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Brian G. Marsden, Director Gareth V. Williams, Associate Director

ERRATA.

MPC	Line				
18457	14	For	1976 Nov. 11	read	1976 Nov. 20
18606	-29	For	2448600.	read	2448600.5
18615	9	For	2448600.	read	2448600.5

* * * * *

CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Mag.	N	Obs.
1971 FB	1971 04	02.41285	12 14 15.80	+00 47 48.9	MPC 4395	17.0		675
198	1937 07	01.9167	18 33 34.6	-20 11 49	RI 1651	10.5		006
838	1930 07	21.93793	18 12 53.00	-12 52 20.0	RI 1647			078
993	1977 03	27.26667	12 00 41.06	-00 10 19.6	MPC 4299			801
3495	1982 09	27.94447	00 34 22.04	+00 22 57.1	MPC13530		1	095

Note 1: Originally given as (3435).

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 18488.

Object	Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	N	Obs.
1930 SE1 *	1930 09	19.92054	23 19 04.16	-15 38 11.8	553			078
1930 SE1	1930 10	12.79924	23 01 18.54	-16 15 57.3	553			078
1989 ED12*	1989 03	10.84722	09 08 44.27	+16 52 49.0	1989 EM6	18.7		033
1989 ED12	1989 03	10.87222	09 08 43.62	+16 52 49.9	1989 EM6			033
1990 SY16*	1990 09	17.21181	22 00 33.29	-19 02 25.8	1989 EX			675
1990 SY16	1990 09	17.24549	22 00 32.00	-19 02 54.6	1989 EX			675
1990 SJ17*	1990 09	20.25590	21 51 01.89	-21 28 43.8	1990 SM1	17.8		675
1990 SJ17	1990 09	20.29097	21 51 00.71	-21 28 50.1	1990 SM1			675

* * * * *

IDENTIFICATION.

The following identification with a numbered minor planet, by G. V. Williams, continues the list on MPC 18489:

1930 SE1 = (1185)

DOUBLE DESIGNATIONS.

Continuation to MPC 18002.

	Note		Note
1986 RT3 = 1986 RZ13	1	1987 SR16= 1987 SE17	2

1: by G. V. Williams. 2: by B. G. Marsden.

* * * * *

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

372 Geisei. 0.60-m reflector. Observer T. Seki. In part from Orient. Astron. Assoc. Comet Bull.
413 Siding Spring. U.K. Schmidt and Uppsala Southern Schmidt. Observers M. Hartley, R. H. McNaught and K. S. Russell. Measured by McNaught.
540 Linz. 0.3-m f/5.2 Schmidt-Cassegrain. Observers E. Meyer, E. Obermair and H. Raab.
568 Mauna Kea. Observers D. P. Cruikshank, W. K. Hartmann, C. Kaminski and D. J. Tholen.
589 Santa Lucia Stroncone. 0.5-m Ritchey-Chretien f/7.5 reflector. Observers A. Vagnozzi, G. C. Morando, S. Casulli and R. Castellani.
657 Victoria. 0.5-m reflector + CCD. Observers J. B. Tatum and D. Balam.
675 Palomar. 0.46-m Schmidt. Observers S. Cohen, E. Helin, H. R. Holt, K. Lawrence, T. M. King, F. J. Mendez, C. M. Olmstead, P. Rose, C. E. Petry and L. A. Zimmerman.
801 Oak Ridge Observatory. 1.5-m reflector + CCD. Observers R. E. McCrosky and C.-Y. Shao.
809 European Southern Observatory. 1.0-m Schmidt. Observers E. W. Elst, G. Pizarro and O. Pizarro. Measured by Elst.
894 Otomo. 0.25-m f/3.4 reflector. Observer S. Otomo.
900 Ohtsu. 0.16-m f/2.5 Schmidt. Observer Y. Ikari.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N Obs.
		Periodic Comet Arend-Rigaux				
/1984 XXI	1991 09	05.48274	07 10 02.40	+11 11 56.6		657
/1984 XXI	1991 09	05.48663	07 10 03.21	+11 11 56.9		657
		Periodic Comet Machholz				
/1986 VIII	1991 08	02.46083	10 32 42.39	+28 01 32.9	9.5T	372
/1986 VIII	1991 08	02.46333	10 32 44.37	+28 01 27.4		372
/1986 VIII	1991 08	02.46993	10 32 49.29	+28 01 16.1		372
/1986 VIII	1991 08	14.16788	12 36 44.87	+17 42 32.6	10 T	675
/1986 VIII	1991 08	14.18472	12 36 53.35	+17 41 31.0		675
		Periodic Comet Schwassmann-Wachmann 1				
/1989 XV	1991 08	06.35925	03 36 07.25	+28 36 38.8		801
/1989 XV	1991 08	07.35405	03 36 34.54	+28 39 24.7		801
/1989 XV	1991 08	07.35472	03 36 34.56	+28 39 24.8		801
/1989 XV	1991 08	07.35674	03 36 34.61	+28 39 25.1		801
/1989 XV	1991 08	08.36306	03 37 01.64	+28 42 11.5		801
/1989 XV	1991 08	08.36494	03 37 01.69	+28 42 11.8		801
/1989 XV	1991 08	11.34640	03 38 18.41	+28 50 15.9		801
/1989 XV	1991 08	11.34723	03 38 18.43	+28 50 16.1		801

Periodic Comet Wild 2

/1989t	1991	08	07.06514	16	58	55.03	-19	48	56.3	801
/1989t	1991	08	11.06454	17	00	24.00	-19	58	30.8	801
/1989t	1991	08	11.07800	17	00	24.27	-19	58	32.9	801

Periodic Comet Van Biesbroeck

/1989h1	1991	08	03.09167	21	17	54.15	-12	58	21.0	809
/1989h1	1991	08	03.10486	21	17	53.73	-12	58	24.9	809
/1989h1	1991	08	03.11806	21	17	53.18	-12	58	31.8	14.0T 809
/1989h1	1991	08	05.25833	21	16	46.38	-13	10	59.5	809
/1989h1	1991	08	05.27153	21	16	45.90	-13	11	04.5	809
/1989h1	1991	08	05.28472	21	16	45.41	-13	11	09.3	809
/1989h1	1991	08	05.28484	21	16	45.91	-13	11	11.1	14.8T 675
/1989h1	1991	08	05.32135	21	16	44.70	-13	11	25.3	675
/1989h1	1991	08	06.23316	21	16	16.11	-13	16	44.5	1 801
/1989h1	1991	08	06.25374	21	16	15.36	-13	16	53.9	801
/1989h1	1991	08	07.32240	21	15	41.70	-13	23	12.0	15.2T 675
/1989h1	1991	08	07.35069	21	15	40.74	-13	23	22.1	675
/1989h1	1991	08	11.20593	21	13	39.19	-13	46	10.1	801
/1989h1	1991	08	11.23155	21	13	38.33	-13	46	19.2	801
/1989h1	1991	08	12.12333	21	13	10.63	-13	51	35.5	801
/1989h1	1991	08	12.14037	21	13	10.07	-13	51	41.6	801
/1989h1	1991	08	14.28609	21	12	03.71	-14	04	19.1	657
/1989h1	1991	08	14.30707	21	12	03.03	-14	04	26.5	657
/1989h1	1991	08	15.27168	21	11	33.77	-14	10	04.5	657
/1989h1	1991	08	15.27344	21	11	33.70	-14	10	04.8	657

Periodic Comet Takamizawa

/1991h	1991	08	06.03942	15	00	44.24	-08	36	53.1	801
/1991h	1991	08	06.04686	15	00	45.09	-08	36	59.3	801
/1991h	1991	08	12.04534	15	13	41.91	-10	26	10.4	801
/1991h	1991	08	12.05205	15	13	42.74	-10	26	17.7	801

Periodic Comet Hartley 1

/1991j	1991	06	09.07420	12	57	16.28	-13	41	03.1	801

Periodic Comet Faye

/1991n	1991	08	06.33328	00	48	27.46	+13	15	50.9	801
/1991n	1991	08	06.34916	00	48	28.71	+13	15	56.8	801
/1991n	1991	08	06.37505	00	48	31.05	+13	16	05.6	657
/1991n	1991	08	06.37696	00	48	31.20	+13	16	06.1	657
/1991n	1991	08	07.34850	00	49	48.95	+13	22	01.0	1 801
/1991n	1991	08	08.34906	00	51	08.73	+13	27	55.1	801
/1991n	1991	08	08.35835	00	51	09.45	+13	27	58.3	801
/1991n	1991	08	13.78912	00	58	12.24	+13	56	35.0	900
/1991n	1991	08	31.73785	01	18	58.79	+14	41	41.8	894

Periodic Comet Chernykh

/1991o	1991	09	01.55104	23	37	54.82	-07	41	42.9	17.5T 372
/1991o	1991	09	01.56563	23	37	54.55	-07	41	46.2	372

Periodic Comet Shoemaker 1

/1991p	1991	09	01.52744	20	28	31.12	-37	18	23.4	16.5T 372
/1991p	1991	09	01.53715	20	28	30.84	-37	18	16.6	372

Periodic Comet Levy

/1991q	1991	07	19.03854	04	31	05.91	+33	13	58.6	589
/1991q	1991	07	19.04201	04	31	06.91	+33	14	00.9	589

/1991q	1991	07	19.04549	04	31	07.80	+33	14	02.8		589
/1991q	1991	07	19.04896	04	31	08.96	+33	14	05.4		589
/1991q	1991	07	19.05312	04	31	10.10	+33	14	07.6		589
/1991q	1991	07	19.06319	04	31	13.18	+33	14	24.8		589
/1991q	1991	07	19.06632	04	31	14.20	+33	14	27.1		589
/1991q	1991	07	19.06979	04	31	15.20	+33	14	28.9		589
/1991q	1991	07	19.07326	04	31	16.19	+33	14	31.1		589
/1991q	1991	07	19.07693	04	31	17.18	+33	14	33.8		589
/1991q	1991	08	02.80521	05	42	28.36	+36	18	49.3	10 T	372
/1991q	1991	08	07.80486	06	04	52.33	+36	43	05.5	10.5T	372
/1991q	1991	08	08.05625	06	05	58.21	+36	43	51.0		540
/1991q	1991	08	08.06250	06	05	59.54	+36	43	51.5		540
/1991q	1991	08	08.06944	06	06	01.66	+36	43	54.0		540
/1991q	1991	08	08.07708	06	06	03.49	+36	43	54.2		540
/1991q	1991	08	11.79792	06	21	55.67	+36	51	27.3	10.5T	372
/1991q	1991	08	13.77459	06	30	04.50	+36	52	26.2		900
/1991q	1991	08	13.77937	06	30	06.09	+36	52	24.8		900
/1991q	1991	08	15.77760	06	38	07.82	+36	51	31.5		894
/1991q	1991	09	02.08125	07	39	06.82	+35	45	26.7		540
/1991q	1991	09	02.09271	07	39	08.94	+35	45	21.6		540
/1991q	1991	09	02.10382	07	39	10.85	+35	45	18.7		540

Comet Helin-Alu (1991r)

/1991r	1991	08	06.04181	16	20	43.47	-16	33	37.8		801
/1991r	1991	08	06.06421	16	20	43.50	-16	33	30.7		801
/1991r	1991	08	11.06130	16	21	04.16	-16	09	08.2		801
/1991r	1991	08	13.19583	16	21	18.75	-15	59	19.1	16.5T	675
/1991r	1991	08	14.17882	16	21	26.72	-15	54	46.8		675
/1991r	1991	08	14.19653	16	21	26.81	-15	54	40.8		675

Periodic Comet Wirtanen

/1991s	1991	08	16.45400	05	46	39.28	+16	55	58.3		657
/1991s	1991	08	16.45550	05	46	39.65	+16	56	01.0		657

Periodic Comet Hartley 2

/1991t	1991	08	06.36137	03	38	19.45	+29	51	03.9		801
/1991t	1991	08	07.35828	03	44	57.74	+29	59	11.4		801
/1991t	1991	08	12.33589	04	18	19.64	+30	20	36.0		801
/1991t	1991	08	14.41998	04	32	16.61	+30	19	58.1		657
/1991t	1991	08	14.42365	04	32	18.08	+30	19	58.1		657
/1991t	1991	08	15.76684	04	41	14.49	+30	16	40.8		894
/1991t	1991	08	20.62894	05	13	03.12	+29	46	13.9		568

Comet McNaught-Russell (1991v)

/1991v	1991	08	03.54744	20	20	34.25	-47	53	47.1	16.5T	2	413
/1991v	1991	08	03.59258	20	20	30.23	-47	54	24.0		2	413
/1991v	1991	08	30.43910	19	39	41.28	-52	47	13.7	17.5T	3	413
/1991v	1991	08	30.48076	19	39	37.62	-52	47	33.0		3	413
/1991v	1991	09	01.48731	19	36	53.62	-53	02	05.2	16.5T	4	413

Comet McNaught-Russell (1991w)

/1991w	1991	09	03.53137	21	55	29.34	-01	52	47.2	18 T	5	413
/1991w	1991	09	03.57650	21	55	28.04	-01	53	05.8		5	413
/1991w	1991	09	04.60417	21	54	55.06	-02	01	42.6	17.5T	6	413
/1991w	1991	09	04.65301	21	54	53.47	-02	02	03.5		6	413
/1991w	1991	09	05.55454	21	54	24.79	-02	09	36.9			413
/1991w	1991	09	06.55718	21	53	53.12	-02	17	57.9		7	413
/1991w	1991	09	07.63473	21	53	19.22	-02	26	55.1	18 T		372

```
/1991w     1991 09 07.64827  21 53 18.77  -02 27 00.9                  372
/1991w     1991 09 08.60880  21 52 48.86  -02 35 01.9                  413
```

Note 1: involved with star. 2: very strong 1" condensation, 1’.5 tail in p.a. 0 . 3: strong 3" condensation, 0’.5 tail in p.a. 20 . 4: 1’.0 tail in p.a. 25 . 5: 2" condensation, 1’ tail in p.a. 0 . 6: very faint tail in p.a. 0 . 7: dark film.

* * * * *

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.
```

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

