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NOTES FROM THE IAU GENERAL ASSEMBLY.

The following resolutions adopted by the IAU General Assembly (G) and by IAU Commission 20 (1, 2, 3, 4) at the recent meetings in Buenos Aires are relevant to readers of the Minor Planet Circulars:

G. The 21st General Assembly of the International Astronomical Union,

considering that various studies have shown that the Earth is subject to occasional impacts by minor bodies in the solar system, sometimes with catastrophic results, and

noting that there is a well founded evidence that only a very small fraction of NEO's (Natural Near-Earth Objects: minor planets, comets and fragments thereof) has actually been discovered and have well-determined orbits,

affirms the importance of expanding and sustaining scientific programmes for the discovery, continued surveillance and in-depth physical and theoretical study of potentially hazardous objects, and

resolves to establish an ad-hoc Joint Working Group on NEO's, with participation of Commissions 4, 7, 9, 15, 16, 20, 21 and 22, to:

1. assess and quantify the potential threat, in close interaction with other specialists in these fields;
2. stimulate the pooling of all appropriate resources in support of relevant national and international programmes;
3. act as an international focal point and contribute to the scientific evaluation, and
4. report back to the 22nd General Assembly of the IAU in 1994 for possible further action.

1. Commission 20,
noting the recent disagreement between it and the Working Group on Planetary System Nomenclature (WGPSN) concerning the proposed names for the recently discovered satellites of Neptune,
drawing attention to its 1985 resolution to minimize the duplication between the names of minor planets and natural satellites, and
considering the vast potential for drawing on a number of different cultures for the selection of names,

recommends that its Minor Planet Names Committee, currently consisting of the President, the Vice-President and the Director of the Minor Planet Center, be expanded to include more effective liaison with the WGPSN, and

charges the expanded Committee to take a more active role in both choosing names and writing completed, concise citations.

2. Commission 20,

considering that it currently has at least four committees that deal with some aspect of the naming of solar system objects,

suggests that they be at some time amalgamated into a single Nomenclature Committee.

3. Commission 20,

welcoming the proposal of the Institute for Theoretical Astronomy to prolong the observational programme for 15 selected minor planets (nos. 1, 2, 3, 4, 6, 7, 11, 18, 35, 39, 40, 148, 382, 532 and 704) for the period 1991-2000,

encourages all observatories which have astrographs of focal length > 2 m to take part in this programme, and

recommends that the most precise reference catalogues, PPM (Positions and Proper Motions), Fokat (Fotograficheskij Katalog, Pulkovo) and ACRS (Astrographic Catalog Reference System), are used for the determination of the spherical coordinates of the planets.

4. Commission 20

supports the activities of the Institute for Theoretical Astronomy (ITA) on the elaboration of PC software packages for the provision of ephemerides of minor planets, and

suggests that systems like "STAMP" may be used together with the printed, annual volumes "Ephemerides of Minor Planets".

Notes:

G. This resolution is designed to encourage searches for and improved follow-up of minor planets of the Apollo, Amor and Aten classes and comets that can come to the vicinity of the earth. The order-of-magnitude increase in activity during the last two decades needs to be repeated during the next two decades. Appropriate follow-up is particularly important, and interdisciplinary cooperation between astrometric and physical observers is encouraged.

1. The proliferation of new numberings of minor planets means that there are ever more objects for naming, and it is felt that more imagination needs to be exercised in selecting names that are suitable. Many citations are also unnecessarily long. While more of a liaison with the WGPSN is sought, it is not intended that all the WGPSN rules will be adopted; in particular, many minor planets will continue to be named for living people. It should also be emphasized that, in general, the discoverer is accorded the privilege of proposing a name, subject to review by the Minor Planet Names Committee, the names of the members of which will be announced later.

2. The other committees are the Study Group on the Origins of Minor Planet Names and the Comet Nomenclature Committee, the Satellite Nomenclature Liaison Committee.

3. This is a continuation of the ITA’s long-standing project of observations of minor planets, the positions of which are useful in establishing the fundamental reference system.

4. For further information on the ITA software contact Dr. A. G. Sokolsky, Director, Institute for Theoretical Astronomy, Naberezhnaya Kutuzova 10, Leningrad 191187, U.S.S.R. (INTERNET e-mail address sokolsky@iiii.spb.su).

* * * * *

ERRATA.

MPC	Line	
18264	-23	For H 11.03 read H 11.1
18269	-14	For G. DeSanctis read W. Ferreri
18330	-15	For 0.20-m f/4.0 astrograph read 0.26-m f/3.9 Wright-Schmidt camera
18395	-8	The orbit for 1991 EN is to be deleted
18396	4	The orbit for 1991 GD is to be deleted
18437	- 1	For 0.".74 read 0".74
18453	-18	For stroy-teller read story-teller
18456	8	For Discoveredd read Discovered
18457	26	For (4235) Tatishckev read (4235) Tatishchev
18459	2	For (2299) read (3199)
18459	-23	For William C. Cochran read William D. Cochran
18461	-10	For Lorhmann read Lohrmann

* * * * *

CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Mag.	N	Obs.
1931 TK	1931 10	12.34722	01 42 10.29	+05 57 49.1	MPC 5212		1	690
1931 TK	1931 10	14.28888	01 39 59.57	+06 04 40.1	MPC 5212		1	690
1931 TQ	1931 10	12.34722	01 56 34.52	+08 31 17.8	MPC 2368		2	690
1931 TQ	1931 10	14.28888	01 55 09.52	+08 22 43.3	MPC 2368		2	690
1931 TW3	1931 10	14.28888	01 50 42.51	+10 24 37.2	MPC 2284		3	690
1931 TW3	1931 10	17.29514	01 48 14.25	+10 05 26.0	MPC 2284		3	690
1931 TZ3	1931 10	12.34722	01 57 05.23	+05 20 40.3	MPC 2368		4	690
1931 TZ3	1931 10	14.28888	01 55 26.09	+05 13 01.4	MPC 2368		4	690
1931 TA4	1931 10	12.34722	01 57 28.11	+07 28 28.1	MPC 2120		5	690
1931 TA4	1931 10	14.28888	01 55 38.31	+07 21 57.2	MPC 2120		5	690
1981 QA2	1981 08	30.33889	22 56 41.93	-10 21 51.4	MPC 6451		6	688
1985 VY1	1985 11	07.30694	01 17 25.01	+24 31 22.0	MPC11707			675
1991 JU	1991 05	10.60729	15 00 12.47	-15 21 14.2	MPC18173	16.5		372
10	1928 08	18.74524	19 12 10.83	-21 10 37.6	RI 169	10.0	7	078
10	1928 08	18.79302	19 12 09.68	-21 10 38.6	RI 169		7	078
29	1916 07	25.75919	17 30 52.43	-32 06 03.3	RI 482	10.1	8	078
29	1916 07	26.77793	17 30 24.26	-32 02 56.0	RI 482		8	078
30	1927 08	27.91277	23 35.6	-00 06.8	RI 66			012
38	1927 10	03.04667	02 26.4	+25 45	RI 67	11.0		094
44	1929 06	28.84447	17 47 07.20	-19 35 02.2	RI 267	10.5	9	078
44	1929 06	29.84893	17 46 08.08	-19 35 58.3	RI 267			078
46	1929 06	28.84447	17 48 24.18	-19 28 21.0	RI 267	10.4	9	078
64	1928 08	18.74524	18 57 09.99	-23 15 03.4	RI 169	11.0	7	078
64	1928 08	18.79302	18 57 08.91	-23 15 03.6	RI 169		7	078
67	1926 11	02.92285	03 55.2	+15 29	RI 3	11.4		094
162	1926 10	31.98660	02 22.0	+14 12	RI 3	12.2		094
172	1928 01	02.18563	08 05.3	+31 10	RI 100		A	012
214	1927 04	26.96229	15 37 46	-24 31.9	RI 43	12.5		078
214	1927 04	27.95540	15 36 55	-24 32.7	RI 43			078

218	1928 08 18.93504	00 00 21.16	+01 12 25.4	RI	169	12.0		078
218	1928 08 19.01537	00 00 18.85	+01 11 46.7	RI	169			078
248	1928 08 18.74524	18 52 15.09	-17 57 32.2	RI	169	13.0	7	078
248	1928 08 18.79302	18 52 14.51	-17 57 34.4	RI	169		7	078
297	1928 04 18.80314	12 54 32.62	-14 28 01.9	RI	106	13.6		078
297	1928 04 18.83916	12 54 30.92	-14 27 52.4	RI	106			078
317	1926 10 31.98660	02 57.9	+13 46	RI	3	11.3		094
381	1927 12 31.02132	07 03.4	+15 56.9	RI	82			012
422	1929 08 01.95536	20 29 36.70	-29 19 51.6	RI	272	12.0		078
422	1929 08 01.97804	20 29 35.26	-29 19 51.5	RI	272			078
451	1930 08 21.90304	21 57 15.69	-31 40 02.4	RI	348	10.8		078
451	1930 08 21.92497	21 57 14.59	-31 40 10.3	RI	348			078
469	1927 10 03.04667	02 06.5	+26 33	RI	67	13.0		094
493	1952 10 22.25663	01 58 25.75	+27 42 39.3	MPC	2154	14.7		760
493	1952 10 22.31255	01 58 22.11	+27 42 47.1	MPC	2154			760
528	1928 01 02.18563	08 20.6	+35 39	RI	100		A	012
602	1927 01 27.79930	07 01.4	+37 56.4	RI	19			012
624	1927 10 03.96057	02 34.6	+34 41	RI	62	13.5		024
792	1929 06 28.84447	18 07 58.06	-21 40 07.5	RI	267	13.4	9	078
815	1927 10 03.93963	00 55.8	-12 05.2	RI	66	13.3		012
897	1929 03 05.27854	10 13 50.39	-13 04 29.4	RI	191	14.0		754
911	1929 01 04.30278	06 17 36.97	+47 36 41.5	RI	191	13.5		754
911	1929 01 13.29036	06 10 42.99	+47 13 49.1	RI	191	14.0		754
952	1928 01 02.18563	08 04.2	+35 38	RI	100		A	012
986	1927 08 24.97515	21 18 52.73	-33 28 53.6	RI	57	12.7		078
986	1927 08 27.83260	21 16 49.01	-33 42 48.1	RI	57			078
1031	1926 11 07.00132	03 33.0	+13 48	RI	3	13.2		094
1483	1981 11 24.14931	03 34 58.49	+17 29 52.2	MPC	6501			688
1483	1981 11 24.19097	03 34 56.06	+17 29 50.0	MPC	6501			688
2270	1983 11 28.19306	03 17 38.05	+17 08 53.8	MPC	9276			688
2939	1986 03 05.26703	11 22 01.00	+04 30 10.4	MPC	10602			688

Note 1: 1931 TK = (2913). 2: 1931 TQ = (515). 3: 1931 TW3 = (1791). 4: 1931 TZ3 = (3997). 5: 1931 TA4 = (2571). 6: 1981 QA2 = (4508). 7: date changed by +1 day. 8: time changed by -12 hours. 9: time changed by +1 hour. A: date changed by -2 day.

* * * * *

DELETED OBSERVATIONS.

The following observations are to be deleted.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Obs.
15	1927 03 21.9896	11 07 49.5	-11 06 44	RI	28	523
15	1927 03 21.9944	11 07 49.6	-11 06.9	RI	28	523

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 18324.

Object		Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	N	Obs.
A899 KC	*	1899 05 29.5424	14 00.8	-09 28	50				800
A899 KC		1899 05 30.5771	14 00.4	-09 27	50				800
1927 KB	*	1927 05 28.89852	15 14.5	+05 51.0	413				012
1927 QM	*	1927 08 21.89112	22 38.0	-00 53	872		13.5		094
1927 RG	*	1927 09 01.05210	22 35.0	-00 53	1037		15		024
1927 RG		1927 09 02.95071	22 33.7	-01 12	1037		15.5		024

1927 SQ	*	1927 09 24.93480	00 36.2		+10 15		668					012
1927 SQ		1927 09 28.90487	00 32.8		+09 52		668					012
1927 SR	*	1927 09 30.98757	01 54.0		+03 20		788		13.2			094
1927 SS	*	1927 09 30.98757	01 54.6		+03 23		688		12.8			094
1927 TK	*	1927 10 04.13153	02 47.6		+15 57.9		20					012
1927 YD	*	1927 12 18.83005	03 12.4		+18 15.8		846					012
1929 EM	*	1929 03 10.97676	11 25.7		+03 24.9		878		14.0		1	012
1938 WW	*	1938 11 25.01	05 17.0		+19 22		878		13.7			094
1953 FY1	*	1953 03 20.00833	12 02 04.27		+03 25 56.5		1953 FU					024
1971 OZ1	*	1971 07 16.27336	20 05 15.73		-45 03 29.1		1971 NB					805
1978 JV3	*	1978 05 05.87200	13 41 01.48		-05 49 00.9		1978 GA4		16.8			095
1981 SH9	*	1981 09 27.82111	22 26 22.25		+07 50 26.6		1981 RZ1		17.0			095
1986 VL9	*	1986 11 09.89404	02 40 14.32		+14 05 00.8		1986 VP7					046
1986 VL9		1986 11 09.91348	02 40 13.49		+14 04 59.4		1986 VP7					046
1987 SF30	*	1987 09 17.82776	23 10 11.66		-00 18 44.6		1987 QQ		15.0V			095
1988 RH14	*	1988 09 15.97662	01 42 48.74		+19 51 32.9		1988 UQ		16.0V			095
1988 RH14		1988 09 15.99745	01 42 48.59		+19 51 36.5		1988 UQ		16.0V			095
1989 TG18	*	1989 10 11.08958	01 08 58.43		+05 08 18.3		1989 TR1					809
1989 TG18		1989 10 11.09930	01 08 57.80		+05 08 18.5		1989 TR1					809
1989 VL6	*	1989 11 02.61285	01 46 00.08		+14 15 23.7		1989 UR2					877
1989 VL6		1989 11 02.63021	01 45 59.03		+14 15 17.0		1989 UR2					877
1989 WN7	*	1989 11 25.31441	03 29 59.38		-07 37 20.1		1989 WH7					675
1989 WN7		1989 11 25.34375	03 29 56.65		-07 36 48.9		1989 WH7					675

Note 1: the note on RI 185 should presumably be ignored.

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IDENTIFICATIONS.

The following list of identifications with numbered minor planets, by G. V. Williams, continues that on MPC 18164.

A899 KC = (167)	1927 SQ = (1666)	1927 SR = (688)
1927 SS = (788)	1927 TK = (72)	1927 YD = (959)
1929 EM = (2535)	1938 WW = (1167)	

* * * * *

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

046 Klet. Observers A. Mrkos and Z. Vavrova.
056 Skalnate Pleso. 0.3-m f/5 astrograph. Observers G. Cervak, J. Svoren, P. Rychtarcik and E. M. Pittich.
095 Crimean Astrophysical Observatory, Laboratory of the Sternberg Astronomical Institute. 0.5-m Maksutov telescope. Observers A. A. Martis and K. Chekmareva.
372 Geisei. 0.60-m reflector. Observer T. Seki. In part from Orient. Astron. Assoc. Comet Bull.
391 Sendai Observatory, Ayashi Station. Observer M. Koishikawa.
392 JCPM Sapporo Station. Observer K. Watanabe.
413 Siding Spring. Uppsala Southern Schmidt. Observer R. H. McNaught.
474 Mt. John University Observatory. 0.6-m reflector. Observers A. C. Gilmore and P. M. Kilmartin.
540 Linz. 0.3-m f/5.2 Schmidt Cassegrain. Observers E. Meyer, E. Obermair and H. Raab.
541 Prague. 0.2-m refractor and 0.37-m Maksutov. Observer J. Manek.
568 Mauna Kea. Observer K. J. Meech.

589 Santa Lucia Stroncone. 0.5-m Ritchey-Chretien f/7.5 reflector. Observers A. Vagnozzi, G. C. Morando, S. Casulli and R. Castellani.
595 Farra d'Isonzo. 0.4-m f/4.5 reflector. Observers G. Lombardi, E. Pettarin and F. Piani. Measured by L. Bittesini, F. Piani, G. Lombard and E. Pettarin.
657 Victoria. 0.5-m reflector + CCD. Observers J. B. Tatum, D. D. Balam and P. M. Krol.
675 Palomar. 0.46-m Schmidt. Observers J. Alu, C. Brewer, E. Helin, V. G. Ivanova, K. Lawrence, P. Rose and V. G. Shkodrov.
691 Steward Observatory, Kitt Peak. 0.9-m SPACEWATCH telescope. Observer J. V. Scotti.
695 Kitt Peak. 2.1-m reflector. Observer B. E. A. Mueller.
801 Oak Ridge Observatory. 1.5-m reflector + CCD. Observers R. E. McCrosky, C.-Y. Shao, Z. Ceplecha, B. G. Marsden, G. V. Williams and A. J. Noymer.
894 Otomo. 0.25-m f/3.4 reflector. Observer S. Otomo. Measured by O. Muramatsu.
896 Yatsugatake South Base Observatory. Observers Y. Kushida, R. Kushida and O. Muramatsu.
897 Chiyoda. 0.25-m f/3.4 Wright-Schmidt camera and 0.10-m f/4 refractor. Observer T. Kojima.
900 Ohtsu. 0.16-m f/2.5 Schmidt. Observer Y. Ikari.

Object	Date	UT	R. A. (1950)	Decl.	Mag.		N	Obs.
		Periodic Comet Tempel 1						
/1983 XI	1983	06 07.90567	12 43 44.58	+03 16 38.7			1	056
		Periodic Comet Kopff						
/1983 XIII	1983	07 08.87691	15 30 13.06	-12 54 47.4			1	056
		Periodic Comet Arend-Rigaux						
/1984 XXI	1985	01 20.81296	09 03 46.60	+19 42 53.2				056
/1984 XXI	1985	01 21.79086	09 03 43.59	+20 14 22.5				056
/1984 XXI	1985	01 21.83079	09 03 43.39	+20 15 41.5				056
/1984 XXI	1985	01 29.03819	09 02 52.18	+23 56 47.5				056
/1984 XXI	1985	01 29.09236	09 02 51.58	+23 58 22.2				056
/1984 XXI	1985	02 25.94444	09 01 54.83	+33 03 46.0				056
/1984 XXI	1985	02 26.01319	09 01 55.55	+33 04 24.0				056
/1984 XXI	1991	08 01.79619	05 19 11.54	+09 50 39.2	18	T		372
/1984 XXI	1991	08 01.80069	05 19 12.19	+09 50 39.8				372
/1984 XXI	1991	08 02.79306	05 22 16.29	+09 55 26.7	18	T		372
		Periodic Comet Schaumasse						
/1984 XXII	1985	01 29.13958	15 24 26.78	-04 45 10.8				056
/1984 XXII	1985	01 29.17604	15 24 31.05	-04 45 31.7				056
		Comet Levy-Rudenko (1984 XXIII)						
/1984 XXIII	1984	12 01.73993	18 40 42.43	+19 07 31.5			2	056
/1984 XXIII	1985	01 21.85961	17 43 06.58	+54 37 14.2				056
/1984 XXIII	1985	01 21.88762	17 43 00.80	+54 39 03.4				056
/1984 XXIII	1985	01 29.11354	17 05 36.54	+63 35 27.0				056
/1984 XXIII	1985	01 29.15417	17 05 17.51	+63 38 45.7				056
/1984 XXIII	1985	02 08.78333	14 01 10.41	+75 20 46.2				056
/1984 XXIII	1985	02 25.96944	08 53 02.45	+56 12 34.4				056
		Comet Shoemaker (1985 II)						
/1985 II	1985	01 20.79815	04 56 16.98	-18 23 54.2				056
/1985 II	1985	01 20.82778	04 56 24.20	-18 23 48.0				056

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/1985 II   1985 01 21.72141  05 00 04.13  -18 20 57.3                    056
/1985 II   1985 01 21.74653  05 00 10.13  -18 20 51.0                    056

                Periodic Comet Shoemaker 3
/1985 XVIII1986 02 04.86076  09 33 49.38  +23 39 47.4                    056
/1985 XVIII1986 02 04.91667  09 33 48.19  +23 40 09.0                    056
/1985 XVIII1986 02 05.92212  09 33 32.81  +23 46 20.1                    056

                Periodic Comet Machholz
/1986 VIII 1989 06 03.56516  19 32 58.17  -39 11 01.4                  3 568
/1986 VIII 1991 07 03.76459  05 30 18.55  -10 19 58.2           16  N   474
/1986 VIII 1991 07 03.77640  05 30 23.61  -10 18 59.4                    474
/1986 VIII 1991 07 04.75765  05 37 26.74  -08 54 05.0           16  N   474
/1986 VIII 1991 07 04.76633  05 37 30.32  -08 53 21.3                    474
/1986 VIII 1991 07 04.77895  05 37 35.89  -08 52 14.0                    474
/1986 VIII 1991 07 05.76390  05 44 36.97  -07 25 34.9           14  N 4 474
/1986 VIII 1991 07 05.77189  05 44 40.38  -07 24 53.6                 4 474

                Periodic Comet Howell
/1987 VI   1987 08 22.92257  01 22 48.98  -01 06 17.3                    056
/1987 VI   1987 08 22.97280  01 22 48.71  -01 06 25.4                    056
/1987 VI   1987 08 24.96250  01 22 33.71  -01 12 15.8                    056
/1987 VI   1987 08 25.03819  01 22 32.86  -01 12 27.2                    056
/1987 VI   1987 08 31.03681  01 20 55.89  -01 33 16.6                    056
/1987 VI   1987 08 31.08611  01 20 54.77  -01 33 25.9                    056
/1987 VI   1987 09 02.03194  01 20 07.30  -01 41 09.9                    056
/1987 VI   1987 09 02.07847  01 20 06.14  -01 41 21.5                    056
/1987 VI   1987 09 21.93299  01 06 02.11  -03 12 21.6                    056

                Periodic Comet Shoemaker-Holt 2
/1988 XI   1989 04 23.84132  10 32 22.86  +30 50 39.7                 5 046
/1988 XI   1989 04 23.85417  10 32 23.15  +30 50 37.2                 5 046

                Periodic Comet Tempel 2
/1988 XIV  1991 04 11.17774  07 52 28.13  +23 03 43.8                    695
/1988 XIV  1991 04 11.18381  07 52 28.21  +23 03 43.8                    695
/1988 XIV  1991 04 11.19215  07 52 28.29  +23 03 43.8                    695
/1988 XIV  1991 04 11.20413  07 52 28.41  +23 03 43.7                    695
/1988 XIV  1991 05 15.16218  08 05 59.92  +22 39 26.7                    695
/1988 XIV  1991 05 15.16641  08 06 00.05  +22 39 26.2                    695
/1988 XIV  1991 05 15.17203  08 06 00.26  +22 39 25.5                    695
/1988 XIV  1991 05 16.16439  08 06 35.26  +22 38 06.2                    695
/1988 XIV  1991 05 16.16889  08 06 35.43  +22 38 05.9                    695
/1988 XIV  1991 05 16.17389  08 06 35.60  +22 38 05.3           21  T   695
/1988 XIV  1991 05 16.17802  08 06 35.75  +22 38 05.0                    695

                Comet Yanaka (1988 XX)
/1988 XX   1989 03 07.02917  15 16 11.15  +35 55 52.9                    056
/1988 XX   1989 03 07.07986  15 16 12.59  +35 57 06.6                    056
/1988 XX   1989 03 08.88056  15 17 07.37  +36 41 59.7                    056
/1988 XX   1989 03 08.93547  15 17 08.85  +36 43 24.6                    056

