3.1	0.6/24.0	26411
1994 GL ₉	1998 07 24.3	20 13.94 -13 39.2 17.2	-1.03 - 3.1	2.7/25.5	29663
1991 UE ₁	1998 07 24.3	20 14.00 -21 59.4 17.5	-1.07 - 3.0	0.8/24.0	26562
2592 P-L	1998 07 24.3	20 14.06 -12 04.1 17.2	-0.91 - 4.7	3.3/26.0	29668
6626 P-L	1998 07 24.3	20 14.26 -24 03.2 17.5	-1.08 - 2.5	1.8/23.7	29321
1994 UK ₁	1998 07 24.4	20 14.39 -30 42.5 14.8	-0.85 - 0.5	5.5/22.5	30081
1981 EX ₈	1998 07 24.4	20 14.59 -18 59.1 17.1	-0.95 - 0.7	0.4/24.6	26916
1995 UX ₅	1998 07 24.4	20 14.65 -19 03.6 16.5	-1.06 - 0.7	0.3/24.6	30093
(7680)	1998 07 24.4	20 14.69 -04 53.0 16.4	-0.88 - 2.3	5.9/27.2	29907
1995 VP ₁	1998 07 24.5	20 14.68 -26 21.0 16.2	-1.02 - 7.6	3.2/23.0	29626
1981 EF ₆	1998 07 24.5	20 14.78 -19 47.8 19.4	-0.88 - 0.6	0.0/24.5	26915
1996 AU ₁	1998 07 24.5	20 14.85 -19 36.7 17.4	-0.81 - 3.2	0.1/24.6	29946
1264 T-2	1998 07 24.5	20 14.89 -22 48.8 17.7	-0.97 - 2.6	1.1/24.0	24578
1995 ST	1998 07 24.5	20 14.96 -28 40.6 16.4	-1.17 + 0.3	4.0/23.3	29946
1991 RH ₄₁	1998 07 24.5	20 15.02 -18 48.5 16.8	-0.99 - 4.4	0.4/24.8	29659
1988 BY ₂	1998 07 24.5	20 15.05 -28 02.1 17.2	-1.05 + 0.2	3.0/23.4	29655
1991 GB ₃	1998 07 24.6	20 15.13 -20 58.1 18.1	-0.80 - 2.5	0.3/24.4	30470
1991 KA	1998 07 24.6	20 15.14 -22 07.8 16.0	-1.02 - 6.2	1.1/24.1	28886
1996 AB ₁	1998 07 24.7	20 15.58 -20 21.9 16.9	-0.86 - 3.8	0.2/24.6	30292
2558 P-L	1998 07 24.7	20 15.66 -27 11.5 17.8	-0.86 - 2.4	2.2/23.3	27732
1994 PO	1998 07 24.7	20 15.72 -25 54.5 16.3	-1.11 + 1.5	2.4/24.0	29318
1981 EH ₃₁	1998 07 24.8	20 15.89 -09 17.2 20.0	-0.93 - 5.0	3.9/27.0	21967
1997 FR ₁	1998 07 24.8	20 16.19 -27 51.4 16.3	-1.03 - 5.8	2.8/23.1	30094
1995 YN ₁₁	1998 07 24.9	20 16.23 -16 00.1 18.4	-0.82 - 3.6	1.4/25.7	31545
1993 TX ₁₄	1998 07 24.9	20 16.28 -18 58.4 17.6	-0.81 - 3.1	0.3/25.1	27106
1997 EX ₄₅	1998 07 24.9	20 16.55 -20 48.8 17.0	-0.95 - 4.2	0.4/24.8	29646
1996 BY ₁	1998 07 24.9	20 16.64 -30 07.6 16.3	-1.04 - 0.3	4.1/23.3	29113
1997 ER ₂	1998 07 25.0	20 16.72 -27 03.8 16.3	-1.07 - 4.2	3.0/23.6	29643
1989 WB ₃	1998 07 25.0	20 17.05 -32 47.2 17.1	-0.91 - 4.6	4.4/22.2	30076
1173 T-2	1998 07 25.0	20 17.11 -32 23.9 19.2	-0.96 - 1.3	4.1/22.8	22701
1995 WY ₄₁	1998 07 25.1	20 17.09 -16 56.0 17.0	-1.08 - 1.6	1.2/25.6	26582
1991 NB ₄	1998 07 25.1	20 17.11 -16 16.5 16.8	-1.06 - 1.9	1.4/25.7	32047
(7713)	1998 07 25.1	20 17.14 -17 12.5 18.4	-0.99 - 3.9	1.0/25.6	30072
(7357)	1998 07 25.1	20 17.25 -15 49.2 15.2	-0.90 - 6.1	2.0/26.0	32041
1995 SM ₃	1998 07 25.1	20 17.36 -28 58.5 18.4	-1.10 - 1.4	3.3/23.6	29664
1994 JT	1998 07 25.1	20 17.39 -10 20.2 18.5	-0.97 - 5.6	3.8/27.2	29945
1993 FL ₃₃	1998 07 25.2	20 17.65 -27 04.9 16.9	-1.05 - 4.1	3.1/23.7	23526
1997 ED ₈	1998 07 25.2	20 17.66 -24 51.3 19.4	-0.99 - 2.5	1.8/24.3	30786
1993 FL ₁₉	1998 07 25.3	20 17.83 -07 06.8 17.9	-0.81 - 7.5	5.2/28.5	29300
1978 VD ₅	1998 07 25.4	20 18.65 -18 02.9 18.7	-0.79 - 2.8	0.5/25.8	27118
1996 EX ₁	1998 07 25.5	20 18.66 -00 36.3 18.0	-0.72 - 4.2	5.4/29.8	30689

1991 FH	1998 07 25.5	20 18.80 +08 04.1 18.2	-0.73 - 2.7	7.7/01.0	30654	(7494)	1998 07 29.3	20 33.76 -13 21.2 16.2	-0.84 - 1.1	1.7/30.4	29088
1997 CF ₂₀	1998 07 25.5	20 19.04 -27 28.0 18.1	-1.12 - 1.4	3.1/24.3	29928	1992 DP ₈	1998 07 29.4	20 33.95 -03 45.2 16.1	-0.68 - 4.4	7.2/02.2	23861