```
  39       1991 07 06.93892  18 44 59.32  -09 28 30.9                  046
  39       1991 07 06.95281  18 44 58.66  -09 28 33.4                  046
```

191	1991	08	07.98137	21	25	04.36	-08	25	47.6		046
191	1991	08	07.99554	21	25	03.73	-08	25	53.7		046
191	1991	08	11.92679	21	22	07.51	-08	54	59.8		046
191	1991	08	11.94080	21	22	06.86	-08	55	05.9		046
191	1991	08	13.92853	21	20	37.11	-09	10	10.5	E	046
191	1991	08	13.94502	21	20	36.42	-09	10	18.5		046
489	1991	07	15.90903	19	46	59.46	-06	14	36.2		046
489	1991	07	15.92361	19	46	58.75	-06	14	40.7		046
589	1991	07	15.98715	20	24	12.07	-05	53	20.0		046
589	1991	07	16.00150	20	24	11.47	-05	53	23.7		046
589	1991	07	16.96545	20	23	31.20	-05	56	18.2		046
589	1991	07	16.97963	20	23	30.46	-05	56	20.9		046
635	1991	07	15.94583	20	04	28.49	-05	31	54.3		046
635	1991	07	15.96146	20	04	27.71	-05	31	57.0		046
640	1991	07	11.96763	20	06	13.99	-01	48	20.1		046
640	1991	07	11.98221	20	06	13.35	-01	48	19.4		046
669	1991	07	11.92804	17	44	42.02	-07	23	50.2		046
669	1991	07	11.94240	17	44	41.58	-07	23	52.2		046
798	1991	07	15.98715	20	27	59.00	-04	45	21.6		046
798	1991	07	16.00150	20	27	58.48	-04	45	23.4		046
798	1991	07	16.96545	20	27	15.98	-04	46	35.0		046
798	1991	07	16.97963	20	27	15.32	-04	46	36.2		046
919	1991	07	10.95737	20	11	21.05	-07	53	52.7		046
919	1991	07	10.97132	20	11	20.62	-07	53	52.6		046
919	1991	07	12.00513	20	10	31.13	-07	53	54.5		046
919	1991	07	12.01925	20	10	30.38	-07	53	54.7		046
1030	1991	08	07.91296	20	18	15.39	-00	54	46.0		046
1030	1991	08	07.92731	20	18	14.68	-00	54	52.2		046
1030	1991	08	11.85926	20	15	35.86	-01	17	35.1		046
1030	1991	08	11.87326	20	15	35.40	-01	17	39.5		046
1033	1991	07	16.92396	19	40	46.91	-05	58	22.0		046
1033	1991	07	16.94010	19	40	46.35	-05	58	25.3		046
1043	1991	07	07.93892	17	44	23.92	-11	14	54.0		046
1043	1991	07	07.94656	17	44	23.32	-11	14	55.7		046
1101	1991	07	10.91900	17	47	24.26	+05	59	45.6	U	046
1101	1991	07	10.93428	17	47	23.63	+05	59	42.6	U	046
1176	1991	08	07.94664	20	46	55.54	-10	56	17.3		046
1176	1991	08	07.96071	20	46	54.65	-10	56	19.0		046
1176	1991	08	11.89303	20	43	21.47	-11	04	40.9		046
1176	1991	08	11.90729	20	43	20.73	-11	04	43.0		046
1249	1991	08	11.92679	21	28	54.39	-07	01	01.8		046
1249	1991	08	11.94080	21	28	53.57	-07	01	05.0		046
1419	1991	08	07.86997	19	48	28.46	-11	36	26.9		046
1419	1991	08	07.89225	19	48	27.86	-11	36	28.8		046
1487	1991	07	06.90212	16	21	22.47	-20	23	40.5		046
1487	1991	07	06.91670	16	21	22.03	-20	23	40.0		046
1487	1991	07	07.89587	16	20	59.47	-20	23	41.6		046
1487	1991	07	07.91045	16	20	59.09	-20	23	44.2		046
1520	1991	07	06.90212	16	19	53.11	-19	45	20.2		046
1520	1991	07	06.91670	16	19	52.51	-19	45	17.2		046
1520	1991	07	07.89587	16	19	26.76	-19	40	58.4		046
1520	1991	07	07.91045	16	19	26.54	-19	40	57.9		046
1724	1991	07	11.92804	17	48	15.88	-06	14	32.4		046
1724	1991	07	11.94240	17	48	15.54	-06	14	33.8		046
2378	1991	08	11.85926	20	20	16.96	-02	55	04.2		046
2378	1991	08	11.87326	20	20	16.50	-02	55	09.3		046
3505	1991	08	07.98137	21	30	39.36	-10	24	55.1		046

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3505       1991 08 07.99554  21 30 38.63  -10 24 56.0                    046
3505       1991 08 11.92679  21 27 15.52  -10 28 35.7                    046
3505       1991 08 11.94080  21 27 14.82  -10 28 36.3                    046
3768       1991 07 10.95737  20 12 00.45  -08 25 20.8                    046
3768       1991 07 10.97132  20 11 59.96  -08 25 24.5                    046
3768       1991 07 12.00513  20 11 16.93  -08 30 49.1                    046
3768       1991 07 12.01925  20 11 16.33  -08 30 53.5                    046
4012       1991 08 13.85903  21 04 51.31  -07 33 48.5                    046
4012       1991 08 13.87315  21 04 50.70  -07 33 50.6                    046

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
1989 AZ1   1991 06 14.22431  18 16 07.64  -15 09 08.8                     293

376 Uenohara
N. Kawasato, 3-51, Hana-Koganei, Kodaira, Tokyo 187, Japan
AGK3, SAOC
1988 VD7   1991 08 15.60243  21 13 36.06  -29 22 25.7                     376
1988 VD7   1991 08 15.61979  21 13 35.20  -29 22 31.4                     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
GSC
1990 DX    1991 08 31.49444  23 08 58.72  -00 26 41.5          16.5    385
1990 DX    1991 08 31.50278  23 08 58.31  -00 26 43.8                  385

392 JCPM Sapporo Station
K. Watanabe, 3-8-B203, Ashibetsu Chuo 3 Jo 4 Chome, Shiroishi-Ku,
   Sapporo 005, Japan
Observer K. Watanabe
Measurers K. Watanabe, H. Kaneda
0.30-m f/2.7 Schmidt camera
1991 PM  * 1991 08 09.56111  22 15 38.26  +02 36 21.7          15.5    392
1991 PM    1991 08 12.56701  22 13 30.35  +02 33 13.3          15.5    392
1991 PM    1991 08 12.57263  22 13 30.12  +02 33 13.4                  392
1991 QA  * 1991 08 16.57517  22 21 20.73  -06 37 59.0          16.0    392
1991 QA    1991 08 16.59919  22 21 19.59  -06 37 59.0                  392
1991 QA    1991 08 17.59063  22 20 32.47  -06 38 15.4          16      392
1991 QA    1991 08 17.62222  22 20 30.97  -06 38 16.3                  392
1991 QB  * 1991 08 16.58519  21 47 02.85  -07 39 17.0          16.0    392
1991 QB    1991 08 16.60590  21 47 01.78  -07 39 25.7                  392
1991 QB    1991 08 18.57865  21 45 14.56  -07 54 56.3          16      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
Measurer H. Kaneda
0.16-m f/3.8 Wright-Schmidt camera, 0.20-m f/4.0 reflector
AGK3
1988 BH    1988 02 12.49618  07 31 43.84  +19 00 26.1          16.5    399
1988 BH    1988 02 12.51302  07 31 43.04  +19 00 24.4                  399
1988 BH    1988 02 15.50590  07 30 07.50  +18 55 42.3          16.5    399
1988 BH    1988 02 15.52118  07 30 07.10  +18 55 41.0                  399
5192 T-3   1988 12 15.66806  04 54 32.88  +25 32 43.4          17      399
5192 T-3   1988 12 15.68218  04 54 32.12  +25 32 44.9                  399
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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, M. Yanai
Measurer H. Kaneda

1988 CO		1990 11 11.42049	01	50	29.07	+13	01	41.2	16.5	400
1988 CO		1990 11 11.43576	01	50	28.30	+13	01	39.8		400
1988 DO1		1988 02 23.60451	11	29	15.65	+11	18	35.9	16	400
1988 DO1		1988 02 23.62188	11	29	14.66	+11	18	47.2		400
1988 UF		1988 10 19.63611	01	55	58.32	+13	35	24.6		400
1988 UF		1988 11 13.50104	01	34	27.11	+13	13	58.3	16.5	400
1988 UF		1988 11 13.51840	01	34	26.18	+13	13	57.3		400
1988 VL3		1988 10 16.53993	01	54	54.96	+17	17	34.2	16	400
1988 VL3		1988 10 16.55729	01	54	54.27	+17	17	21.1		400
1988 VL3		1988 11 08.48924	01	39	52.26	+11	50	22.0	16.5	400
1988 VL3		1988 11 08.50521	01	39	51.77	+11	50	07.7		400
1988 VL3		1988 11 16.53993	01	36	31.52	+10	08	09.5	16.5	400
1988 VL3		1988 11 16.55729	01	36	31.07	+10	07	56.9		400
1988 VM9		1988 10 18.55694	01	57	50.61	+12	22	55.8	16.5	400
1988 VM9		1988 10 18.57500	01	57	49.42	+12	22	56.1		400
1988 VM9		1988 11 08.48924	01	36	09.80	+11	59	33.1	16.5	400
1988 VM9		1988 11 08.50521	01	36	08.85	+11	59	31.8		400
1988 VF11*		1988 11 02.58403	03	18	53.59	+18	03	20.2	16.5	400
1988 VF11		1988 11 02.59861	03	18	52.89	+18	03	20.1		400
1988 XE1		1988 11 15.58194	03	48	58.46	+21	52	34.2	16	400
1988 XE1		1988 11 15.60625	03	48	57.03	+21	52	28.6		400
1989 YK8		1991 02 09.62188	10	52	47.23	+12	41	17.3	16.5	400
1989 YK8		1991 02 09.63924	10	52	46.60	+12	41	22.6		400
1990 VE		1990 12 08.48958	03	33	02.76	+17	50	34.4	16.5	400
1990 VE		1990 12 08.50382	03	33	02.08	+17	50	36.0		400
1990 VX8	*	1990 11 11.51563	03	21	02.50	+10	27	09.1	16.5	400
1990 VX8		1990 11 11.53090	03	21	01.53	+10	27	05.4		400
1990 VX8		1990 11 24.48299	03	10	20.33	+10	29	12.4	16.5	400
1990 VX8		1990 11 24.50035	03	10	19.52	+10	29	12.5		400
1990 VY8	*	1990 11 11.51563	03	25	47.06	+10	36	22.8	16	400
1990 VY8		1990 11 11.53090	03	25	45.99	+10	36	22.8		400
1990 VY8		1990 11 24.48299	03	12	10.70	+10	36	21.4	16	400
1990 VY8		1990 11 24.50035	03	12	09.71	+10	36	22.2		400
1990 WK7	*	1990 11 24.51493	03	53	46.63	+18	00	56.8	16.0	400
1990 WK7		1990 11 24.53021	03	53	45.75	+18	00	50.6		400
1990 WK7		1990 12 08.48958	03	40	04.52	+16	48	13.1	17	400
1990 WK7		1990 12 08.50382	03	40	03.77	+16	48	09.8		400
1991 CC		1991 03 10.50278	09	41	05.56	+31	50	06.5	16.5	400
1991 CC		1991 03 10.52361	09	41	04.79	+31	50	08.3		400
1991 CU1		1991 02 08.58854	10	20	30.14	+04	02	40.7	16.5	400
1991 CU1		1991 02 08.60660	10	20	29.25	+04	02	42.7		400
1991 CS3	*	1991 02 08.54896	08	16	21.93	+35	03	06.4	16.5	400
1991 CS3		1991 02 08.56840	08	16	21.01	+35	03	09.4		400
1991 CS3		1991 02 09.50312	08	15	32.55	+35	04	36.0	16.5	400
1991 CS3		1991 02 09.52326	08	15	31.47	+35	04	37.0		400
1991 GV		1991 04 09.56354	13	02	55.20	+05	38	06.6	16.5	400
1991 GV		1991 04 09.57813	13	02	54.37	+05	38	09.4		400
1991 GG1		1991 05 15.49236	12	40	43.43	-16	50	13.5	17	400
1991 GG1		1991 05 15.51389	12	40	42.96	-16	50	10.4		400

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers S. M. Hughes, R. H. McNaught, K. S. Russell, A. Savage

Measurer R. H. McNaught
1.2-m U.K. Schmidt, Uppsala Southern Schmidt

1977	PE1		1991	09	04.61176	23	10	32.11	+02	46	00.8			413
1981	EC11		1991	09	04.61176	23	13	37.71	+01	59	43.4			413
1981	EO40		1991	09	04.61176	23	12	11.44	-01	21	25.9			413
1982	MA		1978	08	03.39612	15	45	06.70	-19	29	07.2			413
1982	VE13	*	1982	11	10.51522	02	08	46.12	-00	44	42.2	17.5V	A	413
1982	VE13		1982	11	10.57772	02	08	34.53	-00	43	57.5		A	413
1984	PH	*	1984	08	02.61985	22	30	29.44	-18	20	58.4	18 V		413
1984	PH		1984	08	02.66152	22	30	27.75	-18	21	16.8			413
1984	PJ	*	1984	08	02.61985	22	30	48.73	-18	20	43.4	15 V	A	413
1984	PJ		1984	08	02.66152	22	30	55.59	-18	37	11.3		A	413
1985	KA		1981	04	25.49189	11	45	14.52	-27	39	47.4			413
1987	RO3		1991	09	04.61176	23	08	43.25	+03	01	38.2			413
1988	HE		1984	05	26.47147	13	41	34.68	-33	12	38.4			413
1988	HE		1984	05	26.51314	13	41	33.05	-33	12	20.0			413
1988	HE		1984	06	05.43939	13	37	18.87	-31	56	38.2			413
1988	HE		1984	06	05.46355	13	37	18.46	-31	56	26.4			413
1988	HE		1984	06	05.49606	13	37	17.90	-31	56	12.5			413
1988	HE		1984	06	23.38740	13	38	28.92	-29	56	25.9			413
1988	HE		1984	06	23.44990	13	38	29.91	-29	56	08.1		T	413
1988	RF1		1984	03	29.64409	12	45	39.52	-11	37	46.6			413
1988	TJ1		1980	12	08.51435	03	26	30.28	-28	06	29.9	17 V	G	413
1988	TJ1		1980	12	11.54531	03	29	38.05	-28	34	21.0	17 V	G	413
1988	VN4		1977	02	16.74196	12	44	36.58	-39	09	43.7	18.5V		413
1989	BB1		1980	03	19.75081	14	28	25.21	-01	53	43.6			413
1989	BB1		1980	07	10.38611	13	50	49.04	-02	43	39.8			413
1989	BB1		1991	04	10.63087	12	33	34.38	+15	17	48.7			413
1989	SL5		1984	11	14.56976	02	28	35.40	-34	04	24.6	18 V	V	413
1989	WQ1		1989	12	17.46361	03	31	21.67	+24	18	52.6	16 V		413
1989	WQ1		1989	12	17.52804	03	31	16.02	+24	20	10.5		F	413
1989	WK2		1981	03	08.42824	09	05	45.30	+20	11	20.5	17 V		413
1989	WK2		1981	03	08.47164	09	05	44.77	+20	11	59.5			413
1990	BG		1978	12	06.65174	07	10	48.95	+01	33	56.3	17.5V	F	413
1990	BG		1978	12	06.70729	07	10	44.61	+01	34	13.2		F	413
1990	DA		1973	10	18.58756	01	04	13.91	-46	56	22.2		p	413
1990	DA		1973	10	21.47340	01	02	24.90	-47	52	43.0	16 V		413
1990	DA		1979	09	20.54132	20	02	49.76	-18	26	11.9	19 V		413
1990	HA		1989	10	25.48499	00	23	47.46	+00	20	41.2	18 V	V	413
1990	HA		1989	10	25.53360	00	23	42.54	+00	20	00.3		V	413
1990	MA		1977	09	18.72616	04	20	37.42	-38	34	39.6			413
1990	MB		1982	01	26.47615	05	28	37.04	-06	58	18.6	17.5V		413
1990	MJ		1983	01	14.56941	07	36	29.80	-00	44	33.4	19 V	V	413
1990	MJ		1983	01	14.61108	07	36	27.08	-00	44	40.4		V	413
1990	MU		1974	07	21.74676	00	08	56.62	-34	46	56.0	18.5V		413
1990	MU		1974	07	23.76134	00	08	17.85	-35	16	37.3	18.5V		413
1990	MU		1974	07	23.79606	00	08	17.09	-35	17	08.7			413
1990	MU		1976	08	20.63160	23	20	03.73	-44	18	06.2	18 V	V	413
1990	MU		1978	08	10.52093	23	13	11.00	-43	58	21.3	18 V	V	413
1990	MU		1987	11	26.42748	01	01	05.58	-39	28	56.8		F	413
1990	MU		1987	11	26.48627	01	00	37.90	-39	28	22.7		V	413
1990	MU		1987	11	26.50705	01	00	28.13	-39	28	08.7		F	413
1990	MU		1987	11	27.42641	00	53	26.89	-39	18	04.2		V	413
1990	MU		1988	07	12.61727	21	34	57.62	-47	41	27.6		F	413
1990	MU		1988	07	12.68671	21	34	48.17	-47	42	46.5		F	413
1990	SB		1982	04	13.48403	08	12	45.90	+04	47	23.5		F	413
1990	SB		1983	12	27.51806	03	27	02.26	-01	00	59.7			413
1990	SQ		1975	06	07.42913	14	08	30.03	-35	21	38.5	17 V		413
1990	SQ		1975	06	07.47080	14	08	27.82	-35	21	22.3			413

1990	SQ	1978	05	27.56168	15	22	09.49	-43	29	11.6		17 V	413
1990	SQ	1980	02	21.65418	12	38	28.75	-00	43	23.4		15.5V	413
1990	SQ	1980	02	21.69932	12	38	25.43	-00	43	25.6			413
1990	SQ	1987	07	17.54340	19	44	47.57	-52	35	41.4			413
1990	SQ	1987	07	17.58181	19	44	42.28	-52	35	48.0			413
1990	SQ	1989	03	29.66433	14	44	12.79	-31	47	53.3		V	413
1990	SF2	1984	08	02.61985	22	32	53.17	-19	14	52.3		15 V	413
1990	SF2	1984	08	02.66152	22	32	51.76	-19	15	09.4			413
1990	SF2	1984	11	13.41422	22	10	15.90	-20	03	55.7			413
1990	SF2	1984	11	14.41220	22	11	01.86	-19	57	20.3			413
1990	SF2	1984	11	15.41361	22	11	49.24	-19	50	40.6			413
1990	SF2	1984	11	16.41434	22	12	37.32	-19	43	53.4			413
1990	SF2	1985	12	04.58023	04	26	00.97	+17	42	55.8			413
1990	SF2	1985	12	12.53725	04	19	11.74	+17	43	54.2			413
1990	SF2	1985	12	12.60322	04	19	08.50	+17	43	54.7			413
1990	SF2	1985	12	16.51838	04	16	01.14	+17	45	08.6			413
1990	SF2	1985	12	17.52263	04	15	14.98	+17	45	33.8			413
1990	SG4	1986	03	14.53082	10	51	09.09	-02	25	09.4		16.5V	413
1990	SG4	1986	03	14.58291	10	51	05.46	-02	24	50.2			413
1990	SG4	1986	04	01.44705	10	32	45.24	-00	30	21.5			413
1990	SG4	1986	04	01.49566	10	32	42.68	-00	30	02.5			413
1990	SK4	1981	04	12.59549	14	11	02.09	+05	39	09.8		V	413
1990	VE1	1984	04	26.53017	12	26	35.31	+14	53	32.3		17.5V	413
1990	VG1	1978	11	21.42439	21	53	51.29	-16	09	21.1			413
1990	VG1	1978	11	22.42512	21	55	32.31	-16	10	33.1			413
1990	VG1	1978	11	23.42338	21	57	13.91	-16	11	33.2			413
1990	VG1	1978	11	24.41968	21	58	56.08	-16	12	15.7			413
1990	VG1	1978	11	25.41690	22	00	39.22	-16	12	47.5			413
1990	VG1	1978	11	26.41557	22	02	23.16	-16	13	04.5		I	413
1990	VG1	1984	03	06.56763	09	52	44.11	+02	58	58.0			413
1990	VG1	1984	03	06.60929	09	52	42.26	+02	59	29.4			413
1990	VG1	1984	05	18.38117	09	55	50.90	+11	54	48.9		F	413
1990	VG1	1988	02	18.61153	11	19	55.80	+00	13	40.7			413
1990	VG1	1988	02	18.68097	11	19	52.62	+00	14	27.7			413
1990	VX2	1984	05	25.54841	13	50	51.79	-02	06	26.0		17.5V	413
1990	VX2	1984	06	01.47759	13	46	21.29	-02	52	40.6		P	413
1990	WA	1974	08	20.75869	01	56	50.32	-34	24	09.2		18 V	413
1990	WA	1982	12	05.46045	02	26	14.71	-01	05	09.6		16 V	413
1990	WA	1982	12	05.52295	02	26	08.85	-01	01	32.1			413
1990	WW2	1984	06	05.67312	18	47	47.74	-23	24	39.0			413
1990	WW2	1984	06	05.69145	18	47	47.06	-23	24	46.4		17 V	413
1990	WZ2	1975	06	08.47212	14	32	03.69	-42	32	07.2		18 V	413
1990	WZ2	1975	06	08.49990	14	32	02.12	-42	31	57.7		F	413
1990	WZ2	1976	08	24.46964	22	20	12.13	-36	43	53.2		16 V	V 413
1990	WZ2	1976	08	24.51478	22	20	07.44	-36	43	51.6		V	413
1990	XJ	1976	03	11.75814	14	19	36.36	-60	43	44.5		19 V	F 413
1990	XJ	1976	04	01.61970	14	02	15.49	-62	39	06.0		18 V	I 413
1990	XJ	1976	06	28.36141	13	14	13.08	-22	42	30.2		17 V	413
1990	XJ	1982	07	10.40749	15	28	31.86	+00	41	31.1		17 V	413
1990	XJ	1982	07	10.44916	15	28	31.38	+00	42	52.3			413
1991	CQ	1983	03	11.41303	07	31	44.32	-06	37	33.8		17.5V	F 413
1991	CQ	1983	03	11.45123	07	31	49.93	-06	35	36.5			F 413
1991	CO3	1977	09	10.38304	17	22	23.47	-23	26	01.3			F 413
1991	CO3	1977	09	10.41777	17	22	24.83	-23	25	52.3			p 413
1991	CO3	1977	09	11.38966	17	23	00.40	-23	21	50.1		17.5V	413
1991	CO3	1977	09	16.40579	17	26	21.24	-23	01	54.6			413
1991	CO3	1980	03	12.63544	13	07	31.43	-46	47	16.2		17 V	413
1991	CO3	1980	03	12.69794	13	07	27.65	-46	47	36.2			413
1991	CO3	1987	01	09.66468	08	49	19.58	+00	05	00.5			413

1991	CO3		1987	01	09.74106	08	49	13.68	+00	03	35.2			413
1991	EE		1991	08	27.39324	14	07	41.20	+17	22	11.5			413
1991	EE		1991	08	29.39959	14	28	51.30	+16	37	41.0			413
1991	FH		1991	05	15.46748	11	55	46.40	-04	07	49.3			413
1991	GY9		1980	06	06.46753	13	48	55.62	-12	22	57.9			413
1991	GY9		1981	04	23.79161	19	42	39.09	-08	21	09.0			413
1991	GY9		1985	05	15.39558	10	02	27.96	-02	18	26.2			413
1991	GZ9		1977	02	10.50863	07	44	50.72	+15	58	16.5			413
1991	GZ9		1982	05	25.49350	12	41	41.96	-16	05	09.6			413
1991	JW		1991	07	01.42218	11	14	10.52	-27	46	49.0			413
1991	OA		1991	03	18.58486	12	09	39.75	-14	56	10.9	18.5V	F	413
1991	OA		1991	03	18.63347	12	09	36.67	-14	56	35.1		F	413
1991	PF1		1991	09	04.64499	00	31	59.17	-27	48	04.0	16.5V		413
1991	PF1		1991	09	04.68666	00	31	59.77	-27	49	27.7			413
1991	PF1		1991	09	05.75451	00	32	19.96	-28	25	32.0			413
1991	QE	*	1991	08	30.43910	19	26	25.68	-54	46	13.8	17 V		413
1991	QE		1991	08	30.48076	19	26	25.13	-54	45	44.1			413
1991	QE		1991	09	01.48731	19	26	17.03	-54	22	39.1			413
1991	QF	*	1991	08	30.43910	19	38	52.94	-51	54	11.1	17 V		413
1991	QF		1991	08	30.48076	19	38	52.52	-51	53	46.2			413
1991	QF		1991	09	01.48731	19	38	55.81	-51	33	16.0			413
1991	RA	*	1991	09	02.61728	00	45	45.97	+03	04	50.3	17 V		413
1991	RA		1991	09	02.66928	00	45	42.08	+03	05	27.2			413
1991	RA		1991	09	03.76076	00	44	20.34	+03	18	18.4			413
1991	RB	*	1991	09	04.53554	22	18	58.33	-64	15	48.4	17.5V	V	413
1991	RB		1991	09	04.57721	22	18	28.37	-64	17	06.1		F	413
1991	RB		1991	09	05.50336	22	07	27.17	-64	44	23.7		V	413
1991	RB		1991	09	05.53692	22	07	02.71	-64	45	16.6		F	413
1991	RB		1991	09	06.60845	21	52	41.65	-65	13	23.4		I	413
1991	RB		1991	09	06.61562	21	52	36.38	-65	13	31.4		F	413
1991	RB		1991	09	07.55185	21	38	40.09	-65	34	19.1		F	413
1991	RC	*	1991	09	03.59023	22	23	06.59	-07	03	58.8	18 V	F	413
1991	RC		1991	09	03.64231	22	22	57.12	-07	05	28.4		F	413
1991	RC		1991	09	05.56608	22	17	31.53	-07	57	52.0			413
1991	RC		1991	09	05.58344	22	17	28.49	-07	58	20.8			413
1991	RD	*	1991	09	04.59093	23	16	44.69	+00	19	39.0	16 V		413
1991	RD		1991	09	04.63259	23	16	40.24	+00	20	06.0			413
1991	RD		1991	09	05.74444	23	14	44.84	+00	35	05.4			413
1991	RE	*	1991	09	04.61176	23	10	54.51	-00	30	31.2	17 V		413
1991	RE		1991	09	05.74444	23	09	59.96	-00	33	56.8			413
1991	RF	*	1991	09	04.61176	23	12	24.47	+01	34	48.1	17.5V		413
1991	RF		1991	09	05.74444	23	11	26.96	+01	28	07.7			413
1991	RG	*	1991	09	04.61176	23	13	09.00	+01	25	23.8	17 V		413
1991	RG		1991	09	05.74444	23	12	05.00	+01	17	55.7			413
1991	RH	*	1991	09	04.61176	23	17	37.97	+01	06	42.9	16.5V		413
1991	RH		1991	09	05.74444	23	16	43.20	+00	56	34.6			413
1991	RJ	*	1991	09	04.61176	23	19	51.45	-00	16	16.6	16.5V		413
1991	RJ		1991	09	05.74444	23	18	39.03	-00	14	32.6			413
1991	RK	*	1991	09	04.61176	23	20	23.41	+01	39	21.3	16.5V		413
1991	RK		1991	09	05.74444	23	19	21.99	+01	32	18.9			413
104			1991	09	03.76076	00	45	47.74	+02	00	52.2			413
324			1991	09	04.61176	23	08	01.53	+02	16	00.8			413
417			1991	09	04.61176	23	10	13.69	+00	25	14.3			413
417			1991	09	05.74444	23	09	22.42	+00	18	20.2			413
874			1991	09	03.55394	21	49	37.43	-02	33	13.1			413
874			1991	09	04.60417	21	48	57.59	-02	40	05.9			413
874			1991	09	04.65301	21	48	55.68	-02	40	26.3			413
2806			1991	09	03.76076	00	47	14.51	+01	20	02.2			413
2862			1991	09	04.61176	23	11	44.46	+00	22	20.5			413

2862	1991 09 05.74444	23 10 39.59	+00 14 56.4					413
3435	1991 09 03.59023	22 25 49.76	-06 38 01.5					413
3435	1991 09 03.64231	22 25 46.97	-06 38 28.9					413
3568	1991 08 03.54744	20 27 43.94	-49 18 16.6					413
3568	1991 08 03.59258	20 27 41.03	-49 18 27.2					413
3728	1991 09 03.55394	21 56 19.89	-03 22 08.0					413
3728	1991 09 04.65301	21 55 29.97	-03 35 36.4					413
3753	1973 10 17.43792	01 00 40.27	-50 25 32.5					413
3753	1973 10 18.58756	00 56 22.37	-50 44 02.2					413
3753	1973 10 21.47340	00 45 37.15	-51 21 53.4			16	V	413
4170	1991 09 03.76076	00 41 10.25	+01 55 17.1					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
AGK3, SAOC, CPZ, field plates from Carter Observatory

1991 EE	1991 09 03.37709	15 59 50.35	+11 49 05.9					474
1991 EE	1991 09 03.38439	16 00 01.58	+11 48 19.1					474
1991 EE	1991 09 03.39654	16 00 20.63	+11 47 01.1					474
1991 EE	1991 09 04.32883	16 26 51.79	+09 57 11.8					474
1991 EE	1991 09 04.33595	16 27 04.66	+09 56 13.7					474
1991 EE	1991 09 05.32676	16 59 04.69	+07 31 13.4					474
1991 EE	1991 09 05.33162	16 59 14.55	+07 30 26.1					474
951	1991 09 04.40788	15 58 11.09	-19 26 09.0					474
951	1991 09 04.41448	15 58 11.57	-19 26 10.3					474

480 Cockfield
M. Mobberley, Denmara, Cross Green, Cockfield, Bury St. Edmunds, Suffolk IP30 0LQ, England

1991 OA	1991 08 18.00833	21 30 07.99	-06 13 57.6					480

568 Mauna Kea Observatory
D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive, Honolulu, HI 96822, U.S.A.
Observers D. J. Tholen, C. Kaminski, D. P. Cruikshank, W. K. Hartmann, W. Golisch
IRTF encoders
SAOC, Lick Gaspra catalog

1990 SQ	1991 06 18.27912	09 59 29.73	+14 01 11.3			17.0	V	568
243	1991 08 20.62188	05 02 38.37	+23 51 28.7					568
951	1991 08 16.28177	15 36 57.50	-18 36 57.1					568
951	1991 08 20.26065	15 40 47.86	-18 45 48.5					568
951	1991 08 22.25341	15 42 50.43	-18 50 35.7					568

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

1990 XB1	1991 01 18.93777	08 13 33.60	+31 31 39.8					591
1990 XB1	1991 01 18.94642	08 13 33.17	+31 31 43.8					591
261	1991 02 19.90524	09 14 01.27	+21 00 45.3					591
261	1991 02 19.95906	09 13 58.24	+21 01 01.8					591
443	1991 01 15.77263	06 03 24.02	+16 18 32.3					591
443	1991 01 15.78131	06 03 23.55	+16 18 33.6					591
538	1991 01 15.82339	07 19 15.03	+17 26 05.5					591
538	1991 01 15.83653	07 19 14.25	+17 26 08.7					591
742	1991 01 16.86565	06 56 18.26	+33 45 20.2					591
742	1991 01 16.87455	06 56 17.67	+33 45 20.8					591
817	1991 01 15.82339	07 21 04.31	+17 23 51.9					591

817	1991 01 15.83653	07 21 03.57	+17 23 57.9		591
863	1991 01 07.88684	06 02 38.56	+09 43 31.0		591
863	1991 01 07.89985	06 02 37.91	+09 43 36.5		591
925	1991 01 16.89141	08 01 20.13	+21 57 14.4		591
925	1991 01 16.90247	08 01 19.24	+21 57 11.3		591
1075	1991 01 18.88056	08 43 56.74	+25 01 18.0		591
1075	1991 01 18.90112	08 43 55.68	+25 01 26.7		591
1113	1991 01 17.88877	08 55 28.36	+24 34 11.8		591
1113	1991 01 17.90222	08 55 27.55	+24 34 11.3		591
1219	1991 01 17.85730	07 52 09.41	+29 19 58.0		591
1219	1991 01 17.87503	07 52 08.10	+29 20 01.6		591
1310	1991 01 16.76722	04 31 13.48	+67 10 04.0		591
1310	1991 01 16.78205	04 31 14.87	+67 09 47.5		591
1510	1991 01 15.80244	07 24 58.16	+35 36 58.6		591
1510	1991 01 15.81137	07 24 57.43	+35 36 56.1		591
1675	1991 01 17.77046	07 39 57.26	+34 53 18.7		591
1675	1991 01 17.77921	07 39 56.58	+34 53 19.9		591
1801	1991 01 18.93344	08 11 56.08	+31 18 37.3		591
1801	1991 01 18.94213	08 11 55.55	+31 18 41.0		591
2151	1991 01 18.80797	07 57 11.65	+46 44 12.8		591
2151	1991 01 18.82669	07 57 10.09	+46 44 14.9		591
2827	1991 01 18.93344	08 16 49.81	+30 59 38.4		591
2827	1991 01 18.95079	08 16 48.65	+30 59 39.1		591

595 Farra d'Isonzo
L. Bittesini, Via dei Conventi 10, I-34070 Farra D'Isonzo (GO), Italy
Observers G. Lombardi, E. Pettarin, F. Piani
Measurers L. Bittesini, F. Piani, G. Lombardi, F. Bressan, G. Jerman
0.4-m f/4.5 reflector

547	1991 07 19.87431	18 35 43.33	+02 50 50.7		595
547	1991 07 19.91111	18 35 41.52	+02 50 43.2		595
2382	1991 07 19.89028	18 54 23.36	+24 55 53.3		595
2382	1991 07 19.92292	18 54 21.42	+24 56 16.1		595

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
0.5-m reflector + CCD

1988 XE1	1991 08 14.34660	22 26 37.22	+00 55 00.5		657
1988 XE1	1991 08 14.35809	22 26 36.64	+00 54 59.3		657
1991 BB	1991 07 18.45818	03 23 29.80	+53 02 11.7		657
1991 BB	1991 07 18.45961	03 23 29.31	+53 02 31.4		657
1991 BB	1991 08 20.31824	18 18 10.5	+81 50 21.9		657
1991 BB	1991 08 20.32117	18 18 08.2	+81 50 17.3		657
1991 BB	1991 08 20.32403	18 18 06.6	+81 50 13.3		657
1991 BB	1991 08 23.27603	17 57 16.9	+80 39 48.3		657
1991 BB	1991 08 23.27954	17 57 16.0	+80 39 43.0		657
1991 OA	1991 08 14.26308	21 29 58.89	-07 00 09.1		657
1991 OA	1991 08 14.27229	21 29 58.79	-07 00 02.1		657
1991 OA	1991 08 15.24616	21 30 01.38	-06 46 42.8		657
1991 OA	1991 08 15.24858	21 30 01.39	-06 46 42.0		657
1991 OA	1991 08 15.25789	21 30 01.34	-06 46 34.1		657
1991 OA	1991 08 16.27203	21 30 03.81	-06 33 45.7		657
1991 OA	1991 08 16.28041	21 30 03.70	-06 33 37.6		657
1991 OA	1991 08 20.24359	21 30 17.08	-05 51 57.5		657
1991 OA	1991 08 20.24919	21 30 17.04	-05 51 53.6		657
1991 OA	1991 08 21.26826	21 30 21.48	-05 43 04.5		657
1991 OA	1991 08 21.29588	21 30 21.39	-05 42 50.5		657

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), S. Cohen (2, S), T. Gehrels (4, L), E. Helin (2, S), H. E. Holt (9, S), H. R. Holt (3, 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), C. T. Kowal (6, L), L. A. Zimmerman (9, S)
Measurers E. Bowell (9), S. J. Bus (9), S. Cohen (2), 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

1931 TS1	1990 09 15.20590	20 45 22.00	-20 15 55.8		17.8	9	675
1931 TS1	1990 09 15.23229	20 45 21.51	-20 15 55.8		18.2	9	675
1932 CY	1971 03 24.37118	12 14 11.02	+00 12 19.3			4	675
1932 CY	1971 03 25.24340	12 13 32.31	+00 16 46.1			4	675
1932 CY	1971 03 25.28715	12 13 30.30	+00 17 00.2		16.6	4	675
1932 CY	1971 03 26.25208	12 12 46.91	+00 21 56.8			4	675
1932 CY	1971 03 27.31181	12 11 59.25	+00 27 20.8			4	675
1932 CY	1971 04 02.41285	12 07 29.91	+00 57 33.0			4	675
1932 CY	1971 04 16.16458	11 58 40.45	+01 54 47.1			4	675
1932 CY	1971 04 16.25069	11 58 37.59	+01 55 05.2			4	675
1941 UN	1991 07 13.42257	20 56 39.64	-28 17 00.6		17.8	9	675
1941 UN	1991 07 13.45347	20 56 38.05	-28 17 08.0			9	675
1949 SA1	1980 11 29.23715	03 53 56.15	+16 33 45.3		15.5V	6	675
1949 SA1	1980 12 01.23577	03 51 48.40	+16 30 48.4			6	675
1953 PR	1980 11 29.29410	04 25 39.70	+13 13 54.9		17.2V	6	675
1953 PR	1980 12 01.29271	04 23 25.63	+13 08 08.2			6	675
1967 UT	1981 09 01.40521	22 16 50.91	-16 16 02.7		15.5V	6	675
1967 UT	1981 09 02.40452	22 15 57.56	-16 21 30.4			6	675
1969 TJ2	1980 11 29.23715	03 51 34.22	+14 24 27.2		15.5V	6	675
1969 TJ2	1980 12 01.23577	03 49 56.72	+14 22 54.2			6	675
1969 TN4	1991 08 05.28484	21 24 47.59	-13 21 47.3		17.2	9	675
1969 TN4	1991 08 05.32135	21 24 45.42	-13 21 55.7			9	675
1969 TN4	1991 08 07.32240	21 22 51.33	-13 30 07.6			9	675
1970 PS	1991 08 05.27500	21 09 17.64	-12 27 47.2		16.5	9	675
1970 PS	1991 08 05.28484	21 09 17.15	-12 27 46.6		16.2	9	675
1970 PS	1991 08 05.31302	21 09 15.82	-12 28 01.1			9	675
1970 PS	1991 08 05.32135	21 09 15.45	-12 28 01.3			9	675
1971 FB	1971 03 26.33611	12 18 23.83	-02 22 50.3		17.6	4	675
1971 FB	1971 03 27.32500	12 17 48.26	-01 55 43.4			4	675
1972 KL	1991 08 07.39306	23 31 35.16	-06 59 17.3		17.2	9	675
1972 KL	1991 08 07.42257	23 31 34.57	-06 59 28.9			9	675
1972 KL	1991 08 08.42483	23 31 17.10	-07 06 05.2		17.0	9	675
1972 KL	1991 08 08.45660	23 31 16.44	-07 06 17.8			9	675
1972 RF	1971 03 24.37118	12 12 38.23	+03 38 55.4			4	675
1972 RF	1971 03 25.24340	12 11 54.96	+03 50 40.7			4	675
1972 RF	1971 03 25.28715	12 11 52.71	+03 51 14.9		17.6	4	675
1972 RF	1971 03 26.25208	12 11 04.55	+04 04 11.1			4	675
1972 RF	1971 03 27.31181	12 10 11.38	+04 18 20.8			4	675
1972 RU3	1971 03 26.31007	12 29 04.47	+02 02 09.1			4	675

1972	RU3	1971	03	26.34896	12	29	02.01	+02	02	19.9		17.5	4 675
1972	RU3	1971	03	27.35208	12	27	59.29	+02	07	30.2			4 675
1972	RU3	1971	04	02.43993	12	21	38.65	+02	37	44.5			4 675
1972	RU3	1971	04	16.16458	12	08	26.41	+03	31	36.3			4 675
1972	RU3	1971	04	16.25069	12	08	21.89	+03	31	51.9			4 675
1973	SC6	1991	08	07.38524	22	54	19.82	-03	56	25.3		17.0	9 675
1973	SC6	1991	08	07.41406	22	54	18.90	-03	56	31.0			9 675
1973	SC6	1991	08	08.38038	22	53	50.95	-04	00	09.7		17.0	9 675
1973	SC6	1991	08	08.41649	22	53	49.80	-04	00	18.6			9 675
1973	UC	1971	03	24.37118	12	13	18.42	+02	52	17.7			4 675
1973	UC	1971	03	25.24340	12	12	34.02	+02	55	49.7			4 675
1973	UC	1971	03	25.28715	12	12	31.73	+02	55	58.4		20.3	4 675
1974	QU1	1991	07	16.38993	22	00	47.12	-09	21	56.8		17.8	9 675
1974	QU1	1991	07	16.42917	22	00	46.30	-09	22	01.5			9 675
1974	QU1	1991	08	05.29363	21	49	27.88	-10	15	04.2		17.0	9 675
1974	QU1	1991	08	05.32951	21	49	26.19	-10	15	12.4			9 675
1974	QU1	1991	08	08.31128	21	47	03.68	-10	27	29.7		17.0	9 675
1974	QU1	1991	08	08.34045	21	47	02.13	-10	27	37.5			9 675
1974	SP1	1991	08	08.42483	23	39	20.41	-05	01	49.4		17.8	9 675
1974	SP1	1991	08	08.45660	23	39	19.83	-05	01	55.0			9 675
1976	UP18	1971	03	25.33090	12	32	03.95	-02	50	17.2			4 675
1976	UP18	1971	03	26.29653	12	31	10.98	-02	42	13.2			4 675
1976	UP18	1971	03	26.33611	12	31	08.87	-02	41	53.7		20.1	4 675
1976	UP18	1971	03	27.33854	12	30	13.77	-02	33	28.2			4 675
1977	DR1	1991	08	09.46892	23	59	48.12	+03	56	27.8		16.2	9 675
1977	DR1	1991	08	10.44618	23	59	23.80	+04	00	18.1			9 675
1977	EC2	1990	09	14.26441	22	10	18.39	-11	52	09.0		17.8	9 675
1977	EC2	1990	09	14.30417	22	10	16.90	-11	52	17.4			9 675
1977	PE1	1991	08	07.44948	23	25	12.33	+04	00	21.0		16.8	9 675
1977	PE1	1991	08	07.46545	23	25	12.02	+04	00	21.5		17.5	9 675
1977	PE1	1991	08	07.48229	23	25	11.74	+04	00	22.0			9 675
1977	PE1	1991	08	08.43003	23	24	58.65	+04	00	31.6		17.2	9 675
1977	PE1	1991	08	08.44149	23	24	58.58	+04	00	32.4		17.0	9 675
1977	PE1	1991	08	08.46441	23	24	58.14	+04	00	29.5			9 675
1977	PE1	1991	08	10.41771	23	24	26.77	+04	00	17.6		17.0	9 675
1977	PE1	1991	08	10.46597	23	24	25.82	+04	00	17.0			9 675
1977	RG	1971	03	24.37118	11	55	48.91	+03	55	21.3			4 675
1977	RG	1971	03	25.24340	11	55	10.12	+04	02	50.3			4 675
1977	RG	1971	03	25.28715	11	55	08.00	+04	03	14.4		17.7	4 675
1977	RG	1971	03	26.25208	11	54	24.81	+04	11	27.6			4 675
1977	RD7	1991	08	09.46892	00	15	10.17	+03	38	55.1		17.8	9 675
1977	RD7	1991	08	10.44618	00	15	00.87	+03	39	13.0			9 675
1978	CH	1981	09	03.41354	22	39	58.29	-11	56	51.8		16.5V	6 675
1978	CH	1981	09	04.28403	22	39	23.38	-12	01	28.1			6 675
1978	NQ1	1991	08	09.46892	00	13	02.87	+07	51	10.1			9 675
1978	NQ1	1991	08	10.44618	00	12	52.10	+07	53	37.3			9 675
1978	RN	1991	08	05.28484	21	14	21.10	-08	31	27.6		16.8	9 675
1978	RN	1991	08	05.32135	21	14	19.42	-08	31	39.2			9 675
1978	RN	1991	08	08.30399	21	11	52.22	-08	48	51.6		16.8	9 675
1978	RN	1991	08	08.33264	21	11	50.76	-08	49	01.0			9 675
1978	RZ	1971	03	24.37118	12	04	28.12	+03	37	07.0			4 675
1978	RZ	1971	03	25.24340	12	03	48.00	+03	41	51.3			4 675
1978	RZ	1971	03	25.28715	12	03	46.07	+03	42	05.4		18.0	4 675
1978	RZ	1971	03	26.25208	12	03	01.67	+03	47	14.1			4 675
1978	RZ	1971	03	27.31181	12	02	12.73	+03	52	48.8			4 675
1978	RZ	1971	04	02.41285	11	57	38.66	+04	23	30.4			4 675
1978	RZ	1971	04	16.16458	11	48	41.14	+05	19	21.7			4 675
1978	RZ	1971	04	16.25069	11	48	38.08	+05	19	40.4			4 675
1978	RD10	1971	03	24.37118	12	10	04.54	-00	17	42.4			4 675

1978	RD10	1971	03	25.24340	12	09	24.98	-00	12	56.5		4 675
1978	RD10	1971	03	25.28715	12	09	22.92	-00	12	41.1	18.9	4 675
1978	RD10	1971	03	26.25208	12	08	38.90	-00	07	24.6		4 675
1978	RD10	1971	03	27.31181	12	07	50.68	-00	01	38.8		4 675
1978	RD10	1971	04	02.41285	12	03	18.48	+00	30	50.7		4 675
1978	RD10	1971	04	16.16458	11	54	16.31	+01	35	16.6		4 675
1978	RD10	1971	04	16.25069	11	54	13.10	+01	35	38.2		4 675
1978	SS2	1971	03	24.42015	12	19	42.73	-05	33	54.9		4 675
1978	SS2	1971	03	25.33090	12	19	04.25	-05	27	17.1		4 675
1978	SS2	1971	03	26.29653	12	18	23.11	-05	20	10.8		4 675
1978	SS2	1971	03	26.33611	12	18	21.32	-05	19	53.8	17.3	4 675
1978	SS2	1971	03	27.32500	12	17	39.17	-05	12	34.1		4 675
1978	SS2	1971	03	27.33854	12	17	38.47	-05	12	26.7		4 675
1978	SS2	1971	04	02.40000	12	13	20.74	-04	26	52.8		4 675
1978	SS2	1971	04	16.18087	12	04	27.68	-02	45	19.2		4 675
1978	SS2	1971	04	16.26458	12	04	24.72	-02	44	44.3		4 675
1978	TT2	1971	03	26.31007	12	31	31.35	-00	06	47.5		4 675
1978	TT2	1971	03	26.34896	12	31	29.33	-00	06	38.0	16.7	4 675
1978	TT2	1971	03	27.35208	12	30	40.55	-00	02	01.3		4 675
1978	TT2	1971	04	02.43993	12	25	43.39	+00	25	15.4		4 675
1978	TT2	1971	04	16.21476	12	15	20.39	+01	17	58.1		4 675
1978	TT2	1971	04	16.27708	12	15	17.80	+01	18	09.6		4 675
1978	VU10	1991	08	15.30451	20	39	31.70	-14	24	42.1	16.0	2 675
1978	VU10	1991	08	15.32708	20	39	30.55	-14	24	44.8		2 675
1978	VU10	1991	08	16.32101	20	38	46.91	-14	27	03.3		2 675
1978	VU10	1991	08	16.34913	20	38	45.67	-14	27	06.5		2 675
1979	MA4	1971	03	24.42015	12	29	27.69	-03	22	33.9		4 675
1979	MA4	1971	03	25.33090	12	28	52.70	-03	18	10.9		4 675
1979	MA4	1971	03	26.29653	12	28	15.24	-03	13	27.9		4 675
1979	MA4	1971	03	26.33611	12	28	13.66	-03	13	17.7	18.9	4 675
1979	MA4	1971	03	27.33854	12	27	34.73	-03	08	24.0		4 675
1979	MA4	1971	04	02.42604	12	23	37.72	-02	38	34.4		4 675
1979	MA4	1971	04	16.22812	12	15	09.77	-01	33	54.3		4 675
1979	MA4	1971	04	16.30139	12	15	07.26	-01	33	36.1		4 675
1979	SL7	1991	08	06.39410	22	25	00.04	-01	28	41.1	18.8	9 675
1979	SL7	1991	08	06.42743	22	24	58.63	-01	28	46.3		9 675
1979	SL7	1991	08	09.33872	22	22	57.23	-01	38	30.5	19.2	9 675
1979	SL7	1991	08	09.37257	22	22	55.69	-01	38	37.9		9 675
1979	SD9	1990	09	15.20590	20	56	27.92	-21	10	01.0		9 675
1979	SD9	1990	09	15.23229	20	56	27.29	-21	10	00.6	17.5	9 675
1979	SU11	1971	03	24.37118	12	09	36.68	+02	41	48.3		4 675
1979	SU11	1971	03	25.24340	12	08	59.46	+02	45	51.2		4 675
1979	SU11	1971	03	25.28715	12	08	57.49	+02	46	03.3	18.3	4 675
1979	SU11	1971	03	26.25208	12	08	16.19	+02	50	27.7		4 675
1979	SU11	1971	03	27.31181	12	07	30.68	+02	55	16.9		4 675
1979	SU11	1971	04	02.41285	12	03	13.32	+03	22	00.5		4 675
1979	SU11	1971	04	16.16458	11	54	30.14	+04	12	48.1		4 675
1979	SU11	1971	04	16.25069	11	54	27.04	+04	13	06.2		4 675
1980	FH12	1991	08	06.35503	22	03	42.33	-09	31	48.0		9 675
1980	FH12	1991	08	06.38698	22	03	40.30	-09	31	48.9	17.0	9 675
1980	PB2	1991	08	05.26563	21	01	29.20	-03	08	03.3	17.0	9 675
1980	PB2	1991	08	05.30313	21	01	27.73	-03	08	14.4		9 675
1980	PB2	1991	08	09.27656	20	58	38.22	-03	28	54.0	17.2	9 675
1980	PB2	1991	08	09.30903	20	58	36.71	-03	29	03.9		9 675
1980	SJ	1991	08	05.26563	21	10	39.98	-06	24	57.3	16.8	9 675
1980	SJ	1991	08	05.30313	21	10	37.84	-06	25	03.6		9 675
1980	SJ	1991	08	09.27656	21	06	58.34	-06	37	54.6	16.8	9 675
1980	SJ	1991	08	09.30903	21	06	56.46	-06	38	01.9		9 675
1980	TK6	1991	08	05.26563	20	58	12.49	-05	00	55.4	16.8	9 675

1980	TK6		1991	08	05.30313	20	58	10.50	-05	01	02.7		9 675
1980	TK6		1991	08	09.27656	20	54	32.38	-05	15	46.3	17.0	9 675
1980	TK6		1991	08	09.30903	20	54	30.51	-05	15	54.7		9 675
1980	WT2	*	1980	11	29.21111	03	42	13.28	+16	42	51.7	18.5V	6 675
1980	WT2		1980	12	01.23577	03	42	04.42	+15	46	29.7		6 675
1980	WU2	*	1980	11	29.23715	03	42	07.03	+13	55	33.5	16.5V	6 675
1980	WU2		1980	12	01.23577	03	40	01.46	+14	03	46.7		6 675
1980	WV2	*	1980	11	29.23715	03	43	54.33	+12	51	24.1	18.0V	6 675
1980	WV2		1980	12	01.23577	03	42	03.30	+12	40	29.1		6 675
1980	WW2	*	1980	11	29.23715	03	44	43.09	+12	54	58.1	18.2V	6 675
1980	WW2		1980	12	01.23577	03	43	13.63	+12	43	19.8		6 675
1980	WX2	*	1980	11	29.23715	03	44	44.05	+15	25	17.7	17.8V	6 675
1980	WX2		1980	12	01.23577	03	42	57.83	+15	13	13.0		6 675
1980	WY2	*	1980	11	29.23715	03	44	48.26	+15	15	23.7	17.5V	6 675
1980	WY2		1980	12	01.23577	03	42	55.87	+15	13	51.5		6 675
1980	WZ2	*	1980	11	29.23715	03	45	34.06	+14	11	32.9	17.5V	6 675
1980	WZ2		1980	12	01.23577	03	43	47.98	+14	11	02.2		6 675
1980	WA3	*	1980	11	29.23715	03	45	39.76	+15	09	40.3	18.5V	6 675
1980	WA3		1980	12	01.23577	03	43	41.62	+15	14	31.9		6 675
1980	WB3	*	1980	11	29.23715	03	46	20.67	+12	10	19.7	17.8V	6 675
1980	WB3		1980	12	01.23577	03	44	15.49	+12	12	17.7		6 675
1980	WC3	*	1980	11	29.23715	03	47	22.75	+11	54	50.5	17.5V	6 675
1980	WC3		1980	12	01.23577	03	45	35.44	+11	49	42.0		6 675
1980	WD3	*	1980	11	29.23715	03	47	42.59	+15	52	29.5	19.0V	6 675
1980	WD3		1980	12	01.23577	03	45	35.85	+15	45	52.2		6 675
1980	WE3	*	1980	11	29.23715	03	48	46.79	+12	40	48.3	18.2V	6 675
1980	WE3		1980	12	01.23577	03	47	00.32	+12	42	23.6		6 675
1980	WF3	*	1980	11	29.23715	03	48	49.52	+12	22	11.2	17.5V	6 675
1980	WF3		1980	12	01.23577	03	47	12.25	+11	57	19.3		6 675
1980	WG3	*	1980	11	29.23715	03	50	16.81	+14	10	01.9	18.0V	6 675
1980	WG3		1980	12	01.23577	03	48	26.55	+14	09	47.2		6 675
1980	WH3	*	1980	11	29.23715	03	51	34.61	+15	51	55.2	18.0V	6 675
1980	WH3		1980	12	01.23577	03	49	38.54	+15	50	40.2		6 675
1980	WJ3	*	1980	11	29.23715	03	52	35.81	+12	58	38.7	17.2V	6 675
1980	WJ3		1980	12	01.23577	03	50	29.95	+12	47	50.2		6 675
1980	WK3	*	1980	11	29.23715	03	53	39.16	+10	42	24.1	17.8V	6 675
1980	WK3		1980	12	01.23577	03	51	34.62	+10	35	22.9		6 675
1980	WL3	*	1980	11	29.23715	03	53	40.18	+13	38	37.8	18.8V	6 675
1980	WL3		1980	12	01.23577	03	52	02.83	+13	39	15.4		6 675
1980	WM3	*	1980	11	29.23715	03	54	19.69	+12	18	45.0	16.8V	6 675
1980	WM3		1980	12	01.23577	03	52	32.87	+12	12	57.5		6 675
1980	WN3	*	1980	11	29.23715	03	57	07.86	+15	50	08.7	18.5V	6 675
1980	WN3		1980	12	01.23577	03	55	08.03	+15	54	57.6		6 675
1980	WO3	*	1980	11	29.23715	03	58	02.17	+12	12	19.2	17.0V	6 675
1980	WO3		1980	12	01.23577	03	56	06.32	+12	14	12.5		6 675
1980	WP3	*	1980	11	29.23715	03	58	18.41	+14	44	43.6	18.5V	6 675
1980	WP3		1980	12	01.23577	03	56	22.72	+14	45	15.2		6 675
1980	WQ3	*	1980	11	29.23715	03	58	50.96	+14	29	05.1	18.5V	6 675
1980	WQ3		1980	12	01.23577	03	56	50.08	+14	35	24.1		6 675
1980	WR3	*	1980	11	29.23715	03	59	55.86	+15	15	05.3	19.2V	6 675
1980	WR3		1980	12	01.23577	03	58	26.33	+15	14	07.1		6 675
1980	WS3	*	1980	11	29.23715	04	00	02.22	+13	34	04.1	17.2V	6 675
1980	WS3		1980	12	01.23577	03	58	21.75	+13	28	00.0		6 675
1980	WT3	*	1980	11	29.23715	04	00	44.69	+11	34	41.7	16.2V	6 675
1980	WT3		1980	12	01.23577	03	58	56.81	+11	43	43.1		6 675
1980	WU3	*	1980	11	29.23715	04	02	51.53	+15	30	54.2	17.2V	6 675
1980	WU3		1980	11	29.29410	04	02	47.96	+15	30	35.3		6 675
1980	WU3		1980	12	01.23577	04	00	49.05	+15	19	37.0		6 675
1980	WV3	*	1980	11	29.23715	04	03	02.01	+15	23	35.4	18.5V	6 675

1980	WV3		1980	11	29.29410	04	02	58.31	+15	23	38.6		6 675
1980	WV3		1980	12	01.23577	04	00	56.62	+15	25	31.0		6 675
1980	WW3	*	1980	11	29.23715	04	03	11.31	+15	24	41.5	18.0V	6 675
1980	WW3		1980	11	29.29410	04	03	07.70	+15	24	22.9		6 675
1980	WW3		1980	12	01.23577	04	01	14.64	+15	14	09.7		6 675
1980	WX3	*	1980	11	29.23715	04	03	40.59	+15	59	11.1	18.2V	6 675
1980	WX3		1980	11	29.29410	04	03	36.78	+15	58	51.1		6 675
1980	WX3		1980	12	01.23577	04	01	32.41	+15	47	14.8		6 675
1980	WY3	*	1980	11	29.29410	04	05	16.93	+15	42	08.3	18.2V	6 675
1980	WY3		1980	12	01.29271	04	03	17.53	+15	35	24.9		6 675
1980	WZ3	*	1980	11	29.29410	04	05	28.61	+15	27	10.7	17.2V	6 675
1980	WZ3		1980	12	01.29271	04	03	28.30	+15	22	36.1		6 675
1980	WA4	*	1980	11	29.29410	04	05	39.70	+15	00	14.6	18.5V	6 675
1980	WA4		1980	12	01.29271	04	03	37.99	+14	50	11.2		6 675
1980	WB4	*	1980	11	29.29410	04	06	10.71	+17	26	01.9	17.8V	6 675
1980	WB4		1980	12	01.29271	04	04	20.41	+17	26	54.4		6 675
1980	WC4	*	1980	11	29.29410	04	06	15.42	+15	11	22.3	18.0V	6 675
1980	WC4		1980	12	01.29271	04	04	30.16	+15	10	56.2		6 675
1980	WD4	*	1980	11	29.29410	04	07	18.91	+17	13	16.2	17.0V	6 675
1980	WD4		1980	12	01.29271	04	05	12.75	+17	04	13.2		6 675
1980	WE4	*	1980	11	29.29410	04	08	14.54	+17	10	20.6	16.5V	6 675
1980	WE4		1980	12	01.29271	04	06	20.65	+17	07	17.2		6 675
1980	WF4	*	1980	11	29.29410	04	09	19.95	+12	28	47.6	18.5V	6 675
1980	WF4		1980	12	01.29271	04	07	07.51	+12	29	00.9		6 675
1980	WG4	*	1980	11	29.29410	04	10	35.22	+16	01	11.2	18.2V	6 675
1980	WG4		1980	12	01.29271	04	08	32.09	+15	55	39.0		6 675
1980	WH4	*	1980	11	29.29410	04	11	10.48	+12	26	18.9	18.0V	6 675
1980	WH4		1980	12	01.29271	04	09	18.82	+12	29	00.5		6 675
1980	WJ4	*	1980	11	29.29410	04	11	17.89	+14	48	30.3	18.5V	6 675
1980	WJ4		1980	12	01.29271	04	09	11.50	+14	43	27.0		6 675
1980	WK4	*	1980	11	29.29410	04	11	18.30	+12	19	52.6	18.5V	6 675
1980	WK4		1980	12	01.29271	04	09	27.92	+12	12	58.6		6 675
1980	WL4	*	1980	11	29.29410	04	12	46.37	+16	55	51.7	18.2V	6 675
1980	WL4		1980	12	01.29271	04	10	51.28	+16	49	44.9		6 675
1980	WM4	*	1980	11	29.29410	04	13	27.90	+13	44	10.0	18.5V	6 675
1980	WM4		1980	12	01.29271	04	11	56.16	+13	21	43.2		6 675
1980	WN4	*	1980	11	29.29410	04	13	54.13	+13	11	16.1	18.8V	6 675
1980	WN4		1980	12	01.29271	04	12	14.16	+12	47	55.1		6 675
1980	WO4	*	1980	11	29.29410	04	16	06.49	+14	39	09.7	17.0V	6 675
1980	WO4		1980	12	01.29271	04	14	25.07	+14	32	35.9		6 675
1980	WP4	*	1980	11	29.29410	04	16	36.10	+12	12	45.5	17.8V	6 675
1980	WP4		1980	12	01.29271	04	14	29.12	+12	22	12.5		6 675
1980	WQ4	*	1980	11	29.29410	04	16	39.61	+11	17	02.7	18.0V	6 675
1980	WQ4		1980	12	01.29271	04	14	29.27	+11	18	07.6		6 675
1980	WR4	*	1980	11	29.29410	04	17	13.95	+15	09	23.5	18.0V	6 675
1980	WR4		1980	12	01.29271	04	14	58.47	+15	13	20.2		6 675
1980	WS4	*	1980	11	29.29410	04	17	35.92	+14	49	18.3	18.8V	6 675
1980	WS4		1980	12	01.29271	04	15	19.54	+14	51	32.8		6 675
1980	WT4	*	1980	11	29.29410	04	17	52.04	+15	39	47.3	19.0V	6 675
1980	WT4		1980	12	01.29271	04	15	39.83	+15	39	08.4		6 675
1980	WU4	*	1980	11	29.29410	04	18	19.58	+17	02	59.0	17.5V	6 675
1980	WU4		1980	12	01.29271	04	16	22.25	+16	46	20.6		6 675
1980	WV4	*	1980	11	29.29410	04	18	57.01	+15	08	35.7	15.0V	6 675
1980	WV4		1980	12	01.29271	04	17	06.25	+14	07	52.2		6 675
1980	WW4	*	1980	11	29.29410	04	18	57.19	+16	35	47.5	17.0V	6 675
1980	WW4		1980	12	01.29271	04	16	43.22	+16	30	37.0		6 675
1980	WX4	*	1980	11	29.29410	04	19	14.91	+14	52	05.8	19.0V	6 675
1980	WX4		1980	12	01.29271	04	15	40.30	+15	31	59.1		6 675
1980	WY4	*	1980	11	29.29410	04	19	31.96	+15	57	44.4	18.8V	6 675

1980	WY4		1980	12	01.29271	04	17	31.40	+15	54	56.6		6 675
1980	WZ4	*	1980	11	29.29410	04	20	20.98	+13	44	53.4	17.2V	6 675
1980	WZ4		1980	12	01.29271	04	18	35.37	+13	44	56.4		6 675
1980	WA5	*	1980	11	29.29410	04	20	45.98	+16	07	54.4	17.0V	6 675
1980	WA5		1980	12	01.29271	04	18	41.02	+16	15	05.8		6 675
1980	WB5	*	1980	11	29.29410	04	21	28.10	+13	02	30.1	19.2V	6 675
1980	WB5		1980	12	01.29271	04	19	22.65	+12	57	57.7		6 675
1980	WC5	*	1980	11	29.29410	04	21	30.84	+13	16	44.0	18.2V	6 675
1980	WC5		1980	12	01.29271	04	19	47.70	+13	07	44.2		6 675
1980	WD5	*	1980	11	29.29410	04	22	00.38	+13	59	06.6	18.5V	6 675
1980	WD5		1980	12	01.29271	04	20	02.90	+14	00	54.3		6 675
1980	WE5	*	1980	11	29.29410	04	22	39.42	+15	04	00.1	16.5V	6 675
1980	WE5		1980	12	01.29271	04	20	58.98	+14	50	36.9		6 675
1980	WF5	*	1980	11	29.29410	04	23	45.33	+17	22	21.2	18.5V	6 675
1980	WF5		1980	12	01.29271	04	21	48.60	+17	06	26.5		6 675
1980	WG5	*	1980	11	29.29410	04	23	45.45	+17	07	23.6	18.2V	6 675
1980	WG5		1980	12	01.29271	04	21	49.72	+17	02	47.1		6 675
1980	WH5	*	1980	11	29.29410	04	25	28.57	+15	15	44.9	17.5V	6 675
1980	WH5		1980	12	01.29271	04	23	16.99	+15	08	39.9		6 675
1980	WJ5	*	1980	11	29.29410	04	26	36.96	+13	05	21.0	19.8V	6 675
1980	WJ5		1980	12	01.29271	04	24	29.05	+13	00	13.4		6 675
1980	WK5	*	1980	11	29.29410	04	27	06.15	+16	08	42.0	19.0V	6 675
1980	WK5		1980	12	01.29271	04	24	54.36	+16	12	43.4		6 675
1980	WL5	*	1980	11	29.29410	04	28	06.50	+16	33	20.6	17.5V	6 675
1980	WL5		1980	12	01.29271	04	25	51.95	+16	30	34.0		6 675
1981	DZ		1991	07	18.44063	22	11	00.25	+02	20	06.2	18.8	9 675
1981	DZ		1991	07	18.47135	22	10	59.36	+02	20	07.3		9 675
1981	DX1		1991	08	09.46892	23	54	39.96	+09	00	15.7	17.8	9 675
1981	DX1		1991	08	10.44618	23	54	25.55	+09	08	08.0		9 675
1981	EH4		1991	08	09.27656	20	57	43.14	-01	21	34.7	17.0	9 675
1981	EH4		1991	08	09.30903	20	57	41.34	-01	21	40.5		9 675
1981	EH11		1991	08	07.39306	23	37	31.01	-06	19	39.6		9 675
1981	EH11		1991	08	07.42257	23	37	30.13	-06	19	30.4		9 675
1981	EH11		1991	08	08.42483	23	37	03.21	-06	14	41.8	17.0	9 675
1981	EH11		1991	08	08.45660	23	37	02.30	-06	14	32.7		9 675
1981	EA12		1971	03	24.38924	12	07	58.48	-03	35	17.6		4 675
1981	EA12		1971	03	25.27326	12	07	08.16	-03	28	49.2		4 675
1981	EA12		1971	03	25.31562	12	07	05.65	-03	28	31.7	18.9	4 675
1981	EA12		1971	03	26.26771	12	06	11.69	-03	21	34.7		4 675
1981	EA12		1971	03	27.32500	12	05	11.46	-03	13	48.7		4 675
1981	EA12		1971	04	02.40000	11	59	37.43	-02	29	39.6		4 675
1981	EA12		1971	04	16.18087	11	49	17.87	-01	00	50.5		4 675
1981	EA12		1971	04	16.26458	11	49	14.69	-01	00	24.2		4 675
1981	ED19		1991	08	05.27500	21	26	01.77	-13	00	33.8	16.8	9 675
1981	ED19		1991	08	05.28484	21	26	01.33	-13	00	33.9	16.8	9 675
1981	ED19		1991	08	05.31302	21	25	59.89	-13	00	44.5		9 675
1981	ED19		1991	08	05.32135	21	25	59.43	-13	00	44.5		9 675
1981	ED19		1991	08	07.32240	21	24	19.79	-13	10	25.2	16.8	9 675
1981	ED19		1991	08	07.35069	21	24	18.20	-13	10	34.8		9 675
1981	ED19		1991	08	08.30399	21	23	30.42	-13	15	11.4	16.8	9 675
1981	ED19		1991	08	08.33264	21	23	28.96	-13	15	19.4		9 675
1981	EP19		1971	03	26.31007	12	25	33.24	-00	51	47.7		4 675
1981	EP19		1971	03	26.34896	12	25	30.96	-00	51	29.5	19.0	4 675
1981	EP19		1971	03	27.35208	12	24	33.86	-00	44	01.0		4 675
1981	EP19		1971	04	02.41285	12	18	50.43	+00	00	29.9		4 675
1981	EP19		1971	04	02.43993	12	18	48.35	+00	00	43.7		4 675
1981	EP19		1971	04	16.16458	12	07	08.36	+01	29	31.7		4 675
1981	EP19		1971	04	16.25069	12	07	04.42	+01	30	01.4		4 675
1981	ED24		1971	03	25.24340	12	16	19.83	+02	25	09.7		4 675

1981	ED24	1971	03	25.28715	12	16	17.81	+02	25	31.2		19.0	4 675
1981	ED24	1971	03	26.25208	12	15	36.29	+02	32	46.7			4 675
1981	ED24	1971	03	27.31181	12	14	50.01	+02	40	45.7			4 675
1981	ED24	1971	04	02.41285	12	10	29.38	+03	25	18.0			4 675
1981	ED24	1971	04	16.16458	12	01	47.33	+04	51	58.1			4 675
1981	ED24	1971	04	16.25069	12	01	44.32	+04	52	25.7			4 675
1981	ET26	1971	03	24.38924	12	02	26.66	-01	27	07.5			4 675
1981	ET26	1971	03	25.27326	12	01	29.69	-01	23	13.8			4 675
1981	ET26	1971	03	25.31562	12	01	26.92	-01	23	02.4		17.9	4 675
1981	ET26	1971	03	26.26771	12	00	25.60	-01	18	50.7			4 675
1981	ET26	1971	03	27.32500	11	59	17.11	-01	14	09.7			4 675
1981	EO27	1991	07	12.42708	22	10	52.07	+01	00	55.6		16.8	9 675
1981	EO27	1991	07	12.45434	22	10	52.31	+01	00	59.6			9 675
1981	EO27	1991	07	18.44063	22	11	25.24	+01	09	06.4		16.5	9 675
1981	EO27	1991	07	18.47135	22	11	25.08	+01	09	06.9			9 675
1981	EP28	1971	03	24.38924	11	56	57.29	-01	04	24.0			4 675
1981	EP28	1971	03	25.24340	11	56	17.45	-00	59	58.1			4 675
1981	EP28	1971	03	25.27326	11	56	16.10	-00	59	50.0			4 675
1981	EP28	1971	03	25.28715	11	56	15.35	-00	59	45.4			4 675
1981	EP28	1971	03	25.31562	11	56	14.00	-00	59	35.9		19.0	4 675
1981	EP28	1971	03	26.25208	11	55	30.41	-00	54	48.1			4 675
1981	EP28	1971	03	26.26771	11	55	29.77	-00	54	41.6			4 675
1981	EP28	1971	03	27.31181	11	54	41.12	-00	49	19.2			4 675
1981	EY30	1971	03	26.31007	12	25	52.32	+00	29	48.8			4 675
1981	EY30	1971	03	26.34896	12	25	49.95	+00	30	07.7		18.0	4 675
1981	EY30	1971	03	27.35208	12	24	52.29	+00	37	56.6			4 675
1981	EY30	1971	04	02.41285	12	19	02.60	+01	24	26.1			4 675
1981	EY30	1971	04	02.43993	12	19	00.87	+01	24	37.9			4 675
1981	EY30	1971	04	16.16458	12	06	47.73	+02	58	11.6			4 675
1981	EY30	1971	04	16.25069	12	06	43.34	+02	58	41.9			4 675
1981	EO40	1991	08	07.44948	23	24	45.30	+03	30	18.9		18.0	9 675
1981	EO40	1991	08	08.43003	23	24	35.66	+03	23	29.0		18.0	9 675
1981	EO40	1991	08	08.44149	23	24	35.62	+03	23	25.8		17.8	9 675
1981	EO40	1991	08	08.46441	23	24	35.27	+03	23	13.6			9 675
1981	QL2	1981	09	01.40521	22	33	51.07	-13	58	45.6		15.5V	6 675
1981	QL2	1981	09	02.40452	22	32	49.81	-13	59	04.5			6 675
1981	QM2	1981	09	03.41354	22	38	43.98	-15	55	19.0		17.2V	6 675
1981	QM2	1981	09	04.28403	22	37	50.58	-15	58	56.2			6 675
1981	QN2	1981	09	01.40521	22	15	26.55	-12	49	37.3		15.5V	6 675
1981	QN2	1981	09	02.40452	22	14	46.13	-12	55	54.6			6 675
1981	QP2	1981	09	01.40521	22	15	34.71	-13	55	27.0		17.0V	6 675
1981	QP2	1981	09	02.40452	22	14	49.76	-14	05	34.3			6 675
1981	QQ2	1981	09	01.40521	22	15	00.28	-13	52	01.5		17.0V	6 675
1981	QQ2	1981	09	02.40452	22	14	11.12	-14	00	26.3			6 675
1981	QS2	1981	09	01.40521	22	15	30.11	-13	09	55.5		17.5V	6 675
1981	QS2	1981	09	02.40452	22	14	36.69	-13	16	32.3			6 675
1981	QC3	1981	09	01.40521	22	13	46.47	-13	56	43.8		17.2V	6 675
1981	QC3	1981	09	02.40452	22	13	19.24	-14	06	59.5			6 675
1981	QT3	1981	09	01.40521	22	19	02.34	-14	40	59.7		16.5V	6 675
1981	QT3	1981	09	02.40452	22	18	15.43	-14	43	34.9			6 675
1981	RO1	1981	09	01.40521	22	33	57.43	-12	57	13.4		17.0V	6 675
1981	RO1	1981	09	02.40452	22	32	58.95	-13	04	51.2			6 675
1981	RV1	1981	09	01.40521	22	20	21.98	-15	11	30.2		17.8V	6 675
1981	RV1	1981	09	02.40452	22	19	19.39	-15	09	47.3			6 675
1981	RM3	1991	07	16.38993	22	04	03.07	-07	44	54.5		18.2	9 675
1981	RM3	1991	07	16.42917	22	04	02.32	-07	44	56.3			9 675
1981	RM3	1991	08	07.33698	21	52	11.74	-08	44	26.7		17.8	9 675
1981	RM3	1991	08	07.36840	21	52	10.25	-08	44	34.1			9 675
1981	RM3	1991	08	08.31128	21	51	29.40	-08	48	25.4		17.0	9 675

1981	RM3		1991	08	08.34045	21	51	28.05	-08	48	30.9		9 675
1981	RP5	*	1981	09	01.40521	22	15	17.22	-15	25	19.1	17.0V	6 675
1981	RP5		1981	09	02.40452	22	14	29.42	-15	29	16.2		6 675
1981	RQ5	*	1981	09	01.40521	22	15	37.48	-18	30	16.5	18.5V	6 675
1981	RQ5		1981	09	02.40452	22	14	47.86	-18	31	31.4		6 675
1981	RR5	*	1981	09	01.40521	22	15	39.03	-16	32	39.6	17.5V	6 675
1981	RR5		1981	09	02.40452	22	14	43.62	-16	32	34.5		6 675
1981	RS5	*	1981	09	01.40521	22	15	40.39	-15	33	27.1	17.5V	6 675
1981	RS5		1981	09	02.40452	22	15	05.66	-15	44	45.5		6 675
1981	RT5	*	1981	09	01.40521	22	16	16.26	-15	59	49.3	17.0V	6 675
1981	RT5		1981	09	02.40452	22	15	28.36	-16	07	48.6		6 675
1981	RU5	*	1981	09	01.40521	22	18	41.66	-13	10	23.4	17.2V	6 675
1981	RU5		1981	09	02.40452	22	17	55.63	-13	15	29.6		6 675
1981	RV5	*	1981	09	01.40521	22	18	44.33	-17	25	32.8	17.2V	6 675
1981	RV5		1981	09	02.40452	22	17	50.05	-17	31	00.3		6 675
1981	RW5	*	1981	09	01.40521	22	18	53.87	-16	19	37.5	15.8V	6 675
1981	RW5		1981	09	02.40452	22	18	11.04	-16	30	36.4		6 675
1981	RX5	*	1981	09	01.40521	22	19	06.22	-18	36	04.9	16.8V	6 675
1981	RX5		1981	09	02.40452	22	18	11.53	-18	39	51.6		6 675
1981	RY5	*	1981	09	01.40521	22	20	58.30	-13	28	22.3	17.0V	6 675
1981	RY5		1981	09	02.40452	22	19	54.94	-13	31	30.2		6 675
1981	RZ5	*	1981	09	01.40521	22	22	49.80	-16	08	26.3	16.8V	6 675
1981	RZ5		1981	09	02.40452	22	21	54.81	-16	11	33.7		6 675
1981	RA6	*	1981	09	01.40521	22	22	56.70	-14	31	47.2	18.0V	6 675
1981	RA6		1981	09	02.40452	22	22	12.84	-14	36	21.1		6 675
1981	RB6	*	1981	09	01.40521	22	23	00.05	-15	11	27.9	15.0V	6 675
1981	RB6		1981	09	02.40452	22	22	14.23	-15	20	28.2		6 675
1981	RC6	*	1981	09	01.40521	22	23	04.35	-15	08	11.8	15.8V	6 675
1981	RC6		1981	09	02.40452	22	22	07.16	-15	15	36.7		6 675
1981	RD6	*	1981	09	01.40521	22	23	29.22	-15	38	29.3	18.2V	6 675
1981	RD6		1981	09	02.40452	22	22	40.76	-15	44	49.6		6 675
1981	RE6	*	1981	09	01.40521	22	23	43.39	-17	24	41.1	16.5V	6 675
1981	RE6		1981	09	02.40452	22	22	54.83	-17	28	39.1		6 675
1981	RF6	*	1981	09	01.40521	22	23	59.63	-14	17	27.4	17.0V	6 675
1981	RF6		1981	09	02.40452	22	23	06.70	-14	20	41.5		6 675
1981	RG6	*	1981	09	01.40521	22	24	10.44	-14	43	37.0	16.5V	6 675
1981	RG6		1981	09	02.40452	22	23	16.44	-14	47	41.1		6 675
1981	RH6	*	1981	09	01.40521	22	25	44.58	-17	40	59.1	16.8V	6 675
1981	RH6		1981	09	02.40452	22	24	52.67	-17	44	19.7		6 675
1981	RJ6	*	1981	09	01.40521	22	27	56.56	-17	00	55.4	16.2V	6 675
1981	RJ6		1981	09	02.40452	22	27	15.26	-17	13	08.1		6 675
1981	RK6	*	1981	09	01.40521	22	28	08.57	-13	24	14.0	15.0V	6 675
1981	RK6		1981	09	02.40452	22	27	12.28	-13	27	07.5		6 675
1981	RL6	*	1981	09	01.40521	22	29	08.05	-16	15	25.8	17.0V	6 675
1981	RL6		1981	09	02.40452	22	28	18.72	-16	19	48.4		6 675
1981	RM6	*	1981	09	01.40521	22	29	08.94	-17	44	22.6	17.5V	6 675
1981	RM6		1981	09	02.40452	22	28	02.93	-17	42	38.5		6 675
1981	RN6	*	1981	09	01.40521	22	29	17.88	-13	58	13.6	17.2V	6 675
1981	RN6		1981	09	02.40452	22	28	31.20	-14	05	17.2		6 675
1981	RO6	*	1981	09	01.40521	22	29	37.91	-16	38	17.0	17.5V	6 675
1981	RO6		1981	09	02.40452	22	28	50.81	-16	41	08.8		6 675
1981	RP6	*	1981	09	01.40521	22	29	44.55	-12	50	50.4	16.2V	6 675
1981	RP6		1981	09	02.40452	22	28	51.04	-12	53	49.3		6 675
1981	RQ6	*	1981	09	01.40521	22	33	50.46	-13	54	29.0	17.8V	6 675
1981	RQ6		1981	09	02.40452	22	33	05.38	-14	02	05.5		6 675
1981	RR6	*	1981	09	01.40521	22	36	58.37	-16	15	18.2	17.5V	6 675
1981	RR6		1981	09	02.40452	22	36	02.11	-16	22	34.6		6 675
1981	RS6	*	1981	09	01.40521	22	37	37.36	-18	34	33.3	16.5V	6 675
1981	RS6		1981	09	02.40452	22	36	33.70	-18	35	56.0		6 675

1981	RT6	*	1981	09	03.41354	22	37	10.79	-12	16	40.3	17.0V	6 675
1981	RT6		1981	09	04.28403	22	36	32.61	-12	20	55.7		6 675
1981	RU6	*	1981	09	03.41354	22	38	06.32	-12	42	12.3	17.0V	6 675
1981	RU6		1981	09	04.28403	22	37	24.63	-12	48	26.3		6 675
1981	RV6	*	1981	09	03.41354	22	38	55.02	-14	05	38.8	17.5V	6 675
1981	RV6		1981	09	04.28403	22	38	18.46	-14	12	14.9		6 675
1981	RW6	*	1981	09	03.41354	22	38	57.90	-13	52	34.3	16.0V	6 675
1981	RW6		1981	09	04.28403	22	38	16.38	-13	56	55.3		6 675
1981	RX6	*	1981	09	03.41354	22	39	32.63	-12	49	29.7	17.2V	6 675
1981	RX6		1981	09	04.28403	22	38	39.12	-12	51	24.7		6 675
1981	RY6	*	1981	09	03.41354	22	40	26.78	-13	02	48.0	16.8V	6 675
1981	RY6		1981	09	04.28403	22	39	42.26	-13	06	28.9		6 675
1981	RZ6	*	1981	09	03.41354	22	40	28.67	-12	53	59.2	16.2V	6 675
1981	RZ6		1981	09	04.28403	22	39	55.27	-13	06	41.0		6 675
1981	RA7	*	1981	09	03.41354	22	41	13.19	-12	24	10.4	17.2V	6 675
1981	RA7		1981	09	04.28403	22	40	20.26	-12	25	29.9		6 675
1981	RB7	*	1981	09	03.41354	22	41	15.27	-13	07	49.3	17.2V	6 675
1981	RB7		1981	09	04.28403	22	40	27.26	-13	11	31.6		6 675
1981	RC7	*	1981	09	03.41354	22	41	41.33	-14	37	42.1	17.0V	6 675
1981	RC7		1981	09	04.28403	22	40	55.51	-14	42	14.8		6 675
1981	RD7	*	1981	09	03.41354	22	41	54.05	-12	49	17.6	16.5V	6 675
1981	RD7		1981	09	04.28403	22	41	09.47	-12	54	08.9		6 675
1981	RE7	*	1981	09	03.41354	22	42	29.52	-15	11	11.1	18.0V	6 675
1981	RE7		1981	09	04.28403	22	41	32.04	-15	13	06.7		6 675
1981	RF7	*	1981	09	03.41354	22	44	51.72	-11	26	41.2	15.5V	6 675
1981	RF7		1981	09	04.28403	22	44	03.81	-11	26	00.4		6 675
1981	RG7	*	1981	09	03.41354	22	44	52.27	-12	05	25.4	17.5V	6 675
1981	RG7		1981	09	04.28403	22	43	50.36	-12	03	59.5		6 675
1981	RH7	*	1981	09	03.41354	22	45	18.95	-11	04	59.5	16.8V	6 675
1981	RH7		1981	09	04.28403	22	44	36.72	-11	08	41.8		6 675
1981	RJ7	*	1981	09	03.41354	22	45	52.40	-11	45	11.5	16.0V	6 675
1981	RJ7		1981	09	04.28403	22	45	17.51	-11	56	34.8		6 675
1981	RK7	*	1981	09	03.41354	22	45	55.27	-11	27	29.1	16.5V	6 675
1981	RK7		1981	09	04.28403	22	45	14.02	-11	34	00.4		6 675
1981	RL7	*	1981	09	03.41354	22	46	19.46	-16	20	26.0	16.8V	6 675
1981	RL7		1981	09	04.28403	22	45	24.63	-16	20	42.3		6 675
1981	RM7	*	1981	09	03.41354	22	47	12.98	-14	34	01.8	16.2V	6 675
1981	RM7		1981	09	04.28403	22	46	29.94	-14	41	43.6		6 675
1981	RN7	*	1981	09	03.41354	22	47	27.30	-13	59	52.1	17.5V	6 675
1981	RN7		1981	09	04.28403	22	46	45.91	-14	06	00.5		6 675
1981	RO7	*	1981	09	03.41354	22	53	20.07	-11	52	58.3	17.0V	6 675
1981	RO7		1981	09	04.28403	22	52	26.69	-11	53	58.8		6 675
1981	RP7	*	1981	09	03.41354	22	54	03.53	-12	55	48.6	17.2V	6 675
1981	RP7		1981	09	04.28403	22	53	11.77	-12	57	26.9		6 675
1981	RQ7	*	1981	09	03.41354	22	56	01.47	-12	20	36.7	17.5V	6 675
1981	RQ7		1981	09	04.28403	22	55	25.09	-12	23	32.7		6 675
1981	RR7	*	1981	09	03.41354	22	56	53.63	-16	52	48.0	17.5V	6 675
1981	RR7		1981	09	04.28403	22	55	58.48	-16	56	12.4		6 675
1981	RS7	*	1981	09	03.41354	22	58	40.11	-17	11	40.2	16.5V	6 675
1981	RS7		1981	09	04.28403	22	57	54.41	-17	16	13.3		6 675
1981	RT7	*	1981	09	03.41354	22	58	44.84	-12	53	54.7	16.0V	6 675
1981	RT7		1981	09	04.28403	22	57	50.80	-12	53	16.1		6 675
1981	RU7	*	1981	09	03.41354	22	59	40.61	-14	46	56.5	17.2V	6 675
1981	RU7		1981	09	04.28403	22	59	15.15	-15	01	11.7		6 675
1981	RV7	*	1981	09	03.41354	23	01	24.85	-17	02	13.0	16.8V	6 675
1981	RV7		1981	09	04.28403	23	00	43.08	-17	09	25.8		6 675
1981	SY1		1991	08	05.27500	21	11	45.16	-16	59	48.2	15.5	9 675
1981	SY1		1991	08	05.31302	21	11	42.78	-16	59	50.4		9 675
1981	SY1		1991	08	07.32240	21	09	41.37	-17	01	58.1	15.8	9 675

1981	SY1	1991	08	07.35069	21	09	39.51	-17	02	00.0		9 675
1981	SQ2	1981	09	01.40521	22	19	48.57	-16	51	25.9	15.0V	6 675
1981	SQ2	1981	09	02.40452	22	18	52.22	-16	53	22.2		6 675
1981	WA1	1990	09	15.20590	21	01	53.08	-18	19	57.3	18.0	9 675
1981	WA1	1990	09	15.23229	21	01	52.56	-18	20	00.0		9 675
1981	XH2	1991	07	12.42708	21	58	54.30	+00	05	35.6	16.5	9 675
1981	XH2	1991	07	12.45434	21	58	53.91	+00	05	42.3	16.8	9 675
1981	XH2	1991	07	18.44063	21	57	08.60	+00	24	31.5	16.2	9 675
1981	XH2	1991	07	18.47135	21	57	07.93	+00	24	36.5		9 675
1981	YO1	1991	07	10.20295	16	08	07.04	-19	45	23.5	16	2 675
1981	YO1	1991	07	10.22986	16	08	05.92	-19	45	43.1		2 675
1981	YO1	1991	07	11.21944	16	07	26.25	-19	57	56.9		2 675
1981	YO1	1991	07	11.24106	16	07	25.23	-19	58	11.7		2 675
1982	FC	1990	09	14.27604	22	28	43.50	-23	10	23.0	17.8	9 675
1982	FC	1990	09	14.31354	22	28	41.21	-23	10	22.5		9 675
1982	ST6	1991	08	05.27500	21	31	09.49	-15	18	14.3	17.0	9 675
1982	ST6	1991	08	05.29363	21	31	08.65	-15	18	14.2	17.0	9 675
1982	ST6	1991	08	05.31302	21	31	07.63	-15	18	21.7		9 675
1982	ST6	1991	08	05.32951	21	31	06.87	-15	18	23.6		9 675
1982	ST6	1991	08	07.32240	21	29	27.39	-15	25	26.8	17.0	9 675
1982	ST6	1991	08	07.35069	21	29	25.91	-15	25	32.8		9 675
1982	TK3	1991	08	08.43003	23	21	24.60	+00	26	06.6	18.0	9 675
1982	TK3	1991	08	08.46441	23	21	23.66	+00	26	09.5		9 675
1982	UQ6	1991	08	05.29363	21	53	39.99	-10	45	58.1	17.8	9 675
1982	UQ6	1991	08	05.32951	21	53	38.37	-10	46	07.0		9 675
1982	UQ6	1991	08	08.31128	21	51	24.80	-10	57	35.4	17.5	9 675
1982	UQ6	1991	08	08.34045	21	51	23.35	-10	57	44.5		9 675
1982	UT6	1991	08	07.38524	23	21	47.23	-05	08	08.5	17.8	9 675
1982	UT6	1991	08	07.41406	23	21	46.33	-05	08	12.7		9 675
1982	UT6	1991	08	08.42483	23	21	22.17	-05	10	21.7	17.8	9 675
1982	UT6	1991	08	08.45660	23	21	21.38	-05	10	27.0		9 675
1982	UT6	1991	08	10.40851	23	20	30.35	-05	15	02.1	17.8	9 675
1983	AA3	1981	09	03.41354	23	01	19.13	-16	52	27.7	17.2V	6 675
1983	AA3	1981	09	04.28403	23	00	30.93	-16	55	25.4		6 675
1983	CN3	1981	09	03.41354	22	39	14.48	-11	25	18.7	15.0V	6 675
1983	CN3	1981	09	04.28403	22	38	31.87	-11	39	00.0		6 675
1983	HJ	1990	09	15.20590	21	02	21.58	-17	56	09.5	18.5	9 675
1983	HJ	1990	09	15.23229	21	02	20.92	-17	56	13.2		9 675
1983	HB1	1990	09	15.26840	22	15	24.98	-25	34	36.8	16.8	9 675
1983	HB1	1990	09	15.30330	22	15	23.71	-25	34	43.7		9 675
1983	JQ	1971	03	26.31007	12	34	34.52	+00	29	24.6		4 675
1983	JQ	1971	03	26.34896	12	34	32.68	+00	29	37.4	17.1	4 675
1983	JQ	1971	03	27.35208	12	33	48.72	+00	34	47.3		4 675
1983	JQ	1971	04	02.43993	12	29	18.69	+01	05	48.2		4 675
1983	JQ	1971	04	16.21476	12	19	37.03	+02	07	57.7		4 675
1983	JQ	1971	04	16.27708	12	19	34.39	+02	08	12.5		4 675
1983	PY	1971	03	25.33090	12	41	36.44	-04	21	06.3		4 675
1983	PY	1971	03	26.29653	12	40	45.89	-04	13	06.8		4 675
1983	PY	1971	03	26.33611	12	40	43.76	-04	12	46.5	18.3	4 675
1983	PY	1971	03	27.33854	12	39	51.36	-04	04	30.2		4 675
1983	PY	1971	04	02.42604	12	34	26.13	-03	13	10.3		4 675
1983	PZ	1980	11	29.23715	03	41	37.12	+15	00	02.2	16.5V	6 675
1983	PZ	1980	12	01.23577	03	39	38.24	+14	50	19.5		6 675
1983	QH1	1980	11	29.23715	04	00	47.89	+13	08	32.8	16.8V	6 675
1983	QH1	1980	12	01.23577	03	58	39.58	+13	03	56.2		6 675
1983	RK3	1971	03	24.42015	12	29	53.42	-02	04	48.5		4 675
1983	RK3	1971	03	25.33090	12	29	11.18	-02	00	32.0		4 675
1983	RK3	1971	03	26.29653	12	28	26.03	-01	56	00.4		4 675
1983	RK3	1971	03	26.31007	12	28	25.40	-01	56	00.7		4 675

1983	RK3	1971	03	26.33611	12	28	24.23	-01	55	50.4	19.4	4 675
1983	RK3	1971	03	26.34896	12	28	23.57	-01	55	51.3		4 675
1983	RK3	1971	03	27.33854	12	27	37.21	-01	51	09.2		4 675
1983	RK3	1971	03	27.35208	12	27	36.59	-01	51	07.6		4 675
1983	RK3	1971	04	02.43993	12	22	52.60	-01	22	53.2		4 675
1983	RK3	1971	04	16.21476	12	12	56.51	-00	24	48.7		4 675
1983	RK3	1971	04	16.27708	12	12	53.91	-00	24	31.9		4 675
1983	RT3	1991	07	14.38177	21	24	43.67	-23	30	45.8	18.0	9 675
1983	RT3	1991	07	14.42170	21	24	41.75	-23	30	46.8		9 675
1983	TW1	1991	08	05.27500	21	19	24.19	-17	09	26.2	16.0	9 675
1983	TW1	1991	08	05.31302	21	19	22.37	-17	09	41.5		9 675
1983	TW1	1991	08	07.32240	21	17	51.44	-17	23	04.3	15.8	9 675
1983	TW1	1991	08	07.35069	21	17	50.00	-17	23	15.8		9 675
1984	EC	1981	09	03.41354	22	45	44.96	-12	49	45.3	16.2V	6 675
1984	EC	1981	09	04.28403	22	44	53.50	-12	50	55.1		6 675
1984	HE1	1991	07	12.42708	22	04	23.46	+04	24	25.6		9 675
1984	HE1	1991	07	12.45434	22	04	22.95	+04	24	30.5		9 675
1984	QR	1991	08	06.35503	22	08	31.86	-11	22	56.9	16.2	9 675
1984	QR	1991	08	06.38698	22	08	29.40	-11	22	43.9		9 675
1984	SR	1971	03	24.38924	12	07	13.97	-02	13	35.5		4 675
1984	SR	1971	03	25.27326	12	06	03.63	-02	13	39.8		4 675
1984	SR	1971	03	25.31562	12	06	00.27	-02	13	40.4	18.5	4 675
1984	SR	1971	03	26.26771	12	04	44.95	-02	13	43.3		4 675
1984	SR	1971	03	27.32500	12	03	21.49	-02	13	46.7		4 675
1984	SR	1971	04	02.40000	11	55	38.73	-02	14	07.6		4 675
1984	SW5	1991	08	05.28484	21	38	23.10	-11	19	24.6	17.5	9 675
1984	SW5	1991	08	05.29363	21	38	22.95	-11	19	27.3	17.5	9 675
1984	SW5	1991	08	05.32135	21	38	21.82	-11	19	34.7		9 675
1984	SW5	1991	08	05.32951	21	38	21.60	-11	19	36.0		9 675
1984	SW5	1991	08	08.30399	21	36	38.29	-11	30	34.3	17.5	9 675
1984	SW5	1991	08	08.31128	21	36	38.17	-11	30	37.7	17.8	9 675
1984	SW5	1991	08	08.33264	21	36	37.30	-11	30	40.5		9 675
1984	SW5	1991	08	08.34045	21	36	37.05	-11	30	44.1		9 675
1984	SX5	1991	08	08.42483	23	42	14.89	-01	03	10.3	17.2	9 675
1984	SX5	1991	08	08.45660	23	42	14.49	-01	03	18.7		9 675
1985	CH2	1991	08	08.42483	23	29	11.32	-04	47	38.8	18.5	9 675
1985	CH2	1991	08	08.45660	23	29	10.65	-04	47	50.5		9 675
1985	RW	1980	12	01.29271	04	07	37.67	+17	01	08.5	16.8V	6 675
1985	TG3	1991	03	09.33385	11	48	56.34	-11	00	05.0	18.1	3 675
1985	TG3	1991	03	09.36996	11	48	55.34	-11	00	01.3		3 675
1985	XS	1980	11	29.23715	03	45	48.84	+16	08	11.8	17.0V	6 675
1985	XS	1980	12	01.23577	03	44	05.30	+16	02	50.8		6 675
1986	AA2	1980	11	29.23715	03	43	28.09	+12	07	44.1	17.2V	6 675
1986	AA2	1980	12	01.23577	03	41	39.93	+12	05	21.9		6 675
1986	AO2	1971	03	24.38924	12	12	04.89	-03	16	10.4		4 675
1986	AO2	1971	03	25.27326	12	11	10.98	-03	13	22.4		4 675
1986	AO2	1971	03	25.31562	12	11	08.29	-03	13	13.0	18.1	4 675
1986	AO2	1971	03	26.26771	12	10	10.45	-03	10	10.7		4 675
1986	AO2	1971	03	27.32500	12	09	05.98	-03	06	48.2		4 675
1986	AO2	1971	04	02.40000	12	03	05.23	-02	47	22.2		4 675
1986	AO2	1971	04	16.18087	11	51	24.47	-02	09	45.4		4 675
1986	AO2	1971	04	16.26458	11	51	20.75	-02	09	34.0		4 675
1986	ET	1991	08	07.38524	23	15	44.47	-06	52	02.8	17.8	9 675
1986	ET	1991	08	07.39306	23	15	44.12	-06	52	05.6	18.2	9 675
1986	ET	1991	08	07.41406	23	15	43.34	-06	52	06.8		9 675
1986	ET	1991	08	07.42257	23	15	43.02	-06	52	10.0		9 675
1986	ET	1991	08	10.40851	23	13	52.69	-06	59	13.0	18.5	9 675
1986	EZ1	1991	08	05.29363	21	52	18.01	-11	36	42.0	17.8	9 675
1986	EZ1	1991	08	05.32951	21	52	16.03	-11	36	51.9		9 675

1986	EZ1	1991	08	06.35503	21	51	21.17	-11	40	56.0		17.8	9 675
1986	EZ1	1991	08	06.38698	21	51	19.40	-11	41	04.5			9 675
1986	EZ1	1991	08	08.31128	21	49	34.49	-11	48	56.6		18.0	9 675
1986	EZ1	1991	08	08.34045	21	49	32.76	-11	49	04.1			9 675
1986	JD	1980	11	29.29410	04	10	52.15	+12	16	10.1		17.8V	6 675
1986	JD	1980	12	01.29271	04	08	43.58	+12	15	49.5			6 675
1986	PC1	1991	06	16.39115	17	13	30.47	-20	14	54.5		15	2 675
1986	PC1	1991	06	16.41441	17	13	29.28	-20	14	52.9			2 675
1986	PX5	1990	09	14.27604	22	31	04.25	-17	17	16.1		16.5	9 675
1986	PX5	1990	09	14.31354	22	31	02.51	-17	17	29.3			9 675
1986	QZ2	1990	09	15.26840	21	56	32.83	-22	21	01.7		17.2	9 675
1986	QZ2	1990	09	15.30330	21	56	31.17	-22	20	55.2			9 675
1986	QS3	1991	08	05.29363	21	51	41.42	-13	02	43.2		17.0	9 675
1986	QS3	1991	08	05.32951	21	51	39.96	-13	03	00.1			9 675
1986	QS3	1991	08	08.31128	21	49	38.27	-13	25	53.3		17.2	9 675
1986	QS3	1991	08	08.34045	21	49	36.96	-13	26	06.3			9 675
1986	RU2	1971	03	24.38924	11	59	25.98	-01	31	15.4			4 675
1986	RU2	1971	03	25.27326	11	58	32.74	-01	26	22.8			4 675
1986	RU2	1971	03	25.31562	11	58	30.10	-01	26	08.7		18.1	4 675
1986	RU2	1971	03	26.26771	11	57	32.96	-01	20	56.1			4 675
1986	SD2	1991	08	06.39410	22	34	10.52	+00	21	07.4			9 675
1986	SD2	1991	08	06.42743	22	34	09.14	+00	21	09.3			9 675
1986	SD2	1991	08	08.38038	22	32	47.03	+00	23	53.7		16.5	9 675
1986	SD2	1991	08	08.41649	22	32	45.44	+00	23	56.0			9 675
1986	TB12	1990	09	15.20590	21	02	26.85	-17	12	04.3		18.5	9 675
1986	TB12	1990	09	15.23229	21	02	26.04	-17	12	05.7			9 675
1986	UA	1991	08	05.29363	21	41	10.10	-14	21	12.5		17.0	9 675
1986	UA	1991	08	05.32951	21	41	08.53	-14	21	21.1			9 675
1986	UA	1991	08	08.31128	21	38	57.86	-14	34	21.4		16.8	9 675
1986	UA	1991	08	08.34045	21	38	56.52	-14	34	29.1			9 675
1987	QS1	1991	08	05.29363	21	48	02.98	-15	10	25.9		17.2	9 675
1987	QS1	1991	08	05.32951	21	48	00.82	-15	10	30.6			9 675
1987	QS1	1991	08	08.31128	21	44	59.93	-15	17	16.0		17.0	9 675
1987	QS1	1991	08	08.34045	21	44	58.06	-15	17	19.5			9 675
1987	QZ1	1991	08	10.44618	00	20	18.95	+06	31	58.5			9 675
1987	QN7	1991	08	08.42483	23	44	58.00	-02	42	41.1		17.8	9 675
1987	QN7	1991	08	08.45660	23	44	58.23	-02	42	49.5			9 675
1987	QN7	1991	08	15.41424	23	45	28.77	-03	18	43.7		16.5	2 675
1987	QN7	1991	08	15.44184	23	45	28.66	-03	18	53.1			2 675
1987	QN7	1991	08	16.43333	23	45	26.09	-03	25	00.6			2 675
1987	RD1	1991	07	14.38177	21	06	17.96	-19	14	55.9		18.5	9 675
1987	RD1	1991	07	14.42170	21	06	16.26	-19	14	59.1			9 675
1987	RO3	1991	08	07.44948	23	19	55.42	+04	28	52.7		17.8	9 675
1987	RO3	1991	08	07.46545	23	19	55.24	+04	28	53.3		17.8	9 675
1987	RO3	1991	08	07.48229	23	19	55.12	+04	28	54.5			9 675
1987	RO3	1991	08	08.43003	23	19	52.07	+04	29	31.6		17.5	9 675
1987	RO3	1991	08	08.44149	23	19	52.08	+04	29	32.0		17.5	9 675
1987	RO3	1991	08	08.46441	23	19	51.81	+04	29	31.4			9 675
1987	RO3	1991	08	10.41771	23	19	40.14	+04	30	03.2		17.5	9 675
1987	RO3	1991	08	10.46597	23	19	39.69	+04	30	02.8			9 675
1987	SJ	1991	07	12.42708	22	01	50.76	-02	46	46.0		15.8	9 675
1987	SJ	1991	07	12.45434	22	01	51.18	-02	46	40.4			9 675
1987	SJ	1991	07	16.38993	22	02	49.24	-02	35	07.2		15.8	9 675
1987	SJ	1991	07	16.42917	22	02	49.55	-02	35	02.3			9 675
1987	SJ	1991	07	18.44063	22	03	08.09	-02	30	38.9		15.2	9 675
1987	SJ	1991	07	18.47135	22	03	08.21	-02	30	35.4			9 675
1987	SG1	1991	08	06.39410	22	19	56.17	+03	40	42.5		17.5	9 675
1987	ST11	1971	03	26.31007	12	41	26.02	+01	47	56.6			4 675
1987	ST11	1971	03	26.34896	12	41	23.65	+01	48	08.2		17.6	4 675

1987	ST11	1971	03	27.35208	12	40	24.32	+01	52	45.3	4	675
1987	ST11	1971	04	02.43993	12	34	23.48	+02	19	42.8	4	675
1987	ST11	1971	04	16.21476	12	21	38.44	+03	07	24.6	4	675
1987	ST11	1971	04	16.27708	12	21	35.31	+03	07	34.1	4	675
1987	SM13	1990	09	15.26840	21	48	30.79	-24	27	29.9	17.8 9	675
1987	SM13	1990	09	15.30330	21	48	29.09	-24	27	30.1	9	675
1987	SS17	1981	09	01.40521	22	14	53.34	-16	14	34.3	15.0V 6	675
1987	SS17	1981	09	02.40452	22	14	04.42	-16	15	52.2	6	675
1987	VB	1990	09	15.20590	20	41	05.87	-14	52	24.8	18.0 9	675
1987	VB	1990	09	15.23229	20	41	05.37	-14	52	25.7	9	675
1987	YL1	1991	08	05.28484	21	28	25.30	-13	04	33.8	16.5 9	675
1987	YL1	1991	08	05.29363	21	28	25.11	-13	04	38.4	16.8 9	675
1987	YL1	1991	08	05.32135	21	28	23.79	-13	04	54.4	9	675
1987	YL1	1991	08	05.32951	21	28	23.58	-13	05	00.8	9	675
1987	YL1	1991	08	07.32240	21	27	02.10	-13	24	43.5	16.8 9	675
1987	YL1	1991	08	07.35069	21	27	00.79	-13	25	01.8	9	675
1987	YL1	1991	08	08.30399	21	26	21.55	-13	34	27.5	16.5 9	675
1987	YL1	1991	08	08.33264	21	26	20.31	-13	34	44.1	9	675
1988	AF	1990	09	14.17917	21	13	25.56	-04	30	07.7	17.2 9	675
1988	AF	1990	09	14.21875	21	13	24.02	-04	30	11.9	9	675
1988	AA5	1991	08	05.26563	20	58	12.56	-07	20	55.5	17.0 9	675
1988	AA5	1991	08	05.30313	20	58	10.68	-07	21	07.2	9	675
1988	AA5	1991	08	09.27656	20	54	44.98	-07	40	21.3	17.5 9	675
1988	AA5	1991	08	09.30903	20	54	43.23	-07	40	31.5	9	675
1988	BW1	1991	03	12.43177	14	18	34.29	+02	04	05.1	18.0 3	675
1988	BW1	1991	03	12.46476	14	18	33.78	+02	04	07.9	3	675
1988	BY1	1991	03	09.42309	14	12	23.39	-04	58	46.9	18.6 3	675
1988	BY1	1991	03	12.42326	14	11	32.76	-04	56	03.2	3	675
1988	BY1	1991	03	12.45642	14	11	32.22	-04	56	01.5	3	675
1988	BO5	1990	09	15.20590	20	58	30.11	-18	38	53.9	18.5 9	675
1988	BO5	1990	09	15.23229	20	58	29.37	-18	38	57.3	19.0 9	675
1988	CH	1990	09	15.20590	20	39	27.50	-15	31	38.7	18.5 9	675
1988	CH	1990	09	15.23229	20	39	27.01	-15	31	42.9	9	675
1988	CA1	1980	11	29.29410	04	09	08.50	+12	52	30.2	18.0V 6	675
1988	CA1	1980	12	01.29271	04	06	52.97	+12	49	05.5	6	675
1988	CN2	1991	08	07.38524	23	01	47.24	-05	48	10.5	18.2 9	675
1988	CN2	1991	08	07.41406	23	01	46.32	-05	48	15.1	9	675
1988	CN2	1991	08	10.40851	23	00	14.20	-05	58	09.6	18.8 9	675
1988	EU	1971	03	26.31007	12	27	01.23	+00	42	39.5	4	675
1988	EU	1971	03	26.34896	12	26	59.44	+00	42	48.3	17.0 4	675
1988	EU	1971	03	27.35208	12	26	13.99	+00	46	34.7	4	675
1988	EU	1971	04	02.43993	12	21	39.41	+01	08	44.1	4	675
1988	EU	1971	04	16.21476	12	12	05.86	+01	50	52.2	4	675
1988	EU	1971	04	16.27708	12	12	03.26	+01	51	00.9	4	675
1988	RD3	1991	08	09.33872	22	14	44.30	-07	35	16.6	17.8 9	675
1988	RD3	1991	08	09.37257	22	14	42.56	-07	35	28.2	9	675
1988	RR3	1991	07	14.38177	21	25	03.95	-20	50	42.6	18.5 9	675
1988	RR3	1991	07	14.42170	21	25	02.07	-20	50	51.4	9	675
1988	TP1	1971	03	24.37118	12	18	10.82	+00	57	54.4	4	675
1988	TP1	1971	03	24.40486	12	18	09.20	+00	58	04.4	4	675
1988	TP1	1971	03	25.24340	12	17	30.37	+01	02	19.0	4	675
1988	TP1	1971	03	25.28715	12	17	28.26	+01	02	32.4	18.0 4	675
1988	TP1	1971	03	26.25208	12	16	43.44	+01	07	21.9	4	675
1988	TP1	1971	03	27.31181	12	15	54.03	+01	12	40.3	4	675
1988	TP1	1971	04	02.41285	12	11	12.49	+01	42	17.6	4	675
1988	TP1	1971	04	16.16458	12	01	37.71	+02	39	34.7	4	675
1988	TP1	1971	04	16.25069	12	01	34.39	+02	39	52.9	4	675
1988	TJ2	1991	08	07.39306	23	23	52.90	-09	38	41.7	9	675
1988	TJ2	1991	08	07.42257	23	23	51.91	-09	38	44.8	9	675

1988	UB	1991	08	05.27500	21	16	04.71	-16	07	26.6	17.2	9 675
1988	UB	1991	08	05.31302	21	16	02.25	-16	07	35.8		9 675
1988	UB	1991	08	07.32240	21	13	55.88	-16	15	48.8	17.8	9 675
1988	UB	1991	08	07.35069	21	13	54.03	-16	15	56.5		9 675
1988	VF1	1991	08	07.44948	23	37	20.37	+04	06	55.2	17.0	9 675
1988	VF1	1991	08	08.44149	23	37	23.86	+04	10	14.0	16.8	9 675
1988	VZ3	1991	07	16.38993	21	54	01.65	-05	38	49.3	18.2	9 675
1988	VZ3	1991	07	16.42917	21	54	00.30	-05	38	45.2		9 675
1988	VZ3	1991	08	07.33698	21	37	09.43	-05	37	48.9	17.8	9 675
1988	VZ3	1991	08	07.36840	21	37	07.41	-05	37	52.1		9 675
1988	XR	1971	03	24.38924	12	16	59.42	-03	11	23.6		4 675
1988	XR	1971	03	25.27326	12	16	11.17	-03	05	46.0		4 675
1988	XR	1971	03	25.31562	12	16	08.88	-03	05	30.0	19.5	4 675
1988	XR	1971	03	26.26771	12	15	16.55	-02	59	38.2		4 675
1988	XR	1971	03	27.32500	12	14	18.13	-02	53	08.5		4 675
1988	XR	1971	04	02.40000	12	08	49.35	-02	15	56.6		4 675
1988	XE1	1991	08	06.39410	22	32	45.17	+01	14	25.8	18.0	9 675
1988	XE1	1991	08	06.42743	22	32	43.68	+01	14	19.8		9 675
1989	AU1	1991	04	14.30243	12	19	14.93	-08	42	11.8	17.8	3 675
1989	AU1	1991	04	14.33351	12	19	14.17	-08	42	05.1		3 675
1989	AU1	1991	04	16.27760	12	18	23.88	-08	35	08.4		3 675
1989	BL	1991	03	09.42309	13	58	52.80	-03	13	30.2	18.1	3 675
1989	BL	1991	03	12.43177	13	58	03.82	-03	06	46.0	18.1	3 675
1989	BL	1991	03	12.46476	13	58	03.20	-03	06	42.5		3 675
1989	BW	1991	03	09.40556	13	58	04.63	+05	08	52.2	18.5	3 675
1989	BW	1991	03	09.43854	13	58	04.09	+05	08	59.4		3 675
1989	BN1	1991	08	06.35503	22	08	19.13	-10	25	25.8	18.0	9 675
1989	BN1	1991	08	06.38698	22	08	17.65	-10	25	37.9		9 675
1989	CW	1990	09	15.20590	21	02	54.42	-16	39	54.9	17.5	9 675
1989	CW	1990	09	15.23229	21	02	53.65	-16	39	56.8		9 675
1989	CY1	1990	09	15.20590	20	59	40.69	-15	52	12.8	18.8	9 675
1989	CY1	1990	09	15.23229	20	59	39.96	-15	52	15.7		9 675
1989	CW2	1991	08	05.26563	20	56	12.10	-04	58	47.1	17.0	9 675
1989	CW2	1991	08	05.30313	20	56	10.18	-04	58	51.3		9 675
1989	CW2	1991	08	09.27656	20	52	55.90	-05	05	58.6	16.8	9 675
1989	CW2	1991	08	09.30903	20	52	54.28	-05	06	03.1		9 675
1989	CU8	1991	08	05.35451	22	40	39.84	-10	54	50.0	17.8	9 675
1989	CU8	1991	08	08.37188	22	38	47.80	-11	05	48.9	17.5	9 675
1989	CU8	1991	08	08.40868	22	38	46.33	-11	05	57.0		9 675
1989	DJ	1991	05	14.24115	12	40	23.09	-26	46	00.9	17.9	3 675
1989	DJ	1991	05	14.27413	12	40	22.47	-26	45	53.3		3 675
1989	DJ	1991	05	16.22882	12	39	44.07	-26	39	18.7		3 675
1989	FA	1990	09	15.20590	20	57	40.37	-17	11	06.4	18.5	9 675
1989	FA	1990	09	15.23229	20	57	39.70	-17	11	09.0		9 675
1989	GB1	1991	08	06.39410	22	35	36.57	-01	07	31.4	19.0	9 675
1989	GB1	1991	08	06.42743	22	35	35.44	-01	07	36.6		9 675
1989	GB1	1991	08	08.38038	22	34	29.55	-01	12	49.2	17.8	9 675
1989	GB1	1991	08	08.41649	22	34	28.29	-01	12	55.4	18.2	9 675
1989	GL5	1991	08	15.40174	23	03	52.35	-15	16	49.1	16	2 675
1989	GL5	1991	08	15.42986	23	03	51.40	-15	16	59.5		2 675
1989	GL5	1991	08	16.39010	23	03	17.63	-15	22	34.5		2 675
1989	GL5	1991	08	16.41181	23	03	16.83	-15	22	42.5		2 675
1989	WL	1981	09	01.40521	22	36	34.44	-18	58	44.3	17.5V	6 675
1989	WL	1981	09	02.40452	22	35	36.57	-19	04	45.0		6 675
1989	YT	1971	03	24.37118	11	56	52.08	+03	55	37.2		4 675
1989	YT	1971	03	25.24340	11	56	06.09	+03	59	54.0		4 675
1989	YT	1971	03	25.28715	11	56	03.66	+04	00	07.9	19.4	4 675
1989	YT	1971	03	26.25208	11	55	12.80	+04	04	49.2		4 675
1990	CH	1991	08	05.27500	21	14	09.89	-18	16	42.8	16.8	9 675

1990	CH	1991	08	05.31302	21	14	07.44	-18	16	47.1		9 675
1990	CH	1991	08	07.32240	21	11	58.48	-18	20	11.2	16.8	9 675
1990	CH	1991	08	07.35069	21	11	56.51	-18	20	13.5		9 675
1990	DX	1991	08	08.42483	23	26	34.44	+00	34	45.4	17.8	9 675
1990	DX	1991	08	08.43003	23	26	34.21	+00	34	46.0	17.0	9 675
1990	DX	1991	08	08.46441	23	26	33.27	+00	34	45.0		9 675
1990	FT	1971	03	24.38924	12	00	37.64	-04	39	05.9		4 675
1990	FT	1971	03	25.27326	11	59	51.03	-04	38	37.4		4 675
1990	FT	1971	03	25.31562	11	59	48.79	-04	38	35.3	16.6	4 675
1990	FT	1971	03	26.26771	11	58	58.90	-04	38	06.3		4 675
1990	FT	1971	03	27.32500	11	58	03.23	-04	37	29.6		4 675
1990	FT	1971	04	02.40000	11	52	52.12	-04	33	43.3		4 675
1990	FW1	1971	03	24.37118	12	03	23.01	+03	48	08.2		4 675
1990	FW1	1971	03	25.24340	12	02	35.20	+03	52	46.7		4 675
1990	FW1	1971	03	25.28715	12	02	32.64	+03	53	00.7	16.9	4 675
1990	FW1	1971	03	26.25208	12	01	39.53	+03	58	01.3		4 675
1990	FW1	1971	03	27.31181	12	00	41.03	+04	03	28.7		4 675
1990	FW1	1971	04	02.41285	11	55	14.44	+04	32	31.7		4 675
1990	LA	1991	08	07.44948	23	48	50.51	+03	10	37.4	17.5	9 675
1990	LA	1991	08	08.44149	23	48	34.69	+03	05	53.1	17.5	9 675
1990	OL	1990	09	15.26840	21	55	26.55	-20	34	20.0	17.2	9 675
1990	OL	1990	09	15.30330	21	55	27.82	-20	34	53.7	17.5	9 675
1990	OY	1990	09	15.20590	20	41	15.07	-15	39	15.4	17.5	9 675
1990	OY	1990	09	15.23229	20	41	15.26	-15	39	32.1		9 675
1990	OD1	1990	09	15.20590	20	48	56.99	-22	30	13.9		9 675
1990	OD1	1990	09	15.23229	20	48	57.14	-22	30	13.1		9 675
1990	OY1	1990	09	15.26840	22	02	38.94	-22	25	40.4	17.5	9 675
1990	OY1	1990	09	15.30330	22	02	37.60	-22	25	41.7		9 675
1990	OA2	1990	09	16.18906	21	54	16.63	-20	22	05.9		9 675
1990	OA2	1990	09	16.23316	21	54	14.61	-20	21	48.5		9 675
1990	OC2	1990	09	15.26840	22	08	34.37	-25	44	15.3	17.0	9 675
1990	OC2	1990	09	15.30330	22	08	32.77	-25	44	12.5		9 675
1990	OD2	1990	09	15.26840	22	10	55.60	-24	52	34.8	17.8	9 675
1990	OD2	1990	09	15.30330	22	10	54.02	-24	52	26.2		9 675
1990	OF2	1990	09	15.20590	20	57	34.85	-20	55	38.7		9 675
1990	OF2	1990	09	15.23229	20	57	34.73	-20	55	27.1	17.8	9 675
1990	QD2	1971	03	24.37118	12	05	52.01	+02	06	23.4		4 675
1990	QD2	1971	03	25.24340	12	05	02.48	+02	12	05.3		4 675
1990	QD2	1971	03	25.28715	12	04	59.88	+02	12	24.7	18.2	4 675
1990	QD2	1971	03	26.25208	12	04	04.77	+02	18	39.1		4 675
1990	QD2	1971	03	27.31181	12	03	04.21	+02	25	31.3		4 675
1990	QD2	1971	04	02.41285	11	57	21.49	+03	03	34.9		4 675
1990	QG2	1971	03	24.40486	12	40	24.12	+03	20	33.7		4 675
1990	QG2	1971	03	26.31007	12	39	07.76	+03	35	46.7		4 675
1990	QG2	1971	03	26.34896	12	39	06.16	+03	36	05.6	17.3	4 675
1990	QG2	1971	03	27.35208	12	38	25.46	+03	44	01.5		4 675
1990	QB4	1971	03	24.40486	12	28	19.42	+01	44	28.6		4 675
1990	QB4	1971	03	26.31007	12	27	00.18	+01	56	21.4		4 675
1990	QB4	1971	03	26.34896	12	26	58.57	+01	56	35.6	17.4	4 675
1990	QB4	1971	03	27.35208	12	26	16.64	+02	02	44.4		4 675
1990	QB4	1971	04	02.43993	12	22	02.97	+02	39	24.9		4 675
1990	QB4	1971	04	16.21476	12	13	15.00	+03	51	30.5		4 675
1990	QB4	1971	04	16.27708	12	13	12.80	+03	51	46.7		4 675
1990	RN10	1990	09	14.27604	22	17	05.67	-23	39	34.0	18.0	9 675
1990	RN10	1990	09	14.31354	22	17	04.23	-23	39	36.5		9 675
1990	RN10*	1990	09	15.26840	22	16	26.08	-23	40	26.6	17.8	9 675
1990	RN10	1990	09	15.30330	22	16	24.60	-23	40	26.6		9 675
1990	RO10	1990	09	14.27604	22	20	18.19	-21	53	29.0	17.5	9 675
1990	RO10	1990	09	14.31354	22	20	16.78	-21	53	42.6		9 675

1990	RO10*	1990	09	15.26840	22	19	44.82	-21	59	17.8	17.5	9 675
1990	RO10	1990	09	15.30330	22	19	43.56	-21	59	29.8		9 675
1990	RP10	1990	09	14.27604	22	20	16.59	-24	25	40.3	17.0	9 675
1990	RP10	1990	09	14.31354	22	20	15.37	-24	25	43.9		9 675
1990	RP10*	1990	09	15.26840	22	19	47.36	-24	27	43.4	17.2	9 675
1990	RP10	1990	09	15.30330	22	19	46.16	-24	27	46.3		9 675
1990	RQ10	1990	09	14.27604	22	21	16.21	-22	29	28.2	16.8	9 675
1990	RQ10	1990	09	14.31354	22	21	14.49	-22	29	32.7		9 675
1990	RQ10*	1990	09	15.26840	22	20	33.90	-22	31	14.3	16.8	9 675
1990	RQ10	1990	09	15.30330	22	20	32.28	-22	31	17.4		9 675
1990	SQ	1990	09	15.26840	22	20	17.11	-26	06	26.3		9 675
1990	SQ	1990	09	15.30330	22	20	11.33	-26	05	26.0		9 675
1990	SZ1	1971	03	24.40486	12	24	57.89	-00	45	48.7		4 675
1990	SZ1	1971	03	26.31007	12	23	39.62	-00	31	20.7		4 675
1990	SZ1	1971	03	26.34896	12	23	38.01	-00	31	02.5	17.7	4 675
1990	SZ1	1971	03	27.35208	12	22	56.63	-00	23	25.0		4 675
1990	SZ1	1971	04	02.41285	12	18	49.56	+00	21	51.0		4 675
1990	SZ1	1971	04	02.43993	12	18	48.12	+00	22	04.3		4 675
1990	SZ1	1971	04	16.16458	12	10	16.38	+01	55	53.9		4 675
1990	SZ1	1971	04	16.21476	12	10	14.45	+01	56	13.6		4 675
1990	SZ1	1971	04	16.25069	12	10	13.39	+01	56	26.2		4 675
1990	SZ1	1971	04	16.27708	12	10	12.30	+01	56	37.7		4 675
1990	SM16	1990	09	15.26840	21	53	10.02	-21	16	07.7	16.5	9 675
1990	SM16	1990	09	15.30330	21	53	08.70	-21	16	15.6		9 675
1990	SQ16	1990	09	15.26840	22	04	55.14	-20	55	51.2	16.8	9 675
1990	SQ16	1990	09	15.30330	22	04	53.48	-20	55	57.7		9 675
1990	SS16	1990	09	15.26840	22	09	31.64	-21	38	16.6	18.2	9 675
1990	SS16	1990	09	15.30330	22	09	30.30	-21	38	22.8		9 675
1990	ST16	1990	09	15.26840	22	11	13.06	-19	52	58.3	17.2	9 675
1990	ST16	1990	09	15.30330	22	11	11.58	-19	53	05.1		9 675
1990	SU16	1990	09	14.27604	22	14	45.55	-19	36	31.7	17.2	9 675
1990	SU16	1990	09	14.31354	22	14	43.93	-19	36	41.9		9 675
1990	SW16	1990	09	14.27604	22	19	50.72	-17	36	01.5	17.0	9 675
1990	SW16	1990	09	14.31354	22	19	48.95	-17	36	07.7	17.8	9 675
1990	SX16	1990	09	14.27604	22	20	16.27	-19	59	51.8	17.5	9 675
1990	SX16	1990	09	14.31354	22	20	14.43	-19	59	50.3		9 675
1990	SZ16	1990	09	15.26840	21	51	00.18	-21	53	16.2	17.2	9 675
1990	SZ16	1990	09	15.30330	21	50	59.02	-21	53	31.5		9 675
1990	SZ16*	1990	09	16.18906	21	50	34.68	-22	00	08.4	18.5	9 675
1990	SZ16	1990	09	16.23316	21	50	33.41	-22	00	28.4		9 675
1990	SA17	1990	09	15.26840	21	53	05.78	-22	12	37.2	18.0	9 675
1990	SA17	1990	09	15.30330	21	53	04.26	-22	12	32.8		9 675
1990	SA17*	1990	09	16.18906	21	52	30.18	-22	10	54.0		9 675
1990	SA17	1990	09	16.23316	21	52	28.56	-22	10	49.1		9 675
1990	SB17	1990	09	15.26840	21	54	33.69	-22	39	32.8	17.8	9 675
1990	SB17	1990	09	15.30330	21	54	31.92	-22	39	31.5		9 675
1990	SB17*	1990	09	16.18906	21	53	50.57	-22	38	58.9		9 675
1990	SB17	1990	09	16.23316	21	53	48.59	-22	38	58.1		9 675
1990	SC17	1990	09	14.27604	22	27	54.36	-16	54	08.4	16.2	9 675
1990	SC17	1990	09	14.31354	22	27	50.53	-16	53	36.5		9 675
1990	SC17*	1990	09	16.26406	22	24	43.63	-16	25	01.1	16.0	9 675
1990	SC17	1990	09	16.30069	22	24	40.06	-16	24	28.5		9 675
1990	SD17	1990	09	14.27604	22	29	05.58	-17	58	06.5	17.0	9 675
1990	SD17	1990	09	14.31354	22	29	03.41	-17	57	49.8		9 675
1990	SD17*	1990	09	16.26406	22	27	21.71	-17	42	42.9	16.8	9 675
1990	SD17	1990	09	16.30069	22	27	19.66	-17	42	25.4		9 675
1990	SE17	1990	09	14.27604	22	36	05.18	-17	30	58.3	18.5	9 675