                Periodic Comet Churyumov-Gerasimenko
/1989 VI   1991 05 15.21124  14 07 53.29  -10 50 03.0          22.0N    695
/1989 VI   1991 05 15.21591  14 07 53.09  -10 50 02.2                    695
/1989 VI   1991 05 15.22172  14 07 52.91  -10 50 01.8                    695
/1989 VI   1991 05 15.22609  14 07 52.73  -10 50 01.1                    695
/1989 VI   1991 05 15.23212  14 07 52.51  -10 50 00.0                    695
/1989 VI   1991 05 16.19970  14 07 17.20  -10 47 36.2          21.8N    695
```

/1989 VI	1991	05	16.20400	14	07	17.04	-10	47	35.7			695
/1989 VI	1991	05	16.20926	14	07	16.85	-10	47	34.9			695
/1989 VI	1991	05	16.21347	14	07	16.70	-10	47	34.2			695
/1989 VI	1991	05	16.21955	14	07	16.48	-10	47	33.4			695
/1989 VI	1991	05	16.22525	14	07	16.26	-10	47	32.6			695
			Periodic Comet Schwassmann-Wachmann 1									
/1989 XV	1991	08	06.40640	03	36	08.53	+28	36	46.6			657
/1989 XV	1991	08	06.40781	03	36	08.62	+28	36	46.7			657
			Comet Helin-Roman-Alu (1989 XXI)									
/1989 XXI	1989	11	18.71806	20	29	05.88	+32	59	43.8			056
/1989 XXI	1989	11	18.78958	20	28	51.80	+33	02	02.3			056
/1989 XXI	1989	11	19.71806	20	25	54.35	+33	32	24.1			056
/1989 XXI	1989	11	19.83403	20	25	32.04	+33	36	05.0			056
/1989 XXI	1989	11	29.70035	19	57	13.36	+38	23	28.0			056
/1989 XXI	1989	11	29.81736	19	56	55.08	+38	26	28.3			056
/1989 XXI	1989	12	27.67731	18	50	57.75	+48	44	41.7			056
/1989 XXI	1989	12	28.68038	18	48	36.25	+49	04	45.3			056
/1989 XXI	1989	12	28.71887	18	48	30.99	+49	05	25.4			056
/1989 XXI	1989	12	30.68287	18	43	52.33	+49	44	25.1			056
/1989 XXI	1989	12	30.72581	18	43	45.65	+49	45	11.4			056
/1989 XXI	1989	12	31.67940	18	41	29.23	+50	04	12.7		6	056
/1989 XXI	1990	01	01.69086	18	39	02.11	+50	24	19.2			056
/1989 XXI	1990	01	03.70959	18	34	03.70	+51	04	38.0		6	056
/1989 XXI	1990	01	04.68947	18	31	36.59	+51	24	14.1			056
			Periodic Comet Wild 2									
/1989t	1991	06	09.21200	17	23	51.25	-18	18	52.1			801
/1989t	1991	06	09.22782	17	23	50.25	-18	18	52.6			801
/1989t	1991	06	11.17602	17	21	52.05	-18	19	54.6			801
/1989t	1991	06	11.18877	17	21	51.22	-18	19	55.7			801
/1989t	1991	07	09.07700	17	00	16.50	-18	49	48.0			801
/1989t	1991	07	09.10216	17	00	15.87	-18	49	51.0			801
/1989t	1991	07	10.09103	16	59	50.29	-18	51	25.8			801
/1989t	1991	07	10.10633	16	59	49.89	-18	51	27.4			801
/1989t	1991	07	13.11601	16	58	42.27	-18	56	31.2			801
/1989t	1991	07	13.13721	16	58	41.80	-18	56	33.6			801
/1989t	1991	07	15.14221	16	58	05.37	-19	00	07.5			801
/1989t	1991	07	16.09278	16	57	50.63	-19	01	50.6			801
/1989t	1991	07	16.13081	16	57	50.02	-19	01	54.7			801
			Periodic Comet Kearns-Kwee									
/1989u	1991	01	08.54520	06	54	16.78	+31	08	43.5	14	T	897
/1989u	1991	01	08.56250	06	54	16.04	+31	08	39.2			897
			Periodic Comet Van Biesbroeck									
/1989h1	1991	06	10.30887	21	21	48.99	-10	35	40.2			801
/1989h1	1991	06	10.32817	21	21	49.57	-10	35	38.8			801
/1989h1	1991	07	09.26985	21	27	06.78	-11	01	21.3			801
/1989h1	1991	07	09.29005	21	27	06.55	-11	01	24.9			801
/1989h1	1991	07	12.28800	21	26	32.10	-11	11	39.6			801
/1989h1	1991	07	12.31087	21	26	31.78	-11	11	44.4			801
/1989h1	1991	07	16.21813	21	25	30.56	-11	27	03.0			801
/1989h1	1991	07	16.24837	21	25	29.96	-11	27	10.6			801
/1989h1	1991	08	04.34597	21	17	15.09	-13	05	43.5			657
/1989h1	1991	08	04.35270	21	17	14.89	-13	05	46.2			657

/1989h1	1991	08	06.26433	21	16	15.19	-13	16	58.0		657
/1989h1	1991	08	06.26571	21	16	15.10	-13	16	58.6		657
/1989h1	1991	08	06.26714	21	16	15.06	-13	16	58.6		657
			Comet Levy (1990c)								
/1990c	1990	07	28.98958	23	34	32.63	+28	22	27.9		541
/1990c	1990	08	02.99969	23	18	14.89	+27	03	25.3		541
/1990c	1990	08	03.06007	23	18	00.78	+27	02	11.2		541
/1990c	1990	08	03.06806	23	17	58.90	+27	02	00.8		541
/1990c	1990	08	18.78082	21	28	33.61	+12	26	33.6		095
/1990c	1990	08	18.78212	21	28	32.71	+12	26	25.1		095
/1990c	1990	08	18.93559	21	26	50.31	+12	09	01.5		095
/1990c	1990	08	18.93637	21	26	49.89	+12	08	57.1		095
/1990c	1990	08	19.77789	21	17	20.41	+10	29	33.6		095
/1990c	1990	08	19.87109	21	16	15.33	+10	18	08.7		095
/1990c	1990	08	20.79201	21	05	22.54	+08	20	50.1		095
/1990c	1990	08	20.79323	21	05	21.58	+08	20	40.5		095
/1990c	1990	08	20.79531	21	05	20.10	+08	20	22.8		095
/1990c	1990	08	20.93776	21	03	35.93	+08	01	30.7		095
/1990c	1990	08	20.94045	21	03	33.96	+08	01	08.9		095
/1990c	1990	12	24.84549	13	33	35.45	-40	29	26.9		897
/1990c	1990	12	24.84826	13	33	35.09	-40	29	27.8		897
/1990c	1990	12	24.85197	13	33	34.51	-40	29	26.0		897
/1990c	1991	04	25.49618	08	15	08.98	+14	19	11.5	13 T	372
/1990c	1991	04	25.50295	08	15	08.97	+14	19	13.6		372
			Periodic Comet Wolf-Harrington								
/1990e	1990	12	23.47454	23	19	15.04	+12	05	37.1	14 T	897
/1990e	1990	12	23.49734	23	19	17.55	+12	05	32.5		897
/1990e	1991	01	06.39369	23	45	37.40	+12	05	06.2	13.5T	897
/1990e	1991	01	06.41655	23	45	40.10	+12	05	08.0		897
/1990e	1991	03	03.44074	02	02	33.94	+15	44	18.7		897
/1990e	1991	03	03.45324	02	02	35.9	+15	44	25		897
			Comet McNaught-Hughes (1990g)								
/1990g	1991	01	22.83451	16	17	30.66	-16	55	33.4	15 T	897
/1990g	1991	01	22.85625	16	17	31.27	-16	55	14.7		897
/1990g	1991	06	09.08516	12	30	53.28	+37	16	29.1		801
/1990g	1991	06	09.12523	12	30	49.90	+37	16	31.9		801
/1990g	1991	06	14.07972	12	24	35.89	+37	20	48.8		801
/1990g	1991	06	14.10179	12	24	34.35	+37	20	49.4		801
			Periodic Comet Taylor								
/1990n	1991	01	08.50920	07	25	05.12	+22	09	13.9	15.5T	897
/1990n	1991	01	08.55440	07	25	02.85	+22	10	07.0		897
			Periodic Comet Metcalf-Brewington								
/1991a	1991	01	15.42523	00	28	21.06	-04	42	23.4		897
/1991a	1991	01	19.43264	00	39	08.61	-03	54	12.8		897
/1991a	1991	01	19.44329	00	39	10.36	-03	54	03.1		897
/1991a	1991	01	19.44606	00	39	10.99	-03	54	02.3		897
/1991a	1991	03	03.43409	02	36	22.52	+05	10	15.3		897
/1991a	1991	03	03.46094	02	36	26.85	+05	10	40.4		897
			Comet Shoemaker-Levy (1991d)								
/1991d	1991	05	14.90764	08	47	50.57	+21	48	16.5		595
/1991d	1991	05	14.92153	08	47	50.81	+21	48	25.6		595

Periodic Comet Takamizawa

/1991h	1991	06	11.09341	13	50	29.03	+06	11	37.0		801
/1991h	1991	06	11.10163	13	50	29.15	+06	11	31.9		801
/1991h	1991	06	14.11117	13	51	32.01	+05	39	21.7		801
/1991h	1991	06	14.12391	13	51	32.26	+05	39	13.0		801
/1991h	1991	07	10.06664	14	14	18.17	-00	32	51.5		801
/1991h	1991	07	10.07233	14	14	18.57	-00	32	55.4		801
/1991h	1991	07	12.08532	14	17	02.23	-01	07	04.7		801
/1991h	1991	07	12.09154	14	17	02.73	-01	07	11.4		801

Periodic Comet Hartley 1

/1991j	1991	06	09.08845	12	57	16.75	-13	41	19.0		801
/1991j	1991	06	14.08639	12	58	50.77	-15	21	50.4		801
/1991j	1991	06	14.10488	12	58	51.12	-15	22	11.5		801

Periodic Comet Mrkos

/1991k	1991	04	16.45670	11	19	59.64	-30	42	13.7	16.2N	474
/1991k	1991	04	16.47348	11	19	57.51	-30	42	48.1		474
/1991k	1991	06	11.41707	11	25	28.79	-44	39	46.3	18.4N	474
/1991k	1991	06	11.43351	11	25	30.51	-44	39	55.3		474

Comet Helin-Lawrence (1991l)

/1991l	1991	05	13.86696	12	05	43.52	+07	56	43.3		046
/1991l	1991	05	13.87500	12	05	42.96	+07	56	39.2		046
/1991l	1991	05	15.86088	12	03	07.15	+07	46	22.4		046
/1991l	1991	05	15.86811	12	03	06.53	+07	46	19.6		046
/1991l	1991	06	05.88368	11	41	15.63	+05	28	13.6		540
/1991l	1991	06	05.91215	11	41	14.23	+05	28	00.6		540
/1991l	1991	06	05.91597	11	41	14.79	+05	27	59.6		595
/1991l	1991	06	05.92708	11	41	13.60	+05	27	54.5		595
/1991l	1991	06	13.20139	11	36	07.90	+04	29	24.3	13 T	675
/1991l	1991	06	13.22656	11	36	06.95	+04	29	13.6		675
/1991l	1991	06	14.06755	11	35	36.58	+04	22	09.4		801
/1991l	1991	06	14.07005	11	35	36.52	+04	22	08.4		801
/1991l	1991	06	15.10256	11	35	00.34	+04	13	22.7		801
/1991l	1991	06	15.11525	11	34	59.95	+04	13	16.5		801
/1991l	1991	06	16.22604	11	34	22.59	+04	03	45.1		675
/1991l	1991	06	16.24271	11	34	21.92	+04	03	38.2		675
/1991l	1991	07	09.20069	11	27	16.10	+00	26	03.0	16.0T	675
/1991l	1991	07	11.20000	11	27	06.54	+00	05	17.4		675

Periodic Comet Faye

/1991n	1991	06	04.76946	23	15	50.76	+03	38	11.1	17 T	372
/1991n	1991	08	04.31999	00	45	44.52	+13	03	04.2		657
/1991n	1991	08	04.32531	00	45	45.00	+13	03	06.5		657

Periodic Comet Chernykh

/1991o	1991	06	08.41137	23	10	57.02	-06	57	29.9		691
/1991o	1991	06	08.42829	23	10	58.09	-06	57	25.1		691
/1991o	1991	06	08.44484	23	10	58.93	-06	57	22.2	20.3T	691
/1991o	1991	06	10.45954	23	12	50.14	-06	49	11.0	7	691
/1991o	1991	06	10.46803	23	12	50.72	-06	49	09.3		691

Periodic Comet Shoemaker 1

/1991p	1991	06	08.70869	21	40	31.49	-43	32	31.1	18 N	474
/1991p	1991	06	08.75557	21	40	32.66	-43	32	36.2		474
/1991p	1991	06	10.71829	21	41	19.50	-43	36	01.0		474
/1991p	1991	06	10.74873	21	41	19.87	-43	36	03.6	8	474

Periodic Comet Levy

/1991q	1991	06	14.74375	01	43	56.57	+13	41	32.5	7.5T	391
/1991q	1991	06	14.74826	01	43	57.82	+13	41	55.3		391
/1991q	1991	06	15.78281	01	48	36.64	+14	28	24.2		474
/1991q	1991	06	15.78530	01	48	37.43	+14	28	33.2		474
/1991q	1991	06	15.82374	01	48	47.86	+14	30	15.0		413
/1991q	1991	06	17.44271	01	56	08.88	+15	42	17.7		675
/1991q	1991	06	17.45660	01	56	12.66	+15	42	52.5		675
/1991q	1991	06	17.75903	01	57	35.22	+15	56	16.1	9.0T	894
/1991q	1991	06	17.76311	01	57	36.49	+15	56	28.9	8.5T	896
/1991q	1991	06	18.43924	02	00	42.22	+16	26	19.0		657
/1991q	1991	06	19.06042	02	03	33.72	+16	53	17.6		589
/1991q	1991	06	19.06875	02	03	36.00	+16	53	46.5		589
/1991q	1991	06	19.07569	02	03	38.12	+16	54	08.7		589
/1991q	1991	06	19.72014	02	06	36.50	+17	22	10.8	8 T	392
/1991q	1991	06	20.06528	02	08	12.18	+17	37	04.6		589
/1991q	1991	06	20.07778	02	08	15.54	+17	37	35.0		589
/1991q	1991	06	20.08750	02	08	18.31	+17	38	01.2		589
/1991q	1991	06	22.06458	02	17	32.27	+19	02	27.3		589
/1991q	1991	06	22.06944	02	17	33.27	+19	02	36.4		589
/1991q	1991	06	22.07361	02	17	34.70	+19	02	46.4		589
/1991q	1991	06	22.07847	02	17	35.89	+19	02	57.5		589
/1991q	1991	06	22.08507	02	17	37.57	+19	03	18.9		589
/1991q	1991	06	23.07222	02	22	17.01	+19	44	38.4		589
/1991q	1991	06	23.07569	02	22	17.74	+19	44	45.4		589
/1991q	1991	06	23.07917	02	22	19.17	+19	44	55.3		589
/1991q	1991	06	23.08264	02	22	19.95	+19	45	02.5		589
/1991q	1991	06	25.83166	02	35	25.40	+21	37	18.6		413
/1991q	1991	06	26.75868	02	39	53.31	+22	13	53.7		900
/1991q	1991	06	26.76354	02	39	54.49	+22	14	08.0		900
/1991q	1991	06	26.77170	02	39	56.81	+22	14	27.8		900
/1991q	1991	07	08.79410	03	39	25.85	+29	07	33.8	9 T	372
/1991q	1991	07	09.79271	03	44	27.96	+29	36	04.7		372
/1991q	1991	07	09.79497	03	44	28.80	+29	36	08.6		372
/1991q	1991	07	09.79618	03	44	29.13	+29	36	10.0	9 T	372
/1991q	1991	07	10.77569	03	49	25.73	+30	03	13.0		900
/1991q	1991	07	10.77899	03	49	26.87	+30	03	15.5		900
/1991q	1991	07	11.47569	03	52	57.81	+30	21	55.9		675
/1991q	1991	07	11.48715	03	53	01.41	+30	22	12.7		675
/1991q	1991	07	12.02778	03	55	45.16	+30	36	19.9		540
/1991q	1991	07	12.03611	03	55	47.75	+30	36	32.8		540
/1991q	1991	07	12.04514	03	55	50.56	+30	36	47.6		540
/1991q	1991	07	12.05596	03	55	53.88	+30	37	04.0		540
/1991q	1991	07	12.34222	03	57	20.64	+30	44	26.7		801
/1991q	1991	07	12.34340	03	57	21.01	+30	44	28.6		801
/1991q	1991	07	12.34546	03	57	21.61	+30	44	31.6		801
/1991q	1991	07	13.34714	04	02	25.34	+31	09	39.8		801
/1991q	1991	07	13.34823	04	02	25.68	+31	09	42.2		801
/1991q	1991	07	16.34328	04	17	32.95	+32	19	00.1		801
/1991q	1991	07	16.76736	04	19	41.07	+32	28	07.2		897
/1991q	1991	07	22.77532	04	49	42.22	+34	18	43.1	9 T	372
/1991q	1991	07	23.45235	04	53	02.65	+34	29	02.4		657
/1991q	1991	07	23.45437	04	53	03.30	+34	29	04.5		657
/1991q	1991	07	23.45559	04	53	03.56	+34	29	05.2		657
/1991q	1991	08	01.76354	05	37	40.39	+36	11	34.7	10 T	372
/1991q	1991	08	01.76840	05	37	41.64	+36	11	37.2		372
/1991q	1991	08	04.47962	05	50	05.81	+36	28	46.5		657
/1991q	1991	08	04.48064	05	50	06.11	+36	28	46.8		657

Comet Helin-Alu (1991r)

/1991r	1991	06	13.32257	16	35	54.60	-22	25	54.7		16	T	675
/1991r	1991	06	13.34722	16	35	53.76	-22	25	43.3				675
/1991r	1991	06	14.32899	16	35	23.58	-22	18	26.4				675
/1991r	1991	06	14.35590	16	35	22.51	-22	18	14.9				675
/1991r	1991	06	16.24878	16	34	24.54	-22	04	07.3		16	T	675
/1991r	1991	06	16.31753	16	34	22.38	-22	03	38.4				675
/1991r	1991	06	16.34583	16	34	21.44	-22	03	23.8				675
/1991r	1991	06	16.36701	16	34	20.73	-22	03	12.5				675
/1991r	1991	06	17.60451	16	33	43.22	-21	54	05.0		16.0	T	894
/1991r	1991	06	17.61771	16	33	42.91	-21	53	57.1				894
/1991r	1991	06	18.26736	16	33	23.65	-21	49	08.4				675
/1991r	1991	06	18.29896	16	33	22.63	-21	48	55.3				675
/1991r	1991	07	08.28368	16	25	00.15	-19	25	21.3		16.0	T	675
/1991r	1991	07	08.30816	16	24	59.58	-19	25	12.2				675
/1991r	1991	07	08.56424	16	24	54.73	-19	23	28.0		16.5	T	9 372
/1991r	1991	07	08.57674	16	24	54.59	-19	23	20.6				9 372
/1991r	1991	07	08.57917	16	24	54.38	-19	23	19.3		16	T	894
/1991r	1991	07	09.06775	16	24	45.16	-19	20	01.5				801
/1991r	1991	07	10.08134	16	24	26.31	-19	13	11.7				801
/1991r	1991	07	10.10049	16	24	25.88	-19	13	03.4				801
/1991r	1991	07	10.24201	16	24	23.29	-19	12	03.0				675
/1991r	1991	07	10.26701	16	24	22.79	-19	11	56.5				675
/1991r	1991	07	11.07912	16	24	08.33	-19	06	30.5				801
/1991r	1991	07	11.09525	16	24	08.09	-19	06	24.3				801
/1991r	1991	07	13.10329	16	23	34.24	-18	53	07.0				801
/1991r	1991	07	13.12076	16	23	33.98	-18	52	59.6				801

Periodic Comet Wirtanen

/1991s	1991	07	08.76666	03	12	02.7	+08	03	58		17	T	372
/1991s	1991	07	08.77500	03	12	04.2	+08	04	01				372
/1991s	1991	07	08.78472	03	12	06.3	+08	04	10				372
/1991s	1991	07	08.79063	03	12	07.3	+08	04	12				372
/1991s	1991	07	09.77743	03	15	32.12	+08	19	56.5		17	T	372
/1991s	1991	07	09.78333	03	15	33.57	+08	20	03.8				372

Periodic Comet Hartley 2

/1991t	1991	07	12.31995	01	12	48.80	+21	21	05.9				801
/1991t	1991	07	12.32387	01	12	49.88	+21	21	12.4				801
/1991t	1991	07	12.32899	01	12	51.28	+21	21	20.8				801
/1991t	1991	07	12.33093	01	12	51.82	+21	21	23.9				801
/1991t	1991	07	12.66032	01	14	26.02	+21	30	30.5		15	N	474
/1991t	1991	07	12.67236	01	14	29.58	+21	30	51.1				474
/1991t	1991	07	13.32439	01	17	37.83	+21	48	14.6				801
/1991t	1991	07	13.32778	01	17	38.78	+21	48	20.2				801
/1991t	1991	07	13.33084	01	17	39.67	+21	48	25.1				801
/1991t	1991	07	14.68021	01	24	16.68	+22	24	34.3		11.3	T	372
/1991t	1991	07	14.68404	01	24	17.73	+22	24	39.9		14	T	372
/1991t	1991	07	14.69208	01	24	20.27	+22	24	53.8				372
/1991t	1991	07	15.31269	01	27	25.74	+22	41	20.0				801
/1991t	1991	07	15.31440	01	27	26.25	+22	41	22.8				801
/1991t	1991	07	16.33961	01	32	37.53	+23	08	19.7				801
/1991t	1991	07	16.34090	01	32	37.93	+23	08	22.1				801
/1991t	1991	07	23.39409	02	10	54.13	+26	01	43.9				657
/1991t	1991	07	23.39584	02	10	54.69	+26	01	46.2				657
/1991t	1991	08	06.41240	03	38	40.01	+29	51	27.9				657
/1991t	1991	08	06.41341	03	38	40.36	+29	51	28.5				657

Periodic Comet Arend

/1991u	1991	08	01.78090	06	12	11.82	+37 42 35.1	17.5T	372
/1991u	1991	08	01.78785	06	12	12.93	+37 42 33.0		372
/1991u	1991	08	02.77500	06	15	07.98	+37 45 06.1	18 T	372
/1991u	1991	08	02.78403	06	15	09.62	+37 45 05.7		372
/1991u	1991	08	07.78056	06	29	47.05	+37 54 53.8	18.5T	372

Note 1: correction to MPC 9123. 2: correction to MPC 9256. 3: correction to MPC 16295. 4: faint, narrow tail 30" long in p.a. 207 5 . 5: correction to MPC 14670, where the observations were interchanged. 6: time uncertain. 7: coma 8" across; faint tail extending > 8" in p.a. 252 . 8: very weak image. 9: diffuse without condensation.

* * * * *

OBSERVATIONS OF MINOR PLANETS.

The observations are listed separately for each observatory code. Alphabetic note codes shown with some of the observations are defined according to the scheme below. Numerical codes are defined in the headings for the individual observatories.

A earlier approximate position inferior
a sense of motion ambiguous
B black or dark plate
b bad seeing
C correction to earlier position
c crowded star field
D declination uncertain
d diffuse image
E at or near edge of plate
F faint image
f involved with emulsion or plate flaw
G poor guiding
g no guiding
I involved with star
i inkdot measured
M measurement difficult
N near edge of plate, measurement uncertain
O image out of focus
o plate measured in one direction only
P position uncertain
p poor image
R right ascension uncertain
r poor distribution of reference stars
S poor sky
s streaked image
T time uncertain
t trailed image
U uncertain image
u unconfirmed image
V very faint image
W weak image
w weak solution

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
033 Tautenburg							
F. Borngen, Karl Schwarzschild Observatorium, O-6901 Tautenburg, Federal Republic of Germany							
1.3-m Schmidt telescope							
PPM							
1977 TS3	1991 04	09.90556	13 06 57.89	-01 01 25.8	18.9		033
1977 TS3	1991 04	09.95903	13 06 55.59	-01 01 11.3			033
1977 TS3	1991 04	11.00486	13 06 10.95	-00 56 34.5			033
1977 TS3	1991 04	11.98542	13 05 29.26	-00 52 18.1			033
1977 TS3	1991 04	12.95278	13 04 48.16	-00 48 07.8			033
1977 TS3	1991 04	13.96389	13 04 05.42	-00 43 48.9			033
1980 BB	1991 05	13.95694	15 24 43.67	-16 23 47.6	17.6		033
1980 BB	1991 05	13.98056	15 24 42.54	-16 23 45.1			033
1980 BB	1991 05	14.97778	15 23 50.04	-16 21 22.9			033
1982 UW3	1991 05	08.02743	17 04 40.95	-06 25 26.8			033
1982 UW3	1991 05	09.07535	17 04 05.97	-06 20 38.9		V	033
1982 UW3	1991 05	15.00069	17 00 31.63	-05 54 40.6	17.6		033
1982 UW3	1991 05	15.05174	17 00 29.61	-05 54 28.7			033
1982 UW3	1991 06	05.99167	16 44 41.63	-04 42 50.9			033
1982 UW3	1991 06	15.97361	16 37 22.61	-04 26 53.2	17.5	V	033
1982 UW3	1991 06	16.01528	16 37 20.88	-04 26 50.1		V	033
1987 SL10	1991 04	09.90556	13 13 34.11	+00 08 03.3	19.4		033
1987 SL10	1991 04	09.95903	13 13 32.37	+00 08 16.9			033
1987 SL10	1991 04	11.00486	13 12 57.32	+00 12 43.5			033
1987 SL10	1991 04	11.98542	13 12 24.67	+00 16 51.1			033
1988 PM2	1991 04	09.90556	13 09 36.58	-00 32 24.9	18.7		033
1988 PM2	1991 04	09.95903	13 09 34.02	-00 32 07.3			033
1988 PM2	1991 04	11.00486	13 08 44.48	-00 26 13.1			033
1988 PM2	1991 04	11.98542	13 07 58.23	-00 20 46.6			033
1988 PM2	1991 04	12.95278	13 07 12.72	-00 15 27.6			033
1988 PM2	1991 04	13.96389	13 06 25.28	-00 09 58.0			033
1989 UE7	1991 04	09.82431	08 37 49.16	+17 45 33.2	19.8	M	033
1989 UE7	1991 04	10.82569	08 38 04.24	+17 45 00.7			033
1989 WZ	1991 05	13.95694	15 31 17.72	-17 24 24.3	16.7		033
1989 WZ	1991 05	13.98056	15 31 16.33	-17 24 12.8			033
1989 WZ	1991 05	14.97778	15 30 18.84	-17 15 53.1			033
1990 EX2	1991 05	08.02743	17 06 44.84	-06 53 45.3			033
1990 EX2	1991 05	09.07535	17 06 10.85	-06 46 41.0			033
1990 EX2	1991 05	15.00069	17 02 31.61	-06 07 43.6	17.2		033
1990 EX2	1991 05	15.05174	17 02 29.41	-06 07 23.8			033
1991 GB10*	1991 04	09.90556	13 03 05.78	-00 56 25.2	19.5		033
1991 GB10	1991 04	09.95903	13 03 02.98	-00 55 59.6			033
1991 GB10	1991 04	11.00486	13 02 08.44	-00 47 41.7			033
1991 GC10*	1991 04	09.90556	13 03 13.99	-01 40 36.4	18.8		033
1991 GC10	1991 04	09.95903	13 03 10.64	-01 40 25.4			033
1991 GC10	1991 04	11.00486	13 02 05.80	-01 36 50.0			033
1991 GD10*	1991 04	09.90556	13 04 47.02	+00 12 56.1	18.7		033
1991 GD10	1991 04	09.95903	13 04 43.92	+00 13 00.2			033
1991 GD10	1991 04	11.00486	13 03 45.42	+00 14 20.6			033
1991 GD10	1991 04	11.98542	13 02 50.97	+00 15 28.3			033
1991 GD10	1991 04	12.95278	13 01 57.51	+00 16 30.3			033
1991 GD10	1991 04	13.96389	13 01 01.97	+00 17 28.0			033
1991 GE10*	1991 04	09.90556	13 05 14.67	-00 38 37.4	19.7		033
1991 GE10	1991 04	09.95903	13 05 11.60	-00 38 22.6			033
1991 GE10	1991 04	11.00486	13 04 12.45	-00 33 38.5			033
1991 GE10	1991 04	11.98542	13 03 17.62	-00 29 19.7			033
1991 GF10*	1991 04	09.90556	13 05 45.52	-00 04 07.3	19.1		033

1991	GF10	1991	04	09.95903	13	05	42.81	-00	03	59.4	033
1991	GF10	1991	04	11.00486	13	04	50.70	-00	01	33.3	033
1991	GF10	1991	04	11.98542	13	04	02.05	+00	00	39.9	033
1991	GF10	1991	04	12.95278	13	03	14.17	+00	02	47.9	033
1991	GF10	1991	04	13.96389	13	02	24.29	+00	04	57.4	033
1991	GG10*	1991	04	09.90556	13	05	46.18	+00	43	07.2	17.8 033
1991	GG10	1991	04	09.95903	13	05	43.00	+00	43	26.0	033
1991	GG10	1991	04	11.00486	13	04	42.57	+00	49	30.9	033
1991	GG10	1991	04	11.98542	13	03	46.55	+00	55	04.7	033
1991	GG10	1991	04	12.95278	13	02	51.53	+01	00	26.5	033
1991	GG10	1991	04	13.96389	13	01	54.37	+01	05	55.2	033
1991	GH10*	1991	04	09.90556	13	06	05.58	-00	10	39.6	18.8 033
1991	GH10	1991	04	09.95903	13	06	02.40	-00	10	28.2	033
1991	GH10	1991	04	11.00486	13	05	00.80	-00	06	50.5	033
1991	GH10	1991	04	11.98542	13	04	03.47	-00	03	32.7	033
1991	GH10	1991	04	12.95278	13	03	06.98	-00	00	22.7	033
1991	GH10	1991	04	13.96389	13	02	08.39	+00	02	51.0	033
1991	GJ10*	1991	04	09.90556	13	06	10.59	-00	30	40.0	18.5 033
1991	GJ10	1991	04	09.95903	13	06	07.94	-00	30	32.8	033
1991	GJ10	1991	04	11.00486	13	05	16.90	-00	28	16.7	033
1991	GJ10	1991	04	11.98542	13	04	29.31	-00	26	12.6	033
1991	GJ10	1991	04	12.95278	13	03	42.50	-00	24	14.1	033
1991	GJ10	1991	04	13.96389	13	02	53.71	-00	22	13.9	033
1991	GK10*	1991	04	09.90556	13	06	41.19	-01	44	14.4	18.3 033
1991	GK10	1991	04	09.95903	13	06	38.61	-01	43	58.8	033
1991	GK10	1991	04	11.00486	13	05	48.80	-01	38	57.9	033
1991	GK10	1991	04	11.98542	13	05	02.38	-01	34	19.1	033
1991	GK10	1991	04	12.95278	13	04	16.73	-01	29	48.4	033
1991	GK10	1991	04	13.96389	13	03	29.24	-01	25	09.4	033
1991	GL10*	1991	04	09.90556	13	06	48.52	-01	35	48.2	18.2 033
1991	GL10	1991	04	09.95903	13	06	46.13	-01	35	35.0	033
1991	GL10	1991	04	11.00486	13	05	59.64	-01	31	22.6	033
1991	GL10	1991	04	11.98542	13	05	16.31	-01	27	29.9	033
1991	GL10	1991	04	12.95278	13	04	33.70	-01	23	42.7	033
1991	GL10	1991	04	13.96389	13	03	49.28	-01	19	48.6	033
1991	GM10*	1991	04	09.90556	13	07	23.49	-00	45	09.9	19.0 033
1991	GM10	1991	04	09.95903	13	07	21.56	-00	44	58.8	033
1991	GM10	1991	04	11.00486	13	06	45.07	-00	41	16.4	033
1991	GM10	1991	04	11.98542	13	06	10.99	-00	37	49.7	033
1991	GM10	1991	04	12.95278	13	05	37.38	-00	34	28.5	033
1991	GN10*	1991	04	09.90556	13	07	28.94	+01	10	26.5	19.2 033
1991	GN10	1991	04	09.95903	13	07	25.73	+01	10	45.3	033
1991	GN10	1991	04	11.00486	13	06	24.16	+01	16	50.8	033
1991	GN10	1991	04	11.98542	13	05	26.67	+01	22	26.8	033
1991	GN10	1991	04	12.95278	13	04	29.90	+01	27	53.2	033
1991	GO10*	1991	04	09.90556	13	07	38.41	+01	17	06.6	19.0 033
1991	GO10	1991	04	09.95903	13	07	34.92	+01	17	04.9	033
1991	GO10	1991	04	11.00486	13	06	27.93	+01	16	37.4	033
1991	GO10	1991	04	11.98542	13	05	25.58	+01	16	06.7	033
1991	GO10	1991	04	12.95278	13	04	24.18	+01	15	29.2	033
1991	GO10	1991	04	13.96389	13	03	20.52	+01	14	50.7	033
1991	GP10*	1991	04	09.90556	13	07	40.96	-00	56	10.3	18.9 033
1991	GP10	1991	04	09.95903	13	07	38.25	-00	55	53.5	033
1991	GP10	1991	04	11.00486	13	06	45.13	-00	50	17.2	033
1991	GP10	1991	04	11.98542	13	05	55.55	-00	45	07.0	033
1991	GP10	1991	04	12.95278	13	05	06.76	-00	40	04.6	033
1991	GP10	1991	04	13.96389	13	04	15.97	-00	34	53.6	033
1991	GQ10*	1991	04	09.90556	13	08	16.44	-00	37	25.1	18.1 033
1991	GQ10	1991	04	09.95903	13	08	13.84	-00	37	07.8	033

1991	GQ10	1991	04	11.00486	13	07	23.42	-00	31	28.5			033
1991	GQ10	1991	04	11.98542	13	06	36.39	-00	26	14.1			033
1991	GQ10	1991	04	12.95278	13	05	50.08	-00	21	07.6			033
1991	GQ10	1991	04	13.96389	13	05	01.78	-00	15	52.2			033
1991	GR10*	1991	04	09.90556	13	08	24.36	+00	29	59.3	18.7		033
1991	GR10	1991	04	09.95903	13	08	21.50	+00	30	05.5			033
1991	GR10	1991	04	11.00486	13	07	26.90	+00	32	07.3			033
1991	GR10	1991	04	11.98542	13	06	36.02	+00	33	56.2			033
1991	GR10	1991	04	12.95278	13	05	45.93	+00	35	39.9			033
1991	GR10	1991	04	13.96389	13	04	53.80	+00	37	22.7			033
1991	GS10*	1991	04	09.90556	13	09	41.03	-01	21	18.5	19.3		033
1991	GS10	1991	04	09.95903	13	09	38.05	-01	21	06.4			033
1991	GS10	1991	04	11.00486	13	08	41.14	-01	17	10.5			033
1991	GS10	1991	04	11.98542	13	07	48.07	-01	13	35.1			033
1991	GS10	1991	04	12.95278	13	06	56.06	-01	10	06.9			033
1991	GT10*	1991	04	09.90556	13	10	50.43	+01	24	35.1	18.4		033
1991	GT10	1991	04	09.95903	13	10	47.02	+01	24	36.2			033
1991	GT10	1991	04	11.00486	13	09	40.90	+01	24	59.6			033
1991	GT10	1991	04	11.98542	13	08	39.06	+01	25	15.0			033
1991	GT10	1991	04	12.95278	13	07	38.09	+01	25	23.5			033
1991	GT10	1991	04	13.96389	13	06	34.52	+01	25	29.0			033
1991	GU10*	1991	04	09.90556	13	12	20.48	+00	31	07.7	19.3		033
1991	GU10	1991	04	09.95903	13	12	17.42	+00	31	07.4			033
1991	GU10	1991	04	11.00486	13	11	19.14	+00	31	12.0			033
1991	GU10	1991	04	11.98542	13	10	24.81	+00	31	13.1			033
1991	GU10	1991	04	12.95278	13	09	31.26	+00	31	08.2			033
1991	GU10	1991	04	13.96389	13	08	35.36	+00	30	59.9		U	033
1991	GV10*	1991	04	09.90556	13	13	18.11	-01	40	10.7	19.1		033
1991	GV10	1991	04	09.95903	13	13	15.38	-01	40	05.2			033
1991	GV10	1991	04	11.00486	13	12	22.76	-01	38	16.5			033
1991	GV10	1991	04	11.98542	13	11	33.58	-01	36	37.7			033
1991	JN3 *	1991	05	13.95694	15	22	53.05	-17	21	22.3	18.1		033
1991	JN3	1991	05	13.98056	15	22	51.50	-17	21	20.4		V	033
1991	JN3	1991	05	14.97778	15	21	47.19	-17	20	09.0		V	033
1991	JO3 *	1991	05	13.95694	15	26	39.67	-18	20	43.6	17.7		033
1991	JO3	1991	05	13.98056	15	26	38.25	-18	20	36.7			033
1991	JO3	1991	05	14.97778	15	25	39.92	-18	16	20.6			033
1991	JP3 *	1991	05	13.95694	15	30	02.49	-17	46	38.3	17.8		033
1991	JP3	1991	05	13.98056	15	30	01.00	-17	46	38.3			033
1991	JP3	1991	05	14.97778	15	29	01.42	-17	46	10.3			033
1991	JQ3 *	1991	05	13.95694	15	30	34.76	-15	47	25.8	17.8		033
1991	JQ3	1991	05	13.98056	15	30	33.51	-15	47	19.2			033
1991	JQ3	1991	05	14.97778	15	29	39.81	-15	42	33.8			033
1991	JR3 *	1991	05	13.95694	15	30	54.31	-16	23	04.6	17.9		033
1991	JR3	1991	05	13.98056	15	30	53.03	-16	22	57.7		V	033
1991	JR3	1991	05	14.97778	15	29	59.92	-16	18	10.2		V	033
1991	JS3 *	1991	05	13.95694	15	32	06.38	-17	38	13.5	17.1		033
1991	JS3	1991	05	13.98056	15	32	05.26	-17	38	09.9			033
1991	JS3	1991	05	14.97778	15	31	17.29	-17	35	18.3			033
1991	JT3 *	1991	05	13.95694	15	34	50.64	-16	31	43.6	17.0		033
1991	JT3	1991	05	13.98056	15	34	49.21	-16	31	35.0			033
1991	JT3	1991	05	14.97778	15	33	50.05	-16	25	50.3			033
1991	JU3 *	1991	05	13.95694	15	34	57.71	-17	24	30.6	17.9		033
1991	JU3	1991	05	13.98056	15	34	56.20	-17	24	21.0			033
1991	JU3	1991	05	14.97778	15	33	54.32	-17	17	52.5			033
279		1991	05	13.95694	15	34	59.76	-18	17	37.0	15.4	D	033
279		1991	05	13.98056	15	34	58.92	-18	17	34.8		D	033
279		1991	05	14.97778	15	34	21.25	-18	15	45.5		D	033
633		1991	05	08.02743	17	06	50.55	-07	20	43.4			033

633	1991	05	09.07535	17	06	18.43	-07	17	11.5		033
633	1991	05	15.00069	17	02	54.30	-06	58	32.2	15.4	033
633	1991	05	15.05174	17	02	52.29	-06	58	22.8		033
682	1991	06	05.99167	16	51	07.86	-04	07	42.4	r	033
682	1991	06	15.97361	16	42	54.80	-03	31	23.9	16.2	033
682	1991	06	16.01528	16	42	52.77	-03	31	17.9		033
712	1991	05	13.95694	15	25	53.55	-17	49	41.0	13.5	033
712	1991	05	13.98056	15	25	52.31	-17	49	32.4		033
712	1991	05	14.97778	15	24	58.69	-17	42	52.1		033
712	1991	06	05.90660	15	06	57.60	-15	22	11.7	14.1	033
712	1991	06	05.92812	15	06	56.65	-15	22	04.4		033
793	1991	04	09.90556	13	09	52.43	+00	57	00.9	15.4	033
793	1991	04	09.95903	13	09	49.38	+00	57	05.6		033
793	1991	04	11.00486	13	08	50.48	+00	58	37.4		033
793	1991	04	11.98542	13	07	55.48	+00	59	58.8		033
793	1991	04	12.95278	13	07	01.25	+01	01	14.3		033
793	1991	04	13.96389	13	06	04.61	+01	02	29.4		033
888	1991	05	09.07535	17	10	19.32	-06	55	07.7		033
888	1991	05	15.00069	17	06	25.09	-06	43	50.0	15.6	033
888	1991	05	15.05174	17	06	22.83	-06	43	44.4		033
974	1991	04	09.90556	13	14	05.63	+00	41	16.3	15.3	033
974	1991	04	09.95903	13	14	02.71	+00	41	31.6		033
974	1991	04	11.00486	13	13	06.54	+00	46	26.8		033
974	1991	04	11.98542	13	12	14.06	+00	50	58.2		033
974	1991	04	12.95278	13	11	22.41	+00	55	20.9		033
974	1991	04	13.96389	13	10	28.45	+00	59	50.0		033
1371	1991	04	09.90556	13	11	28.89	-01	41	24.5	17.0	033
1371	1991	04	09.95903	13	11	26.75	-01	40	57.0		033
1371	1991	04	11.00486	13	10	45.05	-01	31	58.0		033
1371	1991	04	11.98542	13	10	06.14	-01	23	35.3		033
1371	1991	04	12.95278	13	09	27.78	-01	15	21.7		033
1371	1991	04	13.96389	13	08	47.75	-01	06	50.3		033
1624	1991	05	13.95694	15	27	02.61	-15	49	57.7	16.2	033
1624	1991	05	13.98056	15	27	01.51	-15	49	53.5		033
1624	1991	05	14.97778	15	26	14.07	-15	47	04.9		033
1624	1991	06	05.90660	15	10	19.66	-14	53	33.9	17.1	033
1624	1991	06	05.92812	15	10	18.78	-14	53	31.2		033
1898	1991	05	13.95694	15	27	44.28	-17	28	33.6	18.2	033
1898	1991	05	13.98056	15	27	43.28	-17	28	29.6		033
1898	1991	05	14.97778	15	26	56.61	-17	25	34.0	V	033
2982	1991	04	09.90556	13	05	26.53	+00	23	48.7	17.1	033
2982	1991	04	09.95903	13	05	23.80	+00	23	56.0		033
2982	1991	04	11.00486	13	04	30.93	+00	26	19.8		033
2982	1991	04	11.98542	13	03	41.67	+00	28	29.9		033
2982	1991	04	12.95278	13	02	53.22	+00	30	33.6		033
2982	1991	04	13.96389	13	02	02.76	+00	32	39.6		033
3111	1991	05	13.95694	15	24	05.92	-16	17	57.0	17.5	033
3111	1991	05	13.98056	15	24	04.41	-16	17	52.5		033
3111	1991	05	14.97778	15	22	59.93	-16	14	25.0		033
3172	1991	04	09.90556	13	05	59.64	-01	31	16.0	18.6	033
3172	1991	04	09.95903	13	05	56.66	-01	30	59.2		033
3172	1991	04	11.00486	13	04	58.73	-01	25	31.6		033
3172	1991	04	11.98542	13	04	04.61	-01	20	27.9		033
3172	1991	04	12.95278	13	03	11.29	-01	15	32.2		033
3172	1991	04	13.96389	13	02	15.71	-01	10	26.4		033
3262	1991	06	05.90660	15	14	01.84	-14	14	50.1	16.3	033
3262	1991	06	05.92812	15	14	00.88	-14	14	50.3		033
3450	1991	05	13.95694	15	29	21.17	-15	47	31.0	17.2	033
3450	1991	05	13.98056	15	29	19.90	-15	47	29.3		033

3450		1991 05 14.97778	15 28 25.05	-15 46 02.4					033
3693		1991 04 09.90556	13 10 46.87	-00 17 27.1		17.9			033
3693		1991 04 09.95903	13 10 44.71	-00 17 05.8					033
3693		1991 04 11.00486	13 10 02.85	-00 10 08.3					033
3693		1991 04 11.98542	13 09 23.77	-00 03 40.5					033
3693		1991 04 12.95278	13 08 45.22	+00 02 40.2					033
3693		1991 04 13.96389	13 08 05.04	+00 09 13.3					033
3736		1991 05 08.02743	17 08 11.18	-06 31 03.9					033
3736		1991 05 09.07535	17 07 40.38	-06 27 25.7					033
3736		1991 05 15.00069	17 04 22.19	-06 08 31.7		16.2			033
3736		1991 05 15.05174	17 04 20.22	-06 08 22.4					033
3736		1991 06 05.99167	16 48 02.18	-05 31 44.5					033
3736		1991 06 15.97361	16 40 07.17	-05 36 55.6		16.1			033
3736		1991 06 16.01528	16 40 05.24	-05 36 58.9					033
4244		1991 05 13.95694	15 31 21.28	-17 43 01.3		18.4		V	033
4244		1991 05 13.98056	15 31 20.37	-17 42 58.3				V	033
4850		1991 05 13.95694	15 29 24.01	-16 53 49.1		17.7			033
4850		1991 05 13.98056	15 29 22.88	-16 53 44.4					033
4850		1991 05 14.97778	15 28 32.42	-16 50 16.8					033

046 Klet
A. Mrkos, Dept. of Astronomy and Astrophysics, Charles University, Svedska 8, C-15000 Prague 5, Czechoslovakia
Observers A. Mrkos, Z. Vavrova
0.6-m Maksutov reflector

1977 NK		1991 05 15.96580	15 38 18.30	-06 32 44.7		16.7			046
1977 NK		1991 05 15.97998	15 38 17.75	-06 32 42.5					046
1987 DF		1991 06 05.95831	16 11 34.32	+25 36 11.2		15.0			046
1987 DF		1991 06 05.97133	16 11 33.69	+25 36 08.4					046
1987 DF		1991 06 15.90104	16 05 47.91	+24 32 04.9					046
1987 DF		1991 06 15.91528	16 05 47.46	+24 31 56.5					046
1991 JL		1991 05 15.92755	14 32 09.97	-07 49 07.9		16.8			046
1991 JL		1991 05 15.94207	14 32 09.35	-07 49 03.6					046
1991 JX		1991 06 05.90050	15 21 10.30	+21 10 33.8				M	046
1991 JX		1991 06 11.89268	18 16 21.48	+44 25 19.0				M	046
592		1991 06 01.91146	15 23 50.45	-05 03 06.9					046
592		1991 06 01.92297	15 23 50.05	-05 03 06.4					046
1732		1991 06 01.91146	15 24 52.10	-02 57 56.9					046
1732		1991 06 01.92297	15 24 51.62	-02 57 58.3					046
1844		1991 06 02.91667	16 05 28.54	-10 30 29.7					046
1844		1991 06 02.92813	16 05 28.02	-10 30 30.5					046
2399		1991 06 02.91667	16 02 17.58	-10 23 38.9					046
2399		1991 06 02.92813	16 02 17.03	-10 23 38.9					046

074 Boyden Observatory
G. V. Williams, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A.
Measurer A. J. Noymer
ADH telescope

1951 MP	*	1951 06 22.6929	13 29 20.41	-31 09 24.8		17.5			074
1951 MP		1951 06 22.7449	13 29 21.69	-31 09 05.0					074
704		1951 06 22.7189	13 30 15.60	-28 09 26.8					074
862		1951 06 22.6929	13 39 21.62	-28 23 13.6					074
862		1951 06 22.7449	13 39 22.00	-28 22 57.4					074
1719		1951 06 22.6929	13 25 13.96	-28 05 50.0				r	074
1719		1951 06 22.7449	13 25 14.10	-28 05 36.5				r	074
2570		1951 06 22.6929	13 25 01.82	-31 02 05.7					074
2570		1951 06 22.7449	13 25 02.28	-31 01 52.1					074

104 San Marcello Pistoiese
L. Tesi, Osservatorio di Pian dei Termini, Viale Panoramico 45, I-51028 San Marcello Pistoiese (PT), Italy
Observers L. Tesi, P. Gigli
Measurers L. Tesi, G. Cattani
AGK3, SAOC

1709	1991 07 11.96840	21 37 51.12	-12 37 45.2		15.2	104
1709	1991 07 11.98032	21 37 50.87	-12 37 39.1		15.2	104

293 Burlington remote site
T. Handley, 13 Linden Avenue, Burlington, NJ 08016, U.S.A.
0.26-m f/3.9 Wright-Schmidt camera
SAOC

1985 TV2	1991 06 08.21944	16 05 01.24	-11 38 21.9		293
1987 DF	1991 06 08.24375	16 10 05.24	+25 26 31.6		293
1987 DF	1991 06 08.26042	16 10 04.52	+25 26 27.6		293
1989 AH	1991 06 08.28472	17 17 44.50	-11 14 38.9		293
1990 FC1	1991 06 14.29063	19 08 10.39	-12 25 33.4		293
1990 FC1	1991 06 14.30660	19 08 09.77	-12 25 37.4		293
3474	1991 06 14.29063	19 13 53.40	-11 23 19.8		293
3474	1991 06 14.30660	19 13 53.20	-11 23 19.3		293

297 Middlebury
S. Ratcliff, Department of Physics, Middlebury College, Middlebury, VT 05753, U.S.A.
Observers S. Ratcliff, A. Alexov
Long. and Parallax 286.83, -307, -295 (see MPC 16637)

1987 DF	1991 05 19.28830	16 24 01.01	+25 02 52.1		297
1987 DF	1991 05 19.32262	16 23 59.56	+25 03 07.2		297
694	1991 05 19.25580	14 31 08.78	-16 28 26.6		297
694	1991 05 19.26719	14 31 08.18	-16 28 20.0		297
694	1991 05 21.06696	14 29 38.93	-16 11 13.8		297
694	1991 05 21.06973	14 29 38.79	-16 11 12.0		297
694	1991 05 21.07264	14 29 38.64	-16 11 10.6		297
694	1991 05 21.07664	14 29 38.44	-16 11 08.4		297
694	1991 05 21.07997	14 29 38.28	-16 11 06.7		297
694	1991 05 21.08338	14 29 38.11	-16 11 04.5		297
694	1991 05 21.08692	14 29 37.94	-16 11 02.4		297
694	1991 05 21.09032	14 29 37.76	-16 11 00.5		297
694	1991 05 21.09364	14 29 37.60	-16 10 58.7		297
694	1991 05 21.09692	14 29 37.44	-16 10 56.7		297
694	1991 05 21.10050	14 29 37.24	-16 10 54.8		297
694	1991 05 21.10480	14 29 37.04	-16 10 52.4		297
694	1991 05 21.10825	14 29 36.87	-16 10 50.3		297
694	1991 05 21.11203	14 29 36.68	-16 10 48.1		297
694	1991 05 21.11523	14 29 36.52	-16 10 46.4		297
694	1991 05 21.11868	14 29 36.33	-16 10 44.5		297
694	1991 05 21.12509	14 29 36.03	-16 10 40.9		297
694	1991 05 21.12817	14 29 35.86	-16 10 39.1		297
694	1991 05 21.13184	14 29 35.68	-16 10 36.9		297
694	1991 05 21.13467	14 29 35.53	-16 10 35.4		297
694	1991 05 21.13808	14 29 35.37	-16 10 33.4		297
694	1991 05 21.14159	14 29 35.18	-16 10 31.4		297
694	1991 05 21.14522	14 29 34.99	-16 10 29.3		297
694	1991 05 21.14844	14 29 34.83	-16 10 27.6		297
694	1991 05 21.15161	14 29 34.67	-16 10 26.0		297
694	1991 05 21.15490	14 29 34.50	-16 10 24.0		297
694	1991 05 21.15795	14 29 34.35	-16 10 22.2		297
694	1991 05 21.16156	14 29 34.16	-16 10 20.3		297

694	1991	05	21.16492	14	29	33.99	-16	10	18.3	297
694	1991	05	21.16887	14	29	33.79	-16	10	16.1	297
694	1991	05	21.17288	14	29	33.58	-16	10	13.7	297
694	1991	05	21.17633	14	29	33.41	-16	10	11.8	297
694	1991	05	21.18072	14	29	33.19	-16	10	09.4	297
694	1991	05	21.18439	14	29	32.98	-16	10	07.1	297
694	1991	05	21.18748	14	29	32.84	-16	10	05.5	297
694	1991	05	21.19094	14	29	32.66	-16	10	03.5	297
694	1991	05	21.19434	14	29	32.49	-16	10	01.6	297
694	1991	05	21.19830	14	29	32.30	-16	09	59.3	297
694	1991	05	21.20131	14	29	32.15	-16	09	57.6	297
694	1991	05	21.20449	14	29	31.99	-16	09	55.9	297
694	1991	05	21.20818	14	29	31.80	-16	09	53.6	297
694	1991	07	16.13755	14	18	35.22	-10	44	34.8	297
694	1991	07	16.13965	14	18	35.28	-10	44	33.6	297
694	1991	07	16.14281	14	18	35.34	-10	44	34.5	297
694	1991	07	17.08873	14	19	03.75	-10	43	28.2	297
694	1991	07	17.12095	14	19	04.75	-10	43	25.7	297
1702	1991	05	19.27412	15	58	03.01	-09	27	21.6	297
1702	1991	05	19.30424	15	58	01.40	-09	27	20.0	297
1702	1991	07	16.15057	15	25	01.88	-11	18	24.0	297
1702	1991	07	16.18073	15	25	01.73	-11	18	31.0	297
1702	1991	07	16.18378	15	25	01.82	-11	18	34.0	297
1702	1991	07	17.10139	15	25	03.42	-11	22	54.8	297
1702	1991	07	17.12903	15	25	03.47	-11	23	02.8	297
1709	1991	07	17.20207	21	35	34.62	-12	11	48.0	297
1709	1991	07	17.27438	21	35	32.17	-12	11	27.9	297
1816	1991	07	17.20736	21	50	27.65	-01	27	27.6	297
1816	1991	07	17.27851	21	50	25.19	-01	27	59.2	297
2075	1991	07	16.17490	16	20	01.90	-00	23	24.4	297
2075	1991	07	16.20806	16	20	01.20	-00	23	48.1	297
2075	1991	07	17.10672	16	19	41.01	-00	33	32.8	297
2075	1991	07	17.11338	16	19	40.86	-00	33	37.9	297
2198	1991	07	17.14390	19	05	54.16	-17	15	12.2	297
2198	1991	07	17.14835	19	05	53.86	-17	15	12.1	297
2198	1991	07	17.17250	19	05	52.44	-17	15	13.3	297
3103	1991	07	17.23674	22	31	48.90	+07	25	57.3	297
3103	1991	07	17.25854	22	31	55.38	+07	25	10.4	297
3103	1991	07	17.26227	22	31	56.49	+07	25	02.6	297
3103	1991	07	17.26500	22	31	57.33	+07	24	56.8	297
3103	1991	07	17.26632	22	31	57.73	+07	24	54.1	297
3103	1991	07	17.30416	22	32	08.91	+07	23	33.7	297
3103	1991	07	17.31218	22	32	11.35	+07	23	15.6	297
3103	1991	07	17.31358	22	32	11.78	+07	23	12.4	297
3103	1991	07	17.31714	22	32	12.86	+07	23	04.6	297
3103	1991	07	17.31950	22	32	13.55	+07	22	59.7	297
3103	1991	07	17.32107	22	32	14.02	+07	22	56.1	297
3103	1991	07	17.32393	22	32	14.88	+07	22	50.2	297
3103	1991	07	17.32817	22	32	16.14	+07	22	40.8	297
3160	1991	07	16.20157	20	04	12.79	-23	03	06.7	297
3160	1991	07	16.23340	20	04	10.79	-23	03	05.3	297
3160	1991	07	17.16132	20	03	14.51	-23	02	16.4	297
3160	1991	07	17.18234	20	03	13.24	-23	02	14.7	297
3217	1991	07	17.19741	21	27	48.74	-23	43	56.0	297
3217	1991	07	17.27084	21	27	46.42	-23	43	57.7	297
3531	1991	07	17.21652	22	13	26.82	+03	48	47.6	297
3531	1991	07	17.28262	22	13	25.29	+03	48	43.4	297
3556	1991	07	17.15424	19	11	30.40	-11	49	04.1	297
3556	1991	07	17.17616	19	11	29.31	-11	49	04.4	297

3556	1991 07 17.29694	19 11 23.02	-11 49 02.6					297
3712	1991 07 16.19713	19 24 12.38	-19 12 52.6					297
3712	1991 07 16.22494	19 24 10.64	-19 12 46.5					297
3712	1991 07 17.15828	19 23 10.71	-19 09 03.0					297
3712	1991 07 17.17956	19 23 09.34	-19 08 58.0					297
3913	1991 05 19.29457	17 03 15.03	+23 01 45.7					297
3913	1991 05 19.32856	17 03 13.42	+23 01 56.2					297
3913	1991 07 16.15561	16 28 50.25	+14 42 49.0					297
3913	1991 07 16.18896	16 28 50.28	+14 42 12.3					297
3913	1991 07 17.09684	16 28 54.51	+14 25 40.2					297
3913	1991 07 17.12521	16 28 54.63	+14 25 09.2					297
4117	1991 07 17.13877	18 09 51.54	-02 44 12.4					297
4117	1991 07 17.16882	18 09 50.33	-02 44 23.2					297
4853	1991 05 19.27983	17 14 39.38	-06 54 31.4					297
4853	1991 05 19.31269	17 14 38.33	-06 54 24.5					297

372 Geisei
T. Seki, Kamimachi 2-9-35, Kochi, Japan
0.60-m reflector

1989 CV	1991 05 13.68652	15 37 10.78	-23 14 42.1				18	372
1989 CV	1991 05 13.69860	15 37 10.33	-23 14 40.4					372
1989 CV	1991 06 07.60594	15 20 10.45	-22 35 24.3				18	372
1989 WK4	1991 05 16.68194	16 04 04.48	-13 38 55.3				18	372
1989 WK4	1991 05 16.69444	16 04 03.94	-13 38 54.4					372
1989 WK4	1991 06 04.61475	15 44 45.96	-13 24 05.1				18	372
1989 WK4	1991 06 04.62604	15 44 45.44	-13 24 05.2					372
1990 TE1	1990 11 14.70660	02 41 06.00	+29 53 40.3				17.5	372
1990 TF8	1990 11 13.59083	02 22 56.02	+11 26 25.3				17.5	372
1990 TF8	1990 11 13.60000	02 22 55.36	+11 26 20.2					372
1990 VS2	1990 12 19.63229	03 37 46.68	+10 43 06.9				17.5	372
1990 VS2	1990 12 19.64375	03 37 46.16	+10 43 09.6					372
1991 JU	1991 05 10.60729	15 00 12.47	-15 21 14.2				16.5	372
1991 JU	1991 05 10.62014	15 00 11.56	-15 21 13.5					372
1991 JU	1991 05 10.62014	15 00 11.56	-15 21 13.5					372
1991 KA	1991 05 16.68194	16 00 50.87	-13 30 59.7				16.5	372
1991 KA	1991 05 16.69444	16 00 50.17	-13 30 56.0					372
1991 KA	1991 06 04.61475	15 42 11.41	-13 25 38.3				17	372
1991 KA	1991 06 04.62604	15 42 10.70	-13 25 39.4					372
3001	1991 07 08.72937	23 55 43.65	+16 10 05.6				16	372
3001	1991 07 08.74000	23 55 44.04	+16 10 17.4					372

376 Uenohara
N. Kawasato, 3-51, Hana-Koganei, Kodaira, Tokyo 187, Japan
AGK3, SAOC

1991 JR2	1991 05 18.68576	15 37 43.12	+00 30 33.0				16.5	376
1991 JR2	1991 05 18.70521	15 37 42.13	+00 30 40.3					376

385 Nihondaira Observatory Oohira station
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
0.30-m f/3.8 hyperboloid astrocamera, 0.31-m f/5.6 reflector
GSC

1987 SJ	1991 07 08.61875	22 00 28.08	-03 01 40.9				16	385
1987 SJ	1991 07 08.64583	22 00 28.55	-03 01 34.1					385

392 JCPM Sapporo Station
K. Watanabe, 3-8-B203, Ashibetsu Chuo 3 Jo 4 Chome, Shiroishi-Ku,
Sapporo 005, Japan
0.30-m f/2.7 Schmidt camera
SAOC

1991 JS1	1991 06 02.55608	16 55 45.73	-15 30 41.4		15.5		392
1991 JS1	1991 06 02.56510	16 55 45.11	-15 30 42.0				392
1991 JS1	1991 06 08.61748	16 49 43.41	-15 34 25.5		15.5		392
1991 JS1	1991 06 08.62882	16 49 42.74	-15 34 25.3				392
1991 JS1	1991 06 08.63507	16 49 42.40	-15 34 26.1				392
1991 JS1	1991 06 08.64109	16 49 42.00	-15 34 26.3				392

399 Kushiro
H. Kaneda, Taiyo MS 2-H, 2 chome 2-15, kawazoe 8 jo, Minami-ku, Sapporo 005, Japan
Observers S. Ueda, M. Matsuyama
Measurers H. Kaneda, K. Watanabe
0.16-m f/3.8 Wright-Schmidt camera, 0.22-m f/3.0 Schmidt camera
AGK3, SAOC

1984 GR	1989 02 04.62778	09 44 45.24	+14 37 30.5		17		399
1984 GR	1989 02 04.64549	09 44 44.51	+14 37 31.5				399
1984 GR	1989 02 04.66181	09 44 43.56	+14 37 38.2				399
1984 GR	1989 02 04.67642	09 44 42.98	+14 37 39.8				399
1984 GR	1989 02 07.57361	09 42 24.93	+14 47 44.0		17		399
1984 GR	1989 02 07.60521	09 42 23.49	+14 47 50.0				399
1984 GR	1989 02 11.70347	09 39 04.51	+15 02 04.1		16.5		399
1984 GR	1989 02 11.71806	09 39 03.62	+15 02 06.6				399
1984 GR	1989 02 11.73513	09 39 02.84	+15 02 08.6				399
1988 TA1	1990 01 17.55139	08 15 19.07	+04 21 22.8		16.5		399
1988 TA1	1990 01 17.58403	08 15 17.63	+04 21 30.4				399
1988 TA1	1990 01 28.58507	08 06 20.31	+04 57 12.5		16.5		399
1988 TA1	1990 01 28.60174	08 06 19.30	+04 57 13.8				399
1988 TA1	1990 01 28.61979	08 06 18.67	+04 57 19.3				399
1988 TA1	1990 01 30.60243	08 04 44.36	+05 05 17.2		17		399
1988 TA1	1990 01 30.63646	08 04 42.86	+05 05 24.1				399
1988 VO1	1991 07 18.60208	19 54 16.26	-10 03 06.7		16		399
1988 VO1	1991 07 18.61690	19 54 15.44	-10 03 07.5				399
1988 VO1	1991 07 18.63194	19 54 14.45	-10 03 07.5				399
1991 AX1	1991 01 09.61788	08 46 27.46	+17 40 32.1		17		399
1991 AX1	1991 01 09.65162	08 46 26.12	+17 40 40.2				399
1991 AX1	1991 02 08.58767	08 20 50.20	+19 44 53.5		17		399
1991 AX1	1991 02 08.60799	08 20 49.26	+19 44 57.5				399
1991 GZ	1989 11 29.55208	03 56 07.48	+18 53 28.8		17		399
1991 GZ	1989 11 29.56667	03 56 06.47	+18 53 25.8				399
1991 JG	1991 05 11.52083	13 48 54.02	-00 18 29.2		16		399
1991 JG	1991 05 11.53634	13 48 53.25	-00 18 32.6				399
1991 JG	1991 06 06.55220	13 36 01.79	-02 51 20.1		16.5		399
1991 JG	1991 06 06.56875	13 36 01.43	-02 51 27.3				399
805	1991 07 18.54965	18 41 02.14	-01 19 00.0		14		399
805	1991 07 18.56493	18 41 01.45	-01 19 05.3				399

400 Kitami
K. Watanabe, 3-8 Mason Hashimoto B-203, atsubetsu cyuo 3 jo 4 chome, Atsubetsu-ku, Sapporo 004, Japan
Observers K. Endate, T. Fujii, A. Takahashi
Measurers K. Watanabe, H. Kaneda
0.20-m f/4.0 reflector, 0.25-m f/3.5 reflector
AGK3, SAOC

1988 WF	1988 12 02.47778	04 57 52.12	+21 50 36.7		16.5		400
1988 WF	1988 12 02.49375	04 57 51.35	+21 50 35.6				400
1988 WF	1988 12 03.56042	04 56 52.96	+21 49 56.3		16.5		400
1988 WF	1988 12 03.57500	04 56 52.09	+21 49 56.1				400
1988 XV1	1988 12 02.52500	05 03 44.94	+23 54 25.7		16		400
1988 XV1	1988 12 02.54236	05 03 43.81	+23 54 31.1				400

1989	BW		1991	04	14.57187	13	42	52.86	+06	40	01.6	16.5	400
1989	BW		1991	04	14.58993	13	42	52.22	+06	40	05.5		400
1989	RZ5	*	1989	09	07.54826	23	51	15.44	-00	21	39.5	16.5	400
1989	RZ5		1989	09	07.56424	23	51	14.77	-00	21	46.0		400
1989	WS		1989	10	29.57014	02	32	41.41	+20	28	45.4	16	400
1989	WS		1989	10	29.59132	02	32	40.46	+20	28	32.8		400
1991	EE1		1989	10	25.57500	02	44	54.68	+23	59	32.4	16	400
1991	EE1		1989	10	25.59444	02	44	53.37	+23	59	35.3		400
1991	JM1		1991	06	08.55035	15	58	49.33	-06	12	57.5	16.5	400
1991	JM1		1991	06	08.56771	15	58	48.41	-06	12	52.9		400
1991	JM1		1991	06	09.55660	15	58	00.39	-06	09	19.4	16.5	400
1991	JM1		1991	06	09.57465	15	57	59.34	-06	09	17.8		400
1991	JS1		1991	06	09.52708	16	48	49.10	-15	35	17.2	15.5	400
1991	JS1		1991	06	09.54514	16	48	47.87	-15	35	18.2		400

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers J. Barton, R. D. Cannon, M. Hartley, S. M. Hughes, R. H. McNaught, K. S. Russell, A. Savage
Measurer R. H. McNaught
1.2-m U.K. Schmidt, Uppsala Southern Schmidt

1968	OF		1981	04	08.55340	11	58	40.22	-06	07	50.9	V	413
1968	OF		1981	04	08.58813	11	58	38.28	-06	07	32.9	V	413
1968	OF		1981	04	09.50912	11	57	53.19	-06	00	06.0		413
1968	OF		1981	04	09.54384	11	57	51.50	-05	59	49.4		413
1968	OF		1981	05	01.43397	11	45	02.67	-03	26	02.3		413
1980	RU		1991	05	07.44495	11	46	19.86	-10	31	26.0		413
1980	RU		1991	05	13.47905	11	44	33.02	-10	21	22.8		413
1985	DX2		1991	05	18.55961	15	23	32.72	-02	58	55.0	17.5V	413
1985	DX2		1991	05	18.61169	15	23	30.32	-02	58	44.2		413
1985	DX2		1991	05	18.64692	15	23	28.74	-02	58	36.2		413
1986	CG		1991	05	07.44495	11	42	32.11	-08	12	32.5	p	413
1987	QU12	*	1987	08	19.51142	20	30	50.61	+02	34	14.6	18 V	b 413
1987	QU12		1987	08	19.59476	20	30	47.06	+02	33	55.4		b 413
1988	RG1		1989	09	21.65124	02	10	38.02	-08	12	25.1	17.5V	F 413
1988	RG1		1989	09	21.71374	02	10	36.85	-08	12	45.9		F 413
1989	RO2		1991	05	07.44495	11	41	15.98	-09	53	18.8		413
1989	RO2		1991	05	13.44456	11	39	04.68	-09	48	48.1		413
1989	RO2		1991	05	13.47905	11	39	04.32	-09	48	47.7		413
1989	RQ5	*	1989	09	04.69626	01	59	32.58	-07	31	26.0	17 V	413
1989	RQ5		1989	09	04.74140	01	59	32.94	-07	31	53.7		413
1989	RQ5		1989	09	21.65124	01	51	17.54	-09	52	17.4	17.5V	F 413
1989	RQ5		1989	09	21.71374	01	51	15.75	-09	52	53.8		V 413
1989	RR5	*	1989	09	04.69626	02	03	31.99	-11	24	39.2	18 V	413
1989	RR5		1989	09	04.74140	02	03	31.07	-11	24	46.0		413
1989	RR5		1989	09	21.65124	01	53	25.27	-12	09	13.6	17.5V	V 413
1989	RR5		1989	09	21.71374	01	53	21.67	-12	09	21.7		V 413
1989	RS5	*	1989	09	04.69626	02	06	09.67	-12	43	54.6	18 V	413
1989	RS5		1989	09	04.74140	02	06	11.12	-12	44	28.0		413
1989	RT5	*	1989	09	04.69626	02	06	47.79	-08	32	02.0	18 V	413
1989	RT5		1989	09	04.74140	02	06	47.56	-08	32	40.5		413
1989	RU5	*	1989	09	04.69626	02	09	19.97	-08	04	30.4	19 V	413
1989	RU5		1989	09	04.74140	02	09	20.73	-08	04	56.8		413
1989	RV5	*	1989	09	04.71883	01	48	22.66	-12	00	10.4	17.5V	413
1989	RW5	*	1989	09	04.71883	01	49	00.31	-10	44	40.8	17 V	413
1989	RX5	*	1989	09	04.71883	01	50	07.46	-10	25	06.7	17.5V	413
1989	RY5	*	1989	09	04.71883	01	56	54.43	-12	29	16.2	17.5V	413
1989	SQ14	*	1989	09	21.65124	01	50	19.03	-10	37	53.2	16.5V	413

1989	SQ14		1989	09	21.71374	01	50	17.50	-10	37	47.6		413
1989	SR14	*	1989	09	21.65124	01	58	03.77	-10	44	09.7	17 V	413
1989	SR14		1989	09	21.71374	01	58	02.32	-10	44	52.4		413
1989	SS14	*	1989	09	21.65124	02	04	24.75	-08	09	18.0	17.5V	413
1989	SS14		1989	09	21.71374	02	04	24.19	-08	11	03.6		413
1989	YV4		1976	05	30.52370	16	21	25.06	-22	59	22.4	18.5V	I 413
1989	YV4		1976	05	30.56190	16	21	22.85	-22	59	18.9		p 413
1989	YV4		1976	06	29.47233	15	55	57.79	-21	59	09.1	19 V	413
1989	YV4		1987	06	02.50624	14	59	59.63	-18	05	22.6	19 V	F 413
1989	YV4		1987	06	02.56874	14	59	56.57	-18	05	14.4		F 413
1990	QG		1974	06	16.68234	19	46	46.18	-28	00	52.2	17.5V	413
1990	QG		1974	07	23.53626	19	12	56.08	-28	33	05.8	17 V	413
1990	QG		1974	07	23.56751	19	12	54.15	-28	33	04.6		413
1990	TR		1990	05	03.79451	20	18	06.47	-30	55	42.7		V 413
1990	TR		1990	05	04.77723	20	20	39.92	-30	55	22.8	17.5V	413
1990	VU1		1989	09	04.71883	02	07	17.91	-11	15	44.1	17 V	413
1990	VU1		1989	09	21.68249	02	01	46.75	-12	08	40.8	17 V	413
1991	GY9		1987	08	19.51142	20	32	29.99	+02	50	28.8	17.5V	b 413
1991	GY9		1987	08	19.59476	20	32	26.63	+02	50	06.5		I 413
1991	GY9		1991	02	10.67906	12	11	34.14	-17	39	51.0		413
1991	GY9	*	1991	04	13.49519	11	36	51.30	-12	14	55.0	16.5V	413
1991	GY9		1991	04	13.53685	11	36	50.08	-12	14	34.1		413
1991	GY9		1991	05	07.46579	11	30	50.05	-09	07	46.5		413
1991	GY9		1991	05	13.44456	11	31	08.04	-08	30	53.6		413
1991	GZ9		1982	05	25.43410	12	41	41.47	-16	05	24.2	17.5V	413
1991	GZ9		1988	10	03.42120	21	29	06.55	-06	44	19.9	19 V	I 413
1991	GZ9		1988	10	09.43010	21	27	53.76	-06	57	32.4		E 413
1991	GZ9		1991	02	10.67906	12	23	50.04	-14	20	06.0		413
1991	GZ9	*	1991	04	13.49519	11	45	40.52	-12	55	04.9	16.5V	413
1991	GZ9		1991	04	13.53685	11	45	39.11	-12	54	49.7		413
1991	GZ9		1991	05	07.44495	11	40	44.11	-10	44	39.9		413
1991	GZ9		1991	05	13.47905	11	42	04.14	-10	23	15.5		413
1991	JT		1991	05	13.44456	11	36	18.01	-07	56	55.8		413
1991	JY		1991	06	16.45775	11	34	57.82	-43	20	50.2		413
1991	JK1		1991	05	05.61519	15	48	15.81	+01	23	05.2		p 413
1991	JK1		1991	05	05.67769	15	48	12.32	+01	22	59.4		413
1991	JK1		1991	05	08.55367	15	45	35.48	+01	17	01.8	17 V	413
1991	JK1		1991	05	08.61617	15	45	31.96	+01	16	53.1		413
1991	JK1		1991	05	11.57389	15	42	39.90	+01	08	21.7		F 413
1991	JK1		1991	05	11.69889	15	42	32.26	+01	07	55.2		F 413
1991	JK1		1991	05	18.55961	15	35	25.84	+00	37	54.6	17 V	413
1991	JK1		1991	05	18.61169	15	35	22.48	+00	37	37.9		413
1991	JK1		1991	05	18.64692	15	35	20.09	+00	37	25.9		413
1991	JZ1	*	1991	05	08.55367	15	26	59.65	-01	36	08.8	17 V	413
1991	JZ1		1991	05	08.61617	15	26	56.78	-01	35	58.9		413
1991	JZ1		1991	05	11.57389	15	24	39.09	-01	27	15.7		413
1991	JZ1		1991	05	11.69889	15	24	33.37	-01	26	55.5		413
1991	JA2	*	1991	05	08.55367	15	29	28.19	+02	04	20.1	17.5V	413
1991	JA2		1991	05	08.61617	15	29	25.06	+02	04	33.1		413
1991	JA2		1991	05	11.57389	15	26	50.14	+02	15	00.8		413
1991	JA2		1991	05	11.69889	15	26	43.19	+02	15	29.3		413
1991	JB2	*	1991	05	08.55367	15	30	19.00	-02	02	58.2	17.5V	413
1991	JB2		1991	05	08.61617	15	30	15.41	-02	02	58.3		413
1991	JB2		1991	05	11.57389	15	27	25.29	-02	03	09.3		V 413
1991	JB2		1991	05	11.69889	15	27	18.13	-02	03	12.9		V 413
1991	JC2	*	1991	05	08.55367	15	31	15.07	-02	24	59.1	18 V	413
1991	JC2		1991	05	08.61617	15	31	11.87	-02	24	53.2		413
1991	JC2		1991	05	18.55961	15	22	28.08	-02	16	05.6	18 V	413
1991	JC2		1991	05	18.61169	15	22	25.33	-02	16	07.4		413

1991	JD2	*	1991	05	08.55367	15	32	03.50	-01	05	15.6		18	V	413
1991	JD2		1991	05	08.61617	15	31	59.98	-01	05	05.7				413
1991	JD2		1991	05	18.55961	15	22	34.86	-00	45	00.2		18	V	413
1991	JD2		1991	05	18.61169	15	22	31.92	-00	44	57.8				413
1991	JE2	*	1991	05	08.55367	15	34	11.68	-01	05	31.0		18	V	413
1991	JE2		1991	05	08.61617	15	34	08.56	-01	05	08.2				413
1991	JE2		1991	05	18.55961	15	25	34.04	-00	08	08.9		18	V	413
1991	JE2		1991	05	18.61169	15	25	31.34	-00	07	55.2				413
1991	JF2	*	1991	05	08.55367	15	36	20.89	+00	33	04.7		18	V	413
1991	JF2		1991	05	18.55961	15	28	35.10	+00	59	15.8		18	V	413
1991	JF2		1991	05	18.61169	15	28	32.67	+00	59	20.1				413
1991	JG2	*	1991	05	08.55367	15	37	11.81	-00	48	55.6		18	V	F 413
1991	JG2		1991	05	08.61617	15	37	09.18	-00	48	28.4				413
1991	JG2		1991	05	18.55961	15	29	59.23	+00	22	00.0		18	V	413
1991	JG2		1991	05	18.61169	15	29	57.02	+00	22	18.5				413
1991	JH2	*	1991	05	08.55367	15	38	35.75	-02	20	07.2		18	V	V 413
1991	JH2		1991	05	08.61617	15	38	22.09	-02	19	52.0				V 413
1991	JH2		1991	05	18.55961	15	31	07.65	-01	45	09.7		19	V	F 413
1991	JH2		1991	05	18.61169	15	31	05.36	-01	45	02.8				F 413
1991	JJ2	*	1991	05	08.55367	15	39	34.37	-01	07	01.0		17.5	V	413
1991	JJ2		1991	05	08.61617	15	39	31.50	-01	06	50.2				413
1991	JJ2		1991	05	11.57389	15	37	11.82	-00	57	45.0				F 413
1991	JJ2		1991	05	11.69889	15	37	04.74	-00	57	17.9				V 413
1991	JJ2		1991	05	18.55961	15	31	32.42	-00	40	15.3		17.5	V	413
1991	JJ2		1991	05	18.61169	15	31	29.98	-00	40	09.8				413
1991	JJ2		1991	05	18.64692	15	31	28.21	-00	40	05.8				413
1991	JK2	*	1991	05	08.55367	15	40	17.00	+01	49	16.7		18	V	413
1991	JK2		1991	05	08.61617	15	40	14.54	+01	49	27.5				413
1991	JK2		1991	05	18.55961	15	33	22.10	+02	14	35.6		18	V	413
1991	JK2		1991	05	18.61169	15	33	19.99	+02	14	41.3				413
1991	JL2	*	1991	05	08.55367	15	40	47.64	-00	36	40.1		18.5	V	F 413
1991	JL2		1991	05	18.55961	15	33	03.22	+00	03	34.0		18.5	V	413
1991	JL2		1991	05	18.61169	15	33	00.72	+00	03	43.7				413
1991	JM2	*	1991	05	08.55367	15	40	56.08	-02	20	51.4		18	V	413
1991	JM2		1991	05	08.61617	15	40	52.86	-02	20	40.7				413
1991	JM2		1991	05	18.55961	15	31	50.71	-01	58	10.2		18	V	413
1991	JN2	*	1991	05	08.55367	15	41	43.81	+01	43	59.2		18	V	413
1991	JN2		1991	05	18.55961	15	32	18.12	+01	35	25.8		18	V	413
1991	JN2		1991	05	18.61169	15	32	15.18	+01	35	18.7				413
1991	JO2	*	1991	05	08.55367	15	41	58.97	+01	39	50.3		18	V	413
1991	JO2		1991	05	08.61617	15	41	56.10	+01	40	11.8				413
1991	JO2		1991	05	18.55961	15	33	37.11	+02	32	17.7		18	V	413
1991	JO2		1991	05	18.61169	15	33	34.47	+02	32	30.9				413
1991	JP2	*	1991	05	08.55367	15	43	14.79	+00	49	38.8		18	V	413
1991	JP2		1991	05	08.61617	15	43	11.63	+00	49	43.9				413
1991	JP2		1991	05	18.55961	15	34	01.63	+00	58	00.4		18	V	413
1991	JP2		1991	05	18.61169	15	33	58.69	+00	57	59.8				413
1991	JQ2	*	1991	05	08.55367	15	44	12.84	+01	07	17.9		18	V	F 413
1991	JQ2		1991	05	08.61617	15	44	09.79	+01	07	24.6				V 413
1991	JQ2		1991	05	18.55961	15	35	06.07	+01	18	33.4		18.5	V	413
1991	JQ2		1991	05	18.61169	15	35	03.19	+01	18	33.2				413
1991	JR2		1991	05	05.61519	15	48	20.92	-00	47	44.4				P 413
1991	JR2		1991	05	05.67769	15	48	17.92	-00	47	17.4				413
1991	JR2	*	1991	05	08.55367	15	46	03.73	-00	27	23.6		17	V	413
1991	JR2		1991	05	08.61617	15	46	00.82	-00	27	00.3				413
1991	JR2		1991	05	11.57389	15	43	37.27	-00	07	59.1				413
1991	JR2		1991	05	11.69889	15	43	31.40	-00	07	14.7				413
1991	JR2		1991	05	18.55961	15	37	49.78	+00	30	05.0		17	V	413
1991	JR2		1991	05	18.61169	15	37	47.13	+00	30	19.8				413

1991	JR2		1991	05	18.64692	15	37	45.30	+00	30	30.0		413
1991	JS2	*	1991	05	08.58492	15	43	43.13	+00	51	37.8	19 V V	413
1991	JS2		1991	05	18.55961	15	36	33.78	+01	18	55.6	19 V	413
1991	JS2		1991	05	18.61169	15	36	31.54	+01	19	02.2	I	413
1991	KF		1991	05	05.61519	15	57	31.43	+01	54	17.4	F	413
1991	KF		1991	05	05.67769	15	57	28.74	+01	54	25.1	F	413
1991	KF	*	1991	05	18.55961	15	47	21.75	+02	09	21.7	17.5V	413
1991	KF		1991	05	18.61169	15	47	19.23	+02	09	22.2		413
1991	MA	*	1991	06	16.67918	20	07	03.76	-41	21	06.9	16.5V I	413
1991	MA		1991	06	16.72084	20	07	02.20	-41	22	17.6		413
1991	MA		1991	06	24.83413	20	01	06.61	-45	10	31.5		413
407			1991	05	07.44495	11	43	20.86	-09	31	12.3		413
407			1991	05	13.47905	11	42	36.64	-09	08	58.2		413
532			1989	09	04.71883	02	03	37.04	-10	27	03.8		413
532			1989	09	21.68249	01	56	50.90	-12	27	52.5		413
787			1991	05	08.55367	15	23	54.65	-00	18	46.4		413
787			1991	05	08.61617	15	23	51.57	-00	18	14.6		413
1304			1991	05	05.64644	15	52	01.80	-02	59	42.4		413
4205			1980	06	06.74109	18	42	41.09	-29	10	49.2		413
4205			1980	08	31.47127	17	42	27.81	-11	57	26.5		413
4205			1984	04	22.44523	09	59	08.31	-16	21	09.3		413
4205			1991	05	18.45786	12	17	15.04	-29	47	10.2		413
4856			1991	05	08.55367	15	34	36.24	-03	06	33.9	17 V	413
4856			1991	05	08.61617	15	34	33.15	-03	06	06.6		413
4856			1991	05	11.57389	15	32	04.51	-02	42	51.1		413
4856			1991	05	11.69889	15	31	57.81	-02	41	51.5		413
4856			1991	05	18.55961	15	26	09.29	-01	53	09.5	17 V	413
4856			1991	05	18.61169	15	26	06.65	-01	52	50.5		413
4856			1991	05	18.64692	15	26	04.82	-01	52	36.2		413

474 Mount John
A. C. Gilmore, P.O. Box 57, Lake Tekapo, New Zealand
Observer A. C. Gilmore
Measurer P. M. Kilmartin
0.6-m f/14 Cassegrain reflector
SAOC, CPZ, field plates from Carter Observatory

1988	BJ		1991	04	14.51541	11	33	17.91	-46	58	11.9	18.0	474
1988	BJ		1991	04	14.54073	11	33	15.66	-46	58	04.0		474
1988	FJ		1991	05	08.55800	14	37	23.38	-44	44	17.3	17.4	474
1988	FJ		1991	05	08.57252	14	37	21.77	-44	44	21.0		474
1988	MB		1991	06	11.56834	15	29	57.26	-43	14	09.9	18.2	474
1988	MB		1991	06	11.60041	15	29	55.32	-43	13	47.8		474
1989	PA		1991	04	14.44900	11	11	49.68	-40	08	05.3	18.2	474
1989	PA		1991	04	14.47030	11	11	48.47	-40	07	48.6		474
1989	VP		1991	04	14.38642	09	12	30.81	-25	25	29.1	18.1	474
1989	VP		1991	04	14.40479	09	12	31.17	-25	25	12.0		474
1990	BQ1		1991	04	14.57285	11	41	06.34	-51	25	45.3	18.8	474
1990	BQ1		1991	04	14.58795	11	41	05.17	-51	25	40.6		474
1990	BQ1		1991	04	16.48818	11	38	49.00	-51	15	46.0	17.3	474
1990	BQ1		1991	04	16.50103	11	38	48.13	-51	15	41.3		474
1990	BQ1		1991	05	08.47721	11	20	57.16	-48	19	27.3		474
1990	BQ1		1991	05	08.49527	11	20	56.64	-48	19	16.7	17.7	474
1991	DA		1991	05	08.39848	06	54	36.00	-65	46	30.0	18.9	474
1991	DA		1991	05	08.43277	06	54	39.37	-65	46	22.6		474
1991	MA		1991	06	18.57559	20	06	00.98	-42	14	36.7	18.0	474
1991	MA		1991	06	18.59544	20	06	00.26	-42	15	09.0		474
951			1991	05	08.60192	16	08	36.10	-22	47	09.0		474
951			1991	05	08.60985	16	08	35.61	-22	47	07.0		474
951			1991	05	08.61587	16	08	35.24	-22	47	05.3		474

951		1991	06	08.64596	15	35	59.13	-20 18 02.2		474
951		1991	06	08.65881	15	35	58.36	-20 17 58.4		474
951		1991	06	08.67090	15	35	57.70	-20 17 54.4		474
951		1991	06	11.53229	15	33	22.02	-20 03 39.2		474
951		1991	06	11.54253	15	33	21.47	-20 03 35.7		474
951		1991	06	15.49792	15	30	04.44	-19 44 41.1		474
951		1991	06	15.50660	15	30	03.99	-19 44 39.0		474

540 Linz
E. Meyer, F. Marklstr. 1/62, A-4040 Linz, Austria
Observers E. Meyer, H. Raab
0.30-m f/5.2 Schmidt Cassegrain
PPM

1991	JX	1991	06	19.90938	22	48	28.74	+37 54 13.4	I	540
1991	JX	1991	06	19.92743	22	48	45.13	+37 52 21.7		540
1991	JX	1991	06	19.94618	22	49	02.01	+37 50 30.0		540

541 Stefanik Observatory, Prague-Petrin
J. Manek, Pruchova 38/583, C-15000 Prague 5-Kosire, Czechoslovakia
0.2-m f/7 refractor, 0.37-m f/9 Maksutov-Cassegrain

6		1990	05	26.89336	14	00	15.16	+09 40 46.5		541
6		1990	05	26.93086	14	00	13.89	+09 40 43.2		541
6		1990	05	27.90978	13	59	41.15	+09 39 19.0		541
8		1990	07	01.94367	18	27	21.49	-20 57 46.0		541
8		1990	07	01.97145	18	27	19.51	-20 57 52.6		541
8		1990	07	14.91142	18	13	05.74	-21 44 13.3		541
8		1990	07	14.92809	18	13	04.67	-21 44 17.3		541
8		1990	07	28.91007	18	01	07.20	-22 30 41.7	O	541
8		1990	07	28.94479	18	01	05.80	-22 30 48.8	O	541
8		1990	07	28.96215	18	01	05.07	-22 30 51.8	O	541
20		1990	07	29.05486	22	09	31.93	-10 18 13.3		541
20		1990	07	29.06875	22	09	31.31	-10 18 16.1		541
29		1990	07	15.02766	22	28	36.11	-15 36 14.5		541
29		1990	07	15.06100	22	28	35.49	-15 36 17.8		541
29		1990	07	29.02760	22	21	51.21	-16 08 08.4		541
29		1990	07	29.04427	22	21	50.54	-16 08 10.8		541
40		1990	07	29.00139	21	57	56.49	-17 57 11.5		541
40		1990	07	29.02304	21	57	55.52	-17 57 20.9		541
41		1990	07	01.90135	18	51	34.93	+04 37 39.7		541
41		1990	07	01.92913	18	51	33.58	+04 37 32.8		541
41		1990	07	01.97932	18	51	31.03	+04 37 21.8		541
41		1990	07	02.01126	18	51	29.31	+04 37 16.0		541
41		1990	07	11.88409	18	43	36.47	+03 46 57.4	O	541
41		1990	07	11.92575	18	43	34.58	+03 46 43.5	O	541
41		1990	07	14.93478	18	41	20.28	+03 25 54.7		541
41		1990	07	14.95839	18	41	19.28	+03 25 44.2		541
85		1990	07	24.89983	20	26	43.68	+03 02 10.5		541
85		1990	07	24.93108	20	26	42.24	+03 02 04.9		541
194		1990	07	14.96406	20	46	42.69	+03 50 23.6		541
194		1990	07	15.00156	20	46	41.53	+03 50 06.5		541
194		1990	07	24.94115	20	41	12.07	+02 09 26.4		541
194		1990	07	24.97865	20	41	10.60	+02 08 59.8		541

552 San Vittore
E. Colombini, Via S. Vittore 44, I-40136 Bologna, Italy
Observers C. Vacchi, G. Sassi, E. Colombini, V. Goretti, R. di Luca
Measurers C. Vacchi, V. Goretti, E. Colombini
AGK3, SAOC
0.25-m f/2.5 Schmidt, 0.45-m f/5 reflector

196	1981 12 01.91250	05 07 42.41	+23 27 00.0			552
196	1981 12 01.93611	05 07 41.16	+23 27 02.4			552
1511	1981 12 20.97361	06 21 30.58	+24 40 37.1			552
1511	1981 12 20.99097	06 21 29.38	+24 40 39.6			552
1520	1981 08 24.89444	21 45 40.79	+10 55 52.5			552
1520	1981 08 24.91111	21 45 39.98	+10 55 49.0			552
1939	1981 12 01.91250	05 06 48.84	+23 36 57.5			552
1939	1981 12 01.93611	05 06 47.62	+23 36 56.7			552
2054	1981 11 17.93264	03 46 33.00	+24 50 21.2			552
2054	1981 11 17.96042	03 46 31.50	+24 50 16.0			552

553 Chorzow
I. Wlodarczyk, Planetarium and Astronomical Observatory,
PL-41501 Chorzow 1 s.p.10, Poland
Observers I. Wlodarczyk, S. Janta, M. Szczepanski, T. Firszt
Measurers I. Wlodarczyk, B. Osiejuk
0.2-m f/5 astrograph

1	1991 05 10.90527	13 38 59.48	+02 49 11.7			553
1	1991 05 10.92743	13 38 58.56	+02 49 10.2			553
1	1991 05 21.85796	13 32 35.95	+02 23 15.0			553
1	1991 05 21.86143	13 32 35.90	+02 23 13.4			553
1	1991 05 21.87880	13 32 35.37	+02 23 10.8			553
1	1991 05 21.90518	13 32 34.58	+02 23 05.0			553
18	1991 06 11.92346	17 02 45.87	-06 20 26.7			553
18	1991 06 11.94042	17 02 44.69	-06 20 23.9			553

568 Mauna Kea Observatory
D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive,
Honolulu, HI 96822, U.S.A.
Observers D. J. Tholen, J. D. Goldader, D. M. Griep
2.24-m telescope encoders, IRTF encoders
SAOC, Lick Gaspra catalog

302	1991 06 18.59692	01 33 04.73	+09 23 58.3		15.9V	568
739	1991 06 18.54038	19 09 12.70	-03 04 53.8		12.7V	568
739	1991 07 06.46753	18 54 03.06	-04 49 34.3		12.5V	568
951	1991 06 17.45720	15 28 35.37	-19 35 51.2			568
951	1991 06 18.33486	15 27 57.83	-19 31 57.3		15.1V	568
951	1991 07 06.33861	15 20 00.24	-18 30 41.0		15.7V	568

586 Pic-du-Midi
J. L. Heudier, CERGA Caussols, F-06460 Saint Vallier de Thiey, France
Observers Andre, Lacroix, Lanoiselee, Romeuf
Measurers Guillout, Romeuf
0.60-m reflector

1656	1991 03 20.10523	13 23 59.99	+04 09 28.0		14.3	586
1656	1991 03 20.12256	13 23 59.67	+04 09 59.9			586

589 Santa Lucia Stroncone
A. Vagnozzi, Santa Lucia 68, I-05039 Stroncone (Terni), Italy
Observers A. Vagnozzi, G. C. Morando, S. Casulli, R. Castellani
0.5-m f/7.5 Ritchey-Chretien
SAOC, AGK3

241	1991 06 20.06528	02 08 33.80	+17 40 13.5			589
241	1991 06 20.07778	02 08 34.72	+17 40 17.5			589
241	1991 06 20.08750	02 08 35.42	+17 40 23.0			589

591 Resse Observatory
N. Ehring, Detmoldstrasse 8, W-3000 Hannover 1, Federal Republic of Germany

488	1991 03 13.95520	11 42 22.69	+21 56 35.8		591
488	1991 03 13.95894	11 42 22.49	+21 56 36.7		591
582	1991 05 10.90257	15 10 59.56	+25 33 47.4		591
582	1991 05 10.91372	15 10 58.89	+25 33 49.0		591
781	1991 05 12.90313	14 20 54.29	+14 11 38.3		591
781	1991 05 12.91656	14 20 53.75	+14 11 39.9		591
787	1991 05 12.93704	15 20 16.25	+00 19 48.3		591
787	1991 05 12.94148	15 20 16.04	+00 19 50.4		591

657 Victoria, Climenhaga Observatory
J. B. Tatum, Dept. of Physics, University of Victoria, P.O. Box 1700, Victoria, BC V8W 2Y2, Canada
Observers J. B. Tatum, D. D. Balam, P. M. Krol
0.5-m reflector + CCD

1953 UD	1991 07 09.36131	20 20 00.34	+02 47 47.8		657
1953 UD	1991 07 09.37337	20 19 59.80	+02 47 49.4		657
1953 UD	1991 07 10.26726	20 19 22.30	+02 49 35.7		657
1953 UD	1991 07 10.28047	20 19 21.73	+02 49 37.3		657
1977 FT	1991 07 09.29819	19 53 49.91	+20 49 59.4		657
1977 FT	1991 07 10.25287	19 52 56.42	+20 57 40.8		657
1977 FT	1991 07 10.26230	19 52 55.86	+20 57 44.8		657
1983 QE	1991 07 09.36887	20 35 17.56	+02 28 36.9		657
1983 QE	1991 07 09.38228	20 35 17.15	+02 28 34.0		657
1983 QE	1991 07 10.27483	20 34 51.34	+02 25 35.5		657
1983 QE	1991 07 10.29109	20 34 50.83	+02 25 32.2		657
1987 DF	1991 06 19.35486	16 04 17.92	+23 57 16.1		657
1987 HS	1991 07 10.30626	20 41 34.09	-01 59 59.4		657
1987 HS	1991 07 10.31546	20 41 33.77	-02 00 08.8		657
1987 SB1	1991 07 10.29674	20 36 24.14	+00 15 48.9		657
1987 SB1	1991 07 10.31078	20 36 23.67	+00 15 46.4		657
1988 VO1	1991 07 10.33420	20 01 47.44	-10 00 13.3		657
1988 VO1	1991 07 10.35234	20 01 46.43	-10 00 13.0		657
1988 XE1	1991 08 05.35424	22 33 28.45	+01 16 06.0		657
1988 XE1	1991 08 05.36987	22 33 27.83	+01 16 05.2		657
1988 XE1	1991 08 05.37181	22 33 27.81	+01 16 05.3		657
1988 XE1	1991 08 06.28530	22 32 49.91	+01 14 37.6		657
1988 XE1	1991 08 06.33508	22 32 47.81	+01 14 32.4		657
1988 XE1	1991 08 06.34159	22 32 47.46	+01 14 32.1		657
1991 JX	1991 07 03.39785	00 14 35.15	+24 25 15.8		657
1991 JX	1991 07 03.40286	00 14 35.80	+24 25 07.4		657
1246 T-2	1991 07 09.41131	20 28 07.85	-06 31 47.9		657
1246 T-2	1991 07 10.34777	20 27 28.93	-06 33 18.5		657
1246 T-2	1991 07 10.35812	20 27 28.46	-06 33 19.6		657
219	1991 04 21.29236	13 08 14.68	-06 30 33.2		657
219	1991 04 21.33194	13 08 12.51	-06 30 12.2		657
307	1991 04 20.28750	14 13 21.71	-04 37 01.3		657
307	1991 04 20.33542	14 13 19.31	-04 36 50.3		657
770	1991 05 11.31042	13 03 32.47	-04 50 20.8		657
770	1991 05 11.32639	13 03 32.00	-04 50 20.9		657
2812	1991 04 20.33542	14 18 30.55	-05 37 17.4		657
3103	1991 07 09.44936	21 58 54.00	+10 38 35.7		657
3103	1991 07 09.45874	21 58 55.88	+10 38 26.9		657

662 Lick
A. R. Klemola, Lick Observatory, University of California, Santa Cruz CA 95064, U.S.A.
Observer R. B. Hanson
Measurer A. R. Klemola
0.5-m Carnegie double astrograph

1980 TO15* 1980 10 09.42651 04 13 18.26 -11 53 35.2 12.5 a 662
1980 TO15 1980 10 09.46806 04 13 21.67 -11 51 10.0 a 662
1980 TO15 1980 10 09.46892 04 13 21.82 -11 51 03.0 a 662
1980 TO15 1980 10 09.46979 04 13 21.93 -11 50 58.4 a 662
1980 TO15 1980 10 09.51134 04 13 25.41 -11 48 30.4 a 662

675 Palomar
E. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A. (2)
C. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A. (3)
C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The Netherlands (4)
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. (6)
9 = 3 + 6
Observers J. A. Brown (9, S), C. J. Cunningham (9, S), T. Gehrels (4, L), E. Helin (2, S), H. E. Holt (9, S), V. G. Ivanova (2, S), K. Lawrence (2, S), T. M. King (9, S), D. H. Levy (3, S), F. J. Mendez (9, S), C. M. Olmstead (9, S), C. E. Petry (9, S), P. Rose (2, S), C. S. Shoemaker (3, S), E. M. Shoemaker (3, S), V. G. Shkodrov (2, S), L. A. Zimmerman (9, S)
Measurers J. Alu (2), S. J. Bus (9), C. J. Cunningham (9), K. A. Lawler (9), K. Lawrence (2), T. M. King (9), F. J. Mendez (9), C. M. Olmstead (9), P. Rose (2), B. A. Skiff (9), C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4), L. A. Zimmerman (9)
1.2-m (L) and 0.46-m (S) Schmidt telescopes
1941 UN 1991 07 16.35799 20 54 10.86 -28 29 03.1 17.0 9 675
1941 UN 1991 07 16.39809 20 54 08.75 -28 29 12.3 9 675
1948 AA 1991 07 09.38594 19 43 47.86 -05 43 31.8 16.5 2 675
1948 AA 1991 07 09.41406 19 43 45.57 -05 43 16.5 2 675
1948 AA 1991 07 11.33767 19 41 16.90 -05 24 05.1 2 675
1948 AA 1991 07 11.36510 19 41 14.68 -05 23 49.0 2 675
1949 SA1 1990 09 16.26406 22 31 49.01 -13 59 53.8 15.5 9 675
1949 SA1 1990 09 16.30069 22 31 47.69 -14 00 02.0 9 675
1950 DO 1989 11 24.15364 01 07 38.38 +11 22 59.6 9 675
1950 DO 1989 11 24.19701 01 07 37.65 +11 22 49.6 9 675
1950 DO 1991 01 22.31666 09 18 55.20 +13 38 11.4 9 675
1950 DO 1991 01 22.34895 09 18 53.46 +13 38 16.7 9 675
1967 JP 1990 09 15.25885 21 43 17.05 -13 04 51.9 18.2 9 675
1967 JP 1990 09 15.29497 21 43 15.83 -13 04 56.4 9 675
1969 TL1 1990 09 17.21181 22 06 15.77 -16 16 57.1 9 675
1969 TL1 1990 09 17.24549 22 06 14.62 -16 17 02.4 9 675
1969 TL1 1990 09 20.25590 22 04 35.99 -16 23 14.7 9 675
1969 TL1 1990 09 20.29097 22 04 34.85 -16 23 18.3 9 675
1969 TJ2 1990 09 14.18924 21 05 14.41 -19 05 35.3 18.5 9 675
1969 TJ2 1990 09 14.22760 21 05 13.17 -19 05 40.8 9 675
1969 TJ2 1990 09 15.24097 21 04 43.90 -19 08 08.3 18.8 9 675
1969 TJ2 1990 09 15.27777 21 04 42.73 -19 08 13.4 9 675
1971 SN2 1988 09 15.39965 00 29 42.77 -00 50 50.9 16.2 9 675
1971 SN2 1988 09 15.43385 00 29 41.36 -00 51 00.2 9 675
1974 FO 1990 09 16.26406 22 27 14.11 -11 35 17.7 16.8 9 675
1974 FO 1990 09 16.30069 22 27 12.17 -11 35 20.5 9 675
1974 VG 1990 09 14.19948 21 48 32.55 -28 13 46.6 9 675
1975 SS 1990 09 15.24983 21 27 46.66 -03 59 37.5 18.0 9 675
1975 SS 1990 09 15.28663 21 27 45.58 -03 59 51.0 9 675
1975 TS3 1991 07 14.30000 19 39 58.25 -36 48 48.9 16.8 9 675
1975 TS3 1991 07 14.33368 19 39 56.24 -36 48 57.1 9 675
1975 TS3 1991 07 17.32691 19 37 04.59 -36 59 48.5 16.5 9 675
1975 TS3 1991 07 17.36476 19 37 02.29 -36 59 54.8 9 675

1975	XJ	1991	03	12.41493	13	35	14.99	+00	50	53.8	18.5	9 675
1975	XJ	1991	03	12.44779	13	35	14.21	+00	51	11.3		9 675
1976	GN2	1990	09	14.17917	21	13	29.44	-06	22	25.6	17.5	9 675
1976	GN2	1990	09	14.21875	21	13	28.68	-06	22	49.2		9 675
1976	GN2	1990	09	16.18038	21	12	57.93	-06	41	22.9	17.2	9 675
1976	GN2	1990	09	16.22465	21	12	57.26	-06	41	48.4		9 675
1976	YA6	1991	05	09.42899	15	50	05.08	-11	29	36.7	16	2 675
1976	YA6	1991	05	09.44167	15	50	04.30	-11	29	38.7		2 675
1976	YA6	1991	05	11.39514	15	48	07.73	-11	35	31.7		2 675
1976	YA6	1991	05	11.41198	15	48	06.68	-11	35	34.5		2 675
1977	DS4	1989	09	30.41579	02	10	51.77	+11	37	26.9		9 675
1977	DS4	1989	09	30.47465	02	10	49.39	+11	37	16.5		9 675
1977	DS4	1989	11	03.27278	01	43	26.55	+09	46	49.3	17.8	9 675
1977	DS4	1989	11	03.30815	01	43	24.84	+09	46	43.8		9 675
1977	DS4	1989	11	04.27013	01	42	39.09	+09	43	40.3	18.0	9 675
1977	DS4	1989	11	04.30364	01	42	37.28	+09	43	32.6		9 675
1977	DS4	1989	11	24.15364	01	30	09.17	+08	57	27.7		9 675
1977	DS4	1989	11	24.19701	01	30	08.06	+08	57	23.8		9 675
1977	QY	1990	09	15.25885	21	52	07.25	-15	03	14.7	16.5	9 675
1977	QY	1990	09	15.29497	21	52	05.51	-15	03	08.7		9 675
1977	RD3	1990	09	15.24097	21	09	50.96	-24	18	04.3	17.8	9 675
1977	RD3	1990	09	15.27777	21	09	50.43	-24	17	58.4		9 675
1978	EN10	1990	09	14.26441	22	12	11.66	-13	23	27.0	18.0	9 675
1978	EN10	1990	09	14.30417	22	12	09.57	-13	23	29.1		9 675
1978	TW2	1988	09	15.39965	00	13	25.79	-00	31	02.5	17.2	9 675
1978	TW2	1988	09	15.43385	00	13	23.90	-00	31	17.4		9 675
1978	TA7	1991	03	12.41493	13	29	31.85	+03	55	11.8	17.8	9 675
1978	TA7	1991	03	12.44779	13	29	30.85	+03	55	24.3	18.0	9 675
1978	UL2	1991	01	22.31666	09	05	53.31	+16	36	56.1		9 675
1978	UL2	1991	01	22.34895	09	05	51.75	+16	37	04.1		9 675
1978	VS5	1989	09	30.41579	02	24	15.44	+15	27	50.9		9 675
1978	VS5	1989	09	30.47465	02	24	13.02	+15	27	39.3		9 675
1978	VS5	1989	11	03.27278	01	54	35.59	+12	36	46.0	17.8	9 675
1978	VS5	1989	11	03.30815	01	54	33.62	+12	36	33.8		9 675
1978	VS5	1989	11	04.27013	01	53	41.65	+12	31	10.0	17.5	9 675
1978	VS5	1989	11	04.30364	01	53	39.80	+12	30	57.2		9 675
1978	VV9	1988	09	15.43385	00	26	49.31	+06	46	50.7	18.0	9 675
1979	PA	1991	06	14.33524	16	27	05.10	-10	14	45.9	16	2 675
1979	PA	1991	06	14.36215	16	27	03.82	-10	14	31.4		2 675
1979	PA	1991	06	16.37292	16	25	36.20	-09	56	03.4		2 675
1979	PA	1991	06	16.39670	16	25	35.12	-09	55	50.5		2 675
1979	QZ1	1990	09	15.25885	21	35	48.69	-14	49	25.0	18.2	9 675
1979	QZ1	1990	09	15.29497	21	35	47.43	-14	49	30.0		9 675
1979	SD9	1990	09	15.24097	20	56	27.24	-21	10	03.6	17.8	9 675
1979	SD9	1990	09	15.27777	20	56	26.30	-21	10	03.8	18.5	9 675
1980	DX	1990	09	16.26406	22	44	57.57	-10	45	47.1	16.5	9 675
1980	DX	1990	09	16.30069	22	44	55.97	-10	46	05.5		9 675
1980	FU	1991	07	14.30000	19	36	07.16	-32	01	26.1	17.6	9 675
1980	FU	1991	07	14.33368	19	36	04.65	-32	01	23.7		9 675
1980	FU	1991	07	17.32691	19	32	31.93	-31	59	20.9	17.5	9 675
1980	FU	1991	07	17.36476	19	32	29.22	-31	59	17.5		9 675
1980	FU	1991	07	18.28742	19	31	24.59	-31	58	16.2		9 675
1980	FU	1991	07	18.31719	19	31	22.16	-31	58	14.2		9 675
1980	FH5	1990	09	14.19948	21	19	35.50	-25	17	43.1	18.5	9 675
1980	FH5	1990	09	14.23663	21	19	33.67	-25	17	31.3		9 675
1980	FH5	1990	09	15.24097	21	18	51.80	-25	13	53.2	18.5	9 675
1980	FH5	1990	09	15.27777	21	18	50.15	-25	13	43.6		9 675
1980	GG	1991	03	12.41493	13	29	30.89	+03	07	17.1	17.0	9 675
1980	GG	1991	03	12.44779	13	29	30.10	+03	07	28.9		9 675

1980	KD	1991	03	12.41493	13	19	30.22	+03	24	12.7	16.5	9 675
1980	KD	1991	03	12.44779	13	19	29.40	+03	24	27.5		9 675
1980	PB2	1991	07	13.41493	21	15	46.70	-01	54	12.4	17.2	9 675
1980	PB2	1991	07	13.44618	21	15	45.74	-01	54	16.2		9 675
1980	PB2	1991	07	19.35900	21	12	37.58	-02	05	11.6	17.5	9 675
1980	PB2	1991	07	19.42237	21	12	35.38	-02	05	20.3		9 675
1980	TH	1990	09	14.26441	22	07	17.27	-11	03	12.6	17.5	9 675
1980	TH	1990	09	14.30417	22	07	15.53	-11	03	15.7		9 675
1981	EB1	1987	04	21.27725	13	57	25.05	-07	57	03.5		9 675
1981	EB1	1987	04	21.30451	13	57	23.77	-07	56	56.8		9 675
1981	ED19	1991	07	12.38229	21	41	29.54	-11	31	38.6	17.5	9 675
1981	ED19	1991	07	12.41736	21	41	28.62	-11	31	44.6	17.0	9 675
1981	ED19	1991	07	14.45417	21	40	36.12	-11	36	40.0	17.0	9 675
1981	ED19	1991	07	14.48299	21	40	35.28	-11	36	44.7		9 675
1981	ED19	1991	07	17.39670	21	39	09.96	-11	44	51.3	17.0	9 675
1981	ED19	1991	07	17.43872	21	39	08.53	-11	44	59.3		9 675
1981	EO26	1988	09	15.39965	00	21	35.88	+03	43	49.5	18.5	9 675
1981	EO26	1988	09	15.43385	00	21	34.25	+03	43	38.9		9 675
1981	EV26	1988	09	15.39965	00	09	32.78	+02	36	36.5	18.0	9 675
1981	EV26	1988	09	15.43385	00	09	31.30	+02	36	28.2		9 675
1981	ES29	1986	04	30.29306	14	12	07.95	-11	11	04.6	16.5	2 675
1981	ES29	1986	05	02.35313	14	10	40.06	-10	53	47.4		2 675
1981	EO34	1991	07	13.41493	20	46	29.15	-03	31	59.8	17.0	9 675
1981	EO34	1991	07	13.44618	20	46	28.01	-03	32	04.0		9 675
1981	EP40	1989	09	30.41579	02	24	17.72	+11	49	35.8		9 675
1981	EP40	1989	09	30.47465	02	24	15.64	+11	49	05.6		9 675
1981	OH	1988	08	16.17430	19	27	54.21	-15	59	47.0		9 675
1981	OH	1988	08	16.20451	19	27	53.51	-16	00	18.9		9 675
1981	RM3	1991	07	18.43108	22	03	20.25	-07	47	45.1	18.2	9 675
1981	RM3	1991	07	18.46424	22	03	19.46	-07	47	47.6		9 675
1981	SD4	1990	09	16.18038	21	12	44.48	-11	55	16.5	17.0	9 675
1981	SD4	1990	09	16.22465	21	12	43.30	-11	55	22.8		9 675
1981	WA1	1990	09	14.18924	21	02	15.30	-18	17	48.1	17.8	9 675
1981	WA1	1990	09	14.22760	21	02	14.23	-18	17	51.8		9 675
1981	WA1	1990	09	18.17344	21	00	57.19	-18	25	32.6	18.5	9 675
1981	WA1	1990	09	18.20694	21	00	56.54	-18	25	38.5		9 675
1982	BS	1988	08	16.17430	19	29	49.58	-19	28	14.6		9 675
1982	BS	1988	08	16.20451	19	29	48.57	-19	28	12.8		9 675
1982	JR1	1991	07	08.28368	16	25	34.71	-21	04	52.5	16.5	2 675
1982	JR1	1991	07	08.30816	16	25	33.97	-21	04	54.8		2 675
1982	JR1	1991	07	10.24201	16	24	30.48	-21	10	10.2		2 675
1982	JR1	1991	07	10.26701	16	24	29.79	-21	10	13.5		2 675
1982	MA	1990	09	14.26441	22	14	36.28	-10	49	32.0	17.8	9 675
1982	MA	1990	09	14.30417	22	14	34.58	-10	49	40.9		9 675
1982	RO1	1989	09	30.41579	02	15	24.58	+16	53	46.6		9 675
1982	RO1	1989	09	30.47465	02	15	22.81	+16	53	34.9		9 675
1982	RO1	1989	11	03.27278	01	48	55.51	+13	31	41.1	16.8	9 675
1982	RO1	1989	11	03.30815	01	48	53.68	+13	31	26.4		9 675
1982	RO1	1989	11	04.27013	01	48	06.71	+13	24	33.5	17.0	9 675
1982	RO1	1989	11	04.30364	01	48	04.99	+13	24	17.9		9 675
1982	ST6	1991	07	12.38229	21	46	48.74	-14	09	13.7	17.8	9 675
1982	ST6	1991	07	12.41736	21	46	47.75	-14	09	17.8		9 675
1982	ST6	1991	07	14.45417	21	45	52.77	-14	13	24.4	17.5	9 675
1982	ST6	1991	07	14.48299	21	45	51.88	-14	13	26.8		9 675
1982	ST6	1991	07	17.39670	21	44	23.72	-14	20	05.5	17.5	9 675
1982	ST6	1991	07	17.43872	21	44	22.21	-14	20	13.5		9 675
1982	VC3	1990	09	14.19948	21	36	44.46	-26	16	19.4	16.8	9 675
1982	VC3	1990	09	14.23663	21	36	43.79	-26	16	16.1		9 675