1997 GT ₃₇	1998 07 25.6	20 19.19 -15 29.4 17.5	-1.00 - 3.6	1.8/26.4	29936	1607 T-2	1998 07 29.4	20 33.95 -27 39.6 17.7	-1.14 - 0.8	3.9/27.8	21978
1979 MQ ₈	1998 07 25.6	20 19.41 -18 29.0 18.1	-0.98 - 4.8	0.4/25.9	30779	1981 RF ₂	1998 07 29.4	20 34.21 -00 02.9 15.5	-0.80 + 0.3	6.5/02.0	32043
1993 ES	1998 07 25.7	20 19.40 -37 23.4 16.3	-1.15 + 0.5	7.2/23.1	26190	1997 GO ₆	1998 07 29.5	20 34.37 -18 53.6 18.4	-0.80 - 2.9	0.1/29.5	29948
1997 CM ₁₉	1998 07 25.9	20 20.49 -35 43.8 16.8	-0.93 - 8.4	6.9/21.6	32058	1988 SH ₂	1998 07 29.6	20 34.97 -24 04.1 15.5	-0.81 - 7.3	1.9/28.2	30288
1997 CX ₁₃	1998 07 25.9	20 20.63 -20 02.7 18.8	-0.95 - 6.4	0.2/25.9	29321	2821 P-L	1998 07 29.6	20 35.09 -19 23.1 16.4	-0.80 - 3.9	0.3/29.5	32091
(7609)	1998 07 26.0	20 20.91 -39 23.4 16.5	-1.08 - 1.7	6.7/22.3	29603	1993 SK ₃	1998 07 29.6	20 35.12 -18 56.8 18.0	-0.79 - 2.4	0.1/29.6	30899
1997 GZ ₇	1998 07 26.2	20 21.81 -40 00.1 18.6	-0.96 - 2.9	6.4/21.8	30094	(7488)	1998 07 29.7	20 35.50 -08 21.5 16.8	-1.06 -21.4	4.6/02.3	29087
1980 FU	1998 07 26.3	20 21.80 -28 12.0 17.0	-1.16 - 0.1	4.0/25.0	29653	1997 EY ₄₅	1998 07 29.7	20 35.52 -22 20.2 17.6	-1.01 - 4.4	1.3/29.0	30094
1995 UT ₄	1998 07 26.3	20 21.86 -40 05.6 17.3	-1.12 - 4.1	6.9/21.7	29946	(7825)	1998 07 29.9	20 35.90 +10 54.8 17.5	-0.92 - 4.2	10.5/05.6	30438
(7855)	1998 07 26.4	20 22.23 -02 09.3 17.4	-0.83 - 5.3	5.9/30.5	30445	1997 AS ₁₂	1998 07 29.9	20 35.97 -24 17.0 17.0	-0.95 - 8.4	2.4/28.4	31984
1985 CY ₁	1998 07 26.4	20 22.30 -09 32.8 20.1	-0.71 - 4.0	2.4/28.7	26924	1990 TW ₁₁	1998 07 29.9	20 36.10 -21 15.3 18.3	-1.00 - 2.9	1.0/29.4	24912
1981 EO ₄₃	1998 07 26.4	20 22.43 -23 58.6 20.1	-0.87 - 2.0	1.5/25.6	26923	7082 P-L	1998 07 29.9	20 36.22 +22 26.3 18.0	-0.96 - 5.6	19.5/11.9	22087
(7647)	1998 07 26.5	20 22.88 -21 28.7 17.4	-0.86 - 3.8	0.7/26.1	29899	1995 WJ ₅	1998 07 29.9	20 36.25 -07 44.6 15.5	-0.94 - 0.5	4.5/32.0	32054
1997 AW ₁₇	1998 07 26.7	20 23.38 -21 59.2 18.6	-1.02 - 4.0	1.0/26.2	29635	1993 FN ₁	1998 07 29.9	20 36.34 -12 34.9 15.2	-0.77 - 8.9	2.7/31.7	32049
1995 XH ₃	1998 07 26.8	20 24.18 -12 56.8 20.3	-0.89 - 3.9	2.2/28.2	29924	6586 P-L	1998 07 30.0	20 36.32 -02 39.1 17.8	-0.74 - 8.0	7.1/03.5	17975
5078 T-3	1998 07 26.9	20 24.28 -32 54.3 16.7	-0.88 - 4.4	4.5/23.8	30294	1991 UA	1998 07 30.0	20 36.47 -21 04.1 17.3	-0.72 - 2.2	0.7/29.5	25215
1973 AW ₃	1998 07 27.0	20 24.70 -29 22.7 16.1	-0.93 - 4.1	3.4/24.9	30892	1981 EV ₂	1998 07 30.1	20 36.78 -06 00.2 17.6	-0.82 - 1.4	4.2/01.7	26915
1997 HV ₈	1998 07 27.0	20 24.98 -21 36.4 19.0	-0.82 - 3.0	0.7/26.6	30463	1995 UC ₇	1998 07 30.1	20 36.87 -25 08.4 15.3	-0.93 - 7.5	2.9/28.5	29139
1991 GM ₉	1998 07 27.1	20 24.92 -18 56.4 17.6	-0.78 - 3.1	0.1/27.2	30091	4896 P-L	1998 07 30.1	20 36.98 -19 28.8 17.3	-0.80 - 4.0	0.3/30.0	30914
1980 TA ₄	1998 07 27.1	20 25.05 -29 48.0 16.8	-1.10 - 2.6	4.1/25.1	26418	(7693)	1998 07 30.2	20 37.19 -38 33.7 17.5	-1.07 - 4.4	6.5/25.4	30067
1991 GJ ₁₀	1998 07 27.1	20 25.38 -33 35.6 18.2	-0.88 - 2.8	4.3/24.2	30077	1997 EU ₂	1998 07 30.3	20 37.48 -20 33.1 17.5	-0.99 - 4.6	0.7/29.9	29929