1990	SE17	1990	09	14.31354	22	36	03.25	-17	30	58.6	17.8	9 675
1990	SE17*	1990	09	16.26406	22	34	23.43	-17	30	54.3	18.0	9 675

1990	SE17	1990	09	16.30069	22	34	21.53	-17	30	54.3		9 675
1990	SF17	1990	09	14.27604	22	41	07.36	-17	51	11.3	17.0	9 675
1990	SF17	1990	09	14.31354	22	41	05.75	-17	51	14.7		9 675
1990	SF17*	1990	09	16.26406	22	39	49.34	-17	54	37.2	17.0	9 675
1990	SF17	1990	09	16.30069	22	39	47.82	-17	54	39.6		9 675
1990	SG17	1990	09	14.27604	22	24	29.11	-20	03	20.1		9 675
1990	SG17	1990	09	14.31354	22	24	26.96	-20	03	09.4		9 675
1990	SG17*	1990	09	17.21181	22	21	53.44	-19	48	20.9	17.8	9 675
1990	SG17	1990	09	17.24549	22	21	51.60	-19	48	09.9		9 675
1990	SG17	1990	09	20.25590	22	19	26.32	-19	31	14.1	18.0	9 675
1990	SG17	1990	09	20.29097	22	19	24.62	-19	31	02.1		9 675
1990	SH17	1990	09	14.27604	22	15	59.90	-23	02	58.0	17.0	9 675
1990	SH17	1990	09	14.31354	22	15	58.00	-23	02	50.8		9 675
1990	SH17	1990	09	15.26840	22	15	11.20	-22	59	54.3	17.2	9 675
1990	SH17	1990	09	15.30330	22	15	09.39	-22	59	46.0		9 675
1990	SH17*	1990	09	20.25590	22	11	22.01	-22	42	01.0		9 675
1990	SH17	1990	09	20.29097	22	11	20.66	-22	41	51.8		9 675
1990	TE1	1971	03	24.40486	12	18	09.66	+03	58	57.1		4 675
1990	TE1	1971	03	25.24340	12	17	24.41	+04	01	37.9		4 675
1990	TE1	1971	03	25.28715	12	17	21.90	+04	01	44.6	19.9	4 675
1990	TE1	1971	03	26.25208	12	16	29.68	+04	04	46.7		4 675
1990	TE1	1971	03	27.31181	12	15	32.14	+04	08	03.7		4 675
1990	TE1	1971	04	02.41285	12	10	04.92	+04	25	43.3		4 675
1990	YX	1981	09	03.41354	22	42	22.25	-12	44	58.7	18.2V	6 675
1990	YX	1981	09	04.28403	22	41	32.82	-12	48	09.0		6 675
1991	AX1	1989	11	03.27278	01	51	07.13	+06	33	23.0	17.0	9 675
1991	AX1	1989	11	03.30815	01	51	05.47	+06	33	15.5		9 675
1991	AX1	1989	11	04.27013	01	50	20.44	+06	29	26.2	17.0	9 675
1991	AX1	1989	11	04.30364	01	50	18.87	+06	29	19.3		9 675
1991	GA2	1991	05	13.42378	15	26	41.60	+11	52	28.8	17.5	3 675
1991	GA2	1991	05	13.45712	15	26	39.89	+11	52	58.3		3 675
1991	GA2	1991	05	15.39444	15	25	04.50	+12	20	31.9		3 675
1991	GA2	1991	05	15.42118	15	25	03.17	+12	20	53.4		3 675
1991	HO	1991	06	06.19080	12	48	59.11	+14	56	31.8	17.7	3 675
1991	HO	1991	06	06.22813	12	48	59.52	+14	56	01.1		3 675
1991	HO	1991	06	08.18750	12	49	24.91	+14	28	22.4		3 675
1991	HO	1991	06	08.22118	12	49	25.28	+14	27	52.4		3 675
1991	KE	1991	06	07.34566	17	05	34.93	+17	09	04.2	18.5	3 675
1991	KE	1991	06	07.37726	17	05	33.08	+17	08	40.1		3 675
1991	KE	1991	06	09.33663	17	03	39.17	+16	44	16.5		3 675
1991	KE	1991	06	09.36597	17	03	37.37	+16	43	53.9		3 675
1991	LC1	1991	08	09.18281	17	25	12.59	-06	53	58.3	17.0	9 675
1991	LC1	1991	08	09.21997	17	25	13.64	-06	54	10.6		9 675
1991	LC1	1991	08	10.18976	17	25	47.05	-06	59	41.2		9 675
1991	LC1	1991	08	10.22760	17	25	48.17	-06	59	54.8		9 675
1991	NF	1991	08	16.21632	19	23	54.18	-02	57	28.3	16.0	2 675
1991	NF	1991	08	16.23663	19	23	52.89	-02	57	18.6		2 675
1991	NG	1991	08	16.22274	18	23	33.43	-15	44	47.3	16	2 675
1991	NG	1991	08	16.24913	18	23	33.27	-15	44	40.3		2 675
1991	NK	1991	08	15.21615	18	52	02.06	-02	03	51.9	16.5	2 675
1991	NK	1991	08	15.24010	18	52	01.84	-02	03	56.1		2 675
1991	NL	1991	08	15.21615	18	59	37.13	-04	02	15.4	16.5	2 675
1991	NL	1991	08	15.24010	18	59	36.52	-04	02	15.2		2 675
1991	NL	1991	08	16.26649	18	59	17.21	-04	01	24.8		2 675
1991	NL	1991	08	16.28906	18	59	16.72	-04	01	22.3		2 675
1991	NM	1991	07	14.28351	18	06	36.63	-09	23	11.6	17.0	9 675
1991	NM	1991	07	14.31736	18	06	35.07	-09	23	01.5		9 675
1991	NM	1991	07	18.27622	18	03	59.40	-09	07	13.9	17.0	9 675
1991	NM	1991	07	18.30799	18	03	58.16	-09	07	07.7		9 675

1991	NP	1991	08	15.25451	19	34	49.31	-04	31	48.6	16.0	2 675
1991	NP	1991	08	15.28229	19	34	47.87	-04	31	39.1		2 675
1991	NP	1991	08	16.21632	19	34	02.52	-04	26	00.6		2 675
1991	NP	1991	08	16.23663	19	34	01.49	-04	25	49.8		2 675
1991	NQ	1991	08	15.25451	19	47	37.23	-10	19	08.2	16.0	2 675
1991	NQ	1991	08	15.28229	19	47	35.82	-10	18	51.0		2 675
1991	NQ	1991	08	16.30087	19	46	43.03	-10	10	38.8		2 675
1991	NQ	1991	08	16.32830	19	46	41.61	-10	10	25.7		2 675
1991	NU	1991	08	15.21024	18	10	53.37	-03	27	35.8	16	2 675
1991	NU	1991	08	15.23420	18	10	53.35	-03	27	40.7		2 675
1991	NU	1991	08	16.26111	18	10	55.51	-03	31	44.9		2 675
1991	NU	1991	08	16.28368	18	10	55.51	-03	31	50.1		2 675
1991	NY	1991	08	09.27656	21	00	52.56	-06	02	07.7	15.0	9 675
1991	NY	1991	08	09.30903	21	00	51.38	-06	02	19.5		9 675
1991	NB1	1991	08	15.26826	19	53	54.24	-05	16	12.1	16.5	2 675
1991	NB1	1991	08	15.29722	19	53	53.30	-05	16	18.5		2 675
1991	NB1	1991	08	16.24236	19	53	28.26	-05	19	22.1		2 675
1991	NB1	1991	08	16.27813	19	53	27.23	-05	19	28.9		2 675
1991	NC1	1991	08	05.27500	21	17	18.43	-17	37	04.5	16.8	9 675
1991	NC1	1991	08	05.31302	21	17	16.38	-17	37	24.9		9 675
1991	NC1	1991	08	07.32240	21	15	32.20	-17	55	36.5	16.8	9 675
1991	NC1	1991	08	07.35069	21	15	30.57	-17	55	52.0		9 675
1991	ND1	1991	08	05.27500	21	25	26.12	-17	52	50.8	16.8	9 675
1991	ND1	1991	08	05.31302	21	25	24.31	-17	52	59.1		9 675
1991	NE1	1991	08	05.28484	21	25	34.15	-12	12	16.7	17.2	9 675
1991	NE1	1991	08	05.32135	21	25	32.29	-12	12	20.0		9 675
1991	NE1	1991	08	08.30399	21	23	07.33	-12	15	58.4	17.2	9 675
1991	NE1	1991	08	08.33264	21	23	05.89	-12	16	00.8		9 675
1991	NG1	1991	08	05.29363	21	41	53.28	-10	35	21.1	17.2	9 675
1991	NG1	1991	08	05.32951	21	41	51.39	-10	35	21.0		9 675
1991	NG1	1991	08	08.31128	21	39	21.27	-10	36	25.5	17.5	9 675
1991	NG1	1991	08	08.34045	21	39	19.71	-10	36	26.1		9 675
1991	NH1	1991	08	05.29363	21	43	22.12	-15	13	15.0	17.0	9 675
1991	NH1	1991	08	05.32951	21	43	20.38	-15	13	22.4		9 675
1991	NH1	1991	08	08.31128	21	40	57.75	-15	24	12.5	17.0	9 675
1991	NH1	1991	08	08.34045	21	40	56.27	-15	24	18.0		9 675
1991	NJ1	1991	08	06.33281	21	52	08.45	-17	42	38.9	17.8	9 675
1991	NJ1	1991	08	06.37153	21	52	06.99	-17	43	02.7		9 675
1991	NJ1	1991	08	10.29236	21	49	45.99	-18	25	19.8	18.0	9 675
1991	NJ1	1991	08	10.32517	21	49	44.55	-18	25	42.3		9 675
1991	NK1	1991	08	05.29363	21	45	37.04	-16	38	08.9	16.8	9 675
1991	NK1	1991	08	05.32951	21	45	35.51	-16	38	23.4		9 675
1991	NK1	1991	08	06.33281	21	44	54.20	-16	45	06.6	16.5	9 675
1991	NK1	1991	08	06.37153	21	44	52.54	-16	45	22.1		9 675
1991	NK1	1991	08	10.29236	21	42	07.21	-17	11	30.4	16.8	9 675
1991	NK1	1991	08	10.32517	21	42	05.69	-17	11	44.2		9 675
1991	NL1	1991	08	05.32951	21	45	49.91	-16	38	46.9	16.8	9 675
1991	NL1	1991	08	08.31128	21	43	37.21	-16	51	15.4	17.2	9 675
1991	NL1	1991	08	08.34045	21	43	35.81	-16	51	23.3		9 675
1991	NS1	1991	08	05.26563	20	57	59.20	-08	22	14.6	16.5	9 675
1991	NS1	1991	08	05.30313	20	57	57.23	-08	22	32.4		9 675
1991	NT1	1991	08	05.26563	20	56	49.39	-05	07	46.2	16.5	9 675
1991	NT1	1991	08	05.30313	20	56	47.60	-05	07	51.6		9 675
1991	NT1	1991	08	09.27656	20	53	38.58	-05	16	49.7	16.8	9 675
1991	NT1	1991	08	09.30903	20	53	37.22	-05	16	55.4		9 675
1991	NV1	1991	08	05.26563	20	57	11.99	-07	08	46.6	16.8	9 675
1991	NV1	1991	08	05.30313	20	57	09.74	-07	08	50.9		9 675
1991	NV1	1991	08	09.27656	20	53	17.22	-07	17	52.6	17.0	9 675
1991	NV1	1991	08	09.30903	20	53	15.22	-07	17	57.8		9 675

1991	NA2		1991	08	05.27500	21	30	51.31	-17	04	37.8	17.0	9	675
1991	NA2		1991	08	05.31302	21	30	49.31	-17	04	56.2		9	675
1991	NB2	*	1991	07	13.42257	20	48	09.37	-30	16	30.5	16.2	9	675
1991	NB2		1991	07	13.45347	20	48	08.01	-30	16	44.7		9	675
1991	NB2		1991	07	16.35799	20	46	00.72	-30	37	42.6	16.2	9	675
1991	NB2		1991	07	16.39809	20	45	58.92	-30	37	59.1		9	675
1991	NC2	*	1991	07	13.42257	20	57	20.39	-25	27	54.7	17.0	9	675
1991	NC2		1991	07	13.45347	20	57	18.99	-25	27	57.0		9	675
1991	NC2		1991	07	16.35799	20	55	06.23	-25	37	57.1	17.0	9	675
1991	NC2		1991	07	16.39809	20	55	04.25	-25	38	05.8		9	675
1991	ND2	*	1991	07	13.42257	21	04	44.63	-27	04	18.4	17.0	9	675
1991	ND2		1991	07	13.45347	21	04	43.39	-27	04	24.2		9	675
1991	ND2		1991	07	16.35799	21	02	49.28	-27	16	59.5	17.5	9	675
1991	ND2		1991	07	16.39809	21	02	47.67	-27	17	09.5		9	675
1991	NE2	*	1991	07	13.42257	21	07	44.64	-30	16	39.6	17.2	9	675
1991	NE2		1991	07	13.45347	21	07	43.24	-30	16	45.5		9	675
1991	NE2		1991	07	16.35799	21	05	31.89	-30	25	41.8	16.8	9	675
1991	NE2		1991	07	16.39809	21	05	30.02	-30	25	48.8	17.0	9	675
1991	NF2	*	1991	07	13.42257	21	08	58.71	-32	47	59.7	17.5	9	675
1991	NF2		1991	07	13.45347	21	08	57.46	-32	48	14.4		9	675
1991	NF2		1991	07	16.35799	21	06	50.77	-33	10	30.9	17.8	9	675
1991	NF2		1991	07	16.39809	21	06	48.86	-33	10	49.1		9	675
1991	NG2	*	1991	07	13.42257	21	11	15.16	-28	15	44.8	18.2	9	675
1991	NG2		1991	07	13.45347	21	11	13.55	-28	15	45.6		9	675
1991	NG2		1991	07	16.35799	21	08	49.45	-28	16	48.1	18.0	9	675
1991	NG2		1991	07	16.39809	21	08	47.44	-28	16	47.7		9	675
1991	NH2	*	1991	07	14.28351	17	53	56.93	-07	14	28.3	17.8	9	675
1991	NH2		1991	07	14.31736	17	53	55.73	-07	14	29.3	17.5	9	675
1991	NH2		1991	07	18.27622	17	52	00.73	-07	15	53.6	17.5	9	675
1991	NH2		1991	07	18.30799	17	51	59.81	-07	15	56.1	17.8	9	675
1991	NJ2	*	1991	07	14.28351	18	01	56.05	-08	54	18.6	17.8	9	675
1991	NJ2		1991	07	14.31736	18	01	54.67	-08	54	16.5		9	675
1991	NJ2		1991	07	18.27622	17	59	20.29	-09	02	32.2	17.8	9	675
1991	NJ2		1991	07	18.30799	17	59	19.09	-09	02	36.7	18.2	9	675
1991	NK2	*	1991	07	14.28351	18	02	18.74	-04	34	11.9	17.5	9	675
1991	NK2		1991	07	14.31736	18	02	17.46	-04	34	14.0		9	675
1991	NK2		1991	07	18.27622	18	00	03.60	-04	40	55.5	18.0	9	675
1991	NK2		1991	07	18.30799	18	00	02.51	-04	40	59.4		9	675
1991	NL2	*	1991	07	14.28351	18	07	47.11	-03	04	29.1	16.5	9	675
1991	NL2		1991	07	14.31736	18	07	45.57	-03	04	25.0	17.0	9	675
1991	NL2		1991	07	18.27622	18	04	55.69	-03	00	34.5	17.0	9	675
1991	NL2		1991	07	18.30799	18	04	54.31	-03	00	34.4		9	675
1991	NM2	*	1991	07	14.38177	21	01	37.18	-24	55	37.6	17.8	9	675
1991	NM2		1991	07	14.42170	21	01	35.22	-24	55	38.9		9	675
1991	NM2		1991	07	19.37292	20	57	23.95	-24	59	00.2	17.5	9	675
1991	NN2	*	1991	07	14.38177	21	03	22.88	-23	33	46.4	17.2	9	675
1991	NN2		1991	07	14.42170	21	03	21.46	-23	34	03.2		9	675
1991	NN2		1991	07	19.37292	21	00	13.21	-24	10	37.0	17.2	9	675
1991	NO2	*	1991	07	14.38177	21	17	40.84	-18	56	02.2	16.5	9	675
1991	NO2		1991	07	14.42170	21	17	39.27	-18	56	14.8		9	675
1991	NO2		1991	07	19.37292	21	14	27.86	-19	24	57.5	17.0	9	675
1991	NP2	*	1991	07	14.38177	21	19	06.84	-18	57	34.3	16.8	9	675
1991	NP2		1991	07	14.42170	21	19	05.03	-18	57	28.7		9	675
1991	NP2		1991	07	19.37292	21	15	20.37	-18	50	25.0	16.8	9	675
1991	NQ2	*	1991	07	14.38177	20	57	59.99	-24	38	00.7	17.0	9	675
1991	NQ2		1991	07	14.42170	20	57	58.07	-24	38	20.5	17.2	9	675
1991	NR2	*	1991	07	12.42708	21	54	27.93	+01	43	10.8	16.2	9	675
1991	NR2		1991	07	12.45434	21	54	27.74	+01	43	58.7		9	675
1991	NR2		1991	08	09.33125	21	39	02.79	+13	56	37.0		9	675

1991	NR2		1991	08	09.36476	21	39	00.74	+13	57	18.8	9 675
1991	NS2	*	1991	07	12.42708	22	04	30.24	-01	15	38.5	17.5 9 675
1991	NS2		1991	07	18.44063	22	03	07.77	-01	21	37.7	9 675
1991	NS2		1991	07	18.47135	22	03	07.16	-01	21	40.2	17.8 9 675
1991	NS2		1991	08	07.33698	21	52	23.01	-02	44	50.4	16.8 9 675
1991	NS2		1991	08	07.36840	21	52	21.57	-02	45	03.2	9 675
1991	NT2	*	1991	07	12.42708	22	12	03.38	-02	01	35.1	16.5 9 675
1991	NT2		1991	07	12.45434	22	12	02.88	-02	01	22.2	9 675
1991	NT2		1991	07	18.44063	22	09	40.51	-01	17	34.2	16.2 9 675
1991	NT2		1991	07	18.47135	22	09	39.53	-01	17	21.2	9 675
1991	OA		1991	08	08.30399	21	29	37.66	-08	46	25.4	16.5 9 675
1991	OA		1991	08	08.33264	21	29	37.42	-08	45	46.7	9 675
1991	OA		1991	08	14.32552	21	29	58.20	-06	59	10.8	16.0 2 675
1991	OA		1991	08	14.34653	21	29	57.92	-06	58	53.3	2 675
1991	OA		1991	08	16.38490	21	30	02.63	-06	32	16.5	2 675
1991	OA		1991	08	16.40642	21	30	02.43	-06	32	01.1	2 675
1991	OB		1991	07	13.42257	20	50	23.99	-29	30	56.9	17.0 9 675
1991	OB		1991	07	13.45347	20	50	22.53	-29	31	11.8	17.5 9 675
1991	OB	*	1991	07	16.35799	20	48	05.91	-29	54	04.1	17.0 9 675
1991	OB		1991	07	16.39809	20	48	03.90	-29	54	23.5	9 675
1991	OC		1991	07	13.42257	20	56	23.06	-25	55	44.5	16.8 9 675
1991	OC		1991	07	13.45347	20	56	20.96	-25	55	33.2	9 675
1991	OC	*	1991	07	16.35799	20	53	04.66	-25	44	08.5	16.8 9 675
1991	OC		1991	07	16.39809	20	53	01.74	-25	43	58.6	9 675
1991	OD		1991	07	13.42257	20	56	36.12	-28	43	43.9	17.8 9 675
1991	OD		1991	07	13.45347	20	56	34.42	-28	43	57.3	9 675
1991	OD	*	1991	07	16.35799	20	53	55.43	-29	03	38.6	17.0 9 675
1991	OD		1991	07	16.39809	20	53	53.07	-29	03	53.7	9 675
1991	OE		1991	07	13.42257	20	56	39.94	-28	09	50.3	17.2 9 675
1991	OE		1991	07	13.45347	20	56	38.73	-28	10	08.3	17.5 9 675
1991	OE	*	1991	07	16.35799	20	54	41.59	-28	39	42.0	17.0 9 675
1991	OE		1991	07	16.39809	20	54	39.81	-28	40	06.2	9 675
1991	OF		1991	07	13.42257	20	59	56.76	-29	47	41.9	17.5 9 675
1991	OF		1991	07	13.45347	20	59	55.14	-29	47	42.8	9 675
1991	OF	*	1991	07	16.35799	20	57	28.18	-29	48	50.4	17.0 9 675
1991	OF		1991	07	16.39809	20	57	26.16	-29	48	52.0	9 675
1991	OG		1991	07	13.42257	21	00	33.93	-32	15	08.9	18.0 9 675
1991	OG		1991	07	13.45347	21	00	32.59	-32	15	20.6	9 675
1991	OG	*	1991	07	16.35799	20	58	20.47	-32	32	55.8	17.5 9 675
1991	OG		1991	07	16.39809	20	58	18.61	-32	33	10.3	9 675
1991	OH		1991	07	13.42257	21	01	19.45	-25	41	51.6	17.5 9 675
1991	OH		1991	07	13.45347	21	01	18.17	-25	42	10.5	17.8 9 675
1991	OH	*	1991	07	16.35799	20	59	25.00	-26	17	55.5	17.5 9 675
1991	OH		1991	07	16.39809	20	59	23.36	-26	18	25.3	9 675
1991	OJ		1991	07	13.42257	21	09	45.41	-32	15	15.8	17.2 9 675
1991	OJ		1991	07	13.45347	21	09	44.09	-32	15	23.0	9 675
1991	OJ	*	1991	07	16.35799	21	07	32.21	-32	26	44.8	16.8 9 675
1991	OJ		1991	07	16.39809	21	07	30.25	-32	26	53.3	9 675
1991	OK		1991	07	16.38993	21	35	48.47	-06	37	45.5	17.8 9 675
1991	OK		1991	07	16.42917	21	35	47.28	-06	37	53.7	9 675
1991	OK	*	1991	07	18.43108	21	34	49.92	-06	45	10.8	17.8 9 675
1991	OK		1991	07	18.46424	21	34	48.83	-06	45	19.1	9 675
1991	OL		1991	07	16.38993	21	40	36.46	-04	00	06.0	17.8 9 675
1991	OL		1991	07	16.42917	21	40	35.47	-04	00	05.4	9 675
1991	OL	*	1991	07	18.43108	21	39	37.11	-03	59	24.1	17.8 9 675
1991	OL		1991	07	18.46424	21	39	36.02	-03	59	23.4	9 675
1991	OM		1991	07	16.38993	21	41	25.13	-07	32	46.7	17.8 9 675
1991	OM		1991	07	16.42917	21	41	24.23	-07	32	55.3	18.0 9 675
1991	OM	*	1991	07	18.43108	21	39	50.32	-07	30	44.1	18.0 9 675

1991	OM		1991	07	18.46424	21	39	48.96	-07	30	45.3	9 675
1991	ON		1991	07	16.38993	21	42	18.06	-03	23	58.7	17.5 9 675
1991	ON		1991	07	16.42917	21	42	16.90	-03	23	51.4	9 675
1991	ON	*	1991	07	18.43108	21	41	18.97	-03	18	16.5	18.0 9 675
1991	ON		1991	07	18.46424	21	41	17.93	-03	18	11.5	9 675
1991	OO		1991	07	16.38993	21	42	58.58	-06	44	51.1	17.5 9 675
1991	OO		1991	07	16.42917	21	42	57.81	-06	44	47.2	9 675
1991	OO	*	1991	07	18.43108	21	42	21.42	-06	41	40.1	17.5 9 675
1991	OO		1991	07	18.46424	21	42	20.69	-06	41	37.1	9 675
1991	OO		1991	08	05.28484	21	32	06.45	-06	51	58.0	16.8 9 675
1991	OO		1991	08	05.32135	21	32	04.58	-06	52	01.7	9 675
1991	OO		1991	08	08.30399	21	29	43.74	-07	00	06.5	16.8 9 675
1991	OO		1991	08	08.33264	21	29	42.25	-07	00	09.5	9 675
1991	OP		1991	07	16.38993	21	43	12.76	-04	51	30.3	17.8 9 675
1991	OP		1991	07	16.42917	21	43	11.88	-04	51	28.6	9 675
1991	OP	*	1991	07	18.43108	21	42	27.68	-04	50	39.7	18.0 9 675
1991	OP		1991	07	18.46424	21	42	26.81	-04	50	38.4	9 675
1991	OQ		1991	07	16.38993	21	43	49.15	-03	55	56.8	17.8 9 675
1991	OQ		1991	07	16.42917	21	43	47.83	-03	55	53.6	9 675
1991	OQ	*	1991	07	18.43108	21	42	38.26	-03	53	54.1	17.8 9 675
1991	OQ		1991	07	18.46424	21	42	37.24	-03	53	52.4	9 675
1991	OR		1991	07	16.38993	21	44	01.32	-07	27	10.5	17.0 9 675
1991	OR		1991	07	16.42917	21	44	00.59	-07	27	57.1	9 675
1991	OR	*	1991	07	18.43108	21	43	24.44	-08	09	16.6	17.0 9 675
1991	OR		1991	07	18.46424	21	43	23.68	-08	09	58.4	9 675
1991	OR		1991	08	07.32240	21	30	55.38	-16	35	01.4	16.2 9 675
1991	OR		1991	08	07.35069	21	30	53.67	-16	35	50.4	9 675
1991	OR		1991	08	10.29236	21	28	17.44	-17	59	30.2	9 675
1991	OR		1991	08	15.32153	21	23	38.37	-20	22	12.7	16.5 2 675
1991	OR		1991	08	15.34392	21	23	36.72	-20	22	49.9	2 675
1991	OR		1991	08	15.35625	21	23	36.31	-20	23	11.3	2 675
1991	OR		1991	08	15.38038	21	23	34.83	-20	23	52.7	2 675
1991	OR		1991	08	16.39566	21	22	38.12	-20	52	20.4	2 675
1991	OS		1991	07	16.38993	21	45	11.43	-05	27	10.2	18.2 9 675
1991	OS		1991	07	16.42917	21	45	10.10	-05	27	05.8	9 675
1991	OS	*	1991	07	18.43108	21	44	02.03	-05	23	58.8	18.5 9 675
1991	OS		1991	07	18.46424	21	44	00.67	-05	23	57.6	9 675
1991	OT		1991	07	16.38993	21	45	40.43	-04	43	32.4	17.0 9 675
1991	OT		1991	07	16.42917	21	45	39.86	-04	43	30.2	17.5 9 675
1991	OT	*	1991	07	18.43108	21	45	11.46	-04	41	43.5	17.0 9 675
1991	OT		1991	07	18.46424	21	45	10.79	-04	41	42.5	9 675
1991	OT		1991	08	07.33698	21	34	33.60	-05	20	05.8	17.0 9 675
1991	OT		1991	08	07.36840	21	34	31.99	-05	20	14.2	9 675
1991	OU		1991	07	12.42708	21	58	09.10	-02	00	33.0	17.2 9 675
1991	OU		1991	07	12.45434	21	58	08.18	-02	00	27.1	9 675
1991	OU		1991	07	16.38993	21	55	52.23	-01	48	43.6	17.5 9 675
1991	OU		1991	07	16.42917	21	55	50.67	-01	48	38.7	9 675
1991	OU	*	1991	07	18.43108	21	54	33.30	-01	43	39.0	17.0 9 675
1991	OU		1991	07	18.44063	21	54	32.81	-01	43	36.7	9 675
1991	OU		1991	07	18.46424	21	54	31.61	-01	43	27.6	9 675
1991	OU		1991	07	18.47135	21	54	31.54	-01	43	30.2	16.8 9 675
1991	OV		1991	07	16.38993	21	55	12.43	-06	12	58.2	17.5 9 675
1991	OV		1991	07	16.42917	21	55	12.04	-06	13	04.6	9 675
1991	OV	*	1991	07	18.43108	21	54	53.61	-06	18	26.5	17.2 9 675
1991	OV		1991	07	18.46424	21	54	53.23	-06	18	32.3	9 675
1991	OV		1991	08	07.33698	21	45	41.57	-08	09	03.0	17.2 9 675
1991	OV		1991	08	07.36840	21	45	40.14	-08	09	17.5	9 675
1991	OW		1991	07	16.38993	21	56	38.34	-06	47	26.1	17.8 9 675
1991	OW		1991	07	16.42917	21	56	37.07	-06	47	20.7	9 675

1991	OW	*	1991	07	18.43108	21	55	30.37	-06	41	58.1	17.8	9 675
1991	OW		1991	07	18.46424	21	55	29.10	-06	41	52.6		9 675
1991	OW		1991	08	07.33698	21	38	53.95	-06	29	33.7	17.0	9 675
1991	OW		1991	08	07.36840	21	38	51.88	-06	29	35.5		9 675
1991	OX		1991	07	16.38993	21	57	32.43	-06	59	25.5	18.2	9 675
1991	OX		1991	07	16.42917	21	57	31.53	-06	59	29.0	18.5	9 675
1991	OX	*	1991	07	18.43108	21	56	39.74	-07	03	25.6	18.2	9 675
1991	OX		1991	07	18.46424	21	56	38.72	-07	03	28.2		9 675
1991	OY		1991	07	16.38993	21	57	27.40	-07	17	26.9	17.5	9 675
1991	OY		1991	07	16.42917	21	57	27.05	-07	17	38.5		9 675
1991	OY	*	1991	07	18.43108	21	57	10.32	-07	27	58.4	17.5	9 675
1991	OY		1991	07	18.46424	21	57	09.94	-07	28	08.9		9 675
1991	OY		1991	08	07.33698	21	48	56.94	-10	02	28.0	17.2	9 675
1991	OY		1991	08	08.31128	21	48	20.45	-10	12	01.6	17.0	9 675
1991	OY		1991	08	08.34045	21	48	19.19	-10	12	21.1		9 675
1991	OZ		1991	07	16.38993	22	03	29.08	-05	34	59.3	17.8	9 675
1991	OZ		1991	07	16.42917	22	03	27.97	-05	34	59.7		9 675
1991	OZ	*	1991	07	18.43108	22	02	24.14	-05	35	20.2	17.5	9 675
1991	OZ		1991	07	18.46424	22	02	22.93	-05	35	20.5		9 675
1991	OZ		1991	08	07.33698	21	47	01.49	-06	15	37.1	17.2	9 675
1991	OZ		1991	08	07.36840	21	46	59.59	-06	15	44.1		9 675
1991	OA1		1991	07	16.38993	22	03	24.33	-06	35	00.3	18.2	9 675
1991	OA1		1991	07	16.42917	22	03	23.21	-06	34	55.2		9 675
1991	OA1	*	1991	07	18.43108	22	02	25.08	-06	30	17.0	18.5	9 675
1991	OA1		1991	07	18.46424	22	02	24.01	-06	30	13.1	17.8	9 675
1991	OA1		1991	08	07.33698	21	47	33.62	-06	18	09.7	17.8	9 675
1991	OA1		1991	08	07.36840	21	47	31.66	-06	18	12.1		9 675
1991	PA		1991	08	05.27500	21	23	41.08	-14	35	20.0	16.5	9 675
1991	PA		1991	08	05.31302	21	23	39.31	-14	35	20.5		9 675
1991	PA		1991	08	07.32240	21	22	07.94	-14	35	24.4	16.8	9 675
1991	PA		1991	08	07.35069	21	22	06.46	-14	35	25.3		9 675
1991	PC		1991	08	05.28484	21	35	27.13	-12	14	18.5	17.5	9 675
1991	PC	*	1991	08	05.29363	21	35	26.88	-12	14	20.6	17.0	9 675
1991	PC		1991	08	05.32135	21	35	25.50	-12	14	29.3		9 675
1991	PC		1991	08	05.32951	21	35	25.34	-12	14	31.3		9 675
1991	PC		1991	08	08.30399	21	33	16.56	-12	27	55.0	17.5	9 675
1991	PC		1991	08	08.31128	21	33	16.35	-12	27	58.7	17.5	9 675
1991	PC		1991	08	08.33264	21	33	15.30	-12	28	03.1		9 675
1991	PC		1991	08	08.34045	21	33	15.01	-12	28	06.0		9 675
1991	PD	*	1991	08	05.29363	21	39	28.88	-14	12	27.8	17.5	9 675
1991	PD		1991	08	05.32951	21	39	27.21	-14	12	50.8		9 675
1991	PD		1991	08	08.31128	21	37	16.51	-14	45	27.4	17.2	9 675
1991	PD		1991	08	08.34045	21	37	15.08	-14	45	46.9		9 675
1991	PE	*	1991	08	05.29363	21	43	56.19	-15	10	17.1	16.0	9 675
1991	PE		1991	08	05.32951	21	43	54.73	-15	10	27.7		9 675
1991	PE		1991	08	08.31128	21	41	56.02	-15	25	56.1	16.0	9 675
1991	PE		1991	08	08.34045	21	41	54.74	-15	26	04.9		9 675
1991	PG	*	1991	08	05.29363	21	55	05.18	-13	19	45.6	16.8	9 675
1991	PG		1991	08	05.32951	21	55	03.61	-13	19	54.0		9 675
1991	PG		1991	08	06.35503	21	54	18.98	-13	23	43.8	16.8	9 675
1991	PG		1991	08	06.38698	21	54	17.68	-13	23	50.9		9 675
1991	PG		1991	08	08.31128	21	52	52.82	-13	31	12.3	16.8	9 675
1991	PG		1991	08	08.34045	21	52	51.42	-13	31	18.3		9 675
1991	PH	*	1991	08	05.29363	21	55	56.23	-12	18	44.6	16.8	9 675
1991	PH		1991	08	05.32951	21	55	54.73	-12	18	55.5		9 675
1991	PH		1991	08	08.31128	21	53	52.85	-12	33	23.4	17.0	9 675
1991	PH		1991	08	08.34045	21	53	51.52	-12	33	32.3		9 675
1991	PJ	*	1991	08	05.29363	21	56	53.95	-15	48	02.8	16.5	9 675
1991	PJ		1991	08	05.32951	21	56	52.41	-15	48	21.6		9 675

1991	PJ		1991	08	08.31128	21	54	46.30	-16	14	07.0	16.5	9 675
1991	PJ		1991	08	08.34045	21	54	44.96	-16	14	22.1		9 675
1991	PK	*	1991	08	05.29363	21	57	29.78	-10	56	49.8	17.5	9 675
1991	PK		1991	08	05.32951	21	57	28.32	-10	57	03.7		9 675
1991	PK		1991	08	06.35503	21	56	46.60	-11	03	05.8	18.0	9 675
1991	PK		1991	08	06.38698	21	56	45.11	-11	03	16.7		9 675
1991	PK		1991	08	08.31128	21	55	23.48	-11	15	04.4	17.5	9 675
1991	PK		1991	08	08.34045	21	55	22.13	-11	15	15.5		9 675
1991	PL	*	1991	08	05.29363	22	01	08.72	-10	43	16.8	17.8	9 675
1991	PL		1991	08	05.32951	22	01	06.91	-10	43	29.8		9 675
1991	PL		1991	08	06.35503	22	00	17.43	-10	49	04.5	17.8	9 675
1991	PL		1991	08	06.38698	22	00	15.77	-10	49	15.4		9 675
1991	PL		1991	08	08.31128	21	58	40.17	-11	00	08.0	17.5	9 675
1991	PL		1991	08	08.34045	21	58	38.54	-11	00	17.1		9 675
1991	PP	*	1991	08	05.28484	21	08	31.38	-10	09	28.2	17.8	9 675
1991	PP		1991	08	05.32135	21	08	29.72	-10	09	43.6		9 675
1991	PP		1991	08	08.30399	21	06	19.82	-10	30	40.0	18.0	9 675
1991	PP		1991	08	08.33264	21	06	18.65	-10	30	51.6		9 675
1991	PQ	*	1991	08	05.28484	21	11	55.43	-11	44	42.9	16.5	9 675
1991	PQ		1991	08	05.32135	21	11	53.58	-11	44	41.8		9 675
1991	PQ		1991	08	08.30399	21	09	26.88	-11	43	04.4	16.5	9 675
1991	PQ		1991	08	08.33264	21	09	25.43	-11	43	03.6		9 675
1991	PR	*	1991	08	05.28484	21	12	13.87	-07	35	59.6	18.5	9 675
1991	PR		1991	08	05.32135	21	12	11.90	-07	36	09.0		9 675
1991	PR		1991	08	08.30399	21	09	20.48	-07	49	30.6	18.2	9 675
1991	PR		1991	08	08.33264	21	09	18.76	-07	49	40.3	18.8	9 675
1991	PS	*	1991	08	05.28484	21	13	11.78	-11	14	34.1	17.2	9 675
1991	PS		1991	08	05.32135	21	13	09.44	-11	14	39.9		9 675
1991	PS		1991	08	08.30399	21	10	06.39	-11	22	32.8	16.8	9 675
1991	PS		1991	08	08.33264	21	10	04.53	-11	22	37.4	17.2	9 675
1991	PT		1991	08	05.26563	21	14	17.42	-07	33	53.2	17.2	9 675
1991	PT	*	1991	08	05.28484	21	14	16.25	-07	33	53.8	16.8	9 675
1991	PT		1991	08	05.30313	21	14	15.61	-07	33	52.3		9 675
1991	PT		1991	08	05.32135	21	14	14.31	-07	33	51.5		9 675
1991	PT		1991	08	08.30399	21	11	29.01	-07	31	16.3	16.8	9 675
1991	PT		1991	08	08.33264	21	11	27.33	-07	31	15.5		9 675
1991	PT		1991	08	09.27656	21	10	35.21	-07	30	44.6	17.0	9 675
1991	PT		1991	08	09.30903	21	10	33.23	-07	30	44.1		9 675
1991	PU	*	1991	08	05.28484	21	14	26.86	-12	49	43.8	16.8	9 675
1991	PU		1991	08	05.32135	21	14	24.70	-12	49	50.3		9 675
1991	PU		1991	08	07.32240	21	12	37.29	-12	54	03.1	17.2	9 675
1991	PU		1991	08	07.35069	21	12	35.71	-12	54	09.1		9 675
1991	PU		1991	08	08.30399	21	11	44.34	-12	56	07.5	16.8	9 675
1991	PU		1991	08	08.33264	21	11	42.90	-12	56	07.5		9 675
1991	PV	*	1991	08	05.28484	21	26	30.55	-10	37	19.4	17.0	9 675
1991	PV		1991	08	05.32135	21	26	28.76	-10	37	26.3		9 675
1991	PV		1991	08	08.30399	21	24	06.98	-10	48	30.8	17.0	9 675
1991	PV		1991	08	08.33264	21	24	05.65	-10	48	37.6		9 675
1991	PW	*	1991	08	05.28484	21	27	18.63	-09	18	42.7	16.5	9 675
1991	PW		1991	08	05.32135	21	27	16.75	-09	18	44.2		9 675
1991	PW		1991	08	08.30399	21	24	50.02	-09	22	49.6	16.5	9 675
1991	PW		1991	08	08.33264	21	24	48.52	-09	22	51.7		9 675
1991	PX	*	1991	08	05.28484	21	33	12.98	-12	39	49.0	17.2	9 675
1991	PX		1991	08	05.32135	21	33	11.38	-12	40	04.8		9 675
1991	PX		1991	08	08.30399	21	30	58.37	-13	02	27.1	17.2	9 675
1991	PX		1991	08	08.33264	21	30	57.06	-13	02	40.9		9 675
1991	PY	*	1991	08	05.28484	21	34	19.59	-10	12	50.1	17.5	9 675
1991	PY		1991	08	05.32135	21	34	17.45	-10	12	46.3		9 675
1991	PY		1991	08	08.30399	21	31	29.21	-10	06	32.1	17.2	9 675

1991	PY		1991	08	08.33264	21	31	27.55	-10	06	29.4		9 675
1991	PZ	*	1991	08	05.28484	21	38	45.61	-09	47	35.2	17.0	9 675
1991	PZ		1991	08	05.32135	21	38	43.74	-09	47	35.7		9 675
1991	PZ		1991	08	08.30399	21	36	12.85	-09	49	09.9	17.0	9 675
1991	PZ		1991	08	08.33264	21	36	11.43	-09	49	09.6	17.2	9 675
1991	PB1	*	1991	08	05.28484	21	08	55.81	-10	17	50.2	18.5	9 675
1991	PB1		1991	08	05.32135	21	08	53.98	-10	18	00.2		9 675
1991	PB1		1991	08	08.30399	21	06	24.54	-10	32	01.5	18.5	9 675
1991	PB1		1991	08	08.33264	21	06	22.95	-10	32	09.1		9 675
1991	PC1	*	1991	08	15.40174	23	08	14.98	-17	08	50.8	17	2 675
1991	PC1		1991	08	15.42986	23	08	12.47	-17	08	39.8		2 675
1991	PC1		1991	08	16.39010	23	06	50.76	-17	02	02.8		2 675
1991	PC1		1991	08	16.41181	23	06	48.78	-17	01	54.5		2 675
1991	PD1	*	1991	08	15.41424	23	44	55.09	-04	23	22.6	16.0	2 675
1991	PD1		1991	08	15.44184	23	44	53.13	-04	22	58.6		2 675
1991	PD1		1991	08	16.43333	23	43	50.47	-04	08	53.0		2 675
1991	PE1	*	1991	08	15.30451	20	49	48.91	-16	34	39.2	16.0	2 675
1991	PE1		1991	08	15.32708	20	49	48.01	-16	34	55.8		2 675
1991	PE1		1991	08	16.34913	20	49	10.66	-16	48	58.7		2 675
1991	PF1	*	1991	08	15.45747	00	18	09.92	-16	06	43.3	16.5	2 675
1991	PF1		1991	08	15.47986	00	18	11.36	-16	07	26.2		2 675
1991	PF1		1991	08	16.43837	00	19	08.70	-16	39	08.7		2 675
1991	PG1		1991	08	06.33281	21	54	04.16	-18	30	50.6	16.8	9 675
1991	PG1		1991	08	06.37153	21	54	03.18	-18	31	32.1		9 675
1991	PG1		1991	08	10.29236	21	52	29.54	-19	40	59.3	16.8	9 675
1991	PG1		1991	08	10.32517	21	52	28.61	-19	41	34.9		9 675
1991	PG1	*	1991	08	15.36233	21	50	09.57	-21	09	50.5	16	2 675
1991	PG1		1991	08	15.38802	21	50	08.63	-21	10	17.6		2 675
1991	PG1		1991	08	16.40104	21	49	39.24	-21	27	41.6		2 675
1991	PH1	*	1991	08	15.40174	22	53	13.82	-15	20	06.3	16	2 675
1991	PH1		1991	08	15.42986	22	53	12.71	-15	20	22.7		2 675
1991	PH1		1991	08	16.39010	22	52	36.76	-15	29	27.0		2 675
1991	PH1		1991	08	16.41181	22	52	35.90	-15	29	39.4		2 675
1991	PJ1	*	1991	08	15.40174	23	04	01.18	-11	06	16.2	17	2 675
1991	PJ1		1991	08	15.42986	23	04	00.11	-11	06	41.1		2 675
1991	PJ1		1991	08	16.39010	23	03	25.63	-11	20	20.9		2 675
1991	PJ1		1991	08	16.41181	23	03	24.79	-11	20	39.7		2 675
1991	PK1	*	1991	08	15.45747	00	10	58.07	-11	26	21.9	16.5	2 675
1991	PK1		1991	08	15.47986	00	10	58.01	-11	26	38.6		2 675
1991	PK1		1991	08	16.43837	00	11	00.34	-11	38	41.6		2 675
1991	PL1		1991	08	07.38524	23	22	33.75	-04	58	36.0	16.8	9 675
1991	PL1		1991	08	07.41406	23	22	33.89	-04	59	08.9		9 675
1991	PL1		1991	08	08.42483	23	22	40.39	-05	18	45.4	16.8	9 675
1991	PL1		1991	08	08.45660	23	22	40.45	-05	19	22.7		9 675
1991	PL1		1991	08	10.40851	23	22	48.04	-05	58	34.1	16.5	9 675
1991	PL1	*	1991	08	15.40868	23	22	37.75	-07	46	03.6	16	2 675
1991	PL1		1991	08	15.43576	23	22	37.44	-07	46	43.1		2 675
1991	PL1		1991	08	16.42795	23	22	30.31	-08	09	09.4		2 675
1991	PM1	*	1991	08	15.42361	23	37	21.50	-22	29	21.2	15.5	2 675
1991	PM1		1991	08	15.45000	23	37	20.97	-22	29	36.7		2 675
1991	PM1		1991	08	16.42240	23	37	01.67	-22	39	35.0		2 675
1991	PN1		1991	08	05.27500	21	23	20.13	-15	14	06.2	17.0	9 675
1991	PN1		1991	08	05.31302	21	23	18.08	-15	14	03.3		9 675
1991	PN1		1991	08	07.32240	21	21	32.35	-15	12	08.4	17.2	9 675
1991	PN1		1991	08	07.35069	21	21	30.62	-15	12	06.7		9 675
1991	PQ1		1991	08	05.27500	21	25	35.09	-14	13	59.7	16.8	9 675
1991	PQ1		1991	08	05.31302	21	25	33.24	-14	14	10.7		9 675
1991	PQ1		1991	08	07.32240	21	23	57.89	-14	23	47.7	16.8	9 675
1991	PQ1		1991	08	07.35069	21	23	56.42	-14	23	57.1		9 675

1991	PT1	1991	08	05.28484	21	29	29.46	-09	43	03.5	17.8	9 675
1991	PT1	1991	08	05.32135	21	29	27.28	-09	43	15.4		9 675
1991	PT1	1991	08	08.30399	21	26	37.37	-10	00	03.1	17.8	9 675
1991	PT1	1991	08	08.33264	21	26	35.70	-10	00	13.3		9 675
1991	PV1	1991	08	05.28484	21	29	42.94	-09	21	38.9	17.5	9 675
1991	PV1	1991	08	05.32135	21	29	41.19	-09	21	55.5		9 675
1991	PV1	1991	08	08.30399	21	27	26.16	-09	43	14.1	17.5	9 675
1991	PV1	1991	08	08.33264	21	27	24.83	-09	43	26.2	18.0	9 675
1991	PR3	1991	08	05.27500	21	03	01.51	-14	18	32.3	17.0	9 675
1991	PR3	1991	08	05.31302	21	02	59.43	-14	18	49.8		9 675
1991	PR3	1991	08	07.32240	21	01	14.29	-14	33	57.1	17.0	9 675
1991	PR3	1991	08	07.35069	21	01	12.73	-14	34	10.8		9 675
1991	PY3	1991	08	05.27500	21	05	15.55	-16	10	42.7	17.8	9 675
1991	PY3	1991	08	05.31302	21	05	13.42	-16	10	50.8		9 675
1991	PY3	1991	08	07.32240	21	03	24.81	-16	17	47.3	17.8	9 675
1991	PY3	1991	08	07.35069	21	03	23.29	-16	17	52.5		9 675
1991	PB4	1991	08	05.27500	21	06	27.67	-14	41	15.5	17.0	9 675
1991	PB4	1991	08	05.31302	21	06	25.25	-14	41	11.8		9 675
1991	PB4	1991	08	07.32240	21	04	20.02	-14	39	20.3	16.8	9 675
1991	PB4	1991	08	07.35069	21	04	18.10	-14	39	17.7		9 675
1991	PE4	1991	08	05.27500	21	07	46.55	-16	56	06.4	16.8	9 675
1991	PE4	1991	08	05.31302	21	07	44.65	-16	56	19.0		9 675
1991	PE4	1991	08	07.32240	21	06	05.10	-17	07	36.8	16.8	9 675
1991	PE4	1991	08	07.35069	21	06	03.56	-17	07	46.2		9 675
1991	PJ4	1991	08	05.27500	21	08	17.64	-17	40	52.9	17.5	9 675
1991	PJ4	1991	08	05.31302	21	08	15.88	-17	41	07.6		9 675
1991	PJ4	1991	08	07.32240	21	06	44.95	-17	54	03.5	17.5	9 675
1991	PJ4	1991	08	07.35069	21	06	43.52	-17	54	14.0		9 675
1991	PM4	1991	08	05.27500	21	08	57.96	-16	46	24.9	16.8	9 675
1991	PM4	1991	08	05.31302	21	08	55.63	-16	46	25.1		9 675
1991	PM4	1991	08	07.32240	21	06	52.11	-16	47	13.6	16.8	9 675
1991	PM4	1991	08	07.35069	21	06	50.14	-16	47	17.4		9 675
1991	PO4	1991	08	05.27500	21	09	59.21	-15	08	07.2	17.0	9 675
1991	PO4	1991	08	05.31302	21	09	57.35	-15	08	16.8		9 675
1991	PO4	1991	08	07.32240	21	08	23.46	-15	16	32.3	17.2	9 675
1991	PO4	1991	08	07.35069	21	08	22.02	-15	16	40.7		9 675
1991	PT4	1991	08	05.27500	21	11	43.10	-14	35	54.8	17.5	9 675
1991	PT4	1991	08	05.31302	21	11	41.34	-14	36	00.8		9 675
1991	PT4	1991	08	07.32240	21	10	10.43	-14	42	37.6	17.5	9 675
1991	PT4	1991	08	07.35069	21	10	08.95	-14	42	42.4		9 675
1991	PV4	1991	08	05.27500	21	12	35.59	-16	52	13.4	17.8	9 675
1991	PV4	1991	08	05.31302	21	12	33.71	-16	52	20.5		9 675
1991	PV4	1991	08	07.32240	21	10	55.90	-16	59	31.3	18.0	9 675
1991	PV4	1991	08	07.35069	21	10	54.46	-16	59	38.0		9 675
1991	PE5	1991	08	05.27500	21	15	39.97	-14	03	26.3	17.0	9 675
1991	PE5	1991	08	05.31302	21	15	38.09	-14	03	33.8		9 675
1991	PE5	1991	08	07.32240	21	13	58.69	-14	10	46.2	17.0	9 675
1991	PE5	1991	08	07.35069	21	13	57.20	-14	10	52.4		9 675
1991	PQ5	1991	08	05.27500	21	19	53.22	-13	49	55.2	17.2	9 675
1991	PQ5	1991	08	05.31302	21	19	51.31	-13	50	16.1		9 675
1991	PQ5	1991	08	07.32240	21	18	11.63	-14	09	05.0	18.0	9 675
1991	PQ5	1991	08	07.35069	21	18	10.07	-14	09	21.9		9 675
1991	PR5	1991	08	05.27500	21	20	12.67	-16	01	04.0	17.2	9 675
1991	PR5	1991	08	05.31302	21	20	10.27	-16	01	06.5		9 675
1991	PR5	1991	08	07.32240	21	18	06.66	-16	03	52.5	17.5	9 675
1991	PR5	1991	08	07.35069	21	18	04.74	-16	03	54.6		9 675
1991	PX5	1991	08	06.33281	21	49	10.58	-17	09	10.8	18.2	9 675
1991	PX5	1991	08	06.37153	21	49	08.11	-17	09	14.6		9 675
1991	PX5	1991	08	10.29236	21	45	13.00	-17	17	57.5	18.2	9 675

1991	PX5		1991	08	10.32517	21	45	10.86	-17	18	02.0		9 675
1991	PZ5		1991	08	05.29363	21	50	40.77	-15	45	10.5	17.8	9 675
1991	PZ5		1991	08	05.32951	21	50	38.72	-15	45	13.3		9 675
1991	PZ5		1991	08	10.29236	21	45	55.20	-15	53	58.6		9 675
1991	PZ5		1991	08	10.32517	21	45	53.17	-15	54	02.4		9 675
1991	PE6		1991	08	06.33281	21	50	43.07	-17	12	45.1	17.2	9 675
1991	PE6		1991	08	06.37153	21	50	41.10	-17	12	54.5		9 675
1991	PE6		1991	08	10.29236	21	47	37.13	-17	27	37.9	17.5	9 675
1991	PE6		1991	08	10.32517	21	47	35.49	-17	27	46.9		9 675
1991	PS7		1991	08	08.31128	22	02	24.44	-13	33	49.2	17.2	9 675
1991	PS7		1991	08	08.34045	22	02	22.82	-13	34	04.1		9 675
1991	PE8	*	1991	08	05.27500	21	01	33.27	-17	39	00.4	17.2	9 675
1991	PE8		1991	08	05.31302	21	01	31.26	-17	39	11.7		9 675
1991	PE8		1991	08	07.32240	20	59	46.56	-17	50	21.7	17.2	9 675
1991	PE8		1991	08	07.35069	20	59	44.81	-17	50	29.8		9 675
1991	PF8	*	1991	08	05.27500	21	01	45.51	-15	01	00.8	17.0	9 675
1991	PF8		1991	08	05.31302	21	01	43.72	-15	01	10.3		9 675
1991	PF8		1991	08	07.32240	21	00	13.38	-15	09	20.1	17.0	9 675
1991	PF8		1991	08	07.35069	21	00	11.95	-15	09	26.7		9 675
1991	PG8	*	1991	08	05.27500	21	05	24.35	-18	06	54.5	15.8	9 675
1991	PG8		1991	08	05.31302	21	05	21.85	-18	06	54.0		9 675
1991	PG8		1991	08	07.32240	21	03	12.16	-18	06	25.4	16.0	9 675
1991	PG8		1991	08	07.35069	21	03	10.17	-18	06	23.3		9 675
1991	PH8	*	1991	08	05.27500	21	13	11.06	-20	02	37.7	17.0	9 675
1991	PH8		1991	08	05.31302	21	13	09.13	-20	02	58.7		9 675
1991	PH8		1991	08	07.32240	21	11	27.15	-20	12	09.0	17.0	9 675
1991	PH8		1991	08	07.35069	21	11	25.49	-20	12	17.4	17.0	9 675
1991	PJ8	*	1991	08	05.27500	21	13	22.37	-17	41	07.6	17.2	9 675
1991	PJ8		1991	08	05.31302	21	13	20.66	-17	41	39.1		9 675
1991	PJ8		1991	08	07.32240	21	11	50.66	-18	10	33.4	17.8	9 675
1991	PJ8		1991	08	07.35069	21	11	49.20	-18	10	57.7		9 675
1991	PK8		1991	07	12.38229	21	30	34.65	-14	47	44.5	16.8	9 675
1991	PK8		1991	07	12.41736	21	30	33.73	-14	47	58.1		9 675
1991	PK8	*	1991	08	05.27500	21	16	43.35	-17	51	22.9	16.2	9 675
1991	PK8		1991	08	05.31302	21	16	41.67	-17	51	42.5		9 675
1991	PK8		1991	08	07.32240	21	15	15.28	-18	08	10.6	16.5	9 675
1991	PK8		1991	08	07.35069	21	15	13.93	-18	08	24.7		9 675
1991	PL8	*	1991	08	05.27500	21	18	30.47	-18	01	14.8	17.5	9 675
1991	PL8		1991	08	05.31302	21	18	28.58	-18	01	23.0		9 675
1991	PL8		1991	08	07.32240	21	16	52.36	-18	08	24.6	18.0	9 675
1991	PL8		1991	08	07.35069	21	16	50.83	-18	08	29.9		9 675
1991	PM8	*	1991	08	05.27500	21	23	28.90	-15	09	44.8	17.8	9 675
1991	PM8		1991	08	05.31302	21	23	26.74	-15	09	55.2		9 675
1991	PM8		1991	08	07.32240	21	21	31.90	-15	19	25.4	17.5	9 675
1991	PM8		1991	08	07.35069	21	21	29.99	-15	19	33.0		9 675
1991	PN8	*	1991	08	05.27500	21	23	54.58	-13	04	10.3	17.8	9 675
1991	PN8		1991	08	05.31302	21	23	52.69	-13	04	19.5		9 675
1991	PN8		1991	08	07.32240	21	22	12.69	-13	13	23.3	17.8	9 675
1991	PN8		1991	08	07.35069	21	22	11.08	-13	13	32.8		9 675
1991	PO8	*	1991	08	05.27500	21	26	31.98	-19	18	53.7	17.5	9 675
1991	PO8		1991	08	05.31302	21	26	29.88	-19	18	51.9		9 675
1991	PO8		1991	08	06.33281	21	25	33.71	-19	18	15.2	17.8	9 675
1991	PO8		1991	08	06.37153	21	25	31.49	-19	18	12.9		9 675
1991	PO8		1991	08	07.32240	21	24	38.53	-19	17	37.0	18.0	9 675
1991	PO8		1991	08	07.35069	21	24	36.79	-19	17	34.3		9 675
1991	PO8		1991	08	10.29236	21	21	50.40	-19	15	16.2	17.5	9 675
1991	PO8		1991	08	10.32517	21	21	48.35	-19	15	13.0		9 675
1991	PP8	*	1991	08	05.27500	21	27	16.97	-18	31	26.6	17.5	9 675
1991	PP8		1991	08	05.31302	21	27	15.21	-18	31	35.9		9 675

1991	PP8		1991	08	07.32240	21	25	43.29	-18	40	15.5	17.8	9 675
1991	PP8		1991	08	07.35069	21	25	41.94	-18	40	23.0		9 675
1991	PP8		1991	08	10.29236	21	23	25.45	-18	52	51.0	17.5	9 675
1991	PP8		1991	08	10.32517	21	23	23.76	-18	53	00.6		9 675
1991	PQ8	*	1991	08	05.27500	21	27	40.10	-16	00	44.1	18.0	9 675
1991	PQ8		1991	08	05.31302	21	27	38.31	-16	00	53.7		9 675
1991	PQ8		1991	08	07.32240	21	26	04.98	-16	09	54.8	18.2	9 675
1991	PQ8		1991	08	07.35069	21	26	03.59	-16	10	02.2		9 675
1991	PR8	*	1991	08	05.28484	21	06	58.67	-09	31	37.3	17.2	9 675
1991	PR8		1991	08	08.30399	21	04	38.29	-09	50	30.4	17.5	9 675
1991	PR8		1991	08	08.33264	21	04	37.07	-09	50	39.6		9 675
1991	PS8	*	1991	08	05.28484	21	07	35.96	-09	49	24.4	17.5	9 675
1991	PS8		1991	08	05.32135	21	07	34.29	-09	49	33.2	17.2	9 675
1991	PS8		1991	08	08.30399	21	05	20.18	-10	02	28.3	17.8	9 675
1991	PS8		1991	08	08.33264	21	05	18.88	-10	02	36.3		9 675
1991	PT8	*	1991	08	05.28484	21	08	28.81	-10	14	21.5	18.0	9 675
1991	PT8		1991	08	05.32135	21	08	27.19	-10	14	34.7		9 675
1991	PT8		1991	08	08.30399	21	06	12.55	-10	33	31.0	18.0	9 675
1991	PT8		1991	08	08.33264	21	06	11.30	-10	33	40.5		9 675
1991	PU8	*	1991	08	05.28484	21	14	51.51	-10	14	59.8	18.0	9 675
1991	PU8		1991	08	05.32135	21	14	49.42	-10	15	01.7		9 675
1991	PU8		1991	08	08.30399	21	11	56.55	-10	18	03.7	18.0	9 675
1991	PU8		1991	08	08.33264	21	11	54.88	-10	18	05.7		9 675
1991	PV8	*	1991	08	05.28484	21	16	43.05	-09	47	39.7	16.5	9 675
1991	PV8		1991	08	05.32135	21	16	40.91	-09	47	39.4		9 675
1991	PV8		1991	08	08.30399	21	13	51.85	-09	48	01.9	16.5	9 675
1991	PV8		1991	08	08.33264	21	13	50.14	-09	48	02.1		9 675
1991	PW8	*	1991	08	05.28484	21	17	31.60	-09	58	57.3	17.5	9 675
1991	PW8		1991	08	05.32135	21	17	30.07	-09	59	10.8		9 675
1991	PW8		1991	08	08.30399	21	15	21.79	-10	19	42.4	17.8	9 675
1991	PW8		1991	08	08.33264	21	15	20.49	-10	19	55.2		9 675
1991	PX8	*	1991	08	05.28484	21	25	21.21	-08	03	06.4	17.0	9 675
1991	PX8		1991	08	05.32135	21	25	19.04	-08	03	13.6	16.8	9 675
1991	PX8		1991	08	08.30399	21	22	25.97	-08	12	47.2	17.2	9 675
1991	PX8		1991	08	08.33264	21	22	24.30	-08	12	53.7		9 675
1991	PY8	*	1991	08	05.28484	21	26	39.06	-12	33	48.5	18.0	9 675
1991	PY8		1991	08	05.32135	21	26	36.79	-12	33	56.3		9 675
1991	PY8		1991	08	08.30399	21	23	38.92	-12	44	34.1	18.0	9 675
1991	PY8		1991	08	08.33264	21	23	37.14	-12	44	38.4		9 675
1991	PZ8	*	1991	08	05.28484	21	28	44.16	-10	07	41.9	17.8	9 675
1991	PZ8		1991	08	05.32135	21	28	42.30	-10	07	45.2		9 675
1991	PZ8		1991	08	08.30399	21	26	05.73	-10	12	23.8	17.8	9 675
1991	PZ8		1991	08	08.33264	21	26	04.22	-10	12	26.7		9 675
1991	PA9	*	1991	08	05.28484	21	29	35.75	-12	31	37.8	18.5	9 675
1991	PA9		1991	08	05.32135	21	29	33.40	-12	31	39.8		9 675
1991	PA9		1991	08	08.30399	21	26	24.70	-12	34	01.3	18.5	9 675
1991	PA9		1991	08	08.33264	21	26	22.70	-12	34	04.3		9 675
1991	PB9	*	1991	08	05.28484	21	30	12.43	-08	46	39.6	17.5	9 675
1991	PB9		1991	08	05.32135	21	30	10.80	-08	46	38.6		9 675
1991	PB9		1991	08	08.30399	21	27	59.86	-08	45	51.3	17.0	9 675
1991	PB9		1991	08	08.33264	21	27	58.52	-08	45	50.3		9 675
1991	PC9	*	1991	08	05.28484	21	32	05.02	-08	01	59.2	17.5	9 675
1991	PC9		1991	08	05.32135	21	32	02.77	-08	02	05.2		9 675
1991	PC9		1991	08	08.30399	21	29	04.68	-08	12	14.0	17.5	9 675
1991	PC9		1991	08	08.33264	21	29	02.80	-08	12	19.3		9 675
1991	PD9	*	1991	08	15.30451	20	33	13.23	-12	36	11.8	15.5	2 675
1991	PD9		1991	08	15.32708	20	33	12.15	-12	36	23.3		2 675
1991	PD9		1991	08	16.34913	20	32	33.72	-12	44	56.1		2 675
1991	PE9	*	1991	08	15.35625	21	23	00.49	-19	07	39.4	16.5	2 675

1991	PE9		1991	08	15.38038	21	22	59.36	-19	07	53.6		2 675
1991	PE9		1991	08	16.39566	21	22	10.95	-19	19	20.0		2 675
1991	PF9	*	1991	08	15.31563	20	59	18.95	-02	32	17.0	16.0	2 675
1991	PF9		1991	08	15.33819	20	59	18.01	-02	32	27.3		2 675
1991	PF9		1991	08	16.35556	20	58	36.87	-02	39	18.0		2 675
1991	PF9		1991	08	16.37917	20	58	35.98	-02	39	29.7		2 675
1991	PG9		1991	08	05.26563	21	09	04.24	-04	26	14.9	17.0	9 675
1991	PG9		1991	08	05.30313	21	09	02.47	-04	26	27.9		9 675
1991	PG9		1991	08	09.27656	21	06	04.30	-04	52	09.1	17.2	9 675
1991	PG9		1991	08	09.30903	21	06	02.80	-04	52	22.5		9 675
1991	PG9	*	1991	08	15.31563	21	01	35.67	-05	34	58.4	16.0	2 675
1991	PG9		1991	08	15.33819	21	01	34.64	-05	35	08.9		2 675
1991	PG9		1991	08	16.35556	21	00	50.61	-05	42	43.6		2 675
1991	PG9		1991	08	16.37917	21	00	49.55	-05	42	53.8		2 675
1991	PH9	*	1991	08	15.35625	21	11	05.27	-20	10	45.6	16.5	2 675
1991	PH9		1991	08	15.38038	21	11	03.54	-20	10	37.7		2 675
1991	PH9		1991	08	16.39566	21	09	54.25	-20	05	32.1		2 675
1991	PJ9	*	1991	08	15.35625	21	21	20.45	-24	32	29.3	16.5	2 675
1991	PJ9		1991	08	15.38038	21	21	18.62	-24	32	18.0		2 675
1991	PJ9		1991	08	16.39566	21	20	08.28	-24	24	27.2		2 675
1991	PK9	*	1991	08	15.20451	17	36	53.09	-28	00	03.9	16	2 675
1991	PK9		1991	08	15.22813	17	36	53.21	-28	00	13.5		2 675
1991	PK9		1991	08	16.25556	17	37	01.68	-28	06	41.5		2 675
1991	PL9	*	1991	08	05.26563	21	07	23.82	-07	40	39.6	17.0	9 675
1991	PL9		1991	08	05.30313	21	07	21.50	-07	40	31.2		9 675
1991	PL9		1991	08	09.27656	21	03	26.90	-07	23	53.4	17.2	9 675
1991	PL9		1991	08	09.30903	21	03	24.95	-07	23	45.7		9 675
1991	PM9	*	1991	08	05.27500	21	02	37.12	-16	00	29.0	16.8	9 675
1991	PM9		1991	08	05.31302	21	02	34.84	-16	00	36.0		9 675
1991	PM9		1991	08	07.32240	21	00	38.55	-16	05	52.9	17.2	9 675
1991	PM9		1991	08	07.35069	21	00	36.73	-16	05	56.9		9 675
1991	PN9	*	1991	08	05.27500	21	10	53.30	-19	54	37.4	17.8	9 675
1991	PN9		1991	08	05.31302	21	10	50.64	-19	54	38.0		9 675
1991	PN9		1991	08	07.32240	21	08	40.25	-19	56	12.7	17.8	9 675
1991	PN9		1991	08	07.35069	21	08	38.13	-19	56	14.2		9 675
1991	PO9	*	1991	08	05.27500	21	13	12.43	-18	44	11.3	16.8	9 675
1991	PO9		1991	08	05.31302	21	13	09.96	-18	44	17.9		9 675
1991	PO9		1991	08	07.32240	21	11	00.58	-18	50	25.2	17.8	9 675
1991	PO9		1991	08	07.35069	21	10	58.59	-18	50	29.5		9 675
1991	PP9	*	1991	08	05.27500	21	15	23.27	-18	34	15.3	17.8	9 675
1991	PP9		1991	08	05.31302	21	15	21.11	-18	34	18.6		9 675
1991	PP9		1991	08	07.32240	21	13	28.80	-18	38	42.4	18.0	9 675
1991	PP9		1991	08	07.35069	21	13	26.88	-18	38	44.2		9 675
1991	PQ9	*	1991	08	07.32240	21	18	54.01	-13	26	43.4	18.2	9 675
1991	PQ9		1991	08	07.35069	21	18	52.43	-13	26	42.0		9 675
1991	PQ9		1991	08	08.30399	21	18	03.81	-13	25	51.5	17.5	9 675
1991	PQ9		1991	08	08.33264	21	18	02.11	-13	25	50.6		9 675
1991	PR9	*	1991	08	07.32240	21	29	12.52	-14	02	37.2	18.2	9 675
1991	PR9		1991	08	08.30399	21	28	08.48	-13	57	41.3	17.8	9 675
1991	PR9		1991	08	08.33264	21	28	06.41	-13	57	33.0		9 675
1991	PS9	*	1991	08	05.29363	21	57	22.96	-12	43	08.1	17.5	9 675
1991	PS9		1991	08	05.32951	21	57	20.80	-12	43	06.6		9 675
1991	PS9		1991	08	06.35503	21	56	21.02	-12	41	27.6	18.2	9 675
1991	PS9		1991	08	06.38698	21	56	19.08	-12	41	25.6		9 675
1991	PT9	*	1991	08	13.30608	19	13	16.80	-04	10	52.1	16.0	2 675
1991	PT9		1991	08	13.32292	19	13	16.06	-04	10	39.0		2 675
1991	PT9		1991	08	16.27188	19	11	24.99	-03	33	27.9		2 675
1991	PT9		1991	08	16.29444	19	11	24.19	-03	33	11.4		2 675
1991	PU9	*	1991	08	13.30608	19	20	54.79	-04	08	08.0	16.5	2 675

1991	PU9	1991	08	13.32292	19	20	54.43	-04	08	24.7		2 675
1991	PU9	1991	08	16.27188	19	20	02.02	-05	00	34.3		2 675
1991	PU9	1991	08	16.29444	19	20	01.75	-05	00	56.5		2 675
1991	PV9 *	1991	08	13.30608	19	33	09.33	-04	08	20.4	16.5	2 675
1991	PV9	1991	08	13.32292	19	33	08.97	-04	08	30.8		2 675
1991	PV9	1991	08	16.27188	19	32	01.16	-04	43	19.0		2 675
1991	PV9	1991	08	16.29444	19	32	00.67	-04	43	34.4		2 675
1991	PW9	1991	08	05.28484	21	08	53.84	-11	31	11.8	17.5	9 675
1991	PW9	1991	08	05.32135	21	08	52.23	-11	31	25.5		9 675
1991	PW9	1991	08	08.30399	21	06	43.56	-11	50	37.3	17.2	9 675
1991	PW9	1991	08	08.33264	21	06	42.23	-11	50	48.9		9 675
1991	PA10*	1991	08	05.28484	21	19	40.06	-09	55	41.1	17.8	9 675
1991	PA10	1991	08	05.32135	21	19	38.06	-09	55	40.5		9 675
1991	PA10	1991	08	08.30399	21	17	06.13	-09	55	36.9	18.0	9 675
1991	PA10	1991	08	08.33264	21	17	04.62	-09	55	35.5		9 675
1991	PB10*	1991	08	05.28484	21	28	43.61	-09	46	21.4	17.8	9 675
1991	PB10	1991	08	05.32135	21	28	41.46	-09	46	06.4	17.5	9 675
1991	PB10	1991	08	08.30399	21	25	53.61	-09	26	29.4	18.0	9 675
1991	PB10	1991	08	08.33264	21	25	51.92	-09	26	16.7		9 675
1991	PC10*	1991	08	05.28484	21	32	57.10	-13	01	27.9	17.5	9 675
1991	PC10	1991	08	05.32135	21	32	55.13	-13	01	29.5		9 675
1991	PC10	1991	08	08.30399	21	30	23.39	-12	59	47.1	17.2	9 675
1991	PC10	1991	08	08.33264	21	30	21.94	-12	59	46.0	17.5	9 675
1991	PD10*	1991	08	07.38524	23	16	44.56	-03	58	44.1	18.2	9 675
1991	PD10	1991	08	07.41406	23	16	43.52	-03	58	42.4		9 675
1991	PD10	1991	08	08.42483	23	16	08.84	-03	58	40.3	17.8	9 675
1991	PD10	1991	08	08.45660	23	16	07.56	-03	58	41.1		9 675
1991	PD10	1991	08	10.40851	23	14	56.01	-03	59	01.6	18.0	9 675
1991	PE10*	1991	08	07.38524	23	18	12.59	-05	29	30.9	18.0	9 675
1991	PE10	1991	08	07.41406	23	18	11.78	-05	29	28.7		9 675
1991	PE10	1991	08	08.42483	23	17	43.79	-05	28	06.0	18.2	9 675
1991	PE10	1991	08	08.45660	23	17	42.84	-05	28	04.5		9 675
1991	PE10	1991	08	10.40851	23	16	44.25	-05	25	47.9	17.8	9 675
1991	PF10*	1991	08	07.38524	23	20	41.97	-04	50	32.5	17.8	9 675
1991	PF10	1991	08	07.41406	23	20	41.41	-04	50	39.5		9 675
1991	PF10	1991	08	08.42483	23	20	21.04	-04	54	40.2	17.5	9 675
1991	PF10	1991	08	08.45660	23	20	20.25	-04	54	48.1		9 675
1991	PF10	1991	08	10.40851	23	19	35.40	-05	03	13.5	18.0	9 675
1991	PG10*	1991	08	07.38524	23	23	36.56	-06	36	25.5	18.5	9 675
1991	PG10	1991	08	07.41406	23	23	35.71	-06	36	25.5		9 675
1991	PG10	1991	08	08.42483	23	23	08.04	-06	35	30.1	18.5	9 675
1991	PG10	1991	08	08.45660	23	23	07.08	-06	35	28.2		9 675
1991	PH10*	1991	08	07.38524	23	24	49.60	-05	39	45.4	18.0	9 675
1991	PH10	1991	08	07.39306	23	24	49.48	-05	39	47.5	18.2	9 675
1991	PH10	1991	08	07.41406	23	24	49.21	-05	39	52.1		9 675
1991	PH10	1991	08	07.42257	23	24	49.03	-05	39	50.9		9 675
1991	PH10	1991	08	08.42483	23	24	30.78	-05	43	02.9	17.8	9 675
1991	PH10	1991	08	08.45660	23	24	30.09	-05	43	08.4		9 675
1991	PH10	1991	08	10.40851	23	23	49.98	-05	49	50.4	18.2	9 675
1991	PJ10*	1991	08	15.21024	18	11	47.63	-06	20	04.5	17	2 675
1991	PJ10	1991	08	15.23420	18	11	47.28	-06	20	11.8		2 675
1991	PJ10	1991	08	16.26111	18	11	35.87	-06	25	42.6		2 675
1991	PJ10	1991	08	16.28368	18	11	35.66	-06	25	48.9		2 675
1991	PK10*	1991	08	15.21024	18	16	24.49	-06	41	37.3	17	2 675
1991	PK10	1991	08	15.23420	18	16	24.45	-06	41	46.6		2 675
1991	PK10	1991	08	16.26111	18	16	24.51	-06	48	40.6		2 675
1991	PK10	1991	08	16.28368	18	16	24.62	-06	48	46.9		2 675
1991	PN10*	1991	08	07.44948	23	27	25.90	+06	35	51.6	17.0	9 675
1991	PN10	1991	08	07.46545	23	27	25.62	+06	35	36.8	17.5	9 675

1991	PN10	1991	08	07.48229	23	27	25.43	+06	35	22.9		9 675
1991	PN10	1991	08	08.44149	23	27	15.88	+06	21	20.3	17.2	9 675
1991	PN10	1991	08	10.41771	23	26	50.29	+05	51	02.3	17.8	9 675
1991	PN10	1991	08	10.46597	23	26	49.41	+05	50	15.7		9 675
1991	PO10*	1991	08	07.44948	23	30	36.41	+05	20	11.4	16.2	9 675
1991	PO10	1991	08	07.46545	23	30	36.18	+05	20	10.8	16.5	9 675
1991	PO10	1991	08	07.48229	23	30	35.96	+05	20	09.9		9 675
1991	PO10	1991	08	08.44149	23	30	28.49	+05	18	50.8	16.5	9 675
1991	PO10	1991	08	10.41771	23	30	07.44	+05	15	18.1	16.8	9 675
1991	PO10	1991	08	10.46597	23	30	06.72	+05	15	12.2		9 675
1991	PP10*	1991	08	07.44948	23	32	17.24	+03	35	33.2	17.8	9 675
1991	PP10	1991	08	08.44149	23	31	48.18	+03	41	27.8	17.5	9 675
1991	PQ10*	1991	08	07.44948	23	32	31.83	+04	10	13.1	17.0	9 675
1991	PQ10	1991	08	08.44149	23	32	08.04	+04	10	29.3	17.0	9 675
1991	PR10*	1991	08	07.44948	23	33	49.95	+04	03	19.1	17.0	9 675
1991	PR10	1991	08	08.44149	23	33	34.17	+04	00	12.1	16.8	9 675
1991	PS10*	1991	08	07.44948	23	36	47.46	+03	06	46.7	17.0	9 675
1991	PS10	1991	08	08.44149	23	36	21.41	+03	15	37.0	16.8	9 675
1991	PT10*	1991	08	07.44948	23	38	13.89	+02	41	49.0	18.0	9 675
1991	PT10	1991	08	08.44149	23	38	16.54	+02	45	47.3	17.5	9 675
1991	PU10*	1991	08	07.44948	23	38	49.76	+04	20	16.8	18.2	9 675
1991	PU10	1991	08	08.44149	23	38	36.45	+04	20	19.9	18.2	9 675
1991	PV10*	1991	08	07.44948	23	41	07.32	+00	59	59.6	17.2	9 675
1991	PV10	1991	08	08.44149	23	39	49.04	+01	01	38.3	17.2	9 675
1991	PW10*	1991	08	07.44948	23	42	11.19	+01	52	05.5	16.8	9 675
1991	PW10	1991	08	08.44149	23	41	50.61	+01	53	45.8	16.8	9 675
1991	PX10*	1991	08	07.44948	23	48	50.97	+07	23	26.5	17.8	9 675
1991	PX10	1991	08	08.44149	23	49	10.90	+07	21	52.3	17.5	9 675
1991	PX10	1991	08	10.44618	23	49	45.72	+07	17	36.8	17.5	9 675
1991	PY10*	1991	08	07.44948	23	49	00.56	+04	56	01.3	17.8	9 675
1991	PY10	1991	08	08.44149	23	48	53.71	+04	53	51.9	17.8	9 675
1991	PY10	1991	08	09.46892	23	48	45.27	+04	51	22.0	17.5	9 675
1991	PY10	1991	08	10.44618	23	48	35.71	+04	48	47.1		9 675
1991	PZ10*	1991	08	07.44948	23	51	01.16	+02	51	54.4	17.0	9 675
1991	PZ10	1991	08	08.44149	23	50	58.20	+03	01	02.6	17.0	9 675
1991	PA11*	1991	08	07.44948	23	51	16.38	+05	25	28.6	16.5	9 675
1991	PA11	1991	08	08.44149	23	51	32.53	+05	25	17.2	16.0	9 675
1991	PA11	1991	08	09.46892	23	51	47.25	+05	24	49.2	16.0	9 675
1991	PA11	1991	08	10.44618	23	51	59.42	+05	24	01.3		9 675
1991	PB11*	1991	08	10.41771	23	29	41.74	+09	08	22.3	17.0	9 675
1991	PB11	1991	08	10.46597	23	29	40.66	+09	08	39.6		9 675
1991	PC11	1991	08	05.35451	22	53	56.15	-07	52	55.0	17.0	9 675
1991	PC11*	1991	08	07.38524	22	53	05.99	-08	05	48.6	17.0	9 675
1991	PC11	1991	08	07.41406	22	53	05.13	-08	05	59.6		9 675
1991	PC11	1991	08	08.37188	22	52	39.57	-08	12	21.2	17.0	9 675
1991	PC11	1991	08	08.40868	22	52	38.43	-08	12	36.2		9 675
1991	PD11	1991	08	05.35451	22	55	14.59	-08	10	32.0	17.2	9 675
1991	PD11*	1991	08	07.38524	22	54	19.32	-08	28	44.3	17.0	9 675
1991	PD11	1991	08	07.41406	22	54	18.38	-08	29	00.0		9 675
1991	PD11	1991	08	08.37188	22	53	49.81	-08	37	54.1	17.0	9 675
1991	PD11	1991	08	08.40868	22	53	48.46	-08	38	15.3		9 675
1991	PE11	1991	08	05.35451	22	56	34.31	-08	28	20.3	17.5	9 675
1991	PE11*	1991	08	07.38524	22	55	33.07	-08	29	46.6	18.2	9 675
1991	PE11	1991	08	07.41406	22	55	32.11	-08	29	48.2		9 675
1991	PE11	1991	08	08.37188	22	55	01.06	-08	30	39.9	17.2	9 675
1991	PE11	1991	08	08.40868	22	54	59.76	-08	30	42.3		9 675
1991	PE11	1991	08	10.40851	22	53	50.42	-08	32	48.7	17.8	9 675
1991	PF11	1991	08	07.46545	23	09	02.07	+05	04	34.2	17.8	9 675
1991	PF11	1991	08	07.48229	23	09	01.49	+05	04	34.5		9 675

1991	PF11*	1991	08	08.43003	23	08	30.26	+05	05	57.5		17.8	9 675
1991	PF11	1991	08	08.46441	23	08	29.19	+05	06	02.4			9 675
1991	PF11	1991	08	10.41771	23	07	21.37	+05	08	26.3		17.8	9 675
1991	PF11	1991	08	10.46597	23	07	19.56	+05	08	29.8			9 675
1991	PG11*	1991	08	09.46892	00	00	02.76	+05	00	37.8		16.8	9 675
1991	PG11	1991	08	10.44618	00	00	16.09	+04	57	49.5			9 675
1991	PH11*	1991	08	09.46892	00	00	41.26	+08	31	54.8		17.5	9 675
1991	PH11	1991	08	10.44618	00	00	24.10	+08	31	35.2			9 675
1991	PJ11*	1991	08	09.46892	00	00	55.11	+05	15	31.8		17.5	9 675
1991	PJ11	1991	08	10.44618	00	00	54.51	+05	16	53.3			9 675
1991	PK11*	1991	08	09.46892	00	05	11.22	+06	30	51.8		17.8	9 675
1991	PK11	1991	08	10.44618	00	04	58.24	+06	33	12.7			9 675
1991	PL11*	1991	08	09.46892	00	05	48.30	+10	29	00.4			9 675
1991	PL11	1991	08	10.44618	00	05	51.36	+10	26	00.8			9 675
1991	PM11*	1991	08	09.46892	00	13	58.61	+03	43	40.8		16.5	9 675
1991	PM11	1991	08	10.44618	00	14	08.91	+03	49	16.9			9 675
1991	PN11*	1991	08	09.46892	00	20	12.89	+07	08	47.4		17.2	9 675
1991	PN11	1991	08	10.44618	00	20	09.68	+07	06	38.6			9 675
1991	PO11*	1991	08	09.46892	23	50	10.30	+04	07	30.8		17.5	9 675
1991	PO11	1991	08	10.44618	23	50	00.83	+04	04	35.8			9 675
1991	PP11*	1991	08	09.46892	23	54	37.29	+06	32	04.9		17.0	9 675
1991	PP11	1991	08	10.44618	23	54	38.76	+06	28	32.9			9 675
1991	PQ11*	1991	08	09.46892	23	55	55.55	+04	40	31.5		17.8	9 675
1991	PQ11	1991	08	10.44618	23	55	41.50	+04	42	49.9			9 675
1991	PR11*	1991	08	09.46892	23	56	48.48	+07	39	11.8		17.2	9 675
1991	PR11	1991	08	10.44618	23	56	46.37	+07	39	13.5			9 675
1991	PS11*	1991	08	07.38524	22	56	39.11	-04	53	50.9		17.8	9 675
1991	PS11	1991	08	07.41406	22	56	37.85	-04	53	46.7			9 675
1991	PS11	1991	08	08.38038	22	55	55.06	-04	52	04.8		17.8	9 675
1991	PS11	1991	08	08.41649	22	55	53.42	-04	52	00.6			9 675
1991	PT11*	1991	08	07.38524	23	00	14.62	-03	30	34.1		17.8	9 675
1991	PT11	1991	08	07.41406	23	00	13.87	-03	30	39.3			9 675
1991	PT11	1991	08	08.38038	22	59	51.81	-03	33	41.3		17.8	9 675
1991	PT11	1991	08	08.41649	22	59	50.84	-03	33	47.8			9 675
1991	PT11	1991	08	10.40851	22	59	01.79	-03	40	37.5		18.0	9 675
1991	PU11*	1991	08	07.39306	23	26	18.92	-05	35	12.8		16.8	9 675
1991	PU11	1991	08	07.42257	23	26	18.39	-05	35	09.5			9 675
1991	PU11	1991	08	08.42483	23	26	01.91	-05	33	21.2		16.8	9 675
1991	PU11	1991	08	08.45660	23	26	01.22	-05	33	17.6			9 675
1991	PV11*	1991	08	07.39306	23	35	13.44	-06	39	32.0		18.2	9 675
1991	PV11	1991	08	07.42257	23	35	12.73	-06	39	48.9			9 675
1991	PV11	1991	08	08.42483	23	34	52.61	-06	49	05.8		18.2	9 675
1991	PV11	1991	08	08.45660	23	34	51.87	-06	49	23.6			9 675
1991	PW11*	1991	08	07.40035	22	41	32.51	+00	47	03.1		17.8	9 675
1991	PW11	1991	08	07.43166	22	41	31.44	+00	46	52.8			9 675
1991	PW11	1991	08	08.38038	22	41	01.76	+00	41	44.3		17.0	9 675
1991	PW11	1991	08	08.41649	22	41	00.47	+00	41	32.1			9 675
1991	PX11*	1991	08	07.40035	22	44	33.68	+01	47	01.0		17.5	9 675
1991	PX11	1991	08	07.43166	22	44	32.18	+01	47	03.0			9 675
1991	PX11	1991	08	08.38038	22	43	48.84	+01	47	47.9		17.8	9 675
1991	PX11	1991	08	08.41649	22	43	47.16	+01	47	48.4			9 675
1991	PY11*	1991	08	07.40035	22	52	25.71	+00	29	44.7		17.0	9 675
1991	PY11	1991	08	07.43166	22	52	24.27	+00	29	39.5			9 675
1991	PY11	1991	08	08.38038	22	51	47.57	+00	26	21.6		17.2	9 675
1991	PY11	1991	08	08.41649	22	51	46.03	+00	26	13.9			9 675
1991	PZ11*	1991	08	07.40035	23	00	23.44	+03	24	55.0			9 675
1991	PZ11	1991	08	07.43166	23	00	22.10	+03	24	57.6			9 675
1991	PZ11	1991	08	08.43003	22	59	41.30	+03	26	28.2		17.8	9 675
1991	PZ11	1991	08	08.46441	22	59	39.98	+03	26	30.3			9 675

1991	PA12*	1991	08	07.40035	23	05	37.88	+04	00	33.4		9	675
1991	PA12	1991	08	07.43166	23	05	36.63	+04	00	32.2		9	675
1991	PA12	1991	08	08.43003	23	04	58.85	+03	59	16.0	16.8	9	675
1991	PA12	1991	08	08.46441	23	04	57.59	+03	59	13.7		9	675
1991	PB12*	1991	08	07.46545	23	05	14.87	+06	06	52.5	17.0	9	675
1991	PB12	1991	08	07.48229	23	05	14.36	+06	06	52.6		9	675
1991	PB12	1991	08	10.41771	23	03	47.53	+06	06	13.7	17.8	9	675
1991	PB12	1991	08	10.46597	23	03	45.97	+06	06	12.0		9	675
1991	PC12*	1991	08	07.46545	23	05	19.14	+09	02	10.1	17.0	9	675
1991	PC12	1991	08	07.48229	23	05	18.94	+09	02	03.6	17.2	9	675
1991	PC12	1991	08	10.41771	23	04	38.37	+08	40	30.9	17.8	9	675
1991	PC12	1991	08	10.46597	23	04	37.49	+08	40	05.5		9	675
1991	PD12*	1991	08	07.46545	23	06	28.78	+05	50	38.5	17.8	9	675
1991	PD12	1991	08	07.48229	23	06	28.51	+05	50	33.5		9	675
1991	PD12	1991	08	10.41771	23	05	47.74	+05	33	18.8	18.0	9	675
1991	PD12	1991	08	10.46597	23	05	46.78	+05	33	00.6		9	675
1991	PE12*	1991	08	07.46545	23	08	38.14	+06	14	34.2	16.8	9	675
1991	PE12	1991	08	07.48229	23	08	37.83	+06	14	38.0	17.0	9	675
1991	PE12	1991	08	10.41771	23	07	47.69	+06	25	59.6	17.0	9	675
1991	PE12	1991	08	10.46597	23	07	46.68	+06	26	09.6		9	675
1991	PF12*	1991	08	07.46545	23	09	26.24	+06	06	17.4	17.5	9	675
1991	PF12	1991	08	07.48229	23	09	25.78	+06	06	24.1		9	675
1991	PF12	1991	08	10.41771	23	08	18.98	+06	22	44.6	17.5	9	675
1991	PF12	1991	08	10.46597	23	08	17.63	+06	23	00.3		9	675
1991	PG12*	1991	08	07.46545	23	12	15.21	+05	46	04.9	17.5	9	675
1991	PG12	1991	08	07.48229	23	12	14.63	+05	46	05.5	17.2	9	675
1991	PG12	1991	08	10.41771	23	10	42.17	+05	45	01.8	17.5	9	675
1991	PG12	1991	08	10.46597	23	10	40.45	+05	45	00.4		9	675
1991	PH12*	1991	08	07.46545	23	15	06.86	+08	31	17.4	17.8	9	675
1991	PH12	1991	08	07.48229	23	15	06.37	+08	31	21.2		9	675
1991	PH12	1991	08	10.41771	23	13	40.44	+08	37	33.7	17.5	9	675
1991	PH12	1991	08	10.46597	23	13	38.96	+08	37	38.1		9	675
1991	PJ12*	1991	08	07.46545	23	17	55.76	+08	14	58.4	18.2	9	675
1991	PJ12	1991	08	07.48229	23	17	55.32	+08	15	02.2		9	675
1991	PJ12	1991	08	10.41771	23	16	44.43	+08	18	53.7	18.2	9	675
1991	PJ12	1991	08	10.46597	23	16	43.18	+08	18	57.9		9	675
1991	PK12*	1991	08	07.46545	23	18	32.38	+09	20	20.6	18.2	9	675
1991	PK12	1991	08	07.48229	23	18	32.06	+09	20	23.7		9	675
1991	PK12	1991	08	10.41771	23	17	39.72	+09	24	36.1	18.2	9	675
1991	PK12	1991	08	10.46597	23	17	38.76	+09	24	38.1		9	675
1991	PL12*	1991	08	07.46545	23	28	32.82	+09	29	55.7	18.2	9	675
1991	PL12	1991	08	07.48229	23	28	32.35	+09	29	58.7		9	675
1991	PL12	1991	08	10.41771	23	27	23.88	+09	36	04.7	18.0	9	675
1991	PL12	1991	08	10.46597	23	27	22.98	+09	36	09.6		9	675
1991	PM12*	1991	08	07.46545	23	32	44.26	+09	17	39.6		9	675
1991	PM12	1991	08	07.48229	23	32	43.90	+09	17	46.2	17.2	9	675
1991	PM12	1991	08	10.41771	23	31	34.90	+09	36	29.1	17.5	9	675
1991	PM12	1991	08	10.46597	23	31	33.52	+09	36	46.9		9	675
1991	PN12*	1991	08	05.29363	21	43	17.71	-15	29	18.5	18.0	9	675
1991	PN12	1991	08	05.32951	21	43	15.97	-15	29	26.1		9	675
1991	PN12	1991	08	10.29236	21	39	15.93	-15	47	25.2	18.5	9	675
1991	PN12	1991	08	10.32517	21	39	14.19	-15	47	32.8		9	675
1991	PO12*	1991	08	05.29363	21	54	53.02	-11	49	19.2	17.0	9	675
1991	PO12	1991	08	05.32951	21	54	51.19	-11	49	36.3		9	675
1991	PO12	1991	08	06.35503	21	54	00.45	-11	56	52.9	17.0	9	675
1991	PO12	1991	08	06.38698	21	53	58.76	-11	57	07.2	17.5	9	675
1991	PP12*	1991	08	05.35451	22	25	39.89	-08	54	21.4	18.5	9	675
1991	PP12	1991	08	08.37188	22	23	50.31	-08	59	15.5	18.2	9	675
1991	PP12	1991	08	08.40868	22	23	48.76	-08	59	19.3		9	675

1991	PQ12*	1991	08	05.35451	22	28	56.66	-08	47	22.4	17.5	9 675
1991	PQ12	1991	08	08.37188	22	27	04.86	-08	58	55.4	17.5	9 675
1991	PQ12	1991	08	08.40868	22	27	03.35	-08	59	04.1		9 675
1991	PR12*	1991	08	05.35451	22	29	13.59	-08	49	31.2	17.5	9 675
1991	PR12	1991	08	08.37188	22	27	27.92	-08	59	27.7	17.5	9 675
1991	PR12	1991	08	08.40868	22	27	26.51	-08	59	35.5		9 675
1991	PS12*	1991	08	05.35451	22	31	42.95	-07	24	03.9	16.8	9 675
1991	PS12	1991	08	08.37188	22	29	54.95	-07	47	35.6	16.8	9 675
1991	PS12	1991	08	08.40868	22	29	53.53	-07	47	54.4		9 675
1991	PT12*	1991	08	05.35451	22	32	04.32	-10	44	05.0	17.8	9 675
1991	PT12	1991	08	08.37188	22	30	10.29	-10	56	00.0	17.2	9 675
1991	PT12	1991	08	08.40868	22	30	08.80	-10	56	08.6		9 675
1991	PU12*	1991	08	05.35451	22	34	41.25	-07	11	08.4	17.8	9 675
1991	PU12	1991	08	08.37188	22	33	40.46	-07	24	35.3	17.8	9 675
1991	PU12	1991	08	08.40868	22	33	39.41	-07	24	47.3		9 675
1991	PV12*	1991	08	05.35451	22	36	02.54	-09	56	08.4	18.0	9 675
1991	PV12	1991	08	08.37188	22	33	38.44	-09	47	38.7	18.2	9 675
1991	PV12	1991	08	08.40868	22	33	36.51	-09	47	32.0		9 675
1991	PW12*	1991	08	05.35451	22	36	16.74	-09	23	29.8	17.8	9 675
1991	PW12	1991	08	08.37188	22	34	28.97	-09	33	56.2	17.5	9 675
1991	PW12	1991	08	08.40868	22	34	27.57	-09	34	05.1		9 675
1991	PX12*	1991	08	05.35451	22	36	31.49	-09	57	33.0	17.8	9 675
1991	PX12	1991	08	08.37188	22	34	59.22	-10	17	04.7	17.5	9 675
1991	PX12	1991	08	08.40868	22	34	57.90	-10	17	19.5		9 675
1991	PY12*	1991	08	05.35451	22	37	31.34	-08	30	05.9	18.8	9 675
1991	PY12	1991	08	08.37188	22	35	12.78	-08	29	41.6	17.8	9 675
1991	PY12	1991	08	08.40868	22	35	10.93	-08	29	42.0		9 675
1991	PZ12*	1991	08	05.35451	22	40	33.31	-07	23	05.0	18.8	9 675
1991	PZ12	1991	08	08.37188	22	38	28.36	-07	25	32.9	18.2	9 675
1991	PZ12	1991	08	08.40868	22	38	26.63	-07	25	35.0		9 675
1991	PA13*	1991	08	05.35451	22	41	10.64	-07	39	51.5	17.8	9 675
1991	PA13	1991	08	08.37188	22	39	11.14	-07	42	28.6	17.8	9 675
1991	PA13	1991	08	08.40868	22	39	09.53	-07	42	30.9		9 675
1991	PB13*	1991	08	05.35451	22	42	19.06	-10	57	55.3	17.2	9 675
1991	PB13	1991	08	08.37188	22	40	40.80	-11	10	20.6	17.2	9 675
1991	PB13	1991	08	08.40868	22	40	39.44	-11	10	29.8		9 675
1991	PC13*	1991	08	05.35451	22	43	42.65	-08	29	51.4	16.0	9 675
1991	PC13	1991	08	08.37188	22	41	42.43	-08	30	35.5	16.2	9 675
1991	PC13	1991	08	08.40868	22	41	40.65	-08	30	37.6		9 675
1991	PD13*	1991	08	05.35451	22	43	59.07	-09	50	44.2	18.2	9 675
1991	PD13	1991	08	08.37188	22	42	25.48	-09	54	50.4	18.0	9 675
1991	PD13	1991	08	08.40868	22	42	24.16	-09	54	54.3		9 675
1991	PE13*	1991	08	05.35451	22	44	18.72	-08	14	31.1	18.0	9 675
1991	PE13	1991	08	08.37188	22	42	10.81	-08	13	40.3	17.8	9 675
1991	PE13	1991	08	08.40868	22	42	09.01	-08	13	40.4		9 675
1991	PF13*	1991	08	05.35451	22	44	27.58	-05	26	24.8	18.5	9 675
1991	PF13	1991	08	08.37188	22	43	25.93	-05	34	29.6	18.0	9 675
1991	PF13	1991	08	08.38038	22	43	25.73	-05	34	29.6	17.5	9 675
1991	PF13	1991	08	08.40868	22	43	24.93	-05	34	36.2		9 675
1991	PF13	1991	08	08.41649	22	43	24.73	-05	34	36.4	18.0	9 675
1991	PG13*	1991	08	05.35451	22	44	40.20	-12	11	40.4	16.5	9 675
1991	PG13	1991	08	08.40868	22	42	14.49	-12	01	55.4	16.5	9 675
1991	PH13*	1991	08	05.35451	22	46	00.19	-08	32	58.4	17.2	9 675
1991	PH13	1991	08	08.37188	22	44	39.16	-08	49	23.2	17.0	9 675
1991	PH13	1991	08	08.40868	22	44	37.97	-08	49	36.0		9 675
1991	PJ13*	1991	08	05.35451	22	46	51.05	-08	30	43.7	18.0	9 675
1991	PJ13	1991	08	08.37188	22	45	05.12	-08	34	32.6	17.8	9 675
1991	PJ13	1991	08	08.40868	22	45	03.58	-08	34	36.1		9 675
1991	PK13*	1991	08	05.35451	22	47	47.44	-06	27	30.1	18.2	9 675

1991	PK13	1991	08	08.37188	22	46	06.04	-06	16	44.2		18.0	9 675
1991	PK13	1991	08	08.38038	22	46	05.56	-06	16	42.1		18.2	9 675
1991	PK13	1991	08	08.40868	22	46	04.48	-06	16	38.2			9 675
1991	PK13	1991	08	08.41649	22	46	04.12	-06	16	35.3			9 675
1991	PL13*	1991	08	05.35451	22	47	54.02	-04	47	37.0			9 675
1991	PL13	1991	08	08.37188	22	46	21.66	-04	52	48.9		17.5	9 675
1991	PL13	1991	08	08.38038	22	46	21.44	-04	52	48.6		17.5	9 675
1991	PL13	1991	08	08.40868	22	46	20.31	-04	52	53.4			9 675
1991	PL13	1991	08	08.41649	22	46	20.12	-04	52	53.5			9 675
1991	PM13*	1991	08	05.35451	22	48	15.01	-12	11	30.9		16.8	9 675
1991	PM13	1991	08	08.37188	22	46	04.27	-12	18	20.2		16.8	9 675
1991	PM13	1991	08	08.40868	22	46	02.44	-12	18	25.0			9 675
1991	PN13*	1991	08	05.35451	22	48	39.93	-10	36	32.9		17.0	9 675
1991	PN13	1991	08	08.37188	22	46	29.84	-10	30	38.0		16.8	9 675
1991	PN13	1991	08	08.40868	22	46	28.00	-10	30	34.1			9 675
1991	PO13*	1991	08	05.35451	22	52	44.60	-11	26	14.5		16.8	9 675
1991	PO13	1991	08	08.37188	22	51	02.84	-11	26	13.7		16.8	9 675
1991	PO13	1991	08	08.40868	22	51	01.32	-11	26	13.9			9 675
1991	PP13*	1991	08	05.35451	22	53	18.02	-06	09	04.2		17.5	9 675
1991	PP13	1991	08	08.37188	22	51	27.57	-06	07	13.4		17.2	9 675
1991	PP13	1991	08	08.38038	22	51	27.11	-06	07	10.9		17.2	9 675
1991	PP13	1991	08	08.40868	22	51	26.04	-06	07	11.9			9 675
1991	PP13	1991	08	08.41649	22	51	25.71	-06	07	10.1			9 675
1991	PQ13*	1991	08	06.33281	21	25	18.64	-20	30	40.3		17.2	9 675
1991	PQ13	1991	08	06.37153	21	25	16.62	-20	30	55.1			9 675
1991	PQ13	1991	08	10.29236	21	21	58.07	-20	55	16.7		18.0	9 675
1991	PQ13	1991	08	10.32517	21	21	56.22	-20	55	28.4			9 675
1991	PR13*	1991	08	06.33281	21	29	06.55	-20	52	46.7		17.0	9 675
1991	PR13	1991	08	06.37153	21	29	04.19	-20	52	59.9			9 675
1991	PR13	1991	08	10.29236	21	25	16.84	-21	14	47.9		17.0	9 675
1991	PR13	1991	08	10.32517	21	25	14.81	-21	14	59.1			9 675
1991	PS13*	1991	08	06.33281	21	29	21.80	-19	21	23.2		17.0	9 675
1991	PS13	1991	08	06.37153	21	29	19.42	-19	21	33.5			9 675
1991	PS13	1991	08	10.29236	21	25	21.53	-19	37	51.5		16.0	9 675
1991	PS13	1991	08	10.32517	21	25	19.73	-19	38	03.9		17.5	9 675
1991	PT13*	1991	08	06.33281	21	30	27.30	-19	05	00.5		17.5	9 675
1991	PT13	1991	08	06.37153	21	30	25.14	-19	05	18.4			9 675
1991	PT13	1991	08	10.29236	21	26	56.32	-19	34	41.2		17.5	9 675
1991	PT13	1991	08	10.32517	21	26	54.51	-19	34	56.6			9 675
1991	PU13*	1991	08	06.33281	21	31	16.56	-18	10	22.1		17.2	9 675
1991	PU13	1991	08	06.37153	21	31	14.00	-18	10	29.0			9 675
1991	PU13	1991	08	10.29236	21	27	00.74	-18	21	01.5		17.5	9 675
1991	PU13	1991	08	10.32517	21	26	58.52	-18	21	08.0			9 675
1991	PV13*	1991	08	06.33281	21	32	56.09	-18	13	15.1		17.0	9 675
1991	PV13	1991	08	06.37153	21	32	54.13	-18	13	24.2			9 675
1991	PV13	1991	08	10.29236	21	29	51.03	-18	29	17.9		17.2	9 675
1991	PV13	1991	08	10.32517	21	29	49.41	-18	29	24.8			9 675
1991	PW13*	1991	08	06.33281	21	33	53.41	-18	46	49.5		18.2	9 675
1991	PW13	1991	08	06.37153	21	33	50.80	-18	46	54.8			9 675
1991	PW13	1991	08	10.29236	21	29	35.03	-18	56	01.7		18.0	9 675
1991	PW13	1991	08	10.32517	21	29	32.76	-18	56	03.6			9 675
1991	PX13*	1991	08	06.33281	21	37	31.03	-20	51	26.1		17.0	9 675
1991	PX13	1991	08	06.37153	21	37	29.02	-20	51	40.6			9 675
1991	PX13	1991	08	10.29236	21	34	16.84	-21	15	34.5		17.0	9 675
1991	PX13	1991	08	10.32517	21	34	15.06	-21	15	46.0			9 675
1991	PY13*	1991	08	06.33281	21	38	46.14	-18	37	12.8		17.8	9 675
1991	PY13	1991	08	06.37153	21	38	43.42	-18	37	14.1			9 675
1991	PY13	1991	08	10.29236	21	34	26.23	-18	36	43.2		18.5	9 675
1991	PY13	1991	08	10.32517	21	34	24.59	-18	36	51.5			9 675

1991	PZ13*	1991	08	06.33281	21	39	20.90	-22	54	31.8	17.8	9 675
1991	PZ13	1991	08	06.37153	21	39	18.92	-22	54	36.5		9 675
1991	PZ13	1991	08	10.29236	21	36	04.82	-23	02	14.7	18.0	9 675
1991	PZ13	1991	08	10.32517	21	36	03.06	-23	02	19.9		9 675
1991	PA14*	1991	08	06.33281	21	40	06.48	-18	00	55.5	17.8	9 675
1991	PA14	1991	08	06.37153	21	40	04.23	-18	01	08.1		9 675
1991	PA14	1991	08	10.32517	21	36	13.80	-18	20	50.1		9 675
1991	PB14*	1991	08	06.33281	21	40	07.10	-21	46	31.4	17.8	9 675
1991	PB14	1991	08	06.37153	21	40	04.61	-21	46	39.1		9 675
1991	PB14	1991	08	10.29236	21	35	56.00	-21	59	59.8	18.2	9 675
1991	PB14	1991	08	10.32517	21	35	53.80	-22	00	07.1		9 675
1991	PC14*	1991	08	06.33281	21	41	35.08	-22	51	16.7	17.2	9 675
1991	PC14	1991	08	06.37153	21	41	33.29	-22	51	32.1		9 675
1991	PC14	1991	08	10.29236	21	38	34.05	-23	18	03.9	17.0	9 675
1991	PC14	1991	08	10.32517	21	38	32.49	-23	18	17.4	17.5	9 675
1991	PD14*	1991	08	06.33281	21	41	57.58	-18	37	47.8	18.2	9 675
1991	PD14	1991	08	06.37153	21	41	55.42	-18	37	57.6		9 675
1991	PD14	1991	08	10.29236	21	38	15.57	-18	54	08.5	18.2	9 675
1991	PD14	1991	08	10.32517	21	38	13.60	-18	54	17.2		9 675
1991	PE14*	1991	08	06.33281	21	42	38.25	-20	32	50.7	16.8	9 675
1991	PE14	1991	08	06.37153	21	42	36.39	-20	33	09.0		9 675
1991	PE14	1991	08	10.29236	21	39	35.59	-21	04	00.4	16.5	9 675
1991	PE14	1991	08	10.32517	21	39	33.88	-21	04	16.9		9 675
1991	PF14*	1991	08	06.33281	21	42	48.87	-17	16	11.1	17.2	9 675
1991	PF14	1991	08	06.37153	21	42	46.38	-17	16	20.0		9 675
1991	PF14	1991	08	10.29236	21	38	40.42	-17	30	21.1	17.2	9 675
1991	PF14	1991	08	10.32517	21	38	38.22	-17	30	28.7		9 675
1991	PG14*	1991	08	06.33281	21	43	09.62	-20	21	35.9	17.5	9 675
1991	PG14	1991	08	06.37153	21	43	07.49	-20	21	41.5		9 675
1991	PG14	1991	08	10.29236	21	39	38.56	-20	30	14.1	17.2	9 675
1991	PG14	1991	08	10.32517	21	39	36.72	-20	30	17.6		9 675
1991	PH14*	1991	08	06.33281	21	44	02.39	-17	00	51.7	18.5	9 675
1991	PH14	1991	08	06.37153	21	44	00.54	-17	01	07.4		9 675
1991	PH14	1991	08	10.29236	21	41	04.33	-17	29	37.3	18.5	9 675
1991	PH14	1991	08	10.32517	21	41	02.72	-17	29	52.1		9 675
1991	PJ14*	1991	08	06.33281	21	44	50.24	-17	56	56.8	16.8	9 675
1991	PJ14	1991	08	06.37153	21	44	47.95	-17	57	04.4		9 675
1991	PJ14	1991	08	10.29236	21	40	56.54	-18	09	28.9	17.0	9 675
1991	PJ14	1991	08	10.32517	21	40	54.57	-18	09	35.5		9 675
1991	PK14*	1991	08	06.33281	21	45	06.43	-19	13	35.9	17.5	9 675
1991	PK14	1991	08	06.37153	21	45	04.07	-19	13	36.8		9 675
1991	PK14	1991	08	10.29236	21	41	15.98	-19	08	08.3	17.8	9 675
1991	PK14	1991	08	10.32517	21	41	13.89	-19	08	05.4		9 675
1991	PL14*	1991	08	06.33281	21	46	03.97	-21	30	57.6	17.5	9 675
1991	PL14	1991	08	06.37153	21	46	01.76	-21	31	00.7		9 675
1991	PL14	1991	08	10.29236	21	42	21.95	-21	36	35.5	17.5	9 675
1991	PL14	1991	08	10.32517	21	42	20.02	-21	36	38.3		9 675
1991	PM14*	1991	08	06.33281	21	49	11.45	-17	37	44.4	18.0	9 675
1991	PM14	1991	08	06.37153	21	49	09.91	-17	38	01.9		9 675
1991	PM14	1991	08	10.29236	21	46	36.35	-18	05	20.1	18.2	9 675
1991	PM14	1991	08	10.32517	21	46	34.84	-18	05	35.6		9 675
1991	PN14*	1991	08	06.33281	21	50	52.11	-16	55	01.5	18.0	9 675
1991	PN14	1991	08	06.37153	21	50	50.51	-16	55	14.8		9 675
1991	PN14	1991	08	10.29236	21	48	13.00	-17	20	41.8	17.8	9 675
1991	PN14	1991	08	10.32517	21	48	11.46	-17	20	55.5		9 675
1991	PO14*	1991	08	06.33281	21	52	36.51	-18	58	06.9	17.8	9 675
1991	PO14	1991	08	06.37153	21	52	34.56	-18	58	13.4		9 675
1991	PO14	1991	08	10.29236	21	49	15.85	-19	06	45.0	17.8	9 675
1991	PO14	1991	08	10.32517	21	49	13.83	-19	06	45.1		9 675

1991	PP14*	1991	08	06.33281	21	53	25.05	-18	41	52.0		17.5	9 675
1991	PP14	1991	08	06.37153	21	53	23.27	-18	42	13.4			9 675
1991	PP14	1991	08	10.29236	21	50	31.19	-19	17	55.4		17.5	9 675
1991	PP14	1991	08	10.32517	21	50	29.73	-19	18	14.6			9 675
1991	PQ14*	1991	08	06.33281	21	53	46.73	-18	13	19.8		17.2	9 675
1991	PQ14	1991	08	06.37153	21	53	45.08	-18	13	38.9			9 675
1991	PQ14	1991	08	10.29236	21	50	59.31	-18	45	59.2		17.2	9 675
1991	PQ14	1991	08	10.32517	21	50	57.87	-18	46	16.3			9 675
1991	PR14*	1991	08	06.33281	21	53	59.30	-19	08	47.7		17.2	9 675
1991	PR14	1991	08	06.37153	21	53	57.76	-19	09	02.5			9 675
1991	PR14	1991	08	10.29236	21	51	09.63	-19	33	42.3		17.2	9 675
1991	PR14	1991	08	10.32517	21	51	08.09	-19	33	55.7			9 675
1991	PS14*	1991	08	06.33281	21	54	18.40	-18	45	27.9		17.8	9 675
1991	PS14	1991	08	06.37153	21	54	16.32	-18	45	31.1			9 675
1991	PS14	1991	08	10.29236	21	50	46.70	-18	50	14.7		17.8	9 675
1991	PS14	1991	08	10.32517	21	50	44.73	-18	50	17.5			9 675
1991	PT14*	1991	08	06.35503	21	57	26.64	-12	28	02.1		17.8	9 675
1991	PT14	1991	08	06.38698	21	57	24.94	-12	28	14.9			9 675
1991	PT14	1991	08	08.31128	21	55	46.00	-12	39	40.2		18.0	9 675
1991	PT14	1991	08	08.34045	21	55	44.45	-12	39	50.4			9 675
1991	PU14*	1991	08	06.39410	22	13	31.41	-01	30	33.2			9 675
1991	PU14	1991	08	06.42743	22	13	30.05	-01	30	22.0			9 675
1991	PU14	1991	08	09.33872	22	11	44.51	-01	15	57.4		19.2	9 675
1991	PU14	1991	08	09.37257	22	11	42.94	-01	15	48.2			9 675
1991	PV14*	1991	08	06.39410	22	15	44.42	-02	31	33.1			9 675
1991	PV14	1991	08	06.42743	22	15	43.35	-02	31	43.4			9 675
1991	PV14	1991	08	09.33872	22	14	09.13	-02	46	53.4		18.0	9 675
1991	PV14	1991	08	09.37257	22	14	07.88	-02	47	05.3			9 675
1991	PW14*	1991	08	06.39410	22	16	14.88	-02	12	26.3			9 675
1991	PW14	1991	08	06.42743	22	16	13.20	-02	12	12.3			9 675
1991	PW14	1991	08	09.33872	22	13	42.69	-01	52	53.1		19.2	9 675
1991	PW14	1991	08	09.37257	22	13	40.77	-01	52	40.1			9 675
1991	PX14*	1991	08	06.39410	22	18	50.62	-00	18	44.2			9 675
1991	PX14	1991	08	06.42743	22	18	49.19	-00	18	44.3			9 675
1991	PX14	1991	08	09.33872	22	16	45.97	-00	18	53.4		18.5	9 675
1991	PX14	1991	08	09.37257	22	16	44.45	-00	18	54.3			9 675
1991	PY14*	1991	08	06.39410	22	23	59.24	-02	47	42.3		18.0	9 675
1991	PY14	1991	08	06.42743	22	23	57.68	-02	47	37.4			9 675
1991	PY14	1991	08	09.33872	22	21	42.29	-02	40	33.6		17.8	9 675
1991	PY14	1991	08	09.37257	22	21	40.58	-02	40	29.8			9 675
1991	PZ14*	1991	08	06.39410	22	28	35.12	-00	35	20.5			9 675
1991	PZ14	1991	08	06.42743	22	28	33.75	-00	35	29.9			9 675
1991	PZ14	1991	08	09.33872	22	26	38.02	-00	49	41.0			9 675
1991	PZ14	1991	08	09.37257	22	26	36.51	-00	49	52.3			9 675
1991	PA15*	1991	08	06.39410	22	29	16.00	-01	39	36.8		19.2	9 675
1991	PA15	1991	08	06.42743	22	29	14.88	-01	39	47.1			9 675
1991	PA15	1991	08	08.38038	22	28	15.48	-01	47	46.7		18.2	9 675
1991	PA15	1991	08	08.41649	22	28	14.16	-01	47	56.3			9 675
1991	PB15*	1991	08	06.39410	22	34	16.39	-01	01	49.9		19.2	9 675
1991	PB15	1991	08	06.42743	22	34	15.03	-01	01	41.5			9 675
1991	PB15	1991	08	08.38038	22	33	00.99	-00	53	56.5		17.2	9 675
1991	PB15	1991	08	08.41649	22	32	59.42	-00	53	48.4		18.0	9 675
1991	PC15*	1991	08	06.39410	22	35	45.29	+00	05	15.5		19.2	9 675
1991	PC15	1991	08	06.42743	22	35	43.60	+00	05	27.6			9 675
1991	PC15	1991	08	08.38038	22	34	06.17	+00	17	42.5		17.8	9 675
1991	PC15	1991	08	08.41649	22	34	04.27	+00	17	54.8			9 675
1991	PD15*	1991	08	06.39410	22	35	59.98	-00	17	14.0		17.8	9 675
1991	PD15	1991	08	06.42743	22	35	59.25	-00	16	56.4			9 675
1991	PD15	1991	08	08.38038	22	35	21.13	-00	00	09.0		16.8	9 675

1991	PD15		1991	08	08.41649	22	35	20.16	+00	00	09.1		9 675
1991	PE15	*	1991	08	07.32240	21	32	11.29	-17	48	06.3	17.8	9 675
1991	PE15		1991	08	07.35069	21	32	09.88	-17	48	13.3		9 675
1991	PE15		1991	08	10.29236	21	29	52.01	-17	59	20.0	18.8	9 675
1991	PE15		1991	08	10.32517	21	29	50.42	-17	59	26.8		9 675
1991	PF15	*	1991	08	07.33698	22	05	29.82	-05	34	01.0	16.2	9 675
1991	PF15		1991	08	07.36840	22	05	28.46	-05	34	15.8		9 675
1991	PF15		1991	08	09.33872	22	03	49.35	-05	38	30.0	17.5	9 675
1991	PF15		1991	08	09.37257	22	03	47.50	-05	38	35.6		9 675
1991	PG15	*	1991	08	07.38524	22	59	19.30	-09	00	48.6	17.5	9 675
1991	PG15		1991	08	07.41406	22	59	18.68	-09	00	55.3		9 675
1991	PG15		1991	08	10.40851	22	58	11.64	-09	13	02.0	17.5	9 675
1991	PH15	*	1991	08	07.38524	23	00	11.68	-05	47	19.1	17.2	9 675
1991	PH15		1991	08	07.41406	23	00	10.61	-05	47	25.4		9 675
1991	PH15		1991	08	10.40851	22	58	23.79	-05	59	27.4	17.2	9 675
1991	PJ15	*	1991	08	07.38524	23	04	35.49	-09	06	31.0	17.8	9 675
1991	PJ15		1991	08	07.41406	23	04	34.63	-09	06	41.0		9 675
1991	PJ15		1991	08	10.40851	23	03	00.25	-09	24	40.4	17.8	9 675
1991	PK15	*	1991	08	07.38524	23	08	30.67	-04	09	12.1	16.8	9 675
1991	PK15		1991	08	07.41406	23	08	29.94	-04	09	08.2		9 675
1991	PK15		1991	08	10.40851	23	07	21.26	-04	05	22.8	16.8	9 675
1991	PL15	*	1991	08	08.31128	21	47	07.78	-15	45	10.1	17.8	9 675
1991	PL15		1991	08	08.34045	21	47	06.40	-15	45	21.1		9 675
1991	PL15		1991	08	10.29236	21	45	44.57	-15	58	10.5	18.5	9 675
1991	PL15		1991	08	10.32517	21	45	43.13	-15	58	24.8		9 675
1991	PM15	*	1991	08	08.38038	23	00	17.43	-03	12	09.0	17.2	9 675
1991	PM15		1991	08	08.41649	23	00	16.14	-03	12	09.6		9 675
1991	PM15		1991	08	10.40851	22	59	05.20	-03	13	20.1	17.2	9 675
1991	QA		1991	08	05.35451	22	29	15.95	-06	41	07.8	16.2	9 675
1991	QA		1991	08	08.37188	22	27	20.53	-06	39	07.3	16.0	9 675
1991	QA		1991	08	08.40868	22	27	19.00	-06	39	06.6		9 675
1991	QA		1991	08	09.33872	22	26	41.44	-06	38	39.9		9 675
1991	QA		1991	08	09.37257	22	26	39.99	-06	38	39.2	17.0	9 675
1991	RL	*	1991	09	04.37917	23	09	13.13	-03	59	36.1	17.0	2 675
1991	RL		1991	09	04.40052	23	09	10.99	-03	59	23.7		2 675
1991	RL		1991	09	05.44358	23	07	26.94	-03	49	05.7		2 675
1991	RM	*	1991	09	04.37917	23	11	51.00	-08	48	28.6	15.5	2 675
1991	RM		1991	09	04.40052	23	11	50.52	-08	48	55.3		2 675
1991	RM		1991	09	05.39566	23	11	32.50	-09	09	24.8		2 675
1991	RM		1991	09	05.42118	23	11	31.88	-09	09	55.9		2 675
1991	RP	*	1991	09	04.37396	22	56	14.43	-12	32	16.6	16.0	2 675
1991	RP		1991	09	04.39531	22	56	13.80	-12	32	58.5		2 675
1991	RP		1991	09	07.42188	22	54	58.44	-14	10	03.9		2 675
2018	P-L		1991	08	05.35451	22	53	26.41	-11	32	29.1	16.8	9 675
2018	P-L		1991	08	08.37188	22	51	16.95	-11	37	06.2	17.0	9 675
2018	P-L		1991	08	08.40868	22	51	15.11	-11	37	09.5		9 675
2019	P-L		1991	08	05.28484	21	19	03.65	-10	06	39.3	17.5	9 675
2019	P-L		1991	08	05.32135	21	19	01.44	-10	06	45.2		9 675
2093	P-L		1991	08	09.27656	20	50	03.61	-03	35	12.8	17.5	9 675
2093	P-L		1991	08	09.30903	20	50	02.07	-03	35	21.0		9 675
2197	P-L	*	1960	09	24.45000	00	49	29.13	+06	02	21.6	17.4	4 675
2197	P-L		1960	09	24.46184	00	49	28.43	+06	02	17.4		4 675
2197	P-L		1960	09	26.37988	00	47	50.90	+05	47	52.4		4 675
2197	P-L		1960	09	28.43822	00	46	04.27	+05	32	13.3		4 675
2197	P-L		1960	09	29.39514	00	45	14.42	+05	24	50.9		4 675
2197	P-L		1960	10	17.31529	00	30	16.44	+03	10	31.9		4 675
2197	P-L		1960	10	22.26809	00	26	49.49	+02	38	17.2		4 675
2197	P-L		1960	10	25.30351	00	24	57.29	+02	20	19.9		4 675
2197	P-L		1960	10	26.35766	00	24	21.11	+02	14	26.7		4 675

2197	P-L		1991	08	08.38038	22	45	23.94	-02	12	15.9	17.8	9 675
2197	P-L		1991	08	08.41649	22	45	22.54	-02	12	24.9		9 675
2562	P-L		1991	08	05.27500	21	08	43.19	-19	01	53.9	17.2	9 675
2562	P-L		1991	08	05.31302	21	08	40.78	-19	02	03.3		9 675
2562	P-L		1991	08	07.32240	21	06	35.74	-19	10	57.7	17.5	9 675
2562	P-L		1991	08	07.35069	21	06	33.83	-19	11	04.7		9 675
4026	P-L	*	1960	09	24.37573	00	22	47.91	+04	36	35.7	17.8	4 675
4026	P-L		1960	09	25.42780	00	21	43.91	+04	34	59.1		4 675
4026	P-L		1960	09	26.30558	00	20	50.79	+04	33	36.5		4 675
4026	P-L		1960	09	28.36808	00	18	45.33	+04	30	16.7		4 675
4026	P-L		1960	10	17.27085	00	01	03.55	+03	59	41.1		4 675
4026	P-L		1960	10	22.22293	23	57	18.84	+03	53	52.2		4 675
4026	P-L		1960	10	24.35836	23	55	51.41	+03	51	55.9		4 675
4026	P-L		1960	10	26.32573	23	54	36.68	+03	50	27.0		4 675
4594	P-L		1991	08	08.43003	23	04	10.49	+00	41	40.5	17.2	9 675
4594	P-L		1991	08	08.46441	23	04	09.47	+00	41	28.3		9 675
4606	P-L	*	1960	09	24.41183	00	15	10.42	-01	22	33.9	18.2	4 675
4606	P-L		1960	09	26.31530	00	13	19.51	-01	32	59.9		4 675
4606	P-L		1960	09	27.34237	00	12	19.49	-01	38	32.7		4 675
4606	P-L		1960	09	27.40836	00	12	15.64	-01	38	54.3		4 675
4606	P-L		1960	09	28.33822	00	11	21.77	-01	43	52.8		4 675
4606	P-L		1960	09	28.39725	00	11	18.09	-01	44	12.2		4 675
4606	P-L		1960	10	17.28198	23	55	11.09	-03	05	23.5		4 675
4606	P-L		1960	10	22.23406	23	52	07.60	-03	17	49.2		4 675
4606	P-L		1960	10	25.25350	23	50	34.91	-03	23	11.9		4 675
4606	P-L		1960	10	26.31531	23	50	05.80	-03	24	40.3		4 675
4641	P-L		1991	08	08.42483	23	37	43.39	-04	41	42.7	19.0	9 675
4641	P-L		1991	08	08.45660	23	37	42.62	-04	41	50.5		9 675
4657	P-L		1991	08	05.27500	21	16	41.83	-16	13	20.9	17.5	9 675
4657	P-L		1991	08	05.31302	21	16	40.02	-16	13	29.5		9 675
4657	P-L		1991	08	07.32240	21	15	03.93	-16	21	24.1	17.8	9 675
4657	P-L		1991	08	07.35069	21	15	02.45	-16	21	30.4		9 675
7581	P-L	*	1960	10	17.28198	00	01	46.32	-04	28	21.7	18.2	4 675
7581	P-L		1960	10	22.23406	23	58	31.78	-04	23	43.3		4 675
7581	P-L		1960	10	25.25350	23	56	55.29	-04	18	32.7		4 675
7581	P-L		1960	10	26.31531	23	56	25.50	-04	16	17.2		4 675
9540	P-L		1971	03	24.42015	12	31	50.30	-02	49	47.4		4 675
9540	P-L		1971	03	25.33090	12	31	02.52	-02	45	19.6		4 675
9540	P-L		1971	03	26.29653	12	30	11.56	-02	40	33.4		4 675
9540	P-L		1971	03	26.33611	12	30	09.45	-02	40	22.6	18.8	4 675
9540	P-L		1971	03	27.33854	12	29	16.41	-02	35	25.3		4 675
9540	P-L		1971	04	02.42604	12	23	52.42	-02	05	16.0		4 675
1269	T-2		1971	03	24.42015	12	24	59.43	-04	10	36.3		4 675
1269	T-2		1971	03	25.33090	12	24	17.01	-04	06	09.2		4 675
1269	T-2		1971	03	26.29653	12	23	31.72	-04	01	26.1		4 675
1269	T-2		1971	03	26.33611	12	23	29.79	-04	01	14.5	18.2	4 675
1269	T-2		1971	03	27.33854	12	22	42.48	-03	56	16.7		4 675
1269	T-2		1971	04	02.40000	12	17	58.56	-03	26	16.2		4 675
1269	T-2		1971	04	02.42604	12	17	56.91	-03	26	04.9		4 675
1269	T-2		1971	04	16.18087	12	08	08.84	-02	21	51.9		4 675
1269	T-2		1971	04	16.26458	12	08	05.62	-02	21	27.4		4 675
1281	T-2		1971	03	24.42015	12	33	53.02	-06	29	01.3		4 675
1281	T-2		1971	03	25.33090	12	33	10.36	-06	19	28.3		4 675
1281	T-2		1971	03	26.29653	12	32	24.65	-06	09	17.8		4 675
1281	T-2		1971	03	26.33611	12	32	22.76	-06	08	52.3	18.2	4 675
1281	T-2		1971	03	27.33854	12	31	35.32	-05	58	14.7		4 675
1281	T-2		1971	04	02.42604	12	26	48.25	-04	53	20.7		4 675
1298	T-2		1973	09	19.22500	00	24	58.01	+00	48	23.9		4 675
1298	T-2		1973	09	19.27865	00	24	55.09	+00	47	56.6		4 675

1298	T-2		1973	09	20.22847	00	24	05.62	+00	39	40.2		4 675
1298	T-2		1973	09	20.30278	00	24	01.55	+00	39	01.7		4 675
1298	T-2		1973	09	24.34688	00	20	24.74	+00	03	24.4		4 675
1298	T-2		1973	09	24.41597	00	20	20.75	+00	02	48.2		4 675
1298	T-2		1973	09	24.45434	00	20	18.71	+00	02	27.9		4 675
1298	T-2		1973	09	25.24375	00	19	35.85	-00	04	33.1		4 675
1298	T-2		1973	09	25.28125	00	19	33.89	-00	04	50.3		4 675
1298	T-2		1973	09	25.30729	00	19	32.36	-00	05	04.5		4 675
1298	T-2		1973	09	25.34601	00	19	30.17	-00	05	26.5		4 675
1298	T-2	*	1973	09	29.25330	00	15	55.43	-00	39	58.6	18.2	4 675
1298	T-2		1973	09	29.27986	00	15	54.01	-00	40	10.7		4 675
1298	T-2		1973	09	29.31806	00	15	51.70	-00	40	32.7		4 675
1298	T-2		1973	09	29.34375	00	15	50.34	-00	40	45.1		4 675
1298	T-2		1973	09	30.21007	00	15	02.93	-00	48	22.3		4 675
1298	T-2		1973	09	30.23524	00	15	01.58	-00	48	34.9		4 675
1298	T-2		1973	09	30.27431	00	14	59.26	-00	48	56.3		4 675
1298	T-2		1973	09	30.30174	00	14	57.78	-00	49	10.5		4 675
1298	T-2		1973	10	04.28958	00	11	20.60	-01	23	31.2		4 675
1298	T-2		1973	10	04.31493	00	11	19.31	-01	23	45.0		4 675
1298	T-2		1973	10	04.35208	00	11	17.16	-01	24	04.1		4 675
1298	T-2		1973	10	04.37674	00	11	15.82	-01	24	17.4		4 675
1298	T-2		1973	10	05.31684	00	10	25.74	-01	32	11.9		4 675
1298	T-2		1973	10	05.34167	00	10	24.40	-01	32	24.2		4 675
1298	T-2		1973	10	05.37917	00	10	22.33	-01	32	42.8		4 675
1298	T-2		1973	10	05.40347	00	10	21.04	-01	32	54.4		4 675
1607	T-2		1973	09	19.18611	00	02	06.66	+04	10	27.3		4 675
1607	T-2		1973	09	19.23785	00	02	03.47	+04	10	23.9		4 675
1607	T-2		1973	09	20.22847	00	01	02.15	+04	09	23.8		4 675