1982	YL1	1991	07	17.32691	19	15	01.78	-31	58	27.6	17.2	9 675

1982	YL1	1991	07	17.36476	19	14	59.50	-31	58	31.2		9 675
1982	YL1	1991	07	18.28742	19	14	06.08	-32	00	04.3		9 675
1982	YL1	1991	07	18.31719	19	14	04.20	-32	00	07.5		9 675
1983	DC	1987	04	21.27725	13	42	37.98	-14	35	13.4		9 675
1983	DC	1987	04	21.30451	13	42	36.30	-14	35	05.6		9 675
1983	GQ	1990	09	14.18924	21	04	28.28	-17	24	52.9	16.8	9 675
1983	GQ	1990	09	14.22760	21	04	27.91	-17	24	53.8	17.5	9 675
1983	HJ	1990	09	14.18924	21	02	45.91	-17	54	16.3	18.2	9 675
1983	HJ	1990	09	14.22760	21	02	44.85	-17	54	19.8		9 675
1983	HJ	1990	09	18.17344	21	01	17.63	-18	01	11.1		9 675
1983	HJ	1990	09	18.20694	21	01	17.05	-18	01	16.5		9 675
1983	RC5	1990	09	14.30417	22	05	29.14	-08	01	27.4		9 675
1983	TW1	1991	07	12.38229	21	32	26.26	-14	49	27.0	16.2	9 675
1983	TW1	1991	07	12.41736	21	32	25.55	-14	49	35.6		9 675
1983	TW1	1991	07	14.45417	21	31	50.61	-14	58	50.3	16.8	9 675
1983	TW1	1991	07	17.39670	21	30	47.91	-15	13	22.9	16.0	9 675
1983	TW1	1991	07	17.43872	21	30	46.73	-15	13	33.7		9 675
1983	TR2	1987	04	21.27725	13	45	12.96	-13	59	49.3		9 675
1983	TR2	1987	04	21.30451	13	45	11.40	-13	59	47.4		9 675
1984	EX	1990	09	14.26441	22	12	22.09	-12	23	22.3	17.8	9 675
1984	EX	1990	09	14.30417	22	12	20.28	-12	23	29.0		9 675
1984	EN1	1989	11	24.15364	01	13	59.83	+05	12	17.6		9 675
1984	EN1	1989	11	24.19701	01	13	58.85	+05	12	12.5		9 675
1984	EN1	1991	01	22.31666	09	25	47.25	+14	04	15.3		9 675
1984	EN1	1991	01	22.34895	09	25	45.46	+14	04	24.4		9 675
1984	FN	1991	04	14.47292	14	34	17.74	+01	00	47.3	17.0	3 675
1984	FN	1991	04	16.47795	14	31	08.82	+00	43	00.1		3 675
1984	FN	1991	04	17.37031	14	29	44.15	+00	34	52.3		3 675
1984	FN	1991	05	14.35365	13	49	59.25	-04	12	22.0	17.5	3 675
1984	FN	1991	05	16.25417	13	47	52.40	-04	34	20.2		3 675
1984	FN	1991	05	16.28871	13	47	50.13	-04	34	44.0		3 675
1984	FS	1990	09	16.26406	22	40	37.73	-15	10	41.2	16.8	9 675
1984	FS	1990	09	16.30069	22	40	36.01	-15	10	58.1		9 675
1984	SO5	1988	08	16.17430	19	23	19.92	-19	39	20.4		9 675
1984	SO5	1988	08	16.20451	19	23	18.96	-19	39	23.0		9 675
1985	GW	1990	09	14.19948	21	30	46.84	-23	37	11.2	18.5	9 675
1985	GW	1990	09	14.23663	21	30	45.36	-23	37	16.4		9 675
1985	QR	1990	09	14.26441	22	21	14.06	-11	20	51.2	17.2	9 675
1985	QR	1990	09	14.30417	22	21	12.52	-11	21	07.7		9 675
1985	RD	1990	09	18.17344	21	21	17.36	-16	32	04.0	18.2	9 675
1985	RD	1990	09	18.20694	21	21	16.75	-16	32	06.1		9 675
1985	RU	1991	01	22.31666	09	14	49.32	+19	05	35.5		9 675
1985	RU	1991	01	22.34895	09	14	47.11	+19	05	39.3		9 675
1985	RL3	1991	03	12.41493	13	25	19.69	+04	24	24.4	16.8	9 675
1985	RL3	1991	03	12.44779	13	25	18.64	+04	24	36.4		9 675
1985	SR	1989	11	03.27278	01	55	34.34	+11	27	17.4	17.8	9 675
1985	SR	1989	11	03.30815	01	55	32.26	+11	27	08.3	17.5	9 675
1985	SR	1989	11	04.27013	01	54	36.40	+11	23	22.9	17.8	9 675
1985	SR	1989	11	04.30364	01	54	34.45	+11	23	14.2		9 675
1985	TL	1990	09	16.18038	21	09	56.68	-08	45	20.4	17.2	9 675
1985	TL	1990	09	16.22465	21	09	55.85	-08	45	30.5		9 675
1985	TG3	1991	04	14.24809	11	32	01.29	-09	28	12.0	18.3	3 675
1985	TG3	1991	04	14.28351	11	32	00.37	-09	28	05.2		3 675
1985	TG3	1991	04	19.24306	11	30	12.79	-09	13	58.4		3 675
1985	VP	1990	09	15.24097	21	09	33.54	-26	36	06.8		9 675
1985	VP	1990	09	15.27777	21	09	32.16	-26	35	57.9		9 675
1985	VD1	1990	09	16.18906	21	35	08.99	-20	00	53.8		9 675
1985	VD1	1990	09	16.23316	21	35	07.56	-20	00	52.4		9 675
1986	AG1	1986	02	05.27909	07	43	16.72	+17	51	28.8		9 675

1986	AG1	1986	02	05.30260	07	43	14.90	+17	51	15.6		9 675
1986	AG1	1986	02	06.23576	07	42	00.94	+17	41	08.4		9 675
1986	AG1	1986	02	06.28385	07	41	57.04	+17	40	36.9		9 675
1986	AG1	1986	02	07.22256	07	40	43.97	+17	30	34.9		9 675
1986	AG1	1986	02	07.25711	07	40	42.30	+17	30	08.1		9 675
1986	CS1	1988	09	15.39965	00	15	55.51	+00	45	54.3	18.2	9 675
1986	CS1	1988	09	15.43385	00	15	53.77	+00	45	42.1		9 675
1986	GV	1991	04	14.44965	15	06	55.07	+10	15	17.5	17.6	3 675
1986	GV	1991	04	14.48733	15	06	53.71	+10	15	31.1		3 675
1986	GV	1991	04	16.45017	15	05	38.18	+10	26	29.7		3 675
1986	GV	1991	04	16.49115	15	05	36.51	+10	26	42.1		3 675
1986	JD	1990	09	14.19948	21	23	25.43	-27	22	19.1	17.2	9 675
1986	JD	1990	09	14.23663	21	23	24.59	-27	22	20.2		9 675
1986	PQ	1990	09	14.18924	21	21	37.73	-18	16	57.2	17.2	9 675
1986	PQ	1990	09	14.22760	21	21	36.49	-18	17	06.2		9 675
1986	PQ	1990	09	18.17344	21	19	47.83	-18	31	15.2	18.0	9 675
1986	PQ	1990	09	18.20694	21	19	46.99	-18	31	21.9		9 675
1986	PX5	1990	09	16.26406	22	29	39.15	-17	27	57.0	16.5	9 675
1986	PX5	1990	09	16.30069	22	29	37.48	-17	28	08.3		9 675
1986	QL1	1990	09	17.21181	22	12	49.92	-15	37	53.5		9 675
1986	QL1	1990	09	17.24549	22	12	48.34	-15	37	58.2		9 675
1986	QL1	1990	09	20.25590	22	10	27.76	-15	43	12.9	18.5	9 675
1986	QL1	1990	09	20.29097	22	10	26.13	-15	43	14.2		9 675
1986	QZ2	1990	09	17.21181	21	55	11.67	-22	15	18.2		9 675
1986	QZ2	1990	09	17.24549	21	55	10.28	-22	15	12.5		9 675
1986	RQ5	1990	09	14.19948	21	23	51.95	-26	18	16.0	18.8	9 675
1986	RQ5	1990	09	14.23663	21	23	50.58	-26	18	17.7		9 675
1986	TB12	1990	09	14.18924	21	02	55.96	-17	11	39.2	18.2	9 675
1986	TB12	1990	09	14.22760	21	02	54.73	-17	11	41.3		9 675
1986	TB12	1990	09	18.17344	21	01	11.20	-17	12	44.7	18.5	9 675
1986	TB12	1990	09	18.20694	21	01	10.35	-17	12	48.4		9 675
1986	UA	1991	07	12.38229	21	54	00.39	-12	58	35.1	17.8	9 675
1986	UA	1991	07	12.41736	21	53	59.66	-12	58	40.0		9 675
1986	UA	1991	07	14.45417	21	53	18.47	-13	03	38.1	17.5	9 675
1986	UA	1991	07	14.48299	21	53	17.80	-13	03	41.4		9 675
1986	UA	1991	07	17.39670	21	52	10.09	-13	11	36.5	17.5	9 675
1986	UA	1991	07	17.43872	21	52	08.90	-13	11	42.8		9 675
1986	UV	1990	09	14.26441	22	12	07.72	-11	59	48.2	17.8	9 675
1986	UV	1990	09	14.30417	22	12	05.87	-11	59	53.6		9 675
1986	VY	1991	01	22.31666	09	18	18.94	+19	21	28.3		9 675
1986	VY	1991	01	22.34895	09	18	16.70	+19	21	35.0		9 675
1987	HB1	1987	04	21.27725	13	52	38.70	-11	03	33.5		9 675
1987	HB1	1987	04	21.30451	13	52	37.17	-11	03	24.1		9 675
1987	KD1	1991	04	15.41128	14	58	01.77	+07	32	37.3	17.1	3 675
1987	KD1	1991	04	15.46163	14	58	00.13	+07	33	17.6		3 675
1987	KD1	1991	04	17.37726	14	56	57.89	+07	58	54.7		3 675
1987	KD1	1991	04	17.40608	14	56	56.91	+07	59	17.0		3 675
1987	KD1	1991	05	14.33038	14	37	23.80	+12	30	11.1	17.0	3 675
1987	KD1	1991	05	14.36163	14	37	22.29	+12	30	21.0		3 675
1987	KD1	1991	05	16.31024	14	35	56.01	+12	40	30.5		3 675
1987	KD1	1991	06	08.25711	14	24	27.14	+12	46	06.5	16.4	3 675
1987	KD1	1991	06	09.21128	14	24	15.73	+12	42	08.6		3 675
1987	KD1	1991	06	13.22066	14	23	45.09	+12	22	09.4	15	2 675
1987	KD1	1991	06	13.24306	14	23	44.81	+12	22	02.1		2 675
1987	KD1	1991	06	15.22969	14	23	40.58	+12	10	14.9		2 675
1987	KD1	1991	06	15.24653	14	23	40.48	+12	10	09.2		2 675
1987	ML1	1991	06	07.27135	15	13	32.36	+07	13	44.6	17.2	9 675
1987	ML1	1991	06	07.31302	15	13	30.77	+07	13	25.4		9 675
1987	ML1	1991	06	09.26111	15	12	24.83	+06	58	54.6		9 675

1987	ML1	1991	06	09.29583	15	12	23.66	+06	58	37.9		9 675
1987	RD1	1991	07	19.37292	21	02	29.72	-19	31	47.0	18.0	9 675
1987	SJ	1991	07	18.43108	22	03	08.05	-02	30	42.1	15.2	9 675
1987	SJ	1991	07	18.46424	22	03	08.21	-02	30	39.0		9 675
1987	SM13	1990	09	14.19948	21	49	17.99	-24	27	10.7	17.0	9 675
1987	SM13	1990	09	14.23663	21	49	16.27	-24	27	11.6		9 675
1987	UU4	1990	09	14.19948	21	39	22.62	-24	40	40.7	17.8	9 675
1987	UU4	1990	09	14.23663	21	39	20.88	-24	40	41.1		9 675
1987	WS	1990	03	27.33767	12	35	39.29	+00	06	37.7	17.0	9 675
1987	WS	1990	03	27.37135	12	35	37.55	+00	06	41.8		9 675
1987	YL1	1991	07	12.38229	21	40	45.84	-09	40	09.7	17.0	9 675
1987	YL1	1991	07	12.41736	21	40	45.20	-09	40	22.0		9 675
1987	YL1	1991	07	14.45417	21	40	05.23	-09	54	32.5	17.0	9 675
1987	YL1	1991	07	14.48299	21	40	04.65	-09	54	45.4		9 675
1987	YL1	1991	07	17.39670	21	38	58.80	-10	16	17.4	16.8	9 675
1987	YL1	1991	07	17.43872	21	38	57.63	-10	16	36.0		9 675
1988	AA5	1991	07	13.44618	21	14	43.34	-06	13	40.8		9 675
1988	AA5	1991	07	19.35900	21	11	14.45	-06	23	12.3	17.8	9 675
1988	AA5	1991	07	19.42237	21	11	12.00	-06	23	20.0		9 675
1988	BW1	1991	05	14.27413	13	48	10.62	+03	09	22.7	17.9	3 675
1988	BW1	1991	05	14.29948	13	48	09.65	+03	09	20.7		3 675
1988	BW1	1991	05	15.24861	13	47	42.75	+03	08	28.8		3 675
1988	BW1	1991	05	15.28073	13	47	41.83	+03	08	27.0		3 675
1988	BX1	1991	04	14.44253	14	49	41.27	+13	04	18.0	17.8	3 675
1988	BX1	1991	04	14.44965	14	49	41.09	+13	04	20.3		3 675
1988	BX1	1991	04	16.44323	14	48	40.44	+13	07	48.5		3 675
1988	BX1	1991	04	16.45017	14	48	40.35	+13	07	48.6		3 675
1988	BX1	1991	05	13.32951	14	34	02.86	+13	17	05.5		3 675
1988	BX1	1991	05	15.26354	14	33	01.32	+13	14	46.8		3 675
1988	BY1	1991	04	14.36545	13	57	22.90	-04	15	19.9	18.2	3 675
1988	BY1	1991	04	14.39670	13	57	21.81	-04	15	18.3		3 675
1988	BY1	1991	04	16.39705	13	56	19.49	-04	12	50.8		3 675
1988	BY1	1991	04	19.41354	13	54	44.84	-04	09	14.1		3 675
1988	BY1	1991	05	14.35365	13	42	19.19	-03	51	07.5	18.5	3 675
1988	BY1	1991	05	16.25417	13	41	29.36	-03	50	51.7		3 675
1988	BY1	1991	05	16.28871	13	41	28.45	-03	50	51.8		3 675
1988	ER2	1991	01	22.31666	09	05	33.78	+13	47	25.5		9 675
1988	ER2	1991	01	22.34895	09	05	31.77	+13	47	31.3		9 675
1988	ER2	1991	02	09.24236	08	46	46.25	+14	50	51.1	17.0	9 675
1988	ER2	1991	02	09.27309	08	46	44.21	+14	50	57.7		9 675
1988	JQ	1991	01	22.31666	09	24	59.29	+13	36	39.5		9 675
1988	NC	1988	07	16.36319	19	46	29.91	-24	13	36.8		9 675
1988	RF1	1989	11	02.27291	01	16	36.17	+22	49	36.4	18.3	3 675
1988	RF1	1989	11	03.20138	01	16	02.78	+22	48	00.2		3 675
1988	RJ3	1988	09	15.39965	00	09	08.19	+01	04	31.5	17.2	9 675
1988	RJ3	1988	09	15.43385	00	09	06.17	+01	04	22.0		9 675
1988	RM3	1988	09	15.39965	00	10	50.08	+01	52	19.9	17.0	9 675
1988	RM3	1988	09	15.43385	00	10	47.92	+01	52	20.6		9 675
1988	RO3	1988	09	15.39965	00	11	25.77	+01	31	17.1	17.0	9 675
1988	RO3	1988	09	15.43385	00	11	23.44	+01	31	23.7		9 675
1988	RP3	1988	09	15.39965	00	11	53.60	+01	37	31.6	16.5	9 675
1988	RP3	1988	09	15.43385	00	11	51.38	+01	37	36.4		9 675
1988	RR3	1991	07	19.37292	21	21	07.43	-21	12	22.4	17.8	9 675
1988	RS3	1988	09	15.39965	00	15	18.62	-00	29	34.0	16.5	9 675
1988	RS3	1988	09	15.43385	00	15	17.23	-00	29	48.2		9 675
1988	RT3	1988	09	15.39965	00	15	37.08	+00	43	23.4	17.5	9 675
1988	RT3	1988	09	15.43385	00	15	35.30	+00	43	18.5		9 675
1988	RU3	1988	09	15.39965	00	15	50.76	-00	40	32.6	17.8	9 675
1988	RU3	1988	09	15.43385	00	15	49.13	-00	40	45.3		9 675

1988	RW3	1988	09	15.39965	00	16	42.98	+00	43	41.6	17.8	9 675
1988	RW3	1988	09	15.43385	00	16	41.41	+00	43	32.4		9 675
1988	RX3	1988	09	15.39965	00	17	07.65	+00	03	10.8	18.5	9 675
1988	RX3	1988	09	15.43385	00	17	05.96	+00	02	56.9		9 675
1988	RY3	1988	09	15.39965	00	17	57.25	+01	36	10.7	17.8	9 675
1988	RY3	1988	09	15.43385	00	17	55.78	+01	36	00.2		9 675
1988	RZ3	1988	09	15.39965	00	21	24.32	+01	19	53.6	18.5	9 675
1988	RZ3	1988	09	15.43385	00	21	22.81	+01	19	41.7		9 675
1988	RU6	1987	04	21.27725	13	48	16.93	-10	28	56.8		9 675
1988	RU6	1987	04	21.30451	13	48	15.42	-10	28	43.9		9 675
1988	SJ	1988	09	15.39965	00	22	14.70	+05	22	37.3	17.0	9 675
1988	SJ	1988	09	15.43385	00	22	12.82	+05	22	34.2		9 675
1988	SK	1988	09	15.39965	00	22	05.10	+04	00	03.1	16.5	9 675
1988	SK	1988	09	15.43385	00	22	03.44	+03	59	56.3		9 675
1988	SL	1988	09	15.39965	00	22	53.82	+03	35	09.0	16.0	9 675
1988	SL	1988	09	15.43385	00	22	52.62	+03	34	50.1		9 675
1988	SY2	1988	09	15.39965	00	10	36.73	+00	42	25.4	16.2	9 675
1988	SY2	1988	09	15.43385	00	10	35.74	+00	41	53.7		9 675
1988	TZ1	1991	01	20.15642	04	59	27.16	+38	16	13.9	18.4	3 675
1988	TZ1	1991	01	20.19572	04	59	25.93	+38	16	01.9		3 675
1988	VO2	1991	07	10.41823	20	28	21.95	-17	47	07.7	16.5	2 675
1988	VO2	1991	07	10.44149	20	28	20.58	-17	47	10.1		2 675
1988	VO2	1991	07	11.38837	20	27	28.22	-17	47	14.5		2 675
1988	VZ3	1991	07	18.43108	21	52	56.58	-05	35	31.7	17.8	9 675
1988	VZ3	1991	07	18.46424	21	52	55.47	-05	35	27.3	18.2	9 675
1988	XH1	1991	05	08.39115	15	20	21.40	-06	46	52.2	16	2 675
1988	XH1	1991	05	08.41736	15	20	19.78	-06	46	52.6		2 675
1988	XH1	1991	05	10.38681	15	18	23.02	-06	47	10.4		2 675
1988	XH1	1991	05	10.41111	15	18	21.44	-06	47	10.7		2 675
1988	XK1	1991	07	16.29010	19	04	06.29	-25	28	54.3	16.5	9 675
1988	XK1	1991	07	16.32602	19	04	04.08	-25	29	00.0		9 675
1988	XO1	1991	07	08.29583	18	28	54.99	-04	48	34.2	17.0	2 675
1988	XO1	1991	07	08.32691	18	28	53.49	-04	48	37.9		2 675
1988	XO1	1991	07	10.26024	18	27	18.20	-04	51	41.6		2 675
1988	XO1	1991	07	10.28594	18	27	16.90	-04	51	44.8		2 675
1989	AD	1991	07	14.30000	19	17	56.37	-31	34	17.0	17.5	9 675
1989	AD	1991	07	14.33368	19	17	54.06	-31	34	17.8		9 675
1989	AD	1991	07	16.29010	19	15	38.02	-31	36	39.1	18.0	9 675
1989	AD	1991	07	16.32602	19	15	35.51	-31	36	41.5		9 675
1989	AD	1991	07	17.32691	19	14	26.34	-31	37	40.5	17.2	9 675
1989	AD	1991	07	17.36476	19	14	23.51	-31	37	42.0		9 675
1989	AD	1991	07	18.28742	19	13	20.06	-31	38	30.7		9 675
1989	AD	1991	07	18.31719	19	13	17.65	-31	38	33.2		9 675
1989	AY6	1990	09	14.18924	21	06	59.80	-14	24	41.6	18.0	9 675
1989	AY6	1990	09	14.22760	21	06	58.79	-14	24	43.5		9 675
1989	AY6	1990	09	18.17344	21	05	31.42	-14	29	42.0		9 675
1989	AY6	1990	09	18.20694	21	05	30.69	-14	29	45.6		9 675
1989	BL	1991	04	14.36545	13	44	12.76	-01	43	51.3	17.5	3 675
1989	BL	1991	04	14.39670	13	44	11.87	-01	43	47.1		3 675
1989	BL	1991	04	16.39705	13	43	11.59	-01	39	02.4		3 675
1989	BW	1991	05	14.18750	13	29	01.66	+07	02	39.3	18.0	3 675
1989	BW	1991	05	16.16806	13	28	15.80	+07	01	39.7		3 675
1989	BW	1991	05	16.20174	13	28	15.11	+07	01	38.7		3 675
1989	BB1	1991	04	14.31553	12	31	42.38	+15	21	38.3	17.8	3 675
1989	BB1	1991	04	14.34878	12	31	41.45	+15	21	41.0		3 675
1989	BB1	1991	04	16.29618	12	30	43.82	+15	23	08.9		3 675
1989	BB1	1991	04	16.34149	12	30	42.50	+15	23	10.4		3 675
1989	CW	1990	09	14.18924	21	03	15.93	-16	38	50.1	18.0	9 675
1989	CW	1990	09	14.22760	21	03	14.94	-16	38	51.4		9 675

1989	CW	1990	09	18.17344	21	02	03.30	-16	42	24.2	18.2	9 675
1989	CW	1990	09	18.20694	21	02	02.79	-16	42	27.8		9 675
1989	CY1	1990	09	14.18924	21	00	04.37	-15	49	16.2	19.0	9 675
1989	CY1	1990	09	14.22760	21	00	03.47	-15	49	24.2		9 675
1989	CH2	1991	04	14.38819	14	03	35.16	+26	25	29.2	18.2	3 675
1989	CH2	1991	04	14.41970	14	03	34.11	+26	25	34.0		3 675
1989	CH2	1991	04	16.41892	14	02	31.80	+26	31	12.5		3 675
1989	EX	1990	09	17.21181	22	00	33.29	-19	02	25.8		9 675
1989	EX	1990	09	17.24549	22	00	32.00	-19	02	54.6		9 675
1989	EX1	1990	09	16.26406	22	20	44.64	-16	57	40.2	18.0	9 675
1989	EX1	1990	09	16.30069	22	20	43.05	-16	57	55.4		9 675
1989	EX1	1990	09	17.21181	22	20	03.87	-17	03	48.3		9 675
1989	EX1	1990	09	17.24549	22	20	02.44	-17	04	01.2		9 675
1989	EX1	1990	09	20.25590	22	17	59.94	-17	22	07.8	18.2	9 675
1989	EX1	1990	09	20.29097	22	17	58.43	-17	22	18.7		9 675
1989	FA	1990	09	14.18924	20	58	05.62	-17	07	46.5	18.2	9 675
1989	FA	1990	09	14.22760	20	58	04.47	-17	07	53.9	18.8	9 675
1989	GF	1990	09	14.19948	21	39	45.09	-23	30	26.1	18.8	9 675
1989	GF	1990	09	14.23663	21	39	43.54	-23	30	29.4	18.2	9 675
1989	GF	1990	09	16.18906	21	38	28.82	-23	33	06.8		9 675
1989	GF	1990	09	16.23316	21	38	27.31	-23	33	10.0		9 675
1989	GN	1990	09	14.26441	22	11	39.53	-08	40	09.3	17.0	9 675
1989	GN	1990	09	14.30417	22	11	37.71	-08	40	30.5		9 675
1989	GO	1990	09	16.26406	22	41	17.64	-13	35	00.7	17.5	9 675
1989	GO	1990	09	16.30069	22	41	15.59	-13	35	08.4		9 675
1989	GH4	1990	09	16.26406	22	27	39.24	-10	57	47.9	18.0	9 675
1989	GH4	1990	09	16.30069	22	27	37.11	-10	57	52.0		9 675
1989	GP6	1990	09	15.24097	21	22	57.27	-20	12	25.9	17.8	9 675
1989	GP6	1990	09	15.27777	21	22	56.38	-20	12	36.7		9 675
1989	GP6	1990	09	16.18906	21	22	36.01	-20	16	54.7		9 675
1989	GP6	1990	09	16.23316	21	22	34.93	-20	17	06.1		9 675
1989	SX	1989	09	30.41579	02	23	52.44	+12	37	36.9		9 675
1989	SX	1989	09	30.47465	02	23	50.91	+12	37	54.4		9 675
1989	SY	1989	09	30.41579	02	31	31.41	+14	06	08.4		9 675
1989	SY	1989	09	30.47465	02	31	29.47	+14	06	34.1		9 675
1989	SV1	1991	01	22.31666	09	15	36.67	+16	19	03.5		9 675
1989	SV1	1991	01	22.34895	09	15	34.94	+16	19	11.1		9 675
1989	SL12	1991	01	22.31666	09	14	15.21	+16	00	23.9		9 675
1989	SL12	1991	01	22.34895	09	14	13.46	+16	00	30.0		9 675
1989	TM1	1989	09	30.41579	02	15	17.15	+14	10	59.9		9 675
1989	TM1	1989	09	30.47465	02	15	14.70	+14	11	09.1		9 675
1989	TM1	1989	11	03.27278	01	42	44.81	+14	54	56.6		9 675
1989	TM1	1989	11	03.30815	01	42	42.60	+14	54	55.6	16.5	9 675
1989	TT1	1989	11	24.15364	01	16	59.39	+08	56	12.9		9 675
1989	TT1	1989	11	24.19701	01	16	58.73	+08	56	01.3		9 675
1989	UL	1989	09	30.41579	02	23	26.98	+16	05	12.1		9 675
1989	UL	1989	09	30.47465	02	23	25.27	+16	04	58.4		9 675
1989	UL	1989	11	03.27278	01	59	42.25	+12	32	59.8	16.5	9 675
1989	UL	1989	11	03.30815	01	59	40.56	+12	32	45.0		9 675
1989	UL	1989	11	04.27013	01	58	56.07	+12	25	56.7	16.5	9 675
1989	UL	1989	11	04.30364	01	58	54.50	+12	25	42.1		9 675
1989	UM	1989	11	03.27278	01	46	50.61	+14	24	28.1	17.0	9 675
1989	UM	1989	11	03.30815	01	46	48.60	+14	24	15.2		9 675
1989	UM	1989	11	04.27013	01	45	56.61	+14	18	45.9	17.2	9 675
1989	UM	1989	11	04.30364	01	45	54.70	+14	18	34.1		9 675
1989	US	1989	09	30.41579	02	16	35.94	+10	04	31.4		9 675
1989	US	1989	09	30.47465	02	16	33.62	+10	04	29.4		9 675
1989	US	1989	11	03.27278	01	45	02.19	+09	23	01.9	16.0	9 675
1989	US	1989	11	03.30815	01	45	00.03	+09	22	58.3		9 675

1989	US	1989	11	04.27013	01	44	06.07	+09	22	08.3	16.0	9 675
1989	US	1989	11	04.30364	01	44	04.11	+09	22	06.0		9 675
1989	US	1989	11	24.15364	01	31	26.35	+09	31	58.0		9 675
1989	US	1989	11	24.19701	01	31	25.44	+09	32	03.4		9 675
1989	UT	1989	09	30.41579	02	26	17.57	+11	27	15.6		9 675
1989	UT	1989	09	30.47465	02	26	15.67	+11	27	28.0		9 675
1989	UT	1989	11	03.27278	01	54	56.48	+12	50	43.0	15.8	9 675
1989	UT	1989	11	03.30815	01	54	54.20	+12	50	46.4		9 675
1989	UT	1989	11	04.27013	01	53	54.46	+12	52	38.5	16.0	9 675
1989	UT	1989	11	04.30364	01	53	52.29	+12	52	42.1	15.5	9 675
1989	UX	1989	11	03.27278	01	42	27.58	+11	00	44.7	17.2	9 675
1989	UX	1989	11	03.30815	01	42	25.82	+11	00	56.3		9 675
1989	UX	1989	11	04.27013	01	41	42.06	+11	06	55.0	16.8	9 675
1989	UX	1989	11	04.30364	01	41	40.43	+11	07	07.2		9 675
1989	UF1	1989	11	24.15364	01	17	00.86	+10	47	36.1		9 675
1989	UF1	1989	11	24.19701	01	17	00.75	+10	47	30.1		9 675
1989	UG2	1989	11	24.15364	01	36	02.05	+09	58	05.9		9 675
1989	UG2	1989	11	24.19701	01	35	59.11	+09	59	07.8		9 675
1989	UO2	1989	11	03.27278	02	01	09.59	+11	06	24.7	17.2	9 675
1989	UO2	1989	11	03.30815	02	01	08.15	+11	06	05.1		9 675
1989	UO2	1989	11	04.27013	02	00	33.02	+10	57	05.2	17.5	9 675
1989	UO2	1989	11	04.30364	02	00	31.70	+10	56	45.9		9 675
1989	US2	1989	11	03.27278	01	47	40.91	+13	16	08.5	16.5	9 675
1989	US2	1989	11	03.30815	01	47	39.79	+13	15	39.7		9 675
1989	US2	1989	11	04.27013	01	47	10.51	+13	02	35.8	16.5	9 675
1989	US2	1989	11	04.30364	01	47	09.39	+13	02	08.1		9 675
1989	UT2	1989	11	03.27278	01	48	54.55	+14	51	23.4	16.8	9 675
1989	UT2	1989	11	03.30815	01	48	52.82	+14	51	03.0		9 675
1989	UT2	1989	11	04.27013	01	48	06.90	+14	42	01.0	16.8	9 675
1989	UT2	1989	11	04.30364	01	48	05.23	+14	41	42.4		9 675
1989	UD3	1989	11	03.27278	01	40	12.56	+09	08	41.1	17.8	9 675
1989	UD3	1989	11	03.30815	01	40	10.84	+09	08	30.5	18.0	9 675
1989	UD3	1989	11	04.27013	01	39	26.07	+09	03	43.6	17.5	9 675
1989	UD3	1989	11	04.30364	01	39	24.48	+09	03	32.7		9 675
1989	UR3	1989	09	30.41579	02	32	21.26	+11	24	31.5		9 675
1989	UR3	1989	09	30.47465	02	32	19.44	+11	24	15.1		9 675
1989	UP4	1989	11	03.27278	01	53	54.10	+12	59	48.6	17.0	9 675
1989	UP4	1989	11	03.30815	01	53	52.51	+12	59	40.1		9 675
1989	UP4	1989	11	04.27013	01	53	09.17	+12	56	01.3	16.8	9 675
1989	UP4	1989	11	04.30364	01	53	07.74	+12	55	50.7		9 675
1989	UQ4	1989	11	03.27278	01	56	04.86	+10	10	02.3	16.5	9 675
1989	UQ4	1989	11	03.30815	01	56	03.39	+10	09	46.6		9 675
1989	US4	1989	11	03.27278	02	00	56.49	+12	35	36.7	17.0	9 675
1989	US4	1989	11	03.30815	02	00	54.71	+12	35	25.7		9 675
1989	US4	1989	11	04.27013	02	00	06.78	+12	30	32.1	17.0	9 675
1989	US4	1989	11	04.30364	02	00	05.13	+12	30	23.1	17.2	9 675
1989	UT5	1989	09	30.41579	02	05	58.78	+12	14	41.2		9 675
1989	UT5	1989	09	30.47465	02	05	56.72	+12	13	59.8		9 675
1989	UU5	1989	09	30.41579	02	06	06.41	+10	32	25.8		9 675
1989	UW5	1989	11	03.27278	01	44	09.67	+06	44	13.1	17.0	9 675
1989	UW5	1989	11	03.30815	01	44	07.89	+06	44	12.3		9 675
1989	UW5	1989	11	04.27013	01	43	19.86	+06	43	40.0	17.0	9 675
1989	UW5	1989	11	04.30364	01	43	18.01	+06	43	38.8		9 675
1989	UX5	1989	11	04.27013	01	45	12.96	+06	44	05.7	18.2	9 675
1989	UX5	1989	11	04.30364	01	45	11.77	+06	44	01.2		9 675
1989	UZ5	1989	11	03.27278	01	46	16.34	+09	30	24.9	17.0	9 675
1989	UZ5	1989	11	03.30815	01	46	14.69	+09	30	20.8		9 675
1989	UZ5	1989	11	04.27013	01	45	29.92	+09	29	04.6	17.0	9 675
1989	UZ5	1989	11	04.30364	01	45	28.34	+09	29	02.5		9 675

1989	UA6		1989	09	30.41579	02	08	08.99	+10	24	19.1		9 675
1989	UA6		1989	09	30.47465	02	08	07.11	+10	24	09.6		9 675
1989	UA6		1989	11	03.27278	01	47	22.99	+08	46	30.4	18.0	9 675
1989	UA6		1989	11	03.30815	01	47	21.59	+08	46	24.8		9 675
1989	UA6		1989	11	04.27013	01	46	46.57	+08	43	46.5	18.2	9 675
1989	UA6		1989	11	04.30364	01	46	45.28	+08	43	39.2	18.5	9 675
1989	UC6		1989	11	24.15364	01	24	38.91	+07	56	52.0		9 675
1989	UC6		1989	11	24.19701	01	24	36.78	+07	57	08.3		9 675
1989	UE7		1991	01	22.31666	09	12	28.71	+14	55	46.1		9 675
1989	UE7		1991	01	22.34895	09	12	27.32	+14	55	52.7		9 675
1989	VQ		1989	09	30.41579	02	24	09.22	+10	36	31.7		9 675
1989	VQ		1989	09	30.47465	02	24	07.27	+10	36	25.5		9 675
1989	VQ		1989	11	03.27278	01	56	07.50	+09	06	01.3	16.5	9 675
1989	VQ		1989	11	03.30815	01	56	05.60	+09	05	56.1		9 675
1989	VQ		1989	11	04.27013	01	55	15.90	+09	03	46.8	16.5	9 675
1989	VQ		1989	11	04.30364	01	55	14.08	+09	03	42.3		9 675
1989	VR		1991	01	22.31666	09	15	02.21	+13	32	46.6		9 675
1989	VR		1991	01	22.34895	09	15	00.64	+13	32	52.9		9 675
1989	VC2		1989	09	30.41579	02	14	19.73	+14	54	50.4		9 675
1989	VC2		1989	09	30.47465	02	14	17.73	+14	54	48.1		9 675
1989	VC2		1989	11	03.27278	01	48	52.32	+13	54	17.4	16.5	9 675
1989	VC2		1989	11	03.30815	01	48	50.66	+13	54	11.8		9 675
1989	VC2		1989	11	04.27013	01	48	06.52	+13	51	53.3	16.8	9 675
1989	VC2		1989	11	04.30364	01	48	04.96	+13	51	49.0		9 675
1989	VB5		1989	11	03.27278	01	36	10.15	+12	57	41.1	17.0	9 675
1989	VB5		1989	11	03.30815	01	36	07.86	+12	57	35.5		9 675
1989	VB5	*	1989	11	04.27013	01	35	03.90	+12	55	44.6	16.8	9 675
1989	VB5		1989	11	04.30364	01	35	01.59	+12	55	41.4	17.0	9 675
1989	VC5		1989	11	03.27278	01	36	48.76	+13	39	04.5	17.8	9 675
1989	VC5		1989	11	03.30815	01	36	47.23	+13	38	45.2		9 675
1989	VC5	*	1989	11	04.27013	01	36	08.40	+13	28	06.5	17.8	9 675
1989	VC5		1989	11	04.30364	01	36	07.01	+13	27	45.6		9 675
1989	VD5	*	1989	11	04.27013	01	38	42.82	+12	22	22.0	17.8	9 675
1989	VD5		1989	11	04.30364	01	38	41.12	+12	22	10.8	18.2	9 675
1989	VE5		1989	11	03.27278	01	40	06.34	+13	47	36.5	17.2	9 675
1989	VE5		1989	11	03.30815	01	40	04.12	+13	47	28.3		9 675
1989	VE5	*	1989	11	04.27013	01	39	05.09	+13	44	38.1	17.5	9 675
1989	VE5		1989	11	04.30364	01	39	02.98	+13	44	31.7		9 675
1989	VF5		1989	11	03.27278	01	40	31.65	+11	43	43.4	17.2	9 675
1989	VF5		1989	11	03.30815	01	40	29.90	+11	43	25.5		9 675
1989	VF5	*	1989	11	04.27013	01	39	43.42	+11	35	41.1	17.0	9 675
1989	VF5		1989	11	04.30364	01	39	41.73	+11	35	24.5		9 675
1989	VG5		1989	11	03.27278	01	42	26.76	+14	40	41.9	17.8	9 675
1989	VG5		1989	11	03.30815	01	42	24.88	+14	40	29.8	18.2	9 675
1989	VG5	*	1989	11	04.27013	01	41	33.86	+14	36	34.2	17.8	9 675
1989	VG5		1989	11	04.30364	01	41	32.03	+14	36	25.3		9 675
1989	VJ5		1989	11	03.27278	01	43	06.77	+12	50	07.0	17.5	9 675
1989	VJ5		1989	11	03.30815	01	43	04.39	+12	50	10.9		9 675
1989	VJ5	*	1989	11	04.27013	01	42	01.07	+12	52	30.7	17.2	9 675
1989	VJ5		1989	11	04.30364	01	41	58.77	+12	52	34.6		9 675
1989	VK5		1989	11	03.27278	01	43	48.42	+11	51	47.8	16.8	9 675
1989	VK5		1989	11	03.30815	01	43	46.23	+11	51	37.4		9 675
1989	VK5	*	1989	11	04.27013	01	42	47.94	+11	47	12.9	16.8	9 675
1989	VK5		1989	11	04.30364	01	42	45.88	+11	47	02.2		9 675
1989	VL5		1989	11	03.27278	01	44	33.12	+14	13	06.6	17.5	9 675
1989	VL5		1989	11	03.30815	01	44	30.99	+14	12	59.7		9 675
1989	VL5	*	1989	11	04.27013	01	43	35.67	+14	10	15.8	17.5	9 675
1989	VL5		1989	11	04.30364	01	43	33.64	+14	10	08.9		9 675
1989	VM5		1989	11	03.27278	01	44	03.75	+12	09	56.7	17.0	9 675

1989	VM5		1989	11	03.30815	01	44	02.77	+12	09	44.7		9 675
1989	VM5	*	1989	11	04.27013	01	43	35.70	+12	04	35.9	17.0	9 675
1989	VM5		1989	11	04.30364	01	43	34.74	+12	04	24.1		9 675
1989	VN5		1989	11	03.27278	01	45	24.22	+14	11	54.7	17.8	9 675
1989	VN5		1989	11	03.30815	01	45	22.31	+14	11	43.0		9 675
1989	VN5	*	1989	11	04.27013	01	44	30.77	+14	06	42.5	17.5	9 675
1989	VN5		1989	11	04.30364	01	44	28.90	+14	06	30.1		9 675
1989	VO5		1989	11	03.27278	01	47	18.74	+10	47	03.7	18.2	9 675
1989	VO5		1989	11	03.30815	01	47	17.25	+10	46	56.2		9 675
1989	VO5	*	1989	11	04.27013	01	46	36.50	+10	42	59.1	18.5	9 675
1989	VO5		1989	11	04.30364	01	46	35.00	+10	42	50.6	18.0	9 675
1989	VP5		1989	11	03.27278	01	48	07.52	+10	12	04.6	17.5	9 675
1989	VP5		1989	11	03.30815	01	48	05.39	+10	12	04.7		9 675
1989	VP5	*	1989	11	04.27013	01	47	08.62	+10	12	15.1	17.5	9 675
1989	VP5		1989	11	04.30364	01	47	06.61	+10	12	15.7		9 675
1989	VQ5	*	1989	11	04.27013	01	50	17.16	+08	25	26.0	17.5	9 675
1989	VQ5		1989	11	04.30364	01	50	16.14	+08	25	34.6		9 675
1989	VR5		1989	11	03.27278	01	52	28.36	+09	31	30.2	17.2	9 675
1989	VR5		1989	11	03.30815	01	52	26.37	+09	31	18.9		9 675
1989	VR5	*	1989	11	04.27013	01	51	33.04	+09	25	57.2	17.2	9 675
1989	VR5		1989	11	04.30364	01	51	31.12	+09	25	46.8		9 675
1989	VS5		1989	11	03.27278	01	52	26.41	+13	23	10.6	17.0	9 675
1989	VS5		1989	11	03.30815	01	52	24.83	+13	22	55.8		9 675
1989	VS5	*	1989	11	04.27013	01	51	43.71	+13	16	11.2	17.0	9 675
1989	VS5		1989	11	04.30364	01	51	42.22	+13	15	56.4		9 675
1989	VT5	*	1989	11	04.27013	01	56	48.51	+13	14	58.1	18.8	9 675
1989	VT5		1989	11	04.30364	01	56	46.51	+13	14	48.5		9 675
1989	VU5		1989	11	03.27278	01	57	55.48	+12	31	52.2	17.8	9 675
1989	VU5		1989	11	03.30815	01	57	53.94	+12	31	44.1		9 675
1989	VU5	*	1989	11	04.27013	01	57	10.03	+12	27	59.8	17.8	9 675
1989	VU5		1989	11	04.30364	01	57	08.47	+12	27	52.0		9 675
1989	VV5		1989	11	03.27278	01	58	06.42	+12	36	27.1	17.8	9 675
1989	VV5		1989	11	03.30815	01	58	04.63	+12	36	19.9		9 675
1989	VV5	*	1989	11	04.27013	01	57	16.67	+12	32	58.3	17.8	9 675
1989	VV5		1989	11	04.30364	01	57	14.96	+12	32	49.7		9 675
1989	VW5		1989	11	03.27278	01	59	22.45	+08	35	46.4	16.0	9 675
1989	VW5		1989	11	03.30815	01	59	20.10	+08	35	55.1		9 675
1989	VW5	*	1989	11	04.27013	01	58	18.47	+08	39	57.5	16.2	9 675
1989	VW5		1989	11	04.30364	01	58	16.22	+08	40	06.6		9 675
1989	VX5		1989	11	03.27278	01	59	13.54	+09	53	37.3	17.5	9 675
1989	VX5		1989	11	03.30815	01	59	11.54	+09	53	26.5		9 675
1989	VX5	*	1989	11	04.27013	01	58	19.06	+09	48	24.6	17.8	9 675
1989	VX5		1989	11	04.30364	01	58	17.00	+09	48	13.3		9 675
1989	VY5		1989	11	03.27278	01	59	16.18	+13	50	13.3	17.5	9 675
1989	VY5		1989	11	03.30815	01	59	14.13	+13	50	05.6		9 675
1989	VY5	*	1989	11	04.27013	01	58	19.64	+13	46	59.8	17.5	9 675
1989	VY5		1989	11	04.30364	01	58	17.70	+13	46	53.9		9 675
1989	VZ5		1989	11	03.27278	01	59	15.65	+12	30	28.7	18.0	9 675
1989	VZ5		1989	11	03.30815	01	59	13.64	+12	30	21.0		9 675
1989	VZ5	*	1989	11	04.27013	01	58	22.23	+12	26	58.6	17.8	9 675
1989	VZ5		1989	11	04.30364	01	58	20.36	+12	26	51.5		9 675
1989	VA6		1989	11	03.27278	02	00	09.12	+10	36	07.7	17.8	9 675
1989	VA6		1989	11	03.30815	02	00	07.36	+10	36	00.2		9 675
1989	VA6	*	1989	11	04.27013	01	59	19.64	+10	32	52.7	17.8	9 675
1989	VA6		1989	11	04.30364	01	59	17.88	+10	32	46.2		9 675
1989	VB6		1989	11	03.27278	02	00	21.16	+07	54	04.6	17.5	9 675
1989	VB6		1989	11	03.30815	02	00	19.11	+07	54	02.3		9 675
1989	VB6	*	1989	11	04.27013	01	59	23.92	+07	52	40.8	17.2	9 675
1989	VB6		1989	11	04.30364	01	59	21.88	+07	52	37.7		9 675

1989	VC6		1989	11	03.27278	02	00	32.29	+12	00	42.0	17.8	9 675
1989	VC6		1989	11	03.30815	02	00	30.53	+12	00	26.5		9 675
1989	VC6	*	1989	11	04.27013	01	59	41.49	+11	53	50.7	18.0	9 675
1989	VC6		1989	11	04.30364	01	59	39.81	+11	53	36.9		9 675
1989	VD6		1989	11	03.27278	02	01	11.34	+09	48	10.3	17.5	9 675
1989	VD6		1989	11	03.30815	02	01	09.58	+09	47	55.5		9 675
1989	VD6	*	1989	11	04.27013	02	00	24.10	+09	40	50.1	17.8	9 675
1989	VD6		1989	11	04.30364	02	00	22.42	+09	40	35.9		9 675
1989	VE6	*	1989	11	04.27013	02	01	23.11	+11	16	01.0	17.8	9 675
1989	VE6		1989	11	04.30364	02	01	21.30	+11	16	05.7	18.5	9 675
1989	VF6	*	1989	11	04.27013	02	01	23.86	+10	40	34.1	17.2	9 675
1989	VF6		1989	11	04.30364	02	01	21.88	+10	40	23.9		9 675
1989	VG6		1989	11	03.27278	02	02	20.18	+08	30	23.4	17.5	9 675
1989	VG6		1989	11	03.30815	02	02	18.44	+08	30	16.1		9 675
1989	VG6	*	1989	11	04.27013	02	01	32.59	+08	26	53.5	17.5	9 675
1989	VG6		1989	11	04.30364	02	01	30.94	+08	26	46.7		9 675
1989	VH6		1989	11	03.27278	02	03	38.89	+11	13	21.4	17.5	9 675
1989	VH6		1989	11	03.30815	02	03	37.19	+11	13	10.2		9 675
1989	VH6	*	1989	11	04.27013	02	02	51.86	+11	08	37.6	17.2	9 675
1989	VH6		1989	11	04.30364	02	02	50.18	+11	08	28.6		9 675
1989	VJ6		1989	11	03.27278	02	03	57.24	+11	16	44.2	18.0	9 675
1989	VJ6		1989	11	03.30815	02	03	55.29	+11	16	43.8		9 675
1989	VJ6	*	1989	11	04.27013	02	03	03.97	+11	16	01.8	17.8	9 675
1989	VJ6		1989	11	04.30364	02	03	02.13	+11	16	00.7		9 675
1989	VK6		1989	11	03.27278	02	04	19.00	+11	05	20.6	17.0	9 675
1989	VK6		1989	11	03.30815	02	04	16.99	+11	05	13.2		9 675
1989	VK6	*	1989	11	04.27013	02	03	24.34	+11	02	20.1	17.0	9 675
1989	VK6		1989	11	04.30364	02	03	22.37	+11	02	14.2		9 675
1989	WG7		1986	02	05.27909	07	25	12.69	+19	23	52.6		9 675
1989	WG7		1986	02	07.22256	07	23	59.48	+19	26	51.3		9 675
1989	WG7		1986	02	07.25711	07	23	58.43	+19	26	55.6		9 675
1989	YP		1986	02	05.27909	07	30	45.19	+14	02	33.9		9 675
1989	YP		1986	02	05.30260	07	30	44.19	+14	02	47.7		9 675
1989	YP		1986	02	06.23576	07	30	07.62	+14	11	42.6		9 675
1989	YP		1986	02	06.28385	07	30	05.57	+14	12	11.1		9 675
1989	YP		1986	02	07.22256	07	29	30.11	+14	21	06.9		9 675
1989	YP		1986	02	07.25711	07	29	28.79	+14	21	26.2		9 675
1990	DJ		1990	04	25.17865	09	10	52.51	+27	41	00.0	16.5	2 675
1990	DJ		1990	04	25.20347	09	10	55.02	+27	41	06.7		2 675
1990	DK		1991	03	09.36024	13	07	23.03	-15	22	40.4	18.0	3 675
1990	DK		1991	03	09.39548	13	07	22.38	-15	22	39.2		3 675
1990	DK		1991	05	14.25781	12	39	21.50	-11	53	47.7	18.5	3 675
1990	DK		1991	05	16.18385	12	38	53.71	-11	47	53.9		3 675
1990	DK		1991	05	16.22014	12	38	53.14	-11	47	47.3		3 675
1990	MG		1990	09	15.24097	21	25	21.80	-22	14	08.0	17.0	9 675
1990	MG		1990	09	15.27777	21	25	21.28	-22	14	06.6		9 675
1990	MG		1990	09	16.18906	21	25	13.82	-22	13	15.8		9 675
1990	MG		1990	09	16.23316	21	25	13.38	-22	13	13.3		9 675
1990	OA		1990	09	14.19948	21	34	22.12	-26	51	03.1	18.2	9 675
1990	OL		1990	09	16.18906	21	56	07.89	-20	49	06.5		9 675
1990	OL		1990	09	16.23316	21	56	09.73	-20	49	48.9		9 675
1990	OL		1990	09	17.21181	21	56	54.82	-21	04	54.2		9 675
1990	OL		1990	09	20.25590	21	59	22.04	-21	47	33.0	18.2	9 675
1990	OL		1990	09	20.29097	21	59	23.71	-21	48	00.1		9 675
1990	OT		1990	09	14.17917	21	00	31.58	-06	21	00.8	17.5	9 675
1990	OT		1990	09	14.21875	21	00	30.72	-06	21	04.9		9 675
1990	OB1		1990	09	15.24983	21	16	40.93	+00	07	47.2	17.5	9 675
1990	OB1		1990	09	15.28663	21	16	40.36	+00	07	29.7		9 675
1990	OS1		1990	09	14.19948	21	38	53.56	-22	40	03.2	17.5	9 675

1990	OS1	1990	09	14.23663	21	38	51.95	-22	39	56.0		9 675
1990	OS1	1990	09	16.18906	21	37	32.78	-22	33	27.8	18.2	9 675
1990	OS1	1990	09	16.23316	21	37	31.07	-22	33	19.4		9 675
1990	OW1	1990	09	16.18906	21	53	43.90	-20	26	14.6		9 675
1990	OW1	1990	09	16.23316	21	53	42.42	-20	26	10.0		9 675
1990	OW1	1990	09	17.21181	21	53	13.48	-20	24	15.6	17.5	9 675
1990	OW1	1990	09	17.24549	21	53	12.41	-20	24	12.1		9 675
1990	OW1	1990	09	20.25590	21	51	55.55	-20	17	01.5	18.0	9 675
1990	OW1	1990	09	20.29097	21	51	54.70	-20	16	56.1		9 675
1990	OX1	1990	09	17.21181	21	59	39.80	-22	29	36.9		9 675
1990	OX1	1990	09	17.24549	21	59	38.53	-22	29	39.7		9 675
1990	OX1	1990	09	20.25590	21	57	57.68	-22	33	06.1	17.2	9 675
1990	OX1	1990	09	20.29097	21	57	56.76	-22	33	06.4		9 675
1990	OY1	1990	09	17.21181	22	01	31.42	-22	26	33.0		9 675
1990	OY1	1990	09	17.24549	22	01	30.29	-22	26	33.5		9 675
1990	OY1	1990	09	20.25590	21	59	57.05	-22	26	16.9	17.2	9 675
1990	OY1	1990	09	20.29097	21	59	56.01	-22	26	13.6		9 675
1990	OA2	1990	09	17.21181	21	53	31.38	-20	15	17.6		9 675
1990	OA2	1990	09	17.24549	21	53	29.91	-20	15	03.5		9 675
1990	OA2	1990	09	20.25590	21	51	27.27	-19	54	11.1	18.5	9 675
1990	OA2	1990	09	20.29097	21	51	25.66	-19	53	54.9		9 675
1990	OB2	1990	09	17.21181	22	00	21.24	-16	15	32.5		9 675
1990	OB2	1990	09	17.24549	22	00	19.92	-16	15	16.9		9 675
1990	OB2	1990	09	20.25590	21	58	35.01	-15	51	44.4	18.0	9 675
1990	OB2	1990	09	20.29097	21	58	33.81	-15	51	28.5		9 675
1990	OF2	1990	09	15.24097	20	57	34.81	-20	55	28.3	17.8	9 675
1990	OF2	1990	09	15.27777	20	57	34.62	-20	55	14.8		9 675
1990	OH2	1990	09	14.18924	21	07	04.94	-19	21	19.6	18.2	9 675
1990	OH2	1990	09	14.22760	21	07	04.06	-19	21	18.2		9 675
1990	OH2	1990	09	15.24097	21	06	42.77	-19	20	26.3	17.8	9 675
1990	OH2	1990	09	15.27777	21	06	41.91	-19	20	24.1		9 675
1990	OJ2	1990	09	15.24097	21	01	39.74	-24	44	24.6	17.5	9 675
1990	OJ2	1990	09	15.27777	21	01	38.77	-24	44	23.9		9 675
1990	OK2	1990	09	15.24097	21	12	26.70	-23	34	51.7	17.8	9 675
1990	OK2	1990	09	15.27777	21	12	25.79	-23	34	52.5		9 675
1990	OM2	1990	09	14.18924	21	11	01.97	-20	08	04.6		9 675
1990	OM2	1990	09	14.22760	21	11	01.40	-20	07	49.5		9 675
1990	OM2	1990	09	15.24097	21	10	49.17	-20	00	23.2	17.8	9 675
1990	OM2	1990	09	15.27777	21	10	48.86	-20	00	05.4		9 675
1990	OM2	1990	09	18.17344	21	10	29.56	-19	38	20.1		9 675
1990	OM2	1990	09	18.20694	21	10	29.36	-19	38	05.8		9 675
1990	ON2	1990	09	15.24097	21	08	10.58	-19	24	44.2	17.8	9 675
1990	ON2	1990	09	15.27777	21	08	09.69	-19	24	41.0		9 675
1990	OO2	1990	09	14.18924	21	08	55.51	-16	16	52.1	16.2	9 675
1990	OO2	1990	09	14.22760	21	08	54.21	-16	16	37.8		9 675
1990	OV2	1990	09	14.19948	21	38	40.39	-28	19	58.7	17.0	9 675
1990	OV2	1990	09	14.23663	21	38	39.18	-28	19	57.9		9 675
1990	OF3	1990	09	14.17917	20	54	54.80	-03	36	25.4	17.2	9 675
1990	OF3	1990	09	14.21875	20	54	54.05	-03	36	24.7		9 675
1990	OK3	1990	09	14.18924	21	10	43.76	-18	57	41.0	17.2	9 675
1990	OK3	1990	09	14.22760	21	10	43.37	-18	57	45.0	17.8	9 675
1990	OK3	1990	09	15.24097	21	10	38.41	-18	59	35.6	18.0	9 675
1990	OK3	1990	09	15.27777	21	10	38.12	-18	59	38.8	17.5	9 675
1990	OO3	1990	09	14.18924	21	05	01.94	-16	38	23.8	18.5	9 675
1990	OO3	1990	09	14.22760	21	05	00.88	-16	38	34.1		9 675
1990	OR3	1990	09	14.18924	21	05	27.01	-15	39	41.7	18.0	9 675
1990	OR3	1990	09	14.22760	21	05	26.14	-15	39	37.4		9 675
1990	OR3	1990	09	18.17344	21	04	10.43	-15	33	45.7	18.2	9 675
1990	OR3	1990	09	18.20694	21	04	09.88	-15	33	45.5		9 675

1990	OT3	1990	09	18.17344	21	05	07.50	-13	51	07.5	18.2	9 675
1990	OT3	1990	09	18.20694	21	05	06.66	-13	51	11.1		9 675
1990	OY3	1990	09	14.18924	21	20	53.75	-13	40	25.9	17.2	9 675
1990	OY3	1990	09	14.22760	21	20	52.52	-13	40	22.4		9 675
1990	OY3	1990	09	16.18038	21	20	00.84	-13	37	27.3		9 675
1990	OY3	1990	09	16.22465	21	19	59.65	-13	37	23.2		9 675
1990	OY3	1990	09	18.17344	21	19	15.97	-13	34	07.6		9 675
1990	OY3	1990	09	18.20694	21	19	15.20	-13	34	03.2		9 675
1990	OD4	1990	09	14.17917	21	18	42.93	-04	37	24.5	17.0	9 675
1990	OD4	1990	09	14.21875	21	18	41.89	-04	37	43.6		9 675
1990	OD4	1990	09	15.24983	21	18	17.87	-04	46	15.0	16.8	9 675
1990	OD4	1990	09	15.28663	21	18	17.09	-04	46	29.2		9 675
1990	OE4	1990	09	15.24983	21	37	57.16	-02	10	09.0	16.5	9 675
1990	OE4	1990	09	15.28663	21	37	56.72	-02	10	28.1		9 675
1990	QF	1990	09	15.25885	21	46	08.02	-11	54	54.3	16.5	9 675
1990	QF	1990	09	15.29497	21	46	06.34	-11	54	53.9		9 675
1990	QL	1990	09	14.26441	22	05	51.82	-14	37	51.4	17.2	9 675
1990	QL	1990	09	14.30417	22	05	50.23	-14	38	45.6		9 675
1990	QL	1990	09	20.25590	22	02	22.43	-16	51	40.3		9 675
1990	QM	1990	09	14.26441	22	20	55.81	-10	26	21.2	17.5	9 675
1990	QM	1990	09	14.30417	22	20	54.10	-10	26	34.9		9 675
1990	QO	1990	09	15.25885	21	41	35.47	-11	57	41.4	16.8	9 675
1990	QO	1990	09	15.29497	21	41	34.11	-11	58	30.3		9 675
1990	QR	1990	09	14.26441	22	10	41.19	-07	27	15.4	16.8	9 675
1990	QR	1990	09	14.30417	22	10	39.87	-07	27	44.0		9 675
1990	QT	1990	09	15.25885	21	55	06.92	-15	27	51.0	17.0	9 675
1990	QT	1990	09	15.29497	21	55	05.31	-15	27	45.1		9 675
1990	QW	1990	09	14.26441	22	02	53.04	-14	13	04.1	17.0	9 675
1990	QW	1990	09	14.30417	22	02	51.08	-14	12	57.3		9 675
1990	QW	1990	09	15.25885	22	02	07.26	-14	10	14.9	17.5	9 675
1990	QW	1990	09	15.29497	22	02	05.55	-14	10	09.3		9 675
1990	QU3	1990	09	16.26406	22	26	49.29	-14	03	04.2	17.8	9 675
1990	QU3	1990	09	16.30069	22	26	47.52	-14	03	12.6		9 675
1990	QE4	1990	09	16.26406	22	46	22.04	-13	07	26.5	16.0	9 675
1990	QE4	1990	09	16.30069	22	46	21.05	-13	08	00.5		9 675
1990	QF4	1990	09	16.26406	22	37	34.13	-11	37	33.7	17.2	9 675
1990	QF4	1990	09	16.30069	22	37	32.24	-11	37	50.9	17.5	9 675
1990	QM4	1990	09	16.26406	22	48	17.41	-12	20	12.8	17.5	9 675
1990	QM4	1990	09	16.30069	22	48	15.39	-12	20	27.3		9 675
1990	QQ4	1990	09	16.26406	22	48	36.85	-16	35	42.8	17.5	9 675
1990	QQ4	1990	09	16.30069	22	48	34.88	-16	35	46.5		9 675
1990	QM5	1990	09	16.26406	22	20	13.03	-13	18	39.1	17.8	9 675
1990	QM5	1990	09	16.30069	22	20	11.68	-13	18	47.9		9 675
1990	QN5	1990	09	14.26441	22	20	21.29	-11	41	31.5	17.5	9 675
1990	QN5	1990	09	14.30417	22	20	19.17	-11	41	31.1		9 675
1990	QO5	1990	09	16.26406	22	27	58.92	-12	58	37.2	18.8	9 675
1990	QO5	1990	09	16.30069	22	27	57.11	-12	58	44.9	18.5	9 675
1990	QR5	1990	09	16.26406	22	37	45.73	-11	18	45.1	17.5	9 675
1990	QR5	1990	09	16.30069	22	37	44.25	-11	18	53.8	18.0	9 675
1990	QU5	1990	09	14.26441	22	18	51.76	-07	53	01.1	16.8	9 675
1990	QU5	1990	09	14.30417	22	18	50.25	-07	53	15.1		9 675
1990	QV5	1990	09	14.26441	22	23	36.68	-08	56	36.3	17.2	9 675
1990	QV5	1990	09	14.30417	22	23	34.84	-08	56	54.0		9 675
1990	QZ5	1990	09	16.26406	22	33	24.62	-10	19	23.1	17.5	9 675
1990	QZ5	1990	09	16.30069	22	33	23.12	-10	19	43.0		9 675
1990	QA6	1990	09	16.26406	22	30	13.45	-10	19	02.7	17.2	9 675
1990	QA6	1990	09	16.30069	22	30	11.40	-10	19	03.9		9 675
1990	QY7	1990	09	14.26441	22	21	54.87	-08	53	03.9	17.0	9 675
1990	QY7	1990	09	14.30417	22	21	52.61	-08	53	13.0		9 675

1990	QA8	1990	09	16.26406	22	31	30.24	-11	16	47.7		9 675
1990	QA8	1990	09	16.30069	22	31	28.50	-11	17	01.6	18.2	9 675
1990	QD8	1990	09	16.26406	22	33	31.17	-11	08	03.4	18.2	9 675
1990	QD8	1990	09	16.30069	22	33	29.83	-11	08	15.2		9 675
1990	QX8	1990	09	16.26406	22	34	39.29	-11	01	42.8	18.0	9 675
1990	QX8	1990	09	16.30069	22	34	37.61	-11	01	51.3		9 675
1990	QA9	1990	09	16.26406	22	40	19.86	-12	29	43.1	17.0	9 675
1990	QA9	1990	09	16.30069	22	40	18.36	-12	29	49.9		9 675
1990	QP10*	1990	08	26.36111	22	54	37.08	-12	13	46.0	16.2	9 675
1990	QP10	1990	08	26.39948	22	54	35.21	-12	13	51.9		9 675
1990	QP10	1990	09	16.26406	22	38	17.58	-13	01	08.9	16.8	9 675
1990	QP10	1990	09	16.30069	22	38	15.92	-13	01	11.9		9 675
1990	QQ10*	1990	08	26.36111	22	57	56.13	-12	41	05.0	17.0	9 675
1990	QQ10	1990	08	26.39948	22	57	54.60	-12	41	21.7		9 675
1990	QQ10	1990	09	16.26406	22	43	52.45	-15	02	26.5	17.5	9 675
1990	QQ10	1990	09	16.30069	22	43	50.98	-15	02	38.9		9 675
1990	QR10*	1990	08	26.36111	23	01	21.61	-11	13	21.3	17.2	9 675
1990	QR10	1990	08	26.39948	23	01	19.56	-11	13	39.8		9 675
1990	QR10	1990	09	16.26406	22	43	03.07	-13	47	57.2	17.2	9 675
1990	QR10	1990	09	16.30069	22	43	01.18	-13	48	10.1		9 675
1990	QS10*	1990	08	26.36111	23	05	06.99	-12	36	32.6	17.5	9 675
1990	QS10	1990	08	26.39948	23	05	05.19	-12	36	42.3		9 675
1990	QS10	1990	09	16.26406	22	48	44.32	-13	56	11.0	18.0	9 675
1990	QS10	1990	09	16.30069	22	48	42.56	-13	56	17.4	18.5	9 675
1990	QT10*	1990	08	26.36111	23	05	20.79	-14	04	31.0	17.5	9 675
1990	QT10	1990	08	26.39948	23	05	18.80	-14	04	54.2		9 675
1990	QT10	1990	09	16.26406	22	47	28.07	-17	03	29.5	18.0	9 675
1990	QT10	1990	09	16.30069	22	47	26.14	-17	03	45.1		9 675
1990	QU10*	1990	08	27.36354	22	30	19.89	-12	47	52.0	16.8	9 675
1990	QU10	1990	08	27.39615	22	30	18.10	-12	48	01.2		9 675
1990	QU10	1990	09	14.26441	22	15	12.82	-13	56	55.9	16.8	9 675
1990	QU10	1990	09	14.30417	22	15	10.97	-13	57	03.2		9 675
1990	QV10*	1990	08	27.36354	22	31	36.57	-13	02	54.9	17.0	9 675
1990	QV10	1990	08	27.39615	22	31	35.65	-13	02	53.3		9 675
1990	QV10	1990	09	16.26406	22	24	49.96	-12	31	49.1	17.5	9 675
1990	QW10*	1990	08	27.36354	22	32	32.89	-14	21	07.5	17.0	9 675
1990	QW10	1990	08	27.39615	22	32	30.78	-14	21	12.3		9 675
1990	QW10	1990	09	20.25590	22	10	58.60	-14	42	23.4		9 675
1990	QW10	1990	09	20.29097	22	10	57.20	-14	42	20.4		9 675
1990	QX10*	1990	08	27.36354	22	41	37.11	-13	11	26.1	17.0	9 675
1990	QX10	1990	08	27.39615	22	41	35.41	-13	11	34.7		9 675
1990	QX10	1990	09	16.26406	22	24	50.42	-14	27	32.7	17.5	9 675
1990	QX10	1990	09	16.30069	22	24	48.70	-14	27	39.2		9 675
1990	RV5	1990	09	14.26441	22	06	30.33	-12	29	36.1	17.5	9 675
1990	RV5	1990	09	14.30417	22	06	28.42	-12	29	37.6		9 675
1990	RW5	1990	09	14.26441	22	09	41.12	-11	55	24.3	17.8	9 675
1990	RW5	1990	09	14.30417	22	09	39.53	-11	55	37.3	18.2	9 675
1990	RY5	1990	09	14.26441	22	09	39.73	-13	12	23.1	19.0	9 675
1990	RY5	1990	09	14.30417	22	09	37.69	-13	12	29.9	18.5	9 675
1990	RC6	1990	09	14.26441	22	13	25.19	-13	10	03.8	18.0	9 675
1990	RC6	1990	09	14.30417	22	13	23.51	-13	10	25.3		9 675
1990	RD6	1990	09	14.26441	22	13	35.58	-12	22	04.7	17.5	9 675
1990	RD6	1990	09	14.30417	22	13	33.41	-12	21	57.8		9 675
1990	RE6	1990	09	14.26441	22	11	33.30	-11	00	29.6	16.8	9 675
1990	RE6	1990	09	14.30417	22	11	31.48	-11	00	44.0		9 675
1990	RF6	1990	09	14.26441	22	12	38.00	-10	07	34.5	18.5	9 675
1990	RF6	1990	09	14.30417	22	12	36.42	-10	07	48.1		9 675
1990	RG6	1990	09	14.26441	22	13	16.42	-10	50	07.1	18.2	9 675
1990	RG6	1990	09	14.30417	22	13	14.84	-10	50	22.6		9 675

1990	RD9		1990	09	15.24983	21	43	36.60	-00	04	18.3	17.5	9 675
1990	RD9		1990	09	15.28663	21	43	34.93	-00	04	27.8		9 675
1990	RS9	*	1990	09	14.18924	21	02	01.73	-15	23	14.0	17.0	9 675
1990	RS9		1990	09	14.22760	21	02	00.91	-15	23	26.6		9 675
1990	RS9		1990	09	18.17344	21	01	07.08	-15	44	29.1	18.0	9 675
1990	RS9		1990	09	18.20694	21	01	06.69	-15	44	42.0		9 675
1990	RT9	*	1990	09	14.18924	21	11	52.70	-13	19	15.5	17.2	9 675
1990	RT9		1990	09	14.22760	21	11	52.26	-13	19	28.2		9 675
1990	RT9		1990	09	18.17344	21	11	33.92	-13	41	38.8	18.2	9 675
1990	RT9		1990	09	18.20694	21	11	32.92	-13	41	31.6		9 675
1990	RU9	*	1990	09	14.18924	21	22	56.74	-16	18	34.8	17.5	9 675
1990	RU9		1990	09	14.22760	21	22	56.14	-16	18	52.7		9 675
1990	RU9		1990	09	18.17344	21	22	12.79	-16	48	14.2	18.2	9 675
1990	RU9		1990	09	18.20694	21	22	12.46	-16	48	29.0		9 675
1990	RV9	*	1990	09	14.18924	21	26	06.34	-17	28	35.3	17.5	9 675
1990	RV9		1990	09	14.22760	21	26	05.07	-17	28	45.4		9 675
1990	RV9		1990	09	16.18906	21	25	07.26	-17	36	18.1	18.2	9 675
1990	RV9		1990	09	16.23316	21	25	05.99	-17	36	27.3		9 675
1990	RV9		1990	09	18.17344	21	24	15.04	-17	43	13.9	18.2	9 675
1990	RV9		1990	09	18.20694	21	24	14.16	-17	43	21.2		9 675
1990	RW9	*	1990	09	14.18924	21	27	07.14	-15	30	14.5		9 675
1990	RW9		1990	09	14.22760	21	27	06.00	-15	30	22.1		9 675
1990	RW9		1990	09	18.17344	21	25	23.21	-15	41	21.4	18.2	9 675
1990	RW9		1990	09	18.20694	21	25	22.38	-15	41	26.8		9 675
1990	RX9	*	1990	09	14.18924	21	29	13.38	-17	32	38.3	18.2	9 675
1990	RX9		1990	09	14.22760	21	29	12.11	-17	32	41.6		9 675
1990	RX9		1990	09	16.18906	21	28	10.11	-17	35	52.7		9 675
1990	RX9		1990	09	16.23316	21	28	08.64	-17	35	55.3		9 675
1990	RX9		1990	09	18.17344	21	27	11.90	-17	38	24.6	18.2	9 675
1990	RX9		1990	09	18.20694	21	27	11.05	-17	38	36.1		9 675
1990	RY9	*	1990	09	14.19948	21	33	54.07	-23	00	05.7	17.8	9 675
1990	RY9		1990	09	14.23663	21	33	53.04	-22	59	55.0	18.2	9 675
1990	RY9		1990	09	16.18906	21	33	10.86	-22	50	47.0	18.5	9 675
1990	RY9		1990	09	16.23316	21	33	09.85	-22	50	33.5		9 675
1990	RA10	*	1990	09	14.19948	21	43	21.46	-23	07	02.9	17.5	9 675
1990	RA10		1990	09	14.23663	21	43	20.16	-23	07	00.3	17.8	9 675
1990	RA10		1990	09	16.18906	21	42	21.64	-23	04	15.1		9 675
1990	RA10		1990	09	16.23316	21	42	20.33	-23	04	11.5		9 675
1990	RB10	*	1990	09	14.25503	21	42	19.40	+00	02	38.4	18.5	9 675
1990	RB10		1990	09	14.29497	21	42	18.11	+00	02	21.2		9 675
1990	RB10		1990	09	15.24983	21	41	49.52	-00	04	16.2	18.2	9 675
1990	RB10		1990	09	15.28663	21	41	48.24	-00	04	33.7		9 675
1990	RC10	*	1990	09	14.26441	21	56	08.38	-12	42	18.1	17.8	9 675
1990	RC10		1990	09	14.30417	21	56	06.65	-12	42	33.1		9 675
1990	RC10		1990	09	15.25885	21	55	26.28	-12	48	37.9	17.8	9 675
1990	RC10		1990	09	15.29497	21	55	24.69	-12	48	52.0		9 675
1990	RD10	*	1990	09	14.26441	21	56	30.68	-10	24	21.3	17.0	9 675
1990	RD10		1990	09	14.30417	21	56	29.46	-10	24	39.2		9 675
1990	RD10		1990	09	15.25885	21	56	05.25	-10	31	35.1	17.8	9 675
1990	RD10		1990	09	15.29497	21	56	04.22	-10	31	51.6		9 675
1990	RE10	*	1990	09	14.26441	21	56	49.25	-10	12	31.4	17.5	9 675
1990	RE10		1990	09	14.30417	21	56	47.33	-10	12	30.7		9 675
1990	RE10		1990	09	15.25885	21	56	06.20	-10	13	49.0	18.5	9 675
1990	RE10		1990	09	15.29497	21	56	04.55	-10	13	52.3		9 675
1990	RF10	*	1990	09	14.26441	21	57	37.06	-10	55	02.0	17.8	9 675
1990	RF10		1990	09	14.30417	21	57	35.62	-10	55	08.2		9 675
1990	RF10		1990	09	15.25885	21	57	04.53	-10	57	45.0	18.0	9 675
1990	RF10		1990	09	15.29497	21	57	03.28	-10	57	50.8		9 675
1990	RG10	*	1990	09	14.26441	22	00	42.14	-12	56	14.7	17.2	9 675

1990	RG10	1990	09	14.30417	22	00	40.82	-12	56	24.0		9 675
1990	RG10	1990	09	15.25885	22	00	09.95	-12	59	41.6	17.8	9 675
1990	RG10	1990	09	15.29497	22	00	08.72	-12	59	49.4		9 675
1990	RH10*	1990	09	14.26441	22	02	00.72	-12	43	36.2	17.5	9 675
1990	RH10	1990	09	14.30417	22	01	58.73	-12	43	33.9		9 675
1990	RH10	1990	09	15.25885	22	01	13.31	-12	42	38.7	18.2	9 675
1990	RH10	1990	09	15.29497	22	01	11.57	-12	42	36.1		9 675
1990	RJ10*	1990	09	14.26441	22	04	49.64	-12	13	04.3	16.8	9 675
1990	RJ10	1990	09	14.30417	22	04	48.15	-12	13	08.8		9 675
1990	RJ10	1990	09	15.25885	22	04	15.34	-12	14	35.5	16.8	9 675
1990	RJ10	1990	09	15.29497	22	04	14.04	-12	14	38.3		9 675
1990	RK10*	1990	09	14.26441	22	05	47.66	-11	24	47.1	18.8	9 675
1990	RK10	1990	09	14.30417	22	05	46.06	-11	25	02.3		9 675
1990	RL10	1990	09	14.18924	21	16	34.06	-18	28	43.3	17.5	9 675
1990	RL10	1990	09	14.22760	21	16	32.89	-18	28	40.8	18.0	9 675
1990	RL10*	1990	09	15.24097	21	16	06.84	-18	27	38.3	17.5	9 675
1990	RL10	1990	09	15.27777	21	16	05.86	-18	27	35.1		9 675
1990	RL10	1990	09	18.17344	21	15	04.70	-18	23	32.7	18.2	9 675
1990	RL10	1990	09	18.20694	21	15	04.08	-18	23	31.2		9 675
1990	RM10*	1990	09	15.25885	21	57	06.55	-15	57	27.9	17.2	9 675
1990	RM10	1990	09	15.29497	21	57	05.36	-15	57	44.3		9 675
1990	RM10	1990	09	17.21181	21	56	09.29	-16	12	15.4	17.2	9 675
1990	RM10	1990	09	17.24549	21	56	08.34	-16	12	30.0		9 675
1990	SU4	1990	08	26.36111	23	00	32.02	-14	20	29.6		9 675
1990	SU4	1990	08	26.39948	23	00	29.93	-14	20	39.0		9 675
1990	SU4	1990	09	16.26406	22	41	55.67	-15	16	34.0	16.8	9 675
1990	SU4	1990	09	16.30069	22	41	53.71	-15	16	35.0		9 675
1990	SW14	1990	09	20.31778	22	59	50.42	+07	48	14.1	18.2	9 675
1990	SW14	1990	09	20.34896	22	59	49.00	+07	48	05.6		9 675
1990	SH16	1990	09	14.26441	22	03	58.00	-08	46	44.9	17.5	9 675
1990	SH16	1990	09	14.30417	22	03	55.82	-08	46	39.2		9 675
1990	SL16	1990	09	15.24983	21	42	26.58	-02	27	18.8	18.0	9 675
1990	SL16	1990	09	15.28663	21	42	25.23	-02	27	32.2		9 675
1990	SL16*	1990	09	17.16302	21	41	25.96	-02	39	05.0	18.0	9 675
1990	SL16	1990	09	17.19462	21	41	25.05	-02	39	21.6		9 675
1990	SM16	1990	09	16.18906	21	52	39.79	-21	19	23.7	17.0	9 675
1990	SM16	1990	09	16.23316	21	52	38.28	-21	19	33.2		9 675
1990	SM16*	1990	09	17.21181	21	52	07.78	-21	22	48.7	17.0	9 675
1990	SM16	1990	09	17.24549	21	52	06.73	-21	22	55.2		9 675
1990	SM16	1990	09	20.25590	21	51	01.89	-21	28	43.8	17.8	9 675
1990	SM16	1990	09	20.29097	21	51	00.71	-21	28	50.1		9 675
1990	SN16	1990	09	16.18906	21	53	35.99	-19	31	47.7		9 675
1990	SN16	1990	09	16.23316	21	53	34.29	-19	31	44.0		9 675
1990	SN16*	1990	09	17.21181	21	53	00.88	-19	30	07.7	17.5	9 675
1990	SN16	1990	09	17.24549	21	52	59.71	-19	30	03.2		9 675
1990	SO16	1990	09	16.18906	21	55	52.94	-19	26	56.9	18.2	9 675
1990	SO16	1990	09	16.23316	21	55	51.92	-19	26	51.7		9 675
1990	SO16*	1990	09	17.21181	21	55	33.22	-19	24	47.8	17.5	9 675
1990	SO16	1990	09	17.24549	21	55	32.51	-19	24	43.1		9 675
1990	SO16	1990	09	20.25590	21	54	47.33	-19	16	56.5	18.2	9 675
1990	SO16	1990	09	20.29097	21	54	46.82	-19	16	49.9		9 675
1990	SP16*	1990	09	17.21181	21	55	36.13	-16	16	30.4	17.8	9 675
1990	SP16	1990	09	17.24549	21	55	35.01	-16	16	35.6		9 675
1990	SP16	1990	09	20.25590	21	54	02.02	-16	24	02.2		9 675
1990	SP16	1990	09	20.29097	21	54	00.98	-16	24	07.6		9 675
1990	SQ16*	1990	09	17.21181	22	03	33.41	-21	01	47.9	17.0	9 675
1990	SQ16	1990	09	17.24549	22	03	32.00	-21	01	53.6		9 675
1990	SQ16	1990	09	20.25590	22	01	37.44	-21	09	11.3	17.2	9 675
1990	SQ16	1990	09	20.29097	22	01	36.08	-21	09	15.4		9 675

1990	SR16*	1990	09	17.21181	22	07	30.64	-15	26	01.2		17.8	9 675
1990	SR16	1990	09	17.24549	22	07	29.28	-15	26	10.8			9 675
1990	SR16	1990	09	20.25590	22	05	34.93	-15	39	36.4		18.5	9 675
1990	SR16	1990	09	20.29097	22	05	33.61	-15	39	43.4			9 675
1990	SS16*	1990	09	17.21181	22	08	30.16	-21	43	44.4		17.5	9 675
1990	SS16	1990	09	17.24549	22	08	29.18	-21	43	48.7			9 675
1990	SS16	1990	09	20.25590	22	07	07.46	-21	50	02.2			9 675
1990	SS16	1990	09	20.29097	22	07	07.80	-21	50	14.5			9 675
1990	ST16*	1990	09	17.21181	22	10	04.24	-19	58	36.9		17.5	9 675
1990	ST16	1990	09	17.24549	22	10	03.17	-19	58	42.5			9 675
1990	ST16	1990	09	20.25590	22	08	29.19	-20	05	30.6		18.0	9 675
1990	ST16	1990	09	20.29097	22	08	28.12	-20	05	34.7			9 675
1990	SU16*	1990	09	17.21181	22	12	52.81	-19	47	18.4		17.5	9 675
1990	SU16	1990	09	17.24549	22	12	51.58	-19	47	24.4			9 675
1990	SU16	1990	09	20.25590	22	11	08.36	-19	56	21.1		18.0	9 675
1990	SU16	1990	09	20.29097	22	11	07.17	-19	56	26.2			9 675
1990	SV16*	1990	09	17.21181	22	17	31.70	-19	55	26.2		17.8	9 675
1990	SV16	1990	09	17.24549	22	17	30.74	-19	55	37.8			9 675
1990	SV16	1990	09	20.25590	22	16	16.08	-20	12	19.4		18.2	9 675
1990	SV16	1990	09	20.29097	22	16	15.13	-20	12	24.9			9 675
1990	SW16*	1990	09	17.21181	22	17	44.23	-17	40	48.2		18.0	9 675
1990	SW16	1990	09	17.24549	22	17	42.77	-17	40	52.2			9 675
1990	SW16	1990	09	20.25590	22	15	46.32	-17	43	50.3		17.8	9 675
1990	SW16	1990	09	20.29097	22	15	44.95	-17	43	51.6			9 675
1990	SX16*	1990	09	17.21181	22	18	00.80	-19	56	21.1		17.5	9 675
1990	SX16	1990	09	17.24549	22	17	59.24	-19	56	16.8			9 675
1990	SX16	1990	09	20.25590	22	15	50.12	-19	51	14.5		18.0	9 675
1990	SX16	1990	09	20.29097	22	15	48.64	-19	51	10.4			9 675
1990	TU10	1985	08	23.30277	21	42	39.91	-01	02	19.8			2 675
1990	TU10	1985	08	23.35486	21	42	37.58	-01	02	33.3			2 675
1990	YB	1989	09	30.41579	02	16	04.18	+09	27	43.9			9 675
1990	YB	1989	09	30.47465	02	16	01.98	+09	27	28.6			9 675
1990	YB	1989	11	03.27278	01	50	24.72	+06	51	24.7		17.0	9 675
1990	YB	1989	11	03.30815	01	50	23.04	+06	51	16.2			9 675
1990	YB	1989	11	04.27013	01	49	38.71	+06	47	20.8		17.0	9 675
1990	YB	1989	11	04.30364	01	49	37.17	+06	47	13.2			9 675
1991	AR1	1990	12	17.38941	05	41	36.15	+24	29	36.3		16	2 675
1991	AR1	1990	12	17.40521	05	41	35.23	+24	29	36.1			2 675
1991	AR1	1990	12	18.32413	05	40	44.01	+24	29	23.1			2 675
1991	AR1	1990	12	18.34549	05	40	42.78	+24	29	23.1			2 675
1991	AD2	1991	01	22.31666	09	08	11.48	+15	09	55.7			9 675
1991	AD2	1991	01	22.34895	09	08	09.43	+15	10	07.9			9 675
1991	AW2	1991	01	22.31666	09	00	49.06	+16	30	51.0			9 675
1991	AW2	1991	01	22.34895	09	00	47.64	+16	31	10.9			9 675
1991	BO	1989	09	30.41579	02	19	18.95	+15	24	59.6			9 675
1991	BO	1989	09	30.47465	02	19	16.85	+15	24	47.1			9 675
1991	BO	1989	11	03.27278	01	53	11.64	+12	38	37.9		17.5	9 675
1991	BO	1989	11	03.30815	01	53	09.92	+12	38	26.1			9 675
1991	BO	1989	11	04.27013	01	52	24.19	+12	33	13.3		17.0	9 675
1991	BO	1989	11	04.30364	01	52	22.54	+12	33	01.2			9 675
1991	BB3	1991	01	22.31666	09	07	43.04	+15	56	33.2			9 675
1991	BB3	1991	01	22.34895	09	07	41.19	+15	56	39.1			9 675
1991	CA	1989	09	30.41579	02	02	55.59	+12	16	01.0			9 675
1991	CA	1989	09	30.47465	02	02	52.84	+12	15	46.0			9 675
1991	CA	1989	11	03.27278	01	31	41.06	+09	12	30.4		17.2	9 675
1991	CA	1989	11	03.30815	01	31	39.17	+09	12	18.7			9 675
1991	CA	1989	11	24.19701	01	17	18.76	+07	44	12.7			9 675
1991	CB	1986	02	05.27909	07	42	34.46	+18	36	24.4			9 675
1991	CB	1986	02	05.30260	07	42	33.41	+18	36	37.3			9 675

1991	CB	1986	02	06.23576	07	41	53.63	+18	45	38.5		9 675
1991	CB	1986	02	06.28385	07	41	51.52	+18	46	05.5		9 675
1991	CB	1986	02	07.22256	07	41	12.94	+18	55	03.4		9 675
1991	CB	1986	02	07.25711	07	41	11.36	+18	55	24.2		9 675
1991	CB	1991	01	22.31666	09	22	49.80	+17	24	01.5		9 675
1991	CB	1991	01	22.34895	09	22	48.28	+17	24	23.4		9 675
1991	FB	1991	03	12.41493	13	43	33.29	+03	47	59.8	18.5	9 675
1991	FB	1991	03	12.44779	13	43	37.51	+03	47	05.6		9 675
1991	FD	1991	02	16.45000	13	05	22.06	-02	00	49.8	16.0	2 675
1991	FD	1991	02	16.47188	13	05	22.53	-02	00	24.5		2 675
1991	GA1	1991	06	14.20990	12	53	26.55	+12	48	06.0	17	2 675
1991	GA1	1991	06	14.23125	12	53	27.58	+12	48	03.2		2 675
1991	GA1	1991	06	16.23715	12	55	10.06	+12	45	26.9		2 675
1991	GA1	1991	06	16.25990	12	55	11.28	+12	45	25.1		2 675
1991	GB1	1989	10	04.33767	00	40	44.52	-07	59	57.8		2 675
1991	GB1	1989	10	04.36528	00	40	41.63	-07	59	49.2		2 675
1991	GB1	1989	10	06.36753	00	37	27.75	-07	47	50.8		2 675
1991	GB1	1989	10	27.17101	00	08	41.36	-05	00	37.1	16.0	2 675
1991	GB1	1989	10	27.19427	00	08	40.09	-05	00	25.5		2 675
1991	GB1	1989	10	29.11806	00	06	42.90	-04	41	38.5		2 675
1991	GB1	1989	10	29.14757	00	06	41.11	-04	41	18.9		2 675
1991	GB1	1991	06	15.21233	12	23	23.45	-13	22	36.3	16	2 675
1991	GB1	1991	06	15.23490	12	23	24.29	-13	22	51.7		2 675
1991	GP1	1991	06	14.20990	13	09	02.52	+13	27	54.3	16	2 675
1991	GP1	1991	06	14.23125	13	09	03.27	+13	27	41.2		2 675
1991	GP1	1991	06	16.23715	13	10	13.82	+13	06	34.8		2 675
1991	GP1	1991	06	16.25990	13	10	14.64	+13	06	19.7		2 675
1991	GW1	1991	06	14.24323	14	36	58.97	+01	12	49.8	16	2 675
1991	GW1	1991	06	14.26615	14	36	59.08	+01	13	02.7		2 675
1991	GW1	1991	06	17.25885	14	37	28.93	+01	38	01.6		2 675
1991	GW1	1991	06	17.28507	14	37	29.21	+01	38	13.2		2 675
1991	GX1	1991	06	06.19965	12	59	54.08	-18	14	01.5	18.7	3 675
1991	GX1	1991	06	06.23767	12	59	53.86	-18	13	56.1		3 675
1991	GX1	1991	06	07.20503	12	59	49.49	-18	11	36.0		3 675
1991	GX1	1991	06	07.23490	12	59	49.30	-18	11	32.6		3 675
1991	GE2	1991	07	08.22899	14	47	29.62	-04	04	40.8	16.5	2 675
1991	GE2	1991	07	08.24583	14	47	29.97	-04	04	54.6		2 675
1991	GE2	1991	07	10.19575	14	48	14.15	-04	31	28.4		2 675
1991	GE2	1991	07	10.22274	14	48	14.74	-04	31	48.5		2 675
1991	GA10*	1991	04	14.44965	15	10	46.52	+09	43	58.0	16.5	3 675
1991	GA10	1991	04	15.41128	15	10	12.48	+09	49	31.4		3 675
1991	GA10	1991	04	16.45017	15	09	34.11	+09	55	19.5		3 675
1991	HN	1991	06	06.21094	13	09	42.48	+01	46	25.0	19.0	3 675
1991	HN	1991	06	06.24844	13	09	42.17	+01	46	21.1		3 675
1991	HN	1991	06	07.21545	13	09	36.17	+01	45	07.6		3 675
1991	HN	1991	06	07.24497	13	09	35.90	+01	45	04.4		3 675
1991	HO	1991	06	14.20990	12	51	19.67	+13	00	54.3	16	2 675
1991	HO	1991	06	14.23125	12	51	20.23	+13	00	36.3		2 675
1991	HO	1991	06	16.23715	12	52	10.50	+12	30	45.2		2 675
1991	HO	1991	06	16.25990	12	52	11.11	+12	30	24.5		2 675
1991	JX	1991	06	13.42379	19	29	27.86	+47	00	59.0	15	2 675
1991	JX	1991	06	13.44341	19	30	21.70	+47	01	42.6		2 675
1991	JX	1991	06	15.42032	20	56	28.26	+46	06	17.0		2 675
1991	JX	1991	06	15.44792	20	57	27.94	+46	04	05.7		2 675
1991	JA1	1991	06	15.25330	14	51	59.07	-00	56	22.2	17	2 675
1991	JA1	1991	06	15.27760	14	51	58.39	-00	56	10.8		2 675
1991	JD1	1991	06	14.23785	14	28	23.28	-19	24	02.3	16	2 675
1991	JD1	1991	06	14.25955	14	28	22.98	-19	23	51.2		2 675
1991	JD1	1991	06	16.26632	14	28	10.87	-19	08	41.1		2 675

1991	JD1		1991	06	16.29063	14	28	10.70	-19	08	29.4		2 675
1991	JF1		1991	06	13.20833	12	22	54.43	-07	16	08.8	16	2 675
1991	JF1		1991	06	13.23194	12	22	55.49	-07	15	55.9		2 675
1991	JF1		1991	06	15.21806	12	24	30.49	-06	59	07.0		2 675
1991	JF1		1991	06	15.24115	12	24	31.63	-06	58	56.9		2 675
1991	JG1		1991	06	15.22917	14	53	36.79	+36	52	24.7		2 675
1991	JG1		1991	06	15.26736	14	53	38.81	+36	52	48.7		2 675
1991	JN1		1991	06	16.27170	14	54	30.17	-08	00	30.9	16	2 675
1991	JN1		1991	06	16.29705	14	54	29.66	-08	00	33.4		2 675
1991	JT1		1991	06	07.27135	15	00	55.34	+06	11	25.4	17.5	9 675
1991	JT1		1991	06	07.31024	15	00	54.33	+06	11	27.0		9 675
1991	JT1		1991	06	09.26111	15	00	05.15	+06	12	33.0		9 675
1991	JT1		1991	06	09.29583	15	00	04.29	+06	12	33.2		9 675
1991	JY1		1991	06	17.31910	16	11	00.82	+06	19	46.2	16	2 675
1991	JY1		1991	06	17.34028	16	10	59.68	+06	19	55.0		2 675
1991	JZ1		1991	06	13.25851	15	02	28.42	-01	22	55.1	16	2 675
1991	JZ1		1991	06	13.28576	15	02	27.74	-01	22	59.9		2 675
1991	JZ1		1991	06	15.25990	15	01	36.53	-01	28	23.9		2 675
1991	JZ1		1991	06	15.28333	15	01	35.88	-01	28	27.2		2 675
1991	KC		1991	06	06.25800	13	52	28.05	+28	59	13.5	17.9	3 675
1991	KC		1991	06	06.28681	13	52	27.62	+28	59	05.3		3 675
1991	KC		1991	06	08.23976	13	52	01.89	+28	49	24.4		3 675
1991	KC		1991	06	11.22691	13	51	28.00	+28	33	45.4		3 675
1991	LE	*	1991	06	07.27135	15	07	37.05	+07	00	52.6	18.0	9 675
1991	LE		1991	06	07.31302	15	07	35.68	+07	00	40.3		9 675
1991	LE		1991	06	09.26111	15	06	34.23	+06	49	55.3		9 675
1991	LE		1991	06	09.29583	15	06	33.07	+06	49	44.1		9 675
1991	LF	*	1991	06	07.27135	15	09	25.29	+03	56	01.7	17.8	9 675
1991	LF		1991	06	07.31302	15	09	23.64	+03	55	52.1		9 675
1991	LF		1991	06	09.26111	15	08	15.07	+03	48	48.1		9 675
1991	LF		1991	06	09.29583	15	08	14.02	+03	48	40.8		9 675
1991	LG	*	1991	06	07.39271	17	47	31.58	+09	44	08.6	17.2	3 675
1991	LG		1991	06	07.43247	17	47	28.82	+09	44	52.8		3 675
1991	LG		1991	06	09.38958	17	45	20.55	+10	19	48.2		3 675
1991	LG		1991	06	09.44045	17	45	16.97	+10	20	41.8		3 675
1991	LJ	*	1991	06	14.23785	14	19	26.51	-17	52	03.0	16	2 675
1991	LJ		1991	06	14.25955	14	19	26.56	-17	51	37.5		2 675
1991	LJ		1991	06	16.26632	14	19	53.22	-17	13	04.2		2 675
1991	LJ		1991	06	16.29063	14	19	53.53	-17	12	37.6		2 675
1991	LK	*	1991	06	14.24323	14	34	59.98	+02	16	59.2	16	2 675
1991	LK		1991	06	14.26615	14	34	59.44	+02	16	45.2		2 675
1991	LK		1991	06	17.25885	14	34	00.52	+01	45	37.6		2 675
1991	LK		1991	06	17.28507	14	34	00.04	+01	45	20.2		2 675
1991	LL	*	1991	06	15.40295	17	29	28.42	-16	42	30.4	15	2 675
1991	LL		1991	06	15.43125	17	29	26.55	-16	42	46.4		2 675
1991	LL		1991	06	17.39983	17	27	26.11	-17	01	30.6		2 675
1991	LL		1991	06	17.42361	17	27	24.63	-17	01	45.5		2 675
1991	LM	*	1991	06	13.36632	17	22	09.07	-12	05	48.7	15	2 675
1991	LM		1991	06	13.38976	17	22	07.67	-12	05	56.8		2 675
1991	LM		1991	06	15.36563	17	20	06.31	-12	19	06.6		2 675
1991	LM		1991	06	15.39063	17	20	04.67	-12	19	16.3		2 675
1991	LM		1991	07	07.34323	16	59	58.46	-15	09	18.7	15	2 675
1991	LM		1991	07	07.36736	16	59	57.43	-15	09	31.3		2 675
1991	LM		1991	07	09.29201	16	58	37.19	-15	25	45.7		2 675
1991	LM		1991	07	09.31372	16	58	36.15	-15	25	56.3		2 675
1991	LN	*	1991	06	13.36632	17	22	45.38	-07	16	01.6	16	2 675
1991	LN		1991	06	13.38976	17	22	44.26	-07	16	05.8		2 675
1991	LN		1991	06	14.38785	17	21	56.90	-07	20	04.4	15	2 675
1991	LN		1991	06	14.41007	17	21	55.70	-07	20	09.9		2 675

1991	LN		1991	06	15.36563	17	21	10.53	-07	24	10.5	2 675
1991	LN		1991	06	15.39063	17	21	09.46	-07	24	17.6	2 675
1991	LN		1991	06	16.42066	17	20	20.80	-07	28	49.8	2 675
1991	LN		1991	06	16.44757	17	20	19.42	-07	28	56.3	2 675
1991	LO	*	1991	06	13.31632	16	39	13.31	-13	59	54.5	15 2 675
1991	LO		1991	06	13.34115	16	39	11.14	-14	00	13.2	2 675
1991	LO		1991	06	15.34688	16	36	13.31	-14	25	53.3	2 675
1991	LO		1991	06	15.37188	16	36	11.04	-14	26	13.0	2 675
1991	LP	*	1991	06	13.31632	16	54	05.68	-16	30	26.9	16 2 675
1991	LP		1991	06	13.34115	16	54	04.12	-16	30	33.7	2 675
1991	LP		1991	06	15.34688	16	51	55.54	-16	39	59.1	2 675
1991	LP		1991	06	15.37188	16	51	53.90	-16	40	05.6	2 675
1991	LP		1991	07	08.28368	16	31	10.24	-18	39	38.1	16.5 2 675
1991	LP		1991	07	08.30816	16	31	09.31	-18	39	45.6	2 675
1991	LP		1991	07	10.24201	16	29	55.25	-18	50	39.5	2 675
1991	LP		1991	07	10.26701	16	29	54.71	-18	50	50.0	2 675
1991	LQ	*	1991	06	13.31632	16	56	34.44	-14	48	33.8	16 2 675
1991	LQ		1991	06	13.34115	16	56	32.78	-14	48	43.2	2 675
1991	LQ		1991	06	15.34688	16	54	27.62	-15	02	55.1	2 675
1991	LQ		1991	06	15.37188	16	54	26.03	-15	03	06.1	2 675
1991	LQ		1991	07	08.28368	16	35	03.17	-18	02	04.1	16.5 2 675
1991	LQ		1991	07	08.30816	16	35	02.24	-18	02	16.1	2 675
1991	LQ		1991	07	10.24201	16	33	59.85	-18	18	10.4	2 675
1991	LQ		1991	07	10.26701	16	33	59.20	-18	18	22.1	2 675
1991	LR	*	1991	06	07.33681	16	46	49.27	-01	31	15.6	17.2 3 675
1991	LR		1991	06	07.36927	16	46	47.21	-01	31	27.4	3 675
1991	LR		1991	06	11.39618	16	42	40.87	-01	58	46.0	17.2 3 675
1991	LR		1991	06	11.43194	16	42	38.50	-01	59	02.5	3 675
1991	LR		1991	06	14.30000	16	39	46.00	-02	21	43.1	16 2 675
1991	LR		1991	06	14.32170	16	39	44.81	-02	21	53.0	2 675
1991	LR		1991	06	16.34063	16	37	45.79	-02	39	24.5	2 675
1991	LR		1991	06	16.36181	16	37	44.52	-02	39	35.9	2 675
1991	LR		1991	07	10.20885	16	21	14.76	-07	22	53.5	16.0 2 675
1991	LR		1991	07	10.23576	16	21	14.22	-07	23	15.5	2 675
1991	LR		1991	07	11.22483	16	20	55.97	-07	37	10.5	2 675
1991	LR		1991	07	11.24844	16	20	55.54	-07	37	31.0	2 675
1991	LS	*	1991	06	13.32899	16	55	25.23	-07	47	59.6	15 2 675
1991	LS		1991	06	13.35330	16	55	23.87	-07	48	09.9	2 675
1991	LS		1991	06	15.35833	16	53	41.60	-08	01	48.1	2 675
1991	LT	*	1991	06	13.32899	16	58	54.75	-11	01	44.5	16 2 675
1991	LT		1991	06	13.35330	16	58	54.20	-11	01	51.1	2 675
1991	LT		1991	06	15.35833	16	58	22.94	-11	12	42.0	2 675
1991	LT		1991	06	15.38455	16	58	22.38	-11	12	50.0	2 675
1991	LU	*	1991	06	14.20990	13	03	31.15	+12	37	06.2	16 2 675
1991	LU		1991	06	14.23125	13	03	31.64	+12	36	54.8	2 675
1991	LU		1991	06	16.23715	13	04	18.04	+12	21	09.6	2 675
1991	LU		1991	06	16.25990	13	04	18.61	+12	20	57.7	2 675
1991	LV	*	1991	06	14.29462	16	12	11.42	-12	37	08.9	16 2 675
1991	LV		1991	06	14.31632	16	12	09.99	-12	36	51.3	2 675
1991	LV		1991	06	16.33507	16	10	06.82	-12	10	32.1	2 675
1991	LV		1991	06	16.35642	16	10	05.51	-12	10	16.3	2 675
1991	LV		1991	06	17.31406	16	09	09.64	-11	58	09.3	16.5 2 675
1991	LV		1991	06	17.33507	16	09	08.40	-11	57	53.5	2 675
1991	LV		1991	07	07.30903	15	56	31.47	-08	45	03.0	17 2 675
1991	LV		1991	07	07.33715	15	56	31.05	-08	44	50.1	2 675
1991	LV		1991	07	09.21806	15	56	03.82	-08	32	46.7	2 675
1991	LV		1991	07	09.23542	15	56	03.67	-08	32	39.3	2 675
1991	LW	*	1991	06	14.29462	16	16	14.26	-14	22	05.2	16 2 675
1991	LW		1991	06	14.31632	16	16	13.08	-14	22	12.9	2 675

1991	LW		1991	06	16.33507	16	14	30.01	-14	34	43.7		2 675
1991	LW		1991	06	16.35642	16	14	28.76	-14	34	50.6		2 675
1991	LW		1991	07	10.20295	16	02	27.46	-17	15	59.8	16.5	2 675
1991	LW		1991	07	10.22986	16	02	27.23	-17	16	11.4		2 675
1991	LW		1991	07	11.21944	16	02	19.82	-17	23	14.5		2 675
1991	LW		1991	07	11.24097	16	02	19.54	-17	23	24.0		2 675
1991	LX	*	1991	06	14.34288	16	42	04.17	-03	20	53.7	17	2 675
1991	LX		1991	06	14.36840	16	42	03.02	-03	20	41.9		2 675
1991	LX		1991	06	16.37917	16	40	29.26	-03	06	48.6		2 675
1991	LX		1991	06	16.40260	16	40	28.14	-03	06	39.1		2 675
1991	LY	*	1991	06	14.34288	16	45	07.23	-03	23	01.2	16	2 675
1991	LY		1991	06	14.36840	16	45	05.73	-03	23	11.3		2 675
1991	LY		1991	06	16.37917	16	43	14.72	-03	36	09.5		2 675
1991	LY		1991	06	16.40260	16	43	13.45	-03	36	18.5		2 675
1991	LY		1991	07	10.20885	16	26	55.49	-07	08	08.7	16.0	2 675
1991	LY		1991	07	10.23576	16	26	54.78	-07	08	25.8		2 675
1991	LY		1991	07	11.22483	16	26	32.79	-07	18	58.1		2 675
1991	LY		1991	07	11.24844	16	26	32.28	-07	19	12.1		2 675
1991	LZ	*	1991	06	14.38785	17	20	13.15	-02	55	18.6	15	2 675
1991	LZ		1991	06	14.41007	17	20	12.05	-02	55	12.2		2 675
1991	LZ		1991	06	16.42066	17	18	39.75	-02	45	25.8		2 675
1991	LZ		1991	06	16.44757	17	18	38.48	-02	45	18.1		2 675
1991	LZ		1991	07	10.27326	17	05	27.74	-02	32	49.1	16	2 675
1991	LZ		1991	07	11.26319	17	05	13.54	-02	36	00.0		2 675
1991	LZ		1991	07	11.28987	17	05	13.07	-02	36	06.5		2 675
1991	LA1	*	1991	06	14.38785	17	21	44.94	-02	42	03.0	16	2 675
1991	LA1		1991	06	14.41007	17	21	43.66	-02	42	09.9		2 675
1991	LA1		1991	06	16.42066	17	19	54.05	-02	52	00.3		2 675
1991	LA1		1991	06	16.44757	17	19	52.46	-02	52	08.5		2 675
1991	LB1	*	1991	06	14.39358	17	59	19.54	-23	47	49.5	16	2 675
1991	LB1		1991	06	14.41580	17	59	18.18	-23	48	00.9		2 675
1991	LB1		1991	06	16.42604	17	57	12.56	-24	05	19.8		2 675
1991	LB1		1991	06	16.45347	17	57	10.69	-24	05	34.0		2 675
1991	LC1	*	1991	06	15.40833	17	40	39.06	-06	20	50.9	15	2 675
1991	LC1		1991	06	15.43646	17	40	37.61	-06	20	40.2		2 675
1991	LC1		1991	06	17.35694	17	39	05.19	-06	08	45.2		2 675
1991	LC1		1991	06	17.38090	17	39	03.98	-06	08	36.4		2 675
1991	LC1		1991	07	10.25399	17	23	37.14	-05	06	53.8	16.0	2 675
1991	LC1		1991	07	10.27917	17	23	36.70	-05	06	53.2		2 675
1991	LC1		1991	07	11.26962	17	23	11.18	-05	07	33.6		2 675
1991	LC1		1991	07	11.29705	17	23	10.44	-05	07	34.8		2 675
1991	LD1	*	1991	06	15.40833	17	44	21.69	-07	54	15.1	16	2 675
1991	LD1		1991	06	15.43646	17	44	19.87	-07	54	21.8		2 675
1991	LD1		1991	06	17.35694	17	42	30.01	-08	03	10.8		2 675
1991	LD1		1991	06	17.38090	17	42	28.62	-08	03	17.6		2 675
1991	LE1	*	1991	06	15.40833	17	49	17.18	-03	31	18.0	15	2 675
1991	LE1		1991	06	15.43646	17	49	15.49	-03	31	29.6		2 675
1991	LE1		1991	06	17.35694	17	47	16.53	-03	46	13.0		2 675
1991	LE1		1991	06	17.38090	17	47	15.01	-03	46	23.6		2 675
1991	LE1		1991	07	10.25399	17	24	32.64	-07	29	25.3	16.0	2 675
1991	LE1		1991	07	10.27917	17	24	31.22	-07	29	42.8		2 675
1991	LE1		1991	07	11.26962	17	23	40.39	-07	40	52.1		2 675
1991	LE1		1991	07	11.29705	17	23	39.15	-07	41	10.3		2 675
1991	NA	*	1991	07	07.30330	19	09	43.22	-18	20	07.5	16	2 675
1991	NA		1991	07	07.33160	19	09	41.41	-18	19	40.6		2 675
1991	NA		1991	07	08.30174	19	08	48.63	-18	04	31.7		2 675
1991	NA		1991	07	08.39253	19	08	43.18	-18	03	07.7		2 675
1991	NA		1991	07	09.35538	19	07	50.51	-17	48	04.2		2 675
1991	NA		1991	07	11.35174	19	06	00.92	-17	16	48.5		2 675

1991	NB	*	1991	07	10.41823	20	22	25.17	-19	41	48.2	17	2 675
1991	NB		1991	07	10.44149	20	22	23.99	-19	42	15.0		2 675
1991	NB		1991	07	11.38837	20	21	41.35	-20	00	25.6		2 675
1991	NC	*	1991	07	08.28958	18	28	13.58	-15	28	53.0		2 675
1991	NC		1991	07	08.32083	18	28	12.25	-15	29	17.7		2 675
1991	NC		1991	07	10.30747	18	26	53.83	-15	55	12.0		2 675
1991	NC		1991	07	10.34722	18	26	52.10	-15	55	44.2		2 675
1991	ND	*	1991	07	09.29740	18	32	04.72	+04	26	49.6	16.5	2 675
1991	ND		1991	07	09.31892	18	32	03.12	+04	26	20.9		2 675
1991	ND		1991	07	10.31354	18	30	50.40	+04	06	12.7		2 675
1991	ND		1991	07	10.32448	18	30	49.67	+04	05	57.0		2 675
1991	NE	*	1991	07	09.38594	19	36	31.42	-10	20	46.7	16.0	2 675
1991	NE		1991	07	09.41406	19	36	29.78	-10	20	26.7		2 675
1991	NE		1991	07	11.33767	19	34	38.23	-09	57	44.3		2 675
1991	NE		1991	07	11.36510	19	34	36.60	-09	57	25.3		2 675
1991	NF	*	1991	07	09.43785	20	16	27.24	-11	15	14.8	16.5	2 675
1991	NF		1991	07	09.45938	20	16	25.13	-11	14	51.0		2 675
1991	NF		1991	07	11.45313	20	13	25.71	-10	41	31.4		2 675
1991	NG	*	1991	07	07.29757	18	50	41.54	-19	31	19.1	15	2 675
1991	NG		1991	07	07.32604	18	50	39.61	-19	31	09.0		2 675
1991	NG		1991	07	09.30781	18	48	34.76	-19	17	44.6		2 675
1991	NG		1991	07	09.33003	18	48	33.31	-19	17	36.6		2 675
1991	NH	*	1991	07	10.20295	16	07	35.48	-16	35	19.3	16	2 675
1991	NH		1991	07	10.22986	16	07	35.60	-16	35	09.5		2 675
1991	NH		1991	07	11.21944	16	07	41.57	-16	30	02.1		2 675
1991	NH		1991	07	11.24106	16	07	41.62	-16	29	55.4		2 675
1991	NJ	*	1991	07	09.39288	19	35	38.62	-23	12	15.9	16	2 675
1991	NJ		1991	07	09.42124	19	35	37.08	-23	12	33.9		2 675
1991	NJ		1991	07	11.37205	19	33	53.05	-23	33	39.4		2 675
1991	NK	*	1991	07	08.34063	19	13	40.66	-02	34	59.0	16	2 675
1991	NK		1991	07	08.36476	19	13	39.35	-02	34	50.9		2 675
1991	NK		1991	07	10.36250	19	11	58.14	-02	23	43.4		2 675
1991	NL	*	1991	07	08.34063	19	29	25.19	-06	55	57.3	16	2 675
1991	NL		1991	07	08.36476	19	29	23.73	-06	55	45.1		2 675
1991	NL		1991	07	10.36250	19	27	26.30	-06	39	11.9		2 675
1991	NL		1991	07	10.38681	19	27	24.66	-06	39	00.8		2 675
1991	NM	*	1991	07	10.29462	18	09	30.70	-09	41	37.0	16	2 675
1991	NM		1991	07	10.33247	18	09	28.89	-09	41	26.0		2 675
1991	NM		1991	07	11.27604	18	08	46.55	-09	36	51.6		2 675
1991	NM		1991	07	11.30365	18	08	45.30	-09	36	43.4		2 675
1991	NN	*	1991	07	10.29462	18	12	30.15	-12	22	32.6	16	2 675
1991	NN		1991	07	10.33247	18	12	27.94	-12	22	44.6		2 675
1991	NN		1991	07	11.27604	18	11	36.85	-12	27	40.3		2 675
1991	NN		1991	07	11.30365	18	11	35.26	-12	27	49.0		2 675
1991	NO	*	1991	07	10.29462	18	18	29.41	-07	30	33.7	16.5	2 675
1991	NO		1991	07	10.33247	18	18	27.47	-07	30	57.3		2 675
1991	NO		1991	07	11.27604	18	17	40.27	-07	40	08.2		2 675
1991	NO		1991	07	11.30365	18	17	38.99	-07	40	27.5		2 675
1991	NP	*	1991	07	09.43785	20	18	31.78	-10	31	12.1	16.0	2 675
1991	NP		1991	07	09.45938	20	18	30.00	-10	30	53.6		2 675
1991	NP		1991	07	11.45313	20	16	02.73	-10	05	53.0		2 675
1991	NQ	*	1991	07	09.43785	20	33	45.97	-16	49	00.5	16.0	2 675
1991	NQ		1991	07	09.45938	20	33	43.94	-16	48	45.6		2 675
1991	NQ		1991	07	11.45313	20	31	10.60	-16	24	44.6		2 675
1991	NR	*	1991	07	07.36128	19	29	21.10	-24	30	28.3	16	2 675
1991	NR		1991	07	09.34931	19	27	07.83	-24	30	23.9		2 675
1991	NR		1991	07	09.37361	19	27	06.00	-24	30	23.7		2 675
1991	NS	*	1991	07	08.35278	19	36	00.29	-26	11	44.4	15	2 675
1991	NS		1991	07	08.37795	19	35	58.75	-26	11	53.9		2 675

1991	NS		1991	07	10.38125	19	33	57.32	-26	25	07.4	2 675
1991	NS		1991	07	10.40382	19	33	55.80	-26	25	16.4	2 675
1991	NT	*	1991	07	08.35278	19	45	21.71	-29	15	03.7	16.5 2 675
1991	NT		1991	07	08.37795	19	45	20.18	-29	15	15.6	2 675
1991	NT		1991	07	10.38125	19	43	39.71	-29	31	18.1	2 675
1991	NT		1991	07	10.40382	19	43	38.46	-29	31	28.9	2 675
1991	NU	*	1991	07	08.29583	18	29	42.63	-02	46	37.5	16 2 675
1991	NU		1991	07	08.32691	18	29	40.94	-02	46	31.9	2 675
1991	NU		1991	07	10.26024	18	28	00.51	-02	41	37.1	2 675
1991	NU		1991	07	10.28594	18	27	59.15	-02	41	33.3	2 675
1991	NV	*	1991	07	08.29583	18	31	24.90	-00	06	04.6	16.5 2 675
1991	NV		1991	07	08.32691	18	31	23.20	-00	06	15.2	2 675
1991	NV		1991	07	10.26024	18	29	45.51	-00	17	25.5	2 675
1991	NV		1991	07	10.28594	18	29	44.31	-00	17	35.5	2 675
1991	NW	*	1991	07	10.30122	18	24	07.40	-24	27	55.4	15.0 2 675
1991	NW		1991	07	10.34010	18	24	05.34	-24	28	11.8	2 675
1991	NW		1991	07	11.28299	18	23	21.44	-24	34	50.8	2 675
1991	NW		1991	07	11.31042	18	23	20.12	-24	35	02.9	2 675
1991	NX	*	1991	07	10.41823	20	34	22.13	-19	50	13.7	16.5 2 675
1991	NX		1991	07	10.44149	20	34	20.85	-19	49	57.7	2 675
1991	NX		1991	07	11.39375	20	33	34.38	-19	40	06.8	2 675
1991	NX		1991	07	11.41493	20	33	33.38	-19	39	56.0	2 675
1991	NY	*	1991	07	13.41493	21	11	56.50	-04	51	50.7	16.0 9 675
1991	NY		1991	07	13.44618	21	11	56.10	-04	51	48.2	9 675
1991	NY		1991	07	19.35900	21	10	38.40	-04	49	59.0	15.5 9 675
1991	NY		1991	07	19.42237	21	10	37.10	-04	50	01.0	9 675
1991	NY		1991	08	05.26563	21	03	03.15	-05	39	51.8	14.0 9 675
1991	NY		1991	08	05.30313	21	03	01.77	-05	40	03.9	9 675
1991	NZ	*	1991	07	07.29757	18	54	57.85	-21	49	47.3	17.0 2 675
1991	NZ		1991	07	07.32604	18	54	56.08	-21	49	46.1	2 675
1991	NZ		1991	07	09.30781	18	52	59.66	-21	50	16.3	2 675
1991	NZ		1991	07	09.33003	18	52	58.37	-21	50	16.6	2 675
1991	NA1	*	1991	07	09.40035	20	16	20.35	-30	55	06.4	16 2 675
1991	NA1		1991	07	09.42882	20	16	18.68	-30	55	17.8	2 675
1991	NA1		1991	07	11.37778	20	14	20.59	-31	08	22.5	2 675
1991	NB1	*	1991	07	10.42413	20	19	24.83	-05	28	55.1	16.5 2 675
1991	NB1		1991	07	10.44705	20	19	23.85	-05	28	48.3	2 675
1991	NB1		1991	07	11.38299	20	18	46.93	-05	24	39.9	2 675
1991	NC1	*	1991	07	12.38229	21	33	04.16	-14	14	28.1	17.5 9 675
1991	NC1		1991	07	12.41736	21	33	03.28	-14	14	42.6	9 675
1991	NC1		1991	07	14.45417	21	32	16.58	-14	29	07.6	17.0 9 675
1991	NC1		1991	07	17.39670	21	30	55.61	-14	51	20.1	17.0 9 675
1991	NC1		1991	07	17.43872	21	30	54.13	-14	51	38.6	17.2 9 675
1991	ND1	*	1991	07	12.38229	21	40	03.05	-16	33	35.1	17.2 9 675
1991	ND1		1991	07	12.41736	21	40	02.09	-16	33	40.8	17.5 9 675
1991	ND1		1991	07	14.45417	21	39	11.41	-16	39	05.8	17.5 9 675
1991	ND1		1991	07	14.48299	21	39	10.39	-16	39	09.7	9 675
1991	ND1		1991	07	17.39670	21	37	48.68	-16	47	33.4	17.2 9 675
1991	ND1		1991	07	17.43872	21	37	47.29	-16	47	40.5	9 675
1991	NE1	*	1991	07	12.38229	21	41	33.97	-11	59	57.9	18.0 9 675
1991	NE1		1991	07	12.41736	21	41	32.93	-11	59	58.3	9 675
1991	NE1		1991	07	14.45417	21	40	31.41	-11	59	25.8	17.8 9 675
1991	NE1		1991	07	14.48299	21	40	30.52	-11	59	26.2	9 675
1991	NE1		1991	07	17.39670	21	38	54.73	-11	59	17.6	17.8 9 675
1991	NE1		1991	07	17.43872	21	38	53.18	-11	59	18.6	9 675
1991	NF1	*	1991	07	12.38229	21	49	49.95	-10	06	53.5	17.8 9 675
1991	NF1		1991	07	12.41736	21	49	49.09	-10	06	58.8	9 675
1991	NF1		1991	07	14.45417	21	49	04.10	-10	11	42.8	17.5 9 675
1991	NF1		1991	07	14.48299	21	49	03.26	-10	11	46.0	9 675

1991	NF1		1991	07	17.39670	21	47	53.90	-10	19	06.7	17.5	9 675
1991	NF1		1991	07	17.43872	21	47	52.86	-10	19	12.8		9 675
1991	NG1	*	1991	07	12.38229	21	57	03.80	-10	51	16.2	17.8	9 675
1991	NG1		1991	07	12.41736	21	57	02.86	-10	51	13.1		9 675
1991	NG1		1991	07	14.45417	21	56	11.92	-10	47	51.6	17.8	9 675
1991	NG1		1991	07	14.48299	21	56	11.11	-10	47	50.2		9 675
1991	NG1		1991	07	17.39670	21	54	48.50	-10	43	44.0	17.8	9 675
1991	NG1		1991	07	17.43872	21	54	47.19	-10	43	41.6		9 675
1991	NH1	*	1991	07	12.38229	21	57	26.78	-14	04	17.4	17.8	9 675
1991	NH1		1991	07	12.41736	21	57	25.94	-14	04	22.3		9 675
1991	NH1		1991	07	14.45417	21	56	41.03	-14	08	19.1	17.2	9 675
1991	NH1		1991	07	14.48299	21	56	40.30	-14	08	22.2		9 675
1991	NH1		1991	07	17.39670	21	55	26.08	-14	14	49.4	17.5	9 675
1991	NH1		1991	07	17.43872	21	55	24.84	-14	14	54.8		9 675
1991	NJ1	*	1991	07	12.38229	21	57	31.26	-13	59	33.4	18.0	9 675
1991	NJ1		1991	07	12.41736	21	57	31.46	-13	59	47.8		9 675
1991	NJ1		1991	07	14.45417	21	57	50.29	-14	12	58.9	18.0	9 675
1991	NJ1		1991	07	17.39670	21	58	02.55	-14	33	55.8	18.2	9 675
1991	NJ1		1991	07	17.43872	21	58	02.38	-14	34	14.7	17.8	9 675
1991	NK1	*	1991	07	12.38229	21	58	06.14	-14	14	01.3	17.0	9 675
1991	NK1		1991	07	12.41736	21	58	05.37	-14	14	12.2		9 675
1991	NK1		1991	07	14.45417	21	57	23.68	-14	24	36.9	16.8	9 675
1991	NK1		1991	07	14.48299	21	57	23.03	-14	24	49.0		9 675
1991	NK1		1991	07	17.39670	21	56	15.26	-14	40	28.3	17.0	9 675
1991	NK1		1991	07	17.43872	21	56	14.09	-14	40	41.4		9 675
1991	NL1	*	1991	07	12.38229	21	59	23.27	-15	10	17.9	17.5	9 675
1991	NL1		1991	07	12.41736	21	59	22.38	-15	10	24.4		9 675
1991	NL1		1991	07	14.45417	21	58	36.48	-15	16	23.5	17.5	9 675
1991	NL1		1991	07	14.48299	21	58	35.71	-15	16	28.2		9 675