1993 OK ₉	1998 07 27.2	20 25.75 -18 48.2 17.1	-0.84 - 3.9	0.1/27.4	31537	1995 XP ₂	1998 07 30.3	20 37.70 -13 46.1 16.7	-1.02 - 3.8	2.2/31.3	32054
1991 TQ ₂	1998 07 27.2	20 25.79 -16 41.3 18.4	-1.02 - 2.7	0.9/27.8	26420	1955 UN ₁	1998 07 30.4	20 38.01 -42 09.7 15.3	-1.15 - 1.4	12.3/24.6	29939
1988 RO ₄	1998 07 27.3	20 25.90 -08 58.2 17.7	-0.77 - 5.2	3.3/29.7	29656	1990 SY	1998 07 30.4	20 38.20 -25 33.4 15.2	-1.03 + 2.0	3.3/29.4	30289
1984 HJ ₁	1998 07 27.3	20 26.02 -23 22.1 15.8	-1.00 - 4.9	2.0/26.5	29654	1995 SB ₂₇	1998 07 30.5	20 38.47 -23 18.8 16.5	-1.00 - 2.6	2.5/29.6	28889
1993 FY ₄₃	1998 07 27.3	20 26.15 -22 34.2 16.5	-0.94 - 2.2	1.5/26.8	30471	1993 QF ₃	1998 07 30.6	20 38.70 -17 06.0 17.6	-0.77 - 3.4	0.4/30.9	30092
(7845)	1998 07 27.4	20 26.32 -20 52.5 17.9	-0.76 - 5.3	0.4/27.0	30443	1994 LS	1998 07 30.7	20 39.07 -21 09.6 17.4	-1.02 -14.4	1.1/29.9	25532
(7600)	1998 07 27.4	20 26.45 -05 13.6 17.3	-0.85 - 2.6	5.0/30.3	29601	1994 GN	1998 07 30.7	20 39.31 -27 53.5 15.0	-0.99 - 5.6	4.6/28.5	28852
1991 PG ₁₇	1998 07 27.7	20 27.59 -20 47.4 15.1	-1.20 + 5.6	0.8/27.6	29135	1990 VT ₆	1998 07 30.8	20 39.56 -13 54.7 17.7	-0.88 - 4.4	1.7/31.8	25649
1988 SA ₃	1998 07 27.7	20 27.66 -39 07.7 20.0	-0.65 - 0.8	3.6/23.5	15561	1981 US ₂₂	1998 07 30.8	20 39.86 -28 27.2 16.7	-1.02 - 6.7	4.7/28.3	29940
1981 EQ ₃₉	1998 07 27.7	20 27.68 -18 30.6 19.4	-0.84 - 2.9	0.2/27.9	29910	(7657)	1998 07 30.9	20 39.82 -22 49.2 17.0	-0.87 - 3.2	1.6/29.9	29901
1997 BO ₉	1998 07 27.7	20 27.72 -16 08.9 17.6	-1.00 - 5.7	1.2/28.4	30786	1991 VY ₄	1998 07 30.9	20 39.82 -21 22.2 17.3	-0.98 - 4.9	1.1/30.2	30290
1991 TU ₅	1998 07 27.8	20 27.69 -22 45.5 19.2	-1.03 - 2.5	1.4/27.1	29915	1996 ED ₉	1998 07 31.1	20 40.66 -08 15.3 17.8	-0.72 - 6.5	3.2/02.8	31387
1992 UH ₃	1998 07 27.8	20 27.95 -29 36.7 17.1	-1.20 - 2.7	4.6/25.8	29661	1995 WL ₄	1998 07 31.2	20 41.38 -17 23.4 18.4	-0.95 - 4.8	0.3/31.5	29627
1989 WC ₃	1998 07 28.0	20 28.69 -14 25.7 17.0	-1.06 - 3.1	2.0/28.9	30091	1994 TA ₁	1998 07 31.3	20 41.6 -77 45.4 17.6	-3.56 + 3.3	20.9/14.0	30454
1991 GQ	1998 07 28.2	20 29.57 +03 51.0 17.5	-0.73 - 2.2	6.5/02.4	30895	1981 EZ ₃₂	1998 07 31.3	20 41.61 -04 42.2 18.9	-0.76 - 4.2	4.3/03.6	22271
1993 FP ₂₃	1998 07 28.4	20 30.39 -19 07.9 17.0	-1.02 - 2.8	0.1/28.4	26400	1992 DD ₄	1998 07 31.3	20 41.82 -15 07.0 19.3	-0.86 - 4.5	1.1/01.1	31381
1995 US ₈	1998 07 28.4	20 30.51 -37 18.4 15.2	-1.06 - 6.7	8.0/23.8	29319	6585 P-L	1998 07 31.5	20 42.15 -16 53.8 17.6	-0.79 - 3.9	0.5/31.8	30095
1997 GY ₇	1998 07 28.6	20 30.87 -20 09.8 18.4	-0.90 - 3.6	0.4/28.4	30473	2239 T-3	1998 07 31.6	20 42.58 -20 17.6 17.9	-0.94 - 2.1	0.7/31.2	24405
1996 XZ ₂₆	1998 07 28.6	20 31.06 -23 14.0 18.8	-1.06 - 3.0	1.6/27.8	30786	(7719)	1998 07 31.6	20 42.75 -15 51.8 17.9	-0.84 - 3.7	0.8/01.2	30073
1993 NV	1998 07 28.7	20 31.47 -17 45.8 16.9	-0.86 - 2.9	0.4/29.0	30471	1993 BP ₃	1998 07 31.6	20 42.93 -33 46.5 17.4	-1.38 + 2.7	5.5/29.5	29661
1995 SA ₁	1998 07 28.8	20 31.65 +07 28.3 18.5	-1.08 + 2.2	9.5/01.8	26568	1993 FX ₉	1998 07 31.7	20 42.98 -22 35.7 16.4	-0.96 - 4.5	1.6/30.7	29617
1997 AM ₇	1998 07 28.8	20 31.85 -21 20.3 18.3	-1.09 - 2.3	1.0/28.4	31144	1997 KR ₃	1998 07 31.7	20 43.17 -21 43.6 16.3	-0.82 - 5.5	1.2/30.9	30474