1607	T-2		1973	09	24.34688	23	56	44.76	+04	04	25.0		4 675
1607	T-2	*	1973	09	24.41597	23	56	40.28	+04	04	18.9	18.0	4 675
1607	T-2		1973	09	25.24375	23	55	48.80	+04	03	08.5		4 675
1607	T-2		1973	09	25.30729	23	55	44.67	+04	03	04.4		4 675
2040	T-2		1971	03	24.42015	12	35	16.13	-03	57	53.1		4 675
2040	T-2		1971	03	25.33090	12	34	36.69	-03	51	31.8		4 675
2040	T-2		1971	03	26.29653	12	33	54.75	-03	44	44.7		4 675
2040	T-2		1971	03	26.33611	12	33	52.90	-03	44	29.9	19.0	4 675
2040	T-2		1971	03	27.33854	12	33	09.12	-03	37	24.9		4 675
2040	T-2		1971	04	02.42604	12	28	41.82	-02	54	24.6		4 675
2114	T-2		1991	08	06.35503	22	07	00.26	-08	01	50.0	18.8	9 675
2114	T-2		1991	08	06.38698	22	06	58.86	-08	01	57.9		9 675
2224	T-2		1971	03	26.31007	12	31	57.93	-01	16	05.7		4 675
2224	T-2		1971	03	26.34896	12	31	56.05	-01	15	55.5	19.5	4 675
2224	T-2		1971	03	27.35208	12	31	09.17	-01	11	22.1		4 675
2224	T-2		1971	04	02.43993	12	26	23.36	-00	44	02.4		4 675
2224	T-2		1971	04	16.27708	12	16	14.15	+00	11	41.0		4 675
2232	T-2		1973	09	19.19948	00	45	06.66	+03	30	36.2		4 675
2232	T-2		1973	09	19.25006	00	45	04.41	+03	30	14.2		4 675
2232	T-2		1973	09	20.26458	00	44	19.07	+03	22	33.7		4 675
2232	T-2		1973	09	24.36181	00	41	06.66	+02	50	51.6		4 675
2232	T-2		1973	09	24.42847	00	41	03.24	+02	50	20.2		4 675
2232	T-2		1973	09	25.25642	00	40	23.36	+02	43	43.3		4 675
2232	T-2		1973	09	25.32031	00	40	20.17	+02	43	14.0		4 675
2232	T-2		1973	09	29.26632	00	37	03.36	+02	11	39.6		4 675
2232	T-2	*	1973	09	29.33073	00	36	59.97	+02	11	08.9	18.2	4 675
2232	T-2		1973	09	30.22257	00	36	15.17	+02	03	58.7		4 675
2232	T-2		1973	09	30.24826	00	36	13.75	+02	03	48.2		4 675
2232	T-2		1973	09	30.28785	00	36	11.59	+02	03	27.2		4 675
2232	T-2		1973	09	30.31476	00	36	10.29	+02	03	18.8		4 675
2232	T-2		1973	10	04.30208	00	32	47.66	+01	31	23.5		4 675

2232	T-2		1973	10	04.32708	00	32	46.35	+01	31	16.1	4 675
2232	T-2		1973	10	04.36476	00	32	44.33	+01	30	54.3	4 675
2232	T-2		1973	10	04.38889	00	32	42.99	+01	30	46.7	4 675
2232	T-2		1973	10	05.32917	00	31	55.82	+01	23	16.9	4 675
2232	T-2		1973	10	05.35382	00	31	54.27	+01	23	08.3	4 675
2232	T-2		1973	10	05.39132	00	31	52.50	+01	22	48.2	4 675
2232	T-2		1973	10	05.41597	00	31	51.00	+01	22	38.8	4 675
2281	T-2		1973	09	20.26458	00	48	10.84	+06	25	10.4	4 675
2281	T-2		1973	09	24.36181	00	44	57.78	+06	08	33.1	4 675
2281	T-2		1973	09	24.42847	00	44	54.44	+06	08	15.9	4 675
2281	T-2		1973	09	25.25642	00	44	14.84	+06	04	40.3	4 675
2281	T-2		1973	09	25.32031	00	44	11.64	+06	04	25.8	4 675
2281	T-2		1973	09	29.26632	00	40	56.53	+05	47	07.5	4 675
2281	T-2	*	1973	09	29.33073	00	40	53.24	+05	46	51.1	18.3 4 675
2281	T-2		1973	09	30.22257	00	40	08.65	+05	42	47.8	4 675
2281	T-2		1973	09	30.28785	00	40	05.36	+05	42	29.8	4 675
2281	T-2		1973	10	04.30208	00	36	42.91	+05	24	04.4	4 675
2281	T-2		1973	10	04.36476	00	36	39.62	+05	23	47.3	4 675
2281	T-2		1973	10	05.32917	00	35	51.10	+05	19	19.0	4 675
2281	T-2		1973	10	05.39132	00	35	47.90	+05	19	02.4	4 675
3102	T-2		1971	03	24.42015	12	36	46.76	-04	03	34.6	4 675
3102	T-2		1971	03	25.33090	12	35	50.57	-04	03	15.5	4 675
3102	T-2		1971	03	26.29653	12	34	50.62	-04	02	52.7	4 675
3102	T-2		1971	03	26.33611	12	34	48.06	-04	02	51.4	16.6 4 675
3102	T-2		1971	03	27.33854	12	33	45.61	-04	02	26.4	4 675
3102	T-2		1971	04	02.42604	12	27	26.23	-03	59	29.1	4 675
3102	T-2		1971	04	16.22812	12	14	16.72	-03	55	01.1	4 675
3102	T-2		1971	04	16.30139	12	14	12.77	-03	55	01.0	4 675
3201	T-2		1973	09	19.21250	00	20	17.79	-03	34	43.7	4 675
3201	T-2		1973	09	19.26354	00	20	15.41	-03	35	03.1	4 675
3201	T-2		1973	09	20.27795	00	19	28.51	-03	41	37.5	4 675
3201	T-2		1973	09	24.37431	00	16	15.98	-04	07	50.2	4 675
3201	T-2		1973	09	24.44167	00	16	12.66	-04	08	16.4	4 675
3201	T-2		1973	09	25.26875	00	15	33.82	-04	13	27.9	4 675
3201	T-2		1973	09	25.33299	00	15	30.63	-04	13	52.1	4 675
3201	T-2		1973	09	29.27986	00	12	23.82	-04	37	56.3	4 675
3201	T-2		1973	09	29.34375	00	12	20.67	-04	38	19.8	4 675
3201	T-2		1973	09	30.23524	00	11	38.79	-04	43	34.7	4 675
3201	T-2	*	1973	09	30.30174	00	11	35.65	-04	43	57.5	17.7 4 675
3201	T-2		1973	10	04.31493	00	08	30.35	-05	06	28.4	4 675
3201	T-2		1973	10	04.37674	00	08	27.38	-05	06	50.0	4 675
3201	T-2		1973	10	05.34167	00	07	43.96	-05	11	56.4	4 675
3201	T-2		1973	10	05.40347	00	07	41.17	-05	12	15.8	4 675
4053	T-2		1971	03	26.31007	12	26	41.24	+00	27	44.9	4 675
4053	T-2		1971	03	26.34896	12	26	39.36	+00	27	58.4	17.2 4 675
4053	T-2		1971	03	27.35208	12	25	52.73	+00	33	42.6	4 675
4053	T-2		1971	04	02.43993	12	21	10.12	+01	07	50.0	4 675
4053	T-2		1971	04	16.16458	12	11	28.39	+02	14	27.0	4 675
4053	T-2		1971	04	16.21476	12	11	26.54	+02	14	38.1	4 675
4053	T-2		1971	04	16.25069	12	11	25.00	+02	14	49.0	4 675
4053	T-2		1971	04	16.27708	12	11	24.12	+02	14	54.2	4 675
4069	T-2		1971	03	24.37118	12	04	25.69	+03	40	37.1	4 675
4069	T-2		1971	03	25.24340	12	03	43.02	+03	46	34.6	4 675
4069	T-2		1971	03	25.28715	12	03	40.77	+03	46	52.6	18.7 4 675
4069	T-2		1971	03	26.25208	12	02	53.51	+03	53	21.7	4 675
4069	T-2		1971	03	27.31181	12	02	01.67	+04	00	26.9	4 675
4069	T-2		1971	04	02.41285	11	57	11.83	+04	39	12.5	4 675
5490	T-2	*	1973	09	30.19722	00	26	21.11	+14	03	31.5	18.5 4 675
5490	T-2		1973	09	30.35295	00	26	12.71	+14	02	16.4	4 675

5490	T-2		1973	10	04.27708	00	22	50.72	+13	29	30.7		4 675
5490	T-2		1973	10	04.33906	00	22	47.33	+13	28	58.4		4 675
5490	T-2		1973	10	05.36632	00	21	55.26	+13	20	04.0		4 675
5490	T-2		1973	10	05.42847	00	21	52.01	+13	19	30.4		4 675
1039	T-3		1977	10	07.24652	00	56	15.72	+18	08	50.5		4 675
1039	T-3		1977	10	11.26632	00	52	01.36	+18	03	42.7		4 675
1039	T-3		1977	10	11.33351	00	51	56.93	+18	03	35.3		4 675
1039	T-3		1977	10	12.26510	00	50	58.63	+18	02	03.5		4 675
1039	T-3		1977	10	12.33125	00	50	54.35	+18	01	57.3		4 675
1039	T-3		1977	10	16.25156	00	46	52.54	+17	54	08.0		4 675
1039	T-3		1977	10	16.31684	00	46	48.40	+17	54	00.1		4 675
1039	T-3	*	1977	10	17.25365	00	45	52.21	+17	51	53.8	18.5	4 675
1039	T-3		1977	10	17.32083	00	45	48.03	+17	51	44.5		4 675
1039	T-3		1977	10	22.42812	00	40	53.21	+17	38	38.9		4 675
1039	T-3		1977	10	22.48003	00	40	50.40	+17	38	32.5		4 675
2192	T-3		1977	10	07.25868	01	05	46.55	+09	43	07.5		4 675
2192	T-3		1977	10	11.27743	01	02	34.33	+09	22	03.2		4 675
2192	T-3		1977	10	11.28819	01	02	33.76	+09	21	59.0		4 675
2192	T-3		1977	10	11.34375	01	02	30.88	+09	21	40.3		4 675
2192	T-3		1977	10	11.35642	01	02	30.25	+09	21	36.6		4 675
2192	T-3		1977	10	12.27587	01	01	46.51	+09	16	40.1		4 675
2192	T-3		1977	10	12.28681	01	01	46.07	+09	16	34.7		4 675
2192	T-3		1977	10	12.34271	01	01	43.11	+09	16	17.3		4 675
2192	T-3		1977	10	12.35347	01	01	42.59	+09	16	14.3		4 675
2192	T-3	*	1977	10	16.26233	00	58	38.98	+08	54	51.2	18.4	4 675
2192	T-3		1977	10	16.32795	00	58	35.76	+08	54	29.6		4 675
2192	T-3		1977	10	17.26458	00	57	53.27	+08	49	25.1		4 675
2192	T-3		1977	10	17.33177	00	57	49.92	+08	49	03.4		4 675
2192	T-3		1977	10	21.40868	00	54	52.60	+08	27	10.1		4 675
2192	T-3		1977	10	21.46910	00	54	49.99	+08	26	49.0		4 675
4179	T-3		1971	03	25.24340	12	16	13.27	+04	54	52.8		4 675
4179	T-3		1971	03	25.28715	12	16	11.92	+04	55	00.9	19.5	4 675
4179	T-3		1971	03	26.25208	12	15	43.35	+04	57	55.0		4 675
4179	T-3		1971	03	27.31181	12	15	11.86	+05	01	04.8		4 675
4181	T-3		1977	10	07.28125	01	29	32.81	+03	02	28.6		4 675
4181	T-3		1977	10	11.30000	01	25	58.29	+02	42	36.3		4 675
4181	T-3		1977	10	11.36771	01	25	54.42	+02	42	17.3		4 675
4181	T-3		1977	10	12.29826	01	25	04.24	+02	37	50.7		4 675
4181	T-3		1977	10	12.36441	01	25	00.37	+02	37	32.3		4 675
4181	T-3	*	1977	10	16.28368	01	21	28.82	+02	19	58.7	18.2	4 675
4181	T-3		1977	10	16.34931	01	21	25.10	+02	19	41.4		4 675
4181	T-3		1977	10	17.28628	01	20	35.18	+02	15	43.3		4 675
4181	T-3		1977	10	17.35313	01	20	31.46	+02	15	27.8		4 675
4181	T-3		1977	10	21.38698	01	17	01.78	+02	00	10.1		4 675
4181	T-3		1977	10	21.44705	01	16	58.64	+01	59	57.2		4 675
4181	T-3		1977	10	22.38542	01	16	11.69	+01	56	48.0		4 675
4181	T-3		1977	10	22.44878	01	16	08.61	+01	56	34.6		4 675
5016	T-3		1977	10	11.31111	01	25	08.08	-04	25	36.0		4 675
5016	T-3		1977	10	11.37865	01	25	04.88	-04	25	59.9		4 675
5016	T-3		1977	10	12.30885	01	24	21.01	-04	31	43.1		4 675
5016	T-3		1977	10	12.37500	01	24	17.81	-04	32	08.2		4 675
5016	T-3	*	1977	10	16.29444	01	21	12.32	-04	55	07.0	18.8	4 675
5016	T-3		1977	10	16.36024	01	21	09.03	-04	55	27.4		4 675
5016	T-3		1977	10	17.29688	01	20	24.87	-05	00	43.6		4 675
5016	T-3		1977	10	17.36372	01	20	21.58	-05	01	03.4		4 675
5016	T-3		1977	10	21.37622	01	17	13.75	-05	22	04.3		4 675
5016	T-3		1977	10	21.43611	01	17	10.86	-05	22	22.1		4 675
5016	T-3		1977	10	22.37274	01	16	27.62	-05	26	56.2		4 675
5016	T-3		1977	10	22.43872	01	16	24.75	-05	27	15.9		4 675

5192	T-3	*	1977	10	16.29444	01	44	36.62	-02	19	12.6	17.6	4	675
5192	T-3		1977	10	16.36024	01	44	33.13	-02	19	22.7		4	675
5192	T-3		1977	10	17.29688	01	43	45.43	-02	21	31.9		4	675
5192	T-3		1977	10	17.36372	01	43	41.98	-02	21	41.3		4	675
5192	T-3		1977	10	21.37622	01	40	16.35	-02	29	49.0		4	675
5192	T-3		1977	10	21.43611	01	40	13.21	-02	29	55.0		4	675
5192	T-3		1977	10	22.37274	01	39	25.26	-02	31	33.2		4	675
5192	T-3		1977	10	22.43872	01	39	21.95	-02	31	42.7		4	675
6			1991	08	05.35451	22	42	25.92	-11	53	10.0		9	675
6			1991	08	08.37188	22	41	25.69	-12	35	21.2		9	675
6			1991	08	08.40868	22	41	24.76	-12	35	52.5		9	675
7			1991	08	07.46545	23	11	08.01	+04	50	52.2		9	675
7			1991	08	07.48229	23	11	07.64	+04	50	55.0		9	675
7			1991	08	08.43003	23	10	48.77	+04	53	21.0		9	675
7			1991	08	08.46441	23	10	48.04	+04	53	25.1		9	675
7			1991	08	10.41771	23	10	04.12	+04	57	46.1		9	675
7			1991	08	10.46597	23	10	02.85	+04	57	51.4		9	675
35			1991	08	06.33281	21	47	04.85	-20	24	01.3	13.5	9	675
35			1991	08	06.37153	21	47	02.80	-20	24	07.6		9	675
35			1991	08	10.29236	21	43	35.76	-20	34	37.4	14.0	9	675
35			1991	08	10.32517	21	43	33.95	-20	34	42.5		9	675
52			1991	08	05.27500	21	09	57.72	-17	21	22.3		9	675
52			1991	08	05.31302	21	09	55.92	-17	21	33.4		9	675
52			1991	08	07.32240	21	08	25.07	-17	31	45.2		9	675
52			1991	08	07.35069	21	08	23.73	-17	31	53.8		9	675
56			1991	08	07.46545	23	19	26.84	+05	12	31.2		9	675
56			1991	08	07.48229	23	19	26.57	+05	12	28.4		9	675
56			1991	08	10.41771	23	18	38.35	+05	01	57.9		9	675
56			1991	08	10.46597	23	18	37.31	+05	01	46.2		9	675
58			1971	04	16.21476	12	25	50.06	+01	50	21.4		4	675
58			1971	04	16.27708	12	25	47.42	+01	50	39.7		4	675
107			1991	08	08.42483	23	33	47.34	-00	25	49.9	13.8	9	675
107			1991	08	08.45660	23	33	46.71	-00	25	56.5		9	675
129			1991	08	05.27500	21	06	31.23	-15	39	15.7		9	675
129			1991	08	05.31302	21	06	29.34	-15	39	36.2		9	675
129			1991	08	07.32240	21	04	53.56	-15	57	47.9		9	675
129			1991	08	07.35069	21	04	52.15	-15	58	03.1		9	675
131			1991	07	14.38177	21	20	21.17	-23	04	20.4		9	675
131			1991	07	14.42170	21	20	19.40	-23	04	34.4	14.2	9	675
133			1991	08	08.42483	23	25	05.54	+00	19	47.6		9	675
133			1991	08	08.43003	23	25	05.26	+00	19	47.8	13.5	9	675
133			1991	08	08.45660	23	25	04.58	+00	19	47.4		9	675
133			1991	08	08.46441	23	25	04.32	+00	19	47.7		9	675
140			1991	08	05.29363	21	48	54.80	-16	31	06.2		9	675
140			1991	08	05.32951	21	48	53.19	-16	31	19.4		9	675
140			1991	08	06.33281	21	48	10.25	-16	37	14.3		9	675
140			1991	08	06.37153	21	48	08.51	-16	37	27.8		9	675
140			1991	08	08.31128	21	46	43.44	-16	48	52.3		9	675
140			1991	08	08.34045	21	46	42.07	-16	49	03.1		9	675
140			1991	08	10.29236	21	45	13.99	-17	00	34.0		9	675
140			1991	08	10.32517	21	45	12.42	-17	00	45.9		9	675
156			1991	08	05.26563	20	58	14.40	-01	29	47.5	13.0	9	675
156			1991	08	05.30313	20	58	12.35	-01	29	54.1		9	675
156			1991	08	09.27656	20	54	42.30	-01	42	29.2		9	675
156			1991	08	09.30903	20	54	40.57	-01	42	36.0		9	675
160			1971	04	16.22812	12	20	09.87	-02	35	19.9		4	675
160			1971	04	16.30139	12	20	06.60	-02	35	03.1		4	675
163			1990	09	15.20590	20	40	08.70	-16	19	23.9		9	675
163			1990	09	15.23229	20	40	08.11	-16	19	29.7		9	675

167	1971	04	16.16458	12	10	59.04	+00	15	50.6		4	675
167	1971	04	16.21476	12	10	56.63	+00	16	05.9		4	675
167	1971	04	16.25069	12	10	55.60	+00	16	13.5		4	675
167	1971	04	16.27708	12	10	54.17	+00	16	21.3		4	675
191	1991	07	16.38993	21	39	00.87	-06	13	54.8		9	675
191	1991	07	16.42917	21	38	59.74	-06	14	04.6		9	675
191	1991	08	05.28484	21	27	02.87	-08	06	32.0		9	675
191	1991	08	05.32135	21	27	01.24	-08	06	47.1		9	675
191	1991	08	08.30399	21	24	50.10	-08	28	04.9		9	675
191	1991	08	08.33264	21	24	48.76	-08	28	17.7		9	675
202	1981	09	01.40521	22	14	02.40	-14	37	04.8		6	675
202	1981	09	02.40452	22	13	19.91	-14	42	50.9		6	675
214	1991	07	14.38177	20	55	31.29	-20	52	05.2		9	675
214	1991	07	14.42170	20	55	29.28	-20	52	10.8	13.8	9	675
252	1991	07	12.42708	21	43	16.51	+00	05	50.9	14.8	9	675
252	1991	07	12.45434	21	43	15.87	+00	05	50.8		9	675
252	1991	07	18.44063	21	40	48.69	+00	03	50.3		9	675
252	1991	07	18.47135	21	40	47.82	+00	03	47.9	15.0	9	675
275	1991	08	07.38524	22	57	56.24	-09	05	21.8	14.8	9	675
275	1991	08	07.41406	22	57	55.23	-09	05	30.3		9	675
275	1991	08	08.37188	22	57	22.43	-09	10	21.0	14.5	9	675
275	1991	08	08.40868	22	57	21.09	-09	10	32.2		9	675
275	1991	08	10.40851	22	56	09.75	-09	20	55.8	14.5	9	675
277	1971	04	16.18087	12	03	13.04	-01	34	37.2		4	675
277	1971	04	16.26458	12	03	09.86	-01	34	16.5		4	675
319	1991	08	09.46892	00	17	29.72	+06	12	12.9	15.5	9	675
319	1991	08	10.44618	00	17	31.28	+06	10	17.9		9	675
324	1991	08	08.42483	23	25	44.02	-01	42	48.2		9	675
324	1991	08	08.43003	23	25	43.84	-01	42	42.9		9	675
324	1991	08	08.45660	23	25	43.47	-01	42	29.2		9	675
324	1991	08	08.46441	23	25	43.29	-01	42	24.3		9	675
338	1991	08	09.33872	22	23	15.25	-03	32	43.2		9	675
338	1991	08	09.37257	22	23	13.77	-03	32	46.8		9	675
339	1991	08	06.39410	22	28	01.34	-02	39	02.0		9	675
339	1991	08	06.42743	22	28	00.26	-02	39	13.5		9	675
339	1991	08	08.38038	22	26	57.19	-02	50	15.4		9	675
339	1991	08	08.41649	22	26	56.01	-02	50	27.3		9	675
339	1991	08	09.33872	22	26	25.05	-02	55	53.2		9	675
339	1991	08	09.37257	22	26	23.86	-02	56	05.7		9	675
366	1971	04	16.18087	11	57	26.57	-05	50	43.9		4	675
366	1971	04	16.26458	11	57	23.06	-05	50	30.5		4	675
384	1991	08	06.33281	21	46	43.70	-22	38	20.7	14.0	9	675
384	1991	08	06.37153	21	46	41.63	-22	38	32.5		9	675
384	1991	08	10.29236	21	43	11.78	-22	57	40.5	14.5	9	675
384	1991	08	10.32517	21	43	09.93	-22	57	50.3		9	675
390	1991	08	07.44948	23	24	32.70	+07	20	58.7	15.5	9	675
390	1991	08	07.46545	23	24	32.11	+07	21	01.0	15.8	9	675
390	1991	08	07.48229	23	24	31.58	+07	21	03.4		9	675
390	1991	08	10.41771	23	22	56.62	+07	27	19.3	16.0	9	675
390	1991	08	10.46597	23	22	54.89	+07	27	24.4		9	675
400	1991	08	06.35503	22	12	44.90	-11	27	18.7	15.8	9	675
400	1991	08	06.38698	22	12	43.40	-11	27	22.0		9	675
412	1990	09	15.26840	22	07	01.38	-27	45	07.5		9	675
412	1990	09	15.30330	22	06	59.91	-27	45	14.1		9	675
414	1991	07	14.38177	21	13	04.65	-20	11	26.3	15.8	9	675
414	1991	07	14.42170	21	13	03.32	-20	11	37.7	14.0	9	675
417	1991	08	07.44948	23	27	30.40	+02	32	41.7	14.5	9	675
417	1991	08	08.43003	23	27	05.77	+02	30	02.3	14.8	9	675
417	1991	08	08.44149	23	27	05.64	+02	30	01.8	15.0	9	675

417	1991	08	08.46441	23	27	04.93	+02	29	56.7		9 675
420	1991	08	09.46892	23	52	50.38	+08	19	44.9	14.2	9 675
420	1991	08	10.44618	23	52	34.29	+08	19	37.5		9 675
421	1971	04	16.18087	12	08	52.22	-00	32	33.7		4 675
421	1971	04	16.26458	12	08	48.68	-00	32	01.6		4 675
431	1990	09	15.20590	20	40	19.60	-19	35	34.4		9 675
431	1990	09	15.23229	20	40	19.36	-19	35	35.7		9 675
438	1991	07	13.42257	20	42	19.50	-30	26	33.7	14.0	9 675
438	1991	07	13.45347	20	42	17.85	-30	26	44.1		9 675
441	1991	07	12.42708	21	59	29.58	-01	23	22.2	13.8	9 675
441	1991	07	12.45434	21	59	28.94	-01	23	19.3	14.5	9 675
441	1991	07	18.44063	21	56	50.97	-01	15	39.5		9 675
441	1991	07	18.47135	21	56	50.03	-01	15	38.1	13.8	9 675
442	1980	11	29.29410	04	26	20.46	+12	17	46.0		6 675
442	1980	12	01.29271	04	24	12.50	+12	14	48.7		6 675
447	1981	09	01.40521	22	20	10.11	-18	07	40.0		6 675
447	1981	09	02.40452	22	19	22.84	-18	11	46.5		6 675
462	1971	04	16.16458	12	09	12.05	+03	56	55.4		4 675
462	1971	04	16.25069	12	09	08.64	+03	57	12.3		4 675
493	1990	09	14.27604	22	14	38.03	-19	55	24.4		9 675
493	1990	09	14.31354	22	14	36.12	-19	55	20.5		9 675
501	1990	09	15.26840	22	03	05.81	-25	54	07.6	14.5	9 675
501	1990	09	15.30330	22	03	03.91	-25	53	55.0		9 675
515	1991	08	06.35503	22	09	31.15	-12	37	15.9	15.5	9 675
515	1991	08	06.38698	22	09	29.85	-12	37	24.8		9 675
518	1980	11	29.29410	04	15	02.64	+13	52	48.4		6 675
518	1980	12	01.29271	04	13	02.24	+13	44	32.1		6 675
522	1991	08	07.39306	23	32	15.20	-07	28	52.0		9 675
522	1991	08	07.42257	23	32	14.61	-07	28	58.3		9 675
522	1991	08	08.42483	23	31	55.73	-07	32	39.5	15.0	9 675
522	1991	08	08.45660	23	31	55.03	-07	32	46.3		9 675
547	1971	04	16.18087	11	50	13.47	-02	05	14.1		4 675
547	1971	04	16.26458	11	50	10.61	-02	04	34.5		4 675
554	1991	08	06.35503	22	03	03.26	-09	29	59.7		9 675
554	1991	08	06.38698	22	03	01.53	-09	30	05.2		9 675
566	1981	09	01.40521	22	28	07.84	-17	04	02.1		6 675
566	1981	09	02.40452	22	27	24.86	-17	08	10.3		6 675
571	1991	08	07.39306	23	19	35.28	-09	54	49.5		9 675
571	1991	08	07.42257	23	19	34.68	-09	54	49.9		9 675
578	1991	08	07.39306	23	21	30.43	-13	29	41.5		9 675
578	1991	08	07.42257	23	21	29.58	-13	29	47.9		9 675
591	1991	08	09.46892	00	19	38.15	+08	01	15.4		9 675
591	1991	08	10.44618	00	19	18.54	+08	03	19.3		9 675
602	1990	09	15.20590	20	39	54.44	-22	04	05.8		9 675
602	1990	09	15.23229	20	39	53.78	-22	03	56.6		9 675
639	1991	07	18.44063	22	08	00.95	-02	52	14.1	13.5	9 675
639	1991	07	18.47135	22	08	00.11	-02	52	08.4		9 675
639	1991	08	07.33698	21	56	05.38	-02	32	21.7		9 675
639	1991	08	07.36840	21	56	03.93	-02	32	22.2		9 675
663	1980	11	29.29410	04	15	20.51	+15	18	58.2		6 675
663	1980	12	01.29271	04	13	38.82	+15	06	13.4		6 675
669	1991	07	14.28351	17	43	14.32	-07	31	34.6	15.0	9 675
671	1971	04	16.22812	12	17	16.88	-04	15	46.8		4 675
671	1971	04	16.30139	12	17	13.65	-04	15	35.3		4 675
706	1991	08	07.38524	22	59	27.36	-03	35	13.7	14.8	9 675
706	1991	08	07.41406	22	59	26.13	-03	35	03.7		9 675
706	1991	08	08.38038	22	58	46.93	-03	29	40.5		9 675
706	1991	08	08.41649	22	58	45.34	-03	29	27.7		9 675
706	1991	08	10.40851	22	57	19.64	-03	18	43.7		9 675

708	1991	07	14.38177	21	02	37.73	-21	13	48.2		9 675
708	1991	07	14.42170	21	02	35.77	-21	13	55.4	15.5	9 675
724	1991	07	14.28351	17	50	08.17	-06	22	25.7	18.0	9 675
724	1991	07	14.31736	17	50	06.48	-06	22	27.2		9 675
725	1971	04	16.21476	12	28	51.21	+01	54	10.1		4 675
725	1971	04	16.27708	12	28	48.30	+01	54	22.3		4 675
728	1981	09	03.41354	22	39	09.33	-16	04	35.7		6 675
728	1981	09	04.28403	22	38	18.06	-16	09	42.9		6 675
728	1991	08	06.33281	21	35	29.87	-20	34	14.2	16.5	9 675
728	1991	08	06.37153	21	35	27.51	-20	34	27.8		9 675
728	1991	08	10.29236	21	31	30.34	-20	58	27.6	16.5	9 675
728	1991	08	10.32517	21	31	28.21	-20	58	41.1		9 675
736	1990	09	15.20590	20	44	41.07	-20	16	20.2	15.0	9 675
736	1990	09	15.23229	20	44	41.16	-20	16	23.7		9 675
760	1991	08	06.33281	21	33	47.93	-18	51	17.4	13.8	9 675
760	1991	08	06.37153	21	33	46.04	-18	51	20.9		9 675
760	1991	08	10.29236	21	30	33.58	-18	57	56.7		9 675
760	1991	08	10.32517	21	30	31.90	-18	58	00.1		9 675
762	1991	07	16.38993	21	50	09.45	-09	19	17.5	14.2	9 675
762	1991	07	16.42917	21	50	08.14	-09	19	15.6		9 675
762	1991	08	05.28484	21	36	33.57	-09	22	17.7	13.5	9 675
762	1991	08	05.29363	21	36	33.32	-09	22	18.6		9 675
762	1991	08	05.32135	21	36	31.82	-09	22	19.2		9 675
762	1991	08	05.32951	21	36	31.57	-09	22	19.5		9 675
762	1991	08	08.30399	21	34	09.88	-09	24	51.4	13.5	9 675
762	1991	08	08.33264	21	34	08.45	-09	24	53.3		9 675
765	1990	09	15.20590	20	34	01.85	-18	53	46.1	16.2	9 675
765	1990	09	15.23229	20	34	01.38	-18	53	43.3		9 675
770	1971	04	16.16458	12	10	36.80	+03	13	38.1		4 675
770	1971	04	16.21476	12	10	33.85	+03	13	48.1		4 675
770	1971	04	16.25069	12	10	32.41	+03	13	50.4		4 675
770	1971	04	16.27708	12	10	30.62	+03	13	56.8		4 675
778	1991	08	06.35503	22	05	24.41	-11	11	51.3	15.2	9 675
778	1991	08	06.38698	22	05	22.95	-11	11	54.4		9 675
802	1991	08	07.39306	23	32	46.82	-07	46	27.7	17.0	9 675
802	1991	08	07.42257	23	32	45.92	-07	46	32.7		9 675
821	1991	08	08.38038	22	44	35.92	-00	23	55.9		9 675
821	1991	08	08.41649	22	44	34.48	-00	24	04.2		9 675
835	1971	04	16.18087	12	03	51.11	-05	05	42.4		4 675
835	1971	04	16.26458	12	03	48.01	-05	05	21.1		4 675
861	1981	09	03.41354	22	57	25.51	-16	08	16.8		6 675
861	1981	09	04.28403	22	56	48.08	-16	13	41.9		6 675
867	1971	04	16.16458	12	09	34.31	+05	00	09.6		4 675
867	1971	04	16.25069	12	09	30.81	+05	00	17.2		4 675
874	1991	08	06.39410	22	08	24.19	+00	06	00.8		9 675
874	1991	08	06.42743	22	08	22.98	+00	05	52.1		9 675
901	1991	08	07.44948	23	32	37.79	+04	13	13.1	13.2	9 675
901	1991	08	08.44149	23	32	38.22	+04	17	30.8	14.0	9 675
913	1991	08	10.29236	21	54	43.75	-22	10	46.8	14.5	9 675
913	1991	08	10.32517	21	54	41.93	-22	11	04.4		9 675
920	1991	08	06.39410	22	36	10.68	+03	32	23.5		9 675
920	1991	08	06.42743	22	36	09.45	+03	32	12.6		9 675
920	1991	08	07.40035	22	35	35.81	+03	28	25.0	16.2	9 675
920	1991	08	07.43166	22	35	34.62	+03	28	17.1		9 675
946	1971	04	16.16458	12	09	03.08	+01	00	36.8		4 675
946	1971	04	16.25069	12	09	00.00	+01	00	54.3		4 675
958	1991	08	07.38524	23	21	16.97	-04	30	42.0	17.0	9 675
958	1991	08	07.41406	23	21	16.33	-04	30	43.8		9 675
958	1991	08	08.42483	23	20	52.61	-04	32	15.2	16.8	9 675

958	1991	08	08.45660	23	20	51.81	-04	32	18.9		9	675
958	1991	08	10.40851	23	20	03.52	-04	35	30.7	16.8	9	675
1004	1980	11	29.23715	03	47	36.47	+15	33	14.5		6	675
1004	1980	12	01.23577	03	46	04.73	+15	28	52.7		6	675
1044	1991	08	07.39306	23	43	40.18	-09	12	27.1		9	675
1044	1991	08	07.42257	23	43	39.62	-09	12	33.9		9	675
1054	1980	11	29.29410	04	14	11.86	+14	56	21.8		6	675
1054	1980	12	01.29271	04	12	15.39	+15	00	15.2		6	675
1064	1991	07	16.38993	21	42	36.99	-04	36	43.2	14.2	9	675
1064	1991	07	16.42917	21	42	35.65	-04	36	30.9		9	675
1071	1971	04	16.21476	12	16	43.45	+04	07	07.4		4	675
1071	1971	04	16.27708	12	16	40.76	+04	07	16.1		4	675
1080	1991	08	07.39306	23	29	41.45	-07	08	24.7		9	675
1080	1991	08	07.42257	23	29	40.83	-07	08	26.6		9	675
1080	1991	08	08.42483	23	29	21.61	-07	09	25.5	15.8	9	675
1080	1991	08	08.45660	23	29	21.06	-07	09	27.1		9	675
1090	1991	07	16.38993	21	51	03.95	-06	06	53.2	17.2	9	675
1090	1991	07	16.42917	21	51	02.66	-06	07	09.5		9	675
1090	1991	08	05.28484	21	37	01.56	-09	01	49.8	16.8	9	675
1090	1991	08	05.32135	21	36	59.60	-09	02	12.3		9	675
1090	1991	08	08.30399	21	34	25.39	-09	33	06.1	16.8	9	675
1090	1991	08	08.33264	21	34	23.89	-09	33	23.9		9	675
1102	1991	07	14.28351	17	50	33.61	-02	49	12.7	14.5	9	675
1102	1991	07	14.31736	17	50	32.19	-02	49	13.2		9	675
1102	1991	07	18.27622	17	48	06.55	-02	51	43.3		9	675
1102	1991	07	18.30799	17	48	05.39	-02	51	45.7	14.5	9	675
1111	1991	08	05.29363	21	35	48.96	-14	57	09.6	15.0	9	675
1111	1991	08	05.32951	21	35	47.32	-14	57	20.7		9	675
1111	1991	08	08.31128	21	33	33.04	-15	12	53.0	15.0	9	675
1111	1991	08	08.34045	21	33	31.63	-15	13	01.8		9	675
1112	1991	07	16.38993	21	59	25.99	-08	56	15.5	15.0	9	675
1112	1991	07	16.42917	21	59	24.85	-08	56	12.8		9	675
1112	1991	08	05.29363	21	46	33.39	-08	51	48.7	14.5	9	675
1112	1991	08	05.32951	21	46	31.78	-08	51	49.1		9	675
1112	1991	08	07.33698	21	44	54.71	-08	53	14.3	14.5	9	675
1112	1991	08	07.36840	21	44	53.09	-08	53	15.6		9	675
1112	1991	08	08.31128	21	44	06.79	-08	54	03.6	14.5	9	675
1112	1991	08	08.34045	21	44	05.20	-08	54	03.4		9	675
1121	1971	04	16.22812	12	31	36.68	-06	24	16.0		4	675
1121	1971	04	16.30139	12	31	32.80	-06	23	59.5		4	675
1128	1971	03	24.40486	12	19	27.66	-00	42	00.5		4	675
1128	1971	04	16.16458	12	02	00.77	+01	03	59.2		4	675
1128	1971	04	16.25069	12	01	57.28	+01	04	18.0		4	675
1128	1991	08	05.35451	22	31	41.64	-10	57	58.3	15.0	9	675
1128	1991	08	08.37188	22	29	43.01	-11	10	22.4	15.5	9	675
1128	1991	08	08.40868	22	29	41.44	-11	10	31.3		9	675
1188	1971	04	16.22812	12	28	57.99	-04	33	21.7		4	675
1188	1971	04	16.30139	12	28	53.54	-04	33	04.4		4	675
1200	1980	11	29.23715	03	51	24.40	+16	14	17.5		6	675
1200	1980	12	01.23577	03	49	48.03	+16	08	05.1		6	675
1218	1981	09	01.40521	22	35	24.43	-14	36	58.1		6	675
1218	1981	09	02.40452	22	34	24.58	-14	42	29.2		6	675
1218	1991	07	14.38177	21	21	09.22	-20	15	45.2		9	675
1218	1991	07	14.42170	21	21	07.34	-20	15	56.3	17.2	9	675
1249	1991	07	16.38993	21	51	23.16	-06	10	23.9	16.0	9	675
1249	1991	07	16.42917	21	51	21.73	-06	10	23.8		9	675
1249	1991	08	08.30399	21	32	34.09	-06	48	25.8	15.0	9	675
1249	1991	08	08.33264	21	32	32.31	-06	48	30.6		9	675
1257	1991	08	09.46892	00	00	35.16	+04	41	47.9		9	675

1257	1991	08	10.44618	00	00	19.85	+04	40	30.5		9	675
1267	1981	09	03.41354	22	59	37.54	-13	14	08.5		6	675
1267	1981	09	04.28403	22	58	47.65	-13	16	49.0		6	675
1272	1991	08	05.27500	21	32	41.88	-15	47	26.5	16.2	9	675
1272	1991	08	05.29363	21	32	40.86	-15	47	23.9	16.2	9	675
1272	1991	08	05.31302	21	32	39.69	-15	47	25.9		9	675
1272	1991	08	05.32951	21	32	38.79	-15	47	25.3		9	675
1272	1991	08	07.32240	21	30	48.11	-15	47	07.0	16.5	9	675
1272	1991	08	07.35069	21	30	46.41	-15	47	06.5		9	675
1274	1991	08	05.27500	21	30	06.21	-16	19	11.3	15.0	9	675
1274	1991	08	05.31302	21	30	03.71	-16	19	18.7		9	675
1274	1991	08	07.32240	21	27	53.25	-16	24	51.8	15.5	9	675
1274	1991	08	07.35069	21	27	51.25	-16	24	56.5		9	675
1289	1991	08	06.35503	22	21	16.39	-08	18	10.1	15.0	9	675
1289	1991	08	06.38698	22	21	15.14	-08	18	18.3		9	675
1289	1991	08	09.33872	22	19	16.42	-08	30	08.5		9	675
1289	1991	08	09.37257	22	19	14.97	-08	30	16.6		9	675
1305	1991	07	14.38177	21	13	59.87	-19	15	15.6	15.8	9	675
1305	1991	07	14.42170	21	13	58.24	-19	15	23.9		9	675
1311	1991	08	08.38038	22	39	08.25	-03	39	24.7		9	675
1311	1991	08	08.41649	22	39	06.67	-03	39	31.1		9	675
1345	1991	08	05.27500	21	23	52.14	-15	17	33.6	16.5	9	675
1345	1991	08	05.27500	21	23	52.14	-15	17	33.7	16.5	9	675
1345	1991	08	05.31302	21	23	50.81	-15	17	42.8		9	675
1345	1991	08	05.31302	21	23	50.80	-15	17	43.1		9	675
1345	1991	08	07.32240	21	22	41.01	-15	26	06.1	16.5	9	675
1345	1991	08	07.32240	21	22	41.02	-15	26	06.2	16.5	9	675
1345	1991	08	07.35069	21	22	39.93	-15	26	13.5		9	675
1345	1991	08	07.35069	21	22	39.92	-15	26	13.4		9	675
1381	1981	09	01.40521	22	15	12.94	-13	39	18.0		6	675
1381	1981	09	02.40452	22	14	15.67	-13	41	17.4		6	675
1415	1991	08	05.29363	22	03	02.40	-12	50	16.4	15.5	9	675
1415	1991	08	05.32951	22	03	00.24	-12	50	23.5		9	675
1415	1991	08	06.35503	22	02	01.24	-12	53	51.9	15.2	9	675
1415	1991	08	06.38698	22	01	59.35	-12	53	58.5		9	675
1415	1991	08	08.31128	22	00	06.27	-13	00	40.7	16.2	9	675
1415	1991	08	08.34045	22	00	04.46	-13	00	47.0		9	675
1435	1991	08	05.28484	21	10	10.06	-11	12	40.8	18.0	9	675
1435	1991	08	05.32135	21	10	08.18	-11	12	48.8		9	675
1435	1991	08	08.30399	21	07	32.87	-11	25	51.5	18.0	9	675
1435	1991	08	08.33264	21	07	31.37	-11	25	59.2	17.8	9	675
1439	1991	08	06.33281	21	37	31.23	-19	45	20.2	17.0	9	675
1439	1991	08	06.37153	21	37	29.77	-19	45	27.2		9	675
1439	1991	08	10.29236	21	35	04.40	-19	57	04.1	17.5	9	675
1439	1991	08	10.32517	21	35	03.18	-19	57	10.0		9	675
1443	1991	08	07.38524	23	11	39.26	-04	10	15.0	16.0	9	675
1443	1991	08	07.41406	23	11	38.47	-04	10	19.8		9	675
1443	1991	08	10.40851	23	10	17.23	-04	20	17.4	15.8	9	675
1444	1991	08	07.40035	22	39	31.76	+06	05	13.6		9	675
1444	1991	08	07.43166	22	39	30.38	+06	05	18.3		9	675
1452	1990	09	15.26840	21	59	31.71	-28	03	20.4		9	675
1452	1990	09	15.30330	21	59	30.00	-28	03	19.4		9	675
1463	1991	08	05.29363	21	59	57.16	-14	06	03.9	15.0	9	675
1463	1991	08	05.32951	21	59	55.49	-14	06	07.9		9	675
1463	1991	08	06.35503	21	59	08.94	-14	07	59.3	15.2	9	675
1463	1991	08	06.38698	21	59	07.45	-14	08	02.3		9	675
1463	1991	08	08.31128	21	57	38.10	-14	11	40.2	15.2	9	675
1463	1991	08	08.34045	21	57	36.65	-14	11	43.5		9	675
1476	1991	07	14.42170	21	28	12.76	-21	11	04.9	15.5	9	675

1493	1991	08	07.38524	23	08	56.09	-05	31	26.9	15.0	9	675
1493	1991	08	07.41406	23	08	55.37	-05	31	26.1		9	675
1493	1991	08	10.40851	23	07	44.25	-05	31	57.0	14.5	9	675
1502	1991	08	05.28484	21	06	04.54	-10	31	58.6	15.0	9	675
1502	1991	08	05.32135	21	06	02.68	-10	32	06.7		9	675
1541	1991	07	14.38177	21	06	59.39	-23	00	17.4	16.2	9	675
1541	1991	07	14.42170	21	06	57.50	-23	00	24.8		9	675
1545	1991	08	07.39306	23	36	55.51	-06	34	20.8	17.5	9	675
1545	1991	08	07.42257	23	36	54.69	-06	34	27.1		9	675
1545	1991	08	08.42483	23	36	29.14	-06	37	49.2		9	675
1545	1991	08	08.45660	23	36	28.26	-06	37	55.2		9	675
1551	1991	07	14.42170	21	09	49.73	-18	23	06.9	15.8	9	675
1558	1991	08	06.33281	21	49	22.70	-21	04	04.2	15.2	9	675
1558	1991	08	06.37153	21	49	21.06	-21	04	19.4		9	675
1558	1991	08	10.29236	21	46	35.40	-21	29	49.0	15.2	9	675
1558	1991	08	10.32517	21	46	33.96	-21	30	01.1		9	675
1582	1990	09	15.26840	22	01	22.33	-26	50	27.7	16.8	9	675
1582	1990	09	15.30330	22	01	20.98	-26	50	31.9		9	675
1593	1991	08	06.33281	21	31	49.54	-22	11	45.8	14.0	9	675
1593	1991	08	06.37153	21	31	48.45	-22	12	26.4		9	675
1593	1991	08	10.29236	21	30	16.08	-23	19	59.9	14.5	9	675
1593	1991	08	10.32517	21	30	15.09	-23	20	34.4		9	675
1593	1991	08	15.35625	21	28	08.97	-24	42	01.0	14.0	2	675
1593	1991	08	15.38038	21	28	08.15	-24	42	23.5		2	675
1593	1991	08	16.39566	21	27	42.99	-24	57	53.1		2	675
1606	1971	04	16.18087	12	00	54.90	-00	42	15.9		4	675
1606	1971	04	16.26458	12	00	51.45	-00	41	45.1		4	675
1616	1991	07	13.42257	21	16	00.13	-28	47	30.8	16.2	9	675
1616	1991	07	13.45347	21	15	58.84	-28	47	41.0		9	675
1630	1991	08	06.33281	21	40	38.40	-20	37	21.9	17.0	9	675
1630	1991	08	06.37153	21	40	36.58	-20	37	32.0		9	675
1630	1991	08	10.29236	21	37	33.62	-20	53	25.7	17.0	9	675
1630	1991	08	10.32517	21	37	32.01	-20	53	33.7		9	675
1638	1971	04	16.16458	11	56	06.17	+00	18	44.4		4	675
1638	1971	04	16.25069	11	56	02.63	+00	19	07.9		4	675
1644	1991	07	16.38993	22	04	49.64	-03	47	58.0	16.8	9	675
1644	1991	07	16.42917	22	04	48.42	-03	47	56.2		9	675
1644	1991	07	18.44063	22	03	47.86	-03	46	36.6	16.8	9	675
1644	1991	07	18.47135	22	03	46.85	-03	46	34.3		9	675
1644	1991	08	07.33698	21	49	45.40	-04	03	52.0	16.5	9	675
1644	1991	08	07.36840	21	49	43.72	-04	03	56.2		9	675
1658	1990	09	15.26840	22	08	17.45	-26	11	05.4	15.5	9	675
1658	1990	09	15.30330	22	08	16.10	-26	11	07.9		9	675
1661	1991	08	08.38038	22	57	53.17	-01	15	59.3	17.0	9	675
1661	1991	08	08.41649	22	57	51.59	-01	16	04.5		9	675
1661	1991	08	08.43003	22	57	51.02	-01	16	04.7	17.2	9	675
1662	1971	04	16.18087	11	53	46.01	-03	15	58.6		4	675
1662	1971	04	16.26458	11	53	42.69	-03	15	38.5		4	675
1662	1991	08	07.38524	22	57	17.63	-06	35	01.5	16.0	9	675
1662	1991	08	07.41406	22	57	16.64	-06	35	03.1		9	675
1662	1991	08	10.40851	22	55	35.79	-06	39	03.0	16.0	9	675
1669	1971	04	16.22812	12	31	02.53	-03	13	26.6		4	675
1669	1971	04	16.30139	12	30	59.30	-03	13	09.9		4	675
1671	1980	11	29.29410	04	16	07.19	+13	37	44.7		6	675
1671	1980	12	01.29271	04	14	25.06	+13	31	27.9		6	675
1673	1991	08	09.33872	22	07	30.11	-06	29	09.9	17.5	9	675
1673	1991	08	09.37257	22	07	28.72	-06	29	17.5		9	675
1686	1991	08	07.38524	23	10	24.15	-05	51	34.0	15.0	9	675
1686	1991	08	07.41406	23	10	23.35	-05	51	38.2		9	675

1686	1991	08	10.40851	23	09	00.66	-05	59	58.9	15.8	9 675
1697	1991	08	06.35503	22	10	38.84	-12	46	48.9	16.5	9 675
1697	1991	08	06.38698	22	10	37.10	-12	46	53.8		9 675
1709	1991	08	05.28484	21	20	46.27	-10	58	58.0		9 675
1709	1991	08	05.32135	21	20	43.76	-10	58	50.6		9 675
1709	1991	08	08.30399	21	17	48.70	-10	50	21.3	14.8	9 675
1709	1991	08	08.33264	21	17	46.90	-10	50	16.6		9 675
1719	1991	08	05.27500	21	14	52.63	-20	31	41.9	14.8	9 675
1719	1991	08	05.31302	21	14	49.98	-20	31	35.9		9 675
1719	1991	08	07.32240	21	12	32.95	-20	26	19.4	15.2	9 675
1719	1991	08	07.35069	21	12	30.81	-20	26	14.8		9 675
1721	1991	07	14.38177	21	18	39.94	-19	24	19.1	16.5	9 675
1721	1991	07	14.42170	21	18	38.13	-19	24	17.3		9 675
1724	1991	07	14.28351	17	46	37.27	-06	23	35.7	16.5	9 675
1724	1991	07	14.31736	17	46	35.77	-06	23	44.1		9 675
1724	1991	07	18.27622	17	44	02.67	-06	40	20.2		9 675
1724	1991	07	18.30799	17	44	01.49	-06	40	28.5	16.5	9 675
1725	1980	11	29.23715	03	50	50.79	+15	56	42.8		6 675
1725	1980	12	01.23577	03	49	05.82	+15	53	05.4		6 675
1737	1991	07	14.38177	21	09	26.06	-21	34	03.3	16.2	9 675
1737	1991	07	14.42170	21	09	24.30	-21	34	06.6		9 675
1743	1980	11	29.23715	03	52	21.79	+11	59	06.0		6 675
1743	1980	12	01.23577	03	50	25.50	+11	51	06.6		6 675
1748	1971	04	16.16458	11	59	31.03	+03	52	30.3		4 675
1748	1971	04	16.25069	11	59	28.43	+03	52	45.1		4 675
1760	1991	08	07.46545	23	17	12.34	+06	54	42.9		9 675
1760	1991	08	07.48229	23	17	11.88	+06	54	41.9	17.0	9 675
1760	1991	08	10.41771	23	15	52.20	+06	50	52.8	17.0	9 675
1760	1991	08	10.46597	23	15	50.77	+06	50	48.2		9 675
1787	1991	08	09.33872	22	17	14.07	-05	30	44.3		9 675
1787	1991	08	09.37257	22	17	12.47	-05	30	47.2		9 675
1812	1991	08	08.38038	22	47	10.10	-01	00	25.1	16.5	9 675
1812	1991	08	08.41649	22	47	08.95	-01	00	35.3		9 675
1815	1991	08	06.35503	22	25	58.59	-12	14	24.5	16.8	9 675
1815	1991	08	06.38698	22	25	57.31	-12	14	32.1		9 675
1816	1991	07	12.45434	21	52	51.03	-00	55	41.5	17.0	9 675
1816	1991	07	16.38993	21	50	54.33	-01	21	39.2	16.8	9 675
1816	1991	07	16.42917	21	50	52.98	-01	21	58.0		9 675
1816	1991	07	18.44063	21	49	45.73	-01	36	31.9	16.8	9 675
1816	1991	07	18.47135	21	49	44.63	-01	36	45.8		9 675
1816	1991	08	07.33698	21	34	59.13	-04	45	53.8	16.8	9 675
1816	1991	08	07.36840	21	34	57.40	-04	46	15.5		9 675
1816	1991	08	14.32552	21	28	46.98	-06	07	34.9	15.5	2 675
1816	1991	08	14.34653	21	28	45.75	-06	07	51.2		2 675
1816	1991	08	16.38490	21	26	55.72	-06	32	33.9		2 675
1816	1991	08	16.40642	21	26	54.54	-06	32	49.4		2 675
1826	1991	08	06.39410	22	28	59.65	+02	31	17.9		9 675
1826	1991	08	06.42743	22	28	58.38	+02	31	17.1		9 675
1850	1990	09	14.27604	22	34	16.03	-16	55	43.6	16.8	9 675
1850	1990	09	14.31354	22	34	13.95	-16	55	50.9		9 675
1855	1971	04	16.16458	12	08	08.26	-00	37	36.8		4 675
1855	1971	04	16.18087	12	08	07.01	-00	37	27.9		4 675
1855	1971	04	16.25069	12	08	04.68	-00	37	04.5		4 675
1855	1971	04	16.26458	12	08	03.69	-00	36	57.8		4 675
1857	1991	07	16.38993	21	55	15.16	-05	00	16.8	16.2	9 675
1857	1991	07	16.42917	21	55	14.11	-05	00	15.2		9 675
1857	1991	08	07.33698	21	39	50.46	-05	29	25.8	15.8	9 675
1857	1991	08	07.36840	21	39	48.58	-05	29	32.1		9 675
1870	1971	04	16.21476	12	18	13.32	-00	05	58.6		4 675

1870		1971	04	16.27708	12	18	11.71	-00	05	46.5		4 675
1871		1971	04	16.21476	12	28	56.27	+04	40	29.6		4 675
1871		1971	04	16.27708	12	28	54.61	+04	40	40.4		4 675
1872		1971	04	16.18087	12	10	01.70	-01	40	20.6		4 675
1872		1971	04	16.26458	12	09	59.68	-01	39	59.3		4 675
1873		1971	04	16.22812	12	17	58.66	-05	47	09.7		4 675
1873		1971	04	16.30139	12	17	56.91	-05	46	43.5		4 675
1877		1971	04	16.18087	11	58	33.17	-06	23	10.1		4 675
1877		1971	04	16.26458	11	58	30.02	-06	23	01.5		4 675
1884		1990	09	15.26840	22	09	30.20	-22	46	01.8	17.0	9 675
1884		1990	09	15.30330	22	09	27.81	-22	45	54.5		9 675
1887		1991	07	13.42257	20	42	28.53	-29	39	03.7	16.0	9 675
1887		1991	07	13.45347	20	42	26.96	-29	39	08.0		9 675
1891		1991	08	05.29363	21	56	14.07	-12	50	35.2	15.8	9 675
1891		1991	08	05.32951	21	56	12.04	-12	50	34.3		9 675
1891		1991	08	06.35503	21	55	15.39	-12	50	04.2	16.2	9 675
1891		1991	08	06.38698	21	55	13.55	-12	50	03.4		9 675
1891		1991	08	08.31128	21	53	25.39	-12	49	15.4	16.2	9 675
1891		1991	08	08.34045	21	53	23.67	-12	49	14.4		9 675
1892		1990	09	15.20590	20	32	44.73	-15	32	45.7		9 675
1892		1990	09	15.23229	20	32	44.05	-15	32	39.4		9 675
1908		1991	08	06.33281	21	34	48.32	-20	56	35.6	16.0	9 675
1908		1991	08	06.37153	21	34	46.29	-20	56	43.5		9 675
1908		1991	08	10.29236	21	31	23.51	-21	09	45.5	16.0	9 675
1908		1991	08	10.32517	21	31	21.72	-21	09	52.4		9 675
1909		1991	08	09.46892	00	04	54.66	+03	01	52.5	17.0	9 675
1909		1991	08	10.44618	00	04	34.90	+03	00	07.2		9 675
1913		1991	08	05.29363	21	40	04.01	-15	38	06.9	16.0	9 675
1913		1991	08	05.32951	21	40	02.24	-15	38	14.3		9 675
1913		1991	08	06.33281	21	39	13.95	-15	41	55.8	16.2	9 675
1913		1991	08	06.37153	21	39	12.17	-15	42	05.6		9 675
1913		1991	08	08.31128	21	37	37.74	-15	49	12.2	16.2	9 675
1913		1991	08	08.34045	21	37	36.23	-15	49	18.7		9 675
1913		1991	08	10.29236	21	35	59.57	-15	56	33.6		9 675
1913		1991	08	10.32517	21	35	57.83	-15	56	41.0		9 675
1952		1991	07	13.42257	20	58	47.40	-32	08	59.0	16.0	9 675
1952		1991	07	13.45347	20	58	46.07	-32	09	12.2		9 675
1956		1991	08	05.27500	21	29	48.88	-14	13	01.5	17.2	9 675
1956		1991	08	05.29363	21	29	48.18	-14	13	03.1	17.5	9 675
1956		1991	08	05.31302	21	29	47.23	-14	13	10.2		9 675
1956		1991	08	05.32951	21	29	46.58	-14	13	11.8		9 675
1956		1991	08	07.32240	21	28	20.35	-14	20	43.8	17.5	9 675
1956		1991	08	07.35069	21	28	19.02	-14	20	52.0		9 675
1958		1981	09	01.40521	22	20	03.08	-13	44	31.5		6 675
1958		1981	09	02.40452	22	19	10.31	-13	44	40.8		6 675
1971		1991	08	08.38038	22	46	42.46	-00	08	17.8	17.5	9 675
1971		1991	08	08.41649	22	46	41.13	-00	08	17.3		9 675
1973		1991	08	08.43003	23	18	07.88	+02	17	33.5	17.0	9 675
1973		1991	08	08.46441	23	18	07.21	+02	17	26.2		9 675
1974		1991	08	08.42483	23	41	05.63	-00	41	37.4	17.8	9 675
1974		1991	08	08.45660	23	41	05.02	-00	41	47.1		9 675
1984		1971	04	16.16458	12	09	42.81	-00	35	18.9		4 675
1984		1971	04	16.18087	12	09	41.80	-00	35	11.9		4 675
1984		1971	04	16.21476	12	09	40.51	-00	35	03.3		4 675
1984		1971	04	16.25069	12	09	39.59	-00	34	53.3		4 675
1984		1971	04	16.26458	12	09	38.57	-00	34	45.2		4 675
1984		1971	04	16.27708	12	09	38.14	-00	34	43.1		4 675
1990		1980	11	29.23715	04	03	35.80	+16	21	53.4		6 675
1990		1980	11	29.29410	04	03	31.90	+16	21	40.5		6 675

1990	1980	12	01.23577	04	01	21.84	+16	13	54.3		6	675
2031	1971	04	16.16458	12	10	49.79	+01	49	24.8		4	675
2031	1971	04	16.21476	12	10	47.23	+01	49	45.2		4	675
2031	1971	04	16.25069	12	10	45.76	+01	49	57.1		4	675
2031	1971	04	16.27708	12	10	44.32	+01	50	07.4		4	675
2033	1991	08	05.35451	22	43	26.14	-06	13	56.7	17.0	9	675
2033	1991	08	08.37188	22	41	01.30	-06	14	25.2	16.8	9	675
2033	1991	08	08.38038	22	41	00.81	-06	14	23.9	16.8	9	675
2033	1991	08	08.40868	22	40	59.35	-06	14	26.5		9	675
2033	1991	08	08.41649	22	40	58.90	-06	14	25.5		9	675
2034	1991	07	13.42257	21	05	53.56	-30	48	07.8	16.8	9	675
2034	1991	07	13.45347	21	05	51.79	-30	48	18.2		9	675
2046	1971	04	16.16458	11	53	39.04	+04	25	07.2		4	675
2046	1971	04	16.25069	11	53	35.99	+04	25	22.0		4	675
2112	1971	04	16.18087	12	10	36.97	-05	45	09.1		4	675
2112	1971	04	16.22812	12	10	34.81	-05	44	48.6		4	675
2112	1971	04	16.26458	12	10	32.96	-05	44	35.2		4	675
2112	1971	04	16.30139	12	10	31.20	-05	44	20.0		4	675
2113	1991	07	13.42257	20	48	55.29	-29	11	14.9	16.8	9	675
2113	1991	07	13.45347	20	48	53.69	-29	11	24.1	17.0	9	675
2136	1991	08	07.38524	23	09	20.08	-07	24	54.1	16.8	9	675
2136	1991	08	07.41406	23	09	19.31	-07	25	04.6		9	675
2136	1991	08	10.40851	23	07	57.78	-07	43	47.2	16.8	9	675
2138	1991	08	05.27500	21	17	46.50	-20	44	48.2	15.2	9	675
2138	1991	08	05.31302	21	17	44.49	-20	45	02.1		9	675
2140	1991	08	09.46892	23	58	06.88	+09	49	46.3	16.5	9	675
2140	1991	08	10.44618	23	57	52.68	+09	51	35.4		9	675
2147	1991	08	05.27500	21	27	32.44	-13	06	26.4	17.0	9	675
2147	1991	08	05.31302	21	27	30.96	-13	06	40.5		9	675
2147	1991	08	05.32135	21	27	30.53	-13	06	40.6	17.0	9	675
2147	1991	08	07.32240	21	26	06.13	-13	18	33.1	17.0	9	675
2147	1991	08	07.35069	21	26	04.78	-13	18	44.6		9	675
2147	1991	08	08.30399	21	25	24.35	-13	24	23.0	17.0	9	675
2147	1991	08	08.33264	21	25	23.11	-13	24	32.6		9	675
2154	1981	09	01.40521	22	36	14.15	-14	05	32.1		6	675
2154	1981	09	02.40452	22	35	18.17	-14	08	31.6		6	675
2169	1991	08	06.35503	22	19	59.97	-12	48	19.1	16.8	9	675
2169	1991	08	06.38698	22	19	58.64	-12	48	29.6		9	675
2174	1991	08	07.39306	23	30	15.59	-11	25	57.3		9	675
2174	1991	08	07.42257	23	30	15.17	-11	25	52.9		9	675
2187	1991	08	05.29363	21	51	18.73	-14	01	29.8	16.0	9	675
2187	1991	08	05.32951	21	51	17.21	-14	01	53.9		9	675
2187	1991	08	08.31128	21	49	12.45	-14	36	37.5	16.5	9	675
2187	1991	08	08.34045	21	49	11.08	-14	36	57.9		9	675
2189	1990	09	15.26840	21	54	26.54	-27	15	47.8	16.2	9	675
2189	1990	09	15.30330	21	54	25.75	-27	16	05.3		9	675
2197	1991	07	14.38177	21	18	04.06	-19	10	29.5	17.0	9	675
2197	1991	07	14.42170	21	18	02.58	-19	10	36.9		9	675
2203	1971	04	16.21476	12	25	31.99	-01	12	46.8		4	675
2203	1971	04	16.22812	12	25	31.50	-01	12	43.8		4	675
2203	1971	04	16.27708	12	25	29.53	-01	12	33.3		4	675
2203	1971	04	16.30139	12	25	28.55	-01	12	27.1		4	675
2220	1991	08	05.27500	21	07	27.38	-19	09	01.9	16.5	9	675
2220	1991	08	05.31302	21	07	25.55	-19	09	12.1		9	675
2220	1991	08	07.32240	21	05	49.76	-19	17	39.9	16.5	9	675
2220	1991	08	07.35069	21	05	48.35	-19	17	46.9		9	675
2246	1991	08	05.27500	21	04	05.05	-13	28	29.2		9	675
2246	1991	08	07.32240	21	02	49.45	-13	35	57.3	16.8	9	675
2246	1991	08	07.35069	21	02	48.34	-13	36	03.0		9	675

2265	1990	09	15.26840	21	52	16.67	-23	11	22.4	18.5	9 675
2286	1990	09	15.20590	20	46	45.41	-20	24	09.9	16.5	9 675
2286	1990	09	15.23229	20	46	45.12	-20	24	08.9		9 675
2300	1991	08	07.38524	23	22	10.89	-07	11	44.4	16.8	9 675
2300	1991	08	07.39306	23	22	10.78	-07	11	46.7		9 675
2300	1991	08	07.41406	23	22	10.14	-07	11	50.0		9 675
2300	1991	08	07.42257	23	22	10.01	-07	11	51.5		9 675
2300	1991	08	08.42483	23	21	45.37	-07	14	41.1	16.5	9 675
2300	1991	08	08.45660	23	21	44.50	-07	14	46.4		9 675
2300	1991	08	10.40851	23	20	52.54	-07	20	43.2	16.8	9 675
2313	1971	04	16.22812	12	22	13.97	-04	11	47.8		4 675
2313	1971	04	16.30139	12	22	10.33	-04	11	23.6		4 675
2328	1991	08	09.46892	00	11	03.37	+04	53	26.8		9 675
2328	1991	08	10.44618	00	10	51.98	+04	50	09.4		9 675
2336	1991	08	07.38524	23	12	15.26	-08	56	38.3	17.8	9 675
2336	1991	08	07.39306	23	12	15.03	-08	56	41.2		9 675
2336	1991	08	07.41406	23	12	14.39	-08	56	44.7		9 675
2336	1991	08	07.42257	23	12	14.16	-08	56	47.3		9 675
2336	1991	08	10.40851	23	10	48.68	-09	08	13.9	18.0	9 675
2338	1991	08	06.35503	22	06	30.49	-14	24	11.0	16.2	9 675
2338	1991	08	06.38698	22	06	29.10	-14	24	21.2		9 675
2365	1991	08	08.38038	22	46	09.42	-01	10	11.0	16.0	9 675
2365	1991	08	08.41649	22	46	07.91	-01	10	14.8		9 675
2381	1991	08	05.35451	22	35	39.92	-07	57	41.6	16.0	9 675
2381	1991	08	08.37188	22	34	00.11	-08	23	52.8	16.5	9 675
2381	1991	08	08.40868	22	33	58.67	-08	24	13.1		9 675
2403	1991	08	05.28484	21	36	18.53	-11	20	07.2	15.8	9 675
2403	1991	08	05.29363	21	36	18.15	-11	20	09.2	15.5	9 675
2403	1991	08	05.32135	21	36	16.61	-11	20	12.3		9 675
2403	1991	08	05.32951	21	36	16.23	-11	20	13.7		9 675
2403	1991	08	08.30399	21	33	40.53	-11	26	51.6	15.5	9 675
2403	1991	08	08.31128	21	33	40.23	-11	26	54.6	15.8	9 675
2403	1991	08	08.33264	21	33	39.00	-11	26	55.9		9 675
2403	1991	08	08.34045	21	33	38.59	-11	26	58.7		9 675
2405	1991	08	06.35503	22	11	08.95	-12	11	44.5	17.0	9 675
2405	1991	08	06.38698	22	11	07.70	-12	11	52.1		9 675
2413	1991	07	16.38993	21	48	35.60	-05	11	24.2	16.8	9 675
2413	1991	07	16.42917	21	48	34.54	-05	11	31.9	16.5	9 675
2413	1991	08	07.33698	21	35	52.52	-06	52	37.0	16.2	9 675
2413	1991	08	07.36840	21	35	51.09	-06	52	48.8		9 675
2429	1971	04	16.16458	12	07	50.57	+02	56	47.9		4 675
2429	1971	04	16.25069	12	07	46.13	+02	56	46.7		4 675
2431	1991	08	10.44618	00	12	21.88	+02	36	49.8		9 675
2465	1990	09	15.20590	20	46	05.73	-14	54	40.0	16.8	9 675
2465	1990	09	15.23229	20	46	05.37	-14	54	41.0		9 675
2480	1971	04	16.16458	12	06	24.28	+01	27	14.3		4 675
2480	1971	04	16.25069	12	06	20.03	+01	27	32.6		4 675
2493	1971	04	16.18087	12	01	27.95	-04	07	31.1		4 675
2493	1971	04	16.26458	12	01	24.80	-04	06	57.6		4 675
2493	1991	08	05.26563	20	48	08.43	-02	54	41.1	16.5	9 675
2493	1991	08	05.30313	20	48	06.68	-02	54	52.5		9 675
2496	1971	04	16.21476	12	22	12.84	-01	27	32.9		4 675
2496	1971	04	16.22812	12	22	12.18	-01	27	28.1		4 675
2496	1971	04	16.27708	12	22	09.66	-01	27	15.4		4 675
2496	1971	04	16.30139	12	22	08.42	-01	27	03.3		4 675
2496	1991	08	05.27500	21	12	33.06	-15	17	53.5	16.0	9 675
2496	1991	08	05.31302	21	12	30.60	-15	18	04.4		9 675
2496	1991	08	07.32240	21	10	25.98	-15	28	16.4	16.2	9 675
2496	1991	08	07.35069	21	10	24.05	-15	28	25.4		9 675

2504	1991	08	07.38524	23	17	57.23	-08	00	03.6		17.0	9 675
2504	1991	08	07.39306	23	17	57.07	-08	00	06.0			9 675
2504	1991	08	07.41406	23	17	56.30	-08	00	08.8			9 675
2504	1991	08	07.42257	23	17	56.13	-08	00	11.7			9 675
2504	1991	08	10.40851	23	16	19.36	-08	09	24.5		17.0	9 675
2516	1991	08	05.29363	21	53	40.69	-13	23	10.9		17.0	9 675
2516	1991	08	05.32951	21	53	38.71	-13	23	22.8			9 675
2516	1991	08	08.31128	21	50	56.24	-13	39	19.0		17.2	9 675
2516	1991	08	08.34045	21	50	54.48	-13	39	28.9			9 675
2539	1991	08	09.33872	22	16	19.87	-04	57	11.4		17.0	9 675
2539	1991	08	09.37257	22	16	18.28	-04	57	21.7			9 675
2544	1991	07	16.38993	21	43	50.23	-08	46	34.0		16.0	9 675
2544	1991	07	16.42917	21	43	47.83	-08	46	19.8			9 675
2544	1991	08	05.28484	21	20	12.94	-07	08	51.3		16.0	9 675
2544	1991	08	05.32135	21	20	10.04	-07	08	42.9			9 675
2544	1991	08	08.30399	21	16	18.39	-06	57	43.7		16.0	9 675
2544	1991	08	08.33264	21	16	16.16	-06	57	37.7			9 675
2544	1991	08	09.27656	21	15	03.07	-06	54	19.1		16.2	9 675
2544	1991	08	09.30903	21	15	00.42	-06	54	13.0			9 675
2545	1991	07	14.38177	21	02	49.19	-20	19	28.1			9 675
2545	1991	07	14.42170	21	02	47.01	-20	19	30.8		16.5	9 675
2563	1971	04	16.16458	12	07	19.49	+02	21	31.7			4 675
2563	1971	04	16.25069	12	07	16.45	+02	21	49.9			4 675
2563	1990	09	15.20590	20	53	43.65	-18	43	31.7		18.2	9 675
2563	1990	09	15.23229	20	53	43.06	-18	43	35.3			9 675
2575	1990	09	15.20590	20	37	14.45	-17	54	29.8			9 675
2575	1990	09	15.23229	20	37	14.25	-17	54	27.3		16.5	9 675
2578	1990	09	15.26840	22	18	56.19	-27	09	09.0		16.8	9 675
2578	1990	09	15.30330	22	18	54.69	-27	09	08.7			9 675
2592	1990	09	15.20590	20	47	56.92	-16	13	17.9		18.0	9 675
2592	1990	09	15.23229	20	47	56.72	-16	13	18.5			9 675
2606	1991	08	07.40035	22	50	40.65	+04	44	11.8			9 675
2606	1991	08	07.43166	22	50	39.48	+04	44	04.2			9 675
2614	1991	07	14.42170	20	58	47.76	-21	02	44.2		16.2	9 675
2634	1980	11	29.23715	03	54	25.01	+11	22	28.6			6 675
2634	1980	12	01.23577	03	52	53.95	+11	19	43.5			6 675
2642	1971	04	16.18087	11	55	41.92	-04	25	57.6			4 675
2642	1971	04	16.26458	11	55	38.51	-04	25	11.3			4 675
2668	1990	09	15.20590	20	48	10.21	-15	05	16.0		17.0	9 675
2668	1990	09	15.23229	20	48	09.85	-15	05	16.9			9 675
2679	1971	04	16.22812	12	21	49.54	-06	38	36.8			4 675
2679	1971	04	16.30139	12	21	46.83	-06	37	55.9			4 675
2692	1991	08	05.26563	21	06	54.37	-01	55	22.3		16.8	9 675
2692	1991	08	05.30313	21	06	52.37	-01	55	30.4			9 675
2692	1991	08	09.27656	21	03	21.83	-02	09	09.1		16.8	9 675
2692	1991	08	09.30903	21	03	20.06	-02	09	16.7			9 675
2702	1990	09	15.20590	20	28	10.49	-17	07	25.3			9 675
2707	1981	09	01.40521	22	15	38.97	-14	50	53.1			6 675
2707	1981	09	02.40452	22	14	54.03	-14	55	03.3			6 675
2708	1991	08	06.35503	22	19	03.24	-12	53	12.4		17.0	9 675
2708	1991	08	06.38698	22	19	02.00	-12	53	21.0			9 675
2721	1990	09	15.20590	20	36	52.33	-21	18	49.0		17.5	9 675
2721	1990	09	15.23229	20	36	52.01	-21	18	49.2			9 675
2727	1991	08	05.28484	21	16	47.62	-10	37	22.6		16.5	9 675
2727	1991	08	05.32135	21	16	45.70	-10	37	31.4			9 675
2727	1991	08	08.30399	21	14	10.95	-10	50	24.0		16.2	9 675
2727	1991	08	08.33264	21	14	09.40	-10	50	31.6		16.5	9 675
2737	1990	09	15.20590	20	43	26.75	-22	07	11.9			9 675
2737	1990	09	15.23229	20	43	25.93	-22	07	07.3			9 675

2738	1991	08	09.46892	00	13	48.74	+02	54	00.4	17.8	9 675
2738	1991	08	10.44618	00	13	34.09	+02	52	56.1		9 675
2741	1991	08	07.38524	23	21	37.25	-05	36	10.6	16.5	9 675
2741	1991	08	07.41406	23	21	36.45	-05	36	23.7		9 675
2741	1991	08	08.42483	23	21	10.19	-05	43	51.3	16.5	9 675
2741	1991	08	08.45660	23	21	09.30	-05	44	05.5		9 675
2741	1991	08	10.40851	23	20	14.62	-05	59	01.4	16.5	9 675
2750	1971	04	16.21476	12	18	25.68	+03	30	16.5		4 675
2750	1971	04	16.27708	12	18	22.45	+03	30	21.3		4 675
2752	1991	08	08.43003	23	06	07.74	+02	18	06.0	16.5	9 675
2752	1991	08	08.46441	23	06	06.96	+02	17	58.8		9 675
2753	1991	07	14.38177	21	05	33.94	-23	34	01.6		9 675
2753	1991	07	14.42170	21	05	32.05	-23	34	06.9	17.0	9 675
2758	1990	09	15.20590	20	41	38.77	-19	01	20.1	18.5	9 675
2758	1990	09	15.23229	20	41	38.21	-19	01	19.8		9 675
2802	1991	08	07.39306	23	39	20.35	-09	40	27.2	17.0	9 675
2802	1991	08	07.42257	23	39	19.67	-09	40	36.0		9 675
2811	1991	08	05.27500	21	30	47.60	-15	09	07.5	16.2	9 675
2811	1991	08	05.29363	21	30	46.71	-15	09	08.9	16.0	9 675
2811	1991	08	05.31302	21	30	45.65	-15	09	15.1		9 675
2811	1991	08	05.32951	21	30	44.90	-15	09	17.1		9 675
2811	1991	08	07.32240	21	29	07.11	-15	16	33.3	16.5	9 675
2811	1991	08	07.35069	21	29	05.64	-15	16	37.7		9 675
2845	1991	08	13.19583	16	38	44.45	-15	55	40.7	16	2 675
2845	1991	08	14.17882	16	39	45.07	-16	03	02.7		2 675
2845	1991	08	14.19653	16	39	46.20	-16	03	09.8		2 675
2854	1991	08	09.46892	23	52	56.90	+06	46	48.4	17.2	9 675
2854	1991	08	10.44618	23	52	32.87	+06	48	06.5		9 675
2859	1991	08	05.28484	21	27	13.92	-12	04	14.0		9 675
2859	1991	08	05.32135	21	27	11.62	-12	04	17.9		9 675
2859	1991	08	08.30399	21	24	17.66	-12	22	00.4	17.0	9 675
2859	1991	08	08.33264	21	24	15.80	-12	22	11.0		9 675
2862	1991	08	07.44948	23	32	08.02	+02	21	09.3	16.8	9 675
2862	1991	08	08.44149	23	31	42.84	+02	19	30.5	16.8	9 675
2868	1981	09	01.40521	22	18	57.52	-14	14	58.7		6 675
2868	1981	09	02.40452	22	18	11.44	-14	22	31.0		6 675
2871	1981	09	03.41354	23	01	47.44	-15	43	33.1		6 675
2871	1981	09	04.28403	23	00	55.11	-15	45	54.4		6 675
2871	1991	07	13.42257	20	40	30.54	-29	44	32.8	16.0	9 675
2871	1991	07	13.45347	20	40	28.82	-29	44	42.6		9 675
2881	1991	07	16.42917	21	48	03.18	-08	34	02.0	17.5	9 675
2881	1991	08	05.28484	21	32	21.75	-10	06	23.8	17.0	9 675
2881	1991	08	05.32135	21	32	19.64	-10	06	35.8		9 675
2881	1991	08	08.30399	21	29	29.41	-10	24	08.7	17.2	9 675
2881	1991	08	08.33264	21	29	27.76	-10	24	19.6	17.0	9 675
2883	1991	08	06.35503	22	13	40.25	-13	35	04.8	16.8	9 675
2883	1991	08	06.38698	22	13	38.50	-13	35	15.1		9 675
2889	1991	08	07.46545	23	25	32.93	+09	17	29.0		9 675
2889	1991	08	07.48229	23	25	32.64	+09	17	29.4	16.2	9 675
2889	1991	08	10.46597	23	24	37.90	+09	16	06.0	16.5	9 675
2915	1981	09	03.41354	22	52	02.26	-13	20	33.4		6 675
2915	1981	09	04.28403	22	51	03.55	-13	17	46.8		6 675
2918	1991	08	08.42483	23	32	30.36	-04	19	34.6	16.5	9 675
2918	1991	08	08.45660	23	32	29.71	-04	19	40.9		9 675
2944	1991	08	07.40035	22	46	32.04	+05	46	02.7		9 675
2944	1991	08	07.43166	22	46	31.21	+05	45	56.0		9 675
2959	1991	08	07.39306	23	33	44.68	-07	44	45.5	17.0	9 675
2959	1991	08	07.42257	23	33	44.16	-07	44	51.6		9 675
2964	1991	08	06.35503	22	15	51.59	-14	10	21.9	16.2	9 675

2964	1991	08	06.38698	22	15	49.74	-14	10	18.6		9 675
2980	1991	07	16.38993	21	59	18.49	-05	30	05.1	17.8	9 675
2980	1991	07	16.42917	21	59	17.50	-05	30	10.1		9 675
2980	1991	08	07.33698	21	45	59.88	-07	03	25.4	17.8	9 675
2980	1991	08	07.36840	21	45	58.22	-07	03	36.6		9 675
2993	1991	08	07.44948	23	28	39.84	+05	42	51.3	15.5	9 675
2993	1991	08	07.46545	23	28	39.37	+05	42	58.2	16.5	9 675
2993	1991	08	07.48229	23	28	38.95	+05	43	05.6		9 675
2993	1991	08	08.44149	23	28	17.06	+05	50	14.2	15.5	9 675
2993	1991	08	10.41771	23	27	26.40	+06	04	29.7	16.8	9 675
2993	1991	08	10.46597	23	27	24.98	+06	04	49.8		9 675
2994	1990	09	15.20590	20	34	48.22	-21	00	19.6	17.0	9 675
2994	1990	09	15.23229	20	34	48.49	-21	00	14.1		9 675
2996	1991	08	08.42483	23	39	04.97	-01	34	45.6	16.8	9 675
2996	1991	08	08.45660	23	39	04.16	-01	34	47.8		9 675
3019	1991	08	07.39306	23	36	46.55	-06	40	12.2	17.2	9 675
3019	1991	08	07.42257	23	36	45.98	-06	40	18.7		9 675
3019	1991	08	08.42483	23	36	26.34	-06	44	02.8	16.8	9 675
3019	1991	08	08.45660	23	36	25.59	-06	44	10.0		9 675
3027	1991	08	05.27500	21	08	40.60	-13	03	25.1		9 675
3027	1991	08	05.31302	21	08	38.69	-13	03	33.9		9 675
3027	1991	08	07.32240	21	07	00.38	-13	11	51.8	16.0	9 675
3027	1991	08	07.35069	21	06	58.85	-13	11	59.3		9 675
3029	1971	04	16.18087	11	56	13.78	-05	43	39.8		4 675
3029	1971	04	16.26458	11	56	10.00	-05	43	16.3		4 675
3032	1991	08	07.39306	23	37	17.29	-07	22	14.2		9 675
3032	1991	08	07.42257	23	37	16.70	-07	22	20.0		9 675
3055	1990	09	14.27604	22	30	30.97	-20	05	22.4	17.0	9 675
3055	1990	09	14.31354	22	30	28.62	-20	05	18.7		9 675
3068	1991	08	10.29236	21	48	35.13	-23	29	01.9	17.5	9 675
3068	1991	08	10.32517	21	48	32.97	-23	29	10.5		9 675
3078	1991	07	13.42257	20	50	35.19	-28	07	41.2	17.5	9 675
3078	1991	07	13.45347	20	50	33.84	-28	07	48.0		9 675
3096	1971	04	16.16458	12	08	41.86	+05	28	02.8		4 675
3096	1971	04	16.25069	12	08	38.41	+05	28	35.9		4 675
3110	1991	08	05.27500	21	11	34.36	-18	21	37.1	16.5	9 675
3110	1991	08	05.31302	21	11	32.10	-18	21	43.2		9 675
3110	1991	08	07.32240	21	09	37.45	-18	28	42.1	16.8	9 675
3110	1991	08	07.35069	21	09	35.75	-18	28	47.3		9 675
3116	1991	07	14.38177	20	54	58.05	-24	59	25.4	15.2	9 675
3116	1991	07	14.42170	20	54	56.42	-24	59	45.3		9 675
3134	1991	08	07.46545	23	07	33.26	+05	09	55.7	17.0	9 675
3134	1991	08	07.48229	23	07	32.84	+05	09	55.1		9 675
3134	1991	08	08.46441	23	07	09.37	+05	09	33.6		9 675
3134	1991	08	10.41771	23	06	20.24	+05	08	28.9	16.8	9 675
3134	1991	08	10.46597	23	06	19.19	+05	08	28.6		9 675
3149	1991	08	07.40035	22	46	59.94	+00	24	44.0	17.5	9 675
3149	1991	08	07.43166	22	46	58.81	+00	24	36.6		9 675
3149	1991	08	08.38038	22	46	28.11	+00	20	31.6		9 675
3149	1991	08	08.41649	22	46	26.76	+00	20	23.2		9 675
3212	1990	09	15.26840	22	06	36.58	-21	09	04.2		9 675
3212	1990	09	15.30330	22	06	34.80	-21	09	12.7		9 675
3217	1991	07	14.42170	21	29	01.42	-23	43	51.2	17.0	9 675
3227	1980	11	29.23715	03	41	28.64	+12	35	31.8		6 675
3227	1980	12	01.23577	03	39	32.42	+12	29	58.1		6 675
3231	1991	08	05.27500	21	30	43.45	-16	25	08.6	16.0	9 675
3231	1991	08	05.31302	21	30	41.11	-16	25	10.9		9 675
3231	1991	08	07.32240	21	28	40.84	-16	27	32.1	16.5	9 675
3231	1991	08	07.35069	21	28	38.97	-16	27	33.5		9 675

3235	1991	07	13.42257	21	04	53.18	-31	02	32.4	18.8	9 675
3235	1991	07	13.45347	21	04	51.51	-31	02	38.0		9 675
3239	1981	09	03.41354	23	01	11.69	-13	40	10.1		6 675
3239	1981	09	04.28403	23	00	32.95	-13	45	17.6		6 675
3244	1990	09	15.20590	20	32	42.25	-19	26	00.5	17.8	9 675
3244	1990	09	15.23229	20	32	41.92	-19	25	56.8		9 675
3247	1991	08	07.39306	23	27	50.60	-09	33	13.3		9 675
3247	1991	08	07.42257	23	27	49.66	-09	33	20.5		9 675
3252	1991	07	14.38177	21	01	34.89	-24	35	41.4	17.0	9 675
3252	1991	07	14.42170	21	01	32.69	-24	35	43.3	17.2	9 675
3255	1991	08	07.39306	23	29	13.78	-06	35	53.2	16.8	9 675
3255	1991	08	07.42257	23	29	12.59	-06	35	34.4		9 675
3255	1991	08	08.42483	23	28	33.82	-06	25	13.1	16.5	9 675
3255	1991	08	08.45660	23	28	32.45	-06	24	53.0		9 675
3265	1990	09	14.27604	22	19	43.74	-24	02	31.1		9 675
3265	1990	09	14.31354	22	19	41.95	-24	02	33.5		9 675
3265	1990	09	15.26840	22	18	58.45	-24	03	58.5	16.5	9 675
3265	1990	09	15.30330	22	18	56.76	-24	04	00.7		9 675
3280	1991	08	08.42483	23	37	17.25	-01	04	10.4	16.2	9 675
3280	1991	08	08.45660	23	37	16.65	-01	04	10.0		9 675
3288	1991	08	07.46545	23	17	14.80	+04	49	40.1		9 675
3288	1991	08	10.41771	23	14	32.75	+04	35	20.8	19.0	9 675
3288	1991	08	10.46597	23	14	29.94	+04	35	05.3		9 675
3321	1991	08	07.33698	22	08	07.93	-06	39	12.5	16.2	9 675
3321	1991	08	07.36840	22	08	06.77	-06	39	19.0		9 675
3321	1991	08	09.33872	22	06	55.53	-06	54	07.1		9 675
3321	1991	08	09.37257	22	06	54.26	-06	54	22.7		9 675
3323	1991	08	05.35451	22	25	59.75	-10	54	13.5	17.2	9 675
3323	1991	08	06.35503	22	25	20.33	-10	58	04.3	17.0	9 675
3323	1991	08	06.38698	22	25	18.95	-10	58	11.6		9 675
3342	1990	09	15.20590	20	42	33.69	-17	40	29.5	18.0	9 675
3342	1990	09	15.23229	20	42	33.22	-17	40	34.5		9 675
3357	1991	08	07.39306	23	31	03.46	-07	21	20.3	17.2	9 675
3357	1991	08	08.42483	23	30	42.04	-07	27	37.4	17.0	9 675
3357	1991	08	08.45660	23	30	41.37	-07	27	48.6		9 675
3371	1991	08	07.40035	22	53	15.53	+03	18	44.9		9 675
3371	1991	08	07.43166	22	53	14.28	+03	18	46.6		9 675
3374	1991	08	05.27500	21	15	22.93	-20	04	52.6	17.0	9 675
3374	1991	08	05.27500	21	15	23.00	-20	04	52.1	17.2	9 675
3374	1991	08	05.31302	21	15	21.03	-20	04	59.7		9 675
3374	1991	08	05.31302	21	15	21.02	-20	04	59.1		9 675
3374	1991	08	07.32240	21	13	41.78	-20	13	26.5	17.0	9 675
3374	1991	08	07.32240	21	13	41.77	-20	13	26.6	17.2	9 675
3374	1991	08	07.35069	21	13	40.20	-20	13	33.8		9 675
3374	1991	08	07.35069	21	13	40.21	-20	13	33.9		9 675
3389	1991	08	07.38524	22	57	39.99	-07	09	30.9	17.0	9 675
3389	1991	08	07.41406	22	57	39.13	-07	09	40.7		9 675
3389	1991	08	10.40851	22	56	11.24	-07	27	23.0	16.8	9 675
3394	1991	08	09.46892	00	13	18.14	+05	35	21.5		9 675
3409	1991	08	05.28484	21	35	32.60	-12	06	45.7	16.5	9 675
3409	1991	08	05.29363	21	35	32.30	-12	06	48.4	16.2	9 675
3409	1991	08	05.32135	21	35	30.87	-12	06	54.5		9 675
3409	1991	08	05.32951	21	35	30.55	-12	06	57.1		9 675
3409	1991	08	08.30399	21	33	08.97	-12	18	37.9	16.5	9 675
3409	1991	08	08.31128	21	33	08.72	-12	18	41.2	16.2	9 675
3409	1991	08	08.33264	21	33	07.62	-12	18	44.5		9 675
3409	1991	08	08.34045	21	33	07.25	-12	18	48.2		9 675
3410	1988	09	11.33697	23	40	39.82	-00	04	45.5		9 675
3410	1988	09	11.37100	23	40	37.61	-00	04	53.8		9 675

3410	1988	09	12.34566	23	39	38.86	-00	08	56.0		9	675
3410	1988	09	12.38733	23	39	36.22	-00	09	06.4		9	675
3410	1988	09	16.35597	23	35	34.04	-00	26	03.0		9	675
3410	1988	09	16.38872	23	35	31.99	-00	26	11.7		9	675
3410	1991	07	14.38177	20	59	46.05	-21	54	22.1	17.5	9	675
3410	1991	07	14.42170	20	59	43.75	-21	54	29.1		9	675
3414	1981	09	01.40521	22	21	17.47	-18	11	59.5		6	675
3414	1981	09	02.40452	22	20	12.64	-18	15	29.0		6	675
3415	1991	08	09.46892	00	17	14.25	+03	47	35.1		9	675
3415	1991	08	10.44618	00	17	10.47	+03	47	35.7		9	675
3421	1991	07	16.38993	21	57	54.79	-08	25	43.9	17.5	9	675
3421	1991	07	16.42917	21	57	53.56	-08	25	47.7		9	675
3421	1991	08	05.29363	21	43	19.96	-09	17	18.7	17.0	9	675
3421	1991	08	05.32951	21	43	17.98	-09	17	26.8		9	675
3421	1991	08	08.31128	21	40	28.14	-09	29	37.4	17.2	9	675
3421	1991	08	08.34045	21	40	26.27	-09	29	44.5		9	675
3435	1991	08	08.38038	22	46	28.92	-03	08	24.1		9	675
3435	1991	08	08.41649	22	46	27.52	-03	08	38.5		9	675
3464	1991	08	06.35503	22	11	57.14	-11	27	00.5	16.8	9	675
3464	1991	08	06.38698	22	11	55.20	-11	27	03.6		9	675
3477	1980	11	29.29410	04	22	34.71	+11	58	57.5		6	675
3477	1980	12	01.29271	04	20	29.78	+11	51	47.0		6	675
3490	1991	07	14.38177	21	10	07.66	-22	30	00.5	18.2	9	675
3490	1991	07	14.42170	21	10	05.56	-22	30	07.8	17.8	9	675
3501	1991	07	16.38993	22	01	26.43	-04	36	21.5	16.2	9	675
3501	1991	07	16.42917	22	01	25.48	-04	36	22.1		9	675
3501	1991	08	07.33698	21	48	33.55	-05	01	46.3	16.2	9	675
3501	1991	08	07.36840	21	48	32.09	-05	01	51.3		9	675
3505	1991	08	05.28484	21	32	55.52	-10	22	47.8	16.0	9	675
3505	1991	08	05.29363	21	32	55.23	-10	22	49.6		9	675
3505	1991	08	05.32135	21	32	53.66	-10	22	49.2		9	675
3505	1991	08	08.30399	21	30	22.77	-10	25	09.2	16.2	9	675
3505	1991	08	08.33264	21	30	21.31	-10	25	10.9		9	675
3506	1991	07	13.42257	21	00	57.45	-25	59	10.4	16.5	9	675
3506	1991	07	13.45347	21	00	56.03	-25	59	14.0		9	675
3506	1991	07	14.38177	21	00	14.33	-26	01	11.2	16.5	9	675
3508	1971	04	16.22812	12	25	44.99	-04	30	45.2		4	675
3508	1971	04	16.30139	12	25	41.26	-04	30	32.5		4	675
3513	1990	09	15.20590	20	34	30.30	-18	48	28.3	17.5	9	675
3513	1990	09	15.23229	20	34	29.89	-18	48	28.3		9	675
3516	1991	08	05.35451	22	26	15.84	-08	47	33.2	16.8	9	675
3516	1991	08	08.37188	22	24	23.97	-09	00	35.3	16.5	9	675
3516	1991	08	08.40868	22	24	22.48	-09	00	46.5		9	675
3524	1991	08	08.43003	23	05	08.25	+02	02	49.8	18.5	9	675
3524	1991	08	08.46441	23	05	07.16	+02	02	39.2		9	675
3525	1991	08	07.44948	23	44	46.33	+01	40	38.8	17.8	9	675
3525	1991	08	08.44149	23	44	27.76	+01	39	42.3	17.5	9	675
3527	1971	04	16.22812	12	26	48.03	-07	16	04.2		4	675
3527	1971	04	16.30139	12	26	44.78	-07	15	23.4		4	675
3539	1981	09	03.41354	22	57	04.16	-14	55	33.9		6	675
3539	1981	09	04.28403	22	56	24.46	-15	04	45.8		6	675
3541	1981	09	03.41354	22	47	12.61	-14	16	35.7		6	675
3541	1981	09	04.28403	22	46	24.97	-14	21	36.6		6	675
3565	1980	11	29.29410	04	05	24.40	+15	24	34.2		6	675
3565	1980	12	01.23577	04	03	43.71	+15	24	45.8		6	675
3565	1980	12	01.29271	04	03	40.64	+15	24	46.6		6	675
3601	1990	09	15.20590	20	39	39.25	-21	31	09.5		9	675
3601	1990	09	15.23229	20	39	38.71	-21	31	09.0		9	675
3620	1991	08	07.40035	22	39	46.92	+04	05	35.8	17.8	9	675

3620	1991	08	07.43166	22	39	45.71	+04	05	36.6		9 675
3626	1991	08	09.46892	00	03	19.65	+06	03	58.4	17.0	9 675
3626	1991	08	10.44618	00	03	09.19	+06	05	05.9		9 675
3634	1991	08	05.35451	22	33	08.99	-11	42	12.8	16.8	9 675
3634	1991	08	08.37188	22	30	46.26	-11	48	21.2	16.8	9 675
3634	1991	08	08.40868	22	30	44.32	-11	48	25.7		9 675
3656	1991	08	05.27500	21	15	50.75	-15	54	06.7	16.0	9 675
3656	1991	08	05.31302	21	15	48.34	-15	54	15.9		9 675
3656	1991	08	07.32240	21	13	45.12	-16	02	17.0	15.8	9 675
3656	1991	08	07.35069	21	13	43.22	-16	02	23.5		9 675
3668	1991	08	07.33698	21	58	52.99	-07	39	11.3	16.5	9 675
3668	1991	08	07.36840	21	58	51.14	-07	39	21.4		9 675
3676	1991	08	05.29363	21	58	49.49	-16	12	35.9	17.0	9 675
3676	1991	08	05.32951	21	58	47.21	-16	12	46.1		9 675
3676	1991	08	08.31128	21	55	48.27	-16	24	57.1	17.0	9 675
3676	1991	08	08.34045	21	55	46.46	-16	25	05.4		9 675
3694	1991	08	05.29363	21	34	04.56	-13	29	55.6	16.2	9 675
3694	1991	08	05.32951	21	34	03.09	-13	30	00.0		9 675
3694	1991	08	08.30399	21	32	03.83	-13	36	17.2	16.5	9 675
3694	1991	08	08.31128	21	32	03.65	-13	36	20.0	16.2	9 675
3694	1991	08	08.33264	21	32	02.61	-13	36	21.0		9 675
3694	1991	08	08.34045	21	32	02.40	-13	36	23.8		9 675
3696	1991	08	08.43003	23	02	26.41	+00	25	28.0	16.8	9 675
3696	1991	08	08.46441	23	02	25.33	+00	25	31.5		9 675
3699	1991	07	14.38177	21	14	48.19	-21	31	28.7	16.0	9 675
3699	1991	07	14.42170	21	14	46.98	-21	31	47.4		9 675
3700	1991	08	05.26563	21	13	45.96	-06	31	35.5	16.8	9 675
3700	1991	08	05.28484	21	13	44.84	-06	31	36.0	16.8	9 675
3700	1991	08	05.30313	21	13	43.54	-06	31	35.0		9 675
3700	1991	08	05.32135	21	13	42.44	-06	31	35.4		9 675
3700	1991	08	09.27656	21	09	32.50	-06	32	32.6	16.5	9 675
3700	1991	08	09.30903	21	09	30.36	-06	32	34.0		9 675
3716	1991	08	05.35451	22	47	57.97	-08	19	46.3	16.5	9 675
3716	1991	08	08.37188	22	46	25.19	-08	36	11.1	16.5	9 675
3716	1991	08	08.40868	22	46	23.81	-08	36	24.0		9 675
3728	1991	08	06.39410	22	17	19.20	+01	38	08.3		9 675
3728	1991	08	06.42743	22	17	17.95	+01	37	50.4		9 675
3730	1991	08	05.27500	21	01	28.69	-15	15	14.6		9 675
3730	1991	08	05.31302	21	01	26.44	-15	15	14.5		9 675
3730	1991	08	07.32240	20	59	32.60	-15	15	24.7	15.2	9 675
3730	1991	08	07.35069	20	59	30.90	-15	15	24.6		9 675
3759	1991	08	07.46545	23	05	33.77	+08	56	51.0	17.0	9 675
3759	1991	08	07.48229	23	05	33.15	+08	56	55.5		9 675
3759	1991	08	10.41771	23	03	47.98	+09	04	56.1	17.0	9 675
3759	1991	08	10.46597	23	03	46.16	+09	05	01.6		9 675
3765	1991	08	05.29363	21	58	25.12	-10	48	05.2	17.5	9 675
3765	1991	08	05.32951	21	58	23.61	-10	48	15.2		9 675
3765	1991	08	06.35503	21	57	38.00	-10	52	01.2	17.2	9 675
3765	1991	08	06.38698	21	57	36.53	-10	52	08.5		9 675
3765	1991	08	08.31128	21	56	09.36	-10	59	26.4	17.2	9 675
3765	1991	08	08.34045	21	56	07.97	-10	59	32.8		9 675
3785	1991	08	08.42483	23	25	04.01	-04	07	26.8	16.2	9 675
3785	1991	08	08.45660	23	25	03.34	-04	07	32.1		9 675
3787	1991	08	08.43003	23	13	51.15	+03	00	00.6	16.8	9 675
3787	1991	08	08.46441	23	13	50.33	+02	59	53.7		9 675
3807	1991	08	07.38524	23	18	10.95	-03	08	18.9	16.2	9 675
3807	1991	08	07.41406	23	18	10.34	-03	08	27.0		9 675
3807	1991	08	08.42483	23	17	50.31	-03	13	42.9	16.2	9 675
3807	1991	08	08.43003	23	17	50.10	-03	13	43.2	16.0	9 675

3807	1991	08	08.45660	23	17	49.51	-03	13	54.0		9 675
3807	1991	08	08.46441	23	17	49.35	-03	13	53.5		9 675
3807	1991	08	10.40851	23	17	05.41	-03	24	47.5	16.2	9 675
3816	1991	08	07.40035	22	58	57.31	+01	40	09.1		9 675
3816	1991	08	07.43166	22	58	55.99	+01	40	11.2		9 675
3816	1991	08	08.43003	22	58	15.57	+01	41	00.2	16.8	9 675
3816	1991	08	08.46441	22	58	14.28	+01	41	01.2		9 675
3821	1991	08	07.38524	23	18	23.82	-05	04	46.6	18.2	9 675
3821	1991	08	07.41406	23	18	23.04	-05	04	49.7		9 675
3821	1991	08	08.45660	23	17	57.30	-05	07	47.6	17.8	9 675
3830	1991	07	12.42708	21	53	19.06	-00	08	08.0	16.5	9 675
3830	1991	07	12.45434	21	53	18.50	-00	08	01.6		9 675
3830	1991	07	18.44063	21	50	47.85	+00	09	00.3	16.2	9 675
3830	1991	07	18.47135	21	50	46.98	+00	09	04.3		9 675
3843	1991	08	06.33281	21	45	40.74	-18	40	10.8	16.8	9 675
3843	1991	08	06.37153	21	45	39.28	-18	40	18.6		9 675
3843	1991	08	10.29236	21	43	10.59	-18	52	28.0	16.8	9 675
3843	1991	08	10.32517	21	43	09.29	-18	52	34.9		9 675
3844	1971	04	16.16458	11	56	10.69	+04	53	54.0		4 675
3844	1971	04	16.25069	11	56	07.41	+04	54	14.1		4 675
3845	1991	08	08.38038	22	45	42.55	-02	50	30.2		9 675
3845	1991	08	08.41649	22	45	41.54	-02	50	38.4		9 675
3852	1971	04	16.18087	12	06	23.04	-02	22	05.5		4 675
3852	1971	04	16.26458	12	06	19.90	-02	21	44.2		4 675
3923	1991	08	05.29363	21	58	54.85	-11	39	32.1	18.2	9 675
3923	1991	08	05.32951	21	58	53.63	-11	39	39.4		9 675
3923	1991	08	06.35503	21	58	18.89	-11	43	16.8	18.0	9 675
3923	1991	08	06.38698	21	58	17.85	-11	43	23.7		9 675
3923	1991	08	08.31128	21	57	11.41	-11	50	22.0	17.5	9 675
3923	1991	08	08.34045	21	57	10.34	-11	50	27.6		9 675
3952	1991	08	05.27500	21	18	03.91	-14	13	35.1	17.8	9 675
3952	1991	08	05.28484	21	18	03.43	-14	13	32.7		9 675
3952	1991	08	05.31302	21	18	01.67	-14	13	41.6		9 675
3952	1991	08	07.32240	21	16	04.12	-14	21	16.9		9 675
3954	1991	08	07.38524	23	09	58.65	-04	24	09.0	18.5	9 675
3954	1991	08	07.41406	23	09	57.67	-04	24	17.4		9 675
3954	1991	08	10.40851	23	08	13.35	-04	40	19.5	18.2	9 675
3956	1991	07	16.38993	21	44	40.03	-05	39	58.4		9 675
3956	1991	07	16.42917	21	44	39.04	-05	39	52.3	16.2	9 675
3959	1991	07	16.38993	21	52	53.24	-07	06	06.3	17.8	9 675
3959	1991	07	16.42917	21	52	52.12	-07	06	07.7		9 675
3959	1991	08	07.33698	21	37	43.43	-08	03	35.5	17.0	9 675
3959	1991	08	07.36840	21	37	41.63	-08	03	44.0		9 675
3959	1991	08	08.30399	21	36	49.55	-08	08	01.8	17.2	9 675
3959	1991	08	08.33264	21	36	47.90	-08	08	08.3		9 675
3972	1991	08	05.28484	21	20	59.85	-10	54	28.0		9 675
3972	1991	08	05.32135	21	20	57.94	-10	54	42.4		9 675
3972	1991	08	08.30399	21	18	35.19	-11	16	40.8	15.8	9 675
3972	1991	08	08.33264	21	18	33.69	-11	16	53.3		9 675
3997	1991	07	14.38177	20	56	44.59	-21	16	33.0	17.0	9 675
3997	1991	07	14.42170	20	56	42.66	-21	16	42.1		9 675
3999	1991	08	09.46892	00	15	54.64	+04	46	54.6	17.5	9 675
3999	1991	08	10.44618	00	15	42.23	+04	46	58.7		9 675
4000	1991	08	05.35451	22	47	41.69	-06	43	13.9	17.8	9 675
4000	1991	08	08.37188	22	45	44.30	-06	51	57.0	17.5	9 675
4000	1991	08	08.40868	22	45	42.77	-06	52	04.1		9 675
4012	1991	08	05.26563	21	13	15.24	-07	08	46.2	16.2	9 675
4012	1991	08	05.28484	21	13	14.21	-07	08	46.5	16.0	9 675
4012	1991	08	05.30313	21	13	13.07	-07	08	51.5		9 675

4012	1991	08	05.32135	21	13	12.03	-07	08	52.8		9 675
4012	1991	08	08.30399	21	10	18.59	-07	16	29.5	16.0	9 675
4012	1991	08	08.33264	21	10	16.95	-07	16	33.4		9 675
4012	1991	08	09.27656	21	09	21.47	-07	19	13.0	15.8	9 675
4012	1991	08	09.30903	21	09	19.43	-07	19	18.6		9 675
4014	1991	08	05.35451	22	34	22.63	-07	35	57.7	18.0	9 675
4014	1991	08	08.37188	22	32	42.14	-07	44	48.6	17.8	9 675
4014	1991	08	08.40868	22	32	40.78	-07	44	56.6		9 675
4026	1991	08	05.27500	21	01	03.96	-16	33	19.2	17.8	9 675
4026	1991	08	05.31302	21	01	01.78	-16	33	29.4		9 675
4026	1991	08	07.32240	20	59	08.22	-16	43	45.5	17.2	9 675
4026	1991	08	07.35069	20	59	06.54	-16	43	53.2		9 675
4040	1991	08	05.27500	21	12	42.30	-20	10	47.3	16.8	9 675
4040	1991	08	05.31302	21	12	40.22	-20	10	56.9		9 675
4040	1991	08	07.32240	21	10	52.55	-20	19	18.8	16.8	9 675
4040	1991	08	07.35069	21	10	50.80	-20	19	25.8		9 675
4047	1971	04	16.16458	11	54	59.09	+02	34	11.3		4 675
4047	1971	04	16.25069	11	54	55.42	+02	34	29.4		4 675
4067	1991	07	14.38177	21	17	53.54	-19	32	22.0	17.8	9 675
4067	1991	07	14.42170	21	17	51.76	-19	32	26.6	17.5	9 675
4074	1991	08	09.46892	23	55	05.07	+04	54	27.5	17.5	9 675
4074	1991	08	10.44618	23	54	51.02	+04	51	40.6		9 675
4096	1971	04	16.21476	12	16	26.91	+00	18	50.5		4 675
4096	1971	04	16.27708	12	16	23.91	+00	18	58.6		4 675
4099	1990	09	14.27604	22	13	32.31	-20	42	36.3	17.2	9 675
4099	1990	09	14.31354	22	13	30.69	-20	42	54.2		9 675
4099	1990	09	15.26840	22	12	51.74	-20	50	24.3	17.8	9 675
4099	1990	09	15.30330	22	12	50.24	-20	50	40.4		9 675
4106	1990	09	15.26840	21	57	50.39	-27	19	19.9	17.2	9 675
4106	1990	09	15.30330	21	57	48.79	-27	19	18.5		9 675
4119	1990	09	14.27604	22	23	20.51	-23	12	55.0	17.2	9 675
4119	1990	09	14.31354	22	23	18.92	-23	13	05.6		9 675
4119	1990	09	15.26840	22	22	39.57	-23	17	11.6	17.2	9 675
4119	1990	09	15.30330	22	22	38.13	-23	17	22.5		9 675
4126	1991	08	05.31302	21	32	55.41	-17	20	10.0	17.5	9 675
4126	1991	08	06.33281	21	32	11.05	-17	24	30.4	17.2	9 675
4126	1991	08	06.37153	21	32	09.33	-17	24	40.7		9 675
4126	1991	08	07.32240	21	31	27.52	-17	28	42.2		9 675
4126	1991	08	10.29236	21	29	15.51	-17	41	11.8		9 675
4126	1991	08	10.32517	21	29	14.04	-17	41	20.0		9 675
4127	1990	09	15.20590	21	00	01.35	-16	35	14.8	17.8	9 675
4127	1990	09	15.23229	21	00	00.74	-16	35	17.9		9 675
4134	1990	09	15.20590	20	45	33.19	-19	16	37.9	18.0	9 675
4134	1990	09	15.23229	20	45	32.69	-19	16	43.2		9 675
4145	1991	08	07.33698	22	04	38.17	-06	14	23.1	16.0	9 675
4145	1991	08	07.36840	22	04	36.58	-06	14	20.6		9 675
4145	1991	08	09.33872	22	03	03.38	-06	11	53.8		9 675
4145	1991	08	09.37257	22	03	01.66	-06	11	51.9		9 675
4173	1980	11	29.23715	03	56	47.80	+15	07	22.1		6 675
4173	1980	12	01.23577	03	54	39.98	+15	05	08.8		6 675
4173	1990	09	15.20590	20	42	55.71	-21	51	58.6		9 675
4175	1991	08	08.38038	22	29	42.29	-04	34	38.7		9 675
4175	1991	08	08.41649	22	29	40.88	-04	34	51.1		9 675
4175	1991	08	09.33872	22	29	05.53	-04	41	01.4		9 675
4175	1991	08	09.37257	22	29	04.18	-04	41	15.0		9 675
4176	1971	04	16.21476	12	26	46.37	+01	08	51.5		4 675
4176	1971	04	16.27708	12	26	43.96	+01	09	05.0		4 675
4195	1991	08	05.27500	20	59	58.24	-14	40	00.9	16.8	9 675
4195	1991	08	05.31302	20	59	56.25	-14	40	10.4		9 675

4196	1971	04	16.22812	12	31	29.57	-02	36	09.7		4 675
4196	1971	04	16.30139	12	31	27.10	-02	35	52.3		4 675
4198	1991	08	10.40851	23	12	23.96	-07	47	20.0	18.8	9 675
4206	1991	08	05.35451	22	37	22.34	-06	51	07.1	16.8	9 675
4206	1991	08	08.37188	22	35	30.94	-07	01	00.0	17.2	9 675
4206	1991	08	08.40868	22	35	29.42	-07	01	07.9		9 675
4207	1991	07	12.42708	21	45	27.99	-02	44	26.1	16.8	9 675
4207	1991	07	12.45434	21	45	27.17	-02	44	23.5		9 675
4207	1991	07	16.38993	21	43	32.46	-02	40	08.1	16.8	9 675
4207	1991	07	16.42917	21	43	31.18	-02	40	05.9	16.5	9 675
4221	1971	04	16.21476	12	19	46.82	+00	52	53.9		4 675
4221	1971	04	16.27708	12	19	44.59	+00	53	41.6		4 675
4308	1991	08	05.28484	21	28	39.63	-10	19	01.6	16.2	9 675
4308	1991	08	08.30399	21	25	42.08	-10	16	44.5	16.5	9 675
4308	1991	08	08.33264	21	25	40.35	-10	16	43.4		9 675
4336	1991	07	14.38177	21	19	14.90	-26	34	19.1	16.8	9 675
4344	1990	09	15.20590	20	37	00.37	-19	58	20.2	18.5	9 675
4344	1990	09	15.23229	20	36	59.91	-19	58	20.9		9 675
4371	1991	08	05.27500	21	27	29.16	-19	13	18.2	16.8	9 675
4371	1991	08	05.31302	21	27	26.78	-19	13	29.1		9 675
4371	1991	08	06.33281	21	26	25.93	-19	18	27.4	16.8	9 675
4371	1991	08	06.37153	21	26	23.52	-19	18	38.9		9 675
4371	1991	08	07.32240	21	25	26.41	-19	23	13.7	16.8	9 675
4371	1991	08	07.35069	21	25	24.65	-19	23	22.0		9 675
4371	1991	08	10.29236	21	22	27.46	-19	37	07.7	16.8	9 675
4371	1991	08	10.32517	21	22	25.44	-19	37	16.7		9 675
4394	1971	04	16.16458	12	09	18.01	+00	11	21.8		4 675
4394	1971	04	16.25069	12	09	13.70	+00	11	51.2		4 675
4422	1971	04	16.21476	12	23	20.84	+03	01	48.7		4 675
4422	1971	04	16.27708	12	23	17.61	+03	02	11.0		4 675
4462	1991	08	07.38524	22	59	10.20	-08	05	29.4	17.0	9 675
4462	1991	08	07.41406	22	59	09.23	-08	05	34.9		9 675
4462	1991	08	10.40851	22	57	28.45	-08	16	39.5	17.0	9 675
4465	1971	04	16.16458	12	03	07.67	+03	36	44.8		4 675
4465	1971	04	16.25069	12	03	03.94	+03	36	56.2		4 675
4491	1991	08	05.27500	21	25	57.92	-14	47	33.8	16.5	9 675
4491	1991	08	05.31302	21	25	55.44	-14	47	39.2		9 675
4491	1991	08	07.32240	21	23	47.55	-14	52	52.5	16.5	9 675
4491	1991	08	07.35069	21	23	45.56	-14	52	57.1		9 675
4494	1991	08	05.27500	21	18	37.99	-14	08	33.2	17.5	9 675
4494	1991	08	05.28484	21	18	37.44	-14	08	33.0	17.2	9 675
4494	1991	08	05.31302	21	18	35.70	-14	08	40.3		9 675
4494	1991	08	05.32135	21	18	35.25	-14	08	42.8		9 675
4494	1991	08	07.32240	21	16	35.74	-14	15	59.4		9 675
4517	1971	04	16.21476	12	15	41.78	+00	53	09.4		4 675
4517	1971	04	16.27708	12	15	38.16	+00	53	22.2		4 675
4528	1991	08	06.35503	22	11	33.18	-07	17	52.2	17.0	9 675
4528	1991	08	06.38698	22	11	31.82	-07	18	04.7		9 675
4528	1991	08	09.33872	22	09	22.55	-07	36	49.9	17.5	9 675
4528	1991	08	09.37257	22	09	20.97	-07	37	02.9		9 675
4529	1981	09	03.41354	22	58	49.88	-14	55	48.2		6 675
4529	1981	09	04.28403	22	58	12.43	-15	01	54.9		6 675
4550	1971	04	16.16458	11	56	42.16	+00	25	24.1		4 675
4550	1971	04	16.25069	11	56	39.16	+00	25	42.9		4 675
4554	1991	08	07.46545	23	21	10.69	+09	35	31.0		9 675
4554	1991	08	07.48229	23	21	10.27	+09	35	32.5	17.0	9 675
4554	1991	08	10.41771	23	19	54.02	+09	36	40.9	17.0	9 675
4554	1991	08	10.46597	23	19	52.64	+09	36	41.0		9 675
4561	1990	09	15.26840	21	54	54.72	-22	02	31.5	18.2	9 675

4561	1990	09	15.30330	21	54	52.94	-22	02	27.7		9 675
4591	1990	09	15.20590	21	03	37.94	-17	34	43.4	17.5	9 675
4591	1990	09	15.23229	21	03	37.30	-17	34	47.4		9 675
4594	1990	09	15.20590	20	31	54.77	-16	52	11.8	18.5	9 675
4594	1990	09	15.23229	20	31	54.80	-16	52	17.0		9 675
4600	1990	09	15.20590	20	59	07.34	-19	13	01.1	17.0	9 675
4600	1990	09	15.23229	20	59	06.87	-19	13	07.9		9 675
4604	1990	09	15.20590	21	01	10.16	-18	14	54.4	17.2	9 675
4604	1990	09	15.23229	21	01	09.68	-18	14	53.2		9 675
4610	1990	09	15.20590	21	02	00.90	-20	04	09.0	17.0	9 675
4610	1990	09	15.23229	21	02	00.49	-20	04	11.0		9 675
4612	1990	09	15.26840	22	04	04.58	-23	13	11.5	18.0	9 675
4612	1990	09	15.30330	22	04	03.03	-23	13	19.7		9 675
4631	1990	09	14.27604	22	33	36.28	-19	03	47.0	16.8	9 675
4631	1990	09	14.31354	22	33	33.86	-19	03	50.6		9 675
4658	1971	03	24.37118	12	03	23.40	+00	25	14.9		4 675
4658	1971	03	25.24340	12	02	46.65	+00	29	24.1		4 675
4658	1971	03	25.28715	12	02	44.77	+00	29	36.8	18.6	4 675
4658	1971	03	26.25208	12	02	04.28	+00	34	10.1		4 675
4658	1971	03	27.31181	12	01	19.72	+00	39	09.8		4 675
4658	1971	04	02.41285	11	57	08.47	+01	07	15.4		4 675
4658	1971	04	16.16458	11	48	42.84	+02	03	14.7		4 675
4658	1971	04	16.25069	11	48	40.02	+02	03	33.4		4 675
4667	1971	03	24.42015	12	39	29.66	-04	58	21.6		4 675
4667	1971	03	25.33090	12	38	38.56	-04	56	21.8		4 675
4667	1971	03	26.29653	12	37	43.95	-04	54	12.1		4 675
4667	1971	03	26.33611	12	37	41.66	-04	54	06.9	17.9	4 675
4667	1971	04	02.42604	12	30	56.41	-04	37	23.4		4 675
4667	1971	04	16.22812	12	18	30.19	-04	06	09.3		4 675
4667	1971	04	16.30139	12	18	26.46	-04	05	59.9		4 675
4741	1971	03	24.42015	12	40	21.25	-02	23	58.4	18.0	4 675
4741	1971	03	25.33090	12	39	43.43	-02	20	00.8	18.0	4 675
4741	1971	03	26.29653	12	39	02.99	-02	15	46.3	18.0	4 675
4741	1971	03	26.33611	12	39	01.20	-02	15	35.6	18.0	4 675
4741	1971	03	27.33854	12	38	18.97	-02	11	11.1	18.0	4 675
4741	1971	04	02.42604	12	33	59.57	-01	44	22.9	18.0	4 675
4741	1971	04	02.43993	12	33	59.14	-01	44	22.0	18.5	4 675
4741	1971	04	16.21476	12	24	32.63	-00	47	21.4	19.0	4 675
4741	1971	04	16.27708	12	24	30.13	-00	47	07.9	19.0	4 675
4755	1971	03	24.37118	11	58	30.24	+05	14	23.9		4 675
4755	1971	03	25.24340	11	57	40.57	+05	19	46.6		4 675
4755	1971	03	25.28715	11	57	38.05	+05	20	03.2	18.4	4 675
4822	1971	03	26.31007	12	33	06.35	+01	32	31.4		4 675
4822	1971	03	26.34896	12	33	04.11	+01	32	48.3	17.7	4 675
4822	1971	03	27.35208	12	32	06.13	+01	40	15.2		4 675
4822	1971	04	02.43993	12	26	16.19	+02	24	03.2		4 675
4822	1971	04	16.21476	12	14	16.28	+03	47	01.4		4 675
4822	1971	04	16.27708	12	14	13.28	+03	47	20.2		4 675
4849	1991	07	16.38993	22	04	48.88	-07	06	46.2	17.0	9 675
4849	1991	07	16.42917	22	04	48.16	-07	06	48.9		9 675
4849	1991	08	07.33698	21	52	34.54	-08	13	23.1	16.8	9 675
4849	1991	08	07.36840	21	52	32.87	-08	13	32.8		9 675
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4858	1991	08	05.31302	21	08	45.98	-18	07	01.1		9 675
4858	1991	08	07.32240	21	06	32.90	-18	13	32.6	17.5	9 675
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4863	1991	07	12.38229	21	56	48.00	-15	44	23.0	17.5	9 675
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4863	1991	08	05.29363	21	41	48.20	-17	07	25.0	16.8	9 675

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4863       1991 08 06.33281  21 40 57.47  -17 11 33.9          16.8  9 675
4863       1991 08 06.37153  21 40 55.51  -17 11 42.8                9 675
4863       1991 08 10.29236  21 37 40.54  -17 27 03.6          17.0  9 675
4863       1991 08 10.32517  21 37 38.79  -17 27 11.5                9 675
4876       1971 03 24.42015  12 23 52.90  -03 38 46.5                4 675
4876       1971 03 25.33090  12 23 10.51  -03 33 53.2                4 675
4876       1971 03 26.29653  12 22 25.41  -03 28 42.2                4 675
4876       1971 03 26.33611  12 22 23.48  -03 28 29.3          17.4  4 675
4876       1971 03 27.33854  12 21 36.47  -03 23 02.9                4 675
4876       1971 04 02.40000  12 16 54.42  -02 50 14.3                4 675
4876       1971 04 02.42604  12 16 53.18  -02 50 05.6                4 675
4876       1971 04 16.18087  12 07 13.34  -01 40 47.0                4 675
4876       1971 04 16.26458  12 07 10.06  -01 40 23.6                4 675
4882       1989 09 30.41579  02 08 30.35  +12 37 02.7                9 675
4882       1989 09 30.47465  02 08 28.32  +12 36 41.8                9 675
4882       1989 11 03.27278  01 42 08.92  +08 35 53.7          16.8  9 675
4882       1989 11 03.30815  01 42 07.24  +08 35 39.2                9 675
4882       1989 11 04.27013  01 41 22.54  +08 28 56.1          16.5  9 675
4882       1989 11 04.30364  01 41 20.85  +08 28 42.7                9 675
4882       1989 11 24.15364  01 30 17.60  +06 42 59.6                9 675
4882       1989 11 24.19701  01 30 16.73  +06 42 52.2                9 675
4885       1991 04 15.21858  12 14 08.86  +00 47 32.0          18.5  3 675
4885       1991 04 15.25087  12 14 07.30  +00 47 44.2                3 675
4885       1991 04 17.25069  12 12 38.72  +00 59 57.5                3 675
4887       1971 03 24.37118  11 54 59.85  -01 00 14.7                4 675
4887       1971 03 24.38924  11 54 59.07  -01 00 08.7                4 675
4887       1971 03 25.24340  11 54 18.99  -00 55 49.2                4 675
4887       1971 03 25.27326  11 54 17.75  -00 55 42.0                4 675
4887       1971 03 25.28715  11 54 16.88  -00 55 36.6                4 675
4887       1971 03 25.31562  11 54 15.65  -00 55 28.5          18.5  4 675
4887       1971 03 26.26771  11 53 31.13  -00 50 42.9                4 675
4893       1991 07 14.28351  17 48 24.95  -06 32 26.0          16.8  9 675
4893       1991 07 14.31736  17 48 23.55  -06 32 37.0                9 675
4893       1991 07 18.27622  17 46 07.47  -06 53 02.1          17.0  9 675
4893       1991 07 18.30799  17 46 06.42  -06 53 12.8                9 675

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 EE    1991 09 01.19518  15 11 01.17  +14 40 18.1          16.2V   691
1991 EE    1991 09 01.21128  15 11 18.79  +14 39 19.9          15.9V   691

711 McDonald Observatory
A. L. Whipple, Astronomy Department, University of Texas, Austin, TX 78712
Observers P. J. Shelus, A. L. Whipple
Measurers A. Davila, R. Whited
2.1-m Struve reflector
Lick Gaspra catalog
 951       1991 01 24.54066  15 28 33.05  -21 20 27.0                711
 951       1991 01 25.54155  15 29 54.33  -21 25 10.3                711
 951       1991 02 04.53637  15 42 53.79  -22 08 22.2                711
 951       1991 04 16.45923  16 23 43.65  -23 45 17.9                711
 951       1991 04 19.40185  16 22 31.40  -23 40 32.0                711
```