1991	NL1		1991	07	17.39670	21	57	21.48	-15	25	43.9	17.5	9 675
1991	NL1		1991	07	17.43872	21	57	20.24	-15	25	53.4	17.8	9 675
1991	NM1	*	1991	07	13.41493	20	55	50.02	-05	06	52.9	17.8	9 675
1991	NM1		1991	07	13.44618	20	55	48.94	-05	06	52.3		9 675
1991	NM1		1991	07	19.35900	20	52	01.98	-05	03	04.4	17.5	9 675
1991	NM1		1991	07	19.42237	20	51	59.34	-05	03	03.8		9 675
1991	NN1	*	1991	07	13.41493	21	03	13.46	-03	07	06.6	16.8	9 675
1991	NN1		1991	07	13.44618	21	03	12.05	-03	06	58.3		9 675
1991	NN1		1991	07	19.35900	20	58	32.24	-02	45	31.1	17.0	9 675
1991	NN1		1991	07	19.42237	20	58	29.11	-02	45	20.2		9 675
1991	NO1	*	1991	07	13.41493	21	06	25.06	-00	48	57.5	17.2	9 675
1991	NO1		1991	07	13.44618	21	06	24.14	-00	48	51.4		9 675
1991	NO1		1991	07	19.35900	21	03	33.18	-00	37	11.0	17.5	9 675
1991	NO1		1991	07	19.42237	21	03	30.98	-00	37	07.8		9 675
1991	NP1	*	1991	07	13.41493	21	08	24.45	-07	12	31.1	17.8	9 675
1991	NP1		1991	07	13.44618	21	08	23.26	-07	12	35.0		9 675
1991	NP1		1991	07	19.35900	21	05	11.90	-08	13	39.7	17.8	9 675
1991	NP1		1991	07	19.42237	21	05	09.51	-08	13	54.3		9 675
1991	NQ1	*	1991	07	13.41493	21	09	48.76	-07	48	51.9	17.5	9 675
1991	NQ1		1991	07	13.44618	21	09	47.35	-07	48	56.9		9 675
1991	NQ1		1991	07	19.35900	21	05	05.99	-08	05	17.4	17.5	9 675
1991	NQ1		1991	07	19.42237	21	05	02.81	-08	05	29.5		9 675
1991	NR1	*	1991	07	13.41493	21	13	04.04	-04	55	07.5	16.8	9 675
1991	NR1		1991	07	13.44618	21	13	02.81	-04	55	04.6		9 675
1991	NR1		1991	07	19.35900	21	09	14.68	-04	49	23.8	16.8	9 675
1991	NR1		1991	07	19.42237	21	09	12.04	-04	49	21.7		9 675
1991	NS1	*	1991	07	13.41493	21	13	06.85	-06	18	20.3	16.8	9 675
1991	NS1		1991	07	13.44618	21	13	05.95	-06	18	26.0		9 675
1991	NS1		1991	07	19.35900	21	10	03.57	-06	39	41.0	17.0	9 675
1991	NS1		1991	07	19.42237	21	10	01.35	-06	39	58.5	16.5	9 675

1991	NT1	*	1991	07	13.41493	21	13	18.32	-04	47	32.9	16.8	9	675
1991	NT1		1991	07	13.44618	21	13	17.18	-04	47	32.0		9	675
1991	NT1		1991	07	19.35900	21	09	30.63	-04	47	06.2	16.8	9	675
1991	NT1		1991	07	19.42237	21	09	28.15	-04	47	07.4		9	675
1991	NU1	*	1991	07	13.41493	21	16	01.42	-04	30	08.9	17.0	9	675
1991	NU1		1991	07	13.44618	21	16	00.32	-04	30	07.0		9	675
1991	NU1		1991	07	19.35900	21	12	15.01	-04	28	35.2	17.0	9	675
1991	NU1		1991	07	19.42237	21	12	12.31	-04	28	36.1		9	675
1991	NV1	*	1991	07	13.41493	21	16	19.68	-07	00	02.1	17.5	9	675
1991	NV1		1991	07	13.44618	21	16	18.42	-06	59	59.3		9	675
1991	NV1		1991	07	19.35900	21	12	13.99	-06	54	31.6	17.8	9	675
1991	NV1		1991	07	19.42237	21	12	11.28	-06	54	30.1		9	675
1991	NW1	*	1991	07	14.30000	19	18	48.15	-31	08	25.1	16.5	9	675
1991	NW1		1991	07	14.33368	19	18	46.28	-31	08	18.4		9	675
1991	NW1		1991	07	16.29010	19	16	53.71	-31	01	19.4	16.5	9	675
1991	NW1		1991	07	16.32602	19	16	51.58	-31	01	18.1		9	675
1991	NW1		1991	07	18.28742	19	15	00.38	-30	53	34.1	16.5	9	675
1991	NW1		1991	07	18.31719	19	14	58.21	-30	53	23.5		9	675
1991	NX1	*	1991	07	14.30000	19	28	26.96	-31	14	40.3	16.8	9	675
1991	NX1		1991	07	14.33368	19	28	24.48	-31	14	36.4		9	675
1991	NX1		1991	07	17.32691	19	24	55.81	-31	07	28.3	16.5	9	675
1991	NX1		1991	07	17.36476	19	24	53.18	-31	07	22.4		9	675
1991	NX1		1991	07	18.28742	19	23	49.81	-31	05	00.8	16.8	9	675
1991	NX1		1991	07	18.31719	19	23	47.64	-31	04	51.3		9	675
1991	NY1	*	1991	07	14.30000	19	34	13.71	-34	55	31.4	17.0	9	675
1991	NY1		1991	07	14.33368	19	34	11.68	-34	55	32.5		9	675
1991	NY1		1991	07	17.32691	19	31	13.52	-34	55	08.3	16.8	9	675
1991	NY1		1991	07	17.36476	19	31	11.22	-34	55	06.1		9	675
1991	NZ1	*	1991	07	14.30000	19	35	54.17	-35	45	04.8	17.0	9	675
1991	NZ1		1991	07	14.33368	19	35	51.99	-35	45	13.7		9	675
1991	NZ1		1991	07	17.36476	19	32	30.16	-35	53	57.3	16.5	9	675
1991	NA2	*	1991	07	14.45417	21	45	25.81	-14	15	21.4	17.8	9	675
1991	NA2		1991	07	14.48299	21	45	25.09	-14	15	33.2		9	675
1991	NA2		1991	07	17.39670	21	44	00.24	-14	35	38.8	17.8	9	675
1991	NA2		1991	07	17.43872	21	43	58.84	-14	35	55.9		9	675
1991	OA	*	1991	07	16.35799	21	06	26.20	-32	47	03.0	14.0	9	675
1991	OA		1991	07	16.39809	21	06	33.08	-32	41	18.1		9	675
1991	OA		1991	07	19.37292	21	14	58.66	-26	28	47.2	14.2	9	675
1991	OA		1991	08	05.28484	21	29	14.56	-10	01	23.3		9	675
1991	OA		1991	08	05.32135	21	29	14.37	-10	00	22.5		9	675
1991	PA		1991	07	12.38229	21	36	34.68	-14	52	41.6	17.8	9	675
1991	PA		1991	07	12.41736	21	36	33.99	-14	52	38.0		9	675
1991	PA		1991	07	14.45417	21	35	59.46	-14	49	20.8	16.8	9	675
1991	PA		1991	07	14.48299	21	35	58.85	-14	49	19.0		9	675
1991	PA		1991	07	17.39670	21	34	57.63	-14	45	19.4	16.8	9	675
1991	PA		1991	07	17.43872	21	34	56.51	-14	45	15.5	17.0	9	675
1991	PB		1991	08	05.27500	21	07	15.70	-14	44	58.5	14.5	9	675
1991	PB		1991	08	05.31302	21	07	13.89	-14	45	12.9		9	675
1991	PB		1991	08	07.32240	21	05	46.57	-14	57	15.6	15.0	9	675
1991	PB		1991	08	07.35069	21	05	45.16	-14	57	26.5		9	675
2093	P-L		1991	07	13.41493	21	08	56.64	-02	32	36.3	17.8	9	675
2093	P-L		1991	07	13.44618	21	08	55.54	-02	32	37.1		9	675
2093	P-L		1991	07	19.35900	21	05	20.08	-02	37	06.4	18.0	9	675
2093	P-L		1991	07	19.42237	21	05	17.73	-02	37	10.3		9	675
2533	P-L		1989	09	30.41579	02	30	16.55	+11	27	03.1		9	675
2533	P-L		1989	09	30.47465	02	30	14.09	+11	26	49.0		9	675
2533	P-L		1989	11	03.27278	01	58	02.41	+08	34	52.4	17.8	9	675
2533	P-L		1989	11	03.30815	01	58	00.21	+08	34	44.0		9	675
2533	P-L		1989	11	04.27013	01	57	04.86	+08	30	27.8	17.5	9	675

2533	P-L		1989	11	04.30364	01	57	02.83	+08	30	19.8	18.0	9 675
2562	P-L		1988	09	15.39965	00	34	25.50	+02	02	05.6	18.0	9 675
2562	P-L		1988	09	15.43385	00	34	23.73	+02	01	55.8		9 675
2570	P-L		1988	09	15.39965	00	16	18.98	+01	06	28.9	18.5	9 675
2570	P-L		1988	09	15.43385	00	16	17.51	+01	06	17.5		9 675
4015	P-L		1990	09	14.18924	21	10	32.69	-15	02	44.5	18.2	9 675
4015	P-L		1990	09	14.22760	21	10	32.07	-15	02	45.1		9 675
4581	P-L		1990	09	16.26406	22	35	16.15	-14	28	28.8	17.5	9 675
4581	P-L		1990	09	16.30069	22	35	14.11	-14	28	35.7		9 675
4657	P-L		1991	07	12.38229	21	32	30.03	-14	50	51.3	18.0	9 675
4657	P-L		1991	07	12.41736	21	32	28.95	-14	50	56.1		9 675
4657	P-L		1991	07	14.45417	21	31	28.61	-14	56	31.1	17.5	9 675
6035	P-L		1990	09	16.18906	21	43	52.26	-22	08	53.2		9 675
6035	P-L		1990	09	16.23316	21	43	50.67	-22	08	38.1		9 675
6555	P-L		1989	09	30.41579	02	15	58.71	+08	58	12.9		9 675
6555	P-L		1989	09	30.47465	02	15	56.56	+08	57	58.7		9 675
6555	P-L		1989	11	03.27278	01	50	07.11	+06	26	27.7	17.2	9 675
6555	P-L		1989	11	03.30815	01	50	05.43	+06	26	20.5	17.0	9 675
6555	P-L		1989	11	04.27013	01	49	20.30	+06	22	32.9	17.5	9 675
6555	P-L		1989	11	04.30364	01	49	18.72	+06	22	25.5		9 675
6607	P-L		1990	09	14.26441	22	22	55.51	-12	58	13.0	18.8	9 675
6607	P-L		1990	09	14.30417	22	22	53.37	-12	58	25.8		9 675
6607	P-L		1990	09	16.26406	22	21	23.48	-13	08	37.5	18.8	9 675
6607	P-L		1990	09	16.30069	22	21	21.78	-13	08	49.5		9 675
7637	P-L	*	1960	10	22.23406	00	08	06.85	-06	20	28.3	19.4	4 675
7637	P-L		1960	10	25.25350	00	06	05.13	-06	23	13.3		4 675
7637	P-L		1960	10	26.31531	00	05	25.23	-06	23	48.5		4 675
1010	T-2		1989	11	24.15364	01	19	13.52	+06	12	59.4		9 675
1010	T-2		1989	11	24.19701	01	19	12.56	+06	12	50.7		9 675
1070	T-2		1973	09	19.18611	00	08	48.64	+02	21	30.5		4 675
1070	T-2		1973	09	19.23785	00	08	45.95	+02	21	04.3		4 675
1070	T-2		1973	09	20.22847	00	07	55.79	+02	12	43.6		4 675
1070	T-2		1973	09	24.34688	00	04	25.44	+01	37	41.5		4 675
1070	T-2		1973	09	24.41597	00	04	21.72	+01	37	06.0		4 675
1070	T-2		1973	09	25.24375	00	03	39.95	+01	30	00.4		4 675
1070	T-2		1973	09	25.30729	00	03	36.50	+01	29	30.2		4 675
1070	T-2	*	1973	09	29.25330	00	00	17.27	+00	55	55.8	18.8	4 675
1070	T-2		1973	09	29.31806	00	00	13.91	+00	55	22.3		4 675
1070	T-2		1973	09	30.21007	23	59	29.75	+00	47	50.9		4 675
1070	T-2		1973	09	30.27431	23	59	26.38	+00	47	19.4		4 675
1070	T-2		1973	10	04.28958	23	56	12.78	+00	14	08.7		4 675
1070	T-2		1973	10	04.35208	23	56	09.78	+00	13	39.8		4 675
1070	T-2		1973	10	05.31684	23	55	24.92	+00	05	56.1		4 675
1070	T-2		1973	10	05.37917	23	55	21.97	+00	05	23.9		4 675
1212	T-2		1989	09	30.41579	02	30	25.98	+12	13	41.3		9 675
2160	T-2		1990	09	16.26406	22	36	04.65	-10	16	06.9	17.8	9 675
2160	T-2		1990	09	16.30069	22	36	03.00	-10	16	18.8		9 675
3365	T-2		1990	09	16.26406	22	31	39.57	-12	48	30.7	17.5	9 675
3365	T-2		1990	09	16.30069	22	31	38.18	-12	48	37.3	18.5	9 675
5200	T-2		1991	01	22.31666	09	01	47.71	+15	12	59.7		9 675
5200	T-2		1991	01	22.34895	09	01	45.84	+15	13	00.5		9 675
3108	T-3		1989	11	24.15364	01	11	46.28	+07	17	42.7		9 675
3108	T-3		1989	11	24.19701	01	11	45.47	+07	17	38.1		9 675
20			1990	09	14.18924	21	29	31.58	-13	53	26.7		9 675
20			1990	09	14.22760	21	29	29.97	-13	53	34.9		9 675
20			1990	09	15.25885	21	28	50.84	-13	57	06.3		9 675
20			1990	09	15.29497	21	28	49.39	-13	57	13.2		9 675
20			1990	09	18.17344	21	27	08.08	-14	06	27.5		9 675
20			1990	09	18.20694	21	27	06.95	-14	06	33.4		9 675

23		1991	07	16.29010	18	54	06.88	-32	10	30.0		9 675
23		1991	07	16.32602	18	54	04.75	-32	10	34.8		9 675
27		1991	01	22.31666	09	05	09.11	+18	26	29.7		9 675
28		1990	09	14.18924	21	28	57.24	-16	04	48.9		9 675
28		1990	09	14.22760	21	28	56.01	-16	04	59.7		9 675
28		1990	09	18.17344	21	26	55.44	-16	22	43.4		9 675
28		1990	09	18.20694	21	26	54.46	-16	22	51.8		9 675
29		1990	09	16.18906	21	39	27.57	-17	56	26.9	15.0	9 675
29		1990	09	16.23316	21	39	25.80	-17	56	26.1		9 675
34		1988	08	16.17430	19	15	49.22	-15	07	45.6		9 675
34		1988	08	16.20451	19	15	48.33	-15	07	50.3		9 675
40		1990	09	15.24097	21	18	17.13	-22	05	31.8		9 675
40		1990	09	15.27777	21	18	16.10	-22	05	34.1		9 675
44		1990	09	15.25885	21	51	31.96	-15	24	40.6		9 675
44		1990	09	15.29497	21	51	30.35	-15	24	49.9		9 675
45		1986	02	05.27909	07	33	36.44	+17	07	15.9		9 675
45		1986	02	05.30260	07	33	35.36	+17	07	22.2		9 675
45		1986	02	06.23576	07	32	53.27	+17	11	30.4		9 675
45		1986	02	06.28385	07	32	51.00	+17	11	42.6		9 675
45		1986	02	07.22256	07	32	09.72	+17	15	50.6		9 675
45		1986	02	07.25711	07	32	08.18	+17	15	59.8		9 675
58		1990	09	15.25885	21	33	32.76	-13	15	18.5		9 675
58		1990	09	15.29497	21	33	31.59	-13	15	28.3		9 675
64		1990	09	15.25885	21	50	23.71	-12	13	29.8		9 675
64		1990	09	15.29497	21	50	22.23	-12	13	36.9		9 675
94		1990	09	16.18906	21	40	31.11	-20	15	45.1	16.0	9 675
94		1990	09	16.23316	21	40	29.52	-20	15	44.1		9 675
100		1991	01	22.31666	09	02	33.38	+17	18	11.7		9 675
100		1991	01	22.34895	09	02	31.82	+17	18	21.0		9 675
122		1988	09	15.39965	00	32	39.18	+03	16	59.1		9 675
122		1988	09	15.43385	00	32	37.83	+03	16	50.2		9 675
131		1991	07	19.37292	21	16	35.50	-23	33	29.7		9 675
140		1991	07	12.38229	21	59	38.75	-14	34	02.8		9 675
140		1991	07	12.41736	21	59	38.33	-14	34	10.0		9 675
140		1991	07	14.45417	21	59	18.38	-14	41	21.9		9 675
140		1991	07	14.48299	21	59	18.00	-14	41	27.6		9 675
140		1991	07	17.39670	21	58	36.94	-14	52	54.9		9 675
140		1991	07	17.43872	21	58	36.07	-14	53	04.8		9 675
155		1987	04	21.27725	13	46	41.95	-07	01	30.9		9 675
155		1987	04	21.30451	13	46	40.36	-07	01	27.2		9 675
156		1991	07	19.35900	21	12	36.05	-01	04	51.1		9 675
156		1991	07	19.42237	21	12	33.12	-01	04	50.5		9 675
191		1991	07	18.43108	21	38	04.34	-06	22	40.8		9 675
191		1991	07	18.46424	21	38	03.33	-06	22	49.6		9 675
201		1991	01	22.31666	09	07	35.26	+12	43	55.9		9 675
201		1991	01	22.34895	09	07	33.61	+12	44	05.2		9 675
209		1990	09	16.26406	22	21	09.32	-14	27	32.5		9 675
209		1990	09	16.30069	22	21	07.73	-14	27	35.4		9 675
233		1987	04	21.27725	13	37	10.06	-13	07	10.2		9 675
233		1987	04	21.30451	13	37	08.66	-13	06	57.8		9 675
240		1988	07	16.36319	19	37	42.24	-21	26	48.9		9 675
263		1991	01	22.31666	09	15	28.98	+13	54	13.3		9 675
263		1991	01	22.34895	09	15	27.34	+13	54	20.3		9 675
276		1987	04	21.27725	13	57	16.75	-11	53	37.3		9 675
276		1987	04	21.30451	13	57	15.55	-11	53	20.7		9 675
281		1991	07	14.30000	19	22	27.54	-31	29	23.2	15.8	9 675
281		1991	07	14.33368	19	22	24.88	-31	29	27.8		9 675
281		1991	07	17.32691	19	18	45.51	-31	37	02.1		9 675
281		1991	07	18.28742	19	17	35.64	-31	39	08.7		9 675

281		1991	07	18.31719	19	17	33.17	-31	39	13.0	9 675
287		1990	09	14.18924	21	16	10.21	-18	20	11.7	9 675
287		1990	09	14.22760	21	16	09.16	-18	20	25.5	9 675
287		1990	09	15.24097	21	15	45.36	-18	26	21.9	9 675
287		1990	09	15.27777	21	15	44.49	-18	26	35.4	9 675
287		1990	09	18.17344	21	14	46.43	-18	42	27.0	9 675
287		1990	09	18.20694	21	14	45.80	-18	42	38.7	9 675
308		1986	02	05.27909	07	31	56.24	+16	01	04.1	9 675
308		1986	02	05.30260	07	31	55.17	+16	01	08.5	9 675
308		1986	02	06.23576	07	31	14.39	+16	04	13.4	9 675
308		1986	02	06.28385	07	31	12.23	+16	04	23.0	9 675
308		1986	02	07.22256	07	30	32.25	+16	07	27.3	9 675
308		1986	02	07.25711	07	30	30.76	+16	07	34.4	9 675
309		1988	09	15.39965	00	20	33.12	+02	41	13.4	9 675
309		1988	09	15.43385	00	20	31.35	+02	41	06.5	9 675
310		1989	11	03.27278	01	30	37.53	+11	08	03.0	15.2 9 675
310		1989	11	03.30815	01	30	35.92	+11	07	51.8	9 675
310		1989	11	04.27013	01	29	52.94	+11	02	41.2	9 675
310		1989	11	04.30364	01	29	51.62	+11	02	31.1	9 675
310		1989	11	24.15364	01	18	21.08	+09	32	30.4	9 675
310		1989	11	24.19701	01	18	20.03	+09	32	21.5	9 675
317		1988	09	15.39965	00	17	53.49	+00	14	49.0	9 675
317		1988	09	15.43385	00	17	51.62	+00	14	36.6	9 675
321		1987	04	21.27725	14	03	13.17	-11	56	01.4	9 675
321		1987	04	21.30451	14	03	11.86	-11	55	55.3	9 675
321		1989	09	30.41579	02	04	06.24	+11	26	23.4	9 675
321		1989	09	30.47465	02	04	03.93	+11	26	13.8	9 675
321		1989	11	03.27278	01	37	16.59	+09	27	23.6	15.0 9 675
321		1989	11	03.30815	01	37	14.87	+09	27	16.4	9 675
321		1989	11	04.27013	01	36	30.21	+09	23	58.2	9 675
321		1989	11	04.30364	01	36	28.62	+09	23	51.3	9 675
321		1989	11	24.15364	01	24	33.77	+08	34	29.8	9 675
321		1989	11	24.19701	01	24	32.67	+08	34	26.8	9 675
408		1990	09	16.18038	21	31	37.10	-06	43	02.4	9 675
408		1990	09	16.22465	21	31	35.61	-06	43	07.0	9 675
414		1991	07	19.37292	21	10	13.33	-20	35	27.6	15.5 9 675
426		1990	09	14.17917	21	08	20.85	-08	19	54.0	9 675
426		1990	09	16.18038	21	07	12.46	-08	19	25.6	9 675
426		1990	09	16.22465	21	07	10.94	-08	19	24.5	9 675
428		1991	07	14.30000	19	15	44.35	-33	18	58.7	15.8 9 675
428		1991	07	14.33368	19	15	41.81	-33	19	02.4	9 675
428		1991	07	17.32691	19	12	04.71	-33	23	49.7	15.2 9 675
428		1991	07	17.36476	19	12	01.87	-33	23	52.9	9 675
428		1991	07	18.28742	19	10	55.71	-33	25	00.4	9 675
428		1991	07	18.31719	19	10	53.29	-33	25	02.4	9 675
442		1990	09	14.26441	22	17	26.62	-15	08	13.2	9 675
442		1990	09	14.30417	22	17	24.77	-15	08	26.7	9 675
442		1990	09	17.21181	22	15	18.25	-15	25	03.4	9 675
442		1990	09	17.24549	22	15	16.82	-15	25	14.2	9 675
442		1990	09	20.25590	22	13	16.65	-15	40	44.6	15.8 9 675
442		1990	09	20.29097	22	13	15.24	-15	40	55.4	9 675
484		1990	09	15.24097	21	02	21.10	-23	28	37.1	9 675
484		1990	09	15.27777	21	02	20.43	-23	28	46.8	9 675
485		1990	09	14.17917	20	52	51.25	-02	42	13.6	9 675
485		1990	09	14.21875	20	52	50.20	-02	42	31.2	9 675
493		1990	09	17.21181	22	12	13.56	-19	49	34.1	9 675
493		1990	09	17.24549	22	12	11.92	-19	49	29.8	9 675
493		1990	09	20.25590	22	09	52.83	-19	42	14.0	17.0 9 675
493		1990	09	20.29097	22	09	51.17	-19	42	08.3	9 675

497	1987	04	21.27725	13	46	43.14	-13	52	48.9		9 675
497	1987	04	21.30451	13	46	41.78	-13	52	43.4		9 675
523	1988	07	16.36319	19	49	35.37	-17	30	49.0		9 675
523	1988	08	16.20451	19	26	22.78	-18	13	27.4		9 675
525	1988	08	16.17430	19	25	55.12	-12	29	51.0		9 675
525	1988	08	16.20451	19	25	54.12	-12	29	57.8		9 675
526	1987	04	21.27725	13	51	12.61	-08	04	42.2		9 675
526	1987	04	21.30451	13	51	11.30	-08	04	34.7		9 675
535	1991	07	16.29010	19	00	49.00	-27	02	08.3		9 675
535	1991	07	16.32602	19	00	46.89	-27	02	15.9		9 675
540	1990	09	16.18038	21	13	33.09	-08	54	48.7		9 675
540	1990	09	16.22465	21	13	31.82	-08	55	04.1		9 675
544	1991	07	16.29010	18	57	57.16	-25	35	55.9		9 675
544	1991	07	16.32602	18	57	55.03	-25	35	47.1		9 675
553	1990	09	15.24097	21	11	36.11	-25	14	50.5	16.2	9 675
553	1990	09	15.27777	21	11	34.88	-25	14	49.8		9 675
563	1991	07	16.29010	19	02	35.79	-28	24	43.5		9 675
563	1991	07	16.32602	19	02	33.70	-28	24	51.0		9 675
563	1991	07	18.28742	19	00	38.65	-28	31	46.6		9 675
563	1991	07	18.31719	19	00	36.70	-28	31	53.8		9 675
570	1988	09	15.39965	00	09	16.98	+03	01	44.7		9 675
570	1988	09	15.43385	00	09	15.59	+03	01	36.2		9 675
622	1988	08	16.17430	19	15	56.28	-17	33	16.7		9 675
622	1988	08	16.20451	19	15	55.14	-17	33	29.2		9 675
636	1989	09	30.41579	02	08	29.80	+10	22	07.5		9 675
636	1989	09	30.47465	02	08	27.24	+10	22	04.8		9 675
636	1989	11	03.27278	01	39	04.64	+09	35	16.9		9 675
636	1989	11	03.30815	01	39	02.82	+09	35	14.0		9 675
636	1989	11	04.27013	01	38	14.99	+09	34	03.9		9 675
636	1989	11	04.30364	01	38	13.30	+09	34	01.9		9 675
636	1989	11	24.15364	01	25	47.65	+09	27	08.6		9 675
636	1989	11	24.19701	01	25	46.54	+09	27	10.4		9 675
703	1990	09	15.25885	21	34	06.29	-10	18	52.5	16.0	9 675
703	1990	09	15.29497	21	34	05.00	-10	19	00.8		9 675
703	1990	09	16.18038	21	33	37.24	-10	23	18.0	16.0	9 675
703	1990	09	16.22465	21	33	35.78	-10	23	31.1		9 675
708	1991	07	19.37292	20	58	33.37	-21	29	16.2	15.2	9 675
722	1987	04	21.27725	13	54	36.45	-08	43	30.9		9 675
722	1987	04	21.30451	13	54	34.53	-08	43	26.2		9 675
727	1986	02	05.27909	07	37	43.59	+16	56	48.5		9 675
727	1986	02	05.30260	07	37	42.50	+16	57	01.1		9 675
727	1986	02	06.23576	07	37	01.07	+17	05	33.6		9 675
727	1986	02	06.28385	07	36	58.87	+17	06	00.1		9 675
727	1986	02	07.22256	07	36	18.48	+17	14	30.7		9 675
727	1986	02	07.25711	07	36	17.00	+17	14	48.9		9 675
762	1991	07	12.38229	21	52	13.86	-09	22	16.6		9 675
762	1991	07	12.41736	21	52	12.71	-09	22	14.8		9 675
762	1991	07	14.45417	21	51	11.40	-09	20	33.7		9 675
762	1991	07	14.48299	21	51	10.45	-09	20	33.2		9 675
762	1991	07	17.39670	21	49	35.66	-09	18	46.7		9 675
762	1991	07	17.43872	21	49	34.20	-09	18	44.6		9 675
762	1991	07	18.43108	21	49	00.04	-09	18	17.3	14.2	9 675
762	1991	07	18.46424	21	48	58.84	-09	18	16.8		9 675
793	1991	03	12.41493	13	33	15.20	+00	01	46.9	15.8	9 675
793	1991	03	12.44779	13	33	13.94	+00	01	49.8		9 675
832	1989	09	30.41579	02	14	25.31	+14	43	19.2		9 675
832	1989	09	30.47465	02	14	23.22	+14	43	08.9		9 675
832	1989	11	03.27278	01	48	30.56	+12	17	56.0	15.2	9 675
832	1989	11	03.30815	01	48	28.89	+12	17	45.8	15.5	9 675

832	1989	11	04.27013	01	47	43.93	+12	13	10.3		15.5	9 675
832	1989	11	04.30364	01	47	42.34	+12	13	00.4			9 675
832	1991	01	22.31666	09	03	37.06	+15	30	47.5			9 675
832	1991	01	22.34895	09	03	35.35	+15	30	54.2			9 675
850	1990	09	14.19948	21	33	22.16	-25	44	29.7			9 675
850	1990	09	14.23663	21	33	21.07	-25	44	38.6			9 675
851	1990	09	14.18924	21	08	57.30	-16	57	22.3		16.0	9 675
851	1990	09	14.22760	21	08	56.11	-16	57	29.1			9 675
851	1990	09	18.17344	21	07	10.83	-17	08	23.5			9 675
851	1990	09	18.20694	21	07	09.99	-17	08	29.3			9 675
857	1991	07	16.29010	18	59	07.54	-27	19	55.2			9 675
857	1991	07	16.32602	18	59	05.29	-27	20	05.0			9 675
865	1990	09	16.18038	21	22	19.38	-06	33	47.7			9 675
865	1990	09	16.22465	21	22	17.89	-06	34	09.9		16.5	9 675
873	1990	09	14.18924	21	30	11.98	-15	05	02.8		16.0	9 675
873	1990	09	14.22760	21	30	10.88	-15	05	13.5			9 675
873	1990	09	18.17344	21	28	36.66	-15	21	38.6		16.8	9 675
873	1990	09	18.20694	21	28	35.93	-15	21	45.9			9 675
948	1991	07	14.30000	19	13	31.53	-34	08	35.9		16.8	9 675
948	1991	07	14.33368	19	13	29.45	-34	08	36.6			9 675
948	1991	07	18.28742	19	09	47.06	-34	08	50.1			9 675
948	1991	07	18.31719	19	09	45.22	-34	08	49.8			9 675
949	1990	09	16.18038	21	27	24.58	-12	32	54.9			9 675
949	1990	09	16.22465	21	27	23.08	-12	32	56.1		15.2	9 675
954	1988	09	15.39965	00	08	39.62	+00	26	03.5			9 675
954	1988	09	15.43385	00	08	38.12	+00	25	53.2			9 675
974	1991	03	12.41493	13	35	54.18	-01	42	39.0		15.2	9 675
974	1991	03	12.44779	13	35	53.04	-01	42	29.7			9 675
990	1991	07	14.30000	19	38	48.03	-35	18	12.3		15.8	9 675
990	1991	07	14.33368	19	38	45.68	-35	18	14.9			9 675
990	1991	07	17.32691	19	35	25.20	-35	19	58.0			9 675
990	1991	07	17.36476	19	35	22.49	-35	19	57.1			9 675
991	1987	04	21.27725	13	49	15.28	-09	23	39.0			9 675
991	1987	04	21.30451	13	49	14.01	-09	23	32.9			9 675
993	1986	02	05.27909	07	32	32.94	+19	18	59.8			9 675
993	1986	02	05.30260	07	32	31.83	+19	19	01.3			9 675
993	1986	02	06.23576	07	31	52.09	+19	21	11.5			9 675
993	1986	02	06.28385	07	31	50.00	+19	21	14.8			9 675
993	1986	02	07.22256	07	31	11.20	+19	23	24.8			9 675
993	1986	02	07.25711	07	31	09.80	+19	23	28.6			9 675
993	1987	04	21.27725	13	51	03.48	-10	10	56.7			9 675
993	1987	04	21.30451	13	51	02.08	-10	10	49.6			9 675
993	1988	07	16.36319	19	44	49.93	-18	41	39.5			9 675
993	1988	08	16.17430	19	21	43.97	-19	48	45.2			9 675
993	1988	08	16.20516	19	21	42.93	-19	48	47.9			9 675
993	1989	09	30.41579	02	04	00.67	+11	38	03.6			9 675
993	1989	09	30.47465	02	03	58.47	+11	37	49.0			9 675
993	1989	11	03.27278	01	38	13.51	+08	52	58.3		16.2	9 675
993	1989	11	03.30815	01	38	11.91	+08	52	48.7		16.0	9 675
993	1989	11	04.27013	01	37	29.01	+08	48	15.9		16.5	9 675
993	1989	11	04.30364	01	37	27.47	+08	48	06.8			9 675
993	1989	11	24.15364	01	26	08.15	+07	36	18.3			9 675
993	1989	11	24.19701	01	26	07.08	+07	36	12.3			9 675
993	1991	01	22.31666	09	05	08.08	+14	23	16.7			9 675
993	1991	01	22.34895	09	05	06.44	+14	23	24.5			9 675
1001	1991	07	13.41493	20	49	30.41	-07	38	17.9		15.0	9 675
1001	1991	07	13.44618	20	49	29.05	-07	38	16.8			9 675
1005	1990	09	14.19948	21	16	18.58	-27	47	30.8			9 675
1005	1990	09	14.23663	21	16	17.04	-27	47	21.3			9 675

1032		1991	07	14.30000	19	34	01.54	-30	26	52.4		9 675
1032		1991	07	14.33368	19	33	59.64	-30	27	02.4		9 675
1032		1991	07	17.32691	19	31	22.36	-30	40	56.2		9 675
1032		1991	07	17.36476	19	31	20.34	-30	41	05.1		9 675
1032		1991	07	18.28742	19	30	32.40	-30	45	07.1		9 675
1032		1991	07	18.31719	19	30	30.59	-30	45	15.6		9 675
1046		1990	09	16.26406	22	52	32.74	-12	57	09.9		9 675
1046		1990	09	16.30069	22	52	30.87	-12	57	14.1		9 675
1049		1990	09	15.24097	21	25	05.67	-20	57	51.7	15.8	9 675
1049		1990	09	15.27777	21	25	04.16	-20	57	44.5		9 675
1049		1990	09	16.18906	21	24	31.07	-20	54	25.3	17.2	9 675
1049		1990	09	16.23316	21	24	29.38	-20	54	14.9	16.8	9 675
1064		1991	07	18.43108	21	41	28.63	-04	26	04.1		9 675
1064		1991	07	18.46424	21	41	27.22	-04	25	56.3	14.2	9 675
1068		1990	09	14.18924	21	25	04.43	-13	37	42.0	16.0	9 675
1068		1990	09	14.22760	21	25	03.14	-13	37	45.3		9 675
1068		1990	09	16.18038	21	24	03.01	-13	40	01.6		9 675
1068		1990	09	16.22465	21	24	01.65	-13	40	04.9		9 675
1068		1990	09	18.17344	21	23	06.47	-13	42	03.4		9 675
1068		1990	09	18.20694	21	23	05.52	-13	42	05.0		9 675
1071		1991	07	16.29010	18	58	01.70	-29	16	05.8	16.0	9 675
1071		1991	07	16.32602	18	57	59.67	-29	16	10.4		9 675
1071		1991	07	18.28742	18	56	10.93	-29	19	12.9		9 675
1071		1991	07	18.31719	18	56	09.08	-29	19	15.9		9 675
1083		1990	09	17.21181	22	09	38.04	-19	45	31.5		9 675
1083		1990	09	17.24549	22	09	36.40	-19	45	37.8		9 675
1083		1990	09	20.25590	22	07	15.32	-19	54	09.1		9 675
1083		1990	09	20.29097	22	07	13.48	-19	54	11.5		9 675
1088		1989	11	24.15364	01	32	36.30	+06	37	37.9		9 675
1088		1989	11	24.19701	01	32	35.42	+06	37	55.9		9 675
1090		1991	07	18.43108	21	49	56.85	-06	21	47.4	17.5	9 675
1090		1991	07	18.46424	21	49	55.58	-06	21	59.6		9 675
1091		1991	01	22.31666	09	26	15.33	+16	27	46.3		9 675
1091		1991	01	22.34895	09	26	13.94	+16	27	53.3		9 675
1097		1988	07	16.36319	19	32	38.30	-20	33	08.7		9 675
1111		1991	07	12.38229	21	49	19.54	-13	13	07.6	15.5	9 675
1111		1991	07	12.41736	21	49	18.75	-13	13	14.5		9 675
1111		1991	07	14.45417	21	48	34.24	-13	19	57.0	15.5	9 675
1111		1991	07	14.48299	21	48	33.51	-13	20	02.3		9 675
1111		1991	07	17.39670	21	47	20.80	-13	30	30.2	15.0	9 675
1111		1991	07	17.43872	21	47	19.58	-13	30	39.7		9 675
1112		1991	07	18.43108	21	58	26.48	-08	54	04.7	14.8	9 675
1112		1991	07	18.46424	21	58	25.46	-08	54	02.8	15.0	9 675
1130		1989	11	24.15364	01	03	49.92	+06	41	42.1		9 675
1130		1989	11	24.19701	01	03	49.92	+06	41	40.1		9 675
1141		1990	09	16.18906	21	44	48.06	-20	17	55.2	17.2	9 675
1141		1990	09	16.23316	21	44	46.55	-20	18	02.8		9 675
1189		1990	09	15.24983	21	18	07.19	-02	27	16.6		9 675
1189		1990	09	15.28663	21	18	06.07	-02	27	23.5		9 675
1218		1991	07	19.37292	21	17	08.25	-20	41	14.0	17.2	9 675
1244		1990	09	14.17917	21	13	27.29	-04	27	30.1	15.8	9 675
1244		1990	09	14.21875	21	13	25.86	-04	27	38.7		9 675
1249		1991	07	18.43108	21	50	09.65	-06	10	25.4	15.5	9 675
1249		1991	07	18.46424	21	50	08.33	-06	10	26.1		9 675
1272		1991	07	12.38229	21	49	36.25	-16	01	11.2	17.0	9 675
1272		1991	07	12.41736	21	49	35.18	-16	01	08.7		9 675
1272		1991	07	14.45417	21	48	39.49	-15	58	41.9	16.8	9 675
1272		1991	07	14.48299	21	48	38.60	-15	58	40.3		9 675
1272		1991	07	17.39670	21	47	07.35	-15	55	44.2	17.0	9 675

1272	1991	07	17.43872	21	47	05.81	-15	55	41.2		9 675
1274	1991	07	12.38229	21	50	46.31	-15	24	35.8	16.0	9 675
1274	1991	07	12.41736	21	50	44.98	-15	24	38.9		9 675
1274	1991	07	14.45417	21	49	31.91	-15	27	33.7	16.0	9 675
1274	1991	07	14.48299	21	49	30.78	-15	27	36.5		9 675
1274	1991	07	17.39670	21	47	33.65	-15	32	33.6	16.0	9 675
1274	1991	07	17.43872	21	47	31.72	-15	32	38.2		9 675
1284	1991	01	22.31666	09	24	50.19	+11	57	11.0		9 675
1284	1991	01	22.34895	09	24	48.24	+11	57	10.8		9 675
1305	1991	07	19.37292	21	10	38.79	-19	33	40.8	15.5	9 675
1338	1991	07	16.29010	19	13	00.98	-27	16	12.4	16.5	9 675
1338	1991	07	16.32602	19	12	58.47	-27	16	12.4		9 675
1338	1991	07	18.28742	19	10	44.16	-27	16	02.3		9 675
1338	1991	07	18.31719	19	10	41.93	-27	16	01.3		9 675
1340	1988	07	16.36319	20	00	14.40	-21	03	36.1		9 675
1342	1991	07	14.30000	19	39	43.36	-35	55	11.3	15.2	9 675
1342	1991	07	14.33368	19	39	40.17	-35	54	58.0		9 675
1342	1991	07	17.32691	19	35	09.14	-35	33	42.8		9 675
1342	1991	07	17.36476	19	35	05.63	-35	33	24.8		9 675
1345	1991	07	12.38229	21	35	50.24	-13	46	21.1	17.0	9 675
1345	1991	07	12.41736	21	35	49.35	-13	46	27.7		9 675
1345	1991	07	14.45417	21	34	59.66	-13	53	15.7	16.5	9 675
1345	1991	07	14.48299	21	34	58.90	-13	53	21.9		9 675
1345	1991	07	17.39670	21	33	43.41	-14	03	30.2	16.5	9 675
1345	1991	07	17.43872	21	33	42.13	-14	03	37.6		9 675
1364	1991	07	14.30000	19	50	36.14	-34	48	27.8	16.0	9 675
1364	1991	07	14.33368	19	50	34.17	-34	48	35.9		9 675
1364	1991	07	17.32691	19	47	46.90	-35	03	23.7	15.8	9 675
1364	1991	07	17.36476	19	47	44.62	-35	03	33.3		9 675
1372	1990	09	15.25885	21	40	42.80	-10	35	38.5		9 675
1372	1990	09	15.29497	21	40	41.06	-10	35	34.6		9 675
1373	1991	07	13.41493	21	07	48.87	-01	40	07.8	16.5	9 675
1373	1991	07	13.44618	21	07	47.04	-01	39	49.1		9 675
1373	1991	07	19.35900	21	01	53.31	-00	42	52.4		9 675
1373	1991	07	19.42237	21	01	49.40	-00	42	18.7	16.5	9 675
1396	1990	09	16.18906	21	40	11.75	-17	20	11.8	16.8	9 675
1396	1990	09	16.23316	21	40	10.27	-17	20	08.0		9 675
1414	1990	09	14.18924	21	24	31.86	-16	14	54.5	18.5	9 675
1414	1990	09	14.22760	21	24	30.72	-16	15	04.5		9 675
1414	1990	09	18.17344	21	22	35.01	-16	31	20.3		9 675
1414	1990	09	18.20694	21	22	34.02	-16	31	29.1		9 675
1434	1990	09	16.26406	22	29	55.04	-12	04	32.0		9 675
1434	1990	09	16.30069	22	29	53.60	-12	04	46.5		9 675
1471	1991	07	14.30000	19	36	07.13	-32	46	52.5	16.0	9 675
1471	1991	07	14.33368	19	36	04.81	-32	46	49.7		9 675
1471	1991	07	17.32691	19	32	46.93	-32	42	24.4	15.8	9 675
1471	1991	07	17.36476	19	32	44.37	-32	42	20.5		9 675
1476	1991	07	19.37292	21	25	08.81	-21	05	58.7	15.8	9 675
1482	1989	09	30.41579	02	14	12.78	+10	10	30.6		9 675
1482	1989	09	30.47465	02	14	10.51	+10	10	19.0		9 675
1482	1989	11	03.27278	01	47	42.80	+08	06	30.0	15.5	9 675
1482	1989	11	03.30815	01	47	41.08	+08	06	23.1		9 675
1482	1989	11	04.27013	01	46	55.61	+08	03	09.0	16.0	9 675
1482	1989	11	04.30364	01	46	53.99	+08	03	02.7		9 675
1492	1990	09	16.26406	22	32	13.36	-14	01	27.6	16.5	9 675
1492	1990	09	16.30069	22	32	11.47	-14	01	42.0		9 675
1516	1990	09	15.24097	21	24	44.84	-20	40	22.4	17.0	9 675
1516	1990	09	15.27777	21	24	43.72	-20	40	30.0		9 675
1516	1990	09	16.18906	21	24	19.49	-20	43	29.7	17.2	9 675

1516	1990	09	16.23316	21	24	18.22	-20	43	37.6		9 675
1528	1990	09	15.25885	21	48	55.52	-16	53	14.3		9 675
1528	1990	09	15.29497	21	48	54.26	-16	53	25.8		9 675
1528	1990	09	16.18906	21	48	21.86	-16	58	07.5	17.2	9 675
1541	1991	07	19.37292	21	03	03.15	-23	16	10.2	16.0	9 675
1551	1991	07	19.37292	21	06	18.99	-18	50	36.6	16.0	9 675
1559	1988	09	15.39965	00	24	54.18	+05	46	42.3	16.2	9 675
1559	1988	09	15.43385	00	24	52.35	+05	46	33.6		9 675
1587	1991	07	14.30000	19	24	34.58	-33	19	23.2	16.2	9 675
1587	1991	07	14.33368	19	24	32.28	-33	19	26.0		9 675
1587	1991	07	17.32691	19	21	16.55	-33	21	42.8	16.0	9 675
1587	1991	07	17.36476	19	21	14.10	-33	21	44.4		9 675
1587	1991	07	18.28742	19	20	14.26	-33	22	11.7		9 675
1587	1991	07	18.31719	19	20	12.13	-33	22	11.0		9 675
1593	1991	07	12.38229	21	33	43.21	-15	14	29.0	14.8	9 675
1593	1991	07	12.41736	21	33	43.64	-15	14	57.1		9 675
1593	1991	07	14.45417	21	34	16.81	-15	43	57.8	14.5	9 675
1593	1991	07	14.48299	21	34	17.03	-15	44	23.6		9 675
1610	1990	09	14.26441	22	00	03.99	-13	53	37.2	15.8	9 675
1610	1990	09	14.30417	22	00	02.23	-13	53	39.7		9 675
1610	1990	09	15.25885	21	59	23.31	-13	54	43.9	16.0	9 675
1610	1990	09	15.29497	21	59	21.77	-13	54	45.0		9 675
1616	1991	07	16.35799	21	13	59.54	-29	03	18.8	16.5	9 675
1616	1991	07	16.39809	21	13	57.79	-29	03	31.7		9 675
1635	1986	02	06.23576	07	41	36.44	+19	01	15.7		9 675
1635	1986	02	06.28385	07	41	34.16	+19	01	23.3		9 675
1635	1986	02	07.22256	07	40	52.43	+19	03	40.3		9 675
1635	1986	02	07.25711	07	40	50.97	+19	03	45.5		9 675
1635	1991	01	22.31666	09	07	04.63	+14	18	26.3		9 675
1635	1991	01	22.34895	09	07	02.98	+14	18	33.8		9 675
1636	1988	08	16.17430	19	33	55.37	-16	32	32.6		9 675
1636	1988	08	16.20451	19	33	54.02	-16	32	41.4		9 675
1644	1991	07	18.43108	22	03	48.21	-03	46	38.1	16.5	9 675
1644	1991	07	18.46424	22	03	47.11	-03	46	37.3		9 675
1656	1991	03	12.41493	13	27	51.92	+00	31	43.0	15.0	9 675
1656	1991	03	12.44779	13	27	51.06	+00	32	37.1		9 675
1672	1990	09	14.18924	21	03	22.68	-15	56	23.4	17.0	9 675
1672	1990	09	14.22760	21	03	21.54	-15	56	28.6		9 675
1672	1990	09	18.17344	21	01	39.58	-16	05	14.5	18.0	9 675
1672	1990	09	18.20694	21	01	38.75	-16	05	20.6		9 675
1707	1987	04	21.27725	13	33	23.43	-12	25	22.3		9 675
1707	1987	04	21.30451	13	33	21.62	-12	25	14.7		9 675
1709	1991	07	12.38229	21	37	42.36	-12	35	35.5	15.8	9 675
1709	1991	07	12.41736	21	37	41.45	-12	35	24.8		9 675
1709	1991	07	14.45417	21	36	52.88	-12	25	04.9	15.0	9 675
1709	1991	07	14.48299	21	36	52.06	-12	24	56.4		9 675
1709	1991	07	17.39670	21	35	28.32	-12	10	52.0	15.5	9 675
1711	1990	09	14.18924	21	13	58.16	-19	40	53.7		9 675
1711	1990	09	15.24097	21	13	33.39	-19	45	39.0	16.5	9 675
1711	1990	09	15.27777	21	13	32.53	-19	45	48.5		9 675
1711	1990	09	18.17344	21	12	32.86	-19	58	02.1		9 675
1711	1990	09	18.20694	21	12	32.24	-19	58	10.3		9 675
1721	1991	07	19.37292	21	14	56.04	-19	23	11.7	16.2	9 675
1737	1991	07	19.37292	21	05	36.95	-21	40	42.0	16.2	9 675
1768	1988	09	15.39965	00	22	38.17	+00	53	15.6		9 675
1768	1988	09	15.43385	00	22	36.42	+00	53	10.2		9 675
1779	1991	01	22.31666	09	08	57.02	+15	06	53.6		9 675
1816	1991	07	18.43108	21	49	46.14	-01	36	29.2	17.0	9 675
1816	1991	07	18.46424	21	49	44.95	-01	36	44.3		9 675

1827	1986	02	05.27909	07	16	18.43	+14	40	24.8		9 675
1827	1986	02	05.30260	07	16	17.55	+14	40	27.8		9 675
1827	1986	02	06.23576	07	15	46.41	+14	42	52.4		9 675
1827	1986	02	06.28385	07	15	44.62	+14	42	59.5		9 675
1827	1986	02	07.22256	07	15	14.82	+14	45	23.5		9 675
1827	1986	02	07.25711	07	15	13.72	+14	45	28.3		9 675
1834	1990	09	14.17917	21	08	47.01	-03	54	03.2	16.8	9 675
1834	1990	09	14.21875	21	08	45.90	-03	54	12.0		9 675
1850	1990	09	16.26406	22	32	34.45	-17	01	40.6	16.8	9 675
1850	1990	09	16.30069	22	32	32.52	-17	01	47.0	16.2	9 675
1857	1991	07	18.43108	21	54	19.44	-04	59	08.9	16.0	9 675
1857	1991	07	18.46424	21	54	18.39	-04	59	08.0		9 675
1861	1990	09	14.19948	21	43	24.16	-26	48	06.7		9 675
1861	1990	09	14.23663	21	43	22.69	-26	48	02.6		9 675
1884	1990	09	17.21181	22	07	22.71	-22	39	40.0		9 675
1884	1990	09	17.24549	22	07	20.58	-22	39	32.6		9 675
1884	1990	09	20.25590	22	04	12.28	-22	28	20.3	17.8	9 675
1884	1990	09	20.29097	22	04	10.13	-22	28	10.2		9 675
1887	1991	07	16.35799	20	39	58.83	-29	45	17.3		9 675
1887	1991	07	16.39809	20	39	56.74	-29	45	21.8	16.0	9 675
1894	1990	09	15.25885	21	42	26.98	-12	21	10.6	16.8	9 675
1894	1990	09	15.29497	21	42	25.77	-12	21	17.5		9 675
1913	1991	07	12.38229	21	54	41.97	-14	25	55.0	16.8	9 675
1913	1991	07	12.41736	21	54	41.07	-14	25	59.5		9 675
1913	1991	07	14.45417	21	53	51.79	-14	30	23.3	16.5	9 675
1913	1991	07	14.48299	21	53	50.96	-14	30	26.6		9 675
1913	1991	07	17.39670	21	52	31.11	-14	37	27.3	16.2	9 675
1913	1991	07	17.43872	21	52	29.80	-14	37	34.1		9 675
1923	1990	09	14.18924	21	09	26.27	-19	43	22.2	18.5	9 675
1933	1988	08	16.17430	19	16	44.29	-14	35	44.2		9 675
1933	1988	08	16.20451	19	16	43.43	-14	35	54.8		9 675
1940	1988	08	16.17430	19	39	02.22	-15	38	17.0		9 675
1940	1988	08	16.20451	19	39	01.04	-15	38	18.8		9 675
1948	1989	09	30.41579	02	24	26.09	+15	09	49.8		9 675
1948	1989	09	30.47465	02	24	23.59	+15	09	43.7		9 675
1948	1989	11	03.27278	01	54	29.11	+13	34	32.0	17.5	9 675
1948	1989	11	03.30815	01	54	27.13	+13	34	24.7		9 675
1948	1989	11	04.27013	01	53	33.34	+13	31	01.6	17.2	9 675
1948	1989	11	04.30364	01	53	31.47	+13	30	54.7		9 675
1949	1986	02	07.22256	07	36	16.89	+17	25	50.3		9 675
1949	1986	02	07.25711	07	36	15.19	+17	25	53.4		9 675
1952	1991	07	16.35799	20	56	42.76	-32	29	52.2	15.8	9 675
1952	1991	07	16.39809	20	56	40.95	-32	30	09.7		9 675
1956	1991	07	12.38229	21	44	08.13	-12	56	25.7	18.0	9 675
1956	1991	07	12.41736	21	44	07.11	-12	56	30.8		9 675
1956	1991	07	14.45417	21	43	11.35	-13	01	35.1	17.2	9 675
1956	1991	07	14.48299	21	43	10.42	-13	01	39.7		9 675
1956	1991	07	17.39670	21	41	43.90	-13	09	33.2	17.8	9 675
1956	1991	07	17.43872	21	41	42.54	-13	09	39.7		9 675
1975	1988	09	15.39965	00	15	03.15	-00	07	47.1		9 675
1975	1988	09	15.43385	00	15	01.65	-00	08	02.4		9 675
1977	1991	01	22.31666	09	28	26.56	+18	55	11.0		9 675
1977	1991	01	22.34895	09	28	24.79	+18	55	15.1		9 675
1982	1989	11	24.15364	01	19	31.51	+07	44	07.7		9 675
1982	1989	11	24.19701	01	19	30.72	+07	44	16.3		9 675
1983	1987	04	21.27725	13	49	11.33	-13	04	00.0		9 675
1983	1987	04	21.30451	13	49	09.72	-13	03	56.0		9 675
1984	1987	04	21.27725	14	03	45.64	-09	16	43.5		9 675
1984	1987	04	21.30451	14	03	44.39	-09	16	34.6		9 675

2021	1991	01	22.31666	09	10	35.22	+12	47	33.4		9 675
2021	1991	01	22.34895	09	10	33.39	+12	47	45.1		9 675
2034	1991	07	16.35799	21	03	07.19	-31	03	55.6	17.0	9 675
2034	1991	07	16.39809	21	03	04.86	-31	04	09.2		9 675
2043	1990	09	14.18924	21	04	10.06	-16	25	19.7	16.0	9 675
2043	1990	09	14.22760	21	04	09.10	-16	25	21.7		9 675
2043	1990	09	18.17344	21	02	42.99	-16	27	50.6	16.8	9 675
2043	1990	09	18.20694	21	02	42.44	-16	27	50.8		9 675
2052	1990	09	14.17917	21	09	29.34	-03	32	55.1	16.0	9 675
2052	1990	09	14.21875	21	09	28.27	-03	33	08.4		9 675
2065	1990	09	15.25885	21	36	17.79	-12	57	41.9	16.2	9 675
2065	1990	09	15.29497	21	36	16.32	-12	57	42.8		9 675
2066	1990	09	16.18906	21	42	05.48	-17	39	23.0		9 675
2066	1990	09	16.23316	21	42	03.96	-17	39	30.5	17.5	9 675
2079	1990	09	14.19948	21	14	12.82	-25	13	31.3		9 675
2079	1990	09	14.23663	21	14	11.38	-25	13	22.2		9 675
2079	1990	09	15.24097	21	13	34.17	-25	09	51.3	17.5	9 675
2079	1990	09	15.27777	21	13	32.79	-25	09	43.9		9 675
2080	1990	09	16.18906	21	30	23.31	-20	03	41.6		9 675
2080	1990	09	16.23316	21	30	21.55	-20	03	40.4		9 675
2103	1990	09	16.18038	21	12	17.66	-10	06	56.2	16.8	9 675
2103	1990	09	16.22465	21	12	16.41	-10	07	02.2		9 675
2113	1991	07	16.35799	20	46	20.43	-29	24	36.5	17.0	9 675
2113	1991	07	16.39809	20	46	18.23	-29	24	47.0		9 675
2121	1986	02	05.27909	07	25	57.78	+18	59	32.0		9 675
2121	1986	02	05.30260	07	25	56.48	+18	59	37.6		9 675
2121	1986	02	06.23576	07	25	07.68	+19	03	13.6		9 675
2121	1986	02	07.22256	07	24	17.37	+19	07	01.3		9 675
2147	1991	07	14.45417	21	40	19.69	-11	13	57.6	17.2	9 675
2147	1991	07	14.48299	21	40	18.91	-11	14	05.4		9 675
2147	1991	07	17.39670	21	38	58.64	-11	26	40.9	17.0	9 675
2147	1991	07	17.43872	21	38	57.33	-11	26	53.3	17.5	9 675
2175	1990	09	16.18038	21	13	38.28	-08	50	36.2	16.8	9 675
2175	1990	09	16.22465	21	13	37.61	-08	50	49.1	16.5	9 675
2182	1988	09	15.39965	00	34	52.76	+01	07	50.9	16.5	9 675
2182	1988	09	15.43385	00	34	51.32	+01	07	43.0		9 675
2186	1990	09	14.18924	21	13	46.49	-13	27	48.6	17.2	9 675
2186	1990	09	14.22760	21	13	45.29	-13	27	53.0		9 675
2186	1990	09	16.18038	21	12	48.75	-13	32	10.1		9 675
2186	1990	09	16.22465	21	12	47.39	-13	32	14.3	17.2	9 675
2186	1990	09	18.17344	21	11	56.88	-13	36	12.2		9 675
2186	1990	09	18.20694	21	11	55.95	-13	36	15.5		9 675
2187	1991	07	14.45417	22	01	04.31	-10	27	51.2		9 675
2187	1991	07	14.48299	22	01	03.88	-10	28	03.5		9 675
2187	1991	07	17.39670	22	00	25.76	-10	51	06.1	17.5	9 675
2187	1991	07	17.43872	22	00	25.02	-10	51	28.3		9 675
2188	1990	09	14.26441	22	16	53.22	-12	07	40.2	16.2	9 675
2188	1990	09	14.30417	22	16	51.59	-12	07	50.8		9 675
2190	1989	09	30.41579	02	10	14.06	+14	15	38.8		9 675
2190	1989	09	30.47465	02	10	11.53	+14	15	25.4		9 675
2190	1989	11	03.27278	01	40	39.53	+11	30	51.9	17.8	9 675
2190	1989	11	03.30815	01	40	37.75	+11	30	40.8		9 675
2190	1989	11	04.27013	01	39	48.07	+11	25	39.5	17.0	9 675
2190	1989	11	04.30364	01	39	46.38	+11	25	28.4		9 675
2190	1989	11	24.15364	01	26	24.89	+10	00	05.6		9 675
2190	1989	11	24.19701	01	26	23.67	+09	59	57.9		9 675
2197	1991	07	19.37292	21	14	56.45	-19	27	28.5	17.2	9 675
2217	1991	01	22.31666	09	35	06.95	+14	50	12.0		9 675
2217	1991	01	22.34895	09	35	05.69	+14	50	20.1		9 675

2223	1989	09	30.41579	02	19	52.34	+16	52	10.6		9 675
2223	1989	09	30.47465	02	19	50.95	+16	51	59.2		9 675
2228	1989	11	24.15364	01	23	16.54	+05	43	51.0		9 675
2228	1989	11	24.19701	01	23	15.64	+05	43	47.5		9 675
2252	1990	09	14.18924	21	19	08.71	-18	58	15.7	17.0	9 675
2252	1990	09	14.22760	21	19	07.39	-18	58	16.7		9 675
2252	1990	09	15.24097	21	18	35.98	-18	58	04.8	17.5	9 675
2252	1990	09	15.27777	21	18	34.85	-18	58	04.0		9 675
2252	1990	09	18.17344	21	17	14.72	-18	56	45.4	17.6	9 675
2252	1990	09	18.20694	21	17	13.82	-18	56	45.1		9 675
2255	1991	03	12.41493	13	38	44.55	-01	13	06.4	17.8	9 675
2255	1991	03	12.44779	13	38	43.38	-01	12	59.6	17.2	9 675
2264	1987	04	21.27725	14	03	11.09	-12	39	09.6		9 675
2264	1987	04	21.30451	14	03	09.90	-12	39	03.0		9 675
2290	1988	08	16.17430	19	31	35.15	-12	23	51.2		9 675
2290	1988	08	16.20451	19	31	33.78	-12	24	01.4		9 675
2293	1990	09	14.26441	21	56	25.44	-13	12	47.3	16.8	9 675
2293	1990	09	14.30417	21	56	23.98	-13	12	54.4		9 675
2293	1990	09	15.25885	21	55	49.86	-13	15	46.8	17.0	9 675
2293	1990	09	15.29497	21	55	48.56	-13	15	53.1		9 675
2296	1987	04	21.27725	14	00	26.07	-11	54	19.2		9 675
2296	1987	04	21.30451	14	00	24.77	-11	54	13.4		9 675
2306	1989	11	24.15364	01	04	23.05	+09	28	54.9		9 675
2306	1989	11	24.19701	01	04	22.45	+09	28	45.9		9 675
2310	1990	09	14.18924	21	30	35.67	-16	19	36.6	17.2	9 675
2310	1990	09	14.22760	21	30	34.42	-16	19	43.6		9 675
2310	1990	09	16.18906	21	29	33.53	-16	25	07.0		9 675
2310	1990	09	16.23316	21	29	32.15	-16	25	14.4		9 675
2310	1990	09	18.17344	21	28	35.65	-16	30	09.5	18.0	9 675
2310	1990	09	18.20694	21	28	34.67	-16	30	14.2		9 675
2314	1990	09	14.19948	21	33	04.82	-23	24	19.5	17.2	9 675
2314	1990	09	14.23663	21	33	03.24	-23	24	17.4		9 675
2324	1991	01	22.31666	09	22	35.40	+15	27	05.4		9 675
2324	1991	01	22.34895	09	22	33.91	+15	27	13.2		9 675
2325	1990	09	16.26406	22	29	26.85	-10	37	34.1		9 675
2325	1990	09	16.30069	22	29	25.23	-10	37	43.3		9 675
2334	1990	09	16.18906	21	44	55.18	-17	41	44.2	18.2	9 675
2334	1990	09	16.23316	21	44	53.61	-17	41	52.9		9 675
2339	1987	04	21.27725	13	38	59.01	-12	35	09.1		9 675
2339	1987	04	21.30451	13	38	57.47	-12	35	04.5		9 675
2347	1990	09	15.24983	21	40	09.71	+01	23	37.0		9 675
2347	1990	09	15.28663	21	40	08.23	+01	23	32.5	16.0	9 675
2349	1991	01	22.31666	09	07	42.55	+15	19	36.3		9 675
2349	1991	01	22.34895	09	07	40.99	+15	19	52.8		9 675
2357	1989	09	30.41579	02	03	41.40	+10	53	17.7		9 675
2357	1989	09	30.47465	02	03	39.95	+10	53	08.9		9 675
2357	1989	11	03.27278	01	47	44.14	+09	16	08.9	16.5	9 675
2357	1989	11	03.30815	01	47	43.10	+09	16	02.9		9 675
2357	1989	11	04.27013	01	47	15.94	+09	13	21.8	16.5	9 675
2357	1989	11	04.30364	01	47	15.00	+09	13	15.2		9 675
2363	1989	09	30.41579	02	24	49.38	+13	19	29.4		9 675
2363	1989	09	30.47465	02	24	47.95	+13	19	10.9		9 675
2369	1991	07	19.37292	21	22	37.18	-19	41	48.5	16.8	9 675
2374	1990	09	15.24097	21	06	32.73	-25	16	04.9	16.2	9 675
2374	1990	09	15.27777	21	06	31.53	-25	15	50.7		9 675
2376	1989	09	30.41579	02	19	11.02	+10	27	52.6		9 675
2376	1989	09	30.47465	02	19	08.98	+10	27	43.7		9 675
2376	1989	11	03.27278	01	54	29.89	+08	47	21.0	15.5	9 675
2376	1989	11	03.30815	01	54	28.25	+08	47	14.8		9 675

2376	1989	11	04.27013	01	53	44.71	+08	44	35.3	16.0	9 675
2376	1989	11	04.30364	01	53	43.16	+08	44	30.1		9 675
2392	1990	09	14.18924	21	05	03.14	-17	22	19.8	17.8	9 675
2392	1990	09	14.22760	21	05	01.91	-17	22	28.5		9 675
2392	1990	09	18.17344	21	03	15.41	-17	34	46.4	18.5	9 675
2392	1990	09	18.20694	21	03	14.77	-17	34	50.4		9 675
2401	1987	04	21.27725	13	43	36.11	-07	57	39.3		9 675
2401	1987	04	21.30451	13	43	34.62	-07	57	33.8		9 675
2401	1989	09	30.41579	02	25	56.24	+11	39	36.2		9 675
2401	1989	09	30.47465	02	25	54.15	+11	39	29.7		9 675
2401	1989	11	03.27278	01	58	41.34	+10	04	37.5	16.5	9 675
2401	1989	11	03.30815	01	58	39.44	+10	04	31.3		9 675
2401	1989	11	04.27013	01	57	49.12	+10	01	43.8	16.5	9 675
2401	1989	11	04.30364	01	57	47.31	+10	01	37.8		9 675
2403	1991	07	12.38229	21	51	13.74	-11	00	15.1	16.0	9 675
2403	1991	07	12.41736	21	51	12.97	-11	00	14.1		9 675
2403	1991	07	14.45417	21	50	29.44	-10	59	04.0	16.5	9 675
2403	1991	07	14.48299	21	50	28.69	-10	59	02.9		9 675
2403	1991	07	17.39670	21	49	14.44	-10	58	26.6	16.0	9 675
2403	1991	07	17.43872	21	49	13.21	-10	58	26.4		9 675
2409	1991	01	22.31666	09	25	51.89	+14	19	39.1		9 675
2409	1991	01	22.34895	09	25	49.95	+14	19	48.9		9 675
2411	1988	07	16.36319	19	41	14.37	-20	27	59.6		9 675
2413	1991	07	18.43108	21	47	42.76	-05	17	57.7	16.5	9 675
2413	1991	07	18.46424	21	47	41.81	-05	18	04.4		9 675
2417	1990	09	16.26406	22	23	50.44	-14	25	50.9	17.5	9 675
2417	1990	09	16.30069	22	23	48.92	-14	25	58.5		9 675
2433	1990	09	14.17917	21	01	17.12	-06	01	33.2	16.0	9 675
2433	1990	09	14.21875	21	01	16.56	-06	01	53.2		9 675
2458	1988	09	15.39965	00	21	56.91	-00	20	42.5	16.0	9 675
2458	1988	09	15.43385	00	21	55.43	-00	20	52.7		9 675
2467	1991	01	22.31666	09	11	07.54	+16	02	47.1		9 675
2467	1991	01	22.34895	09	11	05.39	+16	02	51.9		9 675
2468	1990	09	15.24983	21	32	36.24	-04	45	56.8	16.0	9 675
2468	1990	09	15.28663	21	32	35.38	-04	46	12.8	16.2	9 675
2470	1990	09	14.18924	21	17	26.29	-20	06	16.8	17.2	9 675
2470	1990	09	15.24097	21	16	56.81	-20	07	44.7	17.0	9 675
2470	1990	09	15.27777	21	16	55.79	-20	07	47.3		9 675
2470	1990	09	18.17344	21	15	42.97	-20	11	06.2		9 675
2470	1990	09	18.20694	21	15	42.32	-20	11	09.7		9 675
2484	1989	09	30.41579	02	18	24.10	+13	59	57.0		9 675
2484	1989	09	30.47465	02	18	22.34	+13	59	44.6		9 675
2484	1989	11	03.27278	01	52	38.23	+11	02	09.1	15.2	9 675
2484	1989	11	03.30815	01	52	36.51	+11	01	58.1		9 675
2484	1989	11	04.27013	01	51	52.84	+10	56	51.9	15.5	9 675
2484	1989	11	04.30364	01	51	51.20	+10	56	43.1		9 675
2493	1991	07	13.41493	21	04	09.74	-02	07	26.1	16.8	9 675
2493	1991	07	13.44618	21	04	08.66	-02	07	24.9		9 675
2493	1991	07	19.35900	21	00	39.49	-02	09	29.3	16.8	9 675
2493	1991	07	19.42237	21	00	37.03	-02	09	33.0		9 675
2496	1991	07	12.38229	21	32	38.77	-13	36	48.3	17.0	9 675
2496	1991	07	12.41736	21	32	37.48	-13	36	54.3		9 675
2496	1991	07	14.45417	21	31	25.02	-13	43	04.8	17.0	9 675
2496	1991	07	14.48299	21	31	23.79	-13	43	11.2		9 675
2496	1991	07	17.39670	21	29	28.40	-13	53	03.2	16.8	9 675
2496	1991	07	17.43872	21	29	26.49	-13	53	11.4		9 675
2544	1991	07	12.38229	21	47	39.58	-09	11	23.6	16.5	9 675
2544	1991	07	12.41736	21	47	37.52	-09	11	10.2		9 675
2544	1991	07	14.45417	21	45	43.93	-08	58	22.1	16.2	9 675

2544	1991	07	14.48299	21	45	42.22	-08	58	11.2		9 675
2544	1991	07	18.43108	21	41	43.95	-08	34	35.5	16.2	9 675
2544	1991	07	18.46424	21	41	41.78	-08	34	24.6		9 675
2545	1991	07	19.37292	20	58	07.92	-20	28	09.5	16.8	9 675
2567	1991	01	22.31666	09	01	20.53	+13	59	12.2		9 675
2567	1991	01	22.34895	09	01	18.90	+13	59	24.0		9 675
2603	1989	09	30.41579	02	01	13.13	+11	05	34.1		9 675
2603	1989	09	30.47465	02	01	10.69	+11	05	25.3		9 675
2603	1989	11	03.27278	01	33	19.10	+09	06	34.0	16.8	9 675
2603	1989	11	03.30815	01	33	17.48	+09	06	26.8		9 675
2603	1989	11	04.27013	01	32	32.49	+09	03	15.4	16.8	9 675
2603	1989	11	04.30364	01	32	30.81	+09	03	09.1		9 675
2603	1989	11	24.15364	01	20	47.28	+08	17	44.8		9 675
2603	1989	11	24.19701	01	20	46.20	+08	17	42.1		9 675
2614	1991	07	19.37292	20	55	39.13	-21	46	47.1		9 675
2623	1990	09	14.18924	21	13	02.94	-18	18	06.8	16.2	9 675
2623	1990	09	14.22760	21	13	01.93	-18	17	59.9		9 675
2623	1990	09	15.24097	21	12	39.80	-18	14	55.5	16.2	9 675
2623	1990	09	15.27777	21	12	38.93	-18	14	48.8		9 675
2623	1990	09	18.17344	21	11	49.95	-18	05	03.4	16.8	9 675
2623	1990	09	18.20694	21	11	49.40	-18	04	57.1		9 675
2637	1990	09	15.24097	21	05	57.07	-20	35	09.5	15.8	9 675
2637	1990	09	15.27777	21	05	56.81	-20	34	55.8		9 675
2653	1990	09	16.18038	21	07	03.15	-11	18	10.2	16.8	9 675
2653	1990	09	16.22465	21	07	01.95	-11	18	22.4		9 675
2657	1990	09	14.26441	22	16	43.92	-14	03	29.7		9 675
2657	1990	09	14.30417	22	16	42.31	-14	03	36.9	17.0	9 675
2666	1990	09	14.17917	21	03	41.35	-00	49	33.1	16.8	9 675
2666	1990	09	14.21875	21	03	40.34	-00	49	51.8		9 675
2683	1991	01	22.31666	09	25	39.71	+16	14	57.3		9 675
2683	1991	01	22.34895	09	25	38.13	+16	15	03.5		9 675
2729	1988	07	16.36319	19	42	16.49	-25	15	59.0		9 675
2739	1990	09	15.25885	21	36	26.04	-12	15	22.5	17.0	9 675
2739	1990	09	15.29497	21	36	25.07	-12	15	28.0		9 675
2753	1991	07	19.37292	21	01	34.20	-23	46	20.8	17.2	9 675
2757	1988	09	15.39965	00	30	29.41	+03	08	33.8	16.0	9 675
2757	1988	09	15.43385	00	30	28.00	+03	08	26.3		9 675
2761	1987	04	21.27725	13	39	10.18	-10	01	36.5		9 675
2761	1987	04	21.30451	13	39	08.84	-10	01	30.9		9 675
2772	1991	03	12.41493	13	47	33.81	+03	27	19.7	17.5	9 675
2772	1991	03	12.44779	13	47	32.80	+03	27	37.5	17.8	9 675
2780	1988	08	16.17430	19	26	39.35	-16	53	57.4		9 675
2780	1988	08	16.20451	19	26	38.38	-16	53	57.0		9 675
2795	1989	11	24.15364	01	14	16.60	+07	16	04.9		9 675
2795	1989	11	24.19701	01	14	15.74	+07	15	53.0		9 675
2796	1990	09	16.26406	22	34	28.55	-10	33	45.6	17.0	9 675
2796	1990	09	16.30069	22	34	26.96	-10	34	04.7		9 675
2800	1991	01	22.31666	09	14	58.33	+18	07	10.2		9 675
2800	1991	01	22.34895	09	14	56.77	+18	07	18.9		9 675
2811	1991	07	12.38229	21	46	28.48	-13	56	53.0	17.0	9 675
2811	1991	07	12.41736	21	46	27.47	-13	56	56.9		9 675
2811	1991	07	14.45417	21	45	30.07	-14	01	27.4	16.8	9 675
2811	1991	07	14.48299	21	45	29.16	-14	01	31.1		9 675
2811	1991	07	17.39670	21	43	58.39	-14	08	40.7	16.8	9 675
2811	1991	07	17.43872	21	43	56.93	-14	08	47.3		9 675
2814	1987	04	21.27725	13	48	35.28	-07	56	41.8		9 675
2814	1987	04	21.30451	13	48	33.93	-07	56	33.1		9 675
2817	1991	01	22.31666	09	03	44.06	+13	43	08.7		9 675
2817	1991	01	22.34895	09	03	41.81	+13	43	13.8		9 675

2853	1987	04	21.27725	14	01	59.95	-11	28	35.5		9 675
2853	1987	04	21.30451	14	01	58.41	-11	28	24.4		9 675
2859	1991	07	12.38229	21	45	46.17	-10	14	06.7	17.5	9 675
2859	1991	07	12.41736	21	45	44.95	-10	14	12.0		9 675
2859	1991	07	14.45417	21	44	38.26	-10	20	37.4		9 675
2859	1991	07	14.48299	21	44	37.19	-10	20	43.5		9 675
2859	1991	07	17.39670	21	42	51.14	-10	31	06.2	17.0	9 675
2859	1991	07	17.43872	21	42	49.40	-10	31	14.7	17.2	9 675
2881	1991	07	18.43108	21	46	48.90	-08	40	54.5	17.5	9 675
2881	1991	07	18.46424	21	46	47.56	-08	41	02.1		9 675
2884	1987	04	21.27725	13	40	57.06	-09	48	44.3		9 675
2884	1987	04	21.30451	13	40	55.87	-09	48	38.8		9 675
2894	1989	11	24.15364	01	17	25.91	+05	06	44.5		9 675
2894	1989	11	24.19701	01	17	24.82	+05	06	41.1		9 675
2899	1987	04	21.27725	13	46	54.29	-12	06	13.0		9 675
2899	1987	04	21.30451	13	46	52.52	-12	06	06.8		9 675
2914	1989	09	30.41579	02	27	07.54	+11	03	59.3		9 675
2914	1989	09	30.47465	02	27	05.88	+11	03	41.5		9 675
2916	1991	07	16.29010	19	11	14.11	-24	52	38.6	16.2	9 675
2922	1987	04	21.27725	13	40	00.19	-08	13	00.1		9 675
2922	1987	04	21.30451	13	39	58.72	-08	12	48.6		9 675
2928	1991	01	22.31666	09	33	55.12	+13	21	59.6		9 675
2928	1991	01	22.34895	09	33	53.64	+13	22	00.5		9 675
2977	1988	09	15.39965	00	27	40.81	-00	11	07.3	15.8	9 675
2977	1988	09	15.43385	00	27	39.52	-00	11	27.1		9 675
2980	1991	07	18.43108	21	58	28.74	-05	35	18.8	17.8	9 675
2980	1991	07	18.46424	21	58	27.83	-05	35	23.9		9 675
2981	1987	04	21.27725	14	02	29.47	-11	53	27.7		9 675
2981	1987	04	21.30451	14	02	28.16	-11	53	20.2		9 675
2982	1991	03	12.41493	13	26	56.09	-00	53	22.6	17.0	9 675
2982	1991	03	12.44779	13	26	54.94	-00	53	18.2		9 675
2990	1990	09	14.26441	22	14	28.39	-09	53	34.3	18.2	9 675
2990	1990	09	14.30417	22	14	26.47	-09	53	47.8		9 675
3012	1990	09	14.19948	21	18	18.20	-29	27	01.2	16.5	9 675
3012	1990	09	14.23663	21	18	16.54	-29	26	53.9		9 675
3022	1988	09	15.39965	00	14	26.02	+03	57	10.7		9 675
3022	1988	09	15.43385	00	14	24.51	+03	56	16.1		9 675
3028	1988	09	15.39965	00	23	45.49	+04	27	43.9		9 675
3028	1988	09	15.43385	00	23	44.12	+04	27	30.6		9 675
3033	1988	08	16.17430	19	12	26.59	-16	45	08.5		9 675
3033	1988	08	16.20451	19	12	25.81	-16	45	16.2		9 675
3065	1990	09	14.18924	21	06	48.21	-13	57	07.1	17.5	9 675
3065	1990	09	14.22760	21	06	47.02	-13	57	09.0		9 675
3065	1990	09	18.17344	21	05	04.23	-14	02	39.3		9 675
3065	1990	09	18.20694	21	05	03.46	-14	02	44.5		9 675
3078	1991	07	16.35799	20	48	22.98	-28	18	46.0	17.0	9 675
3078	1991	07	16.39809	20	48	21.15	-28	18	55.1		9 675
3116	1991	07	16.35799	20	53	41.60	-25	15	48.5	15.0	9 675
3116	1991	07	16.39809	20	53	39.80	-25	16	08.7		9 675
3135	1990	09	16.18038	21	28	53.01	-09	45	28.2	17.8	9 675
3135	1990	09	16.22465	21	28	51.33	-09	45	33.6		9 675
3138	1986	02	07.22256	07	12	54.17	+14	31	35.1		9 675
3138	1986	02	07.25711	07	12	52.84	+14	31	39.6		9 675
3158	1991	06	13.25156	14	47	01.06	-00	14	11.3	17	2 675
3158	1991	06	13.27899	14	47	00.50	-00	14	10.2		2 675
3158	1991	06	15.25330	14	46	14.91	-00	12	56.7		2 675
3158	1991	06	15.27760	14	46	14.45	-00	12	55.5		2 675
3169	1991	05	17.33246	14	22	25.25	+27	45	41.5	16.5	3 675
3169	1991	05	17.36510	14	22	22.98	+27	45	10.1		3 675

3169	1991	05	18.18177	14	21	28.79	+27	31	55.6		3 675
3169	1991	05	18.22795	14	21	25.48	+27	31	10.9		3 675
3170	1989	09	30.41579	02	02	45.36	+12	19	34.5		9 675
3170	1989	09	30.47465	02	02	43.06	+12	19	24.1		9 675
3170	1989	11	03.27278	01	36	14.28	+10	16	18.1	16.8	9 675
3170	1989	11	03.30815	01	36	12.60	+10	16	09.6	17.0	9 675
3170	1989	11	04.27013	01	35	28.19	+10	12	33.6	17.0	9 675
3170	1989	11	04.30364	01	35	26.66	+10	12	25.8		9 675
3170	1989	11	24.15364	01	23	31.09	+09	15	14.8		9 675
3170	1989	11	24.19701	01	23	29.94	+09	15	11.6		9 675
3170	1991	01	22.31666	09	30	15.27	+17	56	46.3		9 675
3170	1991	01	22.34895	09	30	13.69	+17	56	54.6		9 675
3191	1991	01	22.31666	09	28	10.14	+19	12	07.5		9 675
3191	1991	01	22.34895	09	28	08.52	+19	12	15.6		9 675
3212	1990	09	17.21181	22	05	06.00	-21	16	57.5		9 675
3212	1990	09	17.24549	22	05	04.38	-21	17	05.8		9 675
3212	1990	09	20.25590	22	02	54.17	-21	27	51.2		9 675
3212	1990	09	20.29097	22	02	52.11	-21	27	54.0		9 675
3229	1990	09	15.24983	21	30	49.58	-04	41	32.6	16.2	9 675
3229	1990	09	15.28663	21	30	48.27	-04	41	31.0		9 675
3231	1991	07	12.38229	21	48	38.19	-16	08	16.1	17.0	9 675
3231	1991	07	12.41736	21	48	37.09	-16	08	15.9		9 675
3231	1991	07	14.45417	21	47	39.28	-16	08	13.1	17.0	9 675
3231	1991	07	14.48299	21	47	38.32	-16	08	13.0		9 675
3231	1991	07	17.39670	21	46	03.23	-16	08	48.8	17.0	9 675
3231	1991	07	17.43872	21	46	01.57	-16	08	50.0		9 675
3233	1990	09	14.18924	21	09	23.35	-18	15	11.4	17.0	9 675
3233	1990	09	14.22760	21	09	22.00	-18	15	11.4		9 675
3233	1990	09	15.24097	21	08	50.63	-18	14	52.6	16.8	9 675
3233	1990	09	15.27777	21	08	49.48	-18	14	51.4		9 675
3233	1990	09	18.17344	21	07	31.42	-18	13	04.7		9 675
3233	1990	09	18.20694	21	07	30.56	-18	13	05.0		9 675
3235	1991	07	16.35799	21	02	10.72	-31	10	50.0	18.8	9 675
3235	1991	07	16.39809	21	02	08.28	-31	10	52.9		9 675
3236	1990	09	14.26441	21	51	20.06	-11	11	29.7	16.8	9 675
3236	1990	09	14.30417	21	51	18.18	-11	11	41.8		9 675
3236	1990	09	15.25885	21	50	34.48	-11	16	15.3	17.0	9 675
3236	1990	09	15.29497	21	50	32.82	-11	16	25.6		9 675
3240	1988	09	15.39965	00	16	32.93	+04	43	43.4	17.0	9 675
3240	1988	09	15.43385	00	16	31.87	+04	43	34.6		9 675
3252	1991	07	19.37292	20	57	02.34	-24	41	08.3	17.8	9 675
3261	1989	11	24.15364	01	21	47.27	+04	39	15.8		9 675
3261	1989	11	24.19701	01	21	46.32	+04	39	13.3		9 675
3297	1988	07	16.36319	20	01	36.55	-20	48	37.6		9 675
3299	1990	09	15.24983	21	42	04.32	-04	22	34.5	17.2	9 675
3299	1990	09	15.28663	21	42	02.68	-04	22	47.2		9 675
3345	1991	01	22.31666	09	15	23.23	+13	00	42.8		9 675
3345	1991	01	22.34895	09	15	20.91	+13	00	28.3		9 675
3397	1989	09	30.41579	02	07	58.06	+10	18	21.7		9 675
3397	1989	09	30.47465	02	07	54.39	+10	18	40.8		9 675
3409	1991	07	12.38229	21	49	57.42	-10	59	18.4	17.2	9 675
3409	1991	07	12.41736	21	49	56.58	-10	59	21.6	16.8	9 675
3409	1991	07	14.45417	21	49	08.01	-11	02	40.6		9 675
3409	1991	07	14.48299	21	49	07.33	-11	02	45.6		9 675
3409	1991	07	17.39670	21	47	48.45	-11	08	27.6	16.5	9 675
3409	1991	07	17.43872	21	47	47.11	-11	08	33.6		9 675
3421	1991	07	18.43108	21	56	51.08	-08	28	17.4	17.5	9 675
3421	1991	07	18.46424	21	56	49.93	-08	28	20.1		9 675
3423	1987	04	21.27725	13	39	47.64	-10	55	08.1		9 675

3423	1987	04	21.30451	13	39	46.39	-10	55	02.7		9 675
3448	1990	09	16.18906	21	44	57.99	-19	42	16.6	17.0	9 675
3448	1990	09	16.23316	21	44	56.18	-19	42	17.9		9 675
3456	1988	07	16.36319	19	45	48.89	-23	14	39.1		9 675
3459	1990	09	15.24097	21	13	29.10	-24	25	27.6	16.0	9 675
3459	1990	09	15.27777	21	13	28.73	-24	25	25.9		9 675
3462	1991	03	12.41493	13	23	03.23	+00	01	15.3	18.5	9 675
3462	1991	03	12.44779	13	23	01.93	+00	01	26.9		9 675
3479	1990	09	15.24983	21	35	03.24	-01	08	42.1	16.8	9 675
3479	1990	09	15.28663	21	35	02.27	-01	09	00.4		9 675
3480	1988	09	15.43385	00	27	41.26	+03	25	52.2	18.8	9 675
3490	1991	07	19.37292	21	05	48.98	-22	44	20.9	18.0	9 675
3501	1991	07	18.43108	22	00	37.16	-04	35	42.6	16.5	9 675
3501	1991	07	18.46424	22	00	36.25	-04	35	41.9		9 675
3505	1991	07	12.38229	21	48	50.32	-10	27	22.8	16.8	9 675
3505	1991	07	12.41736	21	48	49.27	-10	27	20.2		9 675
3505	1991	07	14.45417	21	47	51.74	-10	25	01.0	16.8	9 675
3505	1991	07	14.48299	21	47	50.87	-10	24	59.2		9 675
3505	1991	07	17.39670	21	46	19.69	-10	22	22.6	16.5	9 675
3505	1991	07	17.43872	21	46	18.22	-10	22	20.6		9 675
3506	1991	07	16.35799	20	58	42.31	-26	05	16.1	16.8	9 675
3506	1991	07	16.39809	20	58	40.34	-26	05	22.7		9 675
3519	1988	07	16.36319	19	39	37.92	-22	40	42.2		9 675
3534	1990	09	15.24983	21	25	23.91	-03	23	46.5	17.5	9 675
3534	1990	09	15.28663	21	25	22.55	-03	23	56.1		9 675
3588	1991	07	16.29010	19	21	29.06	-27	55	25.9	18.5	9 675
3588	1991	07	16.32602	19	21	27.27	-27	55	28.2		9 675
3608	1990	09	14.19948	21	38	08.23	-30	00	42.7		9 675
3609	1990	09	15.24097	21	03	56.38	-23	12	33.5	18.5	9 675
3609	1990	09	15.27777	21	03	55.23	-23	12	34.5		9 675
3623	1990	09	15.25885	21	45	24.59	-16	27	35.8	16.8	9 675
3623	1990	09	15.29497	21	45	23.29	-16	27	43.0	17.5	9 675
3623	1990	09	16.18906	21	44	55.11	-16	30	26.7		9 675
3623	1990	09	16.23316	21	44	53.65	-16	30	33.5		9 675
3647	1988	07	16.36319	19	51	11.72	-18	29	35.3		9 675
3656	1988	09	15.39965	00	19	11.93	+03	11	43.1	16.5	9 675
3656	1988	09	15.43385	00	19	09.89	+03	11	31.7		9 675
3656	1991	07	12.38229	21	35	37.73	-14	34	57.6	17.0	9 675
3656	1991	07	12.41736	21	35	36.46	-14	35	01.7	16.2	9 675
3656	1991	07	14.45417	21	34	28.23	-14	39	29.7	16.2	9 675
3656	1991	07	14.48299	21	34	27.11	-14	39	35.6		9 675
3656	1991	07	17.39670	21	32	36.26	-14	46	58.2	16.8	9 675
3656	1991	07	17.43872	21	32	34.39	-14	47	03.6	16.5	9 675
3661	1987	04	21.27725	13	58	50.24	-12	54	21.2		9 675
3661	1987	04	21.30451	13	58	48.94	-12	54	14.9		9 675
3694	1991	07	12.41736	21	46	57.36	-12	52	42.4	16.2	9 675
3694	1991	07	14.45417	21	46	08.59	-12	54	35.1	16.8	9 675
3694	1991	07	14.48299	21	46	07.83	-12	54	37.4		9 675
3694	1991	07	17.39670	21	44	51.78	-12	57	48.6	16.8	9 675
3694	1991	07	17.43872	21	44	50.55	-12	57	51.5	16.2	9 675
3699	1991	07	19.37292	21	12	13.03	-22	10	39.2	15.5	9 675
3721	1991	07	16.29010	19	03	29.14	-28	29	36.2	17.2	9 675
3721	1991	07	16.32602	19	03	27.18	-28	29	34.0		9 675
3721	1991	07	18.28742	19	01	42.24	-28	27	34.5		9 675
3721	1991	07	18.31719	19	01	40.44	-28	27	32.1		9 675
3739	1990	09	15.24097	20	59	50.16	-22	24	37.5	17.0	9 675
3739	1990	09	15.27777	20	59	49.98	-22	24	39.7		9 675
3748	1990	09	15.24097	21	11	51.01	-24	22	25.4	18.2	9 675
3748	1990	09	15.27777	21	11	49.68	-24	22	24.5		9 675

3749	1990	09	16.18038	21	15	58.41	-10	30	27.8	17.0	9 675
3749	1990	09	16.22465	21	15	56.77	-10	30	33.5		9 675
3791	1990	09	14.18924	21	19	05.67	-15	40	05.9	16.8	9 675
3791	1990	09	14.22760	21	19	04.56	-15	40	10.6		9 675
3791	1990	09	18.17344	21	17	27.08	-15	45	42.4		9 675
3791	1990	09	18.20694	21	17	26.26	-15	45	45.3		9 675
3804	1987	04	21.27725	14	00	57.43	-12	56	36.3		9 675
3804	1987	04	21.30451	14	00	56.08	-12	56	30.8		9 675
3804	1991	01	22.31666	09	21	53.81	+18	30	54.2		9 675
3804	1991	01	22.34895	09	21	52.26	+18	31	00.7		9 675
3805	1991	07	16.29010	18	52	21.38	-31	35	18.7	17.2	9 675
3805	1991	07	16.32602	18	52	19.05	-31	35	11.8		9 675
3809	1990	09	17.21181	22	16	44.79	-16	50	14.9		9 675
3809	1990	09	17.24549	22	16	43.48	-16	50	25.1		9 675
3809	1990	09	20.25590	22	14	45.19	-17	04	02.0		9 675
3809	1990	09	20.29097	22	14	43.79	-17	04	11.3		9 675
3812	1990	09	15.24097	21	05	40.65	-25	17	52.8	17.8	9 675
3812	1990	09	15.27777	21	05	39.65	-25	18	00.0		9 675
3827	1990	09	15.25885	21	38	02.67	-14	04	19.0	17.2	9 675
3827	1990	09	15.29497	21	38	01.37	-14	04	21.1		9 675
3847	1990	09	16.18906	21	29	37.86	-19	54	43.5		9 675
3847	1990	09	16.23316	21	29	36.49	-19	54	46.9	17.8	9 675
3882	1989	09	30.41579	02	01	52.03	+11	19	54.4		9 675
3882	1989	09	30.47465	02	01	49.49	+11	19	33.4		9 675
3882	1989	11	24.15364	01	20	44.24	+05	49	59.7		9 675
3882	1989	11	24.19701	01	20	43.23	+05	49	51.9		9 675
3884	1990	09	14.18924	21	25	18.74	-16	16	06.6	18.8	9 675
3884	1990	09	14.22760	21	25	17.63	-16	16	10.9		9 675
3884	1990	09	18.17344	21	23	21.24	-16	23	40.5		9 675
3884	1990	09	18.20694	21	23	20.21	-16	23	46.4		9 675
3887	1990	09	14.17917	21	10	26.30	-05	55	59.1	17.2	9 675
3887	1990	09	14.21875	21	10	25.47	-05	56	15.3		9 675
3887	1990	09	16.18038	21	09	49.00	-06	09	46.2		9 675
3887	1990	09	16.22465	21	09	48.25	-06	10	05.2		9 675
3938	1988	07	16.36319	19	46	39.21	-18	42	02.3		9 675
3946	1990	09	14.26441	22	18	58.92	-10	13	30.1	17.2	9 675
3946	1990	09	14.30417	22	18	57.29	-10	13	39.1		9 675
3952	1991	07	12.38229	21	37	20.26	-13	01	06.2	19.0	9 675
3952	1991	07	12.41736	21	37	19.12	-13	01	11.4		9 675
3952	1991	07	14.45417	21	36	05.38	-13	05	25.3	18.5	9 675
3952	1991	07	14.48299	21	36	04.35	-13	05	27.0		9 675
3952	1991	07	17.39670	21	34	09.47	-13	12	21.5	18.8	9 675
3952	1991	07	17.43872	21	34	07.58	-13	12	26.2	18.5	9 675
3953	1991	01	22.31666	09	35	01.24	+15	04	39.8		9 675
3953	1991	01	22.34895	09	34	59.30	+15	04	53.2		9 675
3954	1988	09	15.39965	00	18	27.40	+00	06	19.8	17.8	9 675
3954	1988	09	15.43385	00	18	25.42	+00	06	03.5		9 675
3956	1986	02	05.30260	07	18	21.54	+16	37	59.2		9 675
3956	1991	07	18.43108	21	43	51.12	-05	33	51.8	16.2	9 675
3956	1991	07	18.46424	21	43	50.16	-05	33	45.9		9 675
3959	1991	07	18.43108	21	51	59.17	-07	07	44.4	18.0	9 675
3959	1991	07	18.46424	21	51	58.39	-07	07	47.5	17.5	9 675
3976	1989	11	03.27278	01	50	48.36	+14	24	37.9	16.0	9 675
3976	1989	11	03.30815	01	50	46.77	+14	24	18.0		9 675
3976	1989	11	04.27013	01	50	03.90	+14	15	16.9	16.0	9 675
3976	1989	11	04.30364	01	50	02.35	+14	14	58.2		9 675
4012	1986	02	05.27909	07	31	20.69	+15	10	33.2		9 675
4012	1986	02	05.30260	07	31	19.49	+15	10	34.8		9 675
4012	1986	02	06.23576	07	30	34.02	+15	12	43.8		9 675

4012	1986	02	06.28385	07	30	31.59	+15	12	51.7		9 675
4012	1986	02	07.22256	07	29	47.57	+15	15	00.7		9 675
4012	1986	02	07.25711	07	29	45.87	+15	15	05.9		9 675
4046	1991	07	13.41493	20	56	15.54	-04	06	32.3	16.5	9 675
4046	1991	07	13.44618	20	56	14.37	-04	06	32.7		9 675
4046	1991	07	19.35900	20	52	04.62	-04	14	19.5	16.5	9 675
4046	1991	07	19.42237	20	52	01.83	-04	14	26.2		9 675
4067	1991	07	19.37292	21	14	06.65	-19	42	01.8	17.5	9 675
4087	1990	09	16.26406	22	52	06.42	-13	17	40.4	16.0	9 675
4087	1990	09	16.30069	22	52	04.23	-13	17	43.3		9 675
4097	1990	09	16.26406	22	46	03.81	-12	46	35.0	16.5	9 675
4097	1990	09	16.30069	22	46	01.73	-12	46	36.8		9 675
4099	1990	09	17.21181	22	11	35.18	-21	05	00.3		9 675
4099	1990	09	17.24549	22	11	33.84	-21	05	15.3		9 675
4099	1990	09	20.25590	22	09	43.17	-21	26	11.6	18.0	9 675
4099	1990	09	20.29097	22	09	41.91	-21	26	25.3		9 675
4113	1990	09	14.18924	21	25	47.47	-19	10	12.5	17.5	9 675
4113	1990	09	16.18906	21	24	43.36	-19	17	49.4		9 675
4113	1990	09	16.23316	21	24	41.98	-19	17	57.2		9 675
4113	1990	09	18.17344	21	23	46.40	-19	24	39.0		9 675
4113	1990	09	18.20694	21	23	45.17	-19	24	44.0		9 675
4114	1990	09	14.18924	21	23	11.75	-12	36	18.6	17.2	9 675
4114	1990	09	14.22760	21	23	10.35	-12	36	15.0		9 675
4114	1990	09	16.18038	21	22	10.12	-12	32	41.9	17.0	9 675
4114	1990	09	16.22465	21	22	08.72	-12	32	37.3		9 675
4114	1990	09	18.17344	21	21	16.05	-12	28	51.2		9 675
4114	1990	09	18.20694	21	21	15.20	-12	28	45.4		9 675
4126	1991	07	12.38229	21	47	06.64	-15	47	44.0	18.5	9 675
4126	1991	07	12.41736	21	47	05.72	-15	47	50.8		9 675
4126	1991	07	14.45417	21	46	12.18	-15	54	30.8	17.8	9 675
4126	1991	07	14.48299	21	46	11.39	-15	54	35.9		9 675
4126	1991	07	17.39670	21	44	47.63	-16	04	41.0	18.2	9 675
4126	1991	07	17.43872	21	44	46.30	-16	04	49.0		9 675
4127	1990	09	14.18924	21	00	23.38	-16	32	48.8	17.8	9 675
4127	1990	09	14.22760	21	00	22.35	-16	32	54.1		9 675
4127	1990	09	18.17344	20	59	05.99	-16	41	42.2	18.2	9 675
4127	1990	09	18.20694	20	59	05.47	-16	41	49.7		9 675
4146	1990	09	14.18924	21	20	44.09	-13	03	14.6	18.2	9 675
4146	1990	09	14.22760	21	20	42.75	-13	03	25.8		9 675
4146	1990	09	16.18038	21	19	39.07	-13	13	17.9	18.2	9 675
4146	1990	09	16.22465	21	19	37.57	-13	13	30.2		9 675
4146	1990	09	18.17344	21	18	40.04	-13	22	52.7		9 675
4146	1990	09	18.20694	21	18	39.02	-13	23	01.9		9 675
4163	1990	09	16.26406	22	42	54.02	-17	27	07.4	17.2	9 675
4163	1990	09	16.30069	22	42	52.49	-17	27	19.2		9 675
4179	1988	07	16.36319	19	47	57.64	-20	53	59.8		9 675
4196	1987	04	21.27725	13	59	50.28	-10	48	35.7		9 675
4196	1987	04	21.30451	13	59	49.27	-10	48	29.9		9 675
4207	1991	07	18.43108	21	42	26.57	-02	38	42.4	17.0	9 675
4207	1991	07	18.46424	21	42	25.42	-02	38	41.4		9 675
4264	1989	11	24.15364	01	28	18.52	+04	33	28.9		9 675
4264	1989	11	24.19701	01	28	18.84	+04	33	30.4		9 675
4267	1989	11	24.15364	01	19	33.49	+10	08	50.3		9 675
4267	1989	11	24.19701	01	19	33.12	+10	08	43.1		9 675
4280	1989	09	30.41579	02	22	14.29	+10	34	16.4		9 675
4280	1989	09	30.47465	02	22	11.83	+10	34	09.1		9 675
4280	1989	11	03.27278	01	51	03.20	+08	54	30.5	17.0	9 675
4280	1989	11	03.30815	01	51	01.13	+08	54	24.6		9 675
4280	1989	11	04.27013	01	50	05.61	+08	51	45.6	17.0	9 675

4280	1989	11	04.30364	01	50	03.60	+08	51	39.8		9	675
4297	1991	01	22.31666	09	11	52.13	+17	38	56.4		9	675
4297	1991	01	22.34895	09	11	50.33	+17	39	08.7		9	675
4301	1989	09	30.41579	02	01	01.32	+10	45	29.5		9	675
4301	1989	09	30.47465	02	00	59.14	+10	45	19.4		9	675
4301	1989	11	03.27278	01	35	59.89	+08	41	30.8	17.8	9	675
4301	1989	11	03.30815	01	35	58.47	+08	41	23.0		9	675
4301	1989	11	04.27013	01	35	16.54	+08	37	59.1	17.5	9	675
4301	1989	11	04.30364	01	35	15.01	+08	37	51.6		9	675
4301	1989	11	24.15364	01	23	35.37	+07	44	04.0		9	675
4301	1989	11	24.19701	01	23	34.16	+07	44	00.0		9	675
4303	1989	11	24.15364	01	02	50.78	+07	14	00.7		9	675
4303	1989	11	24.19701	01	02	50.39	+07	14	05.5		9	675
4308	1991	07	12.38229	21	46	40.81	-11	01	11.6	17.2	9	675
4308	1991	07	12.41736	21	46	39.70	-11	01	06.6		9	675
4308	1991	07	14.45417	21	45	37.40	-10	55	35.0	17.0	9	675
4308	1991	07	14.48299	21	45	36.41	-10	55	31.3		9	675
4308	1991	07	17.39670	21	43	56.37	-10	48	19.8	16.8	9	675
4308	1991	07	17.43872	21	43	54.72	-10	48	14.1		9	675
4313	1989	11	03.27278	01	39	39.07	+06	49	44.4	17.0	9	675
4313	1989	11	03.30815	01	39	37.22	+06	49	42.5		9	675
4313	1989	11	24.15364	01	24	45.57	+06	46	28.8		9	675
4313	1989	11	24.19701	01	24	44.22	+06	46	31.4		9	675
4316	1991	01	22.31666	09	07	02.67	+17	33	17.0		9	675
4316	1991	01	22.34895	09	07	01.03	+17	33	24.7		9	675
4318	1989	09	30.41579	02	21	54.63	+13	01	31.8		9	675
4318	1989	09	30.47465	02	21	52.50	+13	01	29.3		9	675
4318	1989	11	03.27278	01	56	06.05	+12	08	04.7	16.8	9	675
4318	1989	11	03.30815	01	56	04.33	+12	08	00.6		9	675
4318	1989	11	04.27013	01	55	17.43	+12	06	09.9	16.5	9	675
4321	1991	01	22.31666	09	28	30.49	+14	52	37.9		9	675
4321	1991	01	22.34895	09	28	29.06	+14	52	49.6		9	675
4323	1986	02	05.27909	07	27	53.60	+17	04	26.0		9	675
4323	1986	02	05.30260	07	27	52.31	+17	04	30.4		9	675
4323	1986	02	07.22256	07	26	18.23	+17	07	33.0		9	675
4323	1986	02	07.25711	07	26	16.52	+17	07	36.4		9	675
4334	1991	01	22.31666	09	18	38.70	+18	04	55.6		9	675
4334	1991	01	22.34895	09	18	37.19	+18	05	02.7		9	675
4336	1991	07	19.37292	21	15	18.64	-26	46	04.8		9	675
4343	1990	09	14.17917	20	57	15.52	-07	41	31.2	17.8	9	675
4343	1990	09	14.21875	20	57	14.39	-07	41	40.9		9	675
4348	1989	09	30.41579	02	08	10.57	+14	50	35.4		9	675
4348	1989	09	30.47465	02	08	09.17	+14	50	25.5		9	675
4348	1989	11	03.27278	01	51	49.92	+12	47	59.8	16.5	9	675
4348	1989	11	03.30815	01	51	48.89	+12	47	51.3		9	675
4348	1989	11	04.27013	01	51	20.67	+12	44	07.9	16.5	9	675
4348	1989	11	04.30364	01	51	19.70	+12	43	59.2	16.8	9	675
4354	1988	09	15.39965	00	33	56.89	+05	56	18.9	17.0	9	675
4354	1988	09	15.43385	00	33	55.51	+05	56	04.7		9	675
4364	1991	07	10.41823	20	23	46.51	-18	11	31.6	17	2	675
4364	1991	07	10.44149	20	23	45.26	-18	11	38.1		2	675
4364	1991	07	11.38837	20	22	52.24	-18	15	14.0		2	675
4371	1991	07	12.38229	21	46	55.55	-17	18	46.5	17.0	9	675
4371	1991	07	12.41736	21	46	54.29	-17	18	55.9		9	675
4371	1991	07	14.45417	21	45	44.16	-17	27	24.5		9	675
4371	1991	07	14.48299	21	45	43.09	-17	27	30.7		9	675
4382	1991	03	12.41493	13	41	06.89	-01	29	16.0	17.5	9	675
4382	1991	03	12.44779	13	41	05.75	-01	29	06.9		9	675
4397	1991	01	22.31666	09	08	27.30	+19	13	18.1		9	675

4397	1991	01	22.34895	09	08	25.23	+19	13	21.2		9	675
4480	1989	09	30.41579	02	12	23.91	+10	04	56.5		9	675
4480	1989	09	30.47465	02	12	21.78	+10	04	50.5		9	675
4480	1989	11	03.27278	01	43	42.50	+08	44	32.7	16.8	9	675
4480	1989	11	03.30815	01	43	40.60	+08	44	27.9		9	675
4480	1989	11	04.27013	01	42	50.85	+08	42	34.0	16.5	9	675
4480	1989	11	04.30364	01	42	49.09	+08	42	30.1		9	675
4480	1989	11	24.15364	01	30	45.94	+08	31	30.8		9	675
4480	1989	11	24.19701	01	30	45.02	+08	31	34.1		9	675
4491	1991	07	12.41736	21	45	26.72	-14	05	43.1		9	675
4491	1991	07	14.45417	21	44	22.05	-14	07	03.3	16.8	9	675
4491	1991	07	14.48299	21	44	21.13	-14	07	04.9		9	675
4491	1991	07	17.39670	21	42	35.33	-14	09	53.9	17.0	9	675
4491	1991	07	17.43872	21	42	33.53	-14	09	56.5		9	675
4492	1988	09	15.39965	00	20	20.47	+05	01	50.4	16.5	9	675
4492	1988	09	15.43385	00	20	18.68	+05	01	48.9		9	675
4494	1991	07	12.38229	21	38	33.58	-12	58	47.0	18.0	9	675
4494	1991	07	12.41736	21	38	32.19	-12	58	51.9		9	675
4494	1991	07	14.45417	21	37	15.44	-13	02	51.4	17.8	9	675
4494	1991	07	14.48299	21	37	14.29	-13	02	54.1		9	675
4494	1991	07	17.39670	21	35	14.45	-13	09	29.1	18.0	9	675
4494	1991	07	17.43872	21	35	12.59	-13	09	33.8		9	675
4502	1990	09	16.18038	21	17	31.30	-08	59	01.2	16.8	9	675
4502	1990	09	16.22465	21	17	30.06	-08	59	20.8		9	675
4517	1987	04	21.27725	13	49	43.97	-11	00	31.6		9	675
4525	1991	07	17.32691	19	20	28.03	-34	25	23.7	18.0	9	675
4525	1991	07	17.36476	19	20	25.57	-34	25	32.7		9	675
4545	1989	09	30.41579	02	00	55.85	+11	43	25.3		9	675
4545	1989	09	30.47465	02	00	53.80	+11	43	20.0		9	675
4545	1989	11	03.27278	01	35	40.86	+09	40	35.2	16.8	9	675
4545	1989	11	03.30815	01	35	39.29	+09	40	26.7		9	675
4545	1989	11	04.27013	01	34	56.84	+09	36	56.0	17.0	9	675
4545	1989	11	04.30364	01	34	55.34	+09	36	47.8		9	675
4545	1989	11	24.15364	01	23	20.51	+08	40	46.6		9	675
4545	1989	11	24.19701	01	23	19.39	+08	40	42.2		9	675
4545	1991	01	22.31666	09	13	32.85	+19	00	49.4		9	675
4545	1991	01	22.34895	09	13	31.30	+19	00	57.6		9	675
4552	1990	09	15.25885	21	51	36.70	-13	52	39.4	16.5	9	675
4552	1990	09	15.29497	21	51	35.40	-13	52	40.2		9	675
4561	1990	09	16.18906	21	54	10.68	-22	01	13.9		9	675
4561	1990	09	16.23316	21	54	08.62	-22	01	10.7		9	675
4561	1990	09	17.21181	21	53	23.24	-21	59	43.4		9	675
4561	1990	09	17.24549	21	53	21.71	-21	59	41.0		9	675
4572	1990	09	14.17917	21	16	15.09	-02	41	03.9		9	675
4572	1990	09	14.21875	21	16	14.24	-02	41	26.9		9	675
4572	1990	09	15.24983	21	15	55.57	-02	51	30.5	16.8	9	675
4572	1990	09	15.28663	21	15	54.90	-02	51	51.6		9	675
4589	1990	09	14.26441	21	59	48.98	-09	13	42.0	16.8	9	675
4591	1990	09	14.18924	21	03	59.62	-17	31	40.9	17.5	9	675
4591	1990	09	14.22760	21	03	58.62	-17	31	48.3		9	675
4591	1990	09	18.17344	21	02	47.40	-17	42	38.3	18.0	9	675
4591	1990	09	18.20694	21	02	46.97	-17	42	47.6		9	675
4600	1990	09	15.24097	20	59	06.92	-19	13	12.8		9	675
4600	1990	09	15.27777	20	59	06.26	-19	13	22.3		9	675
4604	1990	09	14.18924	21	01	25.47	-18	15	21.4	17.0	9	675
4604	1990	09	14.22760	21	01	24.61	-18	15	21.7		9	675
4604	1990	09	18.17344	21	00	39.44	-18	12	40.3	18.0	9	675
4604	1990	09	18.20694	21	00	39.09	-18	12	40.6		9	675
4608	1990	09	14.17917	20	54	57.04	-06	49	31.1	16.5	9	675

4608	1990	09	14.21875	20	54	55.99	-06	49	49.4		9 675
4609	1990	09	15.24983	21	20	21.65	-02	59	36.3	16.8	9 675
4609	1990	09	15.28663	21	20	20.71	-02	59	56.3		9 675
4610	1990	09	15.24097	21	02	00.33	-20	04	16.1	17.5	9 675
4610	1990	09	15.27777	21	01	59.58	-20	04	19.3		9 675
4614	1990	09	15.25885	21	41	30.90	-10	05	22.8	16.0	9 675
4614	1990	09	15.29497	21	41	30.31	-10	05	37.6		9 675
4625	1990	09	14.26441	22	15	50.44	-13	31	13.7	17.8	9 675
4625	1990	09	14.30417	22	15	48.37	-13	31	22.4		9 675
4626	1990	09	15.25885	21	46	12.58	-16	51	49.1		9 675
4626	1990	09	15.29497	21	46	10.99	-16	51	52.7		9 675
4626	1990	09	16.18906	21	45	34.18	-16	53	23.1		9 675
4626	1990	09	16.23316	21	45	32.36	-16	53	26.8		9 675
4627	1990	09	17.21181	22	05	35.27	-15	58	40.9		9 675
4627	1990	09	17.24549	22	05	34.07	-15	58	47.2		9 675
4640	1990	09	14.26441	22	02	39.79	-13	18	18.4	17.0	9 675
4640	1990	09	14.30417	22	02	37.71	-13	18	24.6		9 675
4640	1990	09	15.25885	22	01	49.15	-13	20	45.2	17.2	9 675
4640	1990	09	15.29497	22	01	47.20	-13	20	49.1		9 675
4653	1990	09	15.24983	21	32	27.04	-00	10	48.9	17.0	9 675
4653	1990	09	15.28663	21	32	26.04	-00	11	09.2		9 675
4662	1990	09	15.25885	21	39	49.28	-13	02	34.6	18.5	9 675
4662	1990	09	15.29497	21	39	48.03	-13	02	45.2		9 675
4669	1990	09	15.24097	20	57	34.79	-23	50	07.5	17.0	9 675
4669	1990	09	15.27777	20	57	34.36	-23	50	09.4		9 675
4678	1990	09	17.21181	22	11	57.10	-17	33	55.2		9 675
4678	1990	09	17.24549	22	11	55.81	-17	33	52.7		9 675
4678	1990	09	20.25590	22	10	18.14	-17	28	42.4	17.8	9 675
4678	1990	09	20.29097	22	10	16.97	-17	28	37.2		9 675
4702	1987	04	21.27725	13	44	54.81	-13	20	32.4		9 675
4702	1987	04	21.30451	13	44	53.19	-13	20	30.8		9 675
4702	1989	11	24.15364	01	03	45.93	+09	28	06.9		9 675
4702	1989	11	24.19701	01	03	44.88	+09	28	04.3		9 675
4716	1989	11	24.15364	01	05	38.92	+09	53	10.6		9 675
4716	1989	11	24.19701	01	05	37.85	+09	53	08.7		9 675
4735	1991	03	12.41493	13	20	34.19	+03	52	26.6	16.5	9 675
4735	1991	03	12.44779	13	20	33.00	+03	52	38.8		9 675
4746	1989	11	24.19701	01	09	19.94	+06	44	55.9		9 675
4759	1989	09	30.41579	02	29	07.40	+13	36	59.4		9 675
4759	1989	09	30.47465	02	29	05.55	+13	36	50.0		9 675
4759	1989	11	03.27278	02	05	08.88	+11	28	45.8	16.8	9 675
4759	1989	11	03.30815	02	05	07.27	+11	28	37.6		9 675
4759	1989	11	04.27013	02	04	23.30	+11	24	45.1	16.8	9 675
4759	1989	11	04.30364	02	04	21.77	+11	24	37.0		9 675
4778	1991	01	22.31666	09	35	27.58	+16	50	41.0		9 675
4778	1991	01	22.34895	09	35	26.19	+16	50	47.2		9 675
4779	1989	09	30.41579	02	07	05.85	+12	22	55.8		9 675
4779	1989	09	30.47465	02	07	03.81	+12	22	42.7		9 675
4779	1989	11	03.27278	01	43	13.33	+10	04	48.9	17.8	9 675
4779	1989	11	03.30815	01	43	11.79	+10	04	39.9		9 675
4779	1989	11	04.27013	01	42	30.86	+10	00	38.4	17.5	9 675
4779	1989	11	04.30364	01	42	29.34	+10	00	30.3		9 675
4779	1989	11	24.15364	01	30	50.24	+08	51	25.3		9 675
4779	1989	11	24.19701	01	30	49.05	+08	51	20.8		9 675
4799	1991	01	22.31666	09	09	56.75	+15	24	31.8		9 675
4799	1991	01	22.34895	09	09	54.88	+15	24	39.7		9 675
4801	1989	09	30.41579	02	22	44.46	+11	45	04.0		9 675
4801	1989	09	30.47465	02	22	42.45	+11	44	54.9		9 675
4801	1989	11	03.27278	01	55	03.34	+09	39	06.3	16.5	9 675

4801		1989	11	03.30815	01	55	01.36	+09	38	57.8	9 675
4801		1989	11	04.27013	01	54	09.45	+09	35	13.5	16.5 9 675
4801		1989	11	04.30364	01	54	07.56	+09	35	05.6	9 675
4805		1988	08	15.41962	22	32	55.10	+04	52	09.7	18.2 3 675
4849		1991	07	18.43108	22	04	13.55	-07	08	56.2	17.0 9 675
4849		1991	07	18.46424	22	04	12.87	-07	08	59.3	9 675
4856		1991	06	13.25851	15	08	10.24	-00	13	14.3	16 2 675
4856		1991	06	13.28576	15	08	09.40	-00	13	11.5	2 675
4856		1991	06	15.25990	15	07	14.88	-00	11	18.4	2 675
4856		1991	06	15.28333	15	07	14.19	-00	11	19.9	2 675
4863		1991	07	12.38229	21	56	48.00	-15	44	22.9	17.5 9 675
4863		1991	07	12.41736	21	56	47.11	-15	44	29.4	9 675
4863		1991	07	14.45417	21	55	55.83	-15	50	02.1	16.8 9 675
4863		1991	07	14.48299	21	55	55.05	-15	50	07.3	9 675
4863		1991	07	17.39670	21	54	32.34	-15	58	44.1	17.0 9 675
4863		1991	07	17.43872	21	54	30.97	-15	58	51.9	9 675

688 Lowell Observatory, Anderson Mesa Station
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff AZ 86001, U.S.A.
Observer B. A. Skiff
Measurers B. A. Skiff, C. J. Cunningham, L. A. Zimmerman
1.1-m f/8 Hall reflector + CCD

1981	EZ14	1991	04	14.24120	11	55	57.80	-06	54	52.4	18.7R 688
1981	EZ14	1991	04	14.24948	11	55	57.45	-06	54	49.8	688
1981	EX19	1991	05	12.40808	16	24	27.30	-20	10	36.4	17.0V 688
1981	EX19	1991	05	12.44229	16	24	25.40	-20	10	30.1	688
1981	EX19	1991	05	13.36468	16	23	36.14	-20	07	44.3	17.0V 688
1981	EX19	1991	05	13.37478	16	23	35.55	-20	07	42.5	688
1981	EH24	1991	04	14.29797	12	56	12.34	-05	18	32.8	18.2R 688
1981	EH24	1991	04	14.30243	12	56	12.11	-05	18	31.5	688
1981	EV26	1991	04	14.22656	11	55	11.94	-01	02	35.9	17.4R 688
1981	EV26	1991	04	14.23553	11	55	11.59	-01	02	33.7	17.3R 688
1981	EV26	1991	04	14.27905	11	55	09.91	-01	02	22.8	17.1R 688
1981	EP28	1991	04	14.25532	12	04	20.82	-01	47	12.7	17.4R 688
1981	EP28	1991	04	14.28785	12	04	19.53	-01	47	03.7	688