1981 EZ ₂₆	1998 07 28.9	20 32.15 -17 09.5 18.8	-0.95 - 3.1	0.6/29.3	26920	1990 RV ₃	1998 07 31.7	20 43.17 -23 25.5 16.5	-0.90 - 0.7	2.7/30.7	25426
1987 ST ₁₇	1998 07 28.9	20 32.16 -02 19.9 16.2	-0.92 - 1.8	7.4/01.1	23868	1991 LB	1998 07 31.8	20 43.43 -07 01.2 15.9	-0.87 - 2.8	5.9/03.0	32047
1994 RN ₇	1998 07 28.9	20 32.32 -22 06.0 18.9	-0.91 - 2.4	1.1/28.3	24233	1993 FN ₂₈	1998 07 31.8	20 43.78 -21 30.4 18.8	-0.99 - 2.6	1.2/31.2	29662
1993 MZ	1998 07 28.9	20 32.32 -35 24.2 16.3	-1.15 + 2.3	7.3/26.4	29137	1982 VN ₃	1998 07 31.9	20 43.74 -22 05.7 19.1	-0.97 - 4.9	1.5/31.0	24227
1981 EO	1998 07 29.1	20 33.12 -41 29.0 17.1	-1.32 + 3.3	9.6/26.3	27302	(7946)	1998 07 31.9	20 43.89 -07 18.2 16.8	-0.94 - 3.5	4.6/03.0	30746
1989 UX ₅	1998 07 29.3	20 33.67 -22 50.1 17.8	-0.54 - 2.2	0.8/28.4	27454	1997 EX ₂₅	1998 07 31.9	20 44.03 -17 35.7 18.6	-0.99 - 4.8	0.2/01.1	29929

1980 FR ₂	1998 08 01.2	20 45.03 -11 01.3 17.5	-0.91 - 4.7	2.6/02.9	28610	(7678)	1998 08 04.2	20 56.55 -25 24.0 17.6	-0.89 - 0.9	2.7/02.5	29906
1990 FL	1998 08 01.2	20 45.15 +04 13.7 16.8	-0.89 -13.3	8.5/08.9	26189	1995 SD ₄	1998 08 04.2	20 56.92 -07 46.9 16.6	-0.89 - 3.1	5.2/06.4	25966
1998 KD ₅	1998 08 01.2	20 45.24 -34 15.7 17.5	-0.91 - 3.1	5.6/28.4	32032	1991 TH ₆	1998 08 04.3	20 56.98 -12 01.2 17.5	-0.94 - 2.9	2.5/05.5	29915
1993 SG ₅	1998 08 01.3	20 45.47 -17 43.1 18.5	-0.75 - 3.3	0.1/01.4	28888	1988 TL ₁	1998 08 04.3	20 57.01 -07 52.2 16.4	-0.97 - 4.1	4.2/06.5	30780
1994 PY ₂₅	1998 08 01.5	20 46.21 -18 24.3 16.5	-0.90 - 4.2	0.2/01.4	26759	1995 VP ₁₇	1998 08 04.4	20 57.55 -21 03.5 19.6	-0.98 - 4.0	1.5/03.6	29627
(7707)	1998 08 01.6	20 46.56 -16 50.6 16.9	-0.86 - 9.5	0.4/01.9	30071	1997 GR ₄	1998 08 04.4	20 57.57 -20 21.2 20.1	-0.95 - 3.6	1.1/03.7	29647
1995 UR ₃	1998 08 01.7	20 47.05 -07 37.9 17.4	-0.97 - 3.3	4.2/04.0	30472	1983 AC ₁	1998 08 04.5	20 57.67 -19 11.0 17.0	-1.02 -13.4	0.7/03.9	30287
1993 FV ₁₂	1998 08 01.8	20 47.18 -02 48.1 17.0	-0.74 -10.2	6.5/06.7	23523	1981 EA ₁₆	1998 08 04.5	20 58.04 -22 18.1 16.4	-1.15 + 0.2	2.5/03.7	29315
1991 PJ ₃	1998 08 01.8	20 47.28 -23 25.7 17.6	-1.09 - 2.5	2.2/31.7	30470	1993 FP ₁₀	1998 08 04.5	20 58.07 -16 57.1 17.6	-0.96 - 5.3	0.1/04.7	26564
1981 UD ₂	1998 08 01.9	20 47.64 +03 06.0 16.6	-0.86 - 1.8	7.9/06.4	30090	1981 EV ₂₈	1998 08 04.7	20 58.65 -00 43.5 18.3	-0.76 - 3.9	5.9/09.0	29940
1981 EQ ₇	1998 08 01.9	20 47.87 -17 35.1 18.6	-0.89 - 0.6	0.1/02.0	26916	(7755)	1998 08 04.7	20 58.65 -19 35.1 16.4	-0.79 - 3.8	0.8/04.2	30259
(7627)	1998 08 01.9	20 47.95 -24 12.5 16.6	-0.88 - 3.3	2.4/31.5	29893	1996 AL	1998 08 04.8	20 59.07 -24 18.1 18.4	-0.81 - 6.4	2.0/02.9	30689
1981 SE ₇	1998 08 01.9	20 47.96 -28 05.8 15.4	-0.92 - 4.9	4.1/30.4	20922	1991 TH ₂	1998 08 04.9	20 59.18 -14 43.4 15.9	-0.93 - 5.5	1.1/05.5	28886
1986 QQ ₁	1998 08 02.1	20 48.35 -22 39.1 17.1	-1.01 - 3.7	1.9/01.0	30090	(7485)	1998 08 04.9	20 59.36 -31 33.6 15.5	-0.91 - 7.2	5.1/31.7	29086
(7821)	1998 08 02.6	20 50.33 -22 02.4 17.0	-0.86 - 3.6	1.4/01.6	30436	1994 PV ₇	1998 08 04.9	20 59.49 -17 45.3 18.6	-0.87 - 4.1	0.3/04.8	31239