760 Goethe Link
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observers W. E. Carlock, J. P. Mears
Measurers F. J. Mendez, C. M. Olmstead
0.25-m refractor
AGK3 and Perth 70 secondary nets, global solutions

1952	HZ	1952	04	19.29685	14	29	02.94	+00	25	48.1		760
1952	HZ	1952	04	19.32323	14	29	01.81	+00	26	05.0		760
1952	HA1	1952	04	19.29685	14	24	46.95	+02	12	17.1		760
1952	HA1	1952	04	19.32323	14	24	45.64	+02	12	47.2		760
1955	ST2	1955	09	17.07148	22	37	12.13	+04	51	38.4		760
1955	ST2	1955	09	17.10204	22	37	10.77	+04	51	28.5		760
313		1952	04	19.29685	14	44	00.70	-02	22	14.0		760
313		1952	04	19.32323	14	43	59.38	-02	21	58.6	13.0	760
807		1952	04	19.29685	14	25	02.58	+03	02	47.1		760
807		1952	04	19.32323	14	25	01.40	+03	02	55.6	16.2	760
950		1955	09	17.07148	22	37	00.86	+02	27	27.6		760
950		1955	09	17.10204	22	36	59.44	+02	27	03.4		760
1067		1955	09	17.07148	22	25	14.17	+05	22	25.3	15.6	760
1067		1955	09	17.10204	22	25	12.61	+05	22	20.0		760
1189		1955	09	17.07148	22	27	44.32	+06	18	04.8	14.8	760
1189		1955	09	17.10204	22	27	42.89	+06	17	57.2		760
1266		1955	09	17.07148	22	38	14.23	+02	07	30.0	16.1	760
1266		1955	09	17.10204	22	38	12.76	+02	07	29.3		760