1981	EH34	1991	04	14.26620	11	42	40.80	+01	11	40.6	17.1R 688
1981	ER43	1991	04	14.21690	11	44	17.13	+00	17	06.4	18.7R 688
1981	ER43	1991	04	14.22020	11	44	16.88	+00	17	08.1	18.4R 688
1981	ER43	1991	04	14.27471	11	44	14.89	+00	17	21.1	688
1986	UU	1991	04	10.20828	08	55	03.17	+09	31	16.0	18.2R 688
1986	UU	1991	04	10.21250	08	55	03.22	+09	31	16.6	688
1987	SL10	1991	04	13.28200	13	11	41.55	+00	22	14.8	18.2R 688
1987	SL10	1991	04	13.28738	13	11	41.31	+00	22	17.3	688
1869		1991	03	18.30729	12	27	36.62	+00	18	42.3	18.0R 688
1869		1991	03	18.31649	12	27	36.40	+00	18	43.7	17.9R 688
1869		1991	04	15.23796	12	14	49.48	+01	31	27.6	688
1869		1991	04	15.24479	12	14	49.31	+01	31	28.4	688
1917		1991	04	15.28206	12	59	48.46	-00	01	23.4	688
1917		1991	04	15.28646	12	59	48.22	-00	01	20.9	688
2075		1991	04	10.42535	17	30	45.56	+04	32	27.2	17.1R 688
2075		1991	04	10.43785	17	30	45.54	+04	32	30.4	688
2089		1991	03	18.25127	10	29	09.97	+30	05	53.3	15.2R 688
2089		1991	03	18.25509	10	29	09.78	+30	05	54.0	688
2148		1991	03	18.33409	13	10	11.16	-03	43	45.5	17.8R 688
2148		1991	03	18.33976	13	10	11.04	-03	43	44.3	688
2148		1991	04	15.26875	12	57	48.98	-01	59	09.7	688
2148		1991	04	15.27714	12	57	48.75	-01	59	08.0	688
2329		1991	04	15.33507	14	45	56.05	+22	57	31.9	688

2329		1991	04	15.33785	14	45	55.96	+22	57	39.0	688
2355		1991	03	18.25972	10	45	49.94	+22	08	41.0	16.5R 688
2355		1991	03	18.26574	10	45	49.65	+22	08	41.6	688
2789		1991	04	15.22679	11	25	07.34	-01	40	25.3	688
2789		1991	04	15.23160	11	25	07.16	-01	40	23.7	688
2932		1991	04	15.25937	12	37	41.67	-02	44	11.2	688
2932		1991	04	15.26360	12	37	41.51	-02	44	10.2	688
3050		1991	04	15.20613	11	03	09.81	+04	13	23.0	688
3050		1991	04	15.21076	11	03	09.65	+04	13	24.2	688
3076		1991	04	15.24994	12	24	49.69	-03	04	35.1	688
3076		1991	04	15.25405	12	24	49.48	-03	04	33.0	688
3108		1991	04	15.30359	13	50	16.88	-07	18	10.5	688
3108		1991	04	15.30799	13	50	16.61	-07	18	08.7	688
3172		1991	04	15.29201	13	01	03.21	-01	03	49.9	688
3172		1991	04	15.29688	13	01	02.94	-01	03	48.2	688
3190		1991	04	15.17280	10	01	16.73	+15	52	08.8	688
3190		1991	04	15.18090	10	01	16.64	+15	52	07.7	688
3205		1991	04	15.32361	14	23	18.55	+04	34	18.3	688
3205		1991	04	15.33021	14	23	18.23	+04	34	20.4	688
3271		1991	04	10.41441	15	50	23.55	+19	41	56.7	18.7R 688
3271		1991	04	10.41858	15	50	23.57	+19	42	02.8	688
3468		1991	03	18.24138	10	26	06.31	+25	55	17.7	16.1R 688
3468		1991	03	18.24722	10	26	06.08	+25	55	18.5	688
3552		1991	04	10.24809	11	09	54.25	+00	14	21.8	18.2R 688
3552		1991	04	10.25220	11	09	54.02	+00	14	22.3	688
3693		1991	03	18.34657	13	24	40.65	-02	50	30.9	17.0R 688
3693		1991	03	18.35312	13	24	40.45	-02	50	28.5	688
3801		1991	04	10.33715	14	06	15.51	-11	22	31.3	17.8R 688
3801		1991	04	10.34201	14	06	15.35	-11	22	29.9	688
4177		1991	04	10.31794	13	43	14.14	-12	23	24.4	18.1R 688
4177		1991	04	10.32211	13	43	14.00	-12	23	22.8	688
4276		1991	04	10.29954	13	33	05.23	+27	26	02.7	17.0R 688
4276		1991	04	10.31267	13	33	04.07	+27	26	01.0	688
4487		1991	04	10.28981	13	13	54.11	-06	43	30.6	17.5R 688
4487		1991	04	10.29439	13	13	53.72	-06	43	25.7	688

690 Lowell Observatory
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observers E. C. Slipher, C. W. Tombaugh
Measurers C. M. Olmstead, B. A. Skiff
0.33-m photographic telescope, 0.125-m f/7 Brashear astrograph

A907	GS	1907	04	16.20833	13	51	26.57	-05	09	12.7	U 690
1931	TY3	1931	10	12.34722	01	56	47.88	+06	46	54.1	690
31		1907	04	10.29167	13	58	06.34	-08	07	29.5	690
31		1907	04	16.20833	13	52	17.38	-08	12	09.1	690
66		1930	03	30.33125	12	58	50.27	-06	45	15.2	690
66		1930	04	03.30903	12	55	21.96	-06	27	21.1	690
119		1930	03	30.33125	13	02	11.18	-08	14	59.0	690
119		1930	04	03.30903	12	58	55.64	-07	47	07.7	690
204		1930	03	30.33125	13	09	09.48	-10	07	55.4	690
204		1930	04	03.30903	13	06	11.60	-09	33	54.7	690
212		1930	03	30.33125	12	51	52.59	-11	11	11.3	690
212		1930	04	03.30903	12	48	51.37	-10	55	12.0	690
242		1930	03	30.33125	13	03	31.62	-11	03	15.7	690
242		1930	04	03.30903	13	00	36.76	-10	28	51.6	690
258		1907	04	10.29167	13	49	50.17	-12	03	08.5	690
383		1931	10	12.34722	01	40	01.33	+06	06	29.7	690
383		1931	10	14.28888	01	38	32.80	+05	58	16.7	690

427		1931	02	21.35763	10	21	58.52	+05	35	44.3		690
427		1931	02	23.26319	10	20	26.10	+05	42	28.7		690
468		1930	03	30.33125	12	53	39.73	-05	38	34.0		690
468		1930	04	03.30903	12	50	48.16	-05	20	57.9		690
510		1907	04	10.29167	13	54	36.03	-11	07	31.5		690
510		1907	04	16.20833	13	49	56.95	-10	14	07.1		690
515		1931	10	17.29514	01	52	53.99	+08	09	16.6		690
525		1930	03	30.33125	12	53	33.57	-08	00	24.9		690
525		1930	04	03.30903	12	49	56.62	-07	23	28.1		690
540		1931	10	12.34722	01	46	13.02	+10	37	30.7		690
540		1931	10	14.28888	01	44	23.44	+10	21	52.6		690
540		1931	10	17.29514	01	41	30.32	+09	57	16.1		690
793		1907	04	10.29167	14	00	22.77	-07	53	21.4		690
793		1907	04	16.20833	13	54	50.97	-07	48	22.9		690
1128		1931	10	12.34722	01	40	14.21	+09	24	41.8		690
1128		1931	10	14.28888	01	38	36.43	+09	15	53.5	R	690
1178		1931	02	21.35763	10	27	50.54	+05	52	01.6		690
1178		1931	02	23.26319	10	26	24.19	+06	08	37.0		690
1309		1931	10	12.34722	01	41	27.03	+11	03	36.9		690
1309		1931	10	14.28888	01	40	06.82	+10	49	58.5	R	690
1375		1931	10	12.34722	01	50	36.79	+06	05	09.7		690
1375		1931	10	14.28888	01	48	45.49	+05	59	12.3		690
1375		1931	10	17.29514	01	45	47.97	+05	49	55.9		690
1443		1931	10	12.34722	01	55	22.75	+10	14	14.3		690
1443		1931	10	14.28888	01	53	52.77	+10	04	38.3		690
1443		1931	10	17.29514	01	51	30.85	+09	49	32.4		690
1785		1931	02	21.35763	10	19	41.69	+04	31	33.1		690
1840		1931	10	12.34722	01	46	04.86	+09	50	45.0	R	690
1969		1930	03	30.33125	12	57	53.25	-07	51	42.6		690
1969		1930	04	03.30903	12	55	00.90	-07	28	31.7		690
2571		1931	10	17.29514	01	52	42.91	+07	11	56.9		690
3997		1931	10	17.29514	01	52	47.05	+05	01	28.4		690

691 Kitt Peak, Steward Observatory
T. Gehrels, Space Sciences Building, University of Arizona,
Tucson, AZ 85721, U.S.A.
Observers T. Gehrels, D. Rabinowitz, J. V. Scotti
0.91-m SPACEWATCH telescope
SAOC 1984
See also MPC 9198, MPC 10373 and Astron. J. 91, 1242, 1986

1991 JG1		1991	06	18.18731	14	56	32.64	+37	19	35.7		691
1991 JG1		1991	06	18.19650	14	56	33.13	+37	19	38.6		691
1991 JG1		1991	06	18.24609	14	56	35.73	+37	20	01.6		691
1991 JG1		1991	06	18.25933	14	56	36.42	+37	20	06.8		691
1991 LB		1991	06	10.15704	15	12	51.14	-14	17	43.5	18.0V	691
1991 LB		1991	06	10.16573	15	12	50.75	-14	17	41.0		691
1991 LB		1991	06	10.18302	15	12	49.90	-14	17	36.2		691
1991 LC	*	1991	06	08.41132	23	10	52.35	-07	01	00.9		691
1991 LC		1991	06	08.42823	23	10	53.20	-07	00	57.4		691
1991 LC		1991	06	08.44478	23	10	54.03	-07	00	53.6	18.9T	691
1991 LC		1991	06	10.43919	23	12	31.26	-06	54	49.8		691
1991 LC		1991	06	10.44584	23	12	31.54	-06	54	48.2		691
1991 LC		1991	06	10.45934	23	12	32.19	-06	54	46.3		691
1991 LC		1991	06	10.46782	23	12	32.57	-06	54	44.4		691
1991 LH	*	1991	06	14.37630	20	12	01.38	-10	47	39.8	20.6V	691
1991 LH		1991	06	14.39956	20	11	58.33	-10	47	22.5		691
1991 LH		1991	06	14.43043	20	11	54.08	-10	47	01.6		691
1991 LH		1991	06	15.43987	20	09	38.62	-10	35	38.1	I	691
1991 LH		1991	06	15.44698	20	09	37.69	-10	35	33.7	20.8V	691

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1991 LH    1991 06 15.46284  20 09 35.57  -10 35 23.1                I 691
1991 LH    1991 06 15.46881  20 09 34.68  -10 35 19.1                I 691
1991 LH    1991 06 16.44424  20 07 21.28  -10 24 22.2                  691
1991 LH    1991 06 16.45192  20 07 20.16  -10 24 17.1                  691
1991 LH    1991 06 16.46831  20 07 17.84  -10 24 06.0          20.6V   691
1991 LH    1991 06 20.36280  19 58 02.56  -09 40 50.4          20.5V   691
1991 LH    1991 06 20.36758  19 58 01.88  -09 40 47.9                  691
1991 LH    1991 06 20.37304  19 58 01.06  -09 40 43.9                  691
1991 LH    1991 06 20.38612  19 57 59.10  -09 40 35.5                  691
1991 LH    1991 06 21.34490  19 55 37.41  -09 30 05.5                  691
1991 LH    1991 06 21.34949  19 55 36.72  -09 30 02.8                  691
1991 LH    1991 06 21.35538  19 55 35.82  -09 29 58.8          20.3V   691
1991 LH    1991 06 21.36994  19 55 33.59  -09 29 48.9                  691
1991 LH    1991 06 21.37464  19 55 32.87  -09 29 45.9                  691

695 Kitt Peak
B. E. A. Mueller, Kitt Peak National Observatory, P.O. Box 26732,
   Tucson, AZ 85726, U.S.A.
2.1-m reflector
SAOC
1991 JM5 * 1991 05 15.21591  14 07 55.01  -10 49 43.7          22.7R   695
1991 JM5   1991 05 15.22172  14 07 54.69  -10 49 42.5                  695
1991 JM5   1991 05 15.22609  14 07 54.53  -10 49 40.9                  695
1991 JM5   1991 05 15.23212  14 07 54.10  -10 49 34.6                  695
1991 JM5   1991 05 16.19970  14 07 16.72  -10 46 56.2          22.3R   695
1991 JM5   1991 05 16.20400  14 07 16.52  -10 46 55.2                  695
1991 JM5   1991 05 16.20926  14 07 16.31  -10 46 54.3          23.1V   695
1991 JM5   1991 05 16.21955  14 07 15.90  -10 46 51.9                  695
1991 JM5   1991 05 16.22525  14 07 15.64  -10 46 50.1                  695
 739       1991 04 11.47792  19 09 21.72  -04 14 59.3                  695
 739       1991 04 11.47903  19 09 21.77  -04 14 59.1                  695
 739       1991 05 15.43106  19 23 05.49  -02 29 59.3                  695
 739       1991 05 15.43271  19 23 05.48  -02 29 59.1                  695
 739       1991 05 15.43412  19 23 05.48  -02 29 59.0                  695
 739       1991 05 15.43516  19 23 05.48  -02 29 58.9                  695
 739       1991 05 16.44054  19 23 04.78  -02 28 22.1                D 695
 739       1991 05 16.44261  19 23 04.77  -02 28 21.9                D 695
 739       1991 05 16.44356  19 23 04.76  -02 28 21.9                D 695
 739       1991 05 16.44449  19 23 04.76  -02 28 21.8                D 695
 739       1991 05 16.44525  19 23 04.76  -02 28 21.7                D 695
 739       1991 05 16.44611  19 23 04.75  -02 28 21.6                D 695
 739       1991 05 16.44677  19 23 04.76  -02 28 21.6                D 695
 739       1991 05 16.44740  19 23 04.75  -02 28 21.5                D 695

760 Goethe Link
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
   Flagstaff, AZ 86001, U.S.A.
Observers T. J. Borlick, H. L. Cohen, A. N. Cox, P. R. Davis, F. K.
   Edmondson, R. T. Grenchik, P. J. Guyer, R. C. Hall, A. M. Heiser, D. A.
   Klinglesmith, Jr., J. S. Lang, J. E. Michlovic, J. P. Mutschlecner,
   J. L. Neafus, D. L. Rodgers, S. F. Strother
Measurers C. J. Cunningham, F. J. Mendez, B. A. Skiff, L. A. Zimmerman
0.25-m refractor
PDS scanning microdensitometer
AGK3 and Perth 70 secondary nets, global solutions
   6       1963 02 23.32494  11 36 54.16  +13 07 32.2          10.0    760
   6       1963 02 23.37008  11 36 52.02  +13 08 00.0                  760
   6       1963 02 27.36659  11 33 43.53  +13 49 43.8          10.0    760
   6       1963 02 27.41103  11 33 41.54  +13 50 07.7                  760
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18	1957	11	27.33334	04	40	27.99	+01	31	59.3	10.0		760
18	1957	11	27.37709	04	40	25.28	+01	31	56.9			760
122	1965	10	28.10556	00	25	24.62	+02	05	37.3			760
122	1965	10	28.22569	00	25	20.74	+02	05	11.3			760
161	1965	10	28.10556	00	17	19.70	+01	32	12.3			760
161	1965	10	28.22569	00	17	14.82	+01	32	21.9			760
165	1960	11	18.09019	01	58	38.33	+28	45	47.4			760
165	1960	11	18.13116	01	58	36.67	+28	45	30.8			760
165	1962	02	05.10556	07	01	55.15	+25	27	53.9	12.3		760
165	1962	02	05.14826	07	01	53.47	+25	27	50.1			760
203	1961	11	30.18787	04	33	07.25	+27	05	14.2	12.9		760
203	1961	11	30.22672	04	33	04.87	+27	05	09.7			760
203	1965	10	28.22569	00	05	28.50	+02	55	43.1			760
234	1963	02	23.32494	11	46	20.91	+10	54	26.4	13.9		760
234	1963	02	23.37008	11	46	18.87	+10	54	53.5			760
234	1963	02	27.36659	11	43	21.73	+11	35	09.7	14.2		760
234	1963	02	27.41103	11	43	19.82	+11	35	33.4			760
255	1951	10	03.16537	22	22	57.79	-17	28	54.4	15.5		760
255	1951	10	03.21431	22	22	56.42	-17	28	52.5			760
255	1963	02	23.32494	11	31	32.63	+11	40	53.8	14.5	F	760
255	1963	02	23.37008	11	31	30.22	+11	41	00.7			760
255	1963	02	27.36659	11	28	00.48	+11	51	57.5	14.7		760
255	1963	02	27.41103	11	27	58.24	+11	52	04.1			760
288	1951	10	03.16537	22	33	41.15	-13	33	21.2	17.6	A	760
288	1951	10	03.21431	22	33	39.51	-13	33	30.9		A	760
298	1965	10	28.10556	00	26	47.26	+05	00	22.9			760
298	1965	10	28.22569	00	26	41.36	+05	00	05.1			760
305	1965	10	28.10556	00	08	32.55	+02	51	42.2			760
305	1965	10	28.22569	00	08	28.94	+02	51	07.2			760
413	1957	11	27.33334	04	28	56.68	-01	53	48.2	13.5		760
413	1957	11	27.37709	04	28	53.50	-01	53	26.1			760
501	1951	10	03.16537	22	33	52.61	-15	43	01.8	14.5		760
501	1951	10	03.21431	22	33	50.65	-15	42	44.3			760
518	1959	06	05.27080	18	31	50.46	-12	20	45.1			760
518	1959	07	08.24683	18	05	00.10	-11	00	10.3	13.0		760
518	1959	07	08.29858	18	04	57.45	-11	00	10.7			760
520	1962	02	07.11042	07	43	07.43	+37	38	05.5	15.3		760
520	1962	02	07.15417	07	43	05.28	+37	38	02.8			760
696	1960	11	18.09019	01	47	02.22	+33	04	40.8	13.1		760
696	1960	11	18.13116	01	47	00.70	+33	04	20.5			760
816	1959	06	05.27080	18	40	06.75	-10	50	31.8			760
816	1959	07	08.24683	18	14	17.17	-12	32	26.0	15.0		760
816	1959	07	08.29858	18	14	14.55	-12	32	41.1			760
816	1961	11	10.24515	04	10	47.38	+00	38	22.0	15.8		760
816	1961	11	10.28959	04	10	45.35	+00	38	14.9			760
855	1963	02	23.32494	11	37	38.37	+14	19	38.2	15.6		760
855	1963	02	23.37008	11	37	35.74	+14	19	47.2			760
855	1963	02	27.36659	11	33	39.56	+14	32	26.4	15.4		760
855	1963	02	27.41103	11	33	37.13	+14	32	33.7			760
865	1957	11	27.33334	04	25	36.92	-01	41	51.9	15.6		760
865	1957	11	27.37709	04	25	34.39	-01	42	08.4			760
905	1961	11	30.18787	04	10	59.18	+26	29	04.3			760
905	1961	11	30.22672	04	10	56.22	+26	29	04.3			760
1123	1963	02	23.32494	11	51	25.93	+12	28	20.7	15.6		760
1123	1963	02	23.37008	11	51	23.52	+12	28	42.0			760
1123	1963	02	27.36659	11	47	51.29	+12	58	53.1	15.8		760
1123	1963	02	27.41103	11	47	49.04	+12	59	11.1			760
1548	1959	07	08.24683	17	58	39.60	-13	39	05.1			760
1548	1959	07	08.29858	17	58	37.01	-13	39	25.4			760

2349	1957 11 27.33334	04 37 06.16	-03 32 23.1	760
2349	1957 11 27.37709	04 37 03.80	-03 32 21.5	760

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1933 SD	1991 06 09.24231	18 21 38.75	-14 48 10.2	801
1933 SD	1991 06 09.26086	18 21 37.77	-14 48 07.3	801
1933 SD	1991 06 10.25649	18 20 46.77	-14 45 38.5	801
1933 SD	1991 06 10.27199	18 20 45.92	-14 45 36.2	801
1933 SD	1991 07 09.08904	17 50 48.41	-14 17 33.4	801
1933 SD	1991 07 09.11610	17 50 46.72	-14 17 33.7	801
1933 SD	1991 07 10.11744	17 49 47.60	-14 18 19.3	801
1933 SD	1991 07 10.13229	17 49 46.73	-14 18 17.8	801
1953 PR	1991 06 14.27023	19 48 29.55	-10 58 21.7	801
1953 PR	1991 06 14.30279	19 48 29.50	-10 58 14.1	801
1953 PR	1991 07 09.18219	19 39 53.61	-10 19 42.3	801
1953 PR	1991 07 09.19346	19 39 53.14	-10 19 43.3	801
1953 PR	1991 07 10.20479	19 39 13.11	-10 20 59.1	801
1953 PR	1991 07 10.22641	19 39 12.17	-10 21 00.9	801
1953 UD	1991 06 09.32116	20 30 50.29	+00 11 00.5	801
1953 UD	1991 06 09.33966	20 30 50.28	+00 11 09.1	801
1953 UD	1991 06 14.29638	20 30 34.99	+00 47 27.1	801
1953 UD	1991 06 14.32068	20 30 34.77	+00 47 37.3	801
1953 UD	1991 07 09.22233	20 20 06.20	+02 47 30.0	801
1953 UD	1991 07 09.23635	20 20 05.59	+02 47 31.9	801
1953 UD	1991 07 10.27139	20 19 21.90	+02 49 36.5	801
1953 UD	1991 07 10.28818	20 19 21.15	+02 49 38.3	801
1953 VX1	1991 07 15.25096	22 19 55.91	-05 08 38.0	801
1953 VX1	1991 07 15.30675	22 19 55.24	-05 08 38.8	801
1962 SR	1991 07 12.28421	21 20 38.92	-09 45 48.2	801
1962 SR	1991 07 12.30617	21 20 38.15	-09 45 43.4	801
1962 SR	1991 07 13.29108	21 20 04.12	-09 42 16.0	801
1965 SO	1991 05 12.21580	14 34 47.19	-15 33 04.4	801
1965 SO	1991 05 12.23063	14 34 46.26	-15 33 01.5	801
1965 SO	1991 05 13.14654	14 33 51.29	-15 30 04.4	801
1965 SO	1991 05 13.15736	14 33 50.62	-15 30 02.2	801
1965 SO	1991 07 11.07079	14 15 33.03	-15 06 05.6	801
1965 SO	1991 07 11.08341	14 15 33.46	-15 06 08.1	801
1965 SO	1991 07 13.06428	14 16 39.88	-15 13 01.9	801
1965 SO	1991 07 13.07593	14 16 40.30	-15 13 04.9	801
1969 GD	1991 07 11.09153	16 30 17.43	-19 47 00.3	801
1969 GD	1991 07 11.10289	16 30 17.09	-19 46 57.6	801
1969 GD	1991 07 12.10760	16 29 48.33	-19 43 02.9	801
1969 GD	1991 07 12.12860	16 29 47.72	-19 42 57.9	801
1970 PS	1991 07 13.29380	21 23 59.64	-10 23 42.7	801
1970 PS	1991 07 15.20184	21 23 02.25	-10 31 59.7	801
1970 PS	1991 07 15.22209	21 23 01.59	-10 32 05.1	801
1973 SG4	1991 06 09.17873	17 41 31.64	-09 16 52.1	801
1973 SG4	1991 06 09.20467	17 41 30.14	-09 16 48.1	801
1973 SG4	1991 06 13.23241	17 37 38.32	-09 07 52.0	801
1973 SG4	1991 07 09.08072	17 13 52.46	-08 55 43.1	801
1973 SG4	1991 07 09.09446	17 13 51.80	-08 55 43.7	801
1973 SG4	1991 07 10.11250	17 13 05.44	-08 56 54.2	801
1973 SG4	1991 07 10.12934	17 13 04.70	-08 56 56.3	801
1973 SC6	1991 07 15.25661	22 58 59.16	-03 17 27.5	801

1973	SC6	1991	07	15.32862	22	58	59.39	-03	17	26.0	801
1974	SW	1991	06	11.25435	18	47	48.30	-19	27	55.7	801
1974	SW	1991	06	11.26932	18	47	47.59	-19	27	54.3	801
1974	SW	1991	06	14.21859	18	45	38.22	-19	25	24.8	801
1974	SW	1991	06	14.23534	18	45	37.64	-19	25	24.0	801
1974	SW	1991	07	09.12807	18	22	58.28	-19	15	14.2	801
1974	SW	1991	07	09.14508	18	22	57.33	-19	15	14.0	801
1974	SW	1991	07	10.14242	18	22	01.57	-19	15	09.6	801
1974	SW	1991	07	10.15296	18	22	01.04	-19	15	09.1	I 801
1974	SR1	1991	07	16.29970	22	19	42.37	-17	57	15.0	801
1974	SR1	1991	07	16.33700	22	19	42.32	-17	57	11.4	801
1975	TR4	1991	03	17.38485	16	25	24.18	-17	15	01.7	801
1975	TR4	1991	03	17.40186	16	25	24.65	-17	14	55.7	801
1975	TR4	1991	05	11.26034	16	14	20.27	-09	10	33.1	801
1975	TR4	1991	05	11.27089	16	14	19.76	-09	10	26.7	801
1975	TR4	1991	05	12.24735	16	13	33.38	-09	00	26.4	801
1975	TR4	1991	05	12.25968	16	13	32.75	-09	00	19.7	801
1975	TR4	1991	06	13.15417	15	47	37.04	-04	30	44.9	801
1975	TR4	1991	06	13.17122	15	47	36.33	-04	30	38.7	801
1977	FT	1991	06	09.31157	20	09	07.43	+13	32	59.7	801
1977	FT	1991	06	09.32420	20	09	07.40	+13	33	13.8	801
1977	FT	1991	07	09.18859	19	53	55.90	+20	49	05.1	801
1977	FT	1991	07	09.19581	19	53	55.48	+20	49	08.6	801
1977	FT	1991	07	10.21610	19	52	58.12	+20	57	24.8	801
1977	FT	1991	07	10.23228	19	52	57.21	+20	57	32.2	801
1977	QU2	1991	04	19.07964	11	02	51.74	+03	34	19.5	801
1977	QU2	1991	04	19.10639	11	02	51.31	+03	34	25.5	801
1977	QU2	1991	06	15.08731	11	24	50.53	+03	07	36.5	801
1977	QU2	1991	06	15.09844	11	24	51.16	+03	07	33.0	801
1978	PY2	1991	07	15.19848	21	17	42.75	-12	16	57.1	801
1978	PY2	1991	07	15.21940	21	17	42.10	-12	17	01.7	801
1978	PY2	1991	07	16.21315	21	17	05.11	-12	19	37.8	801
1978	PY2	1991	07	16.26531	21	17	03.08	-12	19	46.3	801
1978	RJ1	1991	06	11.14260	15	49	28.58	-10	57	18.6	801
1978	RJ1	1991	06	11.15622	15	49	27.94	-10	57	16.5	801
1978	RJ1	1991	06	13.15738	15	48	02.82	-10	52	14.4	801
1978	RJ1	1991	06	13.17380	15	48	02.12	-10	52	12.3	801
1978	RM2	1991	07	11.21799	20	02	22.93	-12	50	26.8	801
1978	RM2	1991	07	11.23103	20	02	22.25	-12	50	28.7	801
1978	RM2	1991	07	12.18255	20	01	35.35	-12	52	38.0	801
1978	RM2	1991	07	12.19950	20	01	34.52	-12	52	41.7	801
1978	VG5	1991	06	14.07236	12	15	22.22	-02	16	42.8	801
1978	VG5	1991	06	14.09853	12	15	23.09	-02	16	47.9	801
1979	FA3	1991	07	15.27933	22	22	08.63	+06	33	54.6	801
1979	FA3	1991	07	15.30914	22	22	08.12	+06	33	52.5	801
1979	FA3	1991	07	16.30997	22	21	51.71	+06	32	19.1	801
1979	FA3	1991	07	16.33286	22	21	51.28	+06	32	16.9	801
1979	PA	1991	06	09.14934	16	31	07.68	-11	06	17.7	801
1979	PA	1991	06	09.15806	16	31	07.26	-11	06	12.1	801
1979	PA	1991	06	13.16478	16	27	58.06	-10	25	56.0	801
1979	PA	1991	06	13.17881	16	27	57.47	-10	25	47.0	801
1980	FT3	1991	07	11.25112	20	49	52.12	-13	26	34.2	801
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1980	FT3	1991	07	12.19675	20	49	15.57	-13	27	57.4	I 801
1980	FT3	1991	07	12.20951	20	49	14.99	-13	27	59.1	I 801
1980	NB	1991	06	14.07633	12	23	28.32	-03	29	12.3	801
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1980	SJ	1991	07	15.22884	21	26	34.06	-05	59	50.5	801
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1980	SJ	1991	07	16.22277	21	26	01.29	-05 59 15.2	801
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1981	EH4	1991	07	15.19475	21	16	01.37	-01 20 33.2	801
1981	EH4	1991	07	15.21553	21	16	00.71	-01 20 29.7	801
1981	EH4	1991	07	16.17316	21	15	31.04	-01 17 58.3	801
1981	EH4	1991	07	16.20520	21	15	29.95	-01 17 53.4	801
1981	ED19	1991	07	15.23324	21	40	14.62	-11 38 43.1	801
1981	ED19	1991	07	15.26880	21	40	13.49	-11 38 48.9	801
1981	ED19	1991	07	16.22711	21	39	45.77	-11 41 27.3	801
1981	ED19	1991	07	16.25369	21	39	44.93	-11 41 32.0	801
1981	EX19	1991	05	14.22941	16	22	48.48	-20 05 06.4	801
1981	EX19	1991	05	14.27332	16	22	45.90	-20 04 58.2	801
1981	EX19	1991	05	16.20087	16	20	55.99	-19 58 53.2	801
1981	EX19	1991	05	16.21619	16	20	55.06	-19 58 50.3	801
1981	EX19	1991	07	16.07025	15	38	30.33	-17 44 02.6	801
1981	EX19	1991	07	16.08580	15	38	30.53	-17 44 03.9	801
1981	EX21	1991	07	09.18542	19	50	19.06	-01 59 17.6	801
1981	EX21	1991	07	09.19875	19	50	18.44	-01 59 18.1	801
1981	EX21	1991	07	10.20822	19	49	30.78	-02 01 43.2	801
1981	EX21	1991	07	10.22957	19	49	29.65	-02 01 46.3	801
1981	EO27	1991	07	09.32455	22	10	04.88	+00 52 02.1	801
1981	EO27	1991	07	09.33985	22	10	05.10	+00 52 05.3	801
1981	EO27	1991	07	15.24247	22	11	17.32	+01 06 16.6	801
1981	EO27	1991	07	15.30087	22	11	17.48	+01 06 21.6	801
1981	EQ40	1991	05	12.28277	16	58	58.43	-19 43 45.6	801
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1981	JX1	1991	01	18.12640	07	07	33.45	+29 15 30.2	801
1981	JX1	1991	01	18.15178	07	07	31.68	+29 15 32.4	801
1981	SY1	1991	07	12.29171	21	31	04.62	-16 43 28.0	801
1981	SY1	1991	07	12.30810	21	31	04.09	-16 43 27.7	801
1981	SY1	1991	07	13.29656	21	30	34.23	-16 43 19.3	801
1981	XH2	1991	07	10.31522	21	59	19.53	-00 02 24.8	801
1981	XH2	1991	07	10.33541	21	59	19.30	-00 02 20.0	801
1981	XH2	1991	07	16.24258	21	57	53.19	+00 18 18.6	801
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1982	SG4	1991	05	13.29762	18	31	29.59	-12 21 48.8	801
1982	SG4	1991	05	13.33157	18	31	29.00	-12 21 42.6	801
1982	SG4	1991	06	09.23794	18	17	22.70	-11 03 19.4	801
1982	SG4	1991	06	09.25719	18	17	21.89	-11 03 17.6	801
1982	SG4	1991	06	11.22271	18	15	54.52	-10 59 22.8	801
1982	SG4	1991	06	11.23760	18	15	53.82	-10 59 22.0	801
1982	ST6	1991	07	15.23657	21	45	30.28	-14 15 05.1	801
1982	ST6	1991	07	15.27124	21	45	29.20	-14 15 09.8	801
1982	ST6	1991	07	16.23172	21	45	00.38	-14 17 19.6	801
1982	ST6	1991	07	16.25701	21	44	59.57	-14 17 23.2	801
1982	UP2	1991	07	15.20579	21	11	49.20	-16 54 51.0	801
1982	UP2	1991	07	15.22547	21	11	48.39	-16 54 54.4	801
1982	UP2	1991	07	16.18035	21	11	11.38	-16 57 23.5	801
1982	UP2	1991	07	16.20968	21	11	10.27	-16 57 27.2	801
1982	UW3	1991	06	09.16156	16	42	19.58	-04 36 30.7	801
1982	UW3	1991	06	11.14988	16	40	51.30	-04 33 07.8	801
1982	UW3	1991	06	11.16252	16	40	50.71	-04 33 06.9	801
1982	UG7	1991	07	11.20794	19	39	12.77	-15 58 06.6	801
1982	UG7	1991	07	11.22072	19	39	12.00	-15 58 07.6	801
1982	UG7	1991	07	12.17968	19	38	17.32	-15 59 24.2	801
1982	UG7	1991	07	12.19126	19	38	16.64	-15 59 26.0	801
1982	VE4	1991	03	17.38201	16	27	01.38	-17 21 26.3	801
1982	VE4	1991	03	17.39127	16	27	01.95	-17 21 27.0	801
1982	VE4	1991	06	11.14725	16	11	16.15	-17 28 24.2	801

1982	VE4	1991	06	11.16013	16	11	15.40	-17	28	24.2	801
1982	VE4	1991	06	13.16862	16	09	24.63	-17	30	12.8	801
1982	VE4	1991	06	13.18291	16	09	23.80	-17	30	14.3	801
1982	XV	1991	06	14.25550	19	31	02.82	-19	37	01.4	801
1982	XV	1991	06	14.27566	19	31	02.02	-19	37	04.8	801
1982	XV	1991	07	11.15037	19	05	45.86	-20	55	47.9	801
1982	XV	1991	07	11.16325	19	05	45.00	-20	55	50.5	801
1982	XV	1991	07	12.15378	19	04	41.45	-20	59	01.7	801
1982	XV	1991	07	12.16616	19	04	40.59	-20	59	04.3	801
1982	XQ1	1991	07	16.06640	14	54	32.83	-14	26	18.7	801
1982	XQ1	1991	07	16.08235	14	54	33.30	-14	26	20.6	801
1983	AO2	1991	07	11.22370	20	14	37.06	-18	01	20.3	801
1983	AO2	1991	07	11.23769	20	14	36.44	-18	01	25.3	801
1983	AO2	1991	07	12.18547	20	13	55.30	-18	07	08.3	801
1983	AO2	1991	07	12.20266	20	13	54.52	-18	07	14.5	801
1983	QE	1991	06	14.29965	20	39	01.15	+02	06	04.0	801
1983	QE	1991	06	14.32321	20	39	01.35	+02	06	10.0	801
1983	RC4	1991	07	09.15147	18	37	36.32	-09	31	39.2	801
1983	RC4	1991	07	09.16830	18	37	35.58	-09	31	46.5	801
1983	RC4	1991	07	10.14983	18	36	56.45	-09	39	00.7	801
1983	RC4	1991	07	10.17022	18	36	55.57	-09	39	09.5	801
1983	TW1	1991	07	12.29557	21	32	27.34	-14	49	05.3	801
1983	TW1	1991	07	12.31519	21	32	26.99	-14	49	10.3	801
1983	TW1	1991	07	13.30095	21	32	11.29	-14	53	32.3	801
1984	HE1	1991	07	16.28735	22	03	13.52	+04	32	07.8	801
1984	HE1	1991	07	16.32382	22	03	12.72	+04	32	11.5	801
1984	HS1	1991	06	11.26237	19	02	07.14	-20	13	40.8	801
1984	HS1	1991	06	11.29781	19	02	05.82	-20	13	39.6	801
1984	HS1	1991	06	14.22190	19	00	09.55	-20	12	25.7	801
1984	HS1	1991	06	14.23808	19	00	08.80	-20	12	25.3	801
1984	HS1	1991	07	09.13135	18	37	08.56	-20	16	45.1	801
1984	HS1	1991	07	09.14925	18	37	07.46	-20	16	46.1	801
1984	HS1	1991	07	11.12203	18	35	13.35	-20	17	49.6	801
1984	HS1	1991	07	11.16078	18	35	11.03	-20	17	51.0	801
1984	HS1	1991	07	15.14694	18	31	31.21	-20	20	10.5	801
1984	HS1	1991	07	15.16127	18	31	30.41	-20	20	10.7	801
1985	DX2	1991	06	11.10845	15	08	14.43	-02	13	14.5	801
1985	DX2	1991	06	11.13241	15	08	13.71	-02	13	14.2	801
1985	DX2	1991	06	14.13167	15	06	51.09	-02	13	55.3	801
1985	DX2	1991	06	14.15564	15	06	50.43	-02	13	56.1	801
1985	JJ	1991	07	09.23874	20	49	02.20	-02	12	20.1	801
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1985	JJ	1991	07	10.28240	20	48	28.21	-02	13	23.7	801
1985	JJ	1991	07	10.30146	20	48	27.55	-02	13	25.0	801
1985	PD2	1991	06	13.19733	17	31	44.33	-16	53	45.2	801
1985	PD2	1991	06	13.21840	17	31	42.96	-16	53	46.1	801
1985	PD2	1991	06	14.19769	17	30	37.33	-16	54	41.8	801
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1985	PD2	1991	07	11.12697	17	03	30.22	-17	39	50.7	801
1985	PD2	1991	07	12.11087	17	02	46.64	-17	42	14.8	I 801
1985	PD2	1991	07	12.12396	17	02	45.97	-17	42	15.9	I 801
1985	SM3	1991	07	09.25628	20	54	28.50	-18	30	23.6	801
1985	SM3	1991	07	09.27582	20	54	27.60	-18	30	25.0	801
1985	SM3	1991	07	11.26932	20	52	54.94	-18	32	20.3	801
1985	SM3	1991	07	11.29541	20	52	53.62	-18	32	22.2	801
1985	TV2	1991	04	19.32225	16	43	12.02	-16	59	35.7	801
1985	TV2	1991	04	19.35204	16	43	11.57	-16	59	24.7	801
1985	TV2	1991	06	11.14486	16	02	33.92	-11	25	26.5	801

1985	TV2	1991	06	11.15818	16	02	33.21	-11 25 22.5	801
1985	TV2	1991	06	13.16142	16	00	57.73	-11 17 19.7	801
1985	TV2	1991	06	13.17582	16	00	56.99	-11 17 16.9	801
1985	UY4	1991	07	09.15436	18	38	47.53	-15 14 25.1	801
1985	UY4	1991	07	09.16625	18	38	46.80	-15 14 27.0	801
1985	UY4	1991	07	10.15604	18	37	45.74	-15 17 15.2	801
1985	UY4	1991	07	10.17233	18	37	44.62	-15 17 19.5	801
1986	CL1	1991	06	09.30774	19	40	24.22	-19 58 17.7	801
1986	CL1	1991	06	09.32859	19	40	23.46	-19 58 06.7	801
1986	CL1	1991	06	14.25890	19	37	13.85	-19 14 47.0	801
1986	CL1	1991	06	14.27279	19	37	13.23	-19 14 39.8	801
1986	CL1	1991	07	09.16434	19	13	07.23	-15 42 54.2	801
1986	CL1	1991	07	09.17355	19	13	06.61	-15 42 49.8	801
1986	CL1	1991	07	10.19331	19	11	59.90	-15 34 49.3	801
1986	CL1	1991	07	10.20244	19	11	59.29	-15 34 45.1	801
1986	CQ1	1991	07	09.21706	20	14	32.86	-12 17 16.1	801
1986	CQ1	1991	07	09.23219	20	14	32.03	-12 17 17.1	801
1986	CQ1	1991	07	10.25388	20	13	37.94	-12 18 29.0	801
1986	CQ1	1991	07	10.26612	20	13	37.28	-12 18 30.1	801
1986	JT	1991	07	10.06958	14	34	56.50	-08 39 30.5	801
1986	JT	1991	07	10.08454	14	34	57.06	-08 39 31.8	801
1986	JT	1991	07	12.08852	14	36	17.30	-08 44 47.4	801
1986	JT	1991	07	12.09881	14	36	17.70	-08 44 49.2	801
1986	PT4	1991	06	09.22462	18	14	06.01	-04 58 05.5	801
1986	PT4	1991	06	09.24802	18	14	05.00	-04 58 05.7	801
1986	PT4	1991	06	10.24890	18	13	22.88	-04 58 18.0	801
1986	PT4	1991	06	10.26503	18	13	22.05	-04 58 18.8	801
1986	PB5	1991	06	09.30287	19	43	26.26	-18 58 49.4	801
1986	PB5	1991	06	09.33647	19	43	25.69	-18 58 52.5	801
1986	PB5	1991	06	14.26271	19	41	40.00	-19 05 18.6	801
1986	PB5	1991	06	14.29306	19	41	39.18	-19 05 21.1	801
1986	QA4	1991	07	09.27899	21	01	23.34	-16 34 50.1	801
1986	QA4	1991	07	09.29574	21	01	22.78	-16 34 53.2	801
1986	QA4	1991	07	11.27772	21	00	17.49	-16 40 57.5	801
1986	QA4	1991	07	11.30071	21	00	16.70	-16 41 01.2	801
1986	QY4	1991	07	11.22833	20	28	03.62	-19 08 15.9	801
1986	QY4	1991	07	11.24068	20	28	03.07	-19 08 18.2	801
1986	QY4	1991	07	12.18889	20	27	22.43	-19 11 21.1	801
1986	QY4	1991	07	12.20521	20	27	21.72	-19 11 24.3	801
1986	UA	1991	07	15.23934	21	53	01.30	-13 05 40.0	801
1986	UA	1991	07	15.27414	21	53	00.49	-13 05 45.3	801
1986	UA	1991	07	16.23525	21	52	38.33	-13 08 20.3	801
1986	UA	1991	07	16.26125	21	52	37.65	-13 08 24.8	801
1986	YA	1990	08	22.03958	16	35	07.52	-19 10 17.3	801
1986	YA	1990	08	22.05353	16	35	07.89	-19 10 15.9	801
1987	DU6	1991	07	11.24620	20	46	31.40	-15 04 08.7	801
1987	DU6	1991	07	11.26123	20	46	30.68	-15 04 07.7	801
1987	DU6	1991	07	12.19362	20	45	48.02	-15 03 22.3	801
1987	DU6	1991	07	12.20721	20	45	47.36	-15 03 21.7	801
1987	HS	1991	07	09.24118	20	42	06.79	-01 42 40.8	801
1987	HS	1991	07	09.25363	20	42	06.39	-01 42 52.0	801
1987	HS	1991	07	10.28037	20	41	34.61	-01 59 33.4	801
1987	HS	1991	07	10.29361	20	41	34.16	-01 59 46.6	801
1987	KB	1991	07	10.34348	23	17	38.16	+13 38 26.0	801
1987	KB	1991	07	10.34752	23	17	38.36	+13 38 29.6	801
1987	KB	1991	07	13.33929	23	20	08.10	+14 21 54.5	801
1987	KB	1991	07	13.34440	23	20	08.34	+14 21 58.8	801
1987	OQ	1991	06	14.24764	19	19	54.28	-10 22 01.5	801
1987	OQ	1991	06	14.26594	19	19	53.57	-10 21 56.9	801

1987	OQ	1991	06	15.25603	19	19	14.35	-10	17	00.9	801
1987	OQ	1991	06	15.26499	19	19	13.97	-10	16	58.7	801
1987	OQ	1991	07	09.15979	18	58	46.72	-08	48	28.8	801
1987	OQ	1991	07	09.17189	18	58	45.96	-08	48	27.7	801
1987	QS1	1991	07	16.29072	22	04	31.97	-14	34	34.7	801
1987	QS1	1991	07	16.31831	22	04	30.95	-14	34	36.5	801
1987	RP3	1991	07	09.21234	20	05	08.20	-18	25	09.8	801
1987	RP3	1991	07	09.22748	20	05	07.41	-18	25	10.2	801
1987	RP3	1991	07	10.24696	20	04	14.98	-18	25	50.0	801
1987	RP3	1991	07	10.26273	20	04	14.15	-18	25	50.2	801
1987	SJ	1991	07	09.32162	22	00	44.94	-02	58	41.4	801
1987	SJ	1991	07	09.33711	22	00	45.27	-02	58	37.6	801
1987	SJ	1991	07	10.31780	22	01	07.97	-02	54	37.0	801
1987	SJ	1991	07	10.32961	22	01	08.19	-02	54	34.3	801
1987	SB1	1991	07	09.22540	20	36	58.65	+00	19	08.7	801
1987	SB1	1991	07	09.24613	20	36	57.95	+00	19	05.0	801
1987	SB1	1991	07	10.27753	20	36	24.56	+00	15	53.2	801
1987	SB1	1991	07	10.29671	20	36	23.89	+00	15	49.7	801
1987	SG1	1991	07	09.33421	22	19	50.50	+05	41	12.7	801
1987	SG1	1991	07	09.34271	22	19	50.68	+05	41	12.8	801
1987	SG1	1991	07	15.24839	22	21	49.42	+05	40	50.7	801
1987	SG1	1991	07	15.29789	22	21	50.01	+05	40	47.4	801
1987	SJ3	1990	10	22.36447	03	16	35.32	+42	37	55.6	I 801
1987	SJ3	1990	10	22.37148	03	16	34.68	+42	38	03.0	801
1987	YL1	1991	07	10.31212	21	41	20.58	-09	26	33.3	801
1987	YL1	1991	07	10.32295	21	41	20.40	-09	26	37.4	801
1988	CH2	1990	12	15.07611	01	59	44.88	+00	27	46.0	801
1988	CH2	1990	12	15.09866	01	59	45.06	+00	27	55.0	801
1988	KA	1991	06	09.21991	18	08	03.23	-23	09	42.7	801
1988	KA	1991	06	09.23407	18	08	02.36	-23	09	43.5	801
1988	KA	1991	06	14.21390	18	03	37.34	-23	29	30.4	801
1988	KA	1991	06	14.22385	18	03	36.73	-23	29	33.1	801
1988	RF7	1991	06	09.21654	17	20	11.43	-17	22	08.1	801
1988	RF7	1991	06	09.23182	17	20	10.41	-17	22	09.3	801
1988	RF7	1991	06	13.18688	17	15	40.02	-17	29	45.9	801
1988	RF7	1991	06	13.20126	17	15	38.98	-17	29	47.6	801
1988	RF7	1991	07	09.07106	16	49	05.15	-18	47	14.1	801
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1988	RF7	1991	07	11.08694	16	47	42.00	-18	55	15.0	801
1988	RF7	1991	07	11.10017	16	47	41.45	-18	55	18.2	801
1988	VJ	1991	06	09.31497	20	18	03.36	-12	43	00.4	801
1988	VJ	1991	06	09.33389	20	18	03.52	-12	42	53.9	801
1988	VJ	1991	06	14.28681	20	18	34.98	-12	15	44.0	801
1988	VJ	1991	06	14.30718	20	18	34.95	-12	15	37.8	801
1988	VF1	1991	07	11.32874	23	23	58.27	+01	17	51.8	801
1988	VF1	1991	07	11.33767	23	23	58.72	+01	17	56.7	801
1988	VF1	1991	07	13.34216	23	25	39.35	+01	34	40.2	801
1988	VO1	1991	06	14.28370	20	16	22.92	-11	04	34.3	801
1988	VO1	1991	06	14.30524	20	16	22.60	-11	04	27.7	801
1988	VB5	1991	06	11.11862	15	25	23.05	-10	34	13.5	801
1988	VB5	1991	06	11.13543	15	25	22.34	-10	34	08.4	801
1988	VB5	1991	06	14.15288	15	23	20.37	-10	18	47.7	801
1988	VB5	1991	06	14.17495	15	23	19.47	-10	18	41.0	801
1988	WE	1991	07	09.24863	20	50	37.78	-19	21	24.7	801
1988	WE	1991	07	09.26554	20	50	37.09	-19	21	30.6	801
1988	WE	1991	07	10.30508	20	49	56.15	-19	27	41.2	801
1988	WE	1991	07	10.32028	20	49	55.46	-19	27	44.9	801
1988	WE	1991	07	16.16779	20	45	34.00	-20	04	31.4	801
1988	WE	1991	07	16.20207	20	45	32.22	-20	04	45.0	801

1988	XP	1991	07	11.12421	18	36	20.73	-15	14	30.1	801
1988	XP	1991	07	11.14123	18	36	19.68	-15	14	35.7	801
1988	XP	1991	07	13.13297	18	34	20.45	-15	23	17.4	801
1988	XP	1991	07	13.14920	18	34	19.33	-15	23	22.7	801
1988	XO1	1991	07	09.12237	18	28	14.14	-04	49	50.0	801
1988	XO1	1991	07	09.14214	18	28	13.15	-04	49	51.8	801
1988	XO1	1991	07	10.14699	18	27	23.70	-04	51	29.2	801
1988	XO1	1991	07	10.16837	18	27	22.62	-04	51	32.0	801
1989	AH	1991	06	09.16464	17	16	58.44	-11	18	33.2	801
1989	AH	1991	06	11.17271	17	15	12.10	-11	27	34.3	801
1989	AH	1991	06	11.18694	17	15	11.34	-11	27	38.4	801
1989	AU	1991	06	11.11487	15	04	04.76	-10	25	32.9	801
1989	AU	1991	06	11.12939	15	04	04.13	-10	25	33.0	801
1989	AU	1991	06	14.14565	15	02	01.24	-10	26	03.3	801
1989	AU	1991	06	14.16378	15	02	00.56	-10	26	04.0	801
1989	AZ1	1991	06	10.25211	18	19	38.27	-14	54	47.3	801
1989	AZ1	1991	06	10.26769	18	19	37.42	-14	54	50.6	801
1989	AZ1	1991	06	11.22637	18	18	48.05	-14	58	09.9	801
1989	AZ1	1991	06	11.24144	18	18	47.24	-14	58	13.2	801
1989	AZ1	1991	07	09.09163	17	51	45.25	-17	07	14.7	801
1989	AZ1	1991	07	09.11824	17	51	43.72	-17	07	20.0	801
1989	AZ1	1991	07	11.11742	17	49	53.92	-17	18	20.1	801
1989	AZ1	1991	07	11.13229	17	49	53.05	-17	18	25.3	801
1989	BT	1991	07	09.21469	19	59	27.68	-18	23	44.3	801
1989	BT	1991	07	09.22918	19	59	26.94	-18	23	43.6	801
1989	BT	1991	07	10.24294	19	58	35.87	-18	25	09.4	801
1989	BT	1991	07	10.25601	19	58	35.19	-18	25	10.5	801
1989	NM	1990	12	17.18279	05	24	58.69	+19	35	45.5	801
1989	NM	1990	12	17.19384	05	24	58.01	+19	35	45.3	801
1989	WZ	1991	06	11.11135	15	08	32.35	-13	56	42.3	801
1989	WZ	1991	06	11.12685	15	08	31.83	-13	56	37.1	801
1989	WZ	1991	06	14.13565	15	07	02.47	-13	40	32.3	801
1989	WZ	1991	06	14.15771	15	07	01.83	-13	40	25.6	801
1989	WL2	1991	06	10.22759	17	45	27.17	+13	03	45.5	801
1989	WL2	1991	06	11.21679	17	44	19.19	+13	00	36.6	801
1989	WL2	1991	06	11.23420	17	44	17.96	+13	00	33.1	801
1990	BM	1991	06	11.15400	16	52	54.81	-17	23	31.0	801
1990	BM	1991	06	11.16558	16	52	53.98	-17	23	31.2	801
1990	BM	1991	06	14.18280	16	49	37.92	-17	26	17.4	801
1990	BM	1991	06	14.19411	16	49	37.17	-17	26	18.2	801
1990	BR1	1991	06	14.14937	15	17	57.08	-00	44	49.9	801
1990	BR1	1991	06	14.17211	15	17	56.32	-00	44	53.4	801
1990	BT1	1991	06	14.09086	13	05	18.55	+07	52	14.1	801
1990	BT1	1991	06	14.11990	13	05	18.47	+07	52	07.6	801
1990	FU	1991	06	09.15557	17	33	32.02	-10	49	47.8	801
1990	FU	1991	06	09.17024	17	33	31.37	-10	49	46.1	801
1990	FU	1991	06	13.19062	17	30	17.27	-10	41	35.4	801
1990	FU	1991	06	13.20795	17	30	16.28	-10	41	32.1	801
1990	FC1	1991	07	09.15701	18	49	13.32	-14	39	25.1	I 801
1990	FC1	1991	07	09.16983	18	49	12.67	-14	39	30.2	I 801
1990	FC1	1991	07	10.15860	18	48	24.61	-14	45	43.4	801
1990	FC1	1991	07	10.17440	18	48	23.75	-14	45	49.5	801
1990	HF1	1991	07	09.24430	20	44	05.39	-13	46	00.0	801
1990	HF1	1991	07	09.26089	20	44	04.79	-13	46	07.6	801
1990	HF1	1991	07	10.28628	20	43	27.98	-13	54	01.4	801
1990	HF1	1991	07	10.29859	20	43	27.53	-13	54	07.2	801
1990	HF1	1991	07	11.23453	20	42	53.22	-14	01	28.2	801
1990	MJ	1990	09	16.06394	19	27	24.78	+29	49	02.2	801
1990	MJ	1990	09	16.09112	19	27	25.74	+29	48	56.2	801

1990	OL	1990	08	20.19569	21	41	59.44	-09	47	49.9	801
1990	OL	1990	08	20.21207	21	41	59.70	-09	48	20.2	801
1990	WZ2	1991	03	20.01376	04	19	46.38	+43	07	31.4	801
1990	WZ2	1991	03	20.01655	04	19	47.02	+43	07	31.2	801
1990	XZ	1991	02	13.03118	03	41	50.43	+41	17	07.4	801
1990	XZ	1991	02	13.03747	03	41	50.92	+41	17	08.2	801
1990	XZ	1991	02	16.01775	03	46	15.06	+41	26	49.3	801
1990	XZ	1991	02	16.03418	03	46	16.50	+41	26	53.2	801
1991	CD1	1991	07	12.07189	12	57	02.31	+20	52	22.7	801
1991	CD1	1991	07	12.07862	12	57	03.03	+20	52	14.0	801
1991	DB	1991	06	09.27641	19	15	12.35	+33	00	03.3	801
1991	DB	1991	06	09.28160	19	15	12.23	+32	59	55.3	801
1991	DB	1991	06	11.27765	19	14	08.98	+31	53	05.7	801
1991	DB	1991	06	11.28282	19	14	08.78	+31	52	54.7	801
1991	DB	1991	06	14.24322	19	12	21.54	+30	10	01.6	801
1991	DB	1991	06	14.25102	19	12	21.10	+30	09	44.1	801
1991	DB	1991	07	09.13501	18	54	13.01	+13	21	20.3	t 801
1991	DB	1991	07	09.13847	18	54	12.91	+13	21	13.8	t 801
1991	DB	1991	07	10.16262	18	53	35.79	+12	37	25.5	801
1991	DB	1991	07	10.16550	18	53	35.47	+12	37	19.4	801
1991	GN	1991	06	14.08317	12	47	21.36	+01	28	39.3	801
1991	GN	1991	06	14.10762	12	47	22.34	+01	28	44.7	801
1991	JX	1991	06	09.13885	16	30	36.50	+34	00	26.1	801
1991	JX	1991	06	09.13969	16	30	37.91	+34	00	39.2	801
1991	JX	1991	06	10.27884	17	08	18.01	+38	50	19.9	801
1991	JX	1991	06	11.29204	17	49	06.05	+42	37	33.5	801
1991	JX	1991	06	11.29377	17	49	10.40	+42	37	53.8	801
1991	KC	1991	07	10.07626	13	51	44.91	+25	24	06.6	801
1991	KC	1991	07	10.09576	13	51	45.12	+25	23	58.2	801
1991	KC	1991	07	12.08174	13	52	08.69	+25	09	05.8	801
1991	KC	1991	07	12.09549	13	52	08.84	+25	08	59.6	801
1991	KC	1991	07	16.10549	13	53	04.71	+24	38	31.1	801
1991	KC	1991	07	16.12346	13	53	04.99	+24	38	22.6	801
1991	NA	1991	07	10.17682	19	07	05.65	-17	35	12.7	801
1991	NA	1991	07	11.30812	19	06	02.73	-17	17	29.9	801
1991	NA	1991	07	11.31558	19	06	02.32	-17	17	24.8	I 801
1991	NA	1991	07	12.22402	19	05	12.89	-17	03	11.2	801
1991	NA	1991	07	12.23002	19	05	12.50	-17	03	05.2	801
1991	NA	1991	07	13.22153	19	04	18.39	-16	47	36.8	801
1991	NA	1991	07	13.23221	19	04	17.79	-16	47	26.6	801
1991	NA	1991	07	15.15801	19	02	34.11	-16	17	30.9	801
1991	NA	1991	07	15.17253	19	02	33.26	-16	17	17.4	801
1991	NA	1991	07	16.16433	19	01	40.67	-16	01	57.5	801
1991	NA	1991	07	16.17634	19	01	40.00	-16	01	46.3	801
4594	P-L	1991	07	15.27684	23	10	59.71	+02	20	12.7	801
4594	P-L	1991	07	15.32507	23	10	59.60	+02	20	08.2	801
4600	P-L	1991	06	15.08316	11	22	52.16	+05	42	54.4	801
4600	P-L	1991	06	15.09493	11	22	52.68	+05	42	51.0	801
1246	T-2	1991	07	09.21924	20	28	15.88	-06	31	30.2	801
1246	T-2	1991	07	09.23440	20	28	15.22	-06	31	31.5	801
1246	T-2	1991	07	10.27466	20	27	31.90	-06	33	11.1	801
1246	T-2	1991	07	10.29053	20	27	31.19	-06	33	12.9	801
2222	T-2	1991	06	10.30421	19	30	22.66	-16	57	10.8	801
2222	T-2	1991	06	10.32378	19	30	22.09	-16	57	11.4	801
2222	T-2	1991	07	09.16229	19	11	39.62	-17	37	43.3	801
2222	T-2	1991	07	09.17547	19	11	38.90	-17	37	45.2	801
2222	T-2	1991	07	10.18262	19	10	53.02	-17	39	47.7	801
2222	T-2	1991	07	10.19873	19	10	52.31	-17	39	48.1	801
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1978 NY7   1990 09 15.20972  00 39 18.27  -00 23 28.3                   809
1978 RJ1   1991 05 12.21458  16 14 03.26  -13 07 40.3           18.5    809
1978 RJ1   1991 05 12.22778  16 14 02.65  -13 07 36.1                   809
1978 RJ1   1991 05 12.24097  16 14 01.92  -13 07 33.3                   809
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1978	RJ1	1991	05	17.12708	16	10	14.87	-12	41	46.8	809
1978	RJ1	1991	05	17.14028	16	10	14.20	-12	41	42.5	809
1981	EM19	1991	04	19.19028	13	34	28.86	-11	30	02.2	19.1 809
1981	EM19	1991	04	19.20347	13	34	28.20	-11	29	57.8	809
1981	EM19	1991	04	19.21667	13	34	27.51	-11	29	55.1	809
1981	EX19	1991	05	12.25903	16	24	35.08	-20	10	56.6	809
1981	EX19	1991	05	12.27222	16	24	34.29	-20	10	54.6	809
1981	EX19	1991	05	12.28542	16	24	33.58	-20	10	51.9	809
1981	EX19	1991	05	17.15972	16	19	59.47	-19	55	38.6	18.5 809
1981	EX19	1991	05	17.17292	16	19	58.59	-19	55	36.1	809
1981	EX19	1991	05	17.18611	16	19	57.84	-19	55	33.8	809
1981	ES29	1991	05	12.21458	16	06	36.89	-13	57	51.3	18.5 809
1981	ES29	1991	05	12.22778	16	06	36.23	-13	57	46.1	809
1981	ES29	1991	05	12.24097	16	06	35.64	-13	57	42.1	809
1981	ES29	1991	05	17.11389	16	02	41.98	-13	26	42.9	809
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1981	ES29	1991	05	17.14028	16	02	40.60	-13	26	34.0	809
1981	EQ40	1991	06	06.16528	16	35	28.74	-18	33	29.7	18.4 809
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1981	EQ40	1991	06	08.14167	16	33	17.14	-18	27	54.1	809
1981	EQ40	1991	06	08.15486	16	33	16.24	-18	27	51.7	809
1981	EQ40	1991	06	08.16806	16	33	15.32	-18	27	50.1	809
1981	VP2	1991	06	06.16528	16	22	45.69	-19	46	02.6	19.4 809
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1981	VP2	1991	06	08.14167	16	21	07.01	-19	43	17.8	809
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1981	VP2	1991	06	08.16806	16	21	05.61	-19	43	13.5	809
1982	TT	1991	06	06.16528	16	37	31.46	-21	54	47.3	18.5 809
1982	TT	1991	06	06.17847	16	37	30.85	-21	54	43.5	809
1982	TT	1991	06	06.19167	16	37	30.38	-21	54	41.0	809
1982	UT5	1991	06	06.16528	16	22	24.04	-18	55	27.4	18.5 809
1982	UT5	1991	06	06.17847	16	22	23.23	-18	55	25.3	809
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1982	UT5	1991	06	08.14167	16	20	20.16	-18	48	13.1	809
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1982	UT5	1991	06	08.16806	16	20	18.40	-18	48	07.7	809
1982	VK12	1991	06	06.16528	16	31	07.93	-20	06	57.2	18.7 809
1982	VK12	1991	06	06.17847	16	31	07.29	-20	06	56.3	809
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1982	VK12	1991	06	08.14167	16	29	34.83	-20	04	29.4	809
1982	VK12	1991	06	08.15486	16	29	34.24	-20	04	28.0	809
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1984	ER1	1991	06	06.16528	16	21	20.29	-18	20	50.4	18.7 809
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1984	SH6	1991	06	06.12153	16	32	44.39	-16	43	54.7	18.8 809
1984	SH6	1991	06	06.13472	16	32	43.52	-16	43	53.8	809
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1984	SH6	1991	06	08.09722	16	30	48.29	-16	41	10.3	809
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1987	DM6		1991	06	08.09722	16	20	43.56	-15	52	23.0	18.6 809
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1988	RF9		1991	06	06.16528	16	36	04.32	-19	43	49.6	18.2 809
1988	RF9		1991	06	06.17847	16	36	03.44	-19	43	49.5	809
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1988	RF9		1991	06	08.16806	16	34	09.17	-19	44	30.3	809
1989	WK4		1991	05	12.21458	16	08	35.92	-13	45	44.3	18.8 809
1989	WK4		1991	05	12.22778	16	08	35.11	-13	45	43.7	809
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1989	WK4		1991	05	17.11389	16	03	37.91	-13	38	10.3	809
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1989	YR		1991	05	12.22778	16	02	10.01	-16	05	09.9	809
1989	YR		1991	05	12.24097	16	02	09.18	-16	05	08.5	809
1990	VW8	*	1990	11	12.12986	02	30	59.64	+14	17	42.4	17.5 809
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1991	JT2		1991	05	12.28542	16	15	53.26	-18	54	07.5	809
1991	JT2		1991	05	17.15972	16	11	18.71	-18	53	00.0	19.2 809
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1991	JT2		1991	05	17.18611	16	11	17.08	-18	52	59.7	809
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1991	JU2		1991	05	12.28542	16	18	09.68	-18	24	36.7	809
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1991	JU2		1991	05	17.17292	16	13	57.91	-18	29	21.0	809
1991	JU2		1991	05	17.18611	16	13	57.16	-18	29	22.2	809
1991	JV2	*	1991	05	12.25903	16	18	46.98	-18	23	57.3	809
1991	JV2		1991	05	12.27222	16	18	46.34	-18	23	56.4	809
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1991	JV2		1991	05	17.15972	16	15	08.50	-18	14	28.1	18.5 809
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1991	JW2	*	1991	05	12.25903	16	20	21.96	-17	43	18.3	809

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1991	JX2		1991	05	17.17292	16	19	14.26	-17	20	21.6	809
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1991	JY2	*	1991	05	12.25903	16	24	33.13	-17	10	16.4	809
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1991	JZ2		1991	05	17.15972	16	20	21.91	-21	02	37.2	19.0 809
1991	JZ2		1991	05	17.17292	16	20	21.17	-21	02	36.1	809
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1991	JA3	*	1991	05	12.25903	16	25	19.79	-19	20	23.9	19.3 809
1991	JA3		1991	05	12.27222	16	25	19.07	-19	20	26.3	809
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1991	JC3		1991	05	12.27222	16	25	53.23	-19	30	46.2	809
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1991	JC3		1991	05	17.17292	16	21	04.11	-19	38	10.1	809
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1991	JD3	*	1991	05	12.25903	16	27	22.41	-20	49	52.9	809
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1991	JD3		1991	05	17.15972	16	23	08.17	-20	15	37.5	18.7 809
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1991	JD3		1991	05	17.18611	16	23	06.63	-20	15	27.3	809
1991	JE3	*	1991	05	12.25903	16	27	53.23	-18	12	52.4	809
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1991	JE3		1991	05	17.17292	16	23	56.12	-17	58	55.7	809
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1991	JF3	*	1991	05	12.25903	16	28	58.06	-20	27	07.1	809
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1991	JG3		1991	05	17.17292	16	26	14.24	-17	40	27.2	809
1991	JG3		1991	05	17.18611	16	26	13.53	-17	40	22.1	809
1991	JH3	*	1991	05	12.25903	16	30	29.40	-19	27	27.4	809
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1991	JH3		1991	05	17.15972	16	26	17.48	-19	27	52.2	19.2 809
1991	JH3		1991	05	17.17292	16	26	16.73	-19	27	52.9	809
1991	JH3		1991	05	17.18611	16	26	15.98	-19	27	53.0	809
1991	JJ3	*	1991	05	12.25903	16	30	36.36	-20	28	30.1	809
1991	JJ3		1991	05	12.27222	16	30	35.55	-20	28	31.7	809
1991	JJ3		1991	05	12.28542	16	30	34.96	-20	28	32.8	809
1991	JJ3		1991	05	17.15972	16	26	32.80	-20	33	45.0	18.6 809
1991	JJ3		1991	05	17.17292	16	26	32.07	-20	33	46.5	809
1991	JJ3		1991	05	17.18611	16	26	31.37	-20	33	46.5	809
1991	JK3	*	1991	05	12.25903	16	32	31.05	-18	52	34.3	809
1991	JK3		1991	05	12.27222	16	32	30.31	-18	52	35.4	809
1991	JK3		1991	05	12.28542	16	32	29.67	-18	52	36.5	809
1991	JK3		1991	05	17.15972	16	28	06.58	-18	58	37.9	18.6 809
1991	JK3		1991	05	17.17292	16	28	05.72	-18	58	38.5	809
1991	JK3		1991	05	17.18611	16	28	04.99	-18	58	39.5	809
1991	JL3	*	1991	05	12.25903	16	33	51.97	-18	49	07.7	809
1991	JL3		1991	05	12.27222	16	33	51.31	-18	49	09.2	809
1991	JL3		1991	05	12.28542	16	33	50.63	-18	49	09.9	809
1991	JL3		1991	05	17.15972	16	29	42.57	-18	52	35.7	19.0 809
1991	JL3		1991	05	17.17292	16	29	41.82	-18	52	36.1	809
1991	JL3		1991	05	17.18611	16	29	41.17	-18	52	36.6	809
1991	JM3	*	1991	05	12.25903	16	34	15.16	-18	56	34.9	809
1991	JM3		1991	05	12.27222	16	34	14.56	-18	56	34.7	809
1991	JM3		1991	05	12.28542	16	34	14.01	-18	56	32.6	809
1991	JM3		1991	05	17.15972	16	30	44.22	-18	50	29.4	18.5 809
1991	JM3		1991	05	17.17292	16	30	43.57	-18	50	27.9	809
1991	JM3		1991	05	17.18611	16	30	42.98	-18	50	27.4	809
1991	JV3	*	1991	05	12.21458	16	03	38.71	-13	21	44.6	18.5 809
1991	JV3		1991	05	12.22778	16	03	37.97	-13	21	42.7	809
1991	JV3		1991	05	12.24097	16	03	37.18	-13	21	40.9	809
1991	JV3		1991	05	17.11389	15	59	15.30	-13	08	26.4	809
1991	JV3		1991	05	17.12708	15	59	14.47	-13	08	25.1	809
1991	JV3		1991	05	17.14028	15	59	13.70	-13	08	22.7	809
1991	JW3	*	1991	05	12.21458	16	04	39.93	-13	16	21.6	19.5 809
1991	JW3		1991	05	12.22778	16	04	39.24	-13	16	22.9	809
1991	JW3		1991	05	12.24097	16	04	38.57	-13	16	22.8	809
1991	JW3		1991	05	17.11389	16	00	33.96	-13	14	13.3	19.0 809
1991	JW3		1991	05	17.12708	16	00	33.29	-13	14	13.1	809
1991	JW3		1991	05	17.14028	16	00	32.52	-13	14	13.4	809
1991	JX3	*	1991	05	12.21458	16	04	53.04	-14	49	35.6	18.6 809
1991	JX3		1991	05	12.22778	16	04	52.26	-14	49	37.3	809
1991	JX3		1991	05	12.24097	16	04	51.47	-14	49	37.6	809
1991	JX3		1991	05	17.11389	16	00	05.92	-14	56	03.0	809
1991	JX3		1991	05	17.12708	16	00	05.06	-14	56	05.1	809
1991	JX3		1991	05	17.14028	16	00	04.24	-14	56	06.0	809
1991	JY3	*	1991	05	12.21458	16	06	01.54	-12	50	33.0	18.6 809
1991	JY3		1991	05	12.22778	16	06	00.79	-12	50	28.8	809
1991	JY3		1991	05	12.24097	16	06	00.18	-12	50	25.7	809
1991	JY3		1991	05	17.11389	16	01	44.61	-12	24	29.7	809
1991	JY3		1991	05	17.12708	16	01	43.89	-12	24	25.7	809

1991	JY3		1991	05	17.14028	16	01	43.09	-12	24	22.0		809
1991	JZ3	*	1991	05	12.21458	16	06	20.68	-13	41	48.8	18.6	809
1991	JZ3		1991	05	12.22778	16	06	19.94	-13	41	42.3		809
1991	JZ3		1991	05	12.24097	16	06	19.30	-13	39	57.2		809
1991	JZ3		1991	05	17.11389	16	02	08.93	-13	03	31.8		809
1991	JZ3		1991	05	17.12708	16	02	08.20	-13	03	26.0		809
1991	JZ3		1991	05	17.14028	16	02	07.46	-13	03	20.4		809
1991	JA4	*	1991	05	12.21458	16	06	37.54	-15	41	15.5	18.5	809
1991	JA4		1991	05	12.22778	16	06	36.73	-15	41	15.5		809
1991	JA4		1991	05	12.24097	16	06	35.88	-15	41	15.4		809
1991	JA4		1991	05	17.11389	16	01	35.67	-15	36	57.6		809
1991	JA4		1991	05	17.12708	16	01	34.81	-15	36	56.8		809
1991	JA4		1991	05	17.14028	16	01	33.94	-15	36	56.7		809
1991	JB4	*	1991	05	12.21458	16	06	59.00	-13	38	22.8	18.6	809
1991	JB4		1991	05	12.22778	16	06	58.42	-13	38	22.8		809
1991	JB4		1991	05	12.24097	16	06	57.51	-13	38	24.1		809
1991	JB4		1991	05	17.11389	16	02	24.95	-13	43	32.3		809
1991	JB4		1991	05	17.12708	16	02	24.07	-13	43	33.8		809
1991	JB4		1991	05	17.14028	16	02	23.30	-13	43	34.4		809
1991	JC4	*	1991	05	12.21458	16	07	33.44	-15	56	51.3	19.0	809
1991	JC4		1991	05	12.22778	16	07	32.79	-15	56	47.1		809
1991	JC4		1991	05	12.24097	16	07	32.19	-15	56	43.6		809
1991	JC4		1991	05	17.11389	16	03	49.98	-15	31	41.8	18.5	809
1991	JC4		1991	05	17.12708	16	03	49.33	-15	31	37.9		809
1991	JC4		1991	05	17.14028	16	03	48.62	-15	31	34.5		809
1991	JE4	*	1991	05	12.21458	16	09	04.25	-15	36	44.3	19.6	809
1991	JE4		1991	05	12.22778	16	09	03.47	-15	36	45.8		809
1991	JE4		1991	05	12.24097	16	09	02.70	-15	36	49.3		809
1991	JE4		1991	05	17.11389	16	04	22.63	-15	50	34.5		809
1991	JE4		1991	05	17.12708	16	04	21.81	-15	50	38.0		809
1991	JE4		1991	05	17.14028	16	04	20.95	-15	50	40.8		809
1991	JG4	*	1991	05	12.21458	16	10	17.43	-15	19	56.9	18.5	809
1991	JG4		1991	05	12.22778	16	10	16.70	-15	19	57.2		809
1991	JG4		1991	05	12.24097	16	10	15.69	-15	19	57.7		809
1991	JG4		1991	05	17.11389	16	05	23.92	-15	22	03.3		809
1991	JG4		1991	05	17.12708	16	05	23.04	-15	22	04.0		809
1991	JG4		1991	05	17.14028	16	05	22.20	-15	22	03.8		809
1991	JJ4	*	1991	05	12.21458	16	17	26.14	-12	59	00.7	19.6	809
1991	JJ4		1991	05	12.22778	16	17	25.48	-12	58	57.0		809
1991	JJ4		1991	05	12.24097	16	17	24.78	-12	58	52.0		809
1991	JJ4		1991	05	17.11389	16	13	19.75	-12	31	59.2	18.5	809
1991	JJ4		1991	05	17.12708	16	13	19.06	-12	31	54.4		809
1991	JJ4		1991	05	17.14028	16	13	18.33	-12	31	50.5		809
1991	JK4	*	1991	05	12.21458	16	19	05.11	-15	36	25.5	18.7	809
1991	JK4		1991	05	12.22778	16	19	04.39	-15	36	21.7		809
1991	JK4		1991	05	12.24097	16	19	03.75	-15	36	17.9		809
1991	JK4		1991	05	17.11389	16	14	56.22	-15	07	21.7		809
1991	JK4		1991	05	17.12708	16	14	55.52	-15	07	16.9		809
1991	JK4		1991	05	17.14028	16	14	54.73	-15	07	11.9		809
1991	JL4	*	1991	05	12.21458	16	19	09.50	-15	51	03.9	18.7	809
1991	JL4		1991	05	12.22778	16	19	08.77	-15	51	05.8		809
1991	JL4		1991	05	12.24097	16	19	07.99	-15	51	07.9		809
1991	JL4		1991	05	17.11389	16	14	27.09	-15	58	18.5		809
1991	JL4		1991	05	17.12708	16	14	26.27	-15	58	19.2		809
1991	JL4		1991	05	17.14028	16	14	25.43	-15	58	20.9		809
1991	JM4	*	1991	05	13.16111	15	46	18.17	-09	59	14.0	19.4	809
1991	JM4		1991	05	13.17431	15	46	17.26	-09	59	15.2		809
1991	JM4		1991	05	13.18750	15	46	16.47	-09	59	15.0		809
1991	JM4		1991	05	17.07014	15	42	12.61	-09	57	40.2		809

1991	JM4		1991	05	17.08333	15	42	11.82	-09	57	38.5		809
1991	JM4		1991	05	17.09653	15	42	10.76	-09	57	38.8		809
1991	JN4	*	1991	05	13.16111	15	46	19.04	-10	34	36.4	18.7	809
1991	JN4		1991	05	13.17431	15	46	18.26	-10	34	32.1		809
1991	JN4		1991	05	13.18750	15	46	17.41	-10	34	27.1		809
1991	JN4		1991	05	17.07014	15	42	43.83	-10	08	55.4		809
1991	JN4		1991	05	17.08333	15	42	43.09	-10	08	51.8		809
1991	JN4		1991	05	17.09653	15	42	42.43	-10	08	46.2		809
1991	JO4	*	1991	05	13.16111	15	46	22.70	-10	09	43.9	18.8	809
1991	JO4		1991	05	13.17431	15	46	21.99	-10	09	36.3		809
1991	JO4		1991	05	13.18750	15	46	21.37	-10	09	29.5		809
1991	JO4		1991	05	17.07014	15	43	05.34	-09	28	59.2		809
1991	JO4		1991	05	17.08333	15	43	04.55	-09	28	51.1		809
1991	JO4		1991	05	17.09653	15	43	03.85	-09	28	43.5		809
1991	JP4	*	1991	05	13.16111	15	46	33.95	-07	37	17.7	18.7	809
1991	JP4		1991	05	13.17431	15	46	33.19	-07	37	19.5		809
1991	JP4		1991	05	13.18750	15	46	32.56	-07	37	20.1		809
1991	JP4		1991	05	17.07014	15	43	10.43	-07	40	48.2		809
1991	JP4		1991	05	17.08333	15	43	09.68	-07	40	49.9		809
1991	JP4		1991	05	17.09653	15	43	09.02	-07	40	49.3		809
1991	JQ4	*	1991	05	13.16111	15	46	41.90	-09	53	09.6	19.0	809
1991	JQ4		1991	05	13.17431	15	46	41.13	-09	53	11.1		809
1991	JQ4		1991	05	13.18750	15	46	40.55	-09	53	10.6		809
1991	JQ4		1991	05	17.07014	15	43	14.70	-09	52	17.9		809
1991	JQ4		1991	05	17.08333	15	43	13.95	-09	52	18.7		809
1991	JQ4		1991	05	17.09653	15	43	13.46	-09	52	18.7		809
1991	JR4	*	1991	05	13.16111	15	46	49.73	-07	54	44.5	19.4	809
1991	JR4		1991	05	13.17431	15	46	48.93	-07	54	43.1		809
1991	JR4		1991	05	13.18750	15	46	48.10	-07	54	40.8		809
1991	JR4		1991	05	17.07014	15	42	20.82	-07	37	25.0		809
1991	JR4		1991	05	17.08333	15	42	20.12	-07	37	25.7		809
1991	JR4		1991	05	17.09653	15	42	19.31	-07	37	25.8		809
1991	JS4	*	1991	05	13.16111	15	48	11.79	-07	23	57.8	18.7	809
1991	JS4		1991	05	13.17431	15	48	11.00	-07	23	53.1		809
1991	JS4		1991	05	13.18750	15	48	10.36	-07	23	49.3		809
1991	JS4		1991	05	17.07014	15	44	42.21	-07	03	46.9		809
1991	JS4		1991	05	17.08333	15	44	41.52	-07	03	43.4		809
1991	JS4		1991	05	17.09653	15	44	40.85	-07	03	40.6		809
1991	JT4	*	1991	05	13.16111	15	48	33.01	-08	21	44.8	19.0	809
1991	JT4		1991	05	13.17431	15	48	32.22	-08	21	42.1		809
1991	JT4		1991	05	13.18750	15	48	31.47	-08	21	41.6		809
1991	JT4		1991	05	17.07014	15	44	55.34	-08	12	52.2		809
1991	JT4		1991	05	17.08333	15	44	54.62	-08	12	50.9		809
1991	JT4		1991	05	17.09653	15	44	53.75	-08	12	49.2		809
1991	JU4	*	1991	05	13.16111	15	49	55.87	-07	10	13.8	18.6	809
1991	JU4		1991	05	13.17431	15	49	55.31	-07	10	09.3		809
1991	JU4		1991	05	13.18750	15	49	54.64	-07	10	03.9		809
1991	JU4		1991	05	17.07014	15	47	01.61	-06	39	33.1		809
1991	JU4		1991	05	17.08333	15	47	00.93	-06	39	27.7		809
1991	JU4		1991	05	17.09653	15	47	00.36	-06	39	21.8		809
1991	JV4	*	1991	05	13.16111	15	50	55.74	-10	30	39.0	18.7	809
1991	JV4		1991	05	13.17431	15	50	54.91	-10	30	39.2		809
1991	JV4		1991	05	13.18750	15	50	54.11	-10	30	37.8		809
1991	JV4		1991	05	17.07014	15	47	08.55	-10	27	00.7		809
1991	JV4		1991	05	17.08333	15	47	07.58	-10	26	59.6		809
1991	JV4		1991	05	17.09653	15	47	06.67	-10	26	59.4		809
1991	JW4	*	1991	05	13.16111	15	54	39.69	-09	38	55.1	19.4	809
1991	JW4		1991	05	13.17431	15	54	38.80	-09	38	53.6		809
1991	JW4		1991	05	13.18750	15	54	37.94	-09	38	51.2		809

1991	JW4		1991	05	17.07014	15	50	40.35	-09	29	05.5	19.6	809
1991	JW4		1991	05	17.08333	15	50	39.51	-09	29	03.8		809
1991	JW4		1991	05	17.09653	15	50	38.75	-09	29	02.3		809
1991	JX4	*	1991	05	13.16111	15	55	25.36	-09	24	24.9	18.7	809
1991	JX4		1991	05	13.17431	15	55	24.59	-09	24	25.7		809
1991	JX4		1991	05	13.18750	15	55	23.98	-09	24	27.2		809
1991	JX4		1991	05	17.07014	15	52	03.75	-09	28	02.4	19.0	809
1991	JX4		1991	05	17.08333	15	52	03.01	-09	28	02.7		809
1991	JX4		1991	05	17.09653	15	52	02.36	-09	28	04.4		809
1991	JY4	*	1991	05	13.16111	15	58	44.00	-06	58	26.7	19.3	809
1991	JY4		1991	05	13.17431	15	58	43.26	-06	58	20.7		809
1991	JY4		1991	05	13.18750	15	58	42.56	-06	58	15.3		809
1991	JY4		1991	05	17.07014	15	55	11.33	-06	45	38.8		809
1991	JY4		1991	05	17.08333	15	55	10.52	-06	45	36.4		809
1991	JY4		1991	05	17.09653	15	55	09.81	-06	45	33.7		809
1991	JZ4	*	1991	05	13.16111	15	59	30.57	-07	47	11.4	18.5	809
1991	JZ4		1991	05	13.17431	15	59	29.86	-07	47	11.2		809
1991	JZ4		1991	05	13.18750	15	59	29.15	-07	47	10.2		809
1991	JZ4		1991	05	17.07014	15	56	03.91	-07	44	46.5		809
1991	JZ4		1991	05	17.08333	15	56	03.14	-07	44	46.2		809
1991	JZ4		1991	05	17.09653	15	56	02.38	-07	44	45.7		809
1991	JA5	*	1991	05	13.16111	15	59	59.67	-08	45	57.4	18.6	809
1991	JA5		1991	05	13.17431	15	59	59.01	-08	45	52.6		809
1991	JA5		1991	05	13.18750	15	59	58.33	-08	45	49.0		809
1991	JA5		1991	05	17.07014	15	57	02.50	-08	29	10.5		809
1991	JA5		1991	05	17.08333	15	57	01.93	-08	29	07.5		809
1991	JA5		1991	05	17.09653	15	57	01.27	-08	29	04.3		809
1991	JB5	*	1991	05	13.16111	16	00	37.64	-07	06	23.7	19.3	809
1991	JB5		1991	05	13.17431	16	00	36.88	-07	06	20.7		809
1991	JB5		1991	05	13.18750	16	00	36.15	-07	06	16.5		809
1991	JB5		1991	05	17.07014	15	57	53.36	-06	51	26.8		809
1991	JB5		1991	05	17.08333	15	57	52.57	-06	51	27.4		809
1991	JB5		1991	05	17.09653	15	57	51.59	-06	51	25.7		809
1991	JC5	*	1991	05	13.16111	16	00	38.89	-07	45	00.6	19.4	809
1991	JC5		1991	05	13.17431	16	00	38.61	-07	44	59.5		809
1991	JC5		1991	05	13.18750	16	00	37.79	-07	44	56.6		809
1991	JC5		1991	05	17.07014	15	57	13.83	-07	29	19.5		809
1991	JC5		1991	05	17.08333	15	57	13.05	-07	29	16.3		809
1991	JC5		1991	05	17.09653	15	57	12.32	-07	29	12.0		809
1991	JD5	*	1991	05	13.16111	16	01	16.22	-10	22	43.3	18.7	809
1991	JD5		1991	05	13.17431	16	01	15.24	-10	22	47.1		809
1991	JD5		1991	05	13.18750	16	01	14.30	-10	22	50.9		809
1991	JD5		1991	05	17.07014	15	56	32.21	-10	38	26.1		809
1991	JD5		1991	05	17.08333	15	56	31.33	-10	38	28.4		809
1991	JD5		1991	05	17.09653	15	56	30.53	-10	38	30.7		809
1991	JE5	*	1991	05	13.16111	16	01	16.23	-07	59	23.1	18.4	809
1991	JE5		1991	05	13.17431	16	01	15.52	-07	59	21.6		809
1991	JE5		1991	05	13.18750	16	01	14.73	-07	59	18.3		809
1991	JE5		1991	05	17.07014	15	57	39.78	-07	45	18.3		809
1991	JE5		1991	05	17.08333	15	57	39.07	-07	45	15.2		809
1991	JE5		1991	05	17.09653	15	57	38.22	-07	45	13.0		809
1991	JF5	*	1991	05	13.16111	16	01	46.70	-09	43	27.5	19.3	809
1991	JF5		1991	05	13.17431	16	01	45.88	-09	43	28.4		809
1991	JF5		1991	05	13.18750	16	01	45.15	-09	43	26.9		809
1991	JF5		1991	05	17.07014	15	58	01.23	-09	38	41.2		809
1991	JF5		1991	05	17.08333	15	58	00.33	-09	38	40.3		809
1991	JF5		1991	05	17.09653	15	57	59.55	-09	38	38.4		809
1991	JG5	*	1991	05	13.16111	16	01	46.74	-08	07	58.1	18.5	809
1991	JG5		1991	05	13.17431	16	01	45.99	-08	07	55.4		809

1991	JG5		1991	05	13.18750	16	01	45.28	-08	07	53.5		809
1991	JG5		1991	05	17.07014	15	58	10.52	-07	56	37.3		809
1991	JG5		1991	05	17.08333	15	58	09.76	-07	56	34.1		809
1991	JG5		1991	05	17.09653	15	58	08.95	-07	56	33.1		809
1991	JH5	*	1991	05	13.16111	16	03	07.94	-08	36	49.2	18.6	809
1991	JH5		1991	05	13.17431	16	03	07.15	-08	36	53.1		809
1991	JH5		1991	05	13.18750	16	03	06.33	-08	36	55.4		809
1991	JH5		1991	05	17.07014	15	59	09.57	-08	54	29.2	18.6	809
1991	JH5		1991	05	17.08333	15	59	08.58	-08	54	33.0		809
1991	JH5		1991	05	17.09653	15	59	07.85	-08	54	35.7		809
1991	JK5	*	1991	05	13.16111	16	03	35.20	-09	13	03.2	18.3	809
1991	JK5		1991	05	13.17431	16	03	34.41	-09	13	01.7		809
1991	JK5		1991	05	13.18750	16	03	33.62	-09	12	59.4		809
1991	JK5		1991	05	17.07014	15	59	51.38	-09	04	18.1		809
1991	JK5		1991	05	17.08333	15	59	50.57	-09	04	16.9		809
1991	JK5		1991	05	17.09653	15	59	49.81	-09	04	15.1		809
1991	JL5	*	1991	05	13.16111	16	03	53.46	-09	54	09.2	19.0	809
1991	JL5		1991	05	13.17431	16	03	52.70	-09	54	06.9		809
1991	JL5		1991	05	13.18750	16	03	52.02	-09	54	06.8		809
1991	JL5		1991	05	17.07014	16	00	20.59	-09	47	05.0		809
1991	JL5		1991	05	17.08333	16	00	19.71	-09	47	02.3		809
1991	JL5		1991	05	17.09653	16	00	19.04	-09	47	02.1		809
1991	KA		1991	05	12.21458	16	05	08.94	-13	36	24.8	18.3	809
1991	KA		1991	05	12.22778	16	05	08.13	-13	36	24.0		809
1991	KA		1991	05	12.24097	16	05	07.33	-13	36	23.0		809
1991	KA		1991	05	17.11389	16	00	25.81	-13	30	22.7		809
1991	KA		1991	05	17.12708	16	00	24.91	-13	30	21.8		809
1991	KA		1991	05	17.14028	16	00	24.03	-13	30	21.0		809
1991	LV		1991	06	06.12153	16	21	26.07	-14	32	22.1	18.0	809
1991	LV		1991	06	06.13472	16	21	25.07	-14	32	11.3		809
1991	LV		1991	06	06.14792	16	21	24.09	-14	32	00.0		809
1991	LV		1991	06	08.09722	16	19	05.43	-14	03	23.4		809
1991	LV		1991	06	08.11042	16	19	04.40	-14	03	11.5		809
1991	LV		1991	06	08.12361	16	19	03.47	-14	03	00.7		809
1991	LF1	*	1991	06	06.16528	16	16	49.64	-18	46	44.7	18.5	809
1991	LF1		1991	06	06.17847	16	16	48.64	-18	46	44.6		809
1991	LF1		1991	06	06.19167	16	16	47.73	-18	46	42.9		809
1991	LF1		1991	06	08.14167	16	14	38.76	-18	45	53.8		809
1991	LF1		1991	06	08.15486	16	14	37.93	-18	45	52.5		809
1991	LF1		1991	06	08.16806	16	14	37.01	-18	45	52.0		809
1991	LG1	*	1991	06	06.16528	16	17	21.32	-21	41	14.4	18.8	809
1991	LG1		1991	06	06.17847	16	17	20.48	-21	41	08.4		809
1991	LG1		1991	06	06.19167	16	17	19.61	-21	41	04.4		809
1991	LG1		1991	06	08.14167	16	15	28.87	-21	29	33.4		809
1991	LG1		1991	06	08.15486	16	15	28.08	-21	29	28.8		809
1991	LG1		1991	06	08.16806	16	15	27.32	-21	29	24.7		809
1991	LH1	*	1991	06	06.16528	16	17	29.65	-18	36	31.9	18.5	809
1991	LH1		1991	06	06.17847	16	17	28.85	-18	36	29.7		809
1991	LH1		1991	06	06.19167	16	17	27.97	-18	36	28.4		809
1991	LH1		1991	06	08.14167	16	15	33.14	-18	34	34.0		809
1991	LH1		1991	06	08.15486	16	15	32.32	-18	34	32.6		809
1991	LH1		1991	06	08.16806	16	15	31.48	-18	34	32.1		809
1991	LJ1	*	1991	06	06.16528	16	18	37.21	-21	27	34.0	18.5	809
1991	LJ1		1991	06	06.17847	16	18	36.47	-21	27	31.3		809
1991	LJ1		1991	06	06.19167	16	18	35.63	-21	27	28.9		809
1991	LJ1		1991	06	08.14167	16	16	49.85	-21	20	59.4		809
1991	LJ1		1991	06	08.15486	16	16	49.05	-21	20	55.2		809
1991	LJ1		1991	06	08.16806	16	16	48.31	-21	20	53.8		809
1991	LK1	*	1991	06	06.16528	16	18	45.56	-19	47	05.8	19.3	809

1991	LK1		1991	06	06.17847	16	18	44.75	-19	47	03.8		809
1991	LK1		1991	06	06.19167	16	18	43.95	-19	47	03.7		809
1991	LK1		1991	06	08.14167	16	16	47.18	-19	44	30.4		809
1991	LK1		1991	06	08.15486	16	16	46.36	-19	44	30.1		809
1991	LK1		1991	06	08.16806	16	16	45.52	-19	44	29.3		809
1991	LL1	*	1991	06	06.16528	16	19	08.63	-21	39	15.4	18.6	809
1991	LL1		1991	06	06.17847	16	19	07.91	-21	39	15.8		809
1991	LL1		1991	06	06.19167	16	19	07.12	-21	39	16.1		809
1991	LL1		1991	06	08.14167	16	17	23.81	-21	40	50.3		809
1991	LL1		1991	06	08.15486	16	17	23.08	-21	40	50.5		809
1991	LL1		1991	06	08.16806	16	17	22.31	-21	40	51.5		809
1991	LM1	*	1991	06	06.16528	16	19	26.36	-17	38	47.4	19.0	809
1991	LM1		1991	06	06.17847	16	19	25.60	-17	38	44.8		809
1991	LM1		1991	06	06.19167	16	19	24.82	-17	38	41.2		809
1991	LM1		1991	06	08.14167	16	17	33.73	-17	31	56.1		809
1991	LM1		1991	06	08.15486	16	17	32.89	-17	31	53.0		809
1991	LM1		1991	06	08.16806	16	17	32.24	-17	31	50.6		809
1991	LN1	*	1991	06	06.16528	16	20	03.53	-21	18	03.8	18.8	809
1991	LN1		1991	06	06.17847	16	20	02.62	-21	18	03.1		809
1991	LN1		1991	06	06.19167	16	20	01.74	-21	18	02.2		809
1991	LN1		1991	06	08.14167	16	17	57.25	-21	14	30.9		809
1991	LN1		1991	06	08.15486	16	17	56.49	-21	14	30.0		809
1991	LN1		1991	06	08.16806	16	17	55.60	-21	14	28.4		809
1991	LO1	*	1991	06	06.16528	16	22	07.82	-18	19	11.3	18.6	809
1991	LO1		1991	06	06.17847	16	22	07.05	-18	19	13.1		809
1991	LO1		1991	06	06.19167	16	22	06.17	-18	19	13.9		809
1991	LO1		1991	06	08.14167	16	20	06.12	-18	22	58.7		809
1991	LO1		1991	06	08.15486	16	20	05.18	-18	22	59.8		809
1991	LO1		1991	06	08.16806	16	20	04.38	-18	23	01.9		809
1991	LP1	*	1991	06	06.16528	16	22	19.63	-18	36	30.6	18.3	809
1991	LP1		1991	06	06.17847	16	22	18.82	-18	36	30.9		809
1991	LP1		1991	06	06.19167	16	22	17.95	-18	36	29.3		809
1991	LP1		1991	06	08.14167	16	20	21.72	-18	35	07.6		809
1991	LP1		1991	06	08.15486	16	20	20.89	-18	35	07.3		809
1991	LP1		1991	06	08.16806	16	20	20.08	-18	35	06.9		809
1991	LQ1	*	1991	06	06.16528	16	22	23.93	-21	31	24.0	18.0	809
1991	LQ1		1991	06	06.17847	16	22	23.23	-21	31	15.3		809
1991	LQ1		1991	06	06.19167	16	22	22.47	-21	31	06.3		809
1991	LQ1		1991	06	08.14167	16	20	43.52	-21	09	15.7		809
1991	LQ1		1991	06	08.15486	16	20	42.81	-21	09	06.4		809
1991	LQ1		1991	06	08.16806	16	20	42.09	-21	08	57.9		809
1991	LR1	*	1991	06	06.16528	16	22	43.43	-19	20	54.6	18.6	809
1991	LR1		1991	06	06.17847	16	22	42.46	-19	21	00.7		809
1991	LR1		1991	06	06.19167	16	22	41.53	-19	21	05.9		809
1991	LR1		1991	06	08.14167	16	20	33.17	-19	36	35.8		809
1991	LR1		1991	06	08.15486	16	20	32.24	-19	36	41.9		809
1991	LR1		1991	06	08.16806	16	20	31.43	-19	36	47.7		809
1991	LS1	*	1991	06	06.16528	16	23	34.15	-22	07	41.8	19.0	809
1991	LS1		1991	06	06.17847	16	23	33.02	-22	07	39.6		809
1991	LS1		1991	06	06.19167	16	23	32.05	-22	07	37.5		809
1991	LS1		1991	06	08.14167	16	21	23.78	-22	01	57.9		809
1991	LS1		1991	06	08.15486	16	21	22.97	-22	01	57.1		809
1991	LS1		1991	06	08.16806	16	21	22.12	-22	01	54.0		809
1991	LT1	*	1991	06	06.16528	16	23	46.78	-20	04	09.8	19.4	809
1991	LT1		1991	06	06.17847	16	23	46.08	-20	04	08.2		809
1991	LT1		1991	06	06.19167	16	23	45.31	-20	04	07.2		809
1991	LT1		1991	06	08.14167	16	22	04.04	-20	02	08.8		809
1991	LT1		1991	06	08.15486	16	22	03.27	-20	02	08.0		809
1991	LT1		1991	06	08.16806	16	22	02.48	-20	02	07.6		809

1991	LU1	*	1991	06	06.16528	16	24	02.19	-17	31	11.6	18.7	809
1991	LU1		1991	06	06.17847	16	24	01.53	-17	31	08.3		809
1991	LU1		1991	06	06.19167	16	24	00.79	-17	31	05.2		809
1991	LU1		1991	06	08.14167	16	22	26.98	-17	24	44.5		809
1991	LU1		1991	06	08.15486	16	22	26.34	-17	24	43.0		809
1991	LU1		1991	06	08.16806	16	22	25.76	-17	24	39.9		809
1991	LV1	*	1991	06	06.16528	16	24	04.48	-17	18	29.2	18.7	809
1991	LV1		1991	06	06.17847	16	24	03.69	-17	18	31.2		809
1991	LV1		1991	06	06.19167	16	24	02.75	-17	18	32.6		809
1991	LV1		1991	06	08.14167	16	22	14.03	-17	24	06.2		809
1991	LV1		1991	06	08.15486	16	22	13.10	-17	24	08.9		809
1991	LV1		1991	06	08.16806	16	22	12.33	-17	24	11.7		809
1991	LW1	*	1991	06	06.16528	16	24	18.77	-19	37	34.8	18.4	809
1991	LW1		1991	06	06.17847	16	24	18.06	-19	37	34.6		809
1991	LW1		1991	06	06.19167	16	24	17.39	-19	37	32.8		809
1991	LW1		1991	06	08.14167	16	22	43.90	-19	35	31.1		809
1991	LW1		1991	06	08.15486	16	22	43.30	-19	35	31.0		809
1991	LW1		1991	06	08.16806	16	22	42.61	-19	35	30.5		809
1991	LX1	*	1991	06	06.16528	16	24	56.25	-20	24	50.2	18.6	809
1991	LX1		1991	06	06.17847	16	24	55.46	-20	24	49.3		809
1991	LX1		1991	06	06.19167	16	24	54.75	-20	24	48.6		809
1991	LX1		1991	06	08.14167	16	23	16.55	-20	22	30.6		809
1991	LX1		1991	06	08.15486	16	23	15.80	-20	22	29.8		809
1991	LX1		1991	06	08.16806	16	23	15.14	-20	22	28.5		809
1991	LY1	*	1991	06	06.16528	16	25	18.65	-20	52	25.2	19.0	809
1991	LY1		1991	06	06.17847	16	25	17.96	-20	52	24.7		809
1991	LY1		1991	06	06.19167	16	25	17.31	-20	52	23.7		809
1991	LY1		1991	06	08.14167	16	23	42.11	-20	50	38.9		809
1991	LY1		1991	06	08.15486	16	23	41.42	-20	50	38.1		809
1991	LY1		1991	06	08.16806	16	23	40.76	-20	50	37.1		809
1991	LZ1	*	1991	06	06.16528	16	25	35.74	-19	35	34.5	18.6	809
1991	LZ1		1991	06	06.17847	16	25	35.01	-19	35	30.1		809
1991	LZ1		1991	06	06.19167	16	25	34.22	-19	35	24.8		809
1991	LZ1		1991	06	08.14167	16	23	47.98	-19	23	54.7		809
1991	LZ1		1991	06	08.15486	16	23	47.24	-19	23	50.0		809
1991	LZ1		1991	06	08.16806	16	23	46.52	-19	23	46.3		809
1991	LA2	*	1991	06	06.16528	16	25	38.74	-20	50	47.9	19.0	809
1991	LA2		1991	06	06.17847	16	25	38.11	-20	50	47.1		809
1991	LA2		1991	06	06.19167	16	25	37.43	-20	50	46.7		809
1991	LA2		1991	06	08.14167	16	23	53.56	-20	49	06.9		809
1991	LA2		1991	06	08.15486	16	23	52.79	-20	49	05.8		809
1991	LA2		1991	06	08.16806	16	23	52.06	-20	49	05.8		809
1991	LB2	*	1991	06	06.16528	16	25	49.01	-18	43	28.6	18.4	809
1991	LB2		1991	06	06.17847	16	25	48.11	-18	43	22.0		809
1991	LB2		1991	06	06.19167	16	25	47.21	-18	43	15.9		809
1991	LB2		1991	06	08.14167	16	23	48.31	-18	28	18.6		809
1991	LB2		1991	06	08.15486	16	23	47.50	-18	28	12.6		809
1991	LB2		1991	06	08.16806	16	23	46.78	-18	28	07.9		809
1991	LC2	*	1991	06	06.16528	16	25	51.74	-18	27	27.9	19.5	809
1991	LC2		1991	06	06.17847	16	25	50.93	-18	27	29.8		809
1991	LC2		1991	06	06.19167	16	25	50.18	-18	27	32.0		809
1991	LC2		1991	06	08.14167	16	24	03.34	-18	31	42.9		809
1991	LC2		1991	06	08.15486	16	24	02.54	-18	31	45.0		809
1991	LC2		1991	06	08.16806	16	24	01.79	-18	31	47.7		809
1991	LD2	*	1991	06	06.16528	16	26	07.85	-19	33	54.4	18.7	809
1991	LD2		1991	06	06.17847	16	26	07.14	-19	33	53.7		809
1991	LD2		1991	06	06.19167	16	26	06.33	-19	33	53.8		809
1991	LD2		1991	06	08.14167	16	24	23.86	-19	32	11.8		809
1991	LD2		1991	06	08.15486	16	24	23.07	-19	32	10.8		809

1991	LD2		1991	06	08.16806	16	24	22.40	-19	32	10.4	809
1991	LE2		1991	06	06.12153	16	26	49.98	-17	34	37.4	18.6 809
1991	LE2		1991	06	06.13472	16	26	49.06	-17	34	38.4	809
1991	LE2		1991	06	06.14792	16	26	48.01	-17	34	38.3	809
1991	LE2	*	1991	06	06.16528	16	26	47.15	-17	34	38.1	18.5 809
1991	LE2		1991	06	06.17847	16	26	46.26	-17	34	38.9	809
1991	LE2		1991	06	06.19167	16	26	45.47	-17	34	39.1	809
1991	LE2		1991	06	08.14167	16	24	43.12	-17	35	56.2	809
1991	LE2		1991	06	08.15486	16	24	42.15	-17	35	57.0	809
1991	LE2		1991	06	08.16806	16	24	41.42	-17	35	58.0	809
1991	LF2	*	1991	06	06.16528	16	26	54.25	-19	19	12.0	19.0 809
1991	LF2		1991	06	06.17847	16	26	53.54	-19	19	11.5	809
1991	LF2		1991	06	06.19167	16	26	52.86	-19	19	09.1	809
1991	LF2		1991	06	08.14167	16	25	14.67	-19	15	16.3	809
1991	LF2		1991	06	08.15486	16	25	13.95	-19	15	15.9	809
1991	LF2		1991	06	08.16806	16	25	13.27	-19	15	13.5	809
1991	LG2	*	1991	06	06.16528	16	27	20.22	-18	52	06.7	18.6 809
1991	LG2		1991	06	06.17847	16	27	19.29	-18	52	06.1	809
1991	LG2		1991	06	06.19167	16	27	18.29	-18	52	05.7	809
1991	LG2		1991	06	08.14167	16	25	12.90	-18	52	21.8	809
1991	LG2		1991	06	08.15486	16	25	12.02	-18	52	21.8	809
1991	LG2		1991	06	08.16806	16	25	11.10	-18	52	21.8	809
1991	LH2	*	1991	06	06.16528	16	27	49.90	-20	02	02.1	18.5 809
1991	LH2		1991	06	06.17847	16	27	49.21	-20	01	57.3	809
1991	LH2		1991	06	06.19167	16	27	48.36	-20	01	52.3	809
1991	LH2		1991	06	08.14167	16	25	58.92	-19	51	40.4	809
1991	LH2		1991	06	08.15486	16	25	58.13	-19	51	36.9	809
1991	LH2		1991	06	08.16806	16	25	57.33	-19	51	32.7	809
1991	LJ2	*	1991	06	06.16528	16	29	06.70	-18	12	10.4	18.5 809
1991	LJ2		1991	06	06.17847	16	29	05.99	-18	12	11.1	809
1991	LJ2		1991	06	06.19167	16	29	05.31	-18	12	10.6	809
1991	LJ2		1991	06	08.14167	16	27	29.99	-18	12	32.5	809
1991	LJ2		1991	06	08.15486	16	27	29.38	-18	12	32.7	809
1991	LJ2		1991	06	08.16806	16	27	28.70	-18	12	32.9	809
1991	LK2	*	1991	06	06.16528	16	29	34.04	-21	36	33.2	18.8 809
1991	LK2		1991	06	06.17847	16	29	33.28	-21	36	32.4	809
1991	LK2		1991	06	06.19167	16	29	32.61	-21	36	32.8	809
1991	LK2		1991	06	08.14167	16	27	53.73	-21	36	31.6	809
1991	LK2		1991	06	08.15486	16	27	53.04	-21	36	31.6	809
1991	LK2		1991	06	08.16806	16	27	52.36	-21	36	31.7	809
1991	LL2	*	1991	06	06.16528	16	30	27.50	-20	01	14.2	18.6 809
1991	LL2		1991	06	06.17847	16	30	26.77	-20	01	11.9	809
1991	LL2		1991	06	06.19167	16	30	26.09	-20	01	10.3	809
1991	LL2		1991	06	08.14167	16	28	50.92	-19	56	52.6	809
1991	LL2		1991	06	08.15486	16	28	50.25	-19	56	50.6	809
1991	LL2		1991	06	08.16806	16	28	49.64	-19	56	48.3	809
1991	LM2	*	1991	06	06.16528	16	31	02.42	-17	45	35.4	17.5 809
1991	LM2		1991	06	06.17847	16	31	01.61	-17	45	36.5	809
1991	LM2		1991	06	06.19167	16	31	00.85	-17	45	38.0	809
1991	LM2		1991	06	08.14167	16	29	16.19	-17	49	31.2	809
1991	LM2		1991	06	08.15486	16	29	15.43	-17	49	33.4	809
1991	LM2		1991	06	08.16806	16	29	14.63	-17	49	34.7	809
1991	LN2	*	1991	06	06.16528	16	32	01.08	-17	34	58.2	19.0 809
1991	LN2		1991	06	06.17847	16	32	00.16	-17	34	54.4	809
1991	LN2		1991	06	06.19167	16	31	59.39	-17	34	50.7	809
1991	LN2		1991	06	08.14167	16	30	04.69	-17	27	33.6	809
1991	LN2		1991	06	08.15486	16	30	03.89	-17	27	29.6	809
1991	LN2		1991	06	08.16806	16	30	03.15	-17	27	27.5	809
1991	LO2	*	1991	06	06.16528	16	32	46.00	-20	13	49.8	19.2 809

1991	LO2		1991	06	06.17847	16	32	45.32	-20	13	52.3	809
1991	LO2		1991	06	06.19167	16	32	44.54	-20	13	52.4	809
1991	LO2		1991	06	08.14167	16	31	01.75	-20	17	06.1	809
1991	LO2		1991	06	08.15486	16	31	01.01	-20	17	06.7	809
1991	LO2		1991	06	08.16806	16	31	00.33	-20	17	07.9	809
1991	LP2	*	1991	06	06.16528	16	33	38.30	-20	09	12.3	18.5 809
1991	LP2		1991	06	06.17847	16	33	37.31	-20	09	11.1	809
1991	LP2		1991	06	06.19167	16	33	36.51	-20	09	11.3	809
1991	LP2		1991	06	08.14167	16	31	37.65	-20	07	46.7	809
1991	LP2		1991	06	08.15486	16	31	36.79	-20	07	45.7	809
1991	LP2		1991	06	08.16806	16	31	35.93	-20	07	44.7	809
1991	LQ2		1991	06	06.12153	16	33	50.53	-17	30	31.4	18.6 809
1991	LQ2		1991	06	06.13472	16	33	49.69	-17	30	32.8	809
1991	LQ2		1991	06	06.14792	16	33	48.93	-17	30	35.0	809
1991	LQ2	*	1991	06	06.16528	16	33	47.88	-17	30	40.1	18.6 809
1991	LQ2		1991	06	06.17847	16	33	47.12	-17	30	42.0	809
1991	LQ2		1991	06	06.19167	16	33	46.30	-17	30	43.8	809
1991	LQ2		1991	06	08.14167	16	31	57.67	-17	35	47.1	809
1991	LQ2		1991	06	08.15486	16	31	56.92	-17	35	49.5	809
1991	LQ2		1991	06	08.16806	16	31	56.07	-17	35	51.7	809
1991	LR2	*	1991	06	06.16528	16	34	12.24	-20	46	07.5	18.7 809
1991	LR2		1991	06	06.17847	16	34	11.54	-20	46	02.9	809
1991	LR2		1991	06	06.19167	16	34	10.72	-20	45	57.8	809
1991	LR2		1991	06	08.14167	16	32	28.39	-20	35	10.0	809
1991	LR2		1991	06	08.15486	16	32	27.82	-20	35	06.2	809
1991	LR2		1991	06	08.16806	16	32	27.07	-20	35	02.1	809
1991	LS2	*	1991	06	06.16528	16	34	26.54	-19	58	37.4	18.6 809
1991	LS2		1991	06	06.17847	16	34	25.67	-19	58	33.0	809
1991	LS2		1991	06	06.19167	16	34	24.90	-19	58	27.1	809
1991	LS2		1991	06	08.14167	16	32	29.50	-19	46	51.8	809
1991	LS2		1991	06	08.15486	16	32	28.64	-19	46	47.8	809
1991	LS2		1991	06	08.16806	16	32	27.83	-19	46	42.5	809
1991	LT2	*	1991	06	06.16528	16	34	30.72	-22	17	51.8	18.5 809
1991	LT2		1991	06	06.17847	16	34	29.76	-22	17	51.8	809
1991	LT2		1991	06	06.19167	16	34	28.97	-22	17	51.6	809
1991	LT2		1991	06	08.14167	16	32	26.67	-22	18	58.4	809
1991	LT2		1991	06	08.15486	16	32	25.84	-22	18	59.2	809
1991	LT2		1991	06	08.16806	16	32	25.01	-22	19	00.5	809
1991	LU2	*	1991	06	06.16528	16	34	44.58	-19	05	22.5	18.8 809
1991	LU2		1991	06	06.17847	16	34	43.69	-19	05	17.3	809
1991	LU2		1991	06	06.19167	16	34	42.86	-19	05	09.7	809
1991	LU2		1991	06	08.14167	16	32	43.44	-18	50	01.6	809
1991	LU2		1991	06	08.15486	16	32	42.67	-18	49	56.5	809
1991	LU2		1991	06	08.16806	16	32	41.82	-18	49	50.5	809
1991	LV2	*	1991	06	06.16528	16	35	12.15	-18	54	03.9	18.6 809
1991	LV2		1991	06	06.17847	16	35	11.26	-18	54	03.7	809
1991	LV2		1991	06	06.19167	16	35	10.43	-18	54	03.8	809
1991	LV2		1991	06	08.14167	16	33	08.88	-18	53	24.9	809
1991	LV2		1991	06	08.15486	16	33	07.90	-18	53	24.9	809
1991	LV2		1991	06	08.16806	16	33	07.00	-18	53	24.4	809
1991	LW2	*	1991	06	06.16528	16	35	25.21	-22	03	05.4	18.3 809
1991	LW2		1991	06	06.17847	16	35	24.45	-22	03	03.1	809