1997 BF ₁	1998 08 02.6	20 50.35 -17 53.5 19.3	-1.06 - 2.4	0.1/02.6	30690	3107 P-L	1998 08 04.9	20 59.57 +06 15.8 17.0	-0.80 - 3.3	9.8/11.0	29668
6054 P-L	1998 08 02.6	20 50.71 -11 40.8 17.8	-0.79 - 3.5	2.1/04.1	30914	1995 SH ₃₂	1998 08 04.9	20 59.61 -19 46.2 18.3	-1.11 - 3.1	1.1/04.4	29109
1997 AJ ₇	1998 08 02.7	20 50.78 -16 23.9 18.6	-1.01 - 3.7	0.5/03.0	29667	1987 JG	1998 08 04.9	20 59.62 -06 38.1 17.0	-0.97 - 2.9	4.6/07.4	29316
1997 GQ ₂₇	1998 08 02.9	20 51.45 -24 52.6 15.4	-0.90 -10.6	2.9/31.7	32058	1995 YF	1998 08 05.0	20 59.73 -17 36.7 15.3	-0.82 - 6.3	0.3/04.9	32054
1995 WD ₃₂	1998 08 02.9	20 51.49 -17 13.1 18.9	-0.80 - 4.1	6.9/23.0	30784	1995 BW ₂	1998 08 05.1	21 00.19 -23 44.4 17.6	-0.88 - 2.2	2.0/03.6	28617
1979 MV ₈	1998 08 02.9	20 51.69 -13 54.6 18.3	-0.82 - 7.8	1.7/04.0	29092	1981 ER ₄	1998 08 05.2	21 00.38 -02 07.4 19.1	-0.77 - 3.6	4.5/09.0	26915
(7728)	1998 08 02.9	20 51.74 -21 07.0 15.7	-0.91 - 2.3	1.3/02.2	30252	1996 BX	1998 08 05.3	21 00.73 -20 24.0 17.9	-0.84 - 4.2	1.1/04.5	29947
1995 XS ₁	1998 08 03.0	20 52.13 -15 03.1 16.7	-1.00 - 3.8	1.1/03.6	30292	3276 T-2	1998 08 05.3	21 00.74 -18 19.4 18.3	-0.88 - 5.8	0.5/05.0	22088
5332 T-2	1998 08 03.1	20 52.36 -02 44.9 19.0	-0.79 - 2.3	4.6/06.5	20517	(7665)	1998 08 05.4	21 01.22 -18 51.2 16.6	-0.83 - 4.6	0.7/04.9	29903
1995 SY ₂	1998 08 03.1	20 52.37 -18 32.6 16.0	-1.03 - 4.6	0.5/02.9	29664	1997 JB ₁₃	1998 08 05.5	21 01.83 -16 36.2 18.4	-0.77 - 3.5	0.1/05.7	30788
1992 EX ₉	1998 08 03.2	20 52.62 -12 45.7 18.0	-0.91 - 4.5	1.7/04.3	30091	1981 EN ₂₂	1998 08 05.6	21 01.84 -20 33.6 18.3	-0.99 - 2.5	1.4/04.8	31224
1994 WQ ₃	1998 08 03.2	20 52.74 -08 48.0 15.7	-0.75 - 6.2	3.4/05.6	32052	4165 T-2	1998 08 05.6	21 01.88 -11 55.6 17.9	-0.86 - 5.2	1.8/06.9	29949
1988 RO ₂	1998 08 03.2	20 52.82 -19 53.8 17.2	-0.92 - 0.2	0.8/02.8	29941	1988 RD ₁	1998 08 05.6	21 02.12 -18 36.1 15.5	-0.92 - 0.2	0.6/05.3	29941
1995 WF ₃	1998 08 03.2	20 52.85 -33 49.3 18.3	-0.99 - 4.0	4.8/30.3	30093	1997 AG ₈	1998 08 05.6	21 02.21 -12 49.3 16.6	-1.02 - 2.5	1.9/06.6	30786
1989 EX	1998 08 03.2	20 52.99 -15 52.0 16.3	-0.88 - 8.2	0.6/03.7	31416	(7683)	1998 08 05.7	21 02.25 -24 36.9 16.5	-1.04 - 6.8	3.1/03.7	29907
1995 WN	1998 08 03.3	20 53.18 -24 59.1 16.3	-0.93 - 6.1	3.6/01.4	29946	1982 UD ₄	1998 08 05.9	21 03.31 -19 58.4 17.0	-0.94 - 3.2	1.5/05.2	20812
1976 GG ₃	1998 08 03.4	20 53.43 -43 58.9 15.6	-1.11 - 1.8	11.2/28.1	29939	1976 YG ₁	1998 08 06.0	21 03.58 -28 56.4 16.2	-1.02 - 4.3	4.8/03.1	29652
3051 T-1	1998 08 03.4	20 53.61 -01 12.4 16.6	-0.70 - 6.0	6.5/08.2	30696	1995 VG ₂	1998 08 06.0	21 03.64 -32 48.9 15.6	-1.08 - 2.1	7.7/02.3	29305
1992 EE ₁₄	1998 08 03.5	20 53.95 -12 08.2 18.3	-0.84 - 4.0	1.8/04.8	25650	1990 GN	1998 08 06.1	21 03.92 -18 49.1 18.2	-1.03 - 3.8	0.8/05.7	29913
1990 EU ₄	1998 08 03.5	20 53.99 -20 40.1 18.0	-1.06 - 2.6	1.3/02.9	29942	1996 BG ₂	1998 08 06.1	21 03.95 -28 10.1 16.9	-1.19 + 2.4	4.0/04.3	29947
1995 VL ₂	1998 08 03.6	20 54.18 -12 36.1 17.2	-0.99 - 2.7	2.0/04.6	29665	1988 TO ₁	1998 08 06.1	21 03.96 -18 44.2 17.5	-0.84 - 4.2	0.6/05.6	29656
1987 HE	1998 08 03.6	20 54.19 +06 25.3 18.1	-0.91 -11.2	8.7/11.5	27727	1991 VY	1998 08 06.1	21 03.98 -25 52.1 16.3	-1.00 - 5.1	3.5/03.8	26420