801 Oak Ridge
R. E. McCrosky, Harvard-Smithsonian Center for Astrophysics,
60 Garden Street, Cambridge, MA 02138, U.S.A.
Observers R. E. McCrosky. C.-Y. Shao, R. H. McNaught
Measurers R. E. McCrosky, C.-Y. Shao, A. J. Noymer
1.5-m reflector + CCD

1936	NB	1991	08	12.31838	01	05	20.99	+30	21	50.1		801
1936	NB	1991	08	12.34160	01	05	20.97	+30	22	02.9		801
1951	WH	1991	08	11.34361	03	01	59.45	+13	24	17.4		801
1951	WH	1991	08	11.35014	03	02	00.10	+13	24	20.8		801
1953	VX1	1991	08	06.27331	22	10	06.27	-05	58	58.9		801
1953	VX1	1991	08	06.29113	22	10	05.45	-05	59	03.7		801
1953	VX1	1991	08	11.25659	22	06	15.38	-06	23	29.4		801
1953	VX1	1991	08	11.26866	22	06	14.77	-06	23	33.2		801
1962	SR	1991	08	06.20428	21	00	26.81	-08	52	37.7		801
1962	SR	1991	08	06.21859	21	00	25.96	-08	52	36.9		801
1962	SR	1991	08	11.14784	20	55	43.68	-08	49	49.3		801
1962	SR	1991	08	11.16213	20	55	42.89	-08	49	49.0	I	801
1969	GD	1991	08	06.04473	16	25	57.64	-18	34	03.3		801
1969	GD	1991	08	06.09284	16	25	58.10	-18	33	57.7		801
1969	GD	1991	08	12.05968	16	27	18.53	-18	25	28.6		801
1969	GD	1991	08	12.08183	16	27	18.89	-18	25	26.6		801
1969	TA	1991	08	12.32113	01	08	27.53	+17	03	19.4		801
1969	TA	1991	08	12.34637	01	08	28.15	+17	03	25.9		801
1970	WD	1991	08	12.30469	00	18	00.00	+14	45	22.1		801
1970	WD	1991	08	12.32772	00	18	00.04	+14	45	29.6		801
1973	SC6	1991	08	07.26656	22	54	23.11	-03	55	58.0		801
1973	SC6	1991	08	07.28833	22	54	22.47	-03	56	02.8		801
1973	SC6	1991	08	08.31045	22	53	52.96	-03	59	53.8		801
1973	SC6	1991	08	08.33418	22	53	52.22	-03	59	59.3		801
1974	QU1	1991	08	06.24796	21	48	43.05	-10	18	53.5		801
1974	QU1	1991	08	06.26328	21	48	42.30	-10	18	57.2		801
1974	QU1	1991	08	12.13177	21	43	51.12	-10	44	25.5		801