1991	LW2		1991	06	06.19167	16	35	23.65	-22	02	58.4	809
1991	LW2		1991	06	08.14167	16	33	35.73	-21	52	35.5	809
1991	LW2		1991	06	08.15486	16	33	34.93	-21	52	31.6	809
1991	LW2		1991	06	08.16806	16	33	34.04	-21	52	26.3	809
1991	LX2	*	1991	06	06.16528	16	35	25.25	-18	17	38.0	18.1 809
1991	LX2		1991	06	06.17847	16	35	24.42	-18	17	39.3	809
1991	LX2		1991	06	06.19167	16	35	23.59	-18	17	39.6	809

1991	LX2		1991	06	08.14167	16	33	26.40	-18	20	58.7	809
1991	LX2		1991	06	08.15486	16	33	25.58	-18	21	00.0	809
1991	LX2		1991	06	08.16806	16	33	24.66	-18	21	01.8	809
1991	LY2	*	1991	06	06.16528	16	35	29.96	-22	04	18.3	19.3 809
1991	LY2		1991	06	06.17847	16	35	29.07	-22	04	18.2	809
1991	LY2		1991	06	06.19167	16	35	28.14	-22	04	19.7	809
1991	LY2		1991	06	08.14167	16	33	33.66	-22	05	52.4	18.7 809
1991	LY2		1991	06	08.15486	16	33	32.68	-22	05	52.5	809
1991	LY2		1991	06	08.16806	16	33	31.88	-22	05	53.7	809
1991	LZ2	*	1991	06	06.16528	16	35	34.30	-19	13	57.3	19.4 809
1991	LZ2		1991	06	06.17847	16	35	33.61	-19	13	56.6	809
1991	LZ2		1991	06	06.19167	16	35	32.89	-19	13	54.9	809
1991	LZ2		1991	06	08.14167	16	34	03.35	-19	13	10.5	809
1991	LZ2		1991	06	08.15486	16	34	02.52	-19	13	08.0	809
1991	LZ2		1991	06	08.16806	16	34	01.77	-19	13	06.2	809
1991	LA3	*	1991	06	06.16528	16	35	51.10	-17	49	57.9	19.4 809
1991	LA3		1991	06	06.17847	16	35	50.48	-17	49	57.7	809
1991	LA3		1991	06	06.19167	16	35	49.60	-17	49	59.9	809
1991	LA3		1991	06	08.14167	16	34	03.89	-17	53	37.9	809
1991	LA3		1991	06	08.15486	16	34	03.10	-17	53	40.0	809
1991	LA3		1991	06	08.16806	16	34	02.34	-17	53	42.5	809
1991	LB3	*	1991	06	06.16528	16	36	34.99	-19	33	34.1	18.6 809
1991	LB3		1991	06	06.17847	16	36	34.28	-19	33	31.0	809
1991	LB3		1991	06	06.19167	16	36	33.55	-19	33	28.1	809
1991	LB3		1991	06	08.14167	16	34	55.50	-19	25	26.7	18.5 809
1991	LB3		1991	06	08.15486	16	34	54.79	-19	25	23.4	809
1991	LB3		1991	06	08.16806	16	34	54.11	-19	25	20.0	809
1991	LC3	*	1991	06	06.16528	16	36	50.12	-20	41	10.8	19.6 809
1991	LC3		1991	06	06.17847	16	36	49.41	-20	41	11.1	809
1991	LC3		1991	06	06.19167	16	36	48.73	-20	41	10.1	809
1991	LC3		1991	06	08.14167	16	34	56.25	-20	40	32.7	809
1991	LC3		1991	06	08.15486	16	34	55.30	-20	40	32.1	809
1991	LC3		1991	06	08.16806	16	34	54.49	-20	40	32.7	809
1991	LD3	*	1991	06	06.16528	16	37	00.31	-20	18	19.9	18.6 809
1991	LD3		1991	06	06.17847	16	36	59.51	-20	18	19.5	809
1991	LD3		1991	06	06.19167	16	36	58.58	-20	18	18.6	809
1991	LD3		1991	06	08.14167	16	34	56.11	-20	17	27.6	809
1991	LD3		1991	06	08.15486	16	34	55.29	-20	17	26.7	809
1991	LD3		1991	06	08.16806	16	34	54.42	-20	17	26.4	809
1991	LE3	*	1991	06	06.16528	16	37	02.92	-19	54	51.9	18.6 809
1991	LE3		1991	06	06.17847	16	37	01.92	-19	54	49.6	809
1991	LE3		1991	06	06.19167	16	37	01.02	-19	54	48.0	809
1991	LE3		1991	06	08.14167	16	34	49.13	-19	49	23.9	809
1991	LE3		1991	06	08.15486	16	34	48.51	-19	49	22.0	809
1991	LE3		1991	06	08.16806	16	34	47.83	-19	49	19.9	809
1991	LF3	*	1991	06	06.16528	16	37	23.26	-20	12	12.4	18.5 809
1991	LF3		1991	06	06.17847	16	37	22.40	-20	12	07.0	809
1991	LF3		1991	06	06.19167	16	37	21.67	-20	12	01.9	809
1991	LF3		1991	06	08.14167	16	35	33.42	-19	58	40.9	809
1991	LF3		1991	06	08.15486	16	35	32.69	-19	58	35.3	809
1991	LF3		1991	06	08.16806	16	35	31.92	-19	58	29.9	809
1991	LG3	*	1991	06	06.16528	16	37	27.43	-18	42	03.4	19.2 809
1991	LG3		1991	06	06.17847	16	37	26.66	-18	42	04.8	809
1991	LG3		1991	06	06.19167	16	37	25.88	-18	42	06.1	809
1991	LG3		1991	06	08.14167	16	35	41.47	-18	46	05.9	809
1991	LG3		1991	06	08.15486	16	35	40.74	-18	46	08.7	809
1991	LG3		1991	06	08.16806	16	35	39.95	-18	46	11.4	809
1991	LH3	*	1991	06	06.16528	16	37	37.33	-21	12	37.8	19.2 809
1991	LH3		1991	06	06.17847	16	37	36.52	-21	12	38.0	809

1991	LH3		1991	06	06.19167	16	37	35.59	-21	12	39.6	809
1991	LH3		1991	06	08.14167	16	35	38.31	-21	15	12.6	809
1991	LH3		1991	06	08.15486	16	35	37.38	-21	15	14.3	809
1991	LH3		1991	06	08.16806	16	35	36.60	-21	15	16.0	809
1991	LJ3	*	1991	06	06.12153	16	18	03.50	-16	46	20.6	18.5 809
1991	LJ3		1991	06	06.13472	16	18	02.75	-16	46	17.6	809
1991	LJ3		1991	06	06.14792	16	18	01.94	-16	46	15.7	809
1991	LJ3		1991	06	08.09722	16	16	15.01	-16	39	10.6	809
1991	LJ3		1991	06	08.11042	16	16	14.22	-16	39	08.6	809
1991	LJ3		1991	06	08.12361	16	16	13.34	-16	39	05.7	809
1991	LK3	*	1991	06	06.12153	16	18	53.11	-15	19	50.9	18.7 809
1991	LK3		1991	06	06.13472	16	18	52.27	-15	19	48.2	809
1991	LK3		1991	06	06.14792	16	18	51.48	-15	19	45.2	809
1991	LK3		1991	06	08.09722	16	17	02.81	-15	11	00.3	809
1991	LK3		1991	06	08.11042	16	17	02.01	-15	10	56.2	809
1991	LK3		1991	06	08.12361	16	17	01.22	-15	10	52.7	809
1991	LL3	*	1991	06	06.12153	16	18	57.68	-16	07	15.2	19.4 809
1991	LL3		1991	06	06.13472	16	18	56.91	-16	07	14.0	809
1991	LL3		1991	06	06.14792	16	18	56.11	-16	07	12.6	809
1991	LL3		1991	06	08.09722	16	17	05.34	-16	03	03.5	809
1991	LL3		1991	06	08.11042	16	17	04.54	-16	03	02.3	809
1991	LL3		1991	06	08.12361	16	17	03.70	-16	03	00.3	809
1991	LM3	*	1991	06	06.12153	16	19	31.07	-16	45	02.0	18.4 809
1991	LM3		1991	06	06.13472	16	19	30.38	-16	44	55.6	809
1991	LM3		1991	06	06.14792	16	19	29.70	-16	44	49.5	809
1991	LM3		1991	06	08.09722	16	17	57.65	-16	27	57.9	809
1991	LM3		1991	06	08.11042	16	17	56.92	-16	27	51.9	809
1991	LM3		1991	06	08.12361	16	17	56.20	-16	27	44.4	809
1991	LN3	*	1991	06	06.12153	16	20	09.15	-14	19	38.2	18.6 809
1991	LN3		1991	06	06.13472	16	20	08.45	-14	19	36.6	809
1991	LN3		1991	06	06.14792	16	20	07.81	-14	19	35.3	809
1991	LN3		1991	06	08.09722	16	18	40.13	-14	15	29.4	809
1991	LN3		1991	06	08.11042	16	18	39.53	-14	15	28.6	809
1991	LN3		1991	06	08.12361	16	18	38.85	-14	15	26.5	809
1991	LO3	*	1991	06	06.12153	16	20	39.57	-13	25	21.2	18.7 809
1991	LO3		1991	06	06.13472	16	20	38.81	-13	25	20.1	809
1991	LO3		1991	06	06.14792	16	20	38.13	-13	25	17.9	809
1991	LO3		1991	06	08.09722	16	19	00.23	-13	20	53.6	809
1991	LO3		1991	06	08.11042	16	18	59.57	-13	20	52.2	809
1991	LO3		1991	06	08.12361	16	18	58.83	-13	20	51.0	809
1991	LP3	*	1991	06	06.12153	16	20	42.83	-13	24	31.8	19.0 809
1991	LP3		1991	06	06.13472	16	20	41.94	-13	24	28.8	809
1991	LP3		1991	06	06.14792	16	20	41.23	-13	24	25.7	809
1991	LP3		1991	06	08.09722	16	18	53.82	-13	17	56.9	809
1991	LP3		1991	06	08.11042	16	18	53.07	-13	17	54.6	809
1991	LP3		1991	06	08.12361	16	18	52.36	-13	17	53.4	809
1991	LQ3	*	1991	06	06.12153	16	21	11.02	-14	19	14.3	19.0 809
1991	LQ3		1991	06	06.13472	16	21	10.22	-14	19	14.0	809
1991	LQ3		1991	06	06.14792	16	21	09.54	-14	19	12.1	809
1991	LQ3		1991	06	08.09722	16	19	28.75	-14	16	59.4	809
1991	LQ3		1991	06	08.11042	16	19	27.99	-14	16	59.3	809
1991	LQ3		1991	06	08.12361	16	19	27.21	-14	16	58.0	809
1991	LR3	*	1991	06	06.12153	16	21	25.56	-13	48	56.4	18.6 809
1991	LR3		1991	06	06.13472	16	21	24.86	-13	48	54.4	809
1991	LR3		1991	06	06.14792	16	21	24.04	-13	48	52.9	809
1991	LR3		1991	06	08.09722	16	19	43.71	-13	44	04.1	809
1991	LR3		1991	06	08.11042	16	19	42.90	-13	44	01.4	809
1991	LR3		1991	06	08.12361	16	19	42.18	-13	44	00.6	809
1991	LS3	*	1991	06	06.12153	16	21	32.77	-12	25	43.3	18.7 809

1991	LS3		1991	06	06.13472	16	21	31.67	-12	25	55.0	809
1991	LS3		1991	06	06.14792	16	21	30.52	-12	26	08.3	809
1991	LS3		1991	06	08.09722	16	18	52.21	-12	59	08.0	809
1991	LS3		1991	06	08.11042	16	18	51.17	-12	59	19.7	809
1991	LS3		1991	06	08.12361	16	18	50.06	-12	59	33.0	809
1991	LT3	*	1991	06	06.12153	16	21	37.67	-16	15	05.6	18.6 809
1991	LT3		1991	06	06.13472	16	21	36.80	-16	15	05.6	809
1991	LT3		1991	06	06.14792	16	21	36.10	-16	15	06.1	809
1991	LT3		1991	06	08.09722	16	19	50.87	-16	15	54.2	809
1991	LT3		1991	06	08.11042	16	19	50.08	-16	15	54.9	809
1991	LT3		1991	06	08.12361	16	19	49.33	-16	15	54.6	809
1991	LU3	*	1991	06	06.12153	16	21	47.11	-16	23	13.5	18.6 809
1991	LU3		1991	06	06.13472	16	21	46.29	-16	23	12.8	809
1991	LU3		1991	06	06.14792	16	21	45.49	-16	23	11.9	809
1991	LU3		1991	06	08.09722	16	20	00.19	-16	21	50.5	809
1991	LU3		1991	06	08.11042	16	19	59.41	-16	21	49.7	809
1991	LU3		1991	06	08.12361	16	19	58.58	-16	21	49.5	809
1991	LV3	*	1991	06	06.12153	16	21	49.11	-14	35	00.4	17.8 809
1991	LV3		1991	06	06.13472	16	21	48.43	-14	34	57.3	809
1991	LV3		1991	06	06.14792	16	21	47.77	-14	34	53.2	809
1991	LV3		1991	06	08.09722	16	20	19.41	-14	25	14.2	809
1991	LV3		1991	06	08.11042	16	20	18.74	-14	25	10.4	809
1991	LV3		1991	06	08.12361	16	20	18.09	-14	25	07.3	809
1991	LW3	*	1991	06	06.12153	16	21	54.56	-14	15	03.5	18.6 809
1991	LW3		1991	06	06.13472	16	21	53.68	-14	15	04.4	809
1991	LW3		1991	06	06.14792	16	21	52.87	-14	15	04.9	809
1991	LW3		1991	06	08.09722	16	19	59.35	-14	16	42.1	809
1991	LW3		1991	06	08.11042	16	19	58.56	-14	16	42.6	809
1991	LW3		1991	06	08.12361	16	19	57.67	-14	16	44.3	809
1991	LX3	*	1991	06	06.12153	16	25	40.89	-14	31	02.3	18.6 809
1991	LX3		1991	06	06.13472	16	25	39.95	-14	31	02.1	809
1991	LX3		1991	06	06.14792	16	25	39.03	-14	31	00.8	809
1991	LX3		1991	06	08.09722	16	23	33.23	-14	29	10.4	809
1991	LX3		1991	06	08.11042	16	23	32.31	-14	29	09.3	809
1991	LX3		1991	06	08.12361	16	23	31.49	-14	29	09.5	809
1991	LY3	*	1991	06	06.12153	16	26	03.01	-15	11	03.9	18.5 809
1991	LY3		1991	06	06.13472	16	26	02.21	-15	11	00.3	809
1991	LY3		1991	06	06.14792	16	26	01.48	-15	10	58.0	809
1991	LY3		1991	06	08.09722	16	24	12.86	-15	02	52.0	809
1991	LY3		1991	06	08.11042	16	24	12.11	-15	02	49.5	809
1991	LY3		1991	06	08.12361	16	24	11.31	-15	02	45.8	809
1991	LZ3	*	1991	06	06.12153	16	26	03.03	-14	19	42.8	18.0 809
1991	LZ3		1991	06	06.13472	16	26	02.21	-14	19	42.7	809
1991	LZ3		1991	06	06.14792	16	26	01.33	-14	19	42.8	809
1991	LZ3		1991	06	08.09722	16	24	05.72	-14	20	30.3	809
1991	LZ3		1991	06	08.11042	16	24	04.89	-14	20	30.2	809
1991	LZ3		1991	06	08.12361	16	24	04.02	-14	20	30.6	809
1991	LA4	*	1991	06	06.12153	16	26	12.06	-15	25	04.0	19.2 809
1991	LA4		1991	06	06.13472	16	26	11.28	-15	25	05.4	809
1991	LA4		1991	06	06.14792	16	26	10.52	-15	25	06.2	809
1991	LA4		1991	06	08.09722	16	24	28.55	-15	27	29.6	809
1991	LA4		1991	06	08.11042	16	24	27.75	-15	27	31.6	809
1991	LA4		1991	06	08.12361	16	24	26.90	-15	27	32.7	809
1991	LB4	*	1991	06	06.12153	16	26	22.29	-16	54	00.2	18.6 809
1991	LB4		1991	06	06.13472	16	26	21.48	-16	53	54.1	809
1991	LB4		1991	06	06.14792	16	26	20.73	-16	53	49.0	809
1991	LB4		1991	06	08.09722	16	24	38.44	-16	39	20.0	809
1991	LB4		1991	06	08.11042	16	24	37.71	-16	39	14.8	809
1991	LB4		1991	06	08.12361	16	24	36.95	-16	39	07.8	809

1991	LC4	*	1991	06	06.12153	16	26	25.01	-17	23	05.7	19.0	809
1991	LC4		1991	06	06.13472	16	26	24.06	-17	23	02.5		809
1991	LC4		1991	06	06.14792	16	26	23.24	-17	23	01.3		809
1991	LC4		1991	06	08.09722	16	24	25.87	-17	16	33.7		809
1991	LC4		1991	06	08.11042	16	24	24.95	-17	16	31.7		809
1991	LC4		1991	06	08.12361	16	24	24.07	-17	16	28.8		809
1991	LD4	*	1991	06	06.12153	16	26	35.67	-14	22	10.8	19.3	809
1991	LD4		1991	06	06.13472	16	26	34.99	-14	22	08.0		809
1991	LD4		1991	06	06.14792	16	26	34.24	-14	22	06.2		809
1991	LD4		1991	06	08.09722	16	25	03.65	-14	15	35.8	19.0	809
1991	LD4		1991	06	08.11042	16	25	03.03	-14	15	33.5		809
1991	LD4		1991	06	08.12361	16	25	02.33	-14	15	30.3		809
1991	LE4	*	1991	06	06.12153	16	26	37.76	-14	38	36.8	18.4	809
1991	LE4		1991	06	06.13472	16	26	36.96	-14	38	38.2		809
1991	LE4		1991	06	06.14792	16	26	36.27	-14	38	39.4		809
1991	LE4		1991	06	08.09722	16	24	56.96	-14	41	31.0		809
1991	LE4		1991	06	08.11042	16	24	56.26	-14	41	32.2		809
1991	LE4		1991	06	08.12361	16	24	55.54	-14	41	33.2		809
1991	LF4	*	1991	06	06.12153	16	26	46.40	-13	25	51.0	18.8	809
1991	LF4		1991	06	06.13472	16	26	45.61	-13	25	50.4		809
1991	LF4		1991	06	06.14792	16	26	44.79	-13	25	49.7		809
1991	LF4		1991	06	08.09722	16	23	25.07	-13	26	19.0		809
1991	LF4		1991	06	08.11042	16	23	24.30	-13	26	16.8		809
1991	LF4		1991	06	08.12361	16	23	23.42	-13	26	15.4		809
1991	LG4	*	1991	06	06.12153	16	27	34.28	-14	28	55.3	18.6	809
1991	LG4		1991	06	06.13472	16	27	33.32	-14	28	52.6		809
1991	LG4		1991	06	06.14792	16	27	32.48	-14	28	49.5		809
1991	LG4		1991	06	08.09722	16	25	31.88	-14	21	30.0		809
1991	LG4		1991	06	08.11042	16	25	31.06	-14	21	26.4		809
1991	LG4		1991	06	08.12361	16	25	30.09	-14	21	23.7		809
1991	LH4	*	1991	06	06.12153	16	27	38.56	-17	05	09.6	18.6	809
1991	LH4		1991	06	06.13472	16	27	37.83	-17	05	09.3		809
1991	LH4		1991	06	06.14792	16	27	37.14	-17	05	11.1		809
1991	LH4		1991	06	08.09722	16	25	56.98	-17	05	57.8		809
1991	LH4		1991	06	08.11042	16	25	56.14	-17	05	58.7		809
1991	LH4		1991	06	08.12361	16	25	55.49	-17	05	58.3		809
1991	LJ4	*	1991	06	06.12153	16	28	57.53	-14	37	16.9	18.6	809
1991	LJ4		1991	06	06.13472	16	28	56.70	-14	37	09.2		809
1991	LJ4		1991	06	06.14792	16	28	56.00	-14	37	02.4		809
1991	LJ4		1991	06	08.09722	16	27	16.03	-14	18	42.3		809
1991	LJ4		1991	06	08.11042	16	27	15.30	-14	18	34.7		809
1991	LJ4		1991	06	08.12361	16	27	14.63	-14	18	28.5		809
1991	LK4	*	1991	06	06.12153	16	30	40.11	-14	58	09.3	18.5	809
1991	LK4		1991	06	06.13472	16	30	39.37	-14	58	09.2		809
1991	LK4		1991	06	06.14792	16	30	38.55	-14	58	08.9		809
1991	LK4		1991	06	08.09722	16	28	53.33	-14	58	00.2		809
1991	LK4		1991	06	08.11042	16	28	52.58	-14	58	00.0		809
1991	LK4		1991	06	08.12361	16	28	51.87	-14	57	59.8		809
1991	LL4	*	1991	06	06.12153	16	30	57.14	-15	38	02.1	18.6	809
1991	LL4		1991	06	06.13472	16	30	56.46	-15	38	00.3		809
1991	LL4		1991	06	06.14792	16	30	55.84	-15	37	57.3		809
1991	LL4		1991	06	08.09722	16	29	22.43	-15	31	32.6		809
1991	LL4		1991	06	08.11042	16	29	21.83	-15	31	31.0		809
1991	LL4		1991	06	08.12361	16	29	21.18	-15	31	27.9		809
1991	LM4	*	1991	06	06.12153	16	31	33.97	-14	05	17.2	18.4	809
1991	LM4		1991	06	06.13472	16	31	33.07	-14	05	15.6		809
1991	LM4		1991	06	06.14792	16	31	32.22	-14	05	14.0		809
1991	LM4		1991	06	08.09722	16	29	38.09	-14	02	52.6		809
1991	LM4		1991	06	08.11042	16	29	37.21	-14	02	51.5		809

1991	LM4		1991	06	08.12361	16	29	36.45	-14	02	50.2		809
1991	LN4	*	1991	06	06.12153	16	31	47.43	-15	30	49.6	18.6	809
1991	LN4		1991	06	06.13472	16	31	46.46	-15	30	50.2		809
1991	LN4		1991	06	06.14792	16	31	45.54	-15	30	50.1		809
1991	LN4		1991	06	08.09722	16	29	38.74	-15	31	00.4		809
1991	LN4		1991	06	08.11042	16	29	37.97	-15	31	00.7		809
1991	LN4		1991	06	08.12361	16	29	37.16	-15	31	01.9		809
1991	LO4	*	1991	06	06.12153	16	32	40.88	-13	08	50.6	18.5	809
1991	LO4		1991	06	06.13472	16	32	40.03	-13	08	48.4		809
1991	LO4		1991	06	06.14792	16	32	39.21	-13	08	46.0		809
1991	LO4		1991	06	08.09722	16	30	50.37	-13	02	47.6		809
1991	LO4		1991	06	08.11042	16	30	49.70	-13	02	46.1		809
1991	LO4		1991	06	08.12361	16	30	48.89	-13	02	43.2		809
1991	LP4	*	1991	06	06.12153	16	33	26.74	-15	08	36.6	18.7	809
1991	LP4		1991	06	06.13472	16	33	25.99	-15	08	33.4		809
1991	LP4		1991	06	06.14792	16	33	25.16	-15	08	29.2		809
1991	LP4		1991	06	08.09722	16	31	41.83	-14	59	14.5		809
1991	LP4		1991	06	08.11042	16	31	41.11	-14	59	10.8		809
1991	LP4		1991	06	08.12361	16	31	40.24	-14	59	06.5		809
1991	LQ4	*	1991	06	06.12153	16	33	35.76	-16	25	44.6	18.8	809
1991	LQ4		1991	06	06.13472	16	33	35.05	-16	25	40.8		809
1991	LQ4		1991	06	06.14792	16	33	34.34	-16	25	36.0		809
1991	LQ4		1991	06	08.09722	16	32	02.74	-16	15	54.6		809
1991	LQ4		1991	06	08.11042	16	32	02.10	-16	15	51.2		809
1991	LQ4		1991	06	08.12361	16	32	01.37	-16	15	46.1		809
1991	LR4	*	1991	06	06.12153	16	34	19.31	-12	35	43.2	18.6	809
1991	LR4		1991	06	06.13472	16	34	18.57	-12	35	44.2		809
1991	LR4		1991	06	06.14792	16	34	17.88	-12	35	44.2		809
1991	LR4		1991	06	08.09722	16	32	39.29	-12	37	22.0		809
1991	LR4		1991	06	08.11042	16	32	38.60	-12	37	22.6		809
1991	LR4		1991	06	08.12361	16	32	37.85	-12	37	22.9		809
1991	LS4	*	1991	06	06.12153	16	34	42.77	-16	16	21.8	18.7	809
1991	LS4		1991	06	06.13472	16	34	41.93	-16	16	21.5		809
1991	LS4		1991	06	06.14792	16	34	41.15	-16	16	22.4		809
1991	LS4		1991	06	08.09722	16	32	55.65	-16	17	27.3		809
1991	LS4		1991	06	08.11042	16	32	54.97	-16	17	27.4		809
1991	LS4		1991	06	08.12361	16	32	54.24	-16	17	29.7		809
1991	LT4	*	1991	06	06.12153	16	36	29.17	-15	19	51.4	18.4	809
1991	LT4		1991	06	06.13472	16	36	28.22	-15	19	50.4		809
1991	LT4		1991	06	06.14792	16	36	27.33	-15	19	50.1		809
1991	LT4		1991	06	08.09722	16	34	22.32	-15	17	40.7		809
1991	LT4		1991	06	08.11042	16	34	21.45	-15	17	39.7		809
1991	LT4		1991	06	08.12361	16	34	20.51	-15	17	39.7		809
1991	LU4	*	1991	06	06.12153	16	37	15.24	-16	46	41.1	18.4	809
1991	LU4		1991	06	06.13472	16	37	14.52	-16	46	37.9		809
1991	LU4		1991	06	06.14792	16	37	13.71	-16	46	36.2		809
1991	LU4		1991	06	08.09722	16	35	29.36	-16	39	30.3		809
1991	LU4		1991	06	08.11042	16	35	28.57	-16	39	27.8		809
1991	LU4		1991	06	08.12361	16	35	27.81	-16	39	25.3		809
1991	LV4	*	1991	06	06.12153	16	38	21.12	-15	11	42.7	18.7	809
1991	LV4		1991	06	06.13472	16	38	20.32	-15	11	40.6		809
1991	LV4		1991	06	06.14792	16	38	19.47	-15	11	38.8		809
1991	LV4		1991	06	08.09722	16	36	16.82	-15	06	01.6		809
1991	LV4		1991	06	08.11042	16	36	15.93	-15	05	59.3		809
1991	LV4		1991	06	08.12361	16	36	15.10	-15	05	57.4		809
4047	P-L		1991	04	19.19028	13	41	33.18	-13	08	59.6	18.7	809
4047	P-L		1991	04	19.20347	13	41	32.56	-13	08	56.0		809
4047	P-L		1991	04	19.21667	13	41	31.84	-13	08	52.4		809
6582	P-L		1991	04	08.02361	12	57	37.14	-06	16	00.6		809

6582	P-L	1991	04	08.03681	12	57	36.50	-06	15	57.1	809
6582	P-L	1991	04	08.05000	12	57	35.84	-06	15	55.3	809
6582	P-L	1991	04	10.07569	12	56	03.42	-06	06	47.8	18.6 809
6582	P-L	1991	04	10.08889	12	56	02.75	-06	06	44.3	809
6582	P-L	1991	04	10.10208	12	56	02.06	-06	06	40.9	809
9507	P-L	1991	04	19.09653	13	00	49.83	-04	39	26.9	18.7 809
9507	P-L	1991	04	19.10972	13	00	49.36	-04	39	24.1	809
9507	P-L	1991	04	19.13194	13	00	48.80	-04	39	21.8	809
1188	T-2	1991	04	19.14792	13	11	46.96	-10	20	27.9	18.0 809
1188	T-2	1991	04	19.16111	13	11	46.20	-10	20	22.9	809
1188	T-2	1991	04	19.17431	13	11	45.48	-10	20	17.5	809
62		1991	06	06.16528	16	29	00.26	-19	13	30.1	15.0 809
62		1991	06	06.17847	16	28	59.55	-19	13	29.0	809
62		1991	06	06.19167	16	28	58.76	-19	13	27.4	809
62		1991	06	08.14167	16	27	25.24	-19	10	39.6	809
62		1991	06	08.15486	16	27	24.50	-19	10	38.7	809
62		1991	06	08.16806	16	27	23.80	-19	10	37.5	809
153		1991	06	06.16528	16	34	54.25	-17	32	39.2	14.0 809
153		1991	06	06.17847	16	34	53.63	-17	32	35.9	809
153		1991	06	06.19167	16	34	53.00	-17	32	32.7	809
153		1991	06	08.14167	16	33	33.93	-17	26	34.7	809
153		1991	06	08.15486	16	33	33.31	-17	26	32.3	809
153		1991	06	08.16806	16	33	32.73	-17	26	30.2	809
455		1991	05	12.21458	16	16	21.64	-15	43	11.1	14.0 809
455		1991	05	12.22778	16	16	20.81	-15	43	12.5	809
455		1991	05	12.24097	16	16	20.10	-15	43	12.9	809
455		1991	05	17.11389	16	11	38.81	-15	47	20.7	809
455		1991	05	17.12708	16	11	37.91	-15	47	20.2	809
455		1991	05	17.14028	16	11	37.02	-15	47	21.6	809
593		1991	06	06.16528	16	17	52.43	-18	06	12.6	16.0 809
593		1991	06	06.17847	16	17	51.49	-18	06	13.6	809
593		1991	06	06.19167	16	17	50.68	-18	06	14.6	809
593		1991	06	08.14167	16	15	56.76	-18	10	14.8	809
593		1991	06	08.15486	16	15	55.87	-18	10	16.5	809
593		1991	06	08.16806	16	15	55.11	-18	10	17.7	809
966		1991	05	12.21458	16	16	48.06	-15	28	00.0	16.0 809
966		1991	05	12.22778	16	16	47.28	-15	28	02.9	809
966		1991	05	12.24097	16	16	46.48	-15	28	06.6	809
966		1991	05	17.11389	16	12	07.14	-15	48	08.4	809
966		1991	05	17.12708	16	12	06.19	-15	48	11.7	809
966		1991	05	17.14028	16	12	05.37	-15	48	14.6	809
1037		1991	06	06.12153	16	30	35.56	-13	52	12.2	18.3 809
1037		1991	06	06.13472	16	30	34.68	-13	52	09.6	809
1037		1991	06	06.14792	16	30	33.80	-13	52	05.9	809
1037		1991	06	08.09722	16	28	30.36	-13	44	27.1	809
1037		1991	06	08.11042	16	28	29.49	-13	44	24.6	809
1037		1991	06	08.12361	16	28	28.64	-13	44	21.5	809
1245		1991	05	12.25903	16	33	52.48	-17	38	13.5	809
1245		1991	05	12.27222	16	33	51.87	-17	38	11.9	809
1245		1991	05	12.28542	16	33	51.20	-17	38	10.3	809
1245		1991	05	17.15972	16	30	08.24	-17	27	31.6	16.0 809
1245		1991	05	17.17292	16	30	07.51	-17	27	29.4	809
1245		1991	05	17.18611	16	30	06.82	-17	27	27.3	809
1363		1990	11	12.12986	02	32	58.12	+14	45	34.5	17.0 809
1363		1990	11	12.14236	02	32	57.55	+14	45	31.2	809
1363		1990	11	12.15278	02	32	57.05	+14	45	27.8	809
1363		1990	11	15.10972	02	30	33.42	+14	32	58.3	809
1363		1990	11	15.12014	02	30	32.92	+14	32	55.9	809
1363		1990	11	15.13125	02	30	32.38	+14	32	53.3	809

1363	1990	11	21.12431	02	25	59.88	+14	08	50.8	809
1363	1990	11	21.13472	02	25	59.40	+14	08	47.9	809
1363	1990	11	21.14514	02	25	58.94	+14	08	45.4	809
1363	1990	11	22.12708	02	25	17.20	+14	05	03.3	809
1363	1990	11	22.13750	02	25	16.76	+14	05	00.5	809
1363	1990	11	22.14792	02	25	16.28	+14	04	57.3	809
1623	1991	05	12.25903	16	24	35.53	-18	54	08.2	809
1623	1991	05	12.27222	16	24	34.91	-18	54	07.1	809
1623	1991	05	12.28542	16	24	34.23	-18	54	06.0	809
1623	1991	05	17.15972	16	20	57.46	-18	45	51.0	18.4 809
1623	1991	05	17.17292	16	20	56.84	-18	45	49.7	809
1623	1991	05	17.18611	16	20	56.19	-18	45	48.3	809
1671	1991	06	06.12153	16	36	32.30	-16	28	17.2	18.5 809
1671	1991	06	06.13472	16	36	31.49	-16	28	15.7	809
1671	1991	06	06.14792	16	36	30.70	-16	28	14.2	809
1671	1991	06	08.09722	16	34	43.88	-16	24	22.5	809
1671	1991	06	08.11042	16	34	43.08	-16	24	20.5	809
1671	1991	06	08.12361	16	34	42.33	-16	24	19.9	809
1702	1991	05	13.16111	16	03	17.73	-09	34	18.1	18.0 809
1702	1991	05	13.17431	16	03	17.04	-09	34	17.0	809
1702	1991	05	13.18750	16	03	16.36	-09	34	16.3	809
1702	1991	05	17.07014	15	59	58.43	-09	29	29.7	809
1702	1991	05	17.08333	15	59	57.78	-09	29	28.6	809
1702	1991	05	17.09653	15	59	57.03	-09	29	28.0	809
2426	1991	05	12.25903	16	28	24.95	-20	38	06.4	809
2426	1991	05	12.27222	16	28	24.32	-20	38	02.0	809
2426	1991	05	12.28542	16	28	23.65	-20	37	58.4	809
2426	1991	05	17.15972	16	24	44.35	-20	11	05.2	17.3 809
2426	1991	05	17.17292	16	24	43.70	-20	11	00.9	809
2426	1991	05	17.18611	16	24	43.04	-20	10	56.4	809
2489	1991	05	12.25903	16	19	22.41	-21	40	07.7	18.6 809
2489	1991	05	12.27222	16	19	21.76	-21	40	07.4	809
2489	1991	05	12.28542	16	19	21.09	-21	40	06.1	809
2586	1991	05	12.21458	16	18	49.88	-14	04	06.4	18.4 809
2586	1991	05	12.22778	16	18	49.23	-14	04	04.0	809
2586	1991	05	12.24097	16	18	48.51	-14	04	01.5	809
2586	1991	05	17.11389	16	14	29.92	-13	44	42.8	809
2586	1991	05	17.12708	16	14	29.19	-13	44	39.5	809
2586	1991	05	17.14028	16	14	28.39	-13	44	36.0	809
2638	1991	06	06.16528	16	20	24.09	-19	47	31.9	18.0 809
2638	1991	06	06.17847	16	20	23.30	-19	47	26.1	809
2638	1991	06	06.19167	16	20	22.53	-19	47	19.9	809
2638	1991	06	08.14167	16	18	34.18	-19	33	37.8	809
2638	1991	06	08.15486	16	18	33.42	-19	33	32.2	809
2638	1991	06	08.16806	16	18	32.65	-19	33	26.9	809
2707	1991	06	06.16528	16	18	24.88	-20	40	54.2	18.4 809
2707	1991	06	06.17847	16	18	24.18	-20	40	53.2	809
2707	1991	06	06.19167	16	18	23.53	-20	40	51.6	809
2844	1991	05	12.21458	16	09	52.26	-15	06	37.1	18.0 809
2844	1991	05	12.22778	16	09	51.50	-15	06	34.6	809
2844	1991	05	12.24097	16	09	50.79	-15	06	33.2	809
2844	1991	05	17.11389	16	05	34.20	-14	54	04.4	809
2844	1991	05	17.12708	16	05	33.37	-14	54	02.2	809
2844	1991	05	17.14028	16	05	32.63	-14	54	00.6	809
2925	1991	06	06.16528	16	24	15.06	-19	32	24.3	18.5 809
2925	1991	06	06.17847	16	24	14.25	-19	32	22.3	809
2925	1991	06	06.19167	16	24	13.38	-19	32	20.0	809
2925	1991	06	08.14167	16	22	16.09	-19	26	40.9	809
2925	1991	06	08.15486	16	22	15.27	-19	26	38.3	809

2925	1991	06	08.16806	16	22	14.41	-19	26	36.6	809
2950	1991	06	06.12153	16	37	16.97	-13	01	01.2	18.4 809
2950	1991	06	06.13472	16	37	16.19	-13	01	00.5	809
2950	1991	06	06.14792	16	37	15.47	-13	01	01.4	809
2950	1991	06	08.09722	16	35	32.24	-13	00	45.8	809
2950	1991	06	08.11042	16	35	31.48	-13	00	45.6	809
2950	1991	06	08.12361	16	35	30.80	-13	00	46.0	809
3098	1991	05	12.25903	16	32	28.95	-19	44	34.9	809
3098	1991	05	12.27222	16	32	28.30	-19	44	33.9	809
3098	1991	05	12.28542	16	32	27.56	-19	44	33.3	809
3098	1991	05	17.15972	16	28	24.70	-19	35	46.3	18.6 809
3098	1991	05	17.17292	16	28	24.00	-19	35	45.0	809
3098	1991	05	17.18611	16	28	23.28	-19	35	43.0	809
3264	1991	05	12.25903	16	21	57.59	-20	11	33.5	809
3264	1991	05	12.27222	16	21	56.93	-20	11	33.3	809
3264	1991	05	12.28542	16	21	56.30	-20	11	31.8	809
3264	1991	05	17.15972	16	18	08.88	-20	02	08.4	18.4 809
3264	1991	05	17.17292	16	18	08.17	-20	02	06.4	809
3264	1991	05	17.18611	16	18	07.45	-20	02	05.0	809
3355	1991	05	12.21458	16	19	53.49	-14	20	56.9	18.7 809
3355	1991	05	12.22778	16	19	52.67	-14	20	54.9	809
3355	1991	05	12.24097	16	19	51.87	-14	20	52.3	809
3355	1991	05	17.11389	16	15	00.37	-14	05	48.4	809
3355	1991	05	17.12708	16	14	59.53	-14	05	46.7	809
3355	1991	05	17.14028	16	14	58.70	-14	05	43.3	809
3424	1991	05	13.16111	15	56	42.56	-09	31	49.8	18.4 809
3424	1991	05	13.17431	15	56	41.84	-09	31	46.7	809
3424	1991	05	13.18750	15	56	41.11	-09	31	44.7	809
3424	1991	05	17.07014	15	53	13.05	-09	17	54.6	809
3424	1991	05	17.08333	15	53	12.29	-09	17	52.4	809
3424	1991	05	17.09653	15	53	11.55	-09	17	49.8	809
3472	1991	06	06.16528	16	24	21.11	-20	46	12.1	18.7 809
3472	1991	06	06.17847	16	24	20.40	-20	46	09.1	809
3472	1991	06	06.19167	16	24	19.65	-20	46	07.4	809
3472	1991	06	08.14167	16	22	33.40	-20	39	39.4	809
3472	1991	06	08.15486	16	22	32.53	-20	39	35.7	809
3472	1991	06	08.16806	16	22	31.94	-20	39	32.3	809
3571	1991	06	06.16528	16	33	19.93	-21	27	42.0	18.2 809
3571	1991	06	06.17847	16	33	19.30	-21	27	38.4	809
3571	1991	06	06.19167	16	33	18.63	-21	27	35.2	809
3571	1991	06	08.14167	16	31	57.25	-21	21	09.3	809
3571	1991	06	08.15486	16	31	56.66	-21	21	06.6	809
3571	1991	06	08.16806	16	31	56.09	-21	21	03.9	809
3741	1991	05	17.07014	15	51	08.15	-11	01	11.3	18.6 809
3741	1991	05	17.08333	15	51	07.32	-11	01	07.4	809
3741	1991	05	17.09653	15	51	06.61	-11	01	03.0	809
3978	1991	06	06.16528	16	35	17.05	-18	52	34.5	18.0 809
3978	1991	06	06.17847	16	35	16.35	-18	52	30.0	809
3978	1991	06	06.19167	16	35	15.67	-18	52	25.4	809
3978	1991	06	08.14167	16	33	35.77	-18	41	36.2	809
3978	1991	06	08.15486	16	33	35.10	-18	41	32.7	809
3978	1991	06	08.16806	16	33	34.31	-18	41	28.0	809
3982	1991	06	06.16528	16	36	55.55	-21	49	27.2	17.0 809
3982	1991	06	06.17847	16	36	54.65	-21	49	21.8	809
3982	1991	06	06.19167	16	36	53.77	-21	49	15.6	809
3982	1991	06	08.14167	16	34	59.94	-21	35	41.5	809
3982	1991	06	08.15486	16	34	59.09	-21	35	35.7	809
3982	1991	06	08.16806	16	34	58.25	-21	35	30.6	809
4073	1991	05	12.25903	16	20	07.68	-18	25	34.1	809

4073	1991 05 12.27222	16 20 07.07	-18 25 32.7					809
4073	1991 05 12.28542	16 20 06.45	-18 25 31.4					809
4073	1991 05 17.15972	16 16 25.90	-18 15 11.3				18.6	809
4073	1991 05 17.17292	16 16 25.25	-18 15 09.8					809
4073	1991 05 17.18611	16 16 24.60	-18 15 08.1					809
4115	1991 05 12.21458	16 15 02.09	-13 19 39.8				18.6	809
4115	1991 05 12.22778	16 15 01.44	-13 19 35.9					809
4115	1991 05 12.24097	16 15 00.82	-13 19 32.4					809
4115	1991 05 17.11389	16 11 20.56	-12 55 17.3					809
4115	1991 05 17.12708	16 11 19.93	-12 55 13.4					809
4115	1991 05 17.14028	16 11 19.30	-12 55 09.5					809
4143	1991 05 12.25903	16 30 46.88	-19 56 41.9					809
4143	1991 05 12.27222	16 30 46.21	-19 56 41.9					809
4143	1991 05 12.28542	16 30 45.55	-19 56 41.4					809
4143	1991 05 17.15972	16 27 04.59	-19 49 27.4				18.6	809
4143	1991 05 17.17292	16 27 03.96	-19 49 25.6					809
4143	1991 05 17.18611	16 27 03.28	-19 49 24.8					809
4377	1991 06 06.16528	16 33 22.83	-19 58 55.8				18.0	809
4377	1991 06 06.17847	16 33 21.97	-19 58 54.0					809
4377	1991 06 06.19167	16 33 21.21	-19 58 49.8					809
4377	1991 06 08.14167	16 31 26.06	-19 52 24.2					809
4377	1991 06 08.15486	16 31 25.28	-19 52 21.6					809
4377	1991 06 08.16806	16 31 24.50	-19 52 18.7					809
4455	1991 06 06.16528	16 35 33.75	-20 04 56.3				18.3	809
4455	1991 06 06.17847	16 35 33.08	-20 04 53.0					809
4455	1991 06 06.19167	16 35 32.39	-20 04 49.3					809
4455	1991 06 08.14167	16 33 55.71	-19 56 44.3					809
4455	1991 06 08.15486	16 33 55.08	-19 56 40.1					809
4455	1991 06 08.16806	16 33 54.44	-19 56 37.5					809
4458	1991 06 06.16528	16 29 06.42	-18 38 40.0				18.2	809
4458	1991 06 06.17847	16 29 05.57	-18 38 38.3					809
4458	1991 06 06.19167	16 29 04.76	-18 38 37.7					809
4458	1991 06 08.14167	16 27 08.09	-18 37 01.9					809
4458	1991 06 08.15486	16 27 07.27	-18 37 01.4					809
4458	1991 06 08.16806	16 27 06.47	-18 37 00.7					809

875 Yorii
M. Arai, 2695, Tomita, Saitama, 369-12 Japan
Observers M. Arai, H. Mori
Measurer H. Mori

1990 BU	1990 01 25.62639	09 33 10.88	+17 24 22.9				16.5	875
1990 BU	1990 01 25.64375	09 33 09.89	+17 24 25.9					875
1990 BU	1990 01 27.67014	09 31 09.35	+17 27 29.2				16	875
1990 BU	1990 01 27.68924	09 31 08.24	+17 27 30.5					875
1990 BU	1990 02 17.66111	09 09 31.28	+17 52 54.9				17	875
1990 BU	1990 02 17.67535	09 09 30.29	+17 52 53.8					875
1991 EA1	1991 04 16.50347	11 23 31.58	+14 46 23.0				16	875

885 JCPM Yakiimo Station
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers A. Natori, T. Urata
Measurer T. Urata

1987 SJ	1991 08 03.63472	22 01 23.65	-02 37 40.3				15.5	885
1987 SJ	1991 08 03.65000	22 01 23.35	-02 37 42.7					885

894 Otomo
O. Muramatsu, 119-1, 2-8 Sakurazutsumi, Musashino, Tokyo 180, Japan
Observer S. Otomo
Measurer S. Otomo, O. Muramatsu

1991	HH		1991 05 03.51563	13 39 45.89	-13 53 11.7						894
1991	HH		1991 05 10.59826	13 33 53.12	-12 57 40.3						894
1991	JB1		1991 05 18.65382	14 43 05.64	-11 23 38.7					W	894
1991	JH1		1991 05 19.64861	15 41 58.30	-13 49 05.0						894
1991	JH1		1991 05 19.66250	15 41 57.50	-13 49 01.8						894
1991	JH1		1991 06 04.58438	15 29 13.08	-13 16 51.3						894
1991	JH1		1991 06 04.59826	15 29 12.51	-13 16 51.1						894
1991	KA		1991 06 04.55833	15 42 14.48	-13 25 37.4						894
1991	KA		1991 06 04.57014	15 42 13.88	-13 25 38.4						894
1991	KA		1991 06 06.60521	15 40 27.57	-13 27 20.2						894
1991	KA		1991 06 06.61806	15 40 26.80	-13 27 20.4						894
1991	KA		1991 06 17.63472	15 32 40.58	-13 45 49.0			17.0			894
1991	KA		1991 06 17.64861	15 32 40.13	-13 45 51.5			17.0			894
1991	LD	*	1991 06 06.66389	16 41 08.58	-19 47 53.8			16.0			894
1991	LD		1991 06 06.67951	16 41 08.09	-19 47 51.6						894
1991	LD		1991 06 11.70174	16 37 10.2	-19 30 52					W	894
1991	LD		1991 06 11.71534	16 37 09.6	-19 30 49					W	894
1991	LD		1991 06 17.57847	16 32 46.79	-19 11 53.4			16.5			894
1991	LD		1991 06 17.59097	16 32 46.18	-19 11 50.7			16.5			894
1991	LD		1991 06 17.68229	16 32 42.08	-19 11 35.4			16.5			894
1991	LD		1991 07 08.57917	16 21 19.10	-18 18 50.7						894
1991	LD		1991 07 08.59306	16 21 18.89	-18 18 48.3						894
1991	LD		1991 07 08.60573	16 21 18.47	-18 18 47.7					W	894
1991	PA	*	1991 08 03.59965	21 24 55.47	-14 35 25.2			16.5			894
1991	PA		1991 08 03.61528	21 24 54.80	-14 35 24.8			16.5			894
1991	PA		1991 08 08.59444	21 21 09.24	-14 35 28.8			16.5			894
1991	PB	*	1991 08 03.62813	21 08 25.60	-14 35 15.4			15.8			894
1991	PB		1991 08 03.63924	21 08 25.04	-14 35 19.4			15.8			894
1991	PB		1991 08 07.70417	21 05 29.40	-14 59 35.7			15.5			894
1991	PB		1991 08 07.72467	21 05 28.26	-14 59 43.4			15.5			894

896 Yatsugatake South Base Observatory
O. Muramatsu, 119-1, 2-8 Sakurazutsumi, Musashino, Tokyo 180, Japan
Observers Y. Kushida, R. Kushida
Measurer O. Muramatsu
0.20-m f/4.0 reflector

1990	DM		1991 06 17.60868	16 31 05.73	-10 02 24.2						896
1990	DM		1991 06 17.63264	16 31 04.68	-10 02 24.7					W	896

897 YGCO Chiyoda Station
T. Kojima, 45 Shimonakamori, Chiyoda-cyo, Ora-Gun,
Gunma-ken, 370-07 Japan
Observer T. Kojima
0.25-m f/3.4 Wright-Schmidt camera

1991	AQ		1991 01 19.46499	07 27 49.51	+43 14 04.5			14			897
1991	AQ		1991 01 19.50139	07 27 23.08	+43 18 38.1						897

* * * * *

ORBITAL ELEMENTS.

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The name of the orbit computer is shown on the line giving T for a comet and Epoch for a displayed minor-planet orbit; for many of the minor planets (O-C) residuals are shown in full (in R.A. and Decl.); observations are identified by date and observatory code, X referring to an approximate and Y to a semiaccurate position. For displayed minor planets "Id." shows those involved in establishing the identifications (generally with the principal contributors first), "k" indicating key identifications and "d" (only) double (or multiple) designations; no identifier is shown if only the orbit computer is involved and the results were not previously published. J-P indicates that only the perturbations by the outer planets were considered, and a and n are then related by a gravitational constant augmented by the masses of the inner planets. For the one-opposition orbits, equinox 1950.0 is used, and the columns headed Arc and O show the time span in days covered by the observations and the number of observations utilized in the computation (0 = 10 or more). In the note column N, D means that there are double (or multiple) designations, E means that the value of the eccentricity was assumed, F means both; the double designations are listed at the end; the codes for the orbit computers (column C) are as listed above.

Periodic Comet Metcalf-Brewington (1991a)
Epoch 1991 Jan. 24.0 ET = JDE 2448280.5

T 1991 Jan. 5.61458 ET				Nakano
q 1.5914659		(1950.0)	P	Q
n 0.12707151	Peri.	208.04861	+0.81933267	-0.57264366
a 3.9183562	Node	187.08234	+0.55910165	+0.80880914
e 0.5938435	Incl.	13.03404	+0.12688313	+0.13381713
P 7.76				

From 115 observations 1906-1991, mean residual 1".38. Nongravitational parameters A1 = +0.58 +/- 0.06, A2 = +0.0644 +/- 0.0018.

Periodic Comet Levy (1991q)

T 1991 July 8.19293 ET				Marsden
q 0.9825213		(1950.0)	P	Q
n 0.01921207	Peri.	41.47733	+0.96509862	-0.19868989
a 13.8065957	Node	328.72287	+0.04702879	+0.77235337
e 0.9288368	Incl.	19.18450	+0.25762947	+0.60331799
P 51.30				

From 33 observations 1991 June 15-Aug. 4.

Periodic Comet Machholz (1986 VIII)
Epoch 1991 July 3.0 ET = JDE 2448440.5

T	1991 July 21.98243 ET				Marsden
q	0.1255445		(1950.0)	P	Q
n	0.18819992	Peri.	14.52872	-0.18913396	-0.46405904
a	3.0157113	Node	93.82272	+0.79191542	-0.59316373
e	0.9583698	Incl.	60.14716	+0.58060168	+0.65787992
P	5.24				

From 93 observations 1986-1991, mean residual 1".0.

Periodic Comet Hartley 2 (1991t)
Epoch 1991 Sept. 21.0 ET = JDE 2448520.5

T	1991 Sept. 11.65424 ET				Marsden
q	0.9532850		(1950.0)	P	Q
n	0.15732431	Peri.	174.93370	+0.75402362	-0.64655755
a	3.3983817	Node	226.05391	+0.59682350	+0.74801907
e	0.7194885	Incl.	9.25608	+0.27431750	+0.14976918
P	6.26				

From 36 observations 1986-1991, mean residual 0".8.

Periodic Comet Shoemaker 1 (1991p)
Epoch 1992 Jan. 19.0 ET = JDE 2448640.5

T	1991 Dec. 18.21694 ET				Marsden
q	1.9857541		(1950.0)	P	Q
n	0.13578143	Peri.	18.77069	+0.98765763	-0.00001499
a	3.7489455	Node	339.24962	-0.11673464	+0.66666172
e	0.4703166	Incl.	26.23677	+0.10442910	+0.74536042
P	7.26				

From 66 observations 1984-1991, mean residual 1".0.

Periodic Comet Chernykh (1991o)
Epoch 1992 Jan. 19.0 ET = JDE 2448640.5

T	1992 Jan. 25.44168 ET				Marsden
q	2.3562686		(1950.0)	P	Q
n	0.07058914	Peri.	263.19480	+0.83625837	-0.54408875
a	5.7984349	Node	129.74316	+0.53154603	+0.77387114
e	0.5936371	Incl.	5.08209	+0.13465051	+0.32417726
P	13.96				

From 215 observations 1977-1991, mean residual 1".2.

Comet Helin-Alu (1991r)

T	1992 Feb. 20.01526 ET				Marsden
q	4.8500332		(1950.0)	P	Q
		Peri.	30.80693	+0.06739423	+0.68543827
		Node	252.95275	-0.99768253	+0.03948157
e	1.0	Incl.	49.31661	-0.00935895	+0.72705954

From 24 observations 1991 June 13-July 13.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1987 HB1	13.3	870505	37.19	322.09	203.73	2.42	0.1400	2.5643	7	8	E	E
1988 RM3	14.4	880916	6.79	353.22	355.72	8.75	0.1446	2.3997	6	8		E
1988 RO3	14.2	880916	334.76	36.60	357.66	14.95	0.1755	2.5752	6	8		E
1988 RP3	13.4	880916	333.51	39.41	357.59	13.54	0.1875	2.6062	6	0		E
1988 RZ3	15.4	880916	22.84	161.96	165.44	2.09	0.1750	2.7347	6	8		E
1988 WF	10.9	881205	194.95	159.80	83.41	3.58	0.1544	2.9308	7	0		N
1988 XV1	11.5	881225	42.36	302.35	72.55	19.32	0.2372	3.1138	33	0		N
1989 TM1	13.5	891021	339.19	37.85	21.49	9.87	0.1679	2.5911	34	0		E
1989 TT1	13.1	891021	325.80	205.78	223.13	5.12	0.1031	2.4042	61	0		E

1989	UX	15.5	891021	2.33	349.09	33.85	7.93	0.3535	2.6310	12	5	W
1989	UO2	15.1	891021	10.09	160.72	211.28	5.72	0.2793	2.4607	14	9	E
1989	US2	13.9	891110	15.24	148.63	219.82	11.87	0.3002	2.7637	6	7	E
1989	UD3	13.5	891110	55.35	123.81	187.45	1.67	0.2491	2.6634	9	7	E
1989	UP4	12.7	891021	5.50	30.22	352.92	1.15	0.1802	3.1755	12	0	E
1989	UQ4	15.0	891021	19.14	148.51	205.00	3.57	0.3000	2.3116	11	8 E	E
1989	US4	13.5	891021	348.85	183.06	223.87	1.05	0.1457	2.6937	12	0	E
1989	UU5	13.1	891021	301.02	255.74	199.26	15.06	0.0710	3.1774	32	4	E
1989	UW5	14.3	891110	351.90	350.60	58.95	4.35	0.2321	2.4989	5	8	E
1989	UZ5	12.5	891021	14.10	327.35	40.40	6.38	0.2016	3.2044	5	8 E	W
1989	UC6	13.3	891110	72.72	254.95	37.20	28.47	0.2415	2.6379	49	6	E
1989	VL5	14.5	891021	47.61	302.31	14.39	4.94	0.2496	2.3707	6	6 F	W
1989	VN5	14.0	891021	52.64	351.14	322.23	1.80	0.2273	2.4093	2	6 F	W
1989	WS	12.8	891130	9.04	159.53	237.08	8.76	0.1916	2.5693	33	0	N
1990	OB1	13.6	900817	37.67	38.13	231.02	8.63	0.2123	2.3275	55	0	E
1990	OS1	13.4	900817	73.33	226.29	3.09	9.66	0.1872	2.3600	49	8	E
1990	OW1	14.5	900817	26.54	248.00	40.10	4.15	0.1806	2.2120	53	0	E
1990	OX1	13.6	900817	328.67	280.47	86.41	5.73	0.1197	2.3968	53	8	E
1990	OY1	13.1	900817	32.52	209.77	72.42	5.80	0.1713	2.5978	53	8	E
1990	OA2	13.7	900817	347.58	353.36	352.31	14.80	0.2172	2.8816	53	8	E
1990	OF2	14.6	900817	345.72	349.57	353.34	5.01	0.2418	2.3599	51	8	E
1990	OH2	12.4	900817	33.92	282.56	349.00	4.74	0.1820	3.1596	48	8	E
1990	OM2	14.9	900817	356.64	336.43	349.58	6.60	0.2074	2.2272	54	0	E
1990	ON2	13.8	900817	32.72	281.23	1.79	3.18	0.0772	2.2591	52	0	E
1990	OO2	12.3	900817	358.75	353.10	329.74	15.11	0.1403	2.6030	51	0	E
1990	OV2	12.6	900817	353.16	250.49	81.07	9.41	0.0964	2.8565	48	6	E
1990	OF3	14.0	900817	358.36	35.18	289.52	11.98	0.2919	3.1290	51	6	E
1990	OK3	14.5	900817	354.04	203.06	127.36	3.12	0.2160	2.4156	50	0	E
1990	OO3	13.8	900817	269.15	276.96	148.55	6.05	0.1205	2.4123	49	8	E
1990	OR3	14.5	900817	17.83	335.05	324.29	5.65	0.0977	2.3899	53	0 D	W
1990	OT3	13.4	900817	140.32	232.06	305.42	4.02	0.0607	2.2169	53	8	E
1990	OY3	13.8	900817	354.87	5.99	324.27	5.98	0.1354	2.3726	53	0	E
1990	QU3	14.3	900906	42.12	197.96	88.13	2.23	0.1243	2.2765	25	8	E
1990	QE4	13.9	900906	2.23	180.57	156.86	14.51	0.2853	2.6015	24	0	E
1990	QM5	14.0	900906	351.89	223.73	127.59	2.92	0.2432	3.0571	25	8	E
1990	QN5	13.5	900906	326.77	39.18	344.97	8.62	0.1739	2.7911	23	8	E
1990	QO5	15.1	900906	41.18	213.41	74.01	1.70	0.1248	2.3344	31	0	E
1990	RF6	13.7	900906	321.57	233.66	165.03	5.16	0.2557	3.0743	5	0	E
1990	RG6	15.6	900906	340.70	205.09	163.75	2.55	0.2216	2.2718	5	0	E
1990	RD9	13.0	900906	140.49	258.43	290.24	11.24	0.0943	2.4510	4	6 E	W
1990	RV9	13.5	900926	108.59	76.23	135.82	5.42	0.1300	2.3408	4	6 E	E
1990	RX9	12.9	900926	269.17	39.34	28.98	2.04	0.0500	2.8968	4	6 E	E
1990	RL10	14.7	900926	336.49	20.18	1.27	2.78	0.2916	2.4661	4	6	E
1990	SU4	14.0	900906	346.87	325.96	34.15	4.08	0.1902	2.3041	30	8	W
1990	SW14	11.8	900926	159.44	274.50	273.06	9.56	0.1574	3.0156	3	6	E
1990	SH16	14.0	900906	346.59	23.41	331.66	12.73	0.1545	2.6498	6	6 E	W
1990	SO16	15.4	900926	8.61	282.12	47.54	3.22	0.2527	2.3575	4	6	E
1990	TF8	13.7	901016	305.02	247.75	216.53	13.89	0.1394	2.5436	41	0	N
1990	VS2	13.5	901125	179.06	111.56	129.98	6.15	0.0120	2.4805	38	0	N
1990	VW8	14.0	901105	316.10	238.60	222.42	12.91	0.1667	2.5854	10	0	M
1991	BB3	15.1	910124	352.04	203.21	296.01	1.36	0.1160	2.4426	7	6	E
1991	GN	13.0	910504	192.41	168.31	207.29	22.90	0.0901	1.9315	65	8	B
1991	GP1	11.5	910504	338.30	104.57	134.09	14.44	0.2243	2.7617	68	0	G
1991	GW1	14.0	910504	20.24	334.96	218.92	24.56	0.1940	2.2729	64	0 D	W
1991	GA10	12.5	910414	1.03	97.73	113.97	15.64	0.1813	2.7725	2	3	W
1991	GD10	14.5	910325	355.65	156.86	40.57	9.58	0.1073	2.7913	4	6 E	W
1991	GE10	17.0	910325	353.70	117.05	82.23	3.21	0.1190	2.2666	2	4 E	W
1991	GF10	14.5	910325	356.94	148.16	48.33	7.70	0.1048	3.0629	4	6 E	W
1991	GG10	14.0	910325	174.10	269.73	107.96	4.28	0.0872	2.2909	4	6 E	W

1991 GH10	16.0	910325	354.07	133.59	65.07	4.26	0.1117	2.2452	4	6	E	W
1991 GJ10	13.5	910325	69.94	78.25	40.41	10.08	0.0437	3.1648	4	6	E	W
1991 GK10	14.5	910325	355.67	91.46	107.21	2.97	0.1314	2.8725	4	6	E	W
1991 GL10	14.5	910325	356.67	106.24	91.87	3.16	0.2197	3.1975	4	6	E	W
1991 GM10	12.0	910325	138.21	295.96	109.34	4.63	0.1771	3.9695	3	5	E	W
1991 GN10	15.0	910325	172.53	273.20	105.66	4.63	0.1150	2.2349	3	5	E	W
1991 GO10	14.0	910325	93.31	45.30	28.61	23.37	0.2318	2.7821	4	6	E	W
1991 GP10	16.5	910325	354.66	84.34	114.92	3.24	0.1223	2.5575	4	6	E	W
1991 GQ10	14.0	910325	355.68	73.10	125.22	3.86	0.0980	2.7648	4	6	E	W
1991 GR10	14.5	910325	356.31	146.91	50.52	7.75	0.1459	2.9181	4	6	E	W
1991 GS10	16.0	910325	354.59	133.61	65.89	4.16	0.1137	2.5352	3	5	E	W
1991 GU10	15.0	910325	357.57	159.86	36.35	14.54	0.1073	3.0724	4	6	E	W
1991 GV10	14.5	910325	355.67	158.50	41.34	9.02	0.1325	3.1677	2	4	E	W
1991 JF1	12.0	910524	200.96	151.17	221.15	28.08	0.1428	1.9127	39	8		G
1991 JK1	14.0	910504	327.72	199.26	89.08	16.88	0.3240	2.6926	13	0		W
1991 JT1	13.5	910504	332.80	83.57	179.74	15.68	0.1530	2.5548	50	0		W
1991 JY1	12.0	910524	302.22	116.68	212.50	24.81	0.2242	2.5510	37	5		W
1991 JZ1	11.0	910524	320.80	146.92	130.62	11.01	0.0833	3.0589	38	8		G
1991 JJ2	12.5	910504	265.39	231.60	124.77	13.11	0.3026	3.0309	10	6		W
1991 KC	9.5	910613	74.64	358.34	121.20	33.61	0.1133	5.1956	60	0		B
1991 LB	15.0	910524	294.71	113.65	217.02	4.49	0.2433	2.3009	5	0	E	M
1991 LM	11.0	910613	330.44	192.13	102.93	16.50	0.0891	2.5677	26	8		W
1991 LN	12.5	910613	8.61	108.97	135.94	9.83	0.2678	2.7779	3	8		G
1991 LQ	12.5	910613	329.33	204.22	93.63	15.25	0.1489	2.5764	27	8		W
1991 LR	13.5	910613	327.86	189.24	115.61	14.96	0.2332	2.3811	34	0		W
1991 LV	13.5	910613	201.06	175.11	239.92	18.83	0.0828	1.8856	33	0		W
1991 LY	12.5	910613	327.88	182.63	117.03	15.74	0.1796	2.6250	27	8		M
1991 LZ	13.0	910613	6.98	47.17	202.20	10.90	0.2318	2.4186	27	7		W
1991 LA1	13.0	910613	21.45	99.18	132.39	14.50	0.1331	2.5817	27	7		W
1991 LE1	11.0	910613	263.39	262.31	110.03	28.37	0.1215	2.6320	26	8		W
1991 NA	15.0	910703	342.99	40.33	277.35	11.67	0.3302	2.3690	9	0		M
1991 NC1	14.3	910723	27.75	141.27	125.89	5.92	0.2037	2.2999	5	5		E
1991 ND1	12.3	910723	317.85	333.08	39.15	1.64	0.1897	3.1216	5	6		E
1991 NE1	12.5	910703	290.30	85.10	304.45	8.44	0.0783	3.1504	5	6	E	W
1991 NG1	12.7	910723	320.07	59.89	307.90	9.45	0.1326	3.0248	5	6		E
1991 NH1	12.7	910723	30.72	267.57	0.51	1.34	0.2206	3.1491	5	6		E
1991 NJ1	15.4	910723	355.68	198.46	119.53	6.12	0.2265	2.2636	5	5		E
1991 NK1	11.2	910723	59.48	124.21	128.43	10.44	0.0500	3.1911	5	6	E	E
1991 NL1	11.8	910723	285.40	353.58	72.78	2.22	0.3000	3.1354	5	6	E	E
1991 NW1	14.2	910723	343.71	358.37	326.06	6.69	0.3102	2.5832	4	6		E
1991 NX1	11.7	910723	106.90	204.78	311.12	16.22	0.2884	2.5939	4	6		E
1991 PA	13.5	910723	351.24	17.37	310.85	4.42	0.3190	3.0584	27	9		W
1991 PB	14.0	910723	341.01	188.71	150.03	2.41	0.2503	2.2523	4	8	E	W

1989 VL5 = 1989 UR2 = 1989 VA5 (G. V. Williams)
1989 VN5 = 1989 VL6 (G. V. Williams)
1990 OR3 = 1990 PE (G. V. Williams, MPC 16995)
1991 GW1 = 1991 JO (G. V. Williams, MPC 18398)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(287) Nephthys Obs. 550 M 188.77893 Peri. 120.43125
H 8.30 G 0.22 Opp. 36 n 0.27313193 Node 142.56066
rms res. 0".56 (M-P) 1902-1990 e 0.0242242 Incl. 10.02378

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(793) Arizona Obs. 25 M 271.36359 Peri. 308.73926
H 10.26 G 0.15 Opp. 14 n 0.21096191 Node 36.36782
rms res. 0".99 (M-P) 1915-1991 e 0.1250222 Incl. 15.78974

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(857) Glasenappia Obs. 51 M 16.78188 Peri. 238.68867
H 11.32 G 0.15 Opp. 15 n 0.30403187 Node 83.12858
rms res. 0".88 (M-P) 1939-1991 e 0.0890149 Incl. 5.30094

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1032) Pafuri Obs. 32 M 42.92101 Peri. 193.07405
H 10.0 G 0.15 Opp. 16 n 0.17790650 Node 76.58095
rms res. 0".93 (M-P) 1917-1991 e 0.1404340 Incl. 9.48647

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1046) Edwin Obs. 39 M 14.81283 Peri. 51.09013
H 10.2 G 0.15 Opp. 16 n 0.19122412 Node 11.13846
rms res. 0".77 (M-P) 1926-1990 e 0.0594678 Incl. 7.91900

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1610) Mirnaya Obs. 46 M 113.62097 Peri. 14.35102
H 13.1 G 0.15 Opp. 10 n 0.30134830 Node 359.97813
rms res. 0".95 (M-P) 1928-1990 e 0.1982767 Incl. 2.20587

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1656) Suomi Obs. 23 M 173.82549 Peri. 287.25027
H 12.4 G 0.15 Opp. 7 n 0.38310197 Node 175.71104
rms res. 0".81 (M-P) 1942-1991 e 0.1234951 Incl. 25.06310

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1672) Gezelle Obs. 52 M 356.04616 Peri. 254.63346
H 11.1 G 0.15 Opp. 11 n 0.17206038 Node 181.04302
rms res. 0".98 (M-P) 1935-1990 e 0.2555876 Incl. 1.04098

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1785) Wurm Obs. 33 M 51.76086 Peri. 245.98899
H 12.7 G 0.15 Opp. 12 n 0.29483682 Node 283.63028
rms res. 0".93 (M-P) 1931-1989 e 0.0688597 Incl. 3.77337

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(1869) Philoctetes Obs. 25 M 201.05549 Peri. 321.26544
H 11.0 G 0.15 Opp. 7 n 0.08049815 Node 44.26397
rms res. 0".81 (M-P) 1960-1991 e 0.0628533 Incl. 3.96400

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2147) Kharadze Obs. 42 M 270.03969 Peri. 290.79417
H 11.7 G 0.15 Opp. 7 n 0.17417409 Node 145.15623
rms res. 0".67 (M-P) 1966-1991 e 0.0565674 Incl. 10.02308

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2148) Epeios Obs. 34 M 164.25929 Peri. 232.31110
H 11.1 G 0.15 Opp. 4 n 0.08329856 Node 176.59701
rms res. 0".47 (M-P) 1976-1991 e 0.0570741 Incl. 9.15872

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2175) Andrea Doria Obs. 24 M 115.93215 Peri. 143.00938
H 14.2 G 0.15 Opp. 7 n 0.29867351 Node 222.46610
rms res. 1".03 (M-P) 1964-1990 e 0.2062416 Incl. 3.69365

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2217) Eltigen Obs. 31 M 260.23444 Peri. 170.25102
H 10.8 G 0.15 Opp. 12 n 0.17440588 Node 128.15184
rms res. 0".90 (M-P) 1958-1991 e 0.1481584 Incl. 2.22803

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2255) Qinghai Obs. 34 M 207.49413 Peri. 349.38121
H 11.3 G 0.15 Opp. 7 n 0.18110447 Node 41.41762
rms res. 1".01 (M-P) 1950-1991 e 0.1576398 Incl. 14.19953

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2290) Helffrich Obs. 17 M 188.36490 Peri. 270.20575
H 12.2 G 0.15 Opp. 6 n 0.23662242 Node 156.30932
rms res. 0".95 (M-P) 1932-1991 e 0.2378563 Incl. 11.51788

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2306) Bauschinger Obs. 35 M 209.72930 Peri. 104.01114
H 11.4 G 0.15 Opp. 8 n 0.21820514 Node 237.14015
rms res. 0".95 (M-P) 1939-1989 e 0.0622667 Incl. 4.22296

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2329) Orthos Obs. 58 M 34.84425 Peri. 145.80662
H 14.9 G 0.15 Opp. 4 n 0.26484073 Node 169.54664
rms res. 0".70 (M-P) 1976-1991 e 0.6592360 Incl. 24.42233

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2334) Cuffey Obs. 42 M 223.76904 Peri. 112.31271
H 13.5 G 0.15 Opp. 12 n 0.28852467 Node 121.17703
rms res. 0".98 (M-P) 1949-1990 e 0.0752107 Incl. 4.08618

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2339) Anacreon Obs. 31 M 286.25123 Peri. 340.91499
H 13.49 G 0.15 Opp. 9 n 0.24547195 Node 12.28896
rms res. 0".81 (M-P) 1952-1990 e 0.1968077 Incl. 4.85862

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2349) Kurchenko Obs. 30 M 198.41729 Peri. 218.37073
H 11.9 G 0.15 Opp. 9 n 0.21378596 Node 133.47336
rms res. 0".86 (M-P) 1957-1991 e 0.1180929 Incl. 17.47957

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2363) Cebriones Obs. 55 M 193.61017 Peri. 52.66678
H 9.11 G 0.15 Opp. 7 n 0.08473876 Node 211.90803
rms res. 0".81 (M-P) 1977-1989 e 0.0344323 Incl. 32.24724

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2401) Aehlita Obs. 25 M 115.44359 Peri. 37.85931
H 12.2 G 0.15 Opp. 8 n 0.21388157 Node 51.23139
rms res. 0".77 (M-P) 1954-1989 e 0.0614648 Incl. 4.33273

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2403) Sumava Obs. 34 M 21.95920 Peri. 39.02465
H 12.5 G 0.15 Opp. 7 n 0.24244153 Node 290.87498
rms res. 0".90 (M-P) 1918-1991 e 0.1293001 Incl. 3.29403

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2409) Chapman Obs. 54 M 223.17358 Peri. 207.70753
H 13.2 G 0.15 Opp. 7 n 0.28895891 Node 140.92784
rms res. 0".70 (M-P) 1971-1991 e 0.1912381 Incl. 3.50977

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2413) van de Hulst Obs. 37 M 300.78569 Peri. 249.01527
H 10.8 G 0.15 Opp. 7 n 0.18795802 Node 167.17785
rms res. 0".89 (M-P) 1931-1991 e 0.1105569 Incl. 10.64131

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2484) Parenago Obs. 25 M 236.77040 Peri. 147.54528
H 13.0 G 0.15 Opp. 6 n 0.27496589 Node 204.86066
rms res. 0".88 (M-P) 1928-1989 e 0.2555053 Incl. 1.19015

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2493) Elmer Obs. 26 M 358.34701 Peri. 146.96504
H 12.5 G 0.15 Opp. 7 n 0.21168649 Node 206.36997
rms res. 0".76 (M-P) 1954-1991 e 0.1720603 Incl. 8.71989

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2544) Gubarev Obs. 52 M 118.27414 Peri. 261.19931
H 13.0 G 0.15 Opp. 7 n 0.26941149 Node 305.93658
rms res. 0".96 (M-P) 1917-1991 e 0.2390545 Incl. 22.54747

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2653) Principia Obs. 39 M 296.38239 Peri. 314.49238
H 12.1 G 0.15 Opp. 10 n 0.25800552 Node 194.83167
rms res. 0".79 (M-P) 1939-1990 e 0.0800971 Incl. 4.72448

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2739) 1952 UZ1 Obs. 31 M 140.44028 Peri. 35.31180
H 13.2 G 0.15 Opp. 7 n 0.25611035 Node 268.39635
rms res. 0".81 (M-P) 1952-1990 e 0.1316204 Incl. 1.17033

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2761) Eddington Obs. 23 M 4.99770 Peri. 101.82308
H 12.1 G 0.15 Opp. 5 n 0.18271900 Node 31.50381
rms res. 0".70 (M-P) 1979-1987 e 0.1884650 Incl. 3.18407

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2800) Ovidius Obs. 20 M 279.60817 Peri. 175.47369
H 12.8 G 0.15 Opp. 6 n 0.17558521 Node 103.04969
rms res. 0".78 (M-P) 1960-1991 e 0.1338174 Incl. 3.06291

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2853) Harvill Obs. 16 M 266.74991 Peri. 201.38377
H 13.4 G 0.15 Opp. 7 n 0.27450623 Node 204.62534
rms res. 1".19 (M-P) 1963-1987 e 0.1444975 Incl. 4.14815

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2884) Reddish Obs. 43 M 83.83704 Peri. 15.99347
H 11.8 G 0.15 Opp. 7 n 0.17885681 Node 41.54610
rms res. 0".92 (M-P) 1929-1989 e 0.1707586 Incl. 1.94953

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2916) Voronveliya Obs. 29 M 126.35211 Peri. 244.04895
H 13.4 G 0.15 Opp. 6 n 0.29494131 Node 311.39178
rms res. 0".86 (M-P) 1977-1991 e 0.0980796 Incl. 3.60047

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2927) Alamosa Obs. 20 M 237.31550 Peri. 188.48714
H 12.1 G 0.15 Opp. 4 n 0.24468687 Node 150.66354
rms res. 0".77 (M-P) 1936-1991 e 0.1680165 Incl. 16.98305

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2932) Kempchinsky Obs. 26 M 234.52479 Peri. 187.71373
H 11.6 G 0.15 Opp. 6 n 0.14313326 Node 169.84475
rms res. 0".84 (M-P) 1953-1991 e 0.1093712 Incl. 2.24188

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2933) Amber Obs. 13 M 249.39490 Peri. 222.25983
H 11.7 G 0.15 Opp. 6 n 0.23401604 Node 121.64181
rms res. 0".97 (M-P) 1940-1991 e 0.0491525 Incl. 7.22351

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2980) Cameron Obs. 28 M 306.48853 Peri. 252.99662
H 13.2 G 0.15 Opp. 6 n 0.23927977 Node 172.68760
rms res. 0".94 (M-P) 1977-1991 e 0.1784210 Incl. 7.28883

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2981) Chagall Obs. 38 M 250.92980 Peri. 88.95956
H 12.0 G 0.15 Opp. 6 n 0.17554250 Node 187.67013
rms res. 0".84 (M-P) 1954-1988 e 0.1648540 Incl. 0.84237

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2982) Muriel Obs. 27 M 157.12052 Peri. 35.41224
H 11.9 G 0.15 Opp. 6 n 0.18997230 Node 43.35218
rms res. 1".10 (M-P) 1973-1991 e 0.0680065 Incl. 10.24448

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3033) Holbaek Obs. 60 M 56.86699 Peri. 66.91835
H 13.0 G 0.15 Opp. 8 n 0.29482793 Node 167.08003
rms res. 0".79 (M-P) 1964-1989 e 0.0946511 Incl. 4.73652

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3116) Goodricke Obs. 27 M 9.61886 Peri. 270.25231
H 12.5 G 0.15 Opp. 9 n 0.29639261 Node 80.60512
rms res. 1".05 (M-P) 1948-1991 e 0.2006823 Incl. 5.46869

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3135) Lauer Obs. 26 M 44.90635 Peri. 118.64118
H 14.0 G 0.15 Opp. 5 n 0.26179780 Node 305.17597
rms res. 0".83 (M-P) 1978-1990 e 0.1403390 Incl. 5.99478

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Marsden
(3160) Angerhofer Obs. 28 M 48.94228 Peri. 332.05690
H 13.5 G 0.15 Opp. 5 n 0.26887308 Node 310.94639
rms res. 1".26 (M-C) 1980-1991 e 0.1560277 Incl. 5.08162

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3170) Dzhanibekov Obs. 37 M 87.14274 Peri. 77.64656
H 12.0 G 0.15 Opp. 7 n 0.19680383 Node 27.25800
rms res. 0".84 (M-P) 1966-1991 e 0.0899740 Incl. 2.03036

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3229) A916 PC Obs. 50 M 135.99081 Peri. 18.26576
H 12.5 G 0.15 Opp. 6 n 0.28002319 Node 306.87982
rms res. 0".74 (M-P) 1916-1990 e 0.1529608 Incl. 9.46694

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3231) Mila Obs. 18 M 343.70785 Peri. 53.06373
H 13.1 G 0.15 Opp. 5 n 0.25764751 Node 324.85297
rms res. 0".71 (M-P) 1949-1991 e 0.1268180 Incl. 6.40130

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3252) 1981 EM4 Obs. 50 M 214.11845 Peri. 156.64664
H 11.9 G 0.15 Opp. 6 n 0.22651166 Node 327.20559
rms res. 0".82 (M-P) 1981-1991 e 0.1116802 Incl. 12.71516

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3297) 1978 WN14 Obs. 36 M 130.88304 Peri. 292.35692
H 12.3 G 0.15 Opp. 6 n 0.17709552 Node 112.44847
rms res. 1".02 (M-P) 1978-1989 e 0.1684799 Incl. 2.37296

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3345) Tarkovskij Obs. 23 M 75.75432 Peri. 193.76145
H 11.7 G 0.15 Opp. 8 n 0.25315727 Node 305.07133
rms res. 0".82 (M-P) 1938-1991 e 0.1863130 Incl. 15.81893

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3370) Kohsai Obs. 25 M 228.82656 Peri. 300.40738
H 13.8 G 0.15 Opp. 6 n 0.29883217 Node 144.84065
rms res. 0".83 (M-P) 1934-1990 e 0.1092518 Incl. 7.11070

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3552) Don Quixote Obs. 50 M 346.17465 Peri. 316.60779
H 13.0 G 0.15 Opp. 3 n 0.11303216 Node 350.77248
rms res. 0".75 (M-P) 1983-1991 e 0.7136652 Incl. 30.77715

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3623) Chaplin Obs. 23 M 77.61348 Peri. 233.26421
H 12.2 G 0.15 Opp. 9 n 0.20466639 Node 118.49285
rms res. 0".92 (M-P) 1952-1990 e 0.0848087 Incl. 3.06854

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3801) Thrasymedes Obs. 41 M 171.09905 Peri. 209.73157
H 11.3 G 0.15 Opp. 4 n 0.08123308 Node 209.45894
rms res. 0".66 (M-P) 1985-1991 e 0.0230891 Incl. 28.55217

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3812) 1965 AK1 Obs. 19 M 235.30127 Peri. 39.18680
H 12.1 G 0.15 Opp. 6 n 0.17388457 Node 123.34450
rms res. 0".76 (M-P) 1965-1990 e 0.1098634 Incl. 18.37713

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3952) 1986 EM2 Obs. 42 M 255.35074 Peri. 175.81855
H 14.1 G 0.15 Opp. 5 n 0.26753426 Node 289.03346
rms res. 0".84 (M-P) 1973-1991 e 0.1554259 Incl. 1.95559

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3969) 1978 TQ8 Obs. 19 M 0.14833 Peri. 211.45548
H 14.2 G 0.15 Opp. 6 n 0.29790603 Node 172.86114
rms res. 1".24 (M-P) 1968-1988 e 0.1255826 Incl. 2.13854

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4087) Part Obs. 41 M 152.67444 Peri. 303.25315
H 13.2 G 0.15 Opp. 7 n 0.30687672 Node 24.93460
rms res. 0".99 (M-P) 1970-1990 e 0.1174001 Incl. 4.42823

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4097) Tsurugisan Obs. 16 M 135.58380 Peri. 321.56980
H 13.4 G 0.15 Opp. 5 n 0.29408658 Node 20.25614
rms res. 0".84 (M-P) 1949-1990 e 0.1417485 Incl. 3.97548

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4114) 1982 QB1 Obs. 24 M 88.79209 Peri. 43.43417
H 13.7 G 0.15 Opp. 5 n 0.24359846 Node 323.28917
rms res. 0".96 (M-P) 1970-1990 e 0.2016808 Incl. 7.36047

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Marsden
(4117) Wilke Obs. 20 M 10.55000 Peri. 140.14607
H 12.6 G 0.15 Opp. 6 n 0.20598818 Node 169.33475
rms res. 0".81 (M-C) 1971-1991 e 0.1734258 Incl. 13.38812

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4126) Mashu Obs. 32 M 267.48543 Peri. 343.81965
H 11.6 G 0.15 Opp. 5 n 0.17121520 Node 102.19289
rms res. 0".82 (M-P) 1965-1991 e 0.1397567 Incl. 3.17263

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4146) 1982 DD2 Obs. 17 M 336.62380 Peri. 320.79570
H 13.7 G 0.15 Opp. 6 n 0.29032138 Node 170.01511
rms res. 1".06 (M-P) 1938-1990 e 0.1065111 Incl. 4.69734

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4163) Saaremaa Obs. 25 M 285.41480 Peri. 13.63047
H 10.9 G 0.15 Opp. 6 n 0.18770713 Node 129.44685
rms res. 0".82 (M-P) 1941-1990 e 0.0491943 Incl. 11.09560

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4371) 1983 GC2 Obs. 15 M 105.73617 Peri. 166.94157
H 13.3 G 0.15 Opp. 4 n 0.26193445 Node 54.97525
rms res. 1".02 (M-P) 1968-1991 e 0.1886664 Incl. 2.33186

(4878)* 1968 OF = 1989 TF

Discovered 1968 July 18 by C. Torres and S. Cofre at Cerro El Roble.
Id. C. M. Bardwell (MPC 15400)
Epoch 1991 Dec. 10.0 ET = JDE 2448600. Bardwell
M 241.38281 (1950.0) P Q
n 0.28458503 Peri. 120.11050 +0.95621727 +0.28310201
a 2.2890820 Node 223.56400 -0.29159010 +0.89999219
e 0.1541699 Incl. 6.17865 -0.02497483 +0.33146238
P 3.46 H 14.9 G 0.15
Residuals in seconds of arc

680718 805	0.6+	0.6+	810409 413	1.4-	0.9+	891005 494	0.2+	0.1-
680719 805	0.1+	1.5-	810409 413	0.4-	0.7+	891005 494	0.1-	0.7+
680725 805	0.5+	0.4-	810501 413	0.4-	0.2-	891008 413	0.5-	0.2+
680728 805	0.4-	0.8+	821104 413	0.3-	0.5-	891008 413	0.0	1.8+
680822 805	0.3-	0.2+	821104 413	0.5-	0.8-	891020 413	0.8+	0.7-
810408 413	2.3+	0.9-	891004 494	0.5-	0.5-	891020 413	0.9+	0.3-
810408 413	0.0	0.2+	891004 494	0.7-	0.2+			

(4879)* 1974 VG = 1976 DV

Discovered 1974 Nov. 12 by L. I. Chernykh at the Crimean Astrophysical Observatory.
Id. C. M. Bardwell (MPC 9354)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 352.71107 (1950.0) P Q
n 0.17474525 Peri. 15.95983 +0.42739617 -0.89399981
a 3.1685881 Node 48.94833 +0.80868450 +0.31152531
e 0.0837118 Incl. 10.27580 +0.40418052 +0.32205019
P 5.64 H 11.8 G 0.15
Residuals in seconds of arc

741112 095	0.3-	0.2-	760228 033	1.1-	0.1+	900730 675	0.2-	0.7+
741115 095	(2.1-	10.0+)	760229 033	1.1+	0.3+	900730 675	1.3-	0.2-
741117 095	0.8+	1.1-	850917 801	0.9-	0.1+	900914 675	1.3+	0.4-
741210 095	0.8-	1.7+	851109 801	1.0+	0.3-			

(4880)* 1975 TR4 = 1988 UL

Discovered 1975 Oct. 14 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. S. Nakano (MPC 14012)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	241.73305	(1950.0)	P	Q
n	0.22580396	Peri. 188.81650	+0.69035525	-0.68840912
a	2.6708430	Node 218.02789	+0.68381773	+0.72131005
e	0.0357548	Incl. 21.17153	+0.23622646	-0.07618855
P	4.36	H 11.9	G 0.15	

Residuals in seconds of arc

751014	095	0.7+	1.7+	881108	400	0.3+	2.5-	900428	801	0.0	0.4+
751102	095	1.1+	2.7-	881108	400	0.9-	2.9-	910317	801	0.3-	0.0
751106	095	1.7-	0.1-	881108	400	0.9+	0.9-	910317	801	0.2-	0.0
751107	095	(4.9+	9.0+)	881111	400	1.6+	0.3+	910511	801	0.4+	0.7-
881016	400	(5.4-	0.2-)	881111	400	1.1+	2.1-	910511	801	0.5+	0.8-
881016	400	2.5-	0.6+	900328	801	0.7+	0.3-	910512	801	0.3+	0.6-
881016	400	(5.3-	1.9-)	900328	801	0.7-	0.2-	910512	801	0.0	1.5-
881019	400	0.5+	2.5+	900329	801	0.3-	0.3-	910613	801	0.0	0.2-
881019	400	(1.6-	5.1+)	900329	801	0.5-	0.6-	910613	801	0.1+	0.0
881019	400	0.7-	2.3+	900428	801	0.2+	0.0				

(4881)* 1975 XJ = 1987 BF2

Discovered 1975 Dec. 1 by C. Torres at Cerro El Roble.

Id. E. Goffin (MPC 11991)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	131.37504	(1950.0)	P	Q
n	0.28002800	Peri. 348.47312	-0.63489280	-0.76747835
a	2.3138494	Node 140.84595	+0.71952648	-0.62923063
e	0.0461105	Incl. 8.08616	+0.28141212	-0.12266133
P	3.52	H 14.7	G 0.15	

Residuals in seconds of arc

751201	805	0.8-	0.9+	870131	809	0.2+	1.3-	891202	809	0.6+	0.5+
751204	805	0.1-	0.1+	870202	809	0.8-	0.2+	891202	809	0.0	0.6-
751205	805	0.5+	0.2+	870202	809	0.0	0.6-	891203	809	0.5+	0.0
870127	809	0.6-	1.8+	870203	809	0.1+	1.1+	891203	809	0.5+	0.6-
870127	809	0.4+	1.6+	870203	809	0.3+	1.0+	891203	809	0.3-	0.2-
870128	809	1.1-	0.8-	870203	809	1.0+	0.4-	910312	675	1.3-	0.1+
870128	809	0.5-	1.5-	870203	809	1.2+	0.9-	910312	675	0.6+	0.8+
870128	809	0.5+	0.6-	870203	809	1.3+	0.1+	910419	801	0.2-	0.3+
870128	809	0.7-	0.1+	870203	809	0.9+	1.1+	910419	801	0.3+	0.1+
870128	809	0.2-	0.6-	870205	809	1.0-	0.5+	910512	801	0.1+	0.2-
870129	809	(8.3-	4.0+)	870205	809	0.0	0.7-	910512	801	0.1-	0.2+
870129	809	(5.4-	0.8-)	891106	809	0.5-	0.4+	910517	801	0.5+	0.1-
870130	809	1.0-	0.2-	891106	809	2.0-	0.5+	910517	801	0.7+	0.3+
870130	809	0.4+	1.0-	891106	809	(2.7-	0.2+)				
870131	809	0.2-	0.5+	891202	809	1.3+	0.2+				

(4882)* 1977 QU2 = 1985 RO6

Discovered 1977 Aug. 21 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. T. Kobayashi (MPC 14343)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	175.05787	(1950.0)	P	Q
n	0.25155502	Peri. 214.59484	+0.58091967	-0.81346359
a	2.4853109	Node 199.93740	+0.76433918	+0.55718832
e	0.1024693	Incl. 4.78568	+0.27985344	+0.16678778
P	3.92	H 13.1	G 0.15	

Residuals in seconds of arc

770821	095	0.9-	1.2+	890930	809	0.5-	0.0	891101	807	0.4+ 0.1-
770823	095	1.0-	0.0	890930	809	0.2-	0.0	891121	095	0.8- 0.3-
770909	095	0.0	1.1-	890930	809	0.2+	0.1-	891121	095	0.1- 1.6-
850915	095	1.9+	1.8+	891029	872	0.1+	1.4+	891125	801	1.1- 1.1+
850920	095	1.4+	1.0-	891029	872	1.7-	0.8-	891125	801	1.4- 1.1+
850922	095	1.5+	0.9+	891030	807	0.5+	0.3+	910419	801	0.2+ 0.4+
890929	809	0.4-	0.1-	891030	872	1.7+	0.9+	910419	801	0.5+ 0.1-
890929	809	0.5-	0.2-	891030	095	(0.2+	4.2+)	910615	801	0.4- 1.0+
890929	809	0.1-	0.2-	891030	095	0.3+	1.8-	910615	801	0.2+ 0.4+

(4883)* 1978 RJ1 = 1978 SO1 = 1969 TT = 1987 SH19

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

Id. T. Furuta (d, MPC 10375), B. G. Marsden (d, MPC 16868), F. N. Bowman (d, ibid.), H. Kaneda (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	4.32917		(1950.0)	P	Q
n	0.21758701	Peri.	116.51842	+0.54476244	+0.83851065
a	2.7376678	Node	186.52610	-0.80103560	+0.51623537
e	0.2410239	Incl.	5.84090	-0.24814483	+0.17435865
P	4.53	H	13.6	G 0.15	

Residuals in seconds of arc

691007	095	1.0+	0.3-	910511	801	0.3-	0.4-	910517	809	0.0 1.4+
691016	095	0.0	1.6-	910511	801	0.7-	0.1-	910517	809	0.0 0.4+
780905	095	1.7-	1.0+	910512	809	1.1+	0.3+	910517	809	0.1- 0.6+
780907	095	1.4+	0.7-	910512	809	1.2+	0.3+	910611	801	0.3+ 0.4-
780928	095	1.6-	2.7+	910512	809	0.5-	1.1-	910611	801	0.1+ 0.5-
870917	095	0.4+	0.6-	910512	801	1.1-	0.0	910613	801	0.2+ 0.2-
870923	095	0.3+	0.5-	910512	801	0.7-	0.1-	910613	801	0.4+ 0.4-

(4884)* 1979 OK15 = 1985 FP1 = 1985 HA

Discovered 1979 July 21 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. S. Nakano (MPC 11147)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	280.06767		(1950.0)	P	Q
n	0.29710482	Peri.	132.04882	+0.28550740	+0.95772414
a	2.2243148	Node	154.47587	-0.90171401	+0.28094115
e	0.1672953	Incl.	4.70651	-0.32464959	+0.06193989
P	3.32	H	14.3	G 0.15	

Residuals in seconds of arc

790721	095	1.1+	0.3+	850418	691	0.1+	1.0+	890806	071	0.2+ 1.5-
790730	095	0.4+	1.0+	850418	691	0.2+	0.4+	890901	801	0.4- 2.2+
790820	095	1.7-	0.9-	850418	691	0.4+	0.2+	890903	801	2.1+ 0.2+
850322	688	0.2-	0.0	861104	095	0.2-	0.9+			
850322	688	(2.3+	3.6-)	890806	071	2.0-	0.7-			

(4885)* 1980 LU = 1980 KP = 1988 RL4 = 1363 T-2

Discovered 1980 June 10 by C. S. Shoemaker at Palomar.

Id. C. S. Shoemaker (d, MPC 14946), S. Nakano (k, MPC 14946), T. Kobayashi (MPC 15063)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M	3.29551		(1950.0)	P	Q
n	0.26002854	Peri.	99.94516	-0.01236750	+0.99987091
a	2.4310210	Node	169.33017	-0.93771149	-0.00803555
e	0.1694440	Incl.	3.17586	-0.34719477	-0.01391402
P	3.79	H	14.2	G 0.15	

Residuals in seconds of arc

730919	675	0.0	1.1-		800709	675	(77.7- | 68.0-)	880913	809	2.4+	1.5+
730919	675	1.8-	1.2-		880901	809	1.9-	0.5-	880915	809	0.5+	2.5+
730920	675	0.3-	0.2-		880901	809	1.6-	0.6-	880915	809	0.6+	2.5+
730924	675	0.6-	1.0-		880901	809	1.8-	0.5-	880915	809	0.7+	2.3+
730924	675	0.0	0.5-		880903	809	1.8-	0.8-	880915	809	0.5+	2.7+
730925	675	1.0+	1.2-		880903	809	1.6-	0.7-	880915	809	0.9+	2.7+
730929	675	0.4-	1.8-		880903	809	1.5-	0.9-	880915	809	0.8+	2.7+
730929	675	0.5-	1.9-		880903	809	1.3-	0.2+	881004	807	0.5-	0.6-
730930	675	1.5+	1.9-		880903	809	1.3-	0.3+	881005	807	0.9-	0.4-
730930	675	0.3+	1.7-		880903	809	1.0-	0.2+	881007	807	0.8-	0.8-
731004	675	0.7-	1.7-		880906	809	1.6-	1.1-	881008	807	0.6-	1.0-
731004	675	(3.2+ | 0.3+)		880906	809	1.6-	1.2-	881008	807	0.1-	0.8-
731004	675	0.4-	1.0-		880908	809	1.1-	0.8-	881103	807	2.5-	0.9-
731004	675	1.6+	0.6+		880908	809	1.0-	0.9-	881104	807	1.8+	0.4-
731005	675	2.1+	1.9-		880908	809	0.6-	0.9-	881106	807	0.5-	0.7-
731005	675	1.9+	0.1+		880912	809	1.5+	0.9+	910318	675	0.7-	0.9-
731005	675	0.7+	2.4-		880912	809	1.8+	1.0+	910318	675	0.8-	0.1-
731005	675	2.6+	0.5-		880912	809	1.5+	0.9+	910409	675	0.9-	1.9-
800516	675	0.6-	1.0+		880912	809	1.6+	0.8+	910409	675	0.6-	0.5-
800610	675	0.5-	1.5-		880912	809	1.5+	0.7+	910411	675	0.7+	1.5-
800611	675	1.3+	1.8-		880912	809	1.7+	1.0+	910411	675	0.2-	1.2-
800612	675	(7.1+ | 1.5-)		880913	809	1.5+	1.7+				
800618	675	0.6-	1.8-		880913	809	1.9+	1.5+				

(4886)* 1981 EZ14

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

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	139.86631	(1950.0)	P	Q	
n	0.19773400	Peri.	139.32394	+0.28466445	-0.95555829
a	2.9179766	Node	294.01174	+0.85628810	+0.28940555
e	0.2084523	Incl.	4.81314	+0.43097197	+0.05614969
P	4.98	H	14.5	G 0.15	

Residuals in seconds of arc

791122	675	1.9-	0.2-		810308	413	0.9-	0.3-	891130	688	0.0	0.2-
791124	675	1.4+	0.2-		810308	413	0.1+	0.2+	891201	688	0.1-	0.7+
791125	675	0.8+	0.6-		810312	413	1.7-	1.1+	891201	688	0.1-	0.6+
810209	413	0.1-	0.0		810312	413	(3.2- | 2.3+)	910414	688	0.5+	0.5+
810212	413	0.2-	0.9+		810409	413	0.2+	0.3-	910414	688	0.2+	0.6+
810212	413	1.2+	0.7-		810409	413	1.0+	0.3+	910512	688	0.9-	0.3+
810212	413	(3.2+ | 0.3-)		810501	413	0.2+	1.1-	910512	688	0.2-	0.3+
810301	413	0.1-	0.7-		810503	413	0.7-	0.2-	910513	688	0.5+	0.2-
810306	413	0.3+	0.4-		891130	688	0.1-	0.1-	910513	688	0.5+	0.4-

(4887)* 1981 EV26

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

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	210.34161	(1950.0)	P	Q	
n	0.19767064	Peri.	94.43041	+0.91854063	-0.39497991
a	2.9186002	Node	288.83501	+0.35539651	+0.84337656
e	0.0276876	Incl.	1.00210	+0.17313704	+0.36428952
P	4.99	H	13.3	G 0.15	

Residuals in seconds of arc

770613	675	0.5+	0.3-		810213	413	0.2-	0.8-	810306	413	1.3+	0.2-
770614	675	0.5-	0.5+		810302	413	0.5-	0.3+	810311	413	0.4+	0.8-
810212	413	0.1+	0.3+		810302	413	1.4+	0.3-	810311	413	1.7+	0.3-
810212	413	0.2-	0.0		810306	413	1.5-	0.2+	810315	413	0.0	0.3+

810315	413	0.2-	1.0+		810503	413	1.5-	0.8-		910414	688	0.7-	0.1+
810405	413	0.4+	0.3+		880915	675	0.8-	1.0-		910414	688	0.7-	0.1+
810405	413	(3.4+	1.8-)		880915	675	0.9+	0.2+		910512	688	0.5+	0.1-
810406	413	1.8-	0.3-		881104	807	0.0	0.1+		910512	688	0.7+	0.1-
810406	413	(1.4+	2.2-)		881106	807	0.4+	0.3-		910513	688	0.5+	0.1-
810501	413	(1.9+	2.4-)		910414	688	0.6-	0.2+		910513	688	0.5+	0.3-

(4888)* 1981 JX1 = 1986 WP = 1988 GS2

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

Id. B. G. Marsden (k, MPC 11618), S. Nakano (MPC 15706)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	315.62482	(1950.0)	P	Q
n	0.27359560	Peri. 211.88161	-0.42749961	+0.90319883
a	2.3499754	Node 32.85500	-0.81378554	-0.36597565
e	0.0169348	Incl. 4.06080	-0.39369681	-0.22426256
P	3.60	H 14.0	G 0.15	

Residuals in seconds of arc

810411	675	1.0-	0.2-		861031	675	(7.4- | 0.6+)		861128	046	(5.5+ | 1.7+)
810411	675	0.6-	0.3-		861031	675	(5.9-	0.0)		861128	046	0.0	0.3-
810505	675	1.9+	0.6-		861105	675	(12.8-	0.2+)		880415	054	0.4-	0.4-
810506	675	(1.6- | 4.0-)		861105	675	(12.1- | 0.6+)		910118	801	0.2+	0.3+
810510	675	1.5-	1.1-		861125	046	0.2+	0.7-		910118	801	0.2+	0.3+
810511	675	0.5-	1.9-		861125	046	2.3+	0.1-		910209	801	0.2-	0.2+
821015	413	0.4-	1.7-		861126	046	1.9-	0.8-		910209	801	0.0	0.2+
821015	413	1.0+	0.6+		861126	046	0.6+	2.5-		910210	801	0.0	0.1-

(4889)* 1982 UW3 = 1979 CB = 1979 ED = 1990 FC3

Discovered 1982 Oct. 19 by F. Borngen at Tautenburg.

Id. C. M. Bardwell (MPC 17201)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Schmadel

M	176.60234	(1950.0)	P	Q
n	0.18174952	Peri. 271.45429	-0.13310925	-0.99074180
a	3.0866487	Node 186.38302	+0.97770904	-0.12685009
e	0.2020602	Incl. 13.89344	+0.16237904	-0.04837089
P	5.42	H 11.0	G 0.15	

Residuals in seconds of arc

790202	323	(5.0-	2.4+)		900327	675	0.3-	1.9-		910513	801	0.4-	0.7+
790205	323	0.6-	0.8+		900327	675	0.5-	2.2-		910515	033	0.5-	0.4+
790303	330	0.4+	1.4-		900330	095	(4.0-	4.6-)		910515	033	0.7-	0.5-
820916	095	(0.7+ | 4.8+)		900330	095	(3.8- | 4.6-)		910605	033	0.1+	0.2-
820920	095	0.7-	0.5+		910508	033	0.6-	0.9-		910609	801	2.4+	0.1+
820926	095	1.9+	1.2-		910509	033	0.7-	0.6-		910611	801	1.0+	0.2+
821019	033	0.3+	1.5-		910512	801	0.7-	0.1+		910611	801	0.7+	0.1-
821019	033	0.9+	1.5-		910512	801	0.0	0.9+		910615	033	0.6-	0.7-
821022	095	1.6-	1.5-		910513	801	0.4-	0.6+		910616	033	0.4+	0.1-

(4890)* 1982 VE4 = 1987 BM2

Discovered 1982 Nov. 14 by H. Kosai and K. Hurukawa at the Kiso Station of the Tokyo Astronomical Observatory.

Id. C. M. Bardwell (MPC 11736), S. Nakano

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	30.25758	(1950.0)	P	Q
n	0.30109386	Peri. 185.15494	+0.25887243	+0.96386589
a	2.2046253	Node 99.85891	-0.88386753	+0.26261696
e	0.1498242	Incl. 3.65634	-0.38956803	+0.04466409
P	3.27	H 13.6	G 0.15	

Residuals in seconds of arc

821114	381	0.1+	1.4+		821213	381	0.3-	0.3+		821214	381	0.5-	0.6-
821114	381	0.4-	0.6+		821213	381	0.6+	0.7+		821214	381	0.1-	0.5-

870131 046 0.1+ 0.2+ 910317 801 0.7+ 0.4+ 910611 801 0.5+ 0.0
870131 046 0.0 0.2- 910317 801 0.5+ 0.5+ 910611 801 0.7+ 0.6+
870201 046 0.8+ 0.4- 910511 801 1.2- 0.7- 910613 801 0.6+ 0.7+
870202 046 1.0- 0.3- 910511 801 1.1- 0.8- 910613 801 0.4+ 0.0
870202 046 0.4- 0.1+ 910512 801 0.3- 0.3-
880813 801 0.2+ 1.7- 910512 801 0.4- 0.5-

(4891)* 1984 GR = 1933 FN1 = 1986 RA17
Discovered 1984 Apr. 4 at the Bulgarian National Observatory.
Id. S. Nakano (MPC 14785)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	84.26279		(1950.0)	P	Q
n	0.17472555	Peri.	265.54488	-0.43777318	+0.89896519
a	3.1688263	Node	338.47450	-0.80814165	-0.40060701
e	0.0524731	Incl.	2.29685	-0.39403264	-0.17713161
P	5.64	H	11.6	G 0.15	

Residuals in seconds of arc
330325 024 0.4+ 1.3+ 840429 809 0.6- 0.7- 890207 399 1.4+ 0.4-
840404 071 1.0+ 0.5+ 840429 809 0.8- 0.6- 890211 399 1.3+ 0.9+
840404 071 0.9+ 0.0 840429 809 0.8- 0.0 890211 399 1.1- 0.5+
840405 071 1.0+ 0.9+ 860915 095 0.4- 1.5+ 890211 399 0.1- 1.0-
840423 809 1.1+ 0.4- 861002 095 0.4- 0.6+ 900528 801 0.2- 0.6+
840423 809 0.2+ 0.1+ 890204 399 1.2- 0.8+ 900528 801 0.2+ 0.4+
840424 809 0.8+ 0.1- 890204 399 0.7+ 1.8- 900720 801 1.2- 0.2-
840424 809 0.7+ 0.1- 890204 399 1.6- 1.5+ 900720 801 0.2+ 0.1+
840428 809 0.8- 0.3- 890204 399 0.2+ 0.1+
840428 809 0.8- 0.3- 890207 399 0.4- 0.3+

(4892)* 1985 TV2 = 1964 WE = 1978 TT9 = 1981 RY = 1989 VB2
Discovered 1985 Oct. 11 at Caussols.
Id. H. Kaneda (MPC 17631)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	129.96386		(1950.0)	P	Q
n	0.27629584	Peri.	306.70805	-0.92245390	-0.37828408
a	2.3346394	Node	211.27861	+0.38437360	-0.88074749
e	0.0997081	Incl.	8.56556	+0.03654772	-0.28492983
P	3.57	H	12.6	G 0.15	

Residuals in seconds of arc
641129 760 0.5+ 2.6- 851011 010 0.8+ 2.2- 910517 801 0.2- 0.1+
641129 760 0.0 2.8- 891107 095 0.7+ 0.1+ 910517 801 0.1- 0.1+
781004 095 1.9- 1.5+ 891124 095 0.6- 2.9+ 910608 293 0.4- 0.1+
810902 033 0.0 1.0- 910419 801 0.1- 0.4- 910611 801 0.6+ 0.6-
810902 033 0.5+ 0.3- 910419 801 0.0 0.4- 910611 801 0.2+ 0.0
850915 095 0.4- 2.1+ 910513 801 0.2+ 0.3+ 910613 801 0.1- 0.2-
850920 095 0.3+ 0.2+ 910513 801 0.3+ 0.3+ 910613 801 0.7- 0.8-
850922 095 0.1+ 0.8- 910516 801 0.0 0.2+
851011 010 0.4+ 1.1+ 910516 801 0.1- 0.1+

(4893)* 1986 PT4 = 1986 RW4 = 1951 JD = 1984 DJ2 = 1990 HB
Discovered 1986 Aug. 9 by E. W. Elst and V. Ivanova at the Bulgarian National Observatory.
Id. C. M. Bardwell (d, MPC 12118), E. W. Elst (d, ibid.), S. Nakano (d, ibid.), H. E. Holt (k, MPC 16426), G. V. Williams (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	40.52461		(1950.0)	P	Q
n	0.17583810	Peri.	106.85147	-0.20078522	+0.97275208
a	3.1554458	Node	150.78281	-0.96466389	-0.17571822
e	0.0781566	Incl.	13.73861	-0.17061323	-0.15124978
P	5.61	H	11.6	G 0.15	

Residuals in seconds of arc

510508	760	0.1+	0.8+	860906	809	0.1-	0.1+	860912	809	0.7-	0.0
510508	760	0.0	0.6-	860907	809	0.3+	0.6-	860912	809	0.7-	0.0
840226	095	(2.4+	6.6-)	860907	809	0.1+	0.7-	900324	046	(3.4+	2.7-)
860806	071	(10.7+	3.4-)	860907	809	0.2+	0.5-	900324	046	1.6-	2.2-
860806	071	(11.1+	3.0-)	860908	809	0.1+	0.7-	900420	675	0.7+	1.2-
860808	071	(0.5-	3.4+)	860908	809	0.2+	0.6-	900422	675	0.1+	1.1-
860809	071	(6.6+	2.0-)	860908	809	0.3+	0.7-	910513	801	0.1-	0.7+
860809	071	(4.5+	1.1+)	860908	071	(2.3+	2.8-)	910513	801	0.1+	0.5+
860812	095	2.2-	1.5+	860908	071	1.8+	1.3-	910516	801	0.3+	0.5+
860905	809	0.3+	0.7-	860908	071	(1.9-	3.3-)	910516	801	0.3+	0.4+
860905	809	0.6+	0.7-	860910	809	0.2+	0.1+	910609	801	0.0	0.1+
860905	809	0.4+	0.7-	860910	809	0.2+	0.2+	910609	801	0.0	0.1+
860906	809	0.3-	0.3+	860910	809	0.5+	0.1+	910610	801	0.0	0.3+
860906	809	0.1-	0.2+	860912	809	0.8-	0.1+	910610	801	(1.9-	0.2-)

(4894)* 1986 RJ = 1957 OG = 1969 EK = 1976 KY
Discovered 1986 Sept. 8 by P. Jensen at Brorfelde.
Id. C. M. Bardwell (MPC 11241, unpublished), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	254.72955		(1950.0)		P		Q
n	0.30741388	Peri.	46.94139		+0.64302280		+0.76448477
a	2.1743047	Node	263.13365		-0.71530928		+0.57822339
e	0.1944602	Incl.	2.63588		-0.27359517		+0.28499253
P	3.21	H	13.6	G	0.15		

Residuals in seconds of arc

570725	760	0.1+	0.1-	860905	017	2.0-	0.9+	910115	801	0.8-	0.1+
570725	760	0.1+	1.1-	860908	054	(6.8+	2.2+)	910116	801	0.4-	0.1+
690312	095	1.9+	1.3-	860911	054	1.8+	0.7-	910116	801	0.3-	0.0
760526	095	0.1+	2.5-	860925	017	0.7+	0.5-	910209	801	0.1+	1.0-
760529	095	1.6-	2.4+	860925	017	2.1+	1.1+	910209	801	0.3-	1.0-
860904	017	1.0-	0.8-	860929	054	0.4-	1.7-	910210	801	0.1-	1.3-
860904	017	1.1-	0.7+	890730	293	1.1+	1.9-	910210	801	0.0	1.1-
860905	017	0.3+	0.6+	910115	801	0.5-	0.1-				

(4895)* 1986 TK4 = 1939 TH = 1968 UM = 1979 YR