1981 EV ₁₈	1998 08 03.6	20 54.22 -11 01.0 18.4	-0.79 - 3.7	2.2/05.2	29940	(7752)	1998 08 06.1	21 04.19 -12 21.2 15.0	-0.99 - 1.6	2.1/07.1	32041
1997 HS ₃	1998 08 03.7	20 54.86 -15 55.6 19.8	-0.81 - 4.2	0.5/04.1	30474	1992 WX ₁	1998 08 06.2	21 04.18 -13 45.2 16.9	-1.06 - 2.5	1.4/06.8	26172
1994 FF	1998 08 03.7	20 54.91 -17 47.3 16.4	-0.99 - 7.4	0.2/03.7	32051	1991 EN ₂	1998 08 06.3	21 04.87 -14 29.5 16.2	-0.82 - 3.7	0.8/06.9	32047
1993 FB ₁₀	1998 08 03.8	20 54.98 -18 49.7 15.0	-0.92 - 6.1	0.6/03.4	29662	(7590)	1998 08 06.4	21 05.18 -17 56.1 16.3	-1.00 - 7.2	0.5/06.1	29598
1989 GD ₅	1998 08 03.8	20 55.03 -44 44.3 15.6	-1.16 - 1.5	11.5/28.1	30288	1995 YM	1998 08 06.5	21 05.31 -29 38.1 16.6	-0.83 - 6.8	3.9/02.8	30473
1981 EX ₄₂	1998 08 03.8	20 55.04 -22 03.1 19.9	-1.03 - 3.2	1.7/02.8	26922	1989 YA ₄	1998 08 06.5	21 05.44 -16 12.0 17.6	-1.02 - 4.4	0.2/06.6	29941
1988 CK ₄	1998 08 03.8	20 55.09 -09 18.4 15.8	-1.00 + 2.0	3.4/05.2	32044	1290 T-1	1998 08 06.5	21 05.67 -07 24.2 18.3	-0.92 - 5.3	3.5/08.9	30797
1997 FG ₁	1998 08 03.8	20 55.10 -16 48.5 17.9	-0.94 - 6.9	0.2/04.0	30085	1990 SF ₅	1998 08 06.6	21 05.89 -13 48.8 17.6	-0.85 - 6.0	1.2/07.4	29658
1995 RC	1998 08 03.8	20 55.37 -21 24.1 16.5	-1.15 - 1.1	1.9/03.1	29664	1991 EJ ₄	1998 08 06.6	21 06.02 -16 40.5 14.9	-0.84 - 2.0	0.0/06.7	30289
1994 PC ₃₉	1998 08 04.0	20 55.88 -14 13.7 16.9	-0.92 - 3.3	1.1/04.8	29663	1981 EA ₃₈	1998 08 06.7	21 06.13 -18 08.7 20.1	-0.87 - 1.7	0.5/06.4	30780
1981 DO	1998 08 04.0	20 56.12 +06 16.7 18.1	-0.84 - 4.0	9.7/10.6	26914	3119 T-1	1998 08 06.7	21 06.50 -14 15.0 18.3	-0.97 - 4.0	0.9/07.3	26415
1988 RF ₉	1998 08 04.0	20 56.16 -20 10.1 16.8	-1.00 - 5.4	1.4/03.4	32045	1995 BQ	1998 08 06.8	21 06.71 -16 44.8 17.7	-0.78 - 3.7	0.1/06.8	28855
6242 P-L	1998 08 04.1	20 56.28 -07 56.8 17.5	-0.92 - 4.0	3.5/06.4	26423	1997 CK ₂₆	1998 08 06.9	21 07.15 -27 24.1 18.0	-1.03 - 4.8	4.3/04.2	29667
1997 CK ₁	1998 08 04.1	20 56.36 -21 34.6 17.5	-0.95 - 5.0	1.5/03.1	29639	1997 EE ₂₃	1998 08 07.0	21 07.61 -24 04.2 16.7	-0.98 - 6.8	2.9/05.0	30085

1997 BB ₂	1998 08 07.1	21 07.60	-21 48.3	15.4	-1.03	- 2.1	2.8/05.9	31422	1990 QT ₄	1998 08 09.9	21 18.29	-35 22.0	16.6	-1.19	+ 0.1	7.4/05.6	30289
1988 VN ₇	1998 08 07.2	21 08.10	-31 33.6	17.5	-1.08	- 6.1	6.7/03.0	29941	1977 TD ₁	1998 08 09.9	21 18.31	+04 42.5	16.5	-0.82	- 4.8	7.7/15.6	24910
4643 P-L	1998 08 07.3	21 08.38	+05 03.3	17.4	-0.71	- 7.4	6.7/14.4	30088	1995 WL ₅	1998 08 09.9	21 18.48	-03 20.2	17.3	-0.96	- 1.6	5.7/12.7	26582
(7699)	1998 08 07.3	21 08.61	-11 27.8	17.4	-0.93	- 5.9	1.8/08.6	30069	1981 JO	1998 08 09.9	21 18.59	-00 30.1	15.3	-0.78	- 3.8	8.2/14.3	30287
1990 TW ₁₂	1998 08 07.3	21 08.76	-38 59.1	17.5	-1.09	- 3.3	7.8/01.3	30654	1995 UR	1998 08 09.9	21 18.65	+02 09.4	17.5	-1.27	+ 4.1	6.9/12.5	30784
1982 WA	1998 08 07.4	21 08.85	-01 14.0	17.8	-0.89	- 2.2	4.9/10.9	30075	1981 EL ₁₈	1998 08 09.9	21 18.67	-09 59.0	18.0	-0.90	- 4.9	2.2/11.5	26578
1993 BH ₈	1998 08 07.4	21 08.89	-19 53.9	16.3	-0.92	- 7.9	1.4/06.4	29944	1995 VS	1998 08 10.0	21 18.85	-11 05.7	15.7	-0.95	- 4.5	2.2/11.2	30473
1996 AU	1998 08 07.4	21 09.02	-23 18.5	15.7	-0.80	-12.6	2.7/05.1	29946	1977 EL ₁	1998 08 10.1	21 19.04	-21 07.8	17.8	-1.09	- 3.4	2.1/08.8	31414