1974	QU1	1991	08	12.14223	21	43	50.56	-10	44	28.5	801
1974	SR1	1991	08	07.23943	22	11	20.38	-17	36	40.9	801
1974	SR1	1991	08	07.25631	22	11	19.55	-17	36	40.2	801
1974	SR1	1991	08	11.25860	22	08	09.15	-17	34	10.6	801
1974	SR1	1991	08	11.27069	22	08	08.49	-17	34	10.4	801
1976	EB	1991	08	07.31736	23	56	34.94	-01	06	47.3	801
1976	EB	1991	08	07.34608	23	56	34.57	-01	06	44.8	801
1976	EB	1991	08	12.25876	23	55	17.19	-01	01	31.9	801
1976	EB	1991	08	12.29063	23	55	16.47	-01	01	30.6	801
1977	DR1	1991	08	06.31676	00	00	55.57	+03	43	03.7	801
1977	DR1	1991	08	06.33611	00	00	55.17	+03	43	08.8	801
1977	DR1	1991	08	12.25509	23	58	34.52	+04	06	59.0	801
1977	DR1	1991	08	12.27828	23	58	33.81	+04	07	04.0	801
1977	DS2	1991	08	12.30735	00	26	33.48	-08	36	11.4	801
1977	DS2	1991	08	12.32531	00	26	33.40	-08	36	19.7	801
1977	PE1	1991	08	06.30168	23	25	26.31	+03	59	52.6	801
1977	PE1	1991	08	06.34156	23	25	25.78	+03	59	53.9	801
1977	PE1	1991	08	12.18828	23	23	53.49	+03	59	19.3	801
1977	PE1	1991	08	12.23611	23	23	52.44	+03	59	17.2	801
1977	RD7	1991	08	12.20466	00	14	40.23	+03	39	19.8	801
1977	RD7	1991	08	12.24846	00	14	39.59	+03	39	19.6	801
1978	NQ1	1991	08	12.25188	00	12	26.68	+07	57	32.5	801
1978	NQ1	1991	08	12.29325	00	12	25.83	+07	57	37.3	801
1978	PY2	1991	08	06.20903	21	00	42.39	-13	35	02.3	801
1978	PY2	1991	08	06.22265	21	00	41.65	-13	35	05.5	801
1978	PY2	1991	08	11.17203	20	56	23.70	-13	56	15.6	801
1978	PY2	1991	08	11.18536	20	56	22.93	-13	56	19.9	I 801
1978	RM2	1991	08	07.11632	19	40	03.65	-14	13	05.5	801
1978	RM2	1991	08	07.16888	19	40	01.31	-14	13	16.3	801
1978	RM2	1991	08	08.13863	19	39	19.57	-14	16	43.1	I 801
1978	RM2	1991	08	08.15490	19	39	18.84	-14	16	46.4	801
1978	VL5	1991	08	11.33263	01	02	29.67	+14	30	39.0	801
1978	VL5	1991	08	11.35341	01	02	30.24	+14	30	47.2	801
1978	VU10	1991	08	11.11260	20	42	48.21	-14	14	53.2	801
1978	VU10	1991	08	11.13898	20	42	46.83	-14	14	56.9	801
1978	VU10	1991	08	12.08925	20	42	01.05	-14	17	10.7	801
1978	VU10	1991	08	12.09870	20	42	00.57	-14	17	11.6	801
1979	FA3	1991	08	07.23638	22	11	38.04	+05	08	03.5	801
1979	FA3	1991	08	07.25438	22	11	37.34	+05	07	57.0	801
1979	FA3	1991	08	11.26461	22	09	03.62	+04	42	19.5	801
1979	FA3	1991	08	11.27925	22	09	03.03	+04	42	13.6	801
1979	SL7	1991	08	06.27986	22	25	04.63	-01	28	19.8	801
1979	SL7	1991	08	06.29743	22	25	03.90	-01	28	23.2	801
1979	SL7	1991	08	11.27574	22	21	31.73	-01	45	41.8	801
1979	SL7	1991	08	11.29916	22	21	30.62	-01	45	47.3	801
1980	FT3	1991	08	06.18044	20	27	32.36	-14	41	57.5	801
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1980	FT3	1991	08	08.24869	20	25	38.04	-14	49	58.7	801
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1980	FH12	1991	08	11.26175	21	58	43.42	-09	36	55.7	801
1980	FH12	1991	08	12.15882	21	57	47.18	-09	38	03.5	801
1980	FH12	1991	08	12.17373	21	57	46.20	-09	38	04.6	801
1980	SJ	1991	08	06.21508	21	09	47.80	-06	27	49.3	801
1980	SJ	1991	08	06.22880	21	09	47.00	-06	27	51.7	801
1980	SJ	1991	08	11.16935	21	05	12.85	-06	44	45.8	801
1980	SJ	1991	08	11.18314	21	05	12.04	-06	44	48.8	801
1981	DC2	1991	08	11.32948	00	51	55.69	+19	49	58.0	801
1981	DC2	1991	08	11.35556	00	51	56.23	+19	50	03.4	801