Discovered 1986 Oct. 13 by P. Jensen at Brorfelde.
Id. C. M. Bardwell (MPC 11345, unpublished)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	156.31855		(1950.0)		P		Q
n	0.27278767	Peri.	341.57599		+0.94043194		-0.33125259
a	2.3546131	Node	38.04401		+0.32544526		+0.81197406
e	0.2376256	Incl.	7.13522		+0.09835220		+0.48059323
P	3.61	H	13.7	G	0.15		

Residuals in seconds of arc

391011	094	(42.2-	29.3+)X	861002	657	1.0+	0.5-	861206	054	0.2+	0.8+
681022	095	0.7+	0.5+	861007	657	3.0-	0.2+	880313	054	1.5+	0.7+
681026	095	(7.5-	3.6+)	861013	054	1.4-	0.1-	880313	054	1.1+	1.2+
791224	095	0.6-	1.1-	861027	010	(14.0+	11.0-)	880314	054	1.7-	0.6+
791225	809	0.3-	0.4-	861027	010	(13.9+	9.6-)	910115	801	0.2-	0.2-
791225	809	0.3+	0.0	861027	010	(10.6+	8.6-)	910115	801	0.4-	0.4-
791225	809	0.4+	0.3+	861029	054	0.7+	0.8+	910209	801	0.6+	0.4+
791226	809	2.1-	0.7-	861102	054	0.2-	0.1+	910209	801	0.6+	0.4+
791226	809	1.1-	0.1-	861106	054	0.4+	0.4-	910213	801	0.3+	1.0-
791226	809	1.3+	0.0	861204	688	0.3+	1.1+	910213	801	1.1+	0.6+
861002	657	(2.1+	7.1-)	861204	688	1.4+	0.3+				

(4896)* 1986 YA = 1986 RE4 = 1975 XJ2 = 1985 OU
Discovered 1986 Dec. 20 by T. Niijima and T. Urata at Ojima.

Id. H. Oishi (d, JAM 2050; MPC 11633)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Oishi

M 20.08109	(1950.0)	P	Q	
n 0.18054523	Peri. 94.34372	+0.95626000	+0.08070269	
a 3.1003594	Node 261.20512	-0.17829749	+0.92280457	
e 0.1778316	Incl. 16.52959	+0.23189829	+0.37672112	
P 5.46	H 10.6	G 0.15		

Residuals in seconds of arc

751202 095	(1.7-	11.5-)	861226 887	0.4-	1.9+	890403 474	0.1+	0.0
850717 071	0.2+	0.5-	870101 887	0.8+	1.0-	890403 474	0.3-	0.2-
850718 071	(12.2+	6.4-)	870101 887	0.5-	0.5-	890404 474	(4.6-	1.5+)
860909 033	0.4+	0.0	870103 887	0.8-	0.1-	890404 474	(3.7-	1.2+)
860909 033	0.1+	0.0	870103 887	0.9-	0.3+	890414 808	1.5+	0.1+
861220 887	0.1-	1.6+	870120 887	0.3-	0.1+	890414 808	0.8-	0.2-
861220 887	0.8-	2.2+	870120 887	0.4+	1.5-	900528 881	(6.5+	3.3+)
861222 887	1.1+	0.2-	870130 887	2.0-	0.4-	900528 881	1.2+	1.3+
861222 887	0.0	0.2+	870130 887	1.2+	0.9-	900822 801	0.8-	0.9+
861224 887	0.3+	0.7-	890303 474	1.1+	1.0-	900822 801	1.4-	0.7+
861224 887	0.3+	0.7-	890307 808	0.6-	1.1+			
861226 887	1.1+	1.6+	890307 808	0.8-	0.9+			

(4897)* 1987 QD6 = 1971 QV1 = 1971 SB1 = 1990 BN1
Discovered 1987 Aug. 22 by E. F. Helin at Palomar.
Id. S. Nakano (MPC 15415, MPC 18287)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 323.22579	(1950.0)	P	Q	
n 0.18444839	Peri. 111.05568	+0.48366468	+0.87484366	
a 3.0564653	Node 188.02777	-0.85722676	+0.46730412	
e 0.1222862	Incl. 11.05466	-0.17672227	+0.12757521	
P 5.34	H 11.4	G 0.15		

Residuals in seconds of arc

710830 095	2.4+	0.1-	900121 402	1.7-	0.4-	910414 399	0.4-	0.3-
710916 095	1.9-	2.0-	900121 402	1.5+	0.6-	910418 399	0.6-	0.4-
870822 675	0.4-	0.5-	910408 675	1.2+	0.1-	910418 399	1.2-	0.5+
870822 675	0.1+	0.7+	910408 675	0.7+	1.2-	910509 675	0.1+	0.2-
870827 675	1.4-	0.1-	910410 675	0.0	0.1-	910509 675	0.1-	0.0
870827 675	1.3-	1.1+	910410 675	0.5-	0.3+	910512 675	0.1+	0.7+
870827 095	2.0+	0.5-	910411 399	1.0+	0.1+	910512 675	0.1-	0.2-
870902 095	2.7+	0.3+	910411 399	1.2-	1.2-			
870923 095	1.8-	0.8-	910414 399	0.8+	0.6+			

(4898)* 1988 FJ = 1982 BF3
Discovered 1988 Mar. 19 by C. S. Shoemaker at Palomar.
Id. C. M. Bardwell (MPC 13172)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 150.11527	(1950.0)	P	Q	
n 0.36095359	Peri. 146.00718	-0.85649065	-0.51587479	
a 1.9535977	Node 3.09342	+0.37327909	-0.64211130	
e 0.0814348	Incl. 18.62287	+0.35649191	-0.56706814	
P 2.73	H 14.0	G 0.15		

Residuals in seconds of arc

820118 033	0.3-	1.0+	880322 675	0.1-	0.7-	890928 675	1.1-	2.4-
820118 033	1.1+	0.8+	880412 675	0.1+	0.8-	890930 801	0.7+	0.3+
820118 033	1.1-	0.5+	880418 675	1.0-	0.5-	890930 809	0.8+	0.2+
820119 033	0.4-	0.6-	880511 413	2.0+	1.4-	890930 809	1.0+	0.2+
820119 033	0.2-	0.9-	880511 413	1.8-	1.3+	890930 809	1.5+	0.3+
880318 675	0.2-	1.0-	890830 675	0.8+	0.8-	891001 809	0.3-	0.2+
880319 675	0.8-	0.8-	890901 675	0.8-	2.9-	891001 809	0.1+	0.3+
880321 675	1.2-	0.6-	890928 675	1.5+	1.3-	891001 809	0.4+	0.4+

891002 809	0.7-	0.4+	891026 801	0.4+	0.2-	910209 801	0.2-	1.5+
891002 809	0.2-	0.3+	891028 801	0.1+	0.2+	910209 801	0.4+	1.6+
891002 809	0.5+	0.3+	891028 801	0.5+	0.2+	910508 474	0.0	0.1+
891005 327	0.9-	0.5-	891030 801	0.3-	0.9+	910508 474	0.5+	0.4-
891005 327	1.0-	0.1-	891030 801	0.2+	1.0+			

(4899)* 1988 JU = 1952 QL1 = 1977 EZ1 = 1977 FK1

Discovered 1988 May 9 by C. S. Shoemaker at Palomar.

Id. C. M. Bardwell (MPC 13470), G. V. Williams (unpublished)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 315.91444	(1950.0)	P	Q	
n 0.26986841	Peri. 73.50969	-0.12917682	+0.98946464	
a 2.3715631	Node 189.79155	-0.99122207	-0.13071495	
e 0.1838969	Incl. 22.60510	-0.02814520	+0.06223613	
P 3.65	H 13.4	G 0.15		

Residuals in seconds of arc

520820 675	0.8-	1.1-	880611 675	0.2-	2.6-	910216 801	1.1-	1.2-
520820 675	0.1+	1.4-	880613 675	(0.8-	3.5-)	910318 801	0.4-	0.9-
770313 095	(3.8-	4.1-)	880717 675	0.8+	0.3-	910318 801	1.3+	0.9-
770325 095	2.9+	1.2+	880718 675	1.2-	1.8-	910320 801	1.8-	0.1+
880509 675	0.9-	0.7-	891003 807	1.1+	1.3-	910320 801	1.2-	1.7-
880511 675	0.1-	0.1+	891006 807	1.3+	1.7-			
880608 675	0.2+	0.7-	910216 801	0.9-	0.6-			

(4900)* 1988 ME = 1978 YU = 1984 JR2

Discovered 1988 June 16 by E. F. Helin at Palomar.

Id. C. M. Bardwell (MPC 13471)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 320.42330	(1950.0)	P	Q	
n 0.26853782	Peri. 91.31777	+0.50572928	+0.86121177	
a 2.3793906	Node 209.23610	-0.82690361	+0.46722529	
e 0.1275851	Incl. 5.93708	-0.24590305	+0.20003705	
P 3.67	H 12.9	G 0.15		

Residuals in seconds of arc

781222 095	0.7-	1.8-	891130 675	0.5+	0.5-	910321 801	0.6-	0.4+
840505 095	0.3+	3.3-	891203 675	0.4-	2.0-	910410 675	0.9-	1.0+
880520 675	0.7+	1.6-	891203 675	1.0+	1.7-	910410 675	1.1+	1.3-
880521 675	1.2-	0.3-	910317 801	0.3-	0.7+	910412 675	1.0-	1.7+
880616 675	0.4-	1.6-	910317 801	0.3-	0.7+	910412 675	1.1-	0.1-
880620 675	0.8-	0.8+	910318 675	1.8+	1.3-	910419 801	0.5-	0.3+
880715 675	1.5+	0.2-	910318 675	1.6+	1.0-			
880715 675	0.0	0.3-	910321 801	0.6-	0.2+			

(4901)* 1988 VJ = 1950 QS = 1974 SF2 = 1977 KV1 = 1981 UW13

Discovered 1988 Nov. 3 by M. Arai and H. Mori at the Yorii Observatory.

Id. T. Kobayashi (MPC 13862)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 25.87545	(1950.0)	P	Q	
n 0.28739852	Peri. 93.81382	+0.77005579	+0.63524924	
a 2.2741182	Node 226.75948	-0.61271408	+0.71066673	
e 0.1909963	Incl. 4.63978	-0.17775132	+0.30234284	
P 3.43	H 13.5	G 0.15		

Residuals in seconds of arc

500821 760	0.9+	1.2+	811023 095	1.0+	0.1-	881104 033	0.0	0.1+
500821 760	1.4-	2.4+	881102 399	0.4+	0.6-	881104 033	0.4-	0.0
740920 095	1.0-	1.1-	881102 399	0.2-	0.7-	881104 046	(2.1+	2.9-)
740922 095	0.2-	1.4-	881102 399	0.7-	0.9-	881104 046	(3.8+	1.8-)
770518 675	0.4+	0.2-	881103 875	(5.4-	4.4+)	881105 046	(4.8+	1.3+)
770519 675	0.7-	0.0	881103 875	(6.7-	3.4+)	881105 046	(11.5-	0.9-)

881106 875 1.2- 0.4+ 881110 875 1.0+ 1.0+ 910513 801 0.7- 0.3-
881106 875 0.2- 0.5- 881110 875 0.7+ 1.8+ 910513 801 0.6- 0.0
881108 875 0.9+ 0.1+ 881110 875 0.7- 0.1- 910609 801 0.5+ 0.3-
881108 399 1.6- 0.9+ 881111 399 1.0+ 1.7- 910609 801 0.4+ 0.3-
881108 399 1.0- 2.3+ 881111 399 1.2+ 1.6- 910614 801 0.8+ 0.4-
881108 399 (4.4- 1.4-) 881111 399 0.8+ 1.9- 910614 801 0.8+ 0.6-

(4902)* 1989 AN2 = 1985 TK3
Discovered 1989 Jan. 9 by C. S. Shoemaker at Palomar.
Id. C. M. Bardwell (MPC 16583)
Epoch 1991 Dec. 10.0 ET = JDE 2448600. Bardwell

M 125.64784		(1950.0)	P	Q
n 0.08277013	Peri.	272.03067	+0.14226423	-0.98942371
a 5.2145914	Node	169.66042	+0.95923893	+0.13075521
e 0.0439951	Incl.	9.07613	+0.24417526	+0.06279964
P 11.91	H	9.5	G 0.15	

Residuals in seconds of arc
851014 675 0.6+ 0.2+ 900303 809 0.5- 0.8+ 910212 801 0.1- 0.1+
851014 675 0.8- 0.6+ 900303 809 0.4- 0.9+ 910317 801 0.0 0.2-
890109 675 0.1- 0.1+ 900303 809 0.2- 0.9+ 910317 801 0.0 0.5-
890109 675 0.1- 0.8+ 900303 809 0.4+ 0.7+ 910320 801 0.1- 0.2-
890201 675 1.6- 0.9- 900303 809 0.2+ 0.6+ 910320 801 0.1- 0.2+
890202 675 1.2+ 1.2- 900303 809 0.3+ 0.4+ 910414 801 0.0 0.3-
890307 675 0.0 2.6- 900305 809 0.0 2.0+ 910414 801 0.1- 0.4-
890308 675 0.2+ 1.4- 900305 809 0.1+ 1.9+ 910414 675 0.2+ 2.3-
900126 675 1.4+ 1.1- 900305 809 0.1+ 1.9+ 910416 675 0.3- 1.1-
900128 675 0.3+ 0.1- 910212 801 0.3- 0.4+

(4903)* 1989 UD = 1953 FU = 1972 TM1 = 1977 OG = 1980 BU4 = 1983 TG
Discovered 1989 Oct. 20 by Y. Mizuno and T. Furuta at Kani.
Id. K. Ichikawa (MPC 15566; unpublished)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Ichikawa

M 177.27694		(1950.0)	P	Q
n 0.17456438	Peri.	247.84342	+0.92997730	+0.36491714
a 3.1707765	Node	90.73114	-0.31875248	+0.86070565
e 0.1646805	Incl.	2.54907	-0.18313678	+0.35499475
P 5.65	H	12.0	G 0.15	

Residuals in seconds of arc
530316 024 0.3- 0.6- 891020 403 1.0- 0.1+ 910118 801 0.1- 0.2-
721007 095 (1.3+ 5.3-) 891020 403 1.0- 0.2- 910118 801 0.1- 0.2-
770722 095 2.1- 0.3+ 891023 403 2.3- 1.4- 910119 801 1.0+ 0.8+
800122 095 0.4- 0.2+ 891023 403 1.3- 0.7+ 910119 801 0.1+ 0.2+
831001 046 (3.9+ 0.7+) 891026 403 1.0+ 0.8- 910209 801 0.4+ 0.0
831001 046 2.1+ 1.3+ 891026 403 0.3+ 0.2- 910209 801 0.1+ 0.4-
831005 046 1.1+ 0.3- 891102 403 0.1+ 0.1- Y 910211 801 0.6+ 0.0
831005 046 1.4+ 0.3- 891102 403 0.6+ 1.1+ Y 910211 801 0.1- 0.1-

(4904)* 1989 WZ = 1974 TB = 1974 WC = 1980 KF2
Discovered 1989 Nov. 21 by Y. Mizuno and T. Furuta at Kani.
Id. D. W. E. Green (MPC 15723), K. Ichikawa (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 139.49372		(1950.0)	P	Q
n 0.26698786	Peri.	266.97194	-0.70017620	-0.70178563
a 2.3885905	Node	228.40822	+0.70473175	-0.64982477
e 0.1301937	Incl.	10.11436	+0.11448341	-0.29193269
P 3.69	H	12.6	G 0.15	

Residuals in seconds of arc
741011 805 0.8- 3.0- 800518 808 1.1- 0.7- 891026 033 0.1- 0.0
741116 095 1.3+ 3.1+ 800518 808 0.4+ 0.4+ 891026 033 0.6+ 0.6-

891028	033	0.0	0.1-	891201	403	0.9-	0.2+	910514	801	0.0	0.4+
891121	403	1.3-	0.5-	891201	399	2.0+	0.1+	910514	033	1.0+	1.1-
891121	403	0.1+	0.0	891201	399	1.3+	0.1-	910516	801	0.0	0.2+
891125	403	0.4-	0.3+	891201	399	1.0-	0.2-	910516	801	0.1-	0.2+
891125	403	0.9-	1.0+	891205	403	1.1+	1.6- Y	910611	801	0.3-	0.6-
891125	399	0.0	0.1+	891205	403	0.7-	1.4- Y	910611	801	0.2-	0.6-
891125	399	0.3+	0.2-	910513	033	0.2+	0.9-	910614	801	0.4-	0.9-
891125	399	0.7-	0.7-	910513	033	0.4+	1.2-	910614	801	0.4-	0.9-
891201	403	0.3+	1.5-	910514	801	0.0	0.5+				

(4905)* 1991 JM1 = A908 SF = 1929 SB = 1950 TE4 = 1971 TV = 1974 HA3
= 1978 GG4 = 1978 JV3 = 1988 VU4

Discovered 1991 May 15 by A. Takahashi and K. Watanabe at Kitami.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	291.97593		(1950.0)		P		Q
n	0.23502354	Peri.	175.71286		+0.97024504		-0.23263962
a	2.6005296	Node	198.16930		+0.21524258		+0.95565901
e	0.1694550	Incl.	12.42767		+0.11088365		+0.18053992
P	4.19	H	11.9	G	0.15		

Residuals in seconds of arc

081001	024	0.9+	1.7+	740425	805	0.7-	0.6-	910520	400	2.0+	0.7-
290926	024	(22.5+	23.2+)	780411	095	0.1-	0.8+	910520	400	0.9-	1.0+
290928	024	1.2-	1.4-	780505	095	0.3-	0.5-	910608	400	0.8+	1.4-
501008	711	(1.6-	4.7-)Y	881112	675	0.2+	1.2-	910608	400	0.1+	0.6-
501009	711	(7.2-	1.4+)Y	881113	675	0.2+	0.3-	910609	400	0.8+	1.0+
711011	095	(7.7-	0.7+)	910515	400	(0.1-	2.8-)	910609	400	1.4-	1.1-
711021	095	(5.3-	6.4-)	910515	400	0.4-	0.5+				

(4906)* 2533 P-L = 1976 SQ1

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 4644)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	289.11173		(1950.0)		P		Q
n	0.30698842	Peri.	198.82211		+0.74740911		+0.66388973
a	2.1763131	Node	119.55442		-0.60574819		+0.69649661
e	0.2154591	Incl.	1.65351		-0.27285297		+0.27229195
P	3.21	H	15.2	G	0.15		

Residuals in seconds of arc

600924	675	1.0+	0.2+	601026	675	0.1+	0.1-	890930	675	0.4-	0.2+
600926	675	0.3+	0.5+	760924	095	1.4-	0.6+	891101	807	0.9+	0.6+
600928	675	0.1-	0.3-	760928	095	(1.2+	3.0-)	891103	675	0.2-	0.4-
600929	675	0.7+	0.7-	790627	801	0.4+	0.1+	891103	675	0.7-	0.7+
601017	675	0.9-	0.4-	790628	801	0.2+	0.7-	891104	675	0.1+	0.7-
601022	675	0.9-	0.5+	820526	801	0.2-	1.0+	891104	675	0.0	0.0
601025	675	0.2+	0.1-	890930	675	0.9+	0.3-				

(4907)* 7618 P-L = 1972 XR1 = 1977 RE3 = 1980 FD11

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 12584)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M	108.39955		(1950.0)		P		Q
n	0.17417212	Peri.	309.27143		+0.07506539		-0.99456369
a	3.1755354	Node	136.25559		+0.94398949		+0.04755431
e	0.0955799	Incl.	5.99106		+0.32132386		+0.09263719
P	5.66	H	12.0	G	0.15		

Residuals in seconds of arc

601017	675	1.2-	2.2+	770918	095	0.9+	1.0+	910211 801	0.7+ 0.5+
601022	675	0.3+	0.9+	800316	095	1.9-	1.5-	910211 801	0.9+ 0.3+
601025	675	0.1+	0.5+	881105	675	0.2+	2.0-	910305 071	0.2- 0.0
601026	675	0.8+	1.0-	881105	675	1.6-	0.8-	910305 071	0.6- 0.2+
721201	095	1.0-	2.4-	910209	801	0.7+	0.4+		
770910	095	0.8+	0.0	910209	801	0.8+	0.4+		

1929 VS = 1956 RO = 1961 VC = 1987 KS = 1991 GS2
Id. H. Kaneda; 1929 VS = 1980 TC4 (MPC 13851) is invalid
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	222.88320		(1950.0)	P	Q
n	0.21593845	Peri.	347.81145	+0.92323975	-0.37923619
a	2.7515837	Node	34.67824	+0.36098628	+0.80113179
e	0.1930082	Incl.	6.22665	+0.13159505	+0.46299867
P	4.56	H	12.1	G 0.15	

Residuals in seconds of arc

291026	690	0.9-	1.7-	611110	760	1.3-	0.4-	910410 809	0.1+ 1.1+
291027	690	0.6-	1.2-	611110	760	0.8-	0.1+	910410 809	0.4- 0.3+
291103	690	2.8+	0.0	870530	413	1.0-	1.8-	910410 809	0.1- 0.6+
560909	760	0.5-	0.0	870530	413	(1.7-	3.6-)	910419 809	0.3+ 0.4-
560909	760	0.2-	1.7+	910408	809	0.6+	0.2+	910419 809	0.2- 0.4-
611104	760	0.0	1.1+	910408	809	0.5+	0.5+	910419 809	0.2+ 0.6-
611104	760	1.0+	1.4+	910408	809	0.2+	0.4+		

1932 CY = 1977 KW1 = 1979 UB4
Id. E. Bowell (k, MPC 13683), S. Nakano (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	266.47168		(1950.0)	P	Q
n	0.17915915	Peri.	69.74226	-0.97346050	+0.22821309
a	3.1163297	Node	123.44605	-0.21687851	-0.89603139
e	0.1416590	Incl.	1.17637	-0.07306417	-0.38084976
P	5.50	H	12.1	G 0.15	

Residuals in seconds of arc

320214	024	1.7+	3.1-	760301	033	0.1+	1.6+	770518 675	0.7+ 0.4+
320306	024	(3.8+	4.8+)	760302	033	0.0	0.3+	770519 675	0.3- 1.1+
320314	024	2.8-	0.7-	760303	033	1.7-	1.3+	791016 095	0.4- 0.9+
320315	024	0.3+	1.8+	760303	033	2.3+	0.4-		

1938 HA = 1989 OE
Id. T. Kobayashi (MPC 15873)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	152.98915		(1950.0)	P	Q
n	0.17694123	Peri.	219.34000	-0.20379122	+0.97123747
a	3.1423172	Node	39.34889	-0.84206045	-0.10972209
e	0.2114669	Incl.	11.20014	-0.49940298	-0.21132639
P	5.57	H	12.1	G 0.15	

Residuals in seconds of arc

380419	029	0.7+	1.6+	380427	029	0.9+	1.1-	780504 413	0.0 0.2+
380419	029	0.1+	1.5+	380427	029	0.7-	0.5-	780504 413	0.4+ 2.6+
380420	029	0.6+	0.7+	380428	029	0.9-	0.5-	840817 413	0.1- 0.2-
380420	029	0.7+	0.6+	380501	029	0.3+	1.5-	890721 413	0.8- 0.6-
380421	029	0.2+	0.6+	380501	029	0.4+	1.1-	890725 413	0.1- 1.6-
380423	029	0.2+	0.7-	380502	029	0.7+	0.4-	890802 413(17.7-	2.4+)
380424	029	1.0+	0.1-	380522	029	2.5-	0.1+	890802 413(19.3-	3.0+)
380426	029	(5.3-	0.5-)	380522	029	2.9-	0.1-		

1965 DC = 1979 SF13
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Lowe

M	327.86766	(1950.0)	P	Q
n	0.17831337	Peri. 5.50075	-0.42597399	-0.90299324
a	3.1261762	Node 109.72174	+0.82774736	-0.41401443
e	0.1054931	Incl. 3.41778	+0.36521292	-0.11487100
P	5.53	H 11.7	G 0.15	

Residuals in seconds of arc

650225	330	0.8-	0.1-	790920	675	1.0+	0.2-				
650304	330	0.8+	0.1+	790921	675	1.0-	0.2+				

1971 UD1 = 1984 SU4
Id. C. M. Bardwell (MPC 9465)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Bardwell

M	54.95575	(1950.0)	P	Q
n	0.29955013	Peri. 277.52486	+0.95743581	-0.28736190
a	2.2121976	Node 99.17816	+0.27449443	+0.87729954
e	0.1288359	Incl. 1.57882	+0.08927192	+0.38440689
P	3.29	H 14.5	G 0.15	

Residuals in seconds of arc

711026	029	1.2-	0.4-	711119	029	0.7+	0.4-	840923	071	0.3+	0.7+
711027	029	1.0-	0.8-	790127	675	0.6-	0.4+	840924	071	0.7-	0.1-
711030	029	0.2-	0.1+	790129	675	1.0+	0.7-	860312	809	0.3-	1.0-
711110	029	0.6+	0.5-	840919	071	0.3+	0.6-				
711110	029	1.5+	0.3+	840919	071	(9.5-	0.2-)				

1977 EC2 = 1990 RX5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Oishi

M	225.90130	(1950.0)	P	Q
n	0.17502480	Peri. 139.68937	-0.99959008	+0.02819276
a	3.1652197	Node 41.92699	-0.02781057	-0.91479407
e	0.1375680	Incl. 0.42742	-0.00680076	-0.40293545
P	5.63	H 12.0	G 0.15	

Residuals in seconds of arc

770313	095	0.2-	0.6+	900909	809	0.7+	0.1-	900914	809	0.4+	0.2-
770322	095	0.2-	0.2-	900910	809	1.1+	0.0	900915	809	0.4+	0.4-
770325	095	0.3+	0.4-	900910	809	1.5+	0.1+	900915	809	0.4+	0.6-
900908	809	0.6-	0.0	900912	809	0.4-	0.0	900915	809	0.9-	0.2+
900909	809	0.4-	0.1+	900912	809	0.2-	0.0	900916	809	0.9-	0.3+
900909	809	0.1-	0.3+	900912	809	0.2+	0.0	900916	809	1.2-	0.2+

1977 NN = 1977 PX = 1984 SK5
Id. H. Oishi (d, JAM 1391), S. Nakano (MPC 9754)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	85.14096	(1950.0)	P	Q
n	0.29094274	Peri. 354.06094	+0.65286723	+0.75524099
a	2.2556119	Node 316.67791	-0.69140048	+0.56283473
e	0.1801173	Incl. 4.85758	-0.30940226	+0.33589896
P	3.39	H 13.9	G 0.15	

Residuals in seconds of arc

770714	095	0.8+	2.1-	790127	675	0.4-	0.2-	840927	675	0.2-	0.3-
770722	095	1.1+	1.0+	790129	675	0.4+	0.5+	841020	095	0.8+	1.0+
770814	095	2.0-	1.6+	840926	675	0.2-	1.3-				

1977 QN2 = 1991 GU8
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M	339.94242	(1950.0)	P	Q
n	0.26995634	Peri. 6.93322	+0.77454026	+0.63178398
a	2.3710481	Node 313.83725	-0.58232000	+0.69333981
e	0.2544942	Incl. 2.43142	-0.24696316	+0.34659617
P	3.65	H 15.3	G 0.15	

Residuals in seconds of arc

770821	095	0.3+	0.2-	910408	809	(11.9+	3.2-)	910410	809	0.1-	1.2-
770823	095	0.4-	0.3+	910408	809	(12.8+	5.7-)	910419	809	0.9+	0.0
770909	675	0.2+	0.3-	910408	809	(15.4+	6.4-)	910419	809	0.2-	1.2+
770909	095	0.4-	0.9+	910410	809	0.8+	0.7-	910419	809	0.7-	0.9+
770910	675	0.3+	0.7-	910410	809	0.7-	0.3-				

1978 NY7 = 1979 WQ7 = 1982 DB4 = 1982 DB6
Id. S. Nakano (MPC 11146), F. N. Bowman (d, MPC 7830)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	111.85891	(1950.0)	P	Q
n	0.17282325	Peri. 217.43082	+0.68528945	+0.72672114
a	3.1920372	Node 95.88180	-0.65606804	+0.64433929
e	0.1939890	Incl. 2.73609	-0.31615359	+0.23812449
P	5.70	H 12.8	G 0.15	

Residuals in seconds of arc

780707	675	0.1-	0.5+	820227	010	0.9-	1.3+	900916	809	0.4+	0.3-
780708	675	0.2+	0.4+	900915	809	0.7-	0.5+	900922	809	0.5+	0.8+
780709	675	0.2-	0.0	900915	809	1.3-	0.7+	900922	809	0.2-	0.1+
791117	095	0.4+	1.0-	900915	809	1.5-	0.9+	900922	809	0.5-	0.8+
820220	033	0.6+	0.6+	900915	809	0.4-	1.3-	900925	809	1.3+	1.3+
820220	033	2.0+	0.2-	900915	809	0.2-	1.1-	900925	809	0.7+	0.9+
820220	033	0.2-	0.6+	900915	809	0.2-	0.9-	900925	809	0.7+	1.4+
820221	033	0.1-	0.7+	900916	809	0.1-	0.3-				
820221	033	0.0	0.4+	900916	809	0.1+	0.3-				

1978 VB6 = 1984 LG = 1991 LJ
Id. B. G. Marsden, E. Bowell
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	29.69863	(1950.0)	P	Q
n	0.27737303	Peri. 25.03590	-0.03599012	+0.93113185
a	2.3285957	Node 244.74482	-0.97107293	-0.11836048
e	0.2014711	Incl. 23.65671	-0.23605522	+0.34494096
P	3.55	H 14.0	G 0.15	

Residuals in seconds of arc

781105	675	0.1-	0.7-	781129	675	0.7-	0.2-	910614	675	1.6+	0.3+
781106	675	0.2-	0.6-	781130	675	(4.2+	2.0+)	910614	675	0.2-	0.2+
781107	675	1.4+	2.2+	840601	688	0.2-	1.2+	910616	675	0.7-	0.4+
781108	675	0.1-	0.3-	840601	688	0.2+	1.2-	910616	675	0.7-	0.6-

1978 VT8 = 1991 GX8
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	32.14642	(1950.0)	P	Q
n	0.18950866	Peri. 350.48773	-0.74977545	+0.65853770
a	3.0018110	Node 230.90286	-0.60146227	-0.71893436
e	0.0117851	Incl. 4.77002	-0.27582586	-0.22239940
P	5.20	H 13.0	G 0.15	

Residuals in seconds of arc

781105	675	0.2-	0.3-	781107	675	0.3-	0.6+	781129	675	0.9+	0.2-
781106	675	0.6+	0.1+	781108	675	0.1+	0.1+	781130	675	1.1-	0.2-

910408 809 1.7+ 0.5- 910410 809 0.7- 0.3+ 910419 809 0.5+ 0.8+
910408 809 0.2+ 0.3- 910410 809 1.2- 0.5- 910419 809 0.5+ 1.2+
910408 809 1.3+ 0.3+ 910410 809 1.5- 1.1- 910419 809 0.8- 0.2-

1978 WB = 1989 VK6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 199.23183 (1950.0) P Q
n 0.26388990 Peri. 345.12055 +0.75647615 -0.65324334
a 2.4072482 Node 55.71108 +0.60389798 +0.67894947
e 0.1695662 Incl. 2.21206 +0.25109972 +0.33511304
P 3.73 H 14.5 G 0.15
Residuals in seconds of arc
781127 801 1.4- 0.9+ 781207 801 0.9- 0.1- 891103 675 0.3- 0.6-
781129 801 0.5+ 0.6- 781228 801 0.2- 0.0 891104 675 0.9+ 0.0
781203 801 1.8+ 0.3- 781229 801 0.2+ 0.1- 891104 675 0.4+ 0.1+
781206 801 0.0 0.4+ 891103 675 1.1- 0.4+

1979 MU8 = 1991 LD1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 96.70324 (1950.0) P Q
n 0.24060422 Peri. 72.90098 -0.92752164 +0.31953546
a 2.5601607 Node 125.31877 -0.36270090 -0.89477461
e 0.1171606 Incl. 13.74780 +0.09028658 -0.31189018
P 4.10 H 13.5 G 0.15
Residuals in seconds of arc
790623 413 0.5- 0.9- 790724 413 0.4- 0.1- 910615 675 2.1- 0.2+
790624 413 0.2- 0.4- 790725 675 0.5+ 1.4+ 910617 675 0.7+ 0.1+
790625 413 1.5+ 0.6+ 790727 675 0.8- 0.3- 910617 675 1.2+ 0.1+
790629 413 0.4+ 0.0 790823 675 0.5- 1.4-
790724 675 0.1+ 1.0+ 910615 675 0.2+ 0.5-

1979 QB10 = 1990 RJ10
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 128.18723 (1950.0) P Q
n 0.26548872 Peri. 340.59098 +0.84315450 +0.53763237
a 2.3975739 Node 346.88049 -0.48943102 +0.76246449
e 0.2015455 Incl. 1.63472 -0.22259329 +0.35999907
P 3.71 H 14.5 G 0.15
Residuals in seconds of arc
790827 095 1.1+ 0.3- 900914 675 0.5+ 0.1+ 900915 675 0.6- 0.6+
790902 095 0.9- 0.5- 900914 675 1.0+ 0.6-
790924 095 0.0 0.4+ 900915 675 1.0- 0.2+

1980 GG = 1991 GG
Id. H. Kaneda (MPC 18105)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 71.60940 (1950.0) P Q
n 0.26845600 Peri. 88.94090 -0.98578662 +0.13116749
a 2.3798740 Node 98.59020 -0.16170318 -0.91028950
e 0.1823358 Incl. 6.09437 +0.04557212 -0.39264247
P 3.67 H 13.8 G 0.15
Residuals in seconds of arc
800412 046 0.6+ 0.3- 800415 046 0.7- 0.8+ 910402 400 0.2- 1.1-
800412 046 0.8- 1.0- 800415 046 1.6+ 0.4- 910402 400 0.0 1.7+
800413 046 0.6- 0.7- 800416 046 0.9- 1.6+ 910409 400 (3.5+ 0.3+)
800413 046 0.2+ 0.0 800416 046 (4.7- 0.3-) 910409 400 1.0+ 1.3+
800414 046 0.5+ 0.6- 910312 675 0.2+ 0.1-
800414 046 0.7- 0.9- 910312 675 0.4- 0.4-

1980 TK6 = 1991 NU1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 344.95273 (1950.0) P Q
n 0.26179011 Peri. 148.16962 +0.97464802 -0.20951993
a 2.4201032 Node 224.14564 +0.17424116 +0.93086326
e 0.1096316 Incl. 6.47169 +0.14036113 +0.29932421
P 3.76 H 13.3 G 0.15
Residuals in seconds of arc

800913	675	0.6-	1.4-	801012	095	0.5+	0.9+	910719 675 0.8- 0.2-
800914	675	0.6-	1.3-	910713	675	0.3-	0.1+	910719 675 0.9+ 0.1+
801008	095	0.7+	1.7+	910713	675	0.1+	0.4+	

1981 EW20 = 1989 VU5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 198.84599 (1950.0) P Q
n 0.17412686 Peri. 299.46754 +0.69937010 +0.71474807
a 3.1760857 Node 14.91121 -0.65013030 +0.63849456
e 0.1322989 Incl. 0.90879 -0.29700515 +0.28541180
P 5.66 H 12.9 G 0.15
Residuals in seconds of arc

810202	413	0.0	0.9-	810316	413	0.4-	0.2-	810426 413 (0.9+ 3.2-)
810213	413	0.8-	1.0-	810316	413	1.9-	0.0	810502 413 1.4- 0.6+
810302	413	1.0-	0.9+	810329	413	0.0	0.8+	891103 675 1.3- 0.3-
810303	413	1.8+	0.8-	810329	413	1.0-	1.5+	891103 675 0.7+ 0.1-
810303	413	1.0+	0.2+	810408	413	0.1-	0.3-	891104 675 0.2+ 0.3+
810307	413	0.8-	1.5+	810408	413	0.9+	0.4-	891104 675 0.3+ 0.3+
810307	413	1.5+	0.6-	810411	413	0.3-	0.5-	
810311	413	1.5+	0.5-	810411	413	0.9+	0.2-	

1981 SE = 1985 SQ6 = 1989 VX5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 99.62751 (1950.0) P Q
n 0.25600271 Peri. 337.41549 -0.75621291 -0.65426583
a 2.4564410 Node 161.71178 +0.60452826 -0.70377103
e 0.0687891 Incl. 1.61552 +0.25037498 -0.27684393
P 3.85 H 14.0 G 0.15
Residuals in seconds of arc

810929	801	(9.1+	2.5+)	811006	801	0.5-	0.6-	891103 675 0.5+ 1.0+
810930	801	(3.2+	4.6-)	850922	095	0.2-	0.6+	891104 675 0.9+ 0.4-
811001	801	0.6+	0.2+	891103	675	0.3+	0.6+	891104 675 1.6- 1.3-

1981 SZ6 = 1991 LN1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 291.40611 (1950.0) P Q
n 0.27396587 Peri. 314.50527 +0.89103238 -0.45261648
a 2.3478576 Node 72.43475 +0.42609116 +0.80761723
e 0.2002079 Incl. 2.08199 +0.15654911 +0.37801156
P 3.60 H 14.5 G 0.15
Residuals in seconds of arc

810928	095	0.2+	2.1+	811027	095	0.7+	2.2-	910608 809 1.2- 0.4+
811006	095	0.6-	0.1+	910606	809	0.6+	0.5+	910608 809 0.3+ 0.2-
811006	095	0.4-	1.8-	910606	809	0.1+	0.3-	910608 809 0.0 0.0
811026	095	0.1+	1.6+	910606	809	0.1+	0.8-	

1981 YO1 = 1989 WN7 = 1991 LO
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	277.71796	(1950.0)	P		Q
n	0.36497643	Peri.	321.86069	+0.63004258	-0.66426835
a	1.9392159	Node	85.10674	+0.77392823	+0.49449773
e	0.0772896	Incl.	23.81016	+0.06388619	+0.56055290
P	2.70	H	12.0	G 0.15	

Residuals in seconds of arc

811219	330	0.5-	0.0	820115	330	2.8-	0.6+	910613	675	0.3+	1.5-
811222	330	3.4+	1.8-	891125	675	0.3-	0.3-	910615	675	0.5-	0.2-
811225	330	0.5-	1.5-	891125	675	0.7+	0.2-	910615	675	0.7-	0.7-
811229	330	1.9+	0.6-	910613	675	1.5-	1.7-				

1982 FP3 = 1982 HW2 = 1977 LO1
Id. E. Bowell (d, MPC 7360; MPC 11052)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	245.97279	(1950.0)	P		Q
n	0.17455667	Peri.	143.44745	-0.86094681	+0.50734187
a	3.1708698	Node	67.07937	-0.47571633	-0.77717266
e	0.1344172	Incl.	2.30718	-0.18017927	-0.37229946
P	5.65	H	12.6	G 0.15	

Residuals in seconds of arc

770613	675	0.2+	0.3+	820327	809	0.5-	0.1+	820401	809	1.1-	0.3-
770614	675	0.1-	0.7+	820327	809	0.1-	0.1-	820425	033	0.7-	0.8+
820322	809	0.2+	0.4-	820327	809	0.0	0.1-	820425	033	0.5-	0.6+
820322	809	0.3+	0.3-	820328	809	0.6-	1.2+	820427	033	1.8+	0.2-
820322	809	0.4+	0.3-	820328	809	0.4-	1.5+	820427	033	1.7+	0.3-
820323	809	0.4-	0.5-	820328	809	0.3-	0.7+	870127	033	0.1-	1.7+
820323	809	0.6-	0.6-	820329	809	0.3-	0.3+	870128	033	0.2+	1.3+
820323	809	0.6-	0.5-	820329	809	0.4-	0.2+	870131	046	(2.8+	0.9-)
820324	809	0.6-	0.4+	820329	809	0.2-	0.1+	870131	046	0.2+	1.2-
820324	809	0.4-	0.5+	820329	809	1.1+	0.5-	870201	046	0.2+	0.3-
820324	809	0.3-	0.4+	820329	809	1.7+	1.3-	870201	046	(3.6+	1.1-)
820326	809	0.9+	0.0	820329	809	1.4+	1.8-	901022	399	0.0	0.6-
820326	809	0.1+	0.7-	820401	809	1.1-	0.1+	901022	399	0.5+	0.5-
820326	809	0.1-	1.0-	820401	809	1.1-	0.0	901022	399	(3.4-	0.6-)

1982 JR1 = 1983 VG1
Id. H. Kaneda (MPC 16023)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	339.93753	(1950.0)	P		Q
n	0.22472434	Peri.	257.89592	+0.94481821	+0.29091054
a	2.6793903	Node	85.04772	-0.20938489	+0.88989035
e	0.2347922	Incl.	8.69619	-0.25194546	+0.35137761
P	4.39	H	13.2	G 0.15	

Residuals in seconds of arc

820515	675	0.7+	0.6+	831106	046	1.0-	0.9-	831109	046	0.7+	0.0
820516	675	1.5+	0.9-	831106	046	1.8-	1.1+	910708	675	1.4-	1.0-
820516	675	0.9-	0.3+	831107	046	1.3+	0.4-	910708	675	0.7+	0.5+
820517	675	0.9-	0.6-	831107	046	1.3+	0.0	910710	675	0.6-	0.1-
820518	675	0.4-	0.6+	831109	046	0.4-	0.3+	910710	675	1.3+	0.6+

1982 SG4 = 1982 SP4 = 1987 RS3
Id. S. Nakano (d, MPC 13582), D. W. E. Green (d, MPC 15244), B. G. Marsden (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	211.51015	(1950.0)	P	Q
n	0.18950463	Peri. 246.58320	-0.03275717	-0.99685067
a	3.0018595	Node 205.61360	+0.96708962	-0.01337129
e	0.0821465	Incl. 9.61691	+0.25231853	-0.07816619
P	5.20	H 12.0	G 0.15	

Residuals in seconds of arc

820920 095	2.9-	2.1+	870917 095	0.1+	2.6-	910513 801	0.7-	0.6-
820922 095	2.4+	0.1+	870926 095	1.0+	0.9+	910609 801	0.1+	0.2+
820926 095	2.1-	1.4+	900330 400	0.4+	2.0+	910609 801	1.0+	0.4-
820928 095	1.4+	2.0+	900330 400	0.4+	2.0+	910611 801	0.2+	0.9+
870902 095	0.9-	0.1+	910513 801	0.7-	0.5+	910611 801	0.0	0.0

1982 UB7 = 1982 XU3 = 1987 SF9 = 1991 LV3
Id. C. M. Bardwell (d, MPC 9153), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	188.31363	(1950.0)	P	Q
n	0.17549349	Peri. 221.95207	-0.02239593	-0.98046266
a	3.1595753	Node 230.29821	+0.97144223	+0.02484413
e	0.0326748	Incl. 14.71463	+0.23621686	-0.19513006
P	5.62	H 11.5	G 0.15	

Residuals in seconds of arc

821021 095	(5.0+	4.1-)	821214 381	0.6+	0.9-	910606 809	0.5-	0.6+
821023 095	0.7+	0.2-	821214 381	0.0	0.0	910608 809	0.5+	0.1-
821111 330	1.0-	1.4+	870921 010	0.7+	0.7-	910608 809	0.3-	0.2-
821112 095	0.0	0.3+	870922 010	0.6-	0.3+	910608 809	0.8-	0.9-
821117 330	0.6-	0.8+	910606 809	0.9+	1.3+			
821213 381	0.4+	0.3-	910606 809	0.1+	0.4+			

1983 AB = 1991 LD3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	131.37194	(1950.0)	P	Q
n	0.26754255	Peri. 63.83078	-0.89209007	-0.44796474
a	2.3852879	Node 89.50649	+0.39054062	-0.83027190
e	0.1520240	Incl. 3.39318	+0.22727370	-0.33162654
P	3.68	H 14.0	G 0.15	

Residuals in seconds of arc

830113 372	1.7-	1.6+	830215 688	1.3+	1.2-	830309 688	1.6+	0.6-
830114 372	0.3+	1.8+	830215 688	0.5-	1.2-	830309 688	(4.4+	0.9-)
830116 372	0.4+	0.8+	830215 372	(4.0-	0.1-)	910606 809	0.6-	1.1-
830118 372	1.4+	1.5-	830215 372	1.8-	2.0+	910606 809	0.4+	1.0-
830120 372	2.5+	0.5-	830219 688	0.9-	2.2-	910606 809	0.5-	0.4-
830123 372	1.7-	2.3-	830219 688	0.7-	1.5-	910608 809	0.1-	0.4+
830207 372	0.4-	0.1+	830308 372	0.0	1.6+	910608 809	0.4+	1.0+
830207 372	0.1+	0.8+	830308 372	0.0	2.5+	910608 809	0.2+	1.0+

1983 HB1 = 1934 PK = 1989 GS6
Id. B. G. Marsden (MPC 14947)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	104.29161	(1950.0)	P	Q
n	0.17704993	Peri. 191.05527	+0.53900598	+0.81641275
a	3.1410309	Node 111.86689	-0.75472355	+0.57735387
e	0.1564314	Incl. 12.90246	-0.37398518	+0.01152127
P	5.57	H 11.5	G 0.15	

Residuals in seconds of arc

340807 078(40.7+	33.5-)X		830418 688	1.2-	1.9-	890405 809	0.2-	0.2+
830410 095	0.5+	1.4+	830418 688	0.3+	2.6-	890407 809	0.5+	0.5+
830412 095	0.6-	2.6+	830501 095	0.6+	1.1-	890411 809	0.7+	0.2+

890413 809 0.5- 0.4+ 900730 675 0.4+ 0.3+ 900820 801 0.2+ 0.1+
900729 675 0.0 1.1- 900730 675 0.2+ 0.0 900820 801 0.1+ 0.1+
900729 675 0.5+ 0.3- 900816 801 1.2- 0.4+

1983 RM2 = 1979 VS = 1982 HH3 = 1991 LP1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 341.99054 (1950.0) P Q
n 0.23271889 Peri. 239.73759 +0.91485018 +0.39840103
a 2.6176704 Node 96.71550 -0.34396038 +0.85420552
e 0.2228097 Incl. 3.79719 -0.21151928 +0.33408016
P 4.24 H 14.0 G 0.15
Residuals in seconds of arc
791111 095 0.3+ 1.4- 830904 688 1.3- 1.2+ 910606 809 1.2+ 0.0
820427 033 0.4- 1.7- 830906 688 0.8- 0.3- 910606 809 0.5+ 1.0+
820427 033 0.7- 1.3- 830906 688 2.0+ 0.4- 910608 809 0.8- 0.2-
830902 688 1.3- 0.7+ 830912 688 0.9+ 1.6- 910608 809 1.1- 0.4-
830902 688 0.5- 0.4- 830912 688 0.3+ 0.1- 910608 809 1.0- 0.6-
830904 688 1.2+ 0.1- 910606 809 1.1+ 0.9+

1983 RC4 = 1987 OF
Id. C. M. Bardwell (MPC 12203)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Bardwell
M 25.41345 (1950.0) P Q
n 0.24073686 Peri. 157.45010 +0.59377558 +0.80120907
a 2.5592253 Node 148.82974 -0.75832839 +0.58802710
e 0.3183793 Incl. 8.23390 -0.26901415 +0.11085194
P 4.09 H 14.5 G 0.15
Residuals in seconds of arc
830902 688 0.1- 0.1- 830911 095 0.8- 2.2+ 910709 801 0.1+ 0.2+
830902 688 0.8+ 0.8- 870726 675 (4.3- 0.4+) 910709 801 0.0 0.3+
830906 688 0.3+ 0.7- 870728 675 (7.4+ 0.4-) 910710 801 0.1+ 0.3+
830906 688 0.3+ 0.2- 870824 675(13.9+ 1.1+) 910710 801 0.1+ 0.7+
830910 688 1.2- 0.8- 870827 675 0.0 0.2-
830910 688 0.1+ 1.4+ 870926 801 0.6+ 0.4+

1984 EG = 1982 VC2 = 1991 JK5
Id. M. Kretlow, B. G. Marsden
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 79.91877 (1950.0) P Q
n 0.29761178 Peri. 86.74085 -0.82080989 +0.56529902
a 2.2217925 Node 127.66543 -0.55650146 -0.75910217
e 0.1096969 Incl. 5.93882 -0.12875263 -0.32280166
P 3.31 H 14.0 G 0.15
Residuals in seconds of arc
821114 381 1.7+ 0.9+ 840309 688 1.2- 0.3- 910513 809 0.4+ 0.1-
821114 381 2.0- 0.0 840309 688 0.6+ 0.1- 910513 809 0.2+ 0.3+
840301 688 2.7+ 0.4+ 840329 688 2.4- 1.0+ 910517 809 0.5- 0.1+
840301 688 0.1+ 0.9- 840331 688 0.1+ 0.8- 910517 809 0.6- 0.2-
840306 688 0.4+ 1.0- 840331 688 0.1+ 0.7+ 910517 809 0.0 0.1+
840306 688 0.5- 1.4+ 910513 809 0.6+ 0.4+

1984 HL1 = 1989 VK5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 130.24577 (1950.0) P Q
n 0.28793887 Peri. 122.76838 -0.78292828 -0.62196636
a 2.2712722 Node 18.78289 +0.55585171 -0.70909167
e 0.1563197 Incl. 2.39572 +0.27937822 -0.33218496
P 3.42 H 13.1 G 0.15

Residuals in seconds of arc

840329	095	0.9+	0.4+	840428	809	0.0	0.0	891103	675	0.6-	0.0
840404	095	(3.9+	1.0+)	840501	809	0.2+	0.6-	891103	675	0.1+	0.6-
840427	809	0.1-	0.3-	840501	809	0.1+	0.4-	891104	675	0.3+	0.2+
840427	809	0.2+	0.5-	840505	809	1.3-	0.2-	891104	675	0.9+	1.2-
840428	809	0.1+	0.3+	840505	809	0.8-	0.2-				

1984 SW5 = 1980 CE = 1985 VQ4 = 1988 DC1 = 1991 NF1
Id. E. Bowell (k), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams	
M 188.01584		(1950.0)		P	Q
n 0.12487323	Peri.	347.72960		-0.83912377	-0.54257738
a 3.9642085	Node	159.27116		+0.50777490	-0.80673674
e 0.0832776	Incl.	6.24217		+0.19502807	-0.23406328
P 7.89	H	11.0	G	0.15	

Residuals in seconds of arc

800211	688	0.6-	0.6-	840926	809	0.0	0.1-	840930	809	0.9-	0.3-
800211	688	0.7-	1.9-	840926	809	0.2-	0.1+	840930	809	1.0-	0.3-
840921	809	0.9+	0.7-	840927	809	0.0	0.2-	841001	809	0.4-	0.1+
840921	809	1.0+	0.8-	840927	809	0.3-	0.5-	841001	809	0.4-	0.3+
840921	809	1.0+	0.6-	840927	809	0.0	0.2-	841001	809	0.4-	0.4+
840922	809	1.3+	0.9+	840927	809	0.1-	1.5+	851111	095	0.6-	0.0
840922	809	1.1+	0.7+	840927	809	0.2-	1.0+	880217	809	0.1+	0.5-
840922	809	1.4+	0.7+	840927	809	0.3-	0.4+	880217	809	0.1+	0.2-
840923	809	0.1-	0.2+	840928	809	(2.8-	1.5+)	880217	809	0.2+	0.8-
840923	809	0.2-	0.1-	840928	809	(2.5-	1.2+)	910712	675	1.4+	0.6-
840923	809	0.3+	0.5-	840928	809	2.0-	0.8+	910712	675	0.1+	1.1-
840924	809	0.2+	0.5-	840929	809	0.7+	0.8-	910714	675	0.0	0.7-
840924	809	0.1+	0.5-	840929	809	0.7+	0.9-	910714	675	2.3-	0.3+
840924	809	0.1-	0.3-	840929	809	1.0+	0.9-	910717	675	0.2-	0.5-
840926	809	0.1-	0.5-	840930	809	0.9-	0.3-	910717	675	0.5+	0.0

1984 SH6 = 1990 EN5
Id. G. V. Williams (MPC 17203)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams	
M 280.67659		(1950.0)		P	Q
n 0.25137712	Peri.	252.63329		+0.88361453	-0.46614753
a 2.4864833	Node	135.12474		+0.44973643	+0.81888182
e 0.1241714	Incl.	3.57151		+0.13024017	+0.33487170
P 3.92	H	14.0	G	0.15	

Residuals in seconds of arc

840922	809	0.3-	0.5+	840927	809	1.1+	0.9-	841001	809	0.3+	0.1-
840922	809	0.2-	0.6+	840927	809	1.1+	1.1-	900302	809	0.6-	0.2+
840922	809	0.1+	0.6+	840928	809	0.8-	0.7+	900302	809	0.2-	0.0
840923	809	0.1-	0.2+	840928	809	0.4-	0.8+	900302	809	0.3+	0.2+
840923	809	0.0	0.3+	840928	809	0.1+	1.2+	900303	809	0.2-	0.0
840923	809	0.3+	0.8+	840929	809	0.0	0.3-	900303	809	0.1+	0.2-
840924	809	1.4-	0.2-	840929	809	0.1+	0.0	900303	809	0.7+	0.0
840924	809	1.3-	0.3-	840929	809	0.1+	0.4+	910606	809	1.1+	0.3-
840924	809	1.2-	0.1+	840930	809	0.8-	0.1-	910606	809	0.1+	0.5-
840926	809	0.8+	0.4-	840930	809	0.4-	0.1+	910606	809	0.1-	0.3+
840926	809	1.1+	0.4-	840930	809	0.0	0.2-	910608	809	0.0	0.1+
840926	809	1.2+	0.4-	841001	809	0.2-	0.2-	910608	809	0.2-	0.3+
840927	809	0.6+	1.5-	841001	809	0.1+	0.3+	910608	809	0.9-	0.2+

1985 TG3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 165.71244 (1950.0) P Q
n 0.08192743 Peri. 85.56590 +0.81741860 -0.55327896
a 5.2502883 Node 307.93881 +0.41403578 +0.75783136
e 0.0498873 Incl. 11.73036 +0.40050120 +0.34579477
P 12.03 H 10.0 G 0.15
Residuals in seconds of arc

850916	675	1.8+	0.4-	851015	688	0.9+	0.9-	880120 675 0.9+ 0.9-
850916	675	0.5-	1.8-	851015	688	0.7-	0.0	910414 675 0.5+ 0.4-
851011	675	(3.7-	0.5-)	871122	675	0.2+	0.3+	910414 675 0.7- 0.3+
851011	675	0.2+	0.8+	871123	675	1.2-	0.6-	910419 675 0.3- 0.7-
851013	675	(3.1-	1.5+)	880116	801	0.4-	1.4+	
851013	675	1.5-	1.5+	880119	675	0.5+	0.1-	

1986 GV
Id. C. S. Shoemaker (1991 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 33.39445 (1950.0) P Q
n 0.21468710 Peri. 126.00684 -0.51090079 +0.81822558
a 2.7622655 Node 111.19552 -0.85124037 -0.43877482
e 0.1459519 Incl. 16.42324 -0.11987586 -0.37146138
P 4.59 H 13.0 G 0.15
Residuals in seconds of arc

860403	675	0.6-	0.7-	860504	675	0.2+	0.9-	910414 675 0.5+ 0.2+
860403	675	0.0	0.4+	860505	675	0.2+	0.6+	910416 675 0.1+ 0.5+
860404	675	0.6-	0.1+	860509	675	0.4+	0.1-	910416 675 0.6+ 0.2-
860404	675	0.2+	0.4+	860510	675	0.7-	0.2+	
860405	675	1.0+	0.0	910414	675	1.2-	0.5-	

1987 BB = 1991 GZ2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 109.48450 (1950.0) P Q
n 0.26902023 Peri. 354.27563 -0.75545487 -0.65518910
a 2.3765453 Node 144.78938 +0.60137317 -0.69573919
e 0.1612030 Incl. 0.38717 +0.26007353 -0.29440486
P 3.66 H 14.5 G 0.15
Residuals in seconds of arc

870125	887	1.2+	0.2-	910408	809	0.2-	0.2+	910410 809 0.1- 0.3-
870125	887	1.6-	2.1+	910408	809	0.5-	0.4+	910410 809 0.1+ 0.2+
870128	887	1.1+	1.2-	910408	809	1.3-	0.5-	910410 809 0.1- 0.2+
870128	887	0.1+	0.4-	910408	809	0.8+	0.8+	910410 809 0.1+ 0.4-
870130	887	0.6+	0.5-	910408	809	0.4+	0.7-	910419 809 1.0+ 0.1+
870130	887	1.0-	1.1+	910408	809	0.1+	0.5-	910419 809 0.6- 1.1+
870204	887	0.6-	0.7-	910410	809	0.6+	0.2+	910419 809 0.3- 0.2-
870204	887	0.3+	0.2-	910410	809	0.1-	0.5-	

1987 DC6 = 1937 CC = 1959 CG = 1976 GM
Id. B. G. Marsden (MPC 13307)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden
M 10.48219 (1950.0) P Q
n 0.17773092 Peri. 285.30274 +0.13415858 -0.98979738
a 3.1330024 Node 156.82350 +0.94951023 +0.11453785
e 0.1356912 Incl. 7.00324 +0.28360499 +0.08474797
P 5.55 H 12.0 G 0.15
Residuals in seconds of arc (or two decimals in units of degrees)

370210	008	(65.5-	15.0-)X	370304	008	(27.4-	36.1+)X	760401 095 2.0+ 1.4+
370211	008	(50.0-	24.6+)X	370315	008	(0.10+	0.03-)X	760404 095 1.3- 0.9+
370219	008	(19.7-	78.6+)X	590208	024	0.6+	2.4+	870222 809 0.7- 0.1-

870222	809	0.7-	0.2-	870228	809	0.0	0.1-	870307	809	0.0	0.4-
870222	809	0.1-	0.1-	870301	809	0.1+	0.0	870307	809	0.2+	0.5-
870223	809	0.4-	0.2-	870301	809	0.1+	0.3+	870307	809	0.0	0.5-
870223	809	0.5-	0.5-	870301	809	0.2+	0.2+	870308	809	0.1-	0.1+
870223	809	0.6-	0.5-	870303	809	0.1-	0.5-	870308	809	0.2-	0.3-
870224	809	0.8-	0.5+	870303	809	0.2+	0.3-	870308	809	0.1+	0.2-
870224	809	0.6-	0.6+	870303	809	0.0	0.2-	870309	809	0.5+	0.1-
870224	809	0.4-	0.6+	870304	809	0.1-	0.3-	870309	809	0.8+	0.1-
870226	809	0.0	0.1-	870304	809	0.3-	0.0	870309	809	0.8+	0.0
870226	809	0.3+	0.2-	870304	809	0.2-	0.1+	870311	809	1.2+	0.2-
870226	809	0.5+	0.2-	870305	809	0.9-	0.1-	870311	809	1.1+	0.3-
870227	809	0.1-	0.3-	870305	809	0.8-	0.2-	870311	809	1.5+	0.3-
870227	809	0.1-	0.3-	870305	809	0.8-	0.3-	900914	675	0.0	0.5-
870227	809	0.1+	0.3-	870306	809	0.0	0.1+	900914	675	0.3-	0.1+
870228	809	0.5-	0.4+	870306	809	0.1-	0.1-	900918	675	0.4+	0.4-
870228	809	0.3-	0.2+	870306	809	0.0	0.1-	900918	675	0.0	0.2+

1987 EV = 1977 LO = 1988 SK1 = 1991 NR
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	103.42045	(1950.0)		P	Q
n	0.28806738	Peri.	269.83065	-0.79491604	+0.60409537
a	2.2705967	Node	307.33270	-0.52460821	-0.73103315
e	0.1108706	Incl.	4.06516	-0.30478634	-0.31726852
P	3.42	H	13.5	G 0.15	

Residuals in seconds of arc

770611	808	0.9+	1.3+	870303	809	0.4-	0.0	870308	809	0.2+	0.4-
770611	808	0.2+	1.8+	870304	688	(3.4+	0.9+)	870308	809	0.4+	0.3-
870226	809	0.0	0.4-	870304	688	0.4-	0.7+	870310	809	0.5+	0.3-
870226	809	0.1+	0.3-	870304	809	0.5-	0.3-	870310	809	0.6+	0.6-
870226	809	0.1+	0.6-	870304	809	0.4-	0.1-	870310	809	0.8+	0.3-
870227	809	0.1-	0.5-	870304	809	0.2-	0.0	880920	809	0.3+	0.3-
870227	809	0.1-	0.4-	870305	809	0.5-	0.4+	880920	809	0.3+	0.7-
870227	809	0.1-	0.1-	870305	809	0.3-	0.4+	880920	809	0.5+	1.0-
870301	809	0.3-	0.1-	870305	809	0.2-	0.2+	910707	675	1.0+	0.3-
870301	809	0.0	0.1-	870307	809	0.6-	0.3-	910709	675	0.7+	1.5-
870301	809	0.2+	0.2-	870307	809	0.0	0.3-	910709	675	1.0-	1.5-
870303	809	0.7-	0.1-	870307	809	0.1+	0.1-				
870303	809	0.3-	0.0	870308	809	0.2+	0.2-				

1987 WS3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	2.74231	(1950.0)		P	Q
n	0.23892555	Peri.	163.14105	+0.68305107	-0.70005039
a	2.5721383	Node	243.21342	+0.64026791	+0.71112444
e	0.2394171	Incl.	13.49087	+0.35142317	+0.06504983
P	4.13	H	12.5	G 0.15	

From 8 observations 1987 Nov. 22-1988 Feb. 6, mean residual 0".7.

1987 YL1 = 1990 HZ
Id. G. V. Williams (MPC 16581)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	32.83806	(1950.0)		P	Q
n	0.17957444	Peri.	162.35210	+0.55552530	+0.81352778
a	3.1115232	Node	140.89718	-0.79195487	+0.58068148
e	0.1463274	Incl.	15.81996	-0.25337546	-0.03133001
P	5.49	H	12.0	G 0.15	

Residuals in seconds of arc

871217	809	0.9-	0.8+	871220	809	0.4+	0.6-	871223	809	0.4-	0.0
871217	809	0.6+	0.6-	871220	809	0.4+	0.2-	900426	675	0.5-	0.5-

900426 675 0.3+ 0.4+ 910710 801 0.3- 0.1+ 910714 675 0.5+ 0.5-
900429 675 1.7- 1.7+ 910710 801 0.3- 0.2+ 910717 675 0.2+ 0.5-
900429 675 0.2+ 0.9+ 910712 675 0.1+ 0.8- 910717 675 0.8- 0.1+
900522 675 1.0+ 1.8- 910712 675 1.0+ 1.1+
900522 675 0.8+ 1.4- 910714 675 0.5- 0.1+

1988 AF = 1986 SF3
Id. L. G. Karachkina (MPC 14791)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 357.81996 (1950.0) P Q
n 0.23609609 Peri. 158.47912 -0.06944759 -0.97769237
a 2.5926478 Node 295.04076 +0.88031994 +0.03341159
e 0.1331407 Incl. 12.63821 +0.46926947 -0.20736755
P 4.17 H 12.5 G 0.15
Residuals in seconds of arc
860929 095 1.0+ 0.1+ 880120 400 0.5- 0.3- 900726 675 1.0- 0.2-
861003 095 0.2- 1.6- 880120 400 1.1+ 0.5+ 900728 675 0.6- 2.1+
880111 400 2.3- 0.2+ 880124 400 0.0 0.7+ 900728 675 0.5- 0.1+
880111 400 (3.4- 0.3-) 880124 400 0.0 0.5+ 900817 046 (5.2- 1.1-)
880111 400 (3.7- 1.0-) 880124 400 1.5+ 0.5+ 900817 046 0.4- 0.0
880119 400 1.6+ 1.1- 880216 400 (4.9+ 2.6-) 900916 801 0.1+ 0.3+
880119 400 0.7+ 0.9- 880216 400 (6.9+ 1.4-) 900916 801 0.2+ 0.3+
880119 400 0.3- 0.7+ 880216 400 (4.3+ 2.9-) 900919 801 0.3+ 0.3+
880120 400 0.9- 1.3+ 900726 675 0.6- 0.5+ 900919 801 0.4+ 0.2+

1988 BX1
Id. C. S. Shoemaker (1991 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 161.23098 (1950.0) P Q
n 0.08142967 Peri. 344.97465 +0.42460993 -0.74804309
a 5.2716623 Node 77.51608 +0.87516471 +0.19480247
e 0.0656486 Incl. 31.49258 +0.23193347 +0.63441590
P 12.10 H 9.5 G 0.15
Residuals in seconds of arc
880121 675 0.5+ 0.2- 880317 801 0.8- 1.6+ 910414 675 1.3- 1.5-
880123 675 0.5+ 2.1- 880317 675 0.0 1.0- 910414 675 0.7- 0.0
880124 675 0.2+ 1.2- 880318 675 0.0 1.5- 910416 675 0.4- 0.4+
880216 675 0.3+ 1.0+ 880412 675 0.1+ 0.2- 910416 675 1.5+ 0.1-
880217 675 0.2+ 1.2+ 880413 801 2.0- 1.4+ 910513 675 0.2- 0.5+
880220 675 0.3+ 1.4+ 880414 675 0.0 0.1- 910515 675 0.9+ 0.6+

1988 BY1 = 1985 US2
Id. C. S. Shoemaker (1991 obs.), C. M. Bardwell, G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 164.71616 (1950.0) P Q
n 0.08237818 Peri. 10.88036 +0.59343687 -0.76447845
a 5.2311187 Node 43.35860 +0.70814556 +0.34720469
e 0.1304028 Incl. 21.51599 +0.38257358 +0.54315891
P 11.96 H 10.0 G 0.15
Residuals in seconds of arc
851017 010 (6.3- 8.0+) 880317 801 (1.4- 4.1+) 910414 675 0.9- 0.3-
851018 010 (5.8- 5.3+) 880317 675 0.7+ 2.2- 910416 675 0.2- 0.9-
880123 675 0.2+ 0.2- 880318 675 1.0+ 1.4- 910419 675 0.2+ 1.3+
880124 675 0.6+ 1.4+ 880413 801 0.4- 1.5+ 910514 675 1.2+ 0.3-
880216 675 0.3- 0.1- 880414 675 0.0 0.6+ 910516 675 0.4- 0.0
880217 675 0.4- 0.8+ 880414 675 0.4- 0.2- 910516 675 0.4- 0.2-
880220 675 1.0- 0.2- 910414 675 0.6+ 0.5+

1988 CA = 1982 YD2 = 1990 RK10
Id. H. E. Holt (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 288.85775		(1950.0)	P	Q
n 0.21424278	Peri.	350.75500	-0.84470429	-0.53006014
a 2.7660833	Node	156.76427	+0.50228711	-0.83295703
e 0.2024684	Incl.	10.84596	+0.18488462	-0.15880439
P 4.60	H	12.5	G 0.15	

Residuals in seconds of arc

821221 095	0.0	0.3+	880124 809	0.7+	0.1+	880130 809	0.4+	0.0			
880117 809	0.9-	1.4-	880126 809	0.9+	0.1+	880207 220	(7.4+	0.8-)Y			
880117 809	0.7-	1.3-	880126 809	1.0+	0.0	880207 220	(1.1+	2.1-)Y			
880117 809	0.6-	1.2-	880126 809	1.0+	0.9+	880210 897	0.2-	0.9+			
880118 809	1.2-	1.0-	880127 809	1.0+	0.7+	880210 897	(3.0-	0.9+)			
880118 809	1.0-	0.0	880127 809	0.3+	0.8+	880212 220	1.7-	1.1- Y			
880120 809	0.3-	0.2-	880127 809	0.7+	0.7+	880215 897	0.2-	0.3+			
880120 809	0.3-	0.4+	880128 809	0.4+	0.1+	880215 897	2.0-	0.9-			
880122 809	0.5+	0.3-	880128 809	0.4+	0.0	900914 675	0.1-	0.3+			
880122 809	0.1+	0.2+	880128 809	0.5+	0.1+	900914 675	0.1+	0.4-			
880124 809	0.1+	0.1+	880129 809	0.2+	0.7+						
880124 809	0.5+	0.0	880129 809	0.0	1.0+						

1988 ER2 = 1989 SF10 = 1991 BZ2
Id. H. Kaneda (MPC 16698), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 53.91960		(1950.0)	P	Q
n 0.29184539	Peri.	280.54358	-0.99681471	-0.07340326
a 2.2509585	Node	255.25222	+0.07975234	-0.91729367
e 0.0915562	Incl.	1.84786	+0.00003357	-0.39138763
P 3.38	H	14.0	G 0.15	

Residuals in seconds of arc

880315 809	0.1-	0.1+	880322 809	0.5+	0.9-	910115 033	0.4+	0.5-			
880315 809	0.5-	0.3+	890928 809	0.5-	0.3-	910116 033	0.4+	0.9-			
880316 809	0.6-	0.8-	890928 809	0.3-	0.2-	910117 033	0.0	0.1-			
880316 809	0.3+	0.1+	890928 809	0.1+	0.1-	910122 675	0.4-	0.9+			
880321 809	0.4-	0.7-	890929 809	0.1+	0.0	910122 675	1.1-	0.8+			
880321 809	0.4-	1.2+	890929 809	0.2+	0.1+	910209 675	0.1+	0.8+			
880321 809	0.7+	1.0+	890929 809	0.4+	0.1+	910209 675	0.4-	0.4+			
880322 809	0.4+	0.9-	910115 033	0.9+	1.7-						

1988 PV = 1978 TE3 = 1991 JU3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 341.13611		(1950.0)	P	Q
n 0.28882852	Peri.	115.36843	+0.92573214	+0.37317521
a 2.2666058	Node	222.79336	-0.37124254	+0.86580931
e 0.2136351	Incl.	5.17877	-0.07210402	+0.33333841
P 3.41	H	13.5	G 0.15	

Residuals in seconds of arc

781004 095	0.4+	2.1-	880815 400	0.6-	0.5-	880907 400	0.1+	0.3+			
880808 400	1.3+	0.2-	880818 400	1.4+	1.3+	881002 400	1.8-	0.3+			
880808 400	2.3-	0.6-	880818 400	0.6+	0.0	881002 400	1.2+	0.7-			
880808 400	(4.7+	1.0+)	880904 400	0.1+	0.8-	910513 033	0.3-	0.9-			
880815 400	0.4-	0.2+	880905 400	0.0	0.7-	910513 033	0.4-	0.5-			
880815 400	1.1-	2.3+	880907 400	1.0+	0.4-	910514 033	0.4+	1.0-			

1988 RF1
Id. C. S. Shoemaker (1989 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 113.78011	(1950.0)	P	Q	
n 0.08545310	Peri. 330.19881	+0.87930064	+0.47616524	
a 5.1048640	Node 1.47656	-0.32507021	+0.61514440	
e 0.1187443	Incl. 22.47649	-0.34808008	+0.62838207	
P 11.53	H 11.0	G 0.15		

Residuals in seconds of arc

880818 675	0.5+	0.5-	881008 675	0.7+	0.3-	891103 675	0.8-	0.5-
880910 675	1.0-	0.6+	881008 675	0.2-	0.2-			
880912 675	0.0	0.4+	891102 675	0.8+	0.5+			

1988 RF9 = 1977 DL
Id. T. Kobayashi (MPC 15068)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 59.56623	(1950.0)	P	Q	
n 0.29193783	Peri. 148.08294	-0.41637260	+0.90814611	
a 2.2504833	Node 97.27927	-0.84310987	-0.36769866	
e 0.1664442	Incl. 2.52155	-0.34029341	-0.20017075	
P 3.38	H 15.0	G 0.15		

Residuals in seconds of arc

770218 381	0.2+	0.6+	880905 809	0.8-	0.8-	880911 809	0.3+	0.2-
770218 381	1.0+	1.3-	880905 809	0.8+	0.2-	880911 809	0.6+	0.4-
770219 381	1.1+	0.5+	880907 809	(4.7+	2.1+)	910606 809	0.2+	0.6-
770219 381	2.0-	1.1+	880907 809	(4.7+	2.2+)	910606 809	0.7-	0.3-
880902 809	1.8-	0.7+	880910 809	2.3+	0.5+	910606 809	0.1-	0.1-
880902 809	1.9-	0.9+	880910 809	2.2+	0.6+	910608 809	0.7+	0.2-
880902 809	1.8-	0.7+	880910 809	2.1+	0.5+	910608 809	0.1-	0.7+
880905 809	2.1-	1.1-	880911 809	0.1+	0.2-	910608 809	0.1+	0.6+

1988 RJ13 = 1971 NB = 1991 GT10
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 342.84500	(1950.0)	P	Q	
n 0.23765441	Peri. 242.62005	+0.15006206	+0.97722571	
a 2.5813019	Node 36.98992	-0.79590273	+0.20943281	
e 0.0708321	Incl. 14.44004	-0.58653237	-0.03417312	
P 4.15	H 14.5	G 0.15		

Residuals in seconds of arc

710701 821	0.2-	0.5+	881005 807	0.4-	0.7+	910409 033	0.5-	0.5-
710701 821	1.5-	0.7-	881006 807	0.1+	0.1+	910411 033	0.3-	0.0
710701 821	1.5+	0.8+	881007 807	0.7+	1.5-	910411 033	0.4+	0.2-
880914 807	0.4+	0.3+	881008 807	0.4+	1.0-	910412 033	0.0	1.2-
880915 807	0.4+	0.4+	881104 807	1.2-	1.0-	910413 033	0.5+	0.9+
880919 807	0.3+	0.4+	910409 033	1.1-	0.3-			

1988 XO = 1981 AM3 = 1991 LP
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 324.28154	(1950.0)	P	Q	
n 0.23757749	Peri. 265.54383	+0.95896612	+0.07516592	
a 2.5818590	Node 89.97534	+0.03678181	+0.92308512	
e 0.1797698	Incl. 15.86522	-0.28112468	+0.37717893	
P 4.15	H 13.0	G 0.15		

Residuals in seconds of arc

810108 381	0.5+	0.8-	881217 897	1.1+	0.8+	910708 675	2.0-	1.7-
810108 381	0.4-	0.1+	881217 897	(3.4+	1.9-)	910708 675	0.7-	1.0-
881205 897	2.0+	1.8-	910613 675	0.8-	0.3+	910710 675	0.7-	1.1-
881205 897	1.2-	0.7-	910613 675	0.5+	0.4+	910710 675	(5.4+	3.2-)
881207 897	0.0	1.1-	910615 675	0.9+	0.5-			
881207 897	1.0-	0.0	910615 675	1.0+	0.1+			

1988 XE1
Id. D. D. Balam (1991 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	222.39418	(1950.0)		P	Q
n	0.26765604	Peri.	255.39426	-0.78365161	-0.61338249
a	2.3846184	Node	246.67478	+0.60313472	-0.71342154
e	0.0698071	Incl.	6.14177	+0.14872348	-0.33880914
P	3.68	H	12.5	G 0.15	

Residuals in seconds of arc

880910 033	0.2+	0.1+	881203 400	0.6-	3.1-	910805 657	0.6+	0.2+
880910 033	0.5-	0.5-	881203 400	0.5+	1.1-	910805 657	1.6+	0.5+
881116 400	0.0	0.7+	881210 400	0.3-	0.1+	910806 657	0.9-	0.0
881116 400	3.4+	0.2+	881210 400	1.1-	0.3+	910806 657	0.2-	0.2-
881116 400	3.2-	1.4-	881210 400	0.5+	1.9+	910806 657	1.2-	0.2+
881203 400	1.0+	2.9+	910805 657	0.0	0.4-			

1989 BB1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	308.60674	(1950.0)		P	Q
n	0.08361572	Peri.	197.11587	-0.11593071	+0.96067160
a	5.1793758	Node	66.82587	-0.87609161	+0.02079809
e	0.0719229	Incl.	15.93079	-0.46799953	-0.27690706
P	11.79	H	10.5	G 0.15	

Residuals in seconds of arc

890130 675	1.0-	0.3+	900130 675	1.0+	1.8-	910414 675	0.4+	0.7+
890130 675	0.8-	0.4-	900130 675	1.2+	0.7+	910416 675	0.3-	0.4-
890202 675	0.5+	0.3+	900220 675	0.0	1.0+	910416 675	0.3+	0.7-
890308 675	1.5+	1.2-	900222 675	1.5-	1.6+			
890308 675	(4.6+	2.2-)	910414 675	0.9-	0.3-			

1989 CW2 = 1991 NR1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	37.87642	(1950.0)		P	Q
n	0.18968033	Peri.	41.58728	+0.46709417	+0.87091313
a	2.9999995	Node	256.77848	-0.84699746	+0.39112110
e	0.0664889	Incl.	9.02769	-0.25380766	+0.29754765
P	5.20	H	12.2	G 0.15	

Residuals in seconds of arc

890204 809	1.0-	0.2+	890302 809	0.8+	0.3-	910713 675	0.4+	0.5-
890204 809	0.8-	0.0	890302 809	0.7+	0.2-	910713 675	0.5-	0.1-
890204 809	0.0	0.3-	890302 809	1.3-	0.4-	910719 675	0.5-	0.3+
890207 809	0.9+	1.0-	890303 809	0.3+	0.5+	910719 675	0.7+	0.3+
890207 809	1.1+	0.3+	890303 809	0.0	0.6+			
890207 809	0.1-	0.4+	890303 809	0.6-	0.1+			

1989 SN5 = 1979 YP7 = 1991 GL9
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	194.73645	(1950.0)		P	Q
n	0.28573442	Peri.	206.55525	+0.55963251	-0.82822075
a	2.2829392	Node	209.44148	+0.77054664	+0.53304863
e	0.2313263	Incl.	3.42408	+0.30507266	+0.17294380
P	3.45	H	14.7	G 0.15	

Residuals in seconds of arc

791223 095	0.0	0.1-	890930 474	0.0	0.2+	910419 809	0.8+	0.3-
890924 474	0.6+	0.3-	890930 474	1.0-	0.2+	910419 809	2.5-	0.5-
890924 474	0.4+	0.7-	910410 809	0.6+	1.6+	910419 809	0.3-	1.2-
890926 474	0.1-	0.1+	910410 809	0.9+	0.4+			
890926 474	0.0	0.5+	910410 809	0.5+	0.2+			

1989 UU3 = 1982 SJ10 = 1991 GL4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 223.96448 (1950.0) P Q
n 0.28868377 Peri. 209.47508 +0.77880090 -0.62719817
a 2.2673634 Node 189.38663 +0.58636099 +0.73334361
e 0.1752185 Incl. 3.36440 +0.22282269 +0.26235396
P 3.41 H 14.8 G 0.15
Residuals in seconds of arc

820926	095	0.3+	0.8-	891102	403	1.5-	1.0-	910410	809	0.2-	0.4-
891028	403	0.7+	1.6-	910408	809	0.7+	0.9-	910410	809	1.4-	0.7-
891029	403	1.7+	1.9+	910408	809	0.6+	0.2-	910410	809	0.7-	0.6+
891102	403	0.7-	0.1+	910408	809	0.4+	0.2-				

1989 WD3 = 1991 GK7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 131.90851 (1950.0) P Q
n 0.21804254 Peri. 225.90045 -0.29955396 -0.95087272
a 2.7338534 Node 241.68035 +0.89871904 -0.25372534
e 0.1522533 Incl. 5.09359 +0.32026787 -0.17738242
P 4.52 H 13.9 G 0.15
Residuals in seconds of arc

891127	888	0.3-	0.8+	891203	888	0.1+	1.5-	910410	809	0.1+	1.4-
891127	888	0.3-	0.5+	891203	888	0.0	1.6-	910410	809	0.1+	1.3-
891129	888	1.1+	0.0	910408	809	0.8+	0.5+	910419	809	0.6+	1.1+
891129	888	1.1+	0.1-	910408	809	0.7-	0.0	910419	809	0.1+	1.0+
891201	888	1.7-	2.1+	910408	809	1.3-	0.6+	910419	809	0.7+	0.3+
891201	888	(6.2-	0.8+)	910410	809	0.2-	0.8-				

1990 BU = 1950 QB1 = 1967 UB = 1971 SR1 = 1984 WT1 = 1988 RO13
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi
M 287.32268 (1950.0) P Q
n 0.23499817 Peri. 29.53913 +0.98623801 +0.10877298
a 2.6007168 Node 323.55418 -0.15952007 +0.82396458
e 0.1883127 Incl. 12.09848 +0.04345028 +0.55610324
P 4.19 H 11.7 G 0.15
Residuals in seconds of arc

500818	711	2.3+	4.0- Y	880916	095	0.0	0.8-	900125	875	0.5+	1.7+
671027	095	0.5-	0.6+	880916	095	0.4-	0.7+	900127	875	0.1-	1.0+
710923	095	1.1+	0.7-	900121	875	0.3-	0.0	900127	875	0.9+	0.6+
841121	675	0.5+	0.0	900121	875	0.5-	0.6-	900217	875	0.2+	1.7-
841124	675	0.4+	1.2-	900124	875	0.1+	1.8-	900217	875	1.7-	3.3-
880914	095	1.4-	3.8+	900124	875	0.7-	0.0				
880914	095	0.0	1.5-	900125	875	0.4-	0.3+				

1990 BS1 = 1951 CS1 = 1972 YG = 1983 XX1 = 1991 LF
Id. H. E. Holt (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 144.37924 (1950.0) P Q
n 0.17704495 Peri. 357.12277 -0.28255543 -0.91248532
a 3.1410898 Node 109.14757 +0.88618907 -0.36637223
e 0.1420564 Incl. 18.25135 +0.36719390 +0.18204926
P 5.57 H 11.5 G 0.15
Residuals in seconds of arc

510210	711	0.9+	2.8- Y	900121	402	0.1+	0.2+	900227	402	1.2-	0.4+
721229	095	3.3-	3.0+	900201	402	0.3+	1.3-	910607	675	1.7+	1.4+
831205	561	1.2+	0.1-	900201	402	1.6+	0.4-	910607	675	0.1+	0.5+
831205	561	0.7+	0.2-	900213	402	(3.9-	1.2+)	910609	675	(4.1-	1.0-)
900121	402	0.2+	0.1-	900213	402	0.8-	1.6+	910609	675	1.4-	0.4-

1990 HF1 = 1983 ET2 = 1984 HV
Id. B. G. Marsden (MPC 16588)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M 346.45479	(1950.0)	P	Q	
n 0.17353660	Peri. 213.45476	+0.92289284	+0.24643117	
a 3.1832900	Node 129.35601	-0.21160625	+0.96654180	
e 0.0120001	Incl. 22.49789	-0.32170111	+0.07119426	
P 5.68	H 11.0	G 0.15		

Residuals in seconds of arc

830305 095	(89.9-	20.6-)	900429 675	2.4+	0.2+	900527 675	1.1-	1.0-
840427 675	0.5-	0.1-	900429 675	2.2+	1.4+	910709 801	0.1-	0.6+
840427 675	0.3-	1.0-	900521 675	0.1-	0.0	910709 801	0.0	0.6+
840429 675	0.1-	0.9+	900521 675	0.4-	0.8-	910710 801	0.0	0.6+
840429 675	1.0+	0.3+	900523 675	0.0	0.0	910710 801	0.2+	0.5+
900427 675	0.1+	0.8+	900523 675	0.8-	1.2+	910711 801	0.1-	2.1-
900427 675	1.1-	1.3-	900527 675	1.4-	0.8-			

1990 OB2 = 1964 TJ = 1985 TT3 = 1985 VY1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 80.69685	(1950.0)	P	Q	
n 0.18742547	Peri. 357.57307	+0.97435957	+0.22184847	
a 3.0240130	Node 349.38272	-0.20283889	+0.79397905	
e 0.3412685	Incl. 11.74536	-0.09736437	+0.56602166	
P 5.26	H 13.5	G 0.15		

Residuals in seconds of arc

641004 760	(0.7-	4.3+)	851107 675	0.9+	0.0	900917 675	0.3+	0.3-
641004 760	0.4-	0.7+	900729 675	0.7-	0.5-	900917 675	1.0+	0.1-
851011 675	1.5-	1.0-	900729 675	0.4-	0.3+	900920 675	0.5+	0.3+
851013 675	0.4-	1.1+	900730 675	0.4-	0.1+	900920 675	0.8+	0.7-
851107 675	1.0+	0.1-	900730 675	0.8-	0.3+			

1990 OK2 = 1981 RY4 = 1981 SM6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 64.28771	(1950.0)	P	Q	
n 0.21259411	Peri. 292.46685	+0.96673026	-0.24161529	
a 2.7803655	Node 81.59566	+0.25458420	+0.87684785	
e 0.1863454	Incl. 4.87049	+0.02488960	+0.41564395	
P 4.64	H 13.5	G 0.15		

Residuals in seconds of arc

810908 095	1.0+	1.4-	900729 675	0.3-	0.5-	900915 675	0.0	0.3-
810928 095	0.9-	1.3+	900729 675	0.1+	0.0	900915 675	0.0	0.2-
900726 675	0.4+	0.9-	900730 675	0.0	0.6+			
900726 675	0.4-	0.5+	900730 675	0.0	0.9+			

1990 QG
Id. R. H. McNaught (1974 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 69.13673	(1950.0)	P	Q	
n 0.18742495	Peri. 49.27139	+0.94776253	-0.31438012	
a 3.0240185	Node 328.94062	+0.25193098	+0.84151694	
e 0.3741901	Incl. 6.00310	+0.19564500	+0.43933403	
P 5.26	H 14.0	G 0.15		

Residuals in seconds of arc

740616 413	0.4+	0.4+	900824 372	0.3-	1.4+	900910 372	(8.8-	5.5+)
740723 413	0.8-	0.3+	900827 372	0.6-	0.5-	900916 675	0.9+	0.1+
740723 413	0.3+	0.1+	900827 372	0.4-	0.1+	900916 675	0.8+	0.3-
900820 372	0.8-	0.6+	900831 372	0.3+	1.4-	900919 675	1.0+	0.8-
900820 372	2.2-	1.7+	900831 372	1.0+	0.4-	900919 675	0.7+	0.1-
900824 372	1.6-	1.3-	900910 372	(2.1-	5.8+)	900920 372	0.5+	0.9-

900920	372	1.8+	0.3+	901114	801	0.1+	0.1+	901213	801	1.2-	0.6+
901015	801	0.0	0.2-	901115	801	0.2+	0.0	901214	801	0.1+	0.4+
901015	801	0.0	0.1-	901116	801	0.1-	0.4+	901214	801	0.4-	0.3+
901017	801	0.1+	0.1-	901116	801	1.1-	0.1+				
901017	801	0.1-	0.1-	901213	801	0.4+	0.9+				

1990 TR
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	145.42554		(1950.0)	P	Q
n	0.31390171	Peri.	335.20407	+0.98019541	+0.19535951
a	2.1442410	Node	13.64892	-0.15088598	+0.84281163
e	0.4366984	Incl.	7.89895	-0.12825905	+0.50150096
P	3.14	H	14.5	G 0.15	

From 78 observations 1990 May 3-1991 Feb. 12, mean residual 0".89.

1990 UG3 = 1969 TO3 = 1983 CP = 1986 XG3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	87.99550		(1950.0)	P	Q
n	0.23540530	Peri.	359.62629	+0.53869193	-0.83708664
a	2.5977173	Node	57.77668	+0.77323552	+0.44627182
e	0.3155599	Incl.	6.47346	+0.33454124	+0.31642916
P	4.19	H	13.6	G 0.15	

Residuals in seconds of arc

691009	095	0.1-	0.2+	901111	400	1.9+	0.8-	901118	400	(2.9+	0.8-)
830211	688	1.0-	0.7-	901111	400	1.5+	1.6-	901118	400	0.4-	1.3-
830211	688	0.7+	0.8-	901112	364	1.2-	0.6+	901121	364	(3.1-	0.8+)
861204	010	(3.7-	3.1+)	901112	364	0.5-	0.7+	901121	364	2.3-	0.3+
861204	010	0.3-	1.6+	901114	403	0.8+	2.4- Y	901122	364	0.4-	1.0+
861204	010	(1.7+	2.9+)	901114	403	(4.9-	0.7-)Y	901122	364	1.0+	0.7+
901024	400	0.4+	0.5-	901115	403	0.1-	0.3+	901124	399	0.7+	1.4+
901024	400	0.7-	0.6-	901115	403	1.1-	1.0+	901124	399	1.1+	0.2+

1990 VU1
Id. R. H. McNaught (1989 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	94.18830		(1950.0)	P	Q
n	0.08303254	Peri.	267.98059	+0.85699077	+0.36589001
a	5.2035989	Node	70.39924	-0.16112011	+0.85913023
e	0.1639095	Incl.	22.65709	-0.48949681	+0.35779847
P	11.87	H	9.5	G 0.15	

Residuals in seconds of arc

890904	413	0.5-	0.2+	901116	403	0.3-	0.3+	901218	801	0.3-	0.1-
890921	413	0.5+	0.2-	901116	403	(2.5-	1.1-)	901218	801	0.2-	0.0
901111	400	1.9+	2.1-	901118	400	(4.0-	2.9+)	910212	801	0.1-	0.8+
901111	400	1.4-	2.0+	901118	400	(6.1-	0.2-)	910212	801	0.1-	0.7-
901112	364	(1.6+	3.0-)	901124	400	1.9+	1.0+	910317	801	0.1-	0.0
901112	364	0.4-	1.9-	901124	400	(2.9+	2.1+)	910318	801	0.2-	0.2+
901113	400	1.2-	0.5+	901215	400	1.3-	0.6+	910320	801	0.4+	0.6-
901113	400	0.4+	0.2+	901215	400	0.9+	0.2-	910320	801	0.2+	0.1-

1990 WZ2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	96.86401		(1950.0)	P	Q
n	0.28612410	Peri.	62.23288	+0.42098627	-0.90684775
a	2.2808659	Node	3.08427	+0.64538134	+0.28401157
e	0.3367341	Incl.	21.75585	+0.63738018	+0.31139137
P	3.44	H	13.0	G 0.15	

From 10 observations 1990 Nov. 18-1991 Mar. 20, mean residual 0".7.

1990 XZ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 183.28968 (1950.0) P Q
n 0.36840931 Peri. 323.56061 +0.92296815 -0.22511461
a 1.9271506 Node 52.49701 +0.37352858 +0.71943471
e 0.0780050 Incl. 23.17269 -0.09276954 +0.65706705
P 2.68 H 13.5 G 0.15
From 10 observations 1990 Nov. 18-1991 Feb. 16, mean residual 0".7.

1991 AR1 = 1978 QJ1 = 1978 SR3 = 1984 UC3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 82.76956 (1950.0) P Q
n 0.17673673 Peri. 31.84482 +0.55397851 -0.83251129
a 3.1447469 Node 24.51623 +0.76086947 +0.50349113
e 0.1909791 Incl. 0.79043 +0.33791339 +0.23113123
P 5.58 H 12.0 G 0.15
Residuals in seconds of arc

780831 095	0.3-	2.2+	901217 675	0.6-	0.8-	910113 675	0.1-	1.3+
780927 095	0.7-	0.0	901218 675	1.3-	0.4+	910113 675	1.2+	1.7+
841026 688	1.1+	0.6+	901218 675	1.2-	0.8+	910214 675	0.9-	1.0-
841026 688	0.2-	3.0-	910111 675	1.1+	0.1+	910214 675	0.1+	0.1-
901217 675	0.5-	0.9-	910111 675	2.3+	0.6+			

1991 AX1 = 1962 CZ = 1982 FX1 = 1989 UF6
Id. H. Kaneda; 1989 TZ2 = 1991 AX1 (MPC 18118) is invalid
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 53.14737 (1950.0) P Q
n 0.20370845 Peri. 12.14695 -0.73938842 -0.67191196
a 2.8606410 Node 125.55265 +0.61319426 -0.69833872
e 0.0233566 Incl. 3.02151 +0.27802440 -0.24669284
P 4.84 H 12.0 G 0.15
Residuals in seconds of arc

620210 033	2.6-	0.4-	891101 807	0.5+	0.7+	910114 399	0.8-	2.0+
620210 033	2.1+	1.8-	891102 807	0.8+	0.8+	910123 399	1.6+	1.9+
820327 046	0.9-	1.6-	910109 399	1.4-	0.5-	910123 399	1.3+	0.8+
820327 046	0.3+	0.1+	910109 399	1.4+	0.3-	910123 399	(3.7+	0.9+)
891030 807	0.3-	0.1+	910114 399	2.0-	0.1+	910123 399	2.1+	1.9-
891030 095	0.3+	1.9-	910114 399	1.0-	1.2+	910208 399	0.9-	0.7+
891030 095	0.9-	1.9-	910114 399	0.4+	2.2-	910208 399	0.4+	0.2+
891101 807	0.2+	0.5+	910114 399	0.5-	0.9+			

1991 BB
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 138.06106 (1950.0) P Q
n 0.76281255 Peri. 322.80686 -0.10259677 +0.81739958
a 1.1862899 Node 294.35520 -0.69517343 -0.46652181
e 0.2724493 Incl. 38.47964 -0.71148282 +0.33795757
P 1.29 H 16.0 G 0.15
From 28 observations 1991 Jan. 12-May 13, mean residual 1".1.

1991 CA2 = 1977 QL = 1980 DY2 = 1989 WJ7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 166.74135 (1950.0) P Q
n 0.17607120 Peri. 231.24412 +0.96806454 -0.18770504
a 3.1526602 Node 138.79766 +0.22083627 +0.95224322
e 0.1470913 Incl. 14.61286 -0.11866921 +0.24083119
P 5.60 H 11.8 G 0.15

Residuals in seconds of arc

770818	095	0.1+	0.8-		891127	808	0.0	0.4-		910214	511	0.7-	0.2-
800220	095	0.1-	0.6-		891127	808	1.4-	0.1+		910216	511	0.8+	1.6-
891122	808	0.8+	0.5+		891204	808	(2.0-	32.7+)		910305	071	0.6+	0.9+
891122	808	0.4+	0.1-		891204	808	(3.3-	33.5+)		910305	071	0.9-	0.7+

1991 EA1 = 1989 WR4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M	39.97156	(1950.0)		P	Q
n	0.21760895	Peri.	160.43522	-0.93545696	+0.33553406
a	2.7374837	Node	39.72813	-0.34298860	-0.78594135
e	0.2002484	Incl.	10.00786	-0.08531757	-0.51933908
P	4.53	H	12.2	G 0.15	

Residuals in seconds of arc

891128	033	2.4-	1.2+		891129	033	2.4+	0.8-		910314	875	0.3-	1.3+
891128	033	0.2+	0.2+		891203	033	0.6+	0.0		910317	875	0.5+	0.6-
891129	033	0.8-	0.7-		910314	875	0.1-	0.8-		910416	875	0.2-	0.1+

1991 GB1

Id. J. Alu (1989 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	43.30809	(1950.0)		P	Q
n	0.35867993	Peri.	221.91437	-0.43357838	+0.88971743
a	1.9618449	Node	23.50962	-0.70184570	-0.23398410
e	0.0436687	Incl.	20.98753	-0.56517467	-0.39198768
P	2.75	H	13.5	G 0.15	

Residuals in seconds of arc

891004	675	0.7+	1.7+		910223	493	0.2-	0.4-		910419	809	0.2-	0.2+
891004	675	1.2-	0.6+		910223	493	1.0-	0.8-		910419	809	0.1-	0.1+
891006	675	0.3-	0.5+		910408	675	0.4-	0.3-		910507	675	1.3+	1.3-
891027	675	1.7-	0.1-		910408	675	0.8+	0.4+		910509	675	0.7-	0.5+
891027	675	2.3+	1.9-		910409	675	0.5+	0.8+		910509	675	1.0-	1.4+
891029	675	0.3-	1.3-		910412	675	1.5+	0.8-		910615	675	2.2-	0.1+
891029	675	0.2-	0.9+		910412	675	0.2+	0.1-		910615	675	0.9-	0.1-
910223	493	0.6+	0.6+		910419	809	0.7+	0.3+					

1991 GE2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	16.08241	(1950.0)		P	Q
n	0.26054043	Peri.	182.45337	+0.22437712	+0.94425621
a	2.4278358	Node	100.58834	-0.88981858	+0.29931518
e	0.1944410	Incl.	14.18643	-0.39733841	-0.13707892
P	3.78	H	13.0	G 0.15	

From 10 observations 1991 Apr. 15-July 10, mean residual 0".6.

1991 GQ2 = 1977 RC16 = 1978 WV2 = 1990 AQ

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	70.88969	(1950.0)		P	Q
n	0.18374248	Peri.	343.52500	-0.95517041	-0.29605621
a	3.0642886	Node	179.25363	+0.27549678	-0.88941436
e	0.1162040	Incl.	2.05367	+0.10840211	-0.34827118
P	5.36	H	13.1	G 0.15	

Residuals in seconds of arc

770909	675	0.2+	2.4-		900102	511	1.0+	0.9-		910410	809	0.6-	1.7-
770910	675	1.7+	2.6-		910408	809	2.0+	1.9+		910410	809	2.1-	2.5-
781129	675	0.7-	0.1-		910408	809	0.2+	0.4-		910419	809	1.0+	0.4+
781130	675	0.7+	0.2-		910408	809	2.1-	0.7-		910419	809	0.4+	0.1+
900101	511	0.9-	0.7-		910410	809	0.4+	1.5-		910419	809	1.0-	0.2-

1991 GC6 = 1989 TW5 = 1989 TR17
Id. H. Kaneda, S. Nakano (d)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 194.78684	(1950.0)	P	Q	
n 0.30093649	Peri. 44.16431	+0.34455036	-0.93718545	
a 2.2053938	Node 25.82672	+0.82287357	+0.27357082	
e 0.1113630	Incl. 7.18439	+0.45184527	+0.21643114	
P 3.28	H 14.2	G 0.15		

Residuals in seconds of arc

891002 807	0.1+	0.7+	891010 809	1.0+	1.3+	910410 809	0.0	0.4+
891006 807	0.6+	0.4+	910408 809	0.4-	0.1+	910410 809	1.0+	0.0
891010 809	1.2-	2.1-	910408 809	1.0-	0.4-	910419 809	0.1-	0.3+
891010 809	0.4-	1.0-	910408 809	0.1-	0.9-	910419 809	0.3-	0.1-
891010 809	0.3+	0.2+	910410 809	0.5+	0.2+	910419 809	0.1+	0.2-

1991 GC7 = 1977 CZ2 = 1984 DR2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 100.03717	(1950.0)	P	Q	
n 0.28883827	Peri. 137.82016	-0.96750292	-0.24932379	
a 2.2665548	Node 27.82589	+0.20110036	-0.85972457	
e 0.1082923	Incl. 5.17948	+0.15328645	-0.44577048	
P 3.41	H 14.7	G 0.15		

Residuals in seconds of arc

770212 675	0.2-	0.8+	910408 809	1.2-	0.1-	910410 809	0.1-	0.3+
770213 675	0.5+	0.4+	910408 809	0.6-	0.2-	910419 809	1.8+	0.1+
840226 095	0.8-	1.4-	910410 809	0.0	0.1+	910419 809	1.0+	0.1-
910408 809	1.7-	0.6+	910410 809	0.4-	0.1+	910419 809	1.4+	0.0

1991 GV8 = 1977 RX16
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 93.98066	(1950.0)	P	Q	
n 0.25930689	Peri. 232.53106	-0.98471716	-0.17122366	
a 2.4355292	Node 297.58971	+0.16897357	-0.89496703	
e 0.0787275	Incl. 2.05960	+0.04219058	-0.41196659	
P 3.80	H 14.9	G 0.15		

Residuals in seconds of arc

770909 675	0.2+	0.1+	910408 809	0.3-	0.7-	910419 809	0.5+	0.1-
770910 675	0.2-	0.1-	910410 809	0.3-	0.7+	910419 809	0.9-	0.0
910408 809	1.4+	0.1+	910410 809	0.5-	0.3+	910419 809	0.9+	0.3-
910408 809	0.6+	0.1-	910410 809	1.4-	0.2+			

1991 GY9 = 1980 JS = 1986 LQ = 1988 UQ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 71.00779	(1950.0)	P	Q	
n 0.17283477	Peri. 288.73276	-0.88168571	-0.43479217	
a 3.1918953	Node 225.97939	+0.46799206	-0.85532667	
e 0.0318270	Incl. 14.76511	-0.06011437	-0.28173046	
P 5.70	H 11.5	G 0.15		

Residuals in seconds of arc

800510 095 (3.7+	14.1+)		881016 400	0.4+	0.5-	910413 413	0.1-	0.8+
860601 010	1.1-	0.3-	881016 400	0.6-	1.9+	910413 413	0.4+	0.2+
860601 010	1.1+	0.7-	881101 400	(3.2+	2.5+)	910507 413	0.3-	0.1-
870819 413	0.2+	0.6+	881101 400	(1.9+	6.1+)	910513 413	0.2+	2.1+
870819 413	0.6-	1.2+	881101 400	(2.0-	7.2+)			
881016 400	0.2-	0.5+	910210 413	0.8+	0.7+			

1991 GZ9
Id. R. H. McNaught (1982, 1988 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	77.35454	(1950.0)	P	Q
n	0.21667499	Peri. 228.44685	-0.87492524	-0.46702119
a	2.7453445	Node 283.34768	+0.47417699	-0.77254356
e	0.2197033	Incl. 7.56241	+0.09829554	-0.43019491
P	4.55	H 13.5	G 0.15	

Residuals in seconds of arc

820525	413	0.1+ 0.2+	910210	413	0.3+ 0.4-	910507	413	0.1+ 0.0
881003	413	1.7+ 0.5+	910413	413	0.6- 0.3+	910513	413	(5.0- 1.7-)
881009	413	1.6- 0.8-	910413	413	0.1+ 0.3-			

1991 JG = 1938 GF = 1973 GV = 1977 BX

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	36.99025	(1950.0)	P	Q
n	0.22347904	Peri. 165.75345	-0.64785927	+0.73563461
a	2.6893347	Node 63.45510	-0.71873062	-0.50426992
e	0.1401798	Incl. 12.77334	-0.25239782	-0.45227598
P	4.41	H 12.1	G 0.15	

Residuals in seconds of arc

380405	062	0.5- 1.2+	730404	095	0.0 0.5+	910505	399	1.7+ 0.2-
380405	062	0.8+ 1.3-	770120	095	0.1- 0.8-	910511	399	0.9- 0.6-
380405	062	0.4+ 1.0+	910504	399	0.8- 0.4+	910511	399	0.6- 0.5-
380406	062	0.4+ 1.3+	910504	399	0.5- 0.3+	910606	399	(3.0+ 0.9-)
730401	095	0.3+ 0.8-	910505	399	0.1+ 0.8-	910606	399	0.1- 0.4-

1991 JX

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	41.09994	(1950.0)	P	Q
n	0.24544609	Peri. 64.52401	+0.11571462	+0.99304910
a	2.5263798	Node 212.14353	-0.92519390	+0.09986954
e	0.5994958	Incl. 2.31938	-0.36142272	+0.06228609
P	4.02	H 18.5	G 0.15	

From 52 observations 1991 May 9-July 3, mean residual 0".8.

1991 JY

Epoch 1991 May 24.0 ET = JDE 2448400.5 Bardwell

M	120.91606	(1950.0)	P	Q
n	1.06890295	Peri. 37.41030	+0.08422655	-0.76467899
a	0.9473502	Node 57.89596	+0.62948505	-0.45618876
e	0.2959716	Incl. 48.95678	+0.77243412	+0.45514597
P	0.92	H 16.5	G 0.15	

From 41 observations 1991 May 14-June 16.

1991 JA1 = 1989 UF2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	313.12432	(1950.0)	P	Q
n	0.36895962	Peri. 145.45205	+0.97844394	-0.01568429
a	1.9252377	Node 217.15517	-0.01035061	+0.99213399
e	0.0752170	Incl. 19.93382	+0.20625305	+0.12419396
P	2.67	H 13.5	G 0.15	

Residuals in seconds of arc

891027	675	1.0- 0.3+	910508	675	0.8+ 1.4-	910615	675	1.2+ 0.0
891027	675	0.4- 1.5+	910508	675	1.3- 1.6+	910615	675	0.4- 0.2+
891029	675	1.1+ 0.8-	910510	675	0.3+ 0.3+			
891029	675	0.5+ 1.4-	910510	675	0.4- 0.7-			

1991 JD1 = 1977 LV = 1981 RZ1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	14.48051	(1950.0)		P	Q
n	0.27865158	Peri.	27.35345	+0.22151118	+0.96252784
a	2.3214673	Node	255.78762	-0.92155844	+0.15417109
e	0.1149259	Incl.	9.28687	-0.31884610	+0.22309511
P	3.54	H	13.0	G 0.15	

Residuals in seconds of arc

770612	675	0.0	2.2-	910508	675	0.2-	1.9+	910614 675 1.1+ 1.1+
770613	675	0.2+	1.7-	910510	675	2.3-	0.4-	910616 675 1.5+ 1.0-
810907	095	0.8-	2.0+	910510	675	2.4-	1.3+	910616 675 1.3+ 0.2-
910508	675	0.5+	1.3+	910614	675	2.1+	0.1+	

1991 JG1
Epoch 1991 May 24.0 ET = JDE 2448400.5 Marsden

M	35.27223	(1950.0)		P	Q
n	0.61247586	Peri.	322.54850	-0.91552747	+0.04857451
a	1.3732304	Node	225.79156	-0.06423908	-0.99759756
e	0.1844272	Incl.	33.85338	-0.39709292	+0.04939260
P	1.61	H	19.0	G 0.15	

From 16 observations 1991 May 9-June 18.

1991 JN1 = 1953 EC = 1971 OM = 1977 EM8 = 1979 XV = 1989 WQ5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	133.31600	(1950.0)		P	Q
n	0.28797856	Peri.	339.88357	-0.83844955	-0.54458305
a	2.2710635	Node	167.05828	+0.51182106	-0.79995811
e	0.0984676	Incl.	5.32283	+0.18719389	-0.25198477
P	3.42	H	14.0	G 0.15	

Residuals in seconds of arc

530309	012	1.4+	0.1+	770314	381	0.3-	1.0-	910509 675 0.2- 0.5+
530316	012	(71.8+	48.8+)	770315	381	0.3-	1.0-	910509 675 0.1- 1.1+
710726	095	1.1-	1.2-	770315	381	1.6-	0.2-	910511 675 0.3+ 0.3+
770312	381	0.2-	0.1+	791214	095	0.4-	1.0+	910616 675 0.9+ 0.4-
770312	381	0.7-	0.9+	891121	095	(4.9+	0.4-)	910616 675 1.2+ 1.7-
770314	381	0.1+	0.4-	891121	095	1.3+	1.5-	

1991 JS1 = 1978 NS2 = 1982 UP7 = 1988 RM6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	31.38138	(1950.0)		P	Q
n	0.30137502	Peri.	166.36794	+0.31736759	+0.94614272
a	2.2032539	Node	122.10143	-0.87693576	+0.31848746
e	0.1633664	Incl.	4.33064	-0.36091755	+0.05813514
P	3.27	H	13.5	G 0.15	

Residuals in seconds of arc

780709	095	0.2+	0.6+	880909	809	0.4+	0.8-	910521 392 1.3+ 0.2-
780711	095	0.2-	0.3+	880909	809	0.4+	0.6-	910602 392 0.4+ 1.4+
821021	095	0.3-	1.5+	880911	809	0.2-	0.4+	910602 392 0.5- 1.0+
880907	809	0.6-	0.3-	880911	809	0.3-	0.2+	910608 392 0.6- 1.0-
880907	809	0.1-	0.2-	880911	809	0.3-	0.1+	910608 392 0.1+ 0.2-
880907	809	0.3+	0.1-	910513	392	1.2-	0.1+	910608 392 0.9+ 0.7-
880908	809	0.2-	0.5+	910513	392	(1.0-	3.2+)	910608 392 0.6+ 0.6-
880908	809	0.1+	0.4+	910521	392	0.6-	0.2-	910609 400 0.6+ 0.3-
880908	809	0.4+	0.6+	910521	392	0.5-	0.9+	910609 400 0.7- 0.1-
880909	809	0.2+	0.9-	910521	392	0.4+	0.1+	

1991 JR2 = 1952 DK1 = 1971 TK2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	94.11658	(1950.0)	P	Q
n	0.23108134	Peri. 11.04144	-0.99905767	-0.00031755
a	2.6300225	Node 168.66746	-0.00791470	-0.98187344
e	0.0895697	Incl. 12.76007	+0.04267481	-0.18953748
P	4.27	H 12.7	G 0.15	

Residuals in seconds of arc

520218 711	0.2-	0.1- Y	910505 413	0.8+	0.1+	910518 413	1.0+	0.0
520219 711	(3.9+	6.7+)Y	910508 413	0.7+	0.5+	910518 413	1.0+	0.3+
520219 711	0.2+	0.1+ Y	910508 413	(3.6+	1.3-)	910518 376	2.4-	1.2-
711013 095	2.1+	1.9-	910511 413	(3.1-	1.0+)	910518 376	2.2-	0.6+
711014 095	2.1-	1.9+	910511 413	(4.6+	0.6-)			
910505 413	1.0+	0.1-	910518 413	0.1+	0.1-			

1991 KA = 1984 DF3 = 1987 DG1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	59.78127	(1950.0)	P	Q
n	0.29430367	Peri. 133.08434	-0.50953507	+0.85690052
a	2.2384063	Node 106.12812	-0.81114508	-0.44808312
e	0.1011421	Incl. 4.66170	-0.28708478	-0.25483920
P	3.35	H 14.0	G 0.15	

Residuals in seconds of arc

840227 095	0.3+	0.7+	910517 809	1.8-	1.1-	910604 372	0.5+	1.2+
870225 801	0.0	0.2-	910517 809	(2.6-	1.1-)	910604 372	0.6-	0.6+
910512 809	0.3-	0.5+	910518 894	1.8+	1.0-	910606 894	0.3+	0.1+
910512 809	0.8-	0.2+	910518 894	0.9+	1.1-	910606 894	0.9-	0.6+
910512 809	1.1-	0.1+	910519 894	1.1+	0.7+	910617 894	0.7+	0.7+
910516 372	(3.9-	0.8-)	910519 894	(3.1+	0.3+)Y	910617 894	1.2+	0.1+
910516 372	(2.8-	2.0+)	910604 894	0.6-	0.0			
910517 809	0.7-	1.3-	910604 894	0.4+	0.5-			

1991 LD = 1972 AL = 1978 CN = 1978 ED4 = 1980 OL = 1981 UP13 = 1982 YX2 = 1985 JZ1 = 1987 SR25 = 1990 FP3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	43.92455	(1950.0)	P	Q
n	0.17089578	Peri. 0.37963	-0.51947620	+0.84924971
a	3.2159935	Node 238.32558	-0.78422831	-0.51773218
e	0.0733873	Incl. 6.37137	-0.33930877	-0.10357758
P	5.77	H 11.5	G 0.15	

Residuals in seconds of arc

720114 029	1.5+	0.0	850514 675	0.2+	0.8+	910611 894	1.3+	0.4+ Y
720115 029	0.2+	0.2+	850515 675	1.6-	0.3+	910617 894	1.1+	0.1-
720116 029	0.0	0.5-	850523 095	0.7-	1.5-	910617 894	0.3+	0.2+
720117 029	0.1+	0.8-	870924 095	1.2-	0.8+	910617 894	0.4-	1.8-
780201 330	(3.6+	1.6-)	900320 095	2.1-	2.1+	910708 894	1.0+	0.4-
780306 095	0.9+	0.4+	900320 095	1.7-	1.3-	910708 894	2.3+	0.4+
800721 095	2.3-	0.1+	910606 894	2.4-	0.7+	910708 894	0.2+	0.4-
811023 095	0.4+	2.3-	910606 894	1.6+	0.3-			
821222 095	1.3+	0.2-	910611 894	0.7+	0.2+ Y			

1991 LH
Epoch 1991 June 13.0 ET = JDE 2448420.5 Marsden

M	108.80599	(1950.0)	P	Q
n	0.62685009	Peri. 203.92025	-0.40685641	-0.48139259
a	1.3521564	Node 280.17900	+0.91227995	-0.17035278
e	0.7305245	Incl. 52.07082	+0.04704425	-0.85979131
P	1.57	H 17.0	G 0.15	

From 19 observations 1991 June 14-21.

1991 LW = 1989 YH5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 74.57129		(1950.0)	P	Q
n 0.23924151	Peri.	116.61345	-0.86978987	+0.44639155
a 2.5698732	Node	90.54186	-0.49333901	-0.77892295
e 0.1804318	Incl.	12.13687	-0.00906706	-0.44046977
P 4.12	H 13.0	G 0.15		

Residuals in seconds of arc

891228 511	0.2+	0.0	910614 675	0.1-	0.3+	910710 675	0.9+	0.5+
891228 511	0.6-	0.6-	910614 675	0.0	0.6+	910711 675	0.2+	0.3-
891229 511	0.4+	0.4-	910616 675	1.0+	1.0-	910711 675	1.1-	0.7-
891229 511	1.2-	1.2+	910616 675	1.0-	0.0			
891229 511	1.2+	0.3-	910710 675	0.0	0.6+			

1991 LC1 = 1972 LQ = 1980 RL5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 40.14648		(1950.0)	P	Q
n 0.25964785	Peri.	63.31747	+0.06412163	+0.99403226
a 2.4333966	Node	210.75268	-0.96590927	+0.03959420
e 0.2233752	Incl.	9.93847	-0.25081405	+0.10164727
P 3.80	H 13.5	G 0.15		

Residuals in seconds of arc