1990 QP ₈	1998 08 07.4	21 09.17	-16 47.0	18.0	-0.93	- 3.8	0.1/07.4	23974	1995 WV ₇	1998 08 10.1	21 19.27	-31 57.5	16.4	-0.99	- 5.5	5.6/05.5	26582
1997 ER ₄₀	1998 08 07.5	21 09.40	+00 53.1	19.0	-0.78	- 7.8	6.3/12.9	30786	1993 SM ₃	1998 08 10.1	21 19.46	-15 32.0	16.6	-0.79	- 4.3	0.0/10.2	24763
1266 T-2	1998 08 07.6	21 09.64	-24 05.3	17.0	-1.08	- 1.3	3.4/06.0	29949	(7767)	1998 08 10.5	21 20.61	-21 45.5	16.5	-1.06	- 1.5	2.8/09.1	30262
1996 AU ₆	1998 08 07.6	21 09.82	-21 40.9	18.1	-0.89	- 4.3	1.9/06.3	29925	1996 BJ ₄	1998 08 10.5	21 20.80	-30 10.3	15.5	-0.80	-10.9	6.3/05.4	27450
1995 VU ₁₈	1998 08 07.7	21 10.20	-21 21.3	15.5	-0.78	- 6.7	1.6/06.3	32053	1980 EF	1998 08 10.5	21 20.94	-28 26.5	17.6	-1.20	- 1.1	5.2/07.9	18804
1997 FB ₂	1998 08 07.7	21 10.31	-20 33.3	16.0	-0.80	- 9.9	1.9/06.4	29647	1986 UH ₃	1998 08 10.5	21 21.00	-15 23.2	16.7	-0.93	- 3.9	0.0/10.6	30894
1981 UZ ₂₄	1998 08 07.8	21 10.41	-33 42.9	16.6	-1.05	- 3.5	8.3/03.4	20630	1994 PT ₁₄	1998 08 10.6	21 21.15	-12 05.9	16.9	-0.86	- 5.6	1.2/11.6	29945
1997 AE ₁₈	1998 08 07.8	21 10.74	-14 16.9	16.2	-1.10	- 0.3	1.0/08.3	29635	1994 QA ₁	1998 08 10.6	21 21.16	-14 05.6	18.5	-0.88	- 5.2	0.5/11.0	30760
4118 T-3	1998 08 07.9	21 11.02	-03 32.5	17.4	-0.71	- 6.3	4.3/11.7	30294	1992 DZ ₅	1998 08 10.7	21 21.47	-14 33.0	18.9	-0.88	- 5.1	0.3/11.0	30687
1991 RX ₁	1998 08 08.0	21 11.49	-25 01.7	17.4	-1.13	- 2.8	3.3/06.1	26925	1994 UZ ₁	1998 08 10.7	21 21.50	-36 03.3	17.0	-0.95	- 3.6	6.4/05.0	24750
1990 DD ₂	1998 08 08.1	21 11.54	-12 01.5	17.0	-0.96	- 5.8	1.8/09.2	23684	2095 P-L	1998 08 10.7	21 21.74	-16 20.2	19.1	-0.92	- 3.4	0.3/10.6	24764
1995 SS ₅₃	1998 08 08.1	21 11.58	-22 53.2	18.2	-1.10	- 4.4	2.8/06.5	30292	1995 UB ₉	1998 08 11.0	21 22.61	-25 53.8	14.5	-0.92	- 4.5	5.4/08.2	29665
1991 PT ₁	1998 08 08.1	21 11.75	-10 58.3	17.0	-0.96	- 5.7	2.2/09.5	29942	2137 T-2	1998 08 11.1	21 22.81	-12 08.8	17.4	-0.95	- 4.8	1.6/11.9	29669
1994 UO	1998 08 08.3	21 12.19	-15 18.1	16.5	-0.81	- 4.6	0.3/08.5	30276	1996 BB	1998 08 11.2	21 23.26	-21 05.1	14.8	-0.77	- 8.9	2.3/09.4	30457
2189 T-2	1998 08 08.4	21 12.97	-14 45.6	16.2	-0.89	- 3.6	0.5/08.8	29949	1997 GK ₂₃	1998 08 11.2	21 23.34	-13 14.2	18.2	-0.80	- 4.4	0.7/11.8	30094
2124 T-2	1998 08 08.6	21 13.60	-14 28.3	17.5	-0.98	- 3.4	0.7/09.0	19690	1996 YF ₁	1998 08 11.3	21 23.94	-27 17.3	21.9	-1.06	- 5.3	3.8/08.2	29667
(7613)	1998 08 08.6	21 13.66	-15 26.9	18.2	-0.73	- 3.7	0.2/08.8	29604	1994 SP ₉	1998 08 11.3	21 23.98	-00 03.7	19.2	-0.77	- 6.8	4.9/16.1	30080
1981 EO ₂	1998 08 08.6	21 13.69	-02 54.2	18.2	-0.78	- 3.0	4.3/12.1	26914	1989 YA ₅	1998 08 11.4	21 24.03	-04 59.6	17.5	-0.85	- 0.1	2.9/13.7	27728
1981 EG ₄₆	1998 08 08.7	21 13.96	-20 01.5	18.5	-1.01	- 2.2	1.6/07.9	26923	1993 UE ₁	1998 08 11.4	21 24.20	-39 21.6	17.5	-0.94	- 3.1	8.3/04.3	29944
1991 FN ₂	1998 08 08.8	21 14.34	-13 53.2	18.0	-0.77	- 4.4	0.6/09.4	32047	2076 T-2	1998 08 11.4	21 24.21	-11 13.6	18.0	-0.99	- 6.4	1.8/12.6	31436
1995 WG ₅	1998 08 08.9	21 14.52	-07 06.9	17.2	-0.92	- 5.3	3.4/11.2	29946	1993 PJ ₇	1998 08 11.4	21 24.28	-16 09.4	16.7	-0.82	- 3.1	0.3/11.2	28616