720606 095	(1.7-	6.5+)	910615 675	0.1+	0.2+	910710 675	1.2+	0.2+
720610 095	0.1+	2.4-	910615 675	0.1-	0.1-	910710 675	(5.7+	1.6+)
800913 675	0.3+	0.4-	910617 675	0.0	0.5-	910711 675	1.0-	1.5+
800914 675	0.1-	0.4-	910617 675	0.4+	0.3-	910711 675	0.8-	1.6+

1991 MA = 1989 WO2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 99.50988		(1950.0)	P	Q
n 0.38299031	Peri.	170.15209	-0.36720677	+0.82326458
a 1.8779219	Node	77.23280	-0.88070267	-0.15803079
e 0.0210765	Incl.	26.35075	-0.29920225	-0.54521712
P 2.57	H 14.5	G 0.15		

Residuals in seconds of arc

891130 675	0.7+	0.2+	891202 675	1.8-	1.0-	910618 474	0.8-	0.5-
891130 675	0.4+	0.2+	910616 413	1.0+	0.0	910618 474	0.1+	1.0+
891202 675	0.7+	0.6+	910616 413	0.4-	0.4-	910624 413	0.0	0.2-

1991 NY = 1950 QF1 = 1979 WT1 = 1987 SG23 = 1987 SF30
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 33.66426		(1950.0)	P	Q
n 0.24034866	Peri.	110.59723	+0.60133866	+0.79860642
a 2.5619751	Node	196.44225	-0.76187959	+0.56374227
e 0.3232258	Incl.	5.04522	-0.24068924	+0.21076631
P 4.10	H 13.5	G 0.15		

Residuals in seconds of arc

500818 711	1.6+	1.0-	Y	870917 095	0.6+	0.4-	910719 675	0.7-	0.2+
500909 711	0.7-	1.0+	Y	870923 095	0.9-	0.7+	910719 675	0.6+	0.4+
500909 711	0.4-	1.9-	Y	910713 675	0.1-	0.2+	910805 675	0.2+	0.5+
791116 095	0.0	0.9+		910713 675	0.4-	0.4+	910805 675	0.1+	0.0

1991 OA
Epoch 1991 July 23.0 ET = JDE 2448460.5 Marsden

M	8.16502	(1950.0)	P	Q
n	0.24241656	Peri. 317.22081	-0.11653942	+0.99008979
a	2.5473846	Node 305.93781	-0.88303318	-0.13940635
e	0.5931239	Incl. 5.55411	-0.45461079	+0.01697262
P	4.07	H 17.5	G 0.15	

From 5 observations 1991 July 16-Aug. 5.

2023 P-L = 1987 SL12
Id. T. Kobayashi (MPC 15569)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	304.89993	(1950.0)	P	Q
n	0.18236892	Peri. 359.65289	+0.78205215	+0.62317786
a	3.0796557	Node 321.79594	-0.57173283	+0.71318547
e	0.1637534	Incl. 0.61299	-0.24802418	+0.32096081
P	5.40	H 13.3	G 0.15	

Residuals in seconds of arc

600924	675	0.6-	0.9-	601026	675	0.4+	0.9-	870918	809	0.4+	0.8+
600926	675	0.2+	1.1-	800408	675	0.3-	1.0+	870918	809	0.5+	0.7+
600928	675	1.0+	0.4+	800409	675	0.7+	0.2+	870918	809	0.5+	0.5+
600928	675	0.4+	0.9-	870828	095	0.9+	3.4-	910419	809	0.5+	1.6-
600929	675	1.5+	2.1-	870916	809	1.4-	2.4+	910419	809	0.6-	1.2-
601017	675	0.1-	0.4+	870916	809	1.2-	2.4+	910419	809	1.4-	1.3-
601022	675	0.1-	0.5-	870916	809	1.1-	2.5+				
601025	675	0.0	0.6-	870916	095	0.1-	2.4-				

4581 P-L = 1987 VZ
Id. S. Nakano (MPC 12947)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	97.24738	(1950.0)	P	Q
n	0.29429208	Peri. 334.02567	+0.88071786	-0.47195617
a	2.2384651	Node 54.19313	+0.44266285	+0.79020743
e	0.1256584	Incl. 2.82127	+0.16848039	+0.39093426
P	3.35	H 14.3	G 0.15	

Residuals in seconds of arc

600924	675	0.1-	0.1-	871023	095	3.0-	1.3+	871126	046	(4.0+	1.8+)
600926	675	0.4-	0.4+	871028	095	1.0-	3.3+	871126	046	1.2-	1.6-
600927	675	0.1+	1.1+	871115	046	(4.7-	2.6-)	871127	046	0.3+	1.3-
600928	675	0.1-	0.2+	871115	046	(5.1-	3.0-)	900826	675	0.9+	1.0-
601022	675	0.2-	1.4+	871123	046	1.6+	1.3-	900826	675	0.4+	1.3-
601025	675	0.4-	0.1-	871123	046	0.8+	1.5-	900916	675	0.3+	0.7-
601026	675	0.3-	0.1+	871126	046	2.8+	0.1+	900916	675	0.2-	0.3-

7637 P-L = 1977 CW2 = 1986 VP7
Id. K. Ichikawa (k), S. Nakano
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	312.81888	(1950.0)	P	Q
n	0.27012908	Peri. 176.83205	-0.65107205	+0.75380780
a	2.3700372	Node 52.52469	-0.69878548	-0.54963914
e	0.2149258	Incl. 6.42180	-0.29631746	-0.36009806
P	3.65	H 13.2	G 0.15	

Residuals in seconds of arc (or two decimals in units of degrees)

601022	675	0.9+	0.5+	770212	675	0.2-	0.4-	861107	046	1.1-	0.6+
601025	675	0.5-	0.3-	770213	675	0.2+	0.4+				
601026	675	0.5-	0.3-	861107	046	1.1+	0.5-				

1070 T-2 = 1991 JJ4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5		(J-P)	Marsden
M 30.47673	(1950.0)	P	Q
n 0.26296655	Peri. 81.79701	-0.02173867	+0.99968719
a 2.4128847	Node 186.99307	-0.95257288	-0.02446655
e 0.0949024	Incl. 5.83002	-0.30353310	+0.00518658
P 3.75	H 15.0	G 0.15	

Residuals in seconds of arc

730919	675	0.6-	0.9-	730929	675	0.9+	1.1+	731005	675	0.7+	0.3-
730919	675	0.6-	1.0-	730929	675	1.1+	0.4+	910512	809	0.1-	0.8-
730920	675	1.1-	0.9-	730930	675	0.3-	0.5-	910512	809	0.0	1.6-
730924	675	0.4-	0.4+	730930	675	1.3-	0.3+	910512	809	0.4-	1.0-
730924	675	1.1-	0.3+	731004	675	0.6+	1.5-	910517	809	0.1-	0.8+
730925	675	0.9+	0.8-	731004	675	1.5+	0.1-	910517	809	0.4+	1.4+
730925	675	0.2-	1.6+	731005	675	0.0	2.0+	910517	809	0.2+	1.1+

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NEW NAMES OF MINOR PLANETS.

(1834) Palach = 1969 QP

Discovered 1969 Aug. 22 by L. Kohoutek at Bergedorf.

Named in memory of the Czech student of philosophy Jan Palach, who burned himself to death on 1969 Jan. 16 in Wenceslas Square, Prague, as a protest against the occupation of Czechoslovakia the previous August, resulting in the violent end of the reform movement known as the Prague Spring.

(2485) Scheffler = 1932 BH

Discovered 1932 Jan. 29 by K. Reinmuth at Heidelberg.

Named in honor of Helmut Scheffler (1928-), staff member of the Heidelberg Konigstuhl Observatory and professor of astronomy at Heidelberg University (1963-1991), on the occasion of his retirement. He has made important contributions to the fields of radiation transfer in the outer solar atmosphere, atmospheric seeing and the structure of the interstellar medium. In collaboration with H. Elsasser, Scheffler has written the well-known textbooks "Physik der Sterne und der Sonne" and "Physics of the Galaxy and Interstellar Matter". Name proposed and citation prepared by G. Klare and L. D. Schmadel. Endorsed by E. Bowell, who found the key identification involving this planet.

(2533) Fechtig = A905 VA

Discovered 1905 Nov. 3 by M. Wolf at Heidelberg.

Named in honor of Hugo Fechtig (1929-), director at the Max Planck Institute for Nuclear Physics in Heidelberg and professor of physics at Heidelberg University. Early in his career Fechtig became interested in cosmophysics. He is a well-known specialist in studies of micrometeoroids and interplanetary dust by rockets and spacecraft and has shared in the organization and development of laboratory and space experiments on meteoritic, lunar, interplanetary and cometary material. This especially refers to the projects on the Helios, Giotto, Vega, Ulysses and Galileo space missions. Name proposed and citation prepared by L. D. Schmadel and J. Schubart. Endorsed by E. Bowell, who found the key identifications involving this planet.

(2560) Siegma = 1932 CW

Discovered 1932 Feb. 14 by K. Reinmuth at Heidelberg.

Named in honor of Siegfried A. Marx (1934-), director of the Karl Schwarzschild Observatory at Tautenburg and professor of astronomy at Jena

University. Marx is working on problems of interstellar and intergalactic matter, and he has made important contributions to questions of techniques and proper interpretations of astrophotographic observations. He is well-known for the publication of many textbooks and is one of the great popularizers of astronomy in Germany. His interests include the astrometric work on minor planets and he always supported observational campaigns with the largest Schmidt telescope in the world. Name proposed and citation prepared by L. D. Schmadel. Endorsed by E. Bowell, who found the key identifications involving this planet.

(2993) Wendy = 1970 PA

Discovered 1970 Aug. 4 at the Perth Observatory.

Named by Peter Birch in honor of his wife. This was the first minor planet discovered at the Bickley site.

(2994) Flynn = 1975 PA

Discovered 1975 Aug. 14 at the Perth Observatory.

Named by Mike Candy in honor of his wife Vicki Marie Flynn, at one time a staff observer and still an observer on her own time.

(3188) Jekabsons = 1978 OM

Discovered 1978 July 28 at the Perth Observatory.

Named in memory of Peter Jekabsons (1943-1990), a gifted observer on the Perth staff for sixteen years. His astronomical paintings adorn the walls of the Observatory. His talents as an artist carried over into his scientific work, and he produced some of the Observatory's best plates.

(3301) Jansje = 1978 CT

Discovered 1978 Feb. 6 at the Perth Observatory.

Named by Arie Verveer in honor of his mother.

(3307) Athabasca = 1981 DE1

Discovered 1981 Feb. 28 by S. J. Bus at Siding Spring in the course of the U.K. Schmidt-Caltech Asteroid Survey.

Named for the native North Americans who originally settled in the sub-arctic region that is now Northwestern Canada and central Alaska. The Athabascan hunter-gatherers comprise a diverse group whose influence spread, about a thousand years ago, as far as the southwestern United States. They are the ancestors of the present Navajo and Apache peoples. Name suggested and citation prepared by J. J. Klavetter.

(3401) Vanphilos = 1981 PA

Discovered 1981 Aug. 1 at the Harvard College Observatory's Agassiz Station.

Named by G. V. Williams in honor of his friends Vanessa Hall and Philip Osborne, on the occasion of their marriage, 1991 August 3. Both are planning to do a two-year tour of duty with the Voluntary Service Overseas organization.

(3555) Miyasaka = 1931 TC1

Discovered 1931 Oct. 6 by K. Reinmuth at Heidelberg.

Named in honor of Seidai Miyasaka (1955-), an active observer of minor planets and one of the few observers in Japan who devote themselves to follow-up observations. He has observed many minor planets so that they could be numbered. Name proposed by T. Kobayashi, who found the identifications involving this minor planet, and with whom Miyasaka has been collaborating for many years.

(3968) Koptelov = 1978 TU5
Discovered 1978 Oct. 8 by L. I. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of the Soviet writer Afanasij Lazarevich Koptelov, whose works depicted life of the people of the Altaj and Siberia.

(4022) Nonna = 1981 TL4
Discovered 1981 Oct. 8 by L. I. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of Nonna (Noyabrina) Viktorovna Mordyukova, a popular Soviet cinema actress.

(4164) Shilov = 1969 UR
Discovered 1969 Oct. 16 by L. I. Chernykh at the Crimean Astrophysical Observatory.
Named in honor of the outstanding Soviet painter Aleksandr Maksovich Shilov, who has created a gallery of portraits of his contemporaries.

(4364) Shkodrov = 1978 VV5
Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.
Named for Vladimir Shkodrov, professor at the Bulgarian Academy of Sciences and an astronomer at the Bulgarian National Observatory. Dynamicist, science writer and translator of many astronomical classics, he has been a guiding light for many of his colleagues in Bulgaria and Europe. Shkodrov has collaborated with the discoverer on the International Near-Earth Asteroid Survey from Bulgaria and even through difficult times has persisted in carrying out asteroid and comet research.

(4365) Ivanova = 1978 VH8
Discovered 1978 Nov. 7 by E. F. Helin and S. J. Bus at Palomar.
Named in honor of Violetta Ivanova, astronomer at the Bulgarian Academy of Sciences, Bulgarian National Observatory and a friend and colleague of the discoverer. Violetta and her associates have been active members of Helin’s JPL International Near-Earth Asteroid Survey for the last ten years, contributing to its global sky coverage in search for NEAs. Violetta is a diligent and enthusiastic observer. Helin has spent two observing sessions in Bulgaria working with Ivanova and Shkodrov.

(4635) Rimbaud = 1988 BJ1
Discovered 1988 Jan. 21 by E. W. Elst at Haute Provence.
Named in memory of the French poet Arthur Rimbaud (1854-1891) on the occasion of the hundredth anniversary of his death. At the age of 17 he was already known for his "Dormeur du Val" and "Le Bateau ivre", the latter, together with "Voyelles", probably being his most famous work. In 1872 he traveled with Paul Verlaine to England and Belgium, their friendship ending with two gunshots fired by Verlaine at Rimbaud. In 1873 Rimbaud published "Une Saison en Enfer", an autobiographical and psychological work. After "Les Illuminations", written at the age of 19 and issued by Verlaine only in 1886, nothing remains of the work of this great poet. As a precursor of symbolism Rimbaud enormously influenced Verlaine and the following generation. Name proposed and citation prepared by Kristina Leterme at the request of the discoverer.

(4739) Tomahrens = 1985 TH1
Discovered 1985 Oct. 15 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named in honor of Thomas J. Ahrens, professor of geophysics at the California Insititute of Technology. Ahrens has built and directed the premier laboratory for experimental impact and shock physics, using light-

gas guns. He has used this laboratory to investigate a broad array of problems, including the equations of state of minerals at very high pressure, shock metamorphism and cratering mechanics. He has also addressed problems of impact cratering by computer code calculations and investigated the accumulation and early bombardment of the earth and the evolution of the atmosphere. Citation provided by E. M. Shoemaker at the request of the discoverer.

(4764) Joneberhart = 1983 CC

Discovered 1983 Feb. 11 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named in honor of Jonathan Eberhart, space science writer for the weekly publication Science News. For more than two decades Eberhart has reported advances and discoveries in planetary science through his coverage of planetary spacecraft encounters, the annual Lunar and Planetary Science Conference, and the annual meetings of the Division for Planetary Sciences (DPS) of the American Astronomical Society. He is known and respected for his attention to detail and accuracy in science reporting. Eberhart is also a talented composer and performer of folk music. As such, he is a founder of and performer in the "Titan Equatorial Band", an impromptu musical group that originated during the Voyager spacecraft encounters of Saturn. Citation prepared by the Committee of the DPS at the request of the discoverer.

(4766) Malin = 1987 FF1

Discovered 1987 Mar. 28 by E. F. Helin at Palomar.

Named in honor of David F. Malin, chemist and astrophotographer at the Anglo-Australian Observatory. He has developed new methods of extracting information from astronomical plates, an enhancement technique that has led to the discovery of extremely faint but large-scale features associated with otherwise normal galaxies. His special photographic and developing procedures have brought him worldwide recognition and acclaim. The discoverer has long been an admirer of his innovative photographic methods, which produce extraordinary photographs of celestial subjects in glorious color and detail. Malin is a well-known lecturer on his photographic techniques and has written many scientific papers and books on the subject.

(4770) Lane = 1989 PC

Discovered 1989 Aug. 9 by E. F. Helin at Palomar.

Named in honor of Arthur Lonne Lane, manager of the geology and planetary section at the Jet Propulsion Laboratory, a physical chemist and planetary scientist with special interests in ultraviolet physics and photochemistry. He has been active in the field of ultraviolet planetary astronomy of atmospheres and solid surfaces, planetary rings, spectroscopic instrumentation, remote sensing pollution problems and science interactions with space-mission design. His most recent activity is as principal investigator of the delta star ultraviolet imaging experiment. "Lonne" is a diligent, innovative and enthusiastic scientist. He is a longtime friend and colleague of the discoverer who has appreciated his perception and guidance.

(4779) Whitley = 1978 XQ

Discovered 1978 Dec. 6 by E. Bowell and A. Warnock on plates taken by P. Usher at Palomar.

Named in memory of Keith Whitley (1958-1989), American country music singer who died tragically at the zenith of his profession. A powerful and emotional performer, Whitley began his professional career as a teenager, playing bluegrass music with Ralph Stanley and the Clinch Mountain Boys. His later success as a solo artist was a source of joy and inspiration for the many fans and friends he made over the years. He helped rekindle an interest in traditional country music, reviving an entire industry.

(4827) Dares = 1988 QE
Discovered 1988 Aug. 17 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for one of Aeneas' wandering companions at arms after the fall of Troy and the only Trojan who had dared to box with Paris, according to Virgil's "Aeneid". When Aeneas' men stopped in Sicily and had games with the Sicilians, Dares boxed with a Sicilian named Entellus, using rawhide gloves. Entellus nearly beat Dares, but Aeneas called off the fight. Name and citation provided by R. Preston at the request of the discoverers.

(4828) Misenus = 1988 RV
Discovered 1988 Sept. 11 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for Aeneas' herald and trumpeter. As Virgil tells it, Misenus unluckily blew on a conch shell just as the Trojan wanderers were making landfall in Italy, near Cumae, and the clear note of the shell so enraged the god Triton that he killed Misenus and threw his body on the beach. In later years a Roman fleet was stationed near the legendary place, at Misenum, named after Misenus. Name and citation provided by R. Preston at the request of the discoverers.

(4829) Sergestus = 1988 RM1
Discovered 1988 Sept. 10 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for one of Aeneas' Trojan companions after the fall of Troy, commander of the galley named "Centaur". During the Sicilian games, as described in the "Aeneid", Sergestus took the Centaur in a race against three other galleys. He drove his ship upon the rocks, lost the race and was mocked by the crowds, but to console him Aeneas gave him a reward of a slave woman named Pholoe. Name and citation provided by R. Preston at the request of the discoverers.

(4832) Palinurus = 1988 TU1
Discovered 1988 Oct. 12 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for Aeneas' great helmsman and navigator, who led the remnant of the Trojan fleet across unknown seas from Troy to Carthage and Sicily, and finally to Italy, as told by Virgil in the "Aeneid". As the fleet was making its final passage to Italy, the god Neptune put Palinurus to sleep while he held the tiller in his hands; he fell overboard and was drowned, and his naked body washed up on the shores of Italy. Name and citation provided by R. Preston at the request of the discoverers.

(4833) Meges = 1989 AL2
Discovered 1989 Jan. 8 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for the commander of the Greek islanders who dwelt off Elis, on the west coast of Pelopponese; he sailed for Troy with forty ships, and killed Amphiklos. Later Meges, with Thoas, was part of the Greek delegation that persuaded Achilles to return to battle. Name and citation provided by R. Preston at the request of the discoverers.

(4834) Thoas = 1989 AM2
Discovered 1989 Jan. 11 by C. S. Shoemaker and E. M. Shoemaker at Palomar.
Named for Thoas, the commander of the Aitolians, a tough man at spear-throwing, and eloquent in argument. The god Poseidon (who favored the Greeks) must have respected Thoas for both his warlike skills and for his eloquence, because Poseidon chose to take the shape of Thoas, and, in Thoas's

voice, rallied the Greeks when the Trojans were close to the Greek ships, and fought beside the Greeks in the shape of Thoas. Name and citation provided by R. Preston at the request of the discoverers.

(4836) Medon = 1989 CK1

Discovered 1989 Feb. 2 by C. S. Shoemaker and E. M. Shoemaker at Palomar.

Named for an illegitimate son of Oileus, and half-brother of Ajax Oiliades (also known as Little Ajax). Medon lived in exile for having killed a relative of his stepmother. He fought bravely at Troy, but was killed before the Greek ships by Aeneas. Name and citation provided by R. Preston at the request of the discoverers.

(4852) Pamjones = 1977 JD

Discovered 1977 May 15 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Named in honor of Pamela Ann Jones, of the Lunar and Planetary Institute, Houston, in appreciation of her organization of many conferences in planetary sciences, particularly two international conferences held in June-July 1991, "Asteroids, Comets, Meteors 91" in Flagstaff and "Near-Earth Asteroids" in San Juan Capistrano.

(4857) Altgamia = 1984 FM

Discovered 1984 Mar. 29 by C. S. Shoemaker at Palomar.

Named for Andrew L. T. and Angela Maria Chiarappa Green, son and wife of D. W. E. Green, who was involved in taking the discovery films and who found the identifications for this minor planet. Angela, known as 'Lina' to family and friends, did some volunteer work with the monthly subscription book-keeping of the Minor Planet Center in 1984-85, and occasionally helps the Center and the Central Telegram Bureau with her expert linguistic knowledge of Italian and Spanish.

(4872) Grieg = 1989 YH7

Discovered 1989 Dec. 25 by F. Borngen at Tautenburg.

Named for the Norwegian composer Edvard Grieg (1843-1907). In Grieg's work, the precipitous, harsh beauty of the Scandinavian landscape is reflected. Particularly popular is the orchestral suite "Peer Gynt", a piano and violin concerto to accompany Ibsen's play. Also well known are many short charming lyric compositions, for example the "wedding march of Troldhaugen."

(4875) Ingalls = 1991 DJ

Discovered 1991 Feb. 19 by Y. Kushida and R. Kushida at Yatsugatake South Base Observatory.

Named in honor of Laura Ingalls Wilder (1867-1957) and the Ingalls family. Her books in the "Little House" series illustrate the love and strong mind of the family through the American pioneer life of her girlhood and still make a deep impression on all the people of the world.

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EPHEMERIDES.

Periodic Comet Machholz (1986 VIII) Elements MPC 18598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991	08	12	12 17.58	+19 57.7	0.966	0.708	41.8	72.7	13.4
1991	08	22	13 33.16	+09 55.4					
1991	09	01	14 23.80	+01 57.5	1.311	1.136	56.9	48.1	16.1
1991	09	11	15 00.22	-03 48.0					

1991 09 21	15 28.58	-07 58.7	1.805	1.488	55.6	33.8	18.0
1991 10 01	15 52.16	-11 05.6					
1991 10 11	16 12.74	-13 28.9	2.310	1.795	47.6	24.3	19.4
1991 10 21	16 31.34	-15 20.9					
1991 10 31	16 48.53	-16 49.8	2.779	2.070	36.7	16.7	20.4

Comet Helin-Alu (1991r) Elements MPC 18598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 08 12	16 21.17	-16 04.7	4.671	5.075	107.9	11.0	15.9
1991 08 22	16 22.95	-15 21.3					
1991 09 01	16 25.95	-14 43.6	4.936	5.032	89.6	11.6	16.0
1991 09 11	16 30.10	-14 10.9					
1991 09 21	16 35.31	-13 42.0	5.202	4.993	72.5	11.1	16.1
1991 10 01	16 41.46	-13 15.7					
1991 10 11	16 48.45	-12 51.1	5.443	4.958	56.3	9.6	16.1
1991 10 21	16 56.19	-12 26.8					
1991 10 31	17 04.55	-12 01.8	5.635	4.928	40.9	7.6	16.2

Periodic Comet Shoemaker 1 (1991p) Elements MPC 18598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991 08 12	20 53.33	-42 06.3	1.297	2.245	152.5	12.0	17.1
1991 08 22	20 39.68	-40 03.3					
1991 09 01	20 28.97	-37 27.3	1.309	2.176	139.3	17.6	17.0
1991 09 11	20 22.24	-34 29.4					
1991 09 21	20 19.79	-31 20.6	1.402	2.116	122.3	23.7	17.0
1991 10 01	20 21.34	-28 09.3					
1991 10 11	20 26.38	-25 00.2	1.550	2.065	106.2	27.7	17.1
1991 10 21	20 34.36	-21 55.2					
1991 10 31	20 44.72	-18 54.4	1.731	2.026	92.1	29.3	17.3
1991 11 10	20 57.00	-15 56.8					
1991 11 20	21 10.84	-13 01.1	1.925	2.000	79.6	29.1	17.4
1991 11 30	21 25.90	-10 06.1					
1991 12 10	21 41.95	-07 10.8	2.121	1.987	68.6	27.5	17.6
1991 12 20	21 58.82	-04 14.3					
1991 12 30	22 16.34	-01 16.6	2.312	1.988	58.7	25.0	17.8
1992 01 09	22 34.42	+01 42.5					
1992 01 19	22 53.00	+04 42.7	2.493	2.003	49.7	22.0	18.0
1992 01 29	23 12.02	+07 43.4					
1992 02 08	23 31.47	+10 43.8	2.662	2.032	41.5	18.8	18.2
1992 02 18	23 51.34	+13 43.0					
1992 02 28	00 11.61	+16 39.8	2.818	2.073	34.1	15.5	18.4

1991 OA a,e,i = 2.55, 0.59, 6 Elements MPC 18642

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 08 12	21 29.87	-07 34.6	0.227	1.239	172.0	6.5	15.2
1991 08 22	21 30.42	-05 36.7					
1991 09 01	21 31.98	-04 42.4	0.383	1.381	163.4	12.0	16.8
1991 09 11	21 35.26	-04 17.9					
1991 09 21	21 40.56	-04 03.9	0.589	1.535	147.9	20.4	18.3
1991 10 01	21 47.74	-03 50.2					
1991 10 11	21 56.55	-03 31.6	0.848	1.694	132.8	25.6	19.5
1991 10 21	22 06.74	-03 05.3					
1991 10 31	22 18.01	-02 30.3	1.157	1.851	118.7	28.1	20.4

Periodic Comet Chernykh (1991o) Elements MPC 18598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991 08 12	23 43.06	-06 07.8	1.855	2.743	144.4	12.4	18.7
1991 08 22	23 41.48	-06 48.2					
1991 09 01	23 38.15	-07 38.6	1.676	2.663	164.8	5.7	18.4

1991 09 11	23 33.50	-08 34.5						
1991 09 21	23 28.24	-09 29.3	1.595	2.590	170.3	3.8	18.1	
1991 10 01	23 23.22	-10 16.3						
1991 10 11	23 19.30	-10 49.8	1.615	2.526	149.3	11.7	18.1	
1991 10 21	23 17.20	-11 05.5						
1991 10 31	23 17.37	-11 02.1	1.720	2.470	129.1	18.2	18.1	
1991 11 10	23 20.02	-10 39.3						
1991 11 20	23 25.13	-09 58.4	1.883	2.425	111.4	22.3	18.2	
1991 11 30	23 32.51	-09 01.2						
1991 12 10	23 41.94	-07 49.7	2.079	2.390	95.9	24.2	18.4	
1991 12 20	23 53.16	-06 26.0						
1991 12 30	00 05.89	-04 52.1	2.290	2.367	82.3	24.3	18.5	
1992 01 09	00 19.90	-03 10.0						
1992 01 19	00 35.02	-01 21.6	2.504	2.357	70.0	23.1	18.7	
1992 01 29	00 51.04	+00 31.1						
1992 02 08	01 07.85	+02 26.4	2.714	2.359	58.8	21.0	18.9	
1992 02 18	01 25.33	+04 22.4						
1992 02 28	01 43.37	+06 17.3	2.914	2.374	48.3	18.2	19.1	
1992 03 09	02 01.92	+08 09.7						
1992 03 19	02 20.89	+09 57.9	3.101	2.401	38.4	14.9	19.3	

Periodic Comet Hartley 2 (1991t) Elements MPC 18598

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 08 12		04 16.06	+30 20.2	0.773	1.055	71.0	65.2	10.3
1991 08 22		05 21.80	+29 32.7					
1991 09 01		06 21.69	+27 00.7	0.822	0.966	62.7	68.1	9.9
1991 09 11		07 13.51	+23 25.5					
1991 09 21		07 57.44	+19 23.6	0.937	0.963	59.4	63.8	10.1
1991 10 01		08 34.71	+15 18.5					
1991 10 11		09 06.46	+11 23.0	1.060	1.047	61.1	56.6	10.9
1991 10 21		09 33.52	+07 43.5					
1991 10 31		09 56.53	+04 22.5	1.154	1.192	67.0	50.1	12.0
1991 11 10		10 15.81	+01 21.2					
1991 11 20		10 31.51	-01 19.8	1.201	1.369	76.7	44.6	12.9
1991 11 30		10 43.65	-03 39.8					
1991 12 10		10 52.10	-05 37.6	1.204	1.559	90.3	39.2	13.8
1991 12 20		10 56.64	-07 10.8					
1991 12 30		10 57.10	-08 16.6	1.180	1.752	107.8	32.3	14.5
1992 01 09		10 53.35	-08 51.0					
1992 01 19		10 45.65	-08 50.4	1.163	1.943	129.4	23.0	15.2
1992 01 29		10 34.75	-08 13.6					
1992 02 08		10 21.89	-07 03.5	1.203	2.129	152.9	12.2	15.8

Periodic Comet Levy (1991q) Elements MPC 18597

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 08 12		06 22.76	+36 51.7	1.596	1.138	45.2	39.2	9.6
1991 08 22		07 01.82	+36 38.2					
1991 09 01		07 35.74	+35 51.8	1.740	1.324	49.2	35.3	10.4
1991 09 11		08 04.79	+34 47.7					
1991 09 21		08 29.40	+33 36.8	1.843	1.541	56.7	33.0	11.2
1991 10 01		08 50.02	+32 26.7					
1991 10 11		09 06.99	+31 23.0	1.893	1.770	67.5	31.4	11.9
1991 10 21		09 20.49	+30 29.4					
1991 10 31		09 30.64	+29 48.6	1.893	2.002	81.4	29.4	12.4
1991 11 10		09 37.39	+29 22.6					
1991 11 20		09 40.63	+29 12.1	1.860	2.232	98.6	26.0	12.8
1991 11 30		09 40.23	+29 16.4					
1991 12 10		09 36.09	+29 33.3	1.824	2.459	119.2	20.5	13.2
1991 12 20		09 28.33	+29 58.5					

1991 12 30	09 17.41	+30 25.4	1.834	2.682	142.5	12.9	13.6
1992 01 09	09 04.17	+30 47.0					
1992 01 19	08 49.88	+30 57.2	1.940	2.900	164.5	5.2	14.1
1992 01 29	08 35.95	+30 52.8					
1992 02 08	08 23.59	+30 34.1	2.168	3.113	159.9	6.2	14.6

1991 BB a,e,i = 1.19, 0.27, 38 Elements MPC 18635

Date ET	R. A. (1950) Decl.		Delta	r	Elong.	Phase	V
1991 08 22	18 05.3	+81 10.1	0.503	1.069	82.5	69.7	17.1
1991 09 01	17 27.9	+77 27.9					
1991 09 11	17 20.8	+74 21.3	0.653	1.158	85.7	60.1	17.5
1991 09 21	17 27.0	+71 45.4					
1991 10 01	17 41.52	+69 33.5	0.758	1.243	88.8	53.7	17.8
1991 10 11	18 02.69	+67 39.8					
1991 10 21	18 29.81	+65 59.9	0.822	1.319	92.5	49.0	18.0
1991 10 31	19 02.39	+64 27.6					
1991 11 10	19 40.11	+62 55.3	0.858	1.383	96.6	45.3	18.1
1991 11 20	20 22.22	+61 15.4					
1991 11 30	21 07.42	+59 19.6	0.890	1.435	99.6	42.6	18.2
1991 12 10	21 54.13	+57 02.2					
1991 12 20	22 40.58	+54 23.1	0.942	1.474	99.8	41.1	18.3

Comet Tsuchiya-Kiuchi (1990i) Elements MPC 17595

Date ET	R. A. (1950) Decl.		Delta	r	Elong.	Phase	m2
1991 09 01	02 57.68	-19 34.7	3.939	4.477	116.2	11.7	19.0
1991 09 11	02 48.42	-21 13.8					
1991 09 21	02 37.44	-22 47.8	3.923	4.674	133.7	8.9	19.2
1991 10 01	02 25.10	-24 10.8					
1991 10 11	02 11.92	-25 18.0	4.027	4.869	143.8	7.0	19.4
1991 10 21	01 58.55	-26 05.5					
1991 10 31	01 45.64	-26 32.0	4.268	5.060	139.1	7.4	19.7
1991 11 10	01 33.80	-26 38.0					
1991 11 20	01 23.46	-26 25.8	4.634	5.249	123.9	9.0	20.0
1991 11 30	01 14.88	-25 58.7					
1991 12 10	01 08.14	-25 20.0	5.089	5.436	105.5	10.1	20.4

Comet McNaught-Hughes (1990g) Elements MPC 18255

Date ET	R. A. (1950) Decl.		Delta	r	Elong.	Phase	m1
1991 09 01	12 15.87	+35 30.9	4.068	3.293	35.0	10.1	17.2
1991 09 11	12 20.67	+35 37.0					
1991 09 21	12 25.92	+35 53.4	4.176	3.412	35.7	9.9	17.4
1991 10 01	12 31.46	+36 21.9					
1991 10 11	12 37.13	+37 04.1	4.187	3.537	44.0	11.3	17.6
1991 10 21	12 42.76	+38 02.2					
1991 10 31	12 48.17	+39 17.9	4.114	3.666	56.9	13.1	17.7
1991 11 10	12 53.15	+40 53.6					
1991 11 20	12 57.45	+42 51.1	3.982	3.800	72.3	14.3	17.8
1991 11 30	13 00.74	+45 11.6					
1991 12 10	13 02.59	+47 55.7	3.832	3.937	88.8	14.5	17.9
1991 12 20	13 02.41	+51 02.5					
1991 12 30	12 59.45	+54 28.4	3.713	4.077	104.8	13.5	18.0
1992 01 09	12 52.60	+58 07.4					
1992 01 19	12 40.41	+61 49.3	3.676	4.219	117.3	12.0	18.1
1992 01 29	12 21.13	+65 20.1					
1992 02 08	11 53.06	+68 22.6	3.761	4.363	121.9	11.1	18.3
1992 02 18	11 15.9	+70 38.0					
1992 02 28	10 32.4	+71 52.3	3.976	4.508	116.7	11.3	18.5
1992 03 09	09 48.8	+72 03.3					
1992 03 19	09 11.5	+71 22.3	4.299	4.654	104.8	11.9	18.8

Comet Levy (1990c) Elements MPC 17596

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 09 21	09 39.51	+19 40.4	5.283	4.516	36.6	7.6	15.2
1991 10 01	09 43.78	+19 55.1					
1991 10 11	09 47.25	+20 15.4	5.225	4.719	54.7	9.9	15.3
1991 10 21	09 49.75	+20 42.5					
1991 10 31	09 51.16	+21 17.2	5.100	4.918	73.9	11.2	15.5
1991 11 10	09 51.32	+22 00.2					
1991 11 20	09 50.09	+22 52.0	4.939	5.114	94.6	11.1	15.6
1991 11 30	09 47.35	+23 52.3					
1991 12 10	09 43.01	+25 00.2	4.791	5.307	116.7	9.5	15.7
1991 12 20	09 37.05	+26 14.0					
1991 12 30	09 29.58	+27 30.9	4.710	5.497	139.7	6.6	15.8
1992 01 09	09 20.79	+28 47.5					
1992 01 19	09 11.04	+30 00.2	4.745	5.685	161.2	3.2	15.9
1992 01 29	09 00.80	+31 05.4					
1992 02 08	08 50.57	+32 00.7	4.924	5.871	162.0	3.0	16.1
1992 02 18	08 40.89	+32 44.6					
1992 02 28	08 32.20	+33 17.2	5.245	6.054	141.7	5.8	16.4
1992 03 09	08 24.81	+33 39.1					
1992 03 19	08 18.92	+33 52.1	5.675	6.234	120.1	7.9	16.7
1992 03 29	08 14.59	+33 57.7					
1992 04 08	08 11.78	+33 57.7	6.170	6.413	99.6	8.9	17.0

Periodic Comet Metcalf-Brewington (1991a) Elements MPC 18597

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991 09 21	09 47.15	+05 05.1	3.688	2.869	30.6	10.3	19.4
1991 10 01	10 00.20	+03 55.0					
1991 10 11	10 12.33	+02 46.1	3.644	2.994	43.2	13.2	19.6
1991 10 21	10 23.46	+01 39.4					
1991 10 31	10 33.51	+00 36.1	3.544	3.117	57.0	15.5	19.7
1991 11 10	10 42.39	-00 22.6					
1991 11 20	10 49.96	-01 15.4	3.396	3.238	72.4	16.9	19.8
1991 11 30	10 56.10	-02 00.8					
1991 12 10	11 00.65	-02 37.3	3.217	3.356	89.5	17.1	19.8
1991 12 20	11 03.46	-03 03.3					
1991 12 30	11 04.42	-03 17.2	3.032	3.472	108.5	15.6	19.8
1992 01 09	11 03.45	-03 17.5					
1992 01 19	11 00.58	-03 03.3	2.877	3.585	129.5	12.2	19.8
1992 01 29	10 55.98	-02 34.4					
1992 02 08	10 49.93	-01 51.6	2.794	3.695	152.1	7.2	19.9
1992 02 18	10 42.94	-00 57.4					
1992 02 28	10 35.59	+00 04.5	2.820	3.802	171.5	2.2	20.1
1992 03 09	10 28.48	+01 09.7					
1992 03 19	10 22.21	+02 13.7	2.970	3.907	157.3	5.6	20.3
1992 03 29	10 17.18	+03 12.6					
1992 04 08	10 13.68	+04 03.6	3.232	4.009	135.7	10.1	20.6
1991 08 12	23 12.84	-07 03.1	1.642	2.580	151.8	10.7	16.8
- 6.80 -1.12	- 26.6	- 5.3	1986 ET	14022	- 9.74	+0.30	- 36.0 + 2.7
1991 09 11	22 45.42	-08 51.8	1.554	2.556	172.2	3.1	16.3
1991 10 11	01 30.67	+08 34.8	1.495	2.488	172.4	3.0	17.7
- 8.62 -0.30	- 34.3	- 1.6	2277 T-2	14966	- 5.65	+1.15	- 18.6 + 6.3
1991 11 10	01 06.58	+07 00.9	1.592	2.507	151.5	10.9	18.2
1991 10 11	01 30.32	+02 05.3	0.826	1.819	171.5	4.7	15.9
- 7.87 -0.36	- 80.8	+ 4.5	1981 QH2	12122	- 3.36	+1.57	- 13.3 +14.8
1991 11 10	01 09.91	-00 34.8	0.938	1.857	148.6	16.1	16.7

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1991 10 11    01 30.58   +02 22.6    1.087    2.080   171.6     4.0    16.1
- 8.57  -0.51  - 72.5  + 1.5  1982 BQ2  14473  - 5.39  +1.42  - 23.5  +12.9
1991 11 10    01 06.08   -00 22.5    1.129    2.037   147.9    15.0    16.6

1991 10 11    01 31.56   +13 26.7    1.083    2.073   169.8     4.9    16.2
- 9.10  -0.53  - 35.5  - 6.2  1989 BS1  15562  - 5.71  +1.49  - 36.0  + 6.1
1991 11 10    01 05.62   +11 16.6    1.125    2.056   152.7    12.8    16.6

1991 10 11    01 30.87   +08 07.6    1.885    2.878   172.5     2.6    15.5
- 7.74  -0.30  - 27.3  - 1.3  1988 EU   13161  - 5.66  +0.92  - 15.1  + 5.0
1991 11 10    01 08.51   +06 52.3    1.946    2.858   151.9     9.4    15.8

1991 10 11    01 30.94   +23 57.0    2.285    3.246   161.2     5.7    16.4
- 7.95  -0.27  - 31.7  - 7.6  (4573)    16862  - 6.01  +0.85  - 56.9     0.0
1991 11 10    01 07.92   +21 30.3    2.321    3.240   154.0     7.7    16.5

1991 10 11    01 34.27   +28 44.5    1.469    2.417   156.4     9.5    18.4
-10.85  -0.43  +  6.5  -13.5  1981 EO14 11838  - 7.35  +1.41  - 48.2  - 2.8
1991 11 10    01 03.56   +27 22.1    1.551    2.469   151.9    10.9    18.6

1991 10 11    01 34.54   -03 18.4    2.110    3.091   167.1     4.1    16.9
- 7.05  -0.24  - 62.5  + 4.0  1988 AE5  16429  - 5.17  +0.80  - 19.8  + 9.1
1991 11 10    01 14.29   -05 31.4    2.225    3.099   146.4    10.2    17.3

1991 10 11    01 36.73   +26 09.4    1.325    2.284   158.6     9.2    18.0
- 8.84  -0.54  - 28.8  -13.1  1981 DS1  11148  - 6.01  +1.34  - 75.0  - 0.4
1991 11 10    01 10.98   +23 10.0    1.354    2.288   154.5    10.7    18.1

1991 10 11    01 37.78   +22 45.7    1.146    2.116   161.5     8.6    15.5
- 9.50  -0.58  - 14.9  -12.1  1987 SQ3  15249  - 6.25  +1.49  - 54.1  + 0.7
1991 11 10    01 10.32   +20 38.3    1.196    2.134   154.7    11.5    15.7

1991 10 11    01 37.04   +22 55.4    2.229    3.192   161.5     5.7    16.5
- 8.54  -0.37  -  2.4  - 7.0  1985 VP   14196  - 6.93  +0.85  - 29.4  - 1.1
1991 11 10    01 11.57   +21 56.8    2.257    3.181   154.8     7.6    16.6

1991 10 11    01 38.35   +23 09.3    1.664    2.628   161.1     7.1    16.7
- 8.48  -0.36  - 41.8  - 9.3  1017 T-3  12700  - 5.95  +1.09  - 67.9  + 1.4
1991 11 10    01 14.02   +20 04.8    1.738    2.672   155.6     8.8    16.9

1991 10 11    01 39.52   +17 24.5    1.703    2.682   165.6     5.3    16.3
- 9.82  -0.55  +  1.7  - 6.0  3102 T-2  15728  - 8.09  +1.07  - 17.3  + 0.7
1991 11 10    01 09.65   +16 48.6    1.709    2.638   154.5     9.3    16.5

1991 10 11    01 38.88   +23 48.0    1.409    2.374   160.5     8.1    17.2
- 8.17  -0.55  - 26.1  -11.1  1120 T-3  13162  - 5.91  +1.20  - 63.9  + 0.1
1991 11 10    01 14.50   +21 12.3    1.425    2.362   155.6    10.0    17.3

1991 10 11    01 43.08   +08 11.7    1.760    2.748   169.5     3.8    16.6
- 7.63  -0.39  - 62.7  - 1.6  1986 RP1  15245  - 5.86  +0.91  - 44.9  + 7.0
1991 11 10    01 20.45   +05 14.2    1.829    2.753   153.9     9.1    16.9

1991 10 11    01 46.47   +11 45.2    1.286    2.271   167.7     5.4    16.8
- 9.96  -0.70  - 31.3  - 4.5  1983 EM1  14189  - 7.96  +1.28  - 29.0  + 5.5
1991 11 10    01 15.92   +09 56.2    1.308    2.244   154.7    10.9    17.0

1991 10 11    01 44.86   +18 40.2    2.019    2.991   163.9     5.3    16.6
- 7.09  -0.41  - 54.1  - 6.4  1988 DJ   16874  - 5.76  +0.80  - 67.8  + 2.4
1991 11 10    01 23.35   +15 21.1    2.035    2.976   157.7     7.3    16.7
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1991 10 11    01 49.34   +19 17.6    1.472    2.443   162.7     7.0    17.8
-10.43  -0.48  - 35.2  - 8.1  1987 QT1  16428  - 7.71  +1.24  - 53.4  + 2.7
1991 11 10    01 18.94   +16 44.6    1.570    2.510   156.7     9.0    18.1

1991 10 11    01 47.15   +13 39.5    1.582    2.564   166.6     5.2    18.0
- 8.28  -0.54  - 65.6  - 5.5  6242 P-L  14630  - 6.68  +1.01  - 65.4  + 5.7
1991 11 10    01 21.83   +10 02.4    1.606    2.544   156.1     9.1    18.2

1991 10 11    01 48.88   +14 16.4    1.245    2.227   166.0     6.2    16.9
- 8.68  -0.72  - 54.2  - 6.8  1982 BP2  16695  - 6.93  +1.22  - 58.2  + 5.9
1991 11 10    01 21.87   +11 04.2    1.258    2.202   156.4    10.4    17.1

1991 10 11    01 48.96   +12 59.6    1.518    2.500   166.6     5.3    17.3
- 8.49  -0.50  - 44.4  - 4.3  1981 EU20 11840  - 6.53  +1.06  - 41.7  + 5.2
1991 11 10    01 23.56   +10 32.9    1.592    2.532   156.7     8.9    17.6

1991 10 11    01 50.71   +10 29.2    1.398    2.382   167.1     5.4    16.5
- 8.73  -0.63  - 23.8  - 3.0  1987 VC1  15888  - 7.07  +1.10  - 17.3  + 5.2
1991 11 10    01 23.80   +09 12.4    1.438    2.378   156.3     9.6    16.7

1991 10 11    01 50.96   +02 25.5    2.088    3.069   166.9     4.2    16.9
- 8.04  -0.39  - 23.6  + 1.5  1984 JA2  14616  - 6.75  +0.77  +  0.4  + 6.0
1991 11 10    01 26.63   +01 42.4    2.168    3.085   153.3     8.3    17.2

1991 10 11    01 49.95   +16 16.5    2.137    3.110   164.6     4.9    17.5
- 7.09  -0.41  - 59.3  - 5.1  3074 P-L  14628  - 5.99  +0.74  - 65.9  + 3.2
1991 11 10    01 28.22   +12 53.2    2.163    3.105   158.4     6.7    17.6

1991 10 11    01 51.94   +25 39.5    1.314    2.268   157.4     9.8    15.5
- 8.31  -0.72  -  6.8  -12.2  1986 RD1  13159  - 6.54  +1.22  - 54.9  - 1.8
1991 11 10    01 26.07   +23 47.7    1.345    2.293   157.8     9.4    15.6

1991 10 11    01 53.73   +05 09.4    1.557    2.540   166.9     5.1    17.4
- 9.51  -0.57  - 33.0  + 0.1  1986 GC   10840  - 7.87  +1.04  -  9.4  + 7.1
1991 11 10    01 24.67   +03 52.9    1.620    2.548   154.1     9.8    17.7

1991 10 11    01 54.25   +13 24.8    1.544    2.522   165.2     5.8    17.2
-10.05  -0.56  - 33.6  - 4.6  2557 P-L  16438  - 8.09  +1.11  - 35.0  + 4.3
1991 11 10    01 23.94   +11 25.6    1.619    2.560   157.0     8.7    17.5

1991 10 11    01 53.32   -09 34.9    1.598    2.557   159.3     7.9    17.1
- 8.49  -0.43  -134.0  + 9.7  1987 OR   16427  - 6.48  +0.99  - 46.4  +16.5
1991 11 10    01 28.23   -14 18.1    1.759    2.613   142.1    13.5    17.6

1991 10 11    01 54.84   +03 19.8    1.157    2.140   166.3     6.4    16.5
- 7.84  -0.79  - 91.8  - 0.2  6552 P-L   9761  - 6.55  +1.16  - 47.2  +13.4
1991 11 10    01 29.65   -00 33.9    1.179    2.108   152.5    12.5    16.7

1991 10 11    02 00.75   -00 58.9    1.352    2.326   163.3     7.1    16.1
- 8.68  -0.77  - 52.7  + 3.5  1989 AL1  17635  - 7.72  +1.04  -  2.9  +11.5
1991 11 10    01 32.80   -02 37.3    1.381    2.302   151.7    11.8    16.3

1991 10 11    02 00.25   +09 06.7    1.260    2.240   165.1     6.6    17.3
- 8.01  -0.69  - 66.3  - 2.6  1979 MM8  13603  - 6.52  +1.10  - 45.3  + 8.8
1991 11 10    01 35.14   +05 58.1    1.329    2.275   157.4     9.6    17.5

1991 10 11    02 01.98   +08 06.4    1.940    2.915   164.8     5.1    16.6
- 7.22  -0.55  - 46.8  - 1.6  (4345)    15693  - 6.69  +0.71  - 34.1  + 5.6
1991 11 10    01 38.78   +05 51.7    1.962    2.905   158.2     7.3    16.7
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1991 10 11    02 03.64   +25 55.5    2.111    3.048   155.5     7.8    16.5
- 7.57  -0.57  - 28.1  - 8.6  1986 TU6  17018  - 6.98  +0.74  - 62.1  - 1.5
1991 11 10    01 39.40   +23 27.1    2.117    3.070   160.8     6.1    16.4

1991 10 11    02 06.24   +14 58.2    1.207    2.178   161.9     8.2    17.7
- 7.95  -1.06  - 60.0  - 8.4  1984 SS1  14786  - 8.15  +1.04  - 74.0  + 5.1
1991 11 10    01 38.20   +11 12.0    1.149    2.108   160.3     9.1    17.5

1991 10 11    02 05.09   -13 14.3    1.738    2.675   -1.38    -6.8    16.0
- 7.69  -0.62  - 72.1  + 8.9  1989 CH1  14622  - 7.04  +0.81  +  4.0  +14.2
1991 11 10    01 40.35   -15 06.3    1.803    2.662   -1.33    -5.6    16.2

1991 10 11    02 04.38   +28 52.8    1.035    1.978   -3.27    -5.7    14.8
- 5.34  -1.04  - 79.2  -19.4  1987 WS3  18627  - 4.98  +1.16  -151.4  - 0.8
1991 11 10    01 44.82   +22 32.5    0.993    1.959   -3.21    -8.4    14.5

1991 10 11    02 06.53   +12 40.6    2.571    3.537   162.8     4.8    17.2
- 6.75  -0.47  - 34.9  - 2.8  1977 EC2  18618  - 6.63  +0.52  - 36.3  + 2.6
1991 11 10    01 44.64   +10 43.9    2.564    3.517   161.6     5.1    17.2

1991 10 11    02 08.78   +26 45.1    1.943    2.875   154.2     8.7    16.2
- 7.39  -0.68  - 24.9  - 9.4  (4560)    16857  - 7.14  +0.75  - 64.5  - 2.2
1991 11 10    01 44.35   +24 17.7    1.929    2.886   161.6     6.2    16.1

1991 10 11    02 12.85   +15 09.8    1.700    2.662   160.4     7.2    16.3
- 7.42  -0.73  - 31.9  - 5.0  1989 GB4  14795  - 7.28  +0.77  - 40.0  + 2.8
1991 11 10    01 48.04   +13 07.6    1.716    2.679   163.2     6.1    16.3

1991 10 11    02 14.08   +15 43.0    1.466    2.428   159.9     8.1    16.3
- 7.67  -0.94  - 10.6  - 5.5  1986 QY   12942  - 8.12  +0.83  - 25.3  + 1.6
1991 11 10    01 47.12   +14 35.9    1.433    2.398   163.2     6.8    16.2

1991 10 11    02 13.19   +18 35.7    2.113    3.065   158.7     6.8    16.6
- 6.90  -0.62  - 34.1  - 5.6  1980 TW5  13464  - 6.91  +0.62  - 50.1  + 1.0
1991 11 10    01 50.20   +16 17.1    2.109    3.074   164.2     5.0    16.5

1991 10 11    02 14.29   +19 35.4    1.587    2.540   158.0     8.5    17.1
- 7.21  -0.86  - 33.8  - 7.8  1982 UX5  14784  - 7.50  +0.78  - 58.6  + 0.9
1991 11 10    01 49.19   +17 00.6    1.556    2.523   164.0     6.2    17.0

1991 10 11    02 14.24   +00 42.5    1.939    2.901   160.9     6.5    17.3
- 7.17  -0.63  - 89.5  + 1.2  (4565)    16859  - 7.11  +0.64  - 52.9  +10.0
1991 11 10    01 50.47   -03 07.4    1.976    2.901   154.3     8.5    17.5

1991 10 11    02 16.06   -01 07.8    2.138    3.094   159.8     6.4    16.0
- 7.24  -0.58  - 36.2  + 2.6  1974 ME   15874  - 7.22  +0.59  -  3.2  + 7.6
1991 11 10    01 52.21   -02 16.2    2.180    3.107   155.3     7.7    16.1

1991 10 11    02 20.05   +14 46.6    1.336    2.296   159.0     9.0    16.0
- 8.65  -1.00  - 13.9  - 5.4  (4307)    15680  - 8.80  +0.96  - 24.9  + 2.6
1991 11 10    01 50.25   +13 33.7    1.351    2.319   163.8     6.9    16.0

1991 10 11    02 30.57   +38 04.5    1.408    2.283   142.5    15.4    15.5
-13.22  -1.51  + 82.9  -17.2  (4511)    16560  -13.69  +1.39  - 24.7  -13.9
1991 11 10    01 44.79   +39 25.8    1.446    2.369   152.5    11.1    15.5

1991 10 11    02 17.58   +08 42.7    2.259    3.219   160.9     5.8    17.8
- 6.51  -0.55  - 55.2  - 1.6  1990 OH4  16882  - 6.54  +0.54  - 44.2  + 5.1
1991 11 10    01 56.01   +06 01.2    2.298    3.254   161.8     5.5    17.8
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1991 10 11    02 19.49   +15 56.6    1.923    2.876   158.6     7.3    16.0
- 6.82  -0.77  - 52.8  - 5.9  (4343)    15692  - 7.55  +0.58  - 65.5  + 2.4
1991 11 10    01 55.45   +12 43.8    1.857    2.825   164.8     5.3    15.8

1991 10 11    02 18.64   +23 58.1    2.363    3.293   154.5     7.5    16.2
- 6.26  -0.61  - 58.8  - 7.7  (4617)    17185  - 6.60  +0.51  - 86.7  - 0.5
1991 11 10    01 57.26   +20 06.4    2.310    3.278   165.6     4.3    16.0

1991 10 11    02 23.98   +13 11.5    1.834    2.788   158.6     7.5    17.9
- 8.02  -0.80  - 43.6  - 4.1  1979 QW3  11991  - 8.47  +0.67  - 46.3  + 3.6
1991 11 10    01 56.53   +10 42.3    1.831    2.797   164.3     5.5    17.8

1991 10 11    02 23.75   +13 01.1    1.611    2.567   158.7     8.1    15.7
- 7.36  -1.00  - 10.2  - 3.7  1988 EB   13054  - 8.80  +0.62  - 16.3  + 2.4
1991 11 10    01 56.51   +12 10.0    1.530    2.500   164.9     5.9    15.4

1991 10 11    02 23.54   +19 46.5    2.521    3.457   156.0     6.7    17.9
- 6.79  -0.61  - 22.2  - 5.0  1967 JP   18103  - 7.29  +0.46  - 40.0  - 0.2
1991 11 10    02 00.44   +18 04.3    2.495    3.466   166.7     3.8    17.7

1991 10 11    02 25.52   +28 05.5    1.787    2.702   150.6    10.4    16.1
- 7.03  -0.93  -  3.9  - 9.8  1949 QQ1  17011  - 8.01  +0.66  - 52.8  - 4.5
1991 11 10    02 00.02   +26 30.7    1.738    2.703   163.7     5.9    15.8

1991 10 11    02 27.07   +07 36.1    1.353    2.312   158.7     9.0    17.1
- 7.63  -0.94  - 68.6  - 1.6  1975 LQ   13602  - 7.87  +0.85  - 44.7  + 9.0
1991 11 10    02 00.52   +04 26.4    1.404    2.365   161.6     7.6    17.2

1991 10 11    02 31.24   +18 16.7    1.500    2.442   155.1     9.9    16.5
- 8.95  -1.14  -  8.0  - 6.7  1943 EN   14342  -10.33  +0.77  - 33.2  - 0.2
1991 11 10    01 58.76   +17 03.0    1.459    2.432   166.3     5.5    16.2

1991 10 11    02 27.82   -15 17.3    1.255    2.175   149.4    13.5    15.5
- 6.81  -1.05  - 71.3  +12.4  1978 PT4  12949  - 7.46  +0.84  + 32.1  +18.8
1991 11 10    02 02.92   -16 28.0    1.301    2.183   144.3    15.4    15.6

1991 10 11    02 31.51   +17 23.1    1.150    2.100   155.4    11.4    17.1
- 6.91  -1.38  - 29.0  - 8.4  2196 P-L  14480  - 9.19  +0.79  - 55.3  + 1.6
1991 11 10    02 03.34   +14 58.1    1.077    2.054   167.2     6.1    16.7

1991 10 11    02 37.38   +31 41.4    1.776    2.665   146.3    12.0    17.6
- 8.88  -1.10  + 20.2  -10.9  1981 EB9  11837  -10.20  +0.73  - 41.5  - 7.2
1991 11 10    02 05.37   +31 02.8    1.758    2.716   161.6     6.6    17.4

1991 10 11    02 34.32   +33 05.2    1.598    2.488   145.8    13.1    15.8
- 7.18  -1.17  + 15.9  -12.2  1986 VD1  14790  - 8.84  +0.72  - 53.5  - 8.2
1991 11 10    02 06.80   +32 01.4    1.551    2.508   161.1     7.4    15.5

1991 10 11    02 35.00   +21 45.5    1.331    2.265   152.7    11.7    16.6
- 7.25  -1.28  -  1.7  - 8.7  6048 P-L  12699  - 9.34  +0.73  - 41.4  - 2.4
1991 11 10    02 06.39   +20 29.3    1.272    2.249   167.6     5.4    16.2

1991 10 11    02 32.63   +27 34.6    1.814    2.723   149.8    10.6    15.3
- 6.47  -0.95  - 18.9  - 9.7  (4574)    16862  - 7.76  +0.58  - 65.0  - 3.8
1991 11 10    02 08.46   +25 17.7    1.760    2.732   166.0     5.0    15.0

1991 10 11    02 37.21   +25 51.7    2.018    2.926   150.0     9.8    17.5
- 8.44  -0.94  + 12.1  - 7.7  2045 T-2  15081  - 9.71  +0.58  - 28.3  - 4.2
1991 11 10    02 07.17   +25 21.0    1.991    2.961   165.7     4.7    17.3
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1991 10 11    02 37.48   +22 50.1    1.435    2.362   151.7    11.6    16.9
- 7.63  -1.20  + 23.1  - 8.1  1977 RY6  12568  - 9.34  +0.73  - 18.4  - 3.8
1991 11 10    02 08.46   +22 49.5    1.417    2.393   167.3     5.2    16.6

1991 10 11    02 40.44   +02 52.3    2.050    2.985   155.0     8.1    17.6
- 7.65  -0.76  - 34.9  + 1.1  (4585)    16866  - 8.48  +0.51  - 10.6  + 6.5
1991 11 10    02 13.88   +01 34.0    2.090    3.046   161.6     5.9    17.6

1991 10 11    02 37.15   +18 38.0    1.034    1.979   153.7    12.9    15.8
- 3.46  -1.37  -105.0  -13.8  1975 YD   14779  - 6.23  +0.62  -138.6  + 5.4
1991 11 10    02 18.94   +11 56.9    0.958    1.941   169.8     5.2    15.3

1991 10 11    02 44.35   +13 44.1    1.335    2.273   153.6    11.3    18.1
- 6.90  -1.20  - 42.5  - 5.1  1979 MP1  13603  - 8.76  +0.67  - 46.6  + 4.4
1991 11 10    02 17.40   +11 12.8    1.330    2.310   169.1     4.7    17.8

1991 10 11    02 49.39   +19 15.5    1.254    2.180   150.8    12.9    16.4
- 7.12  -1.52  + 12.9  - 6.6  1982 DQ6  18422  -10.67  +0.56  - 19.4  - 2.3
1991 11 10    02 18.85   +18 57.8    1.174    2.158   170.9     4.2    15.9

1991 10 11    02 45.73   +15 14.4    1.773    2.701   152.9     9.7    16.5
- 6.18  -0.97  - 34.7  - 4.7  1981 SA5  14947  - 8.00  +0.44  - 44.1  + 2.2
1991 11 10    02 21.85   +13 03.3    1.741    2.724   170.9     3.3    16.2

1991 10 11    02 46.94   +10 20.1    1.494    2.430   153.6    10.5    16.5
- 5.55  -1.11  - 52.4  - 3.4  1986 RK1  14788  - 7.82  +0.46  - 45.8  + 5.9
1991 11 10    02 23.98   +07 35.6    1.457    2.434   167.9     4.9    16.2

1991 10 11    02 56.72   +20 56.3    2.121    3.018   148.5     9.9    17.2
- 6.32  -0.97  +  7.9  - 4.9  1985 TQ1  14195  - 8.71  +0.28  - 16.4  - 2.2
1991 11 10    02 31.85   +20 38.7    2.056    3.041   173.1     2.3    16.7

1991 10 11    03 04.87   +49 49.2    1.369    2.147   129.5    21.0    16.9
- 7.86  -1.98  - 13.4  -20.8  1987 OC   16697  -11.45  +0.96  -146.4  -18.2
1991 11 10    02 30.42   +45 45.2    1.302    2.219   150.5    12.7    16.6

1991 10 11    02 56.72   +17 02.4    1.832    2.742   149.9    10.5    17.1
- 5.62  -1.01  - 22.7  - 4.7  1985 RV4  11515  - 7.91  +0.34  - 36.7  + 0.8
1991 11 10    02 33.92   +15 23.2    1.804    2.791   174.5     2.0    16.6

1991 10 11    02 57.28   +02 29.1    1.719    2.636   150.8    10.7    16.0
- 5.81  -1.02  - 78.5  + 0.3  1990 ME   16881  - 8.06  +0.36  - 46.5  + 9.8
1991 11 10    02 33.92   -00 56.1    1.715    2.673   161.5     6.8    15.8

1991 10 11    02 59.93   +21 09.4    1.534    2.438   147.8    12.6    16.8
- 5.64  -1.35  - 33.5  - 8.4  1989 EL   16876  - 9.55  +0.26  - 70.5  - 2.0
1991 11 10    02 34.18   +18 21.6    1.402    2.390   174.5     2.3    16.1

1991 10 11    03 01.00   -35 23.1    0.949    1.761   129.5    25.9    15.0
- 5.12  -1.94  -164.0  +25.9  (4490)    16414  - 9.49  +0.72  + 36.5  +35.3
1991 11 10    02 34.14   -38 51.7    0.995    1.754   124.1    27.9    15.1

1991 10 11    03 00.72   +18 38.2    0.958    1.883   148.5    16.1    16.1
- 4.99  -1.82  + 12.0  - 7.1  1989 CZ   15716  - 9.91  +0.50  - 20.9  - 1.8
1991 11 10    02 34.08   +18 15.2    0.900    1.888   174.5     2.9    15.3

1991 10 11    02 57.48   +14 22.3    2.108    3.016   150.4     9.4    16.6
- 5.73  -0.92  - 49.6  - 4.2  1990 OX   17023  - 8.00  +0.26  - 56.8  + 2.4
1991 11 10    02 34.71   +11 30.4    2.036    3.021   172.6     2.4    16.2
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1991 10 11    02 58.41   +15 42.0    2.786    3.684   149.9     7.8    18.2
- 5.58  -0.72  - 27.1  - 3.2  (4633)    17191  - 7.42  +0.17  - 35.6  + 0.8
1991 11 10    02 37.27   +14 00.8    2.706    3.693   174.7     1.4    17.8

1991 10 11    03 14.30   +06 11.0    1.132    2.042   146.9    15.5    16.7
- 8.04  -1.69  + 45.6  + 2.1  1987 XC   12801  -12.02  +0.57  + 61.7  + 2.8
1991 11 10    02 40.03   +08 50.7    1.134    2.118   171.2     4.1    16.3

1991 10 11    03 03.83   +13 24.8    1.976    2.878   149.1    10.3    16.9
- 5.02  -1.00  - 26.1  - 3.2  1979 SP14 18282  - 7.79  +0.19  - 30.6  + 2.1
1991 11 10    02 42.43   +11 49.9    1.903    2.889   174.0     2.0    16.4

1991 10 11    03 07.83   +22 25.4    1.291    2.189   145.6    14.9    16.6
- 5.33  -1.59  + 20.9  - 7.1  1981 EO42 18420  -10.08  +0.28  - 20.2  - 4.7
1991 11 10    02 41.25   +22 22.5    1.208    2.195   173.4     3.0    15.9

1991 10 11    03 06.09   +18 42.3    2.144    3.032   147.3    10.3    17.2
- 5.75  -0.98  - 22.3  - 4.7  1976 UB2  13480  - 8.41  +0.20  - 40.2  - 0.4
1991 11 10    02 42.67   +17 00.4    2.069    3.058   176.8     1.0    16.7

1991 10 11    03 10.87   -21 15.6    1.686    2.516   137.8    15.5    18.0
- 6.49  -1.34  - 94.1  + 9.2  1982 BJ   10828  -10.49  +0.20  +  2.2  +20.7
1991 11 10    02 42.57   -23 54.8    1.623    2.459   139.2    15.3    17.8

1991 10 11    03 10.92   +26 00.1    1.252    2.139   143.5    16.1    17.0
- 4.91  -1.73  + 10.7  - 9.3  3557 P-L  14628  -10.70  +0.16  - 47.8  - 7.6
1991 11 10    02 44.02   +25 01.5    1.121    2.106   171.3     4.1    16.2

1991 10 11    03 08.10   +13 05.7    1.458    2.365   148.1    12.9    18.4
- 4.93  -1.36  - 42.8  - 4.7  1981 EF35 13043  - 9.02  +0.20  - 48.9  + 3.6
1991 11 10    02 44.31   +10 32.9    1.363    2.350   173.1     2.9    17.8

1991 10 11    03 10.15   +17 31.1    2.410    3.291   146.7     9.6    17.1
- 5.43  -0.94  -  4.6  - 3.4  1977 FN1  13310  - 8.40  +0.07  - 18.6  - 0.7
1991 11 10    02 47.54   +16 51.4    2.276    3.266   177.9     0.6    16.5

1991 10 11    03 12.44   +24 31.2    1.414    2.297   143.8    14.9    17.2
- 4.96  -1.54  - 28.2  - 9.8  5469 T-2  18304  - 9.86  +0.17  - 78.2  - 4.4
1991 11 10    02 47.06   +21 41.9    1.289    2.277   174.6     2.3    16.4

1991 10 11    03 15.15   +20 05.6    1.914    2.790   144.8    11.9    17.4
- 6.05  -1.21  - 21.8  - 5.7  (4637)    17192  - 9.79  +0.13  - 47.2  - 1.5
1991 11 10    02 48.93   +18 14.3    1.798    2.788   177.7     0.8    16.6

1991 10 11    03 12.94   +22 06.8    2.204    3.073   144.6    10.8    18.0
- 5.79  -1.01  - 30.7  - 5.9  1990 OE5  17211  - 8.64  +0.17  - 56.5  - 1.6
1991 11 10    02 49.11   +19 48.1    2.123    3.112   176.5     1.1    17.5

1991 10 11    03 17.04   +16 39.1    1.395    2.288   145.3    14.4    18.1
- 5.52  -1.48  - 40.2  - 6.1  2108 T-2  15425  - 9.87  +0.24  - 56.9  + 1.8
1991 11 10    02 50.78   +13 59.0    1.334    2.324   176.9     1.3    17.4

1991 10 11    03 17.45   -08 57.8    1.232    2.115   142.7    16.6    16.0
- 4.65  -1.47  -188.0  + 6.9  1972 RF   12312  - 8.54  +0.32  - 85.3  +23.9
1991 11 10    02 54.37   -16 19.5    1.292    2.190   146.9    14.3    16.1

1991 10 11    03 25.34   +26 58.6    1.307    2.170   140.1    17.2    17.1
- 6.02  -1.76  +  6.6  - 9.5  1977 NN   18618  -11.39  +0.26  - 49.8  - 6.8
1991 11 10    02 55.48   +25 49.3    1.249    2.232   170.9     4.0    16.5
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1991 10 11    03 22.65   +23 08.8    2.067    2.920   142.2    12.1    17.1
- 6.02  -1.21  +  3.0  - 5.4  1989 CM1  14478  -10.07  +0.04  - 27.6  - 3.7
1991 11 10    02 56.22   +22 28.9    1.939    2.926   174.3     1.9    16.5

1991 10 11    03 19.81   +18 01.5    1.908    2.781   144.3    12.1    17.4
- 5.09  -1.19  - 47.4  - 5.9  (4595)    17003  - 9.03  +0.05  - 68.1  + 0.2
1991 11 10    02 56.35   +14 57.0    1.780    2.770   178.2     0.7    16.6

1991 10 11    03 22.28   +22 25.3    1.109    1.996   142.5    17.7    15.7
- 4.17  -1.89  + 13.5  - 7.6  1981 UT   14347  -10.80  +0.07  - 31.5  - 5.2
1991 11 10    02 56.24   +21 54.2    1.011    1.999   174.9     2.5    14.8

1991 11 10    02 56.55   +18 58.8    1.109    2.100   177.8     1.0    15.4
-11.84  +0.26  - 24.5  - 2.5  (4517)    16562  - 4.50  +1.80  - 11.2  + 6.0
1991 12 10    02 29.22   +17 49.5    1.287    2.162   143.8    15.6    16.5

1991 11 10    02 57.28   +18 45.7    1.655    2.645   178.0     0.8    15.8
- 8.83  +0.05  - 36.8  - 1.7  1933 UM1  16692  - 4.30  +1.27  - 24.8  + 5.2
1991 12 10    02 35.34   +17 00.5    1.789    2.656   145.0    12.3    16.6

1991 11 10    02 57.44   +35 06.4    2.537    3.491   161.7     5.1    17.6
- 9.21  -0.02  - 45.3  - 8.0  (4442)    16219  - 5.70  +1.07  - 71.8  - 0.1
1991 12 10    02 33.05   +31 55.9    2.583    3.441   145.7     9.3    17.8

1991 11 10    02 58.23   +20 33.4    1.646    2.635   176.2     1.4    15.9
- 9.71  +0.15  - 41.3  - 2.5  1982 SX5  14784  - 4.64  +1.32  - 31.6  + 5.1
1991 12 10    02 34.55   +18 30.0    1.830    2.697   145.1    12.0    16.7

1991 11 10    02 58.67   +23 40.5    1.414    2.401   173.1     2.9    17.2
-11.26  -0.05  - 31.2  - 5.8  2024 P-L  12585  - 5.83  +1.60  - 36.3  + 4.2
1991 12 10    02 29.99   +21 40.7    1.507    2.380   144.7    13.8    17.8

1991 11 10    02 59.94   -23 06.6    1.179    2.040   140.1    18.1    15.8
-11.47  +0.09  - 56.8  +27.4  1990 DJ   16436  - 5.00  +1.73  + 88.2  +17.9
1991 12 10    02 32.22   -22 01.7    1.321    2.024   122.1    24.3    16.3

1991 11 10    02 59.54   +08 29.3    2.019    3.002   171.7     2.7    16.7
- 7.68  +0.01  - 60.8  + 3.3  1975 SS   14184  - 4.27  +1.01  - 23.9  + 7.9
1991 12 10    02 39.75   +06 13.6    2.148    2.985   141.8    11.8    17.3

1991 11 10    02 59.64   +14 38.9    1.556    2.546   177.7     0.9    17.1
-10.51  +0.15  - 40.8  + 0.8  1987 SS3  14198  - 5.21  +1.38  - 15.5  + 6.7
1991 12 10    02 33.79   +13 03.7    1.742    2.600   143.4    13.1    18.0

1991 11 10    03 00.71   -01 04.0    1.878    2.837   162.1     6.2    15.8
- 8.37  -0.01  - 58.8  + 8.3  (4580)    16864  - 4.73  +1.08  +  1.9  +10.4
1991 12 10    02 39.04   -02 33.2    2.014    2.813   136.8    13.9    16.3

1991 11 10    03 00.30   +05 47.2    1.993    2.972   169.0     3.7    16.2
- 8.33  -0.04  - 49.8  + 4.4  1988 AL   13450  - 4.98  +1.04  -  8.9  + 8.2
1991 12 10    02 38.33   +04 12.0    2.097    2.925   140.5    12.4    16.7

1991 11 10    03 02.08   +18 14.4    1.025    2.015   178.0     1.0    15.7
-16.65  -0.28  + 81.2  - 3.4  1977 RK   16422  - 9.33  +2.27  + 63.4  - 0.7
1991 12 10    02 18.36   +21 46.3    1.130    2.001   142.1    17.6    16.7

1991 11 10    03 02.46   +11 04.3    1.039    2.027   174.1     2.9    15.7
-10.33  -0.09     0.0  + 3.7  1984 YE4  15411  - 4.43  +1.75  + 35.4  + 7.0
1991 12 10    02 36.90   +11 51.2    1.139    2.018   143.6    16.8    16.5
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1991 11 10    03 03.24   +09 08.0    1.471    2.456   172.2     3.1    17.6
-10.48  +0.08   - 32.9  + 4.2  4046 T-3  16440   - 5.34  +1.40  +  6.4  + 7.7
1991 12 10    02 37.07   +08 21.9    1.644    2.496   142.2    14.0    18.4

1991 11 10    03 03.68   +24 06.0    2.035    3.020   172.5     2.5    16.7
- 9.43  -0.09   - 29.1  - 4.4  1984 EX   17819   - 5.85  +1.14  - 35.3  + 2.5
1991 12 10    02 38.50   +22 16.6    2.121    2.994   146.8    10.4    17.2

1991 11 10    03 03.69   +29 36.6    2.205    3.178   167.0     4.0    18.1
- 9.82  -0.08   - 24.2  - 6.5  1989 FL   17443   - 6.23  +1.14  - 43.5  + 0.7
1991 12 10    02 37.37   +27 41.5    2.289    3.160   146.9     9.8    18.4

1991 11 10    03 08.17   +25 23.4    1.234    2.218   170.9     4.0    16.1
-11.13  +0.12   - 50.7  - 6.4  1987 QL1  15247   - 4.76  +1.66  - 51.5  + 5.6
1991 12 10    02 41.52   +22 27.9    1.410    2.302   147.5    13.3    16.8

1991 11 10    03 07.56   +15 29.0    1.877    2.866   177.0     1.0    15.6
- 8.22   0.00   - 35.9  + 0.3  (4571)    16861   - 4.51  +1.09  - 17.2  + 5.3
1991 12 10    02 46.48   +14 00.1    2.045    2.918   146.6    10.7    16.4

1991 11 10    03 08.76   +00 41.1    2.112    3.075   163.6     5.2    17.5
- 8.88  -0.05   - 21.0  + 6.6  (4582)    16865   - 5.71  +1.00  + 24.4  + 7.5
1991 12 10    02 44.95   +00 44.6    2.256    3.076   139.9    11.9    17.9

1991 11 10    03 09.11   +19 09.0    2.830    3.819   176.1     1.0    16.8
- 6.92  -0.03   - 26.0  - 1.2  1990 RW   17825   - 4.53  +0.76  - 21.0  + 2.7
1991 12 10    02 50.49   +17 51.2    2.981    3.856   148.7     7.6    17.3

1991 11 10    03 12.93   +43 27.7    1.977    2.895   153.1     8.9    16.3
-10.33  -0.31   - 14.1  -13.2  (4266)    17605   - 6.49  +1.42  - 73.0  - 4.4
1991 12 10    02 44.52   +41 00.9    1.982    2.851   145.8    11.2    16.4

1991 11 10    03 12.90   +01 32.5    1.792    2.758   164.2     5.6    16.4
- 8.46  -0.20   - 51.8  + 6.7  1988 CA   18629   - 5.51  +1.08  +  3.1  +10.1
1991 12 10    02 49.59   +00 13.0    1.860    2.694   140.5    13.4    16.8

1991 11 10    03 14.14   +14 43.4    1.771    2.760   175.2     1.7    17.0
- 8.92  -0.12   - 44.1  + 0.3  2181 T-2  16883   - 5.41  +1.14  - 22.8  + 6.1
1991 12 10    02 50.33   +12 52.2    1.892    2.771   147.0    11.1    17.6

1991 11 10    03 14.30   +08 57.9    1.866    2.848   171.0     3.1    15.9
- 8.46  -0.17   - 43.3  + 3.0  (4662)    17416   - 5.48  +1.05  -  9.4  + 7.4
1991 12 10    02 51.12   +07 30.6    1.952    2.816   144.9    11.6    16.4

1991 11 10    03 15.97   +13 01.8    1.065    2.052   173.9     2.9    15.5
- 9.68  -0.37   - 25.0  + 1.8  1985 CG   15066   - 5.15  +1.65  +  8.0  + 8.2
1991 12 10    02 49.96   +12 24.4    1.122    2.019   146.8    15.5    16.1

1991 11 10    03 16.07   +21 14.8    1.641    2.627   173.5     2.4    15.9
- 9.60  -0.25   - 13.4  - 3.4  1986 UM1  14790   - 6.08  +1.27  - 15.6  + 2.9
1991 12 10    02 49.74   +20 19.6    1.717    2.611   149.0    11.2    16.5

1991 11 10    03 16.58   +17 11.8    1.621    2.609   175.1     1.9    16.4
- 8.37  -0.13   - 32.5  - 0.7  1985 RP2  11420   - 4.71  +1.19  - 17.9  + 5.2
1991 12 10    02 54.53   +15 45.2    1.755    2.648   149.0    11.0    17.0

1991 11 10    03 17.19   +01 54.9    2.284    3.248   164.3     4.7    17.3
- 8.29  -0.14   - 51.8  + 5.5  1989 EL1  14624   - 5.80  +0.88  -  7.2  + 8.3
1991 12 10    02 54.19   +00 21.3    2.401    3.231   141.5    10.9    17.6
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1991 11 10    03 17.44   +18 31.7    1.923    2.911   174.6     1.8    15.8
- 8.94  -0.21  +  0.3  - 1.5  (4879)    18606  - 6.01  +1.08  +  3.0  + 2.5
1991 12 10    02 52.63   +18 29.2    2.015    2.906   149.3    10.0    16.3

1991 11 10    03 18.18   -01 33.0    2.221    3.173   -0.95    -2.9    16.2
- 7.68  -0.06  - 43.1  + 7.6  1990 OF1  17446  - 4.93  +0.88  +  8.7  + 8.5
1991 12 10    02 57.53   -02 26.5    2.409    3.229   -0.88    -2.5    16.6

1991 11 10    03 20.48   +16 07.3    1.004    1.991   174.1     2.9    16.8
-10.47  -0.48  -  3.2  - 0.4  4071 T-3  12702  - 5.83  +1.77  + 13.6  + 5.7
1991 12 10    02 51.87   +16 11.4    1.062    1.970   148.5    15.1    17.4

1991 11 10    03 20.34   +21 28.1    1.703    2.688   172.6     2.7    17.1
-10.31  -0.31  - 35.4  - 4.0  1989 CH4  15252  - 7.04  +1.26  - 36.8  + 3.7
1991 12 10    02 51.43   +19 25.5    1.758    2.652   149.2    10.9    17.5

1991 11 10    03 19.67   +00 41.1    1.833    2.795   162.9     6.0    16.7
- 8.63  -0.11  - 55.8  + 7.8  (4553)    16690  - 5.40  +1.05  +  1.9  + 9.9
1991 12 10    02 56.50   -00 43.5    1.993    2.830   141.3    12.6    17.2

1991 11 10    03 19.74   -01 29.4    2.253    3.205   160.8     5.8    17.2
- 7.79  -0.12  - 30.0  + 7.1  1989 GP6  16699  - 5.29  +0.86  + 18.8  + 8.1
1991 12 10    02 58.32   -01 48.0    2.398    3.224   141.0    11.1    17.5

1991 11 10    03 21.54   +27 06.9    2.058    3.034   168.1     3.9    17.3
- 8.62  -0.22  - 46.1  - 5.7  1988 DD3  13681  - 5.79  +1.05  - 58.7  + 2.0
1991 12 10    02 57.59   +24 15.3    2.122    3.023   151.3     9.0    17.6

1991 11 10    03 23.02   +15 51.3    1.317    2.304   173.5     2.8    17.7
-10.38  -0.29  - 42.6  - 0.5  9538 P-L  17976  - 6.23  +1.46  - 20.8  + 7.0
1991 12 10    02 54.89   +14 02.2    1.417    2.314   148.5    12.8    18.3

1991 11 10    03 23.84   +13 03.5    1.464    2.449   172.3     3.1    17.1
- 9.99  -0.37  - 46.0  + 0.8  1982 CE   14615  - 6.71  +1.31  - 18.3  + 7.6
1991 12 10    02 55.68   +11 14.3    1.522    2.412   147.6    12.6    17.6

1991 11 10    03 23.27   +07 32.0    1.003    1.984   168.6     5.6    14.9
- 7.94  -0.38  - 78.7  + 6.3  1983 TD2  13301  - 3.84  +1.52  - 10.3  +13.8
1991 12 10    03 02.11   +05 04.7    1.081    1.975   145.9    16.2    15.5

1991 11 10    03 23.74   +25 43.1    2.178    3.156   169.0     3.4    17.0
- 9.32  -0.25  -  4.8  - 4.6  1975 SA1  13683  - 6.74  +1.02  - 19.1  + 0.4
1991 12 10    02 57.30   +24 57.8    2.261    3.161   151.3     8.6    17.4

1991 11 10    03 23.89   +19 17.8    1.758    2.744   172.9     2.5    16.2
- 8.27  -0.31  - 28.3  - 2.2  1979 QZ1  11514  - 5.60  +1.09  - 23.4  + 3.9
1991 12 10    03 00.51   +17 48.9    1.815    2.719   151.0    10.1    16.6

1991 11 10    03 25.93   +08 53.3    1.768    2.747   169.3     3.8    15.4
- 8.60  -0.23  - 81.6  + 3.2  (4569)    16860  - 5.75  +1.06  - 39.4  + 9.6
1991 12 10    03 02.02   +05 39.8    1.874    2.748   146.2    11.5    15.9

1991 11 10    03 27.95   +18 21.6    1.380    2.365   172.3     3.2    17.4
-11.24  -0.30  - 36.6  - 2.1  1949 PQ    9583  - 7.07  +1.46  - 25.3  + 5.6
1991 12 10    02 57.23   +16 34.3    1.496    2.399   149.9    11.9    18.0

1991 11 10    03 29.32   +14 34.8    1.465    2.450   171.7     3.3    15.9
-10.22  -0.28  - 50.4  + 0.5  1976 GX3  15239  - 6.54  +1.32  - 24.7  + 7.3
1991 12 10    03 01.24   +12 29.5    1.586    2.484   149.3    11.7    16.5
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1991 11 10    03 29.50   +26 07.9    1.165    2.143   167.8     5.6    15.4
-10.16  -0.47  - 32.8  - 8.0  1987 SV   12449  - 5.95  +1.62  - 49.1  + 3.3
1991 12 10    03 01.47   +23 44.0    1.240    2.160   152.2    12.3    15.9

1991 11 10    03 28.81   -07 52.2    1.244    2.178   154.1    11.5    15.9
- 9.41  -0.17  - 39.5  +16.8  1983 NL   16578  - 5.10  +1.36  + 57.0  +12.9
1991 12 10    03 04.22   -07 18.7    1.419    2.251   138.2    17.0    16.4

1991 11 10    03 31.62   +17 38.1    1.656    2.639   171.5     3.2    16.5
- 9.36  -0.39  - 21.1  - 1.4  1978 VY14 14613  - 6.70  +1.16  - 12.8  + 4.1
1991 12 10    03 04.67   +16 37.0    1.725    2.633   151.6    10.3    16.9

1991 11 10    03 33.94   +21 06.9    1.079    2.062   170.1     4.8    16.6
-10.11  -0.49  - 11.9  - 4.1  1976 YY   13597  - 5.94  +1.62  - 13.7  + 3.8
1991 12 10    03 05.94   +20 13.7    1.178    2.103   152.7    12.4    17.2

1991 11 10    03 35.62   +23 41.1    1.311    2.290   168.5     5.0    16.8
-11.30  -0.37  - 42.4  - 5.7  1984 SF1   9292  - 7.08  +1.52  - 46.6  + 4.4
1991 12 10    03 04.57   +21 08.8    1.432    2.351   152.6    11.1    17.3

1991 11 10    03 35.48   +40 01.5    1.393    2.330   155.2    10.3    17.0
-11.54  -0.49  - 16.4  -15.4  (4469)    16406  - 7.06  +1.69  - 78.8  - 3.0
1991 12 10    03 03.52   +37 15.7    1.482    2.390   150.6    11.7    17.3

1991 11 10    03 36.98   +31 08.0    1.457    2.421   162.9     6.9    15.7
- 9.67  -0.58  - 22.5  - 9.7  1984 DE   15708  - 6.84  +1.38  - 57.8  - 0.4
1991 12 10    03 08.58   +28 50.4    1.487    2.410   153.7    10.4    15.8

1991 11 10    03 35.40   +06 44.5    1.751    2.723   166.1     5.0    15.8
- 7.62  -0.32  - 60.1  + 4.4  1990 OO   17022  - 5.38  +0.97  - 15.8  + 9.1
1991 12 10    03 13.51   +04 42.1    1.850    2.736   148.0    11.0    16.2

1991 11 10    03 36.03   +02 08.2    2.450    3.408   162.4     5.0    17.5
- 7.92  -0.29  - 33.7  + 4.8  1988 BK   14198  - 6.45  +0.74  +  5.2  + 7.3
1991 12 10    03 12.57   +01 21.0    2.515    3.374   145.7     9.5    17.8

1991 11 10    03 38.72   +31 59.4    1.090    2.055   162.0     8.6    15.8
-10.67  -0.75  - 15.2  -12.5  1987 QG2  14351  - 6.87  +1.76  - 61.5  - 0.6
1991 12 10    03 07.75   +29 42.0    1.136    2.064   153.4    12.3    16.1

1991 11 10    03 37.01   +28 46.9    2.221    3.188   164.8     4.7    16.2
- 8.57  -0.33  - 38.2  - 5.9  1988 BO4  17960  - 6.49  +0.94  - 56.0  + 0.7
1991 12 10    03 12.08   +26 13.3    2.280    3.198   154.6     7.6    16.4

1991 11 10    03 41.65   +20 28.5    0.890    1.871   168.6     6.0    15.1
-10.60  -0.76  + 15.1  - 3.9  1951 WH   13049  - 6.57  +1.82  +  8.1  + 2.4
1991 12 10    03 11.09   +20 51.5    0.970    1.905   154.0    13.1    15.6

1991 11 10    03 42.05   +27 57.2    0.955    1.928   164.6     7.8    15.9
-10.00  -0.88  - 19.8  -10.4  1989 CD4  14794  - 6.62  +1.79  - 52.5  + 1.5
1991 12 10    03 12.16   +25 46.5    0.986    1.923   154.7    12.7    16.1

1991 11 10    03 40.57   +25 09.8    1.824    2.797   166.7     4.7    15.9
- 8.42  -0.37  - 50.9  - 5.0  1988 CD4  16697  - 6.07  +1.04  - 58.2  + 2.9
1991 12 10    03 16.23   +22 11.4    1.907    2.833   155.4     8.3    16.2

1991 11 10    03 41.96   +29 29.4    1.672    2.637   163.5     6.1    16.7
- 9.61  -0.39  - 58.8  - 7.8  1968 OH   14779  - 6.64  +1.22  - 77.4  + 2.4
1991 12 10    03 14.62   +25 46.2    1.765    2.691   155.2     8.8    17.0
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1991 11 10    03 44.23   +16 03.3    1.697    2.674   168.4     4.3    16.7
- 9.65  -0.55  - 38.6  - 1.0  1989 CY1  14478  - 7.86  +1.07  - 25.6  + 5.2
1991 12 10    03 14.96   +14 15.5    1.726    2.643   153.1     9.7    16.9

1991 11 10    03 44.59   +02 05.7    1.811    2.766   161.1     6.7    17.4
- 9.05  -0.46  - 60.5  + 6.1  (4590)    17001  - 7.35  +0.96  -  6.6  +10.4
1991 12 10    03 17.37   +00 17.2    1.871    2.743   145.9    11.6    17.7

1991 11 10    03 44.90   +25 07.6    2.272    3.242   165.9     4.3    17.7
- 8.75  -0.37  -  7.7  - 4.0  1985 SW4  17016  - 7.04  +0.87  - 20.6  + 0.3
1991 12 10    03 18.92   +24 17.2    2.360    3.285   156.2     7.0    18.0

1991 11 10    03 46.36   +24 05.0    1.293    2.267   166.2     6.0    16.3
-10.12  -0.58  - 29.7  - 5.7  (4295)    15548  - 7.04  +1.41  - 39.4  + 3.1
1991 12 10    03 16.95   +22 04.9    1.385    2.318   155.6    10.1    16.7

1991 11 10    03 47.79   +24 37.2    2.768    3.735   165.6     3.8    17.5
- 8.36  -0.36  -  3.6  - 3.2  1938 HA   18617  - 7.21  +0.70  - 14.8     0.0
1991 12 10    03 22.49   +24 03.7    2.830    3.757   157.0     5.9    17.7

1991 11 10    03 47.82   +15 21.9    1.708    2.683   167.5     4.6    16.3
- 8.20  -0.46  - 22.0  + 0.2  (4599)    17005  - 6.34  +0.99  -  7.1  + 4.5
1991 12 10    03 23.32   +14 30.2    1.798    2.723   155.1     8.8    16.6

1991 11 10    03 48.61   +18 35.2    2.505    3.478   167.4     3.6    16.9
- 7.78  -0.34  - 25.5  - 1.3  (4642)    17194  - 6.51  +0.72  - 21.8  + 2.6
1991 12 10    03 25.22   +17 17.1    2.585    3.510   156.5     6.4    17.2

1991 11 10    03 50.64   +10 09.3    1.305    2.277   165.2     6.4    17.4
- 9.37  -0.75  - 53.4  + 2.5  4157 T-3  14480  - 7.74  +1.22  - 13.5  + 9.6
1991 12 10    03 21.33   +08 15.8    1.326    2.242   151.7    12.0    17.6

1991 11 10    03 52.02   +10 15.1    1.249    2.221   164.9     6.7    16.7
- 9.29  -0.79  - 49.0  + 2.7  4379 T-3  14361  - 7.71  +1.25  -  8.6  + 9.6
1991 12 10    03 22.74   +08 35.8    1.268    2.188   152.1    12.1    16.9

1991 11 10    03 53.38   +19 42.2    1.255    2.229   166.1     6.1    16.2
- 9.55  -0.90  -  7.4  - 2.7  1985 CJ1  14616  - 8.21  +1.30  -  8.4  + 3.0
1991 12 10    03 22.65   +19 07.8    1.256    2.194   156.4    10.4    16.4

1991 11 10    03 51.01   +06 04.6    2.232    3.191   162.8     5.3    16.2
- 7.36  -0.36  - 56.1  + 3.8  (4609)    17008  - 6.10  +0.73  - 19.3  + 7.6
1991 12 10    03 28.81   +04 04.3    2.329    3.223   150.6     8.6    16.5

1991 11 10    03 57.59   +23 11.3    1.856    2.822   164.2     5.5    16.0
- 8.55  -0.61  - 30.4  - 4.0  1981 SD4  17013  - 7.47  +0.92  - 38.9  + 1.8
1991 12 10    03 30.74   +21 16.5    1.881    2.821   158.6     7.3    16.2

1991 11 10    03 58.34   +19 23.7    2.260    3.227   165.0     4.6    16.7
- 8.03  -0.47  - 17.4  - 1.6  1969 TL1  11743  - 7.10  +0.75  - 16.6  + 2.1
1991 12 10    03 33.39   +18 25.8    2.317    3.255   158.7     6.3    16.9

1991 11 10    03 58.79   +20 45.6    0.877    1.850   164.7     8.1    15.6
- 7.16  -1.19  + 12.1  - 2.9  1988 AF1  16581  - 6.25  +1.48  +  6.8  + 2.1
1991 12 10    03 33.72   +21 04.7    0.873    1.828   159.3    11.0    15.7

1991 11 10    04 03.80   +13 40.8    1.426    2.392   163.4     6.8    16.8
-10.54  -0.72  - 15.7  + 1.2  1977 QY3  18414  - 8.80  +1.19  +  4.1  + 5.1
1991 12 10    03 31.25   +13 16.2    1.511    2.445   156.3     9.3    17.1
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1991 11 10    04 05.26   +31 06.1    1.390    2.341   158.7     8.8    17.2
-10.82  -0.78  - 36.5  - 9.7  1987 SD4  12950  - 8.56  +1.37  - 70.2  + 0.2
1991 12 10    03 32.20   +28 07.4    1.470    2.415   158.9     8.4    17.3

1991 11 10    04 04.96   +26 19.1    1.270    2.231   161.4     8.1    15.7
- 9.69  -1.06  - 37.4  - 8.0  (4710)    17617  - 8.96  +1.28  - 63.0  + 1.2
1991 12 10    03 32.63   +23 31.3    1.251    2.200   159.3     9.1    15.7

1991 11 10    04 03.57   +26 29.6    1.593    2.552   161.6     7.0    16.6
- 8.79  -0.73  - 28.6  - 6.0  1986 RT5  14476  - 7.58  +1.06  - 47.2  + 0.9
1991 12 10    03 35.69   +24 23.0    1.638    2.586   160.0     7.5    16.7

1991 11 10    04 07.31   +32 19.4    1.346    2.293   157.6     9.5    17.6
-10.69  -0.95  - 14.5  -10.5  1987 QS   15414  - 9.00  +1.39  - 59.0  - 2.0
1991 12 10    03 33.43   +30 13.5    1.397    2.342   158.7     8.8    17.7

1991 11 10    04 03.86   +14 10.5    1.198    2.166   163.5     7.5    16.6
- 8.12  -0.73  - 76.7  + 1.3  7068 P-L  13693  - 6.35  +1.18  - 39.6  + 9.8
1991 12 10    03 38.62   +11 00.1    1.295    2.234   156.7    10.0    17.0

1991 11 10    04 06.07   +36 07.0    1.878    2.808   155.2     8.5    16.5
- 8.90  -0.84  +  2.8  - 9.2  1980 TH   16228  - 8.46  +0.98  - 45.5  - 4.9
1991 12 10    03 36.65   +34 54.9    1.860    2.796   157.7     7.7    16.4

1991 11 10    04 09.81   +17 33.7    1.474    2.437   162.4     7.1    18.3
-10.67  -0.78  - 14.5  - 1.2  1970 OB   12456  - 9.24  +1.16  -  8.4  + 3.4
1991 12 10    03 36.34   +16 50.9    1.555    2.499   158.8     8.2    18.5

1991 11 10    04 06.97   +19 20.0    2.017    2.978   163.0     5.6    18.3
- 8.42  -0.66  - 32.8  - 2.2  2103 P-L   9298  - 8.09  +0.77  - 32.1  + 2.8
1991 12 10    03 39.56   +17 33.4    2.012    2.956   159.8     6.6    18.4

1991 11 10    04 11.37   +32 19.6    0.960    1.911   157.0    11.7    15.1
-10.30  -1.37  + 21.9  -12.2  1989 AX1  15893  - 8.96  +1.69  - 39.7  - 4.7
1991 12 10    03 36.79   +31 39.1    1.001    1.953   159.0    10.4    15.2

1991 11 10    04 07.63   +18 55.0    1.846    2.808   162.9     6.0    17.5
- 8.03  -0.66  - 15.0  - 1.5  1975 VK2  10761  - 7.45  +0.83  - 12.7  + 2.5
1991 12 10    03 41.65   +18 06.2    1.887    2.834   160.4     6.7    17.6

1991 11 10    04 12.96   +22 39.3    1.556    2.513   161.0     7.4    17.5
-10.81  -0.79  - 12.9  - 4.0  3262 T-2  15085  - 9.47  +1.14  - 23.6  + 1.3
1991 12 10    03 38.96   +21 34.7    1.639    2.588   160.6     7.3    17.7

1991 11 10    04 07.77   +11 08.8    2.136    3.092   161.7     5.8    16.6
- 7.15  -0.57  - 33.3  + 1.6  1990 QB4  17640  - 6.86  +0.65  - 11.0  + 5.4
1991 12 10    03 44.50   +09 55.2    2.158    3.090   157.3     7.1    16.6

1991 11 10    04 08.13   +04 17.0    2.039    2.982   158.4     7.0    16.0
- 7.53  -0.55  - 31.8  + 4.9  (4600)    17005  - 7.00  +0.70  +  8.5  + 7.6
1991 12 10    03 44.02   +03 37.0    2.100    3.011   153.0     8.6    16.2

1991 11 10    04 10.72   +17 49.3    1.192    2.156   162.2     8.1    16.1
- 8.52  -0.90  - 80.4  - 2.1  1987 ST17 15250  - 7.35  +1.19  - 59.3  + 8.6
1991 12 10    03 43.04   +13 59.8    1.250    2.198   159.2     9.2    16.3

1991 11 10    04 10.42   +11 55.0    2.161    3.115   161.4     5.8    17.6
- 8.01  -0.56  - 54.8  + 1.0  (4653)    17413  - 7.57  +0.69  - 32.7  + 6.0
1991 12 10    03 44.74   +09 34.5    2.201    3.132   157.1     7.0    17.7
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