(7478)	1998 08 08.9	21 14.90	-17 14.6	17.4	-0.82	- 5.0	0.5/08.7	29083	1997 AD ₁₃	1998 08 11.4	21 24.37	-29 26.6	16.4	-0.97	- 6.9	5.3/07.4	29141
1996 BO ₂	1998 08 09.0	21 15.16	-18 00.2	16.8	-0.81	- 2.7	0.6/08.6	29139	1993 FS ₁₂	1998 08 11.5	21 24.66	-17 18.0	18.6	-0.97	- 5.9	0.8/11.0	30080
1991 GH ₁₁	1998 08 09.0	21 15.18	-15 27.7	19.0	-0.75	- 3.9	0.1/09.2	29135	(7776)	1998 08 11.6	21 24.78	-11 41.1	14.3	-1.12	+ 3.1	1.8/12.2	30264
1993 FY ₄₁	1998 08 09.1	21 15.53	-18 45.3	18.2	-0.99	- 4.0	1.1/08.5	29944	4263 T-2	1998 08 11.6	21 25.14	-18 39.2	18.3	-1.00	- 6.0	1.4/10.7	23681
3310 T-2	1998 08 09.3	21 16.02	-18 02.0	17.8	-0.96	- 5.6	0.9/08.7	30467	(7706)	1998 08 11.7	21 25.15	-19 47.3	17.3	-1.01	- 4.5	1.7/10.5	30070
1997 EB ₁	1998 08 09.3	21 16.13	-08 22.4	18.0	-0.99	- 1.9	3.3/11.0	32058	1983 RB ₄	1998 08 11.7	21 25.16	-21 35.6	16.2	-0.90	- 4.4	3.1/10.0	30468
1981 EB ₄₃	1998 08 09.3	21 16.17	-18 41.9	18.9	-0.95	- 3.6	1.1/08.6	29653	3854 T-3	1998 08 11.7	21 25.28	-15 15.9	18.1	-0.76	- 4.1	0.0/11.7	25085
1981 DX ₂	1998 08 09.3	21 16.25	-06 15.9	18.9	-0.81	- 2.3	3.0/11.7	26755	1981 EP ₃₆	1998 08 11.8	21 25.48	-01 07.9	18.7	-0.80	- 2.5	5.0/15.4	26921
1989 YG ₅	1998 08 09.3	21 16.35	-31 30.2	17.1	-0.81	- 5.1	4.3/04.9	29941	1994 TX ₂	1998 08 11.8	21 25.75	+00 49.2	16.8	-0.80	- 4.9	5.5/16.4	30900
1997 CA ₁	1998 08 09.3	21 16.38	-17 33.7	16.7	-1.10	- 0.4	0.8/09.0	29667	(7396)	1998 08 11.9	21 26.21	-13 14.9	16.6	-0.81	- 4.3	0.6/12.5	28825
1995 WS ₂	1998 08 09.4	21 16.44	-30 48.7	16.4	-1.07	- 4.7	7.3/05.3	29946	1994 JF	1998 08 12.0	21 26.42	-11 37.5	17.2	-0.96	- 6.5	1.4/13.0	29301
1995 UL ₈	1998 08 09.4	21 16.67	-20 42.5	18.8	-1.03	- 4.5	1.8/08.2	30473	(7645)	1998 08 12.1	21 26.74	-14 25.1	17.6	-0.98	- 4.6	0.2/12.3	29898
1981 EE ₁₆	1998 08 09.4	21 16.71	-11 22.0	19.8	-0.94	- 3.7	1.6/10.6	30779	3336 T-2	1998 08 12.1	21 26.80	-12 00.9	17.0	-0.90	- 7.5	1.4/13.0	25540
1995 WS	1998 08 09.4	21 16.81	-10 05.0	15.9	-0.99	- 2.2	2.7/10.8	26407	1973 SQ ₃	1998 08 12.1	21 26.84	-05 11.0	16.0	-0.82	- 6.9	4.6/15.1	32041
3123 T-3	1998 08 09.5	21 17.00	-06 09.9	18.1	-0.73	- 4.9	3.0/12.3	24238	1995 XD	1998 08 12.1	21 26.89	-27 28.6	17.2	-1.00	- 5.2	4.8/08.7	31588
1995 VQ ₁₂	1998 08 09.5	21 17.00	-02 47.5	18.0	-0.93	- 5.8	5.7/13.0	29946	1981 ED ₁₂	1998 08 12.1	21 26.90	+01 29.7	18.2	-0.84	- 6.1	5.8/17.1	30779
1997 CX ₁₉	1998 08 09.5	21 17.07	-21 31.2	18.3	-1.07	- 3.2	2.1/08.2	29948	1981 EU ₃	1998 08 12.2	21 27.13	+00 29.3	19.4	-0.88	- 4.4	5.4/16.5	26915
(7579)	1998 08 09.6	21 17.56	-16 16.1	15.2	-1.47	+ 4.4	0.2/09.6	29596	1990 QS ₃	1998 08 12.3	21 27.42	-11 39.4	16.7	-0.73	- 8.0	1.6/13.4	26757
1997 GM ₁₃	1998 08 09.7	21 17.63	+08 20.7	18.5	-0.77	- 6.6	8.1/17.6	30767	1997 CW	1998 08 12.3	21 27.55	-22 23.3	17.1	-1.04	- 4.2	2.9/10.5	30094
1994 WS ₁	1998 08 09.8	21 17.91	-07 25.9	17.5	-0.83	- 1.8	2.5/11.8	24574	1997 BN ₁	1998 08 12.4	21 27.96	-14 53.5	16.7	-1.11	- 2.0	0.0/12.5	30293
1993 QD ₃	1998 08 09.8	21 18.18	-09 21.7	18.0	-0.73	- 5.8	1.9/11.7	30291	1994 PX ₂₂	1998 08 12.7	21 28.94	-15 16.5	19.1	-0.87	- 5.2	0.1/12.6	27448
1994 PM ₂₁	1998 08 09.8	21 18.29	-11 15.9	17.1	-0.80	- 8.5	2.0/11.2	30783	1986 AE	1998 08 12.8	21 29.55	+19 43.2	16.3	-1.42	+14.2	16.0/12.8	25078