1981	DC2	1991	08	12.31216	00	52	17.12	+19	53	15.0	801
1981	DC2	1991	08	12.32997	00	52	17.47	+19	53	18.4	801
1981	EH4	1991	08	06.20647	21	00	19.77	-01	13	55.2	801
1981	EH4	1991	08	06.22045	21	00	19.03	-01	13	58.8	801
1981	EH4	1991	08	11.14166	20	56	07.72	-01	27	10.1	801
1981	EH4	1991	08	11.15683	20	56	06.91	-01	27	13.7	801
1981	EH11	1991	08	07.29759	23	37	33.43	-06	20	05.6	801
1981	EH11	1991	08	07.33690	23	37	32.34	-06	19	54.3	801
1981	ED19	1991	08	08.25624	21	23	32.62	-13	14	58.0	801
1981	ED19	1991	08	08.27726	21	23	31.51	-13	15	04.9	801
1981	ED19	1991	08	12.09654	21	20	18.03	-13	33	55.2	801
1981	EX21	1991	08	06.11150	19	27	39.13	-04	27	25.2	801
1981	EX21	1991	08	06.12809	19	27	38.39	-04	27	33.1	801
1981	EX21	1991	08	07.10868	19	26	57.88	-04	35	15.2	801
1981	EX21	1991	08	07.16588	19	26	55.42	-04	35	42.2	801
1981	EO27	1991	08	07.22271	22	04	56.35	+00	04	20.1	801
1981	EO27	1991	08	07.23387	22	04	55.91	+00	04	15.5	801
1981	EO27	1991	08	11.25446	22	02	22.33	-00	25	57.1	801
1981	EO27	1991	08	11.26666	22	02	21.80	-00	26	03.0	801
1981	SY1	1991	08	06.21150	21	10	48.40	-17	00	48.7	801
1981	SY1	1991	08	06.22481	21	10	47.53	-17	00	49.2	801
1981	SY1	1991	08	11.17751	21	05	48.97	-17	05	43.0	801
1981	SY1	1991	08	11.18972	21	05	48.21	-17	05	43.9	801
1981	XH2	1991	08	06.24630	21	46	50.75	+00	42	18.3	801
1981	XH2	1991	08	06.26507	21	46	49.91	+00	42	17.4	801
1981	XH2	1991	08	11.21821	21	43	12.04	+00	35	54.5	801
1981	XH2	1991	08	11.24174	21	43	10.93	+00	35	52.2	801
1982	TK3	1991	08	12.19617	23	19	29.95	+00	32	48.7	801
1982	TK3	1991	08	12.21757	23	19	29.20	+00	32	51.1	801
1982	UP2	1991	08	06.18729	20	54	38.08	-18	00	10.8	801
1982	UP2	1991	08	06.20001	20	54	37.39	-18	00	13.1	801
1982	UP2	1991	08	11.15104	20	50	23.92	-18	15	01.5	801
1982	UP2	1991	08	11.16473	20	50	23.18	-18	15	03.9	801
1982	UT6	1991	08	07.27802	23	21	49.72	-05	07	54.9	801
1982	UT6	1991	08	07.30150	23	21	49.12	-05	07	58.0	801
1982	UT6	1991	08	11.31848	23	20	04.83	-05	17	23.5	801
1982	UT6	1991	08	11.33965	23	20	04.15	-05	17	24.1	801
1982	UG7	1991	08	06.10468	19	15	58.58	-16	54	54.5	801
1982	UG7	1991	08	06.12297	19	15	57.83	-16	54	57.6	801
1982	UG7	1991	08	08.10301	19	14	44.32	-17	00	16.7	801
1982	UG7	1991	08	08.12611	19	14	43.43	-17	00	21.2	801
1983	AO2	1991	08	07.11940	19	54	06.65	-20	45	56.2	801
1983	AO2	1991	08	07.17263	19	54	04.27	-20	46	14.0	801
1983	AO2	1991	08	08.14419	19	53	23.02	-20	51	51.3	801
1983	AO2	1991	08	08.16064	19	53	22.27	-20	51	55.4	801
1983	CF1	1991	08	07.24207	22	16	30.91	-19	47	51.0	801
1983	CF1	1991	08	07.25811	22	16	30.29	-19	47	59.8	801
1983	CF1	1991	08	12.17966	22	13	23.56	-20	33	58.6	801
1983	CF1	1991	08	12.19263	22	13	23.03	-20	34	06.0	801
1983	GR	1991	08	07.24859	22	27	49.56	-21	44	11.7	801
1983	GR	1991	08	07.26310	22	27	48.68	-21	44	15.9	801
1983	GR	1991	08	12.19895	22	23	20.81	-22	10	17.8	801
1983	GR	1991	08	12.21502	22	23	19.87	-22	10	22.9	801
1983	NL	1991	08	12.35844	03	11	13.83	+04	03	25.1	801
1983	NL	1991	08	12.36591	03	11	14.49	+04	03	23.5	801
1983	RC4	1991	08	06.05634	18	27	03.02	-13	57	04.0	801
1983	RC4	1991	08	06.07466	18	27	03.02	-13	57	15.8	801
1983	RC4	1991	08	08.09047	18	27	14.64	-14	18	33.1	801
1983	RC4	1991	08	08.11554	18	27	14.76	-14	18	48.8	801

1983	TW1	1991	08	06.21723	21	18	41.55	-17	15	43.5	801
1983	TW1	1991	08	06.23031	21	18	40.91	-17	15	48.9	801
1983	TW1	1991	08	11.20829	21	14	53.31	-17	48	37.5	801
1983	TW1	1991	08	11.22197	21	14	52.65	-17	48	42.9	801
1984	EA1	1991	07	09.17969	19	28	45.52	-11	44	56.3	801
1984	EA1	1991	07	09.19144	19	28	44.89	-11	44	58.7	801
1984	EA1	1991	07	10.19602	19	27	58.50	-11	49	20.8	801
1984	EA1	1991	07	10.21131	19	27	57.76	-11	49	25.2	801
1984	EA1	1991	08	06.10208	19	08	31.56	-14	07	04.9	801
1984	EA1	1991	08	06.12054	19	08	30.89	-14	07	11.2	801
1984	EA1	1991	08	07.11363	19	07	56.53	-14	12	36.5	801
1984	EA1	1991	08	07.16240	19	07	54.69	-14	12	54.0	801
1984	HE1	1991	08	11.22017	21	48	58.34	+04	10	28.9	801
1984	HE1	1991	08	12.14936	21	48	19.29	+04	07	20.1	801
1984	HE1	1991	08	12.17162	21	48	18.31	+04	07	15.5	801
1984	QR	1991	08	06.27109	22	08	37.95	-11	23	33.5	801
1984	QR	1991	08	06.28226	22	08	37.09	-11	23	28.5	801
1984	QR	1991	08	11.24929	22	02	09.19	-10	47	37.8	801
1984	QR	1991	08	11.26017	22	02	08.26	-10	47	32.8	801
1984	SM	1991	08	12.31551	00	51	28.28	+15	19	55.0	801
1984	SM	1991	08	12.34427	00	51	28.71	+15	20	05.8	801
1985	JJ	1991	08	06.18453	20	29	48.62	-03	48	26.1	801
1985	JJ	1991	08	06.19766	20	29	48.00	-03	48	31.0	801
1985	JJ	1991	08	07.18941	20	29	04.27	-03	54	10.5	801
1985	JJ	1991	08	07.20505	20	29	03.55	-03	54	15.9	801
1985	SM3	1991	08	08.14973	20	23	38.88	-19	10	01.3	801
1985	SM3	1991	08	08.16353	20	23	37.93	-19	10	02.3	801
1985	SM3	1991	08	11.10487	20	20	26.57	-19	12	54.0	801
1985	SM3	1991	08	11.11454	20	20	25.94	-19	12	54.4	801
1985	UY4	1991	07	16.10123	18	31	49.51	-15	35	10.7	801
1985	UY4	1991	07	16.11995	18	31	48.26	-15	35	13.1	801
1985	UY4	1991	08	08.08765	18	15	04.56	-16	54	33.1	801
1985	UY4	1991	08	08.11848	18	15	03.68	-16	54	39.5	801
1985	UY4	1991	08	11.10145	18	13	53.85	-17	05	25.7	801
1985	UY4	1991	08	11.12785	18	13	53.22	-17	05	31.2	801
1986	CQ1	1991	08	06.11786	19	47	51.08	-13	22	21.8	801
1986	CQ1	1991	08	06.13466	19	47	50.16	-13	22	25.1	801
1986	CQ1	1991	08	08.14163	19	46	05.39	-13	28	46.1	801
1986	CQ1	1991	08	08.15788	19	46	04.55	-13	28	48.3	801
1986	ET	1991	08	07.27042	23	15	48.37	-06	51	47.6	801
1986	ET	1991	08	07.29089	23	15	47.63	-06	51	50.0	801
1986	ET	1991	08	11.29384	23	13	17.44	-07	01	30.8	801
1986	ET	1991	08	11.31583	23	13	16.51	-07	01	34.3	801
1986	EZ1	1991	08	07.21662	21	50	34.43	-11	44	27.2	801
1986	EZ1	1991	08	07.23054	21	50	33.67	-11	44	30.5	801
1986	EZ1	1991	08	12.13419	21	45	59.77	-12	05	05.9	801
1986	EZ1	1991	08	12.14414	21	45	59.14	-12	05	08.7	801
1986	PC1	1991	08	06.05111	16	53	23.42	-20	26	04.1	801
1986	PC1	1991	08	06.09047	16	53	23.97	-20	26	06.7	801
1986	PC1	1991	08	12.06262	16	55	16.21	-20	35	00.5	801
1986	PC1	1991	08	12.07906	16	55	16.49	-20	35	01.0	801
1986	QS3	1991	08	06.25007	21	51	02.82	-13	10	01.5	801
1986	QS3	1991	08	06.26720	21	51	02.10	-13	10	09.2	801
1986	QS3	1991	08	12.13639	21	46	55.84	-13	55	41.1	801
1986	QS3	1991	08	12.14669	21	46	55.38	-13	55	46.6	801
1986	QA4	1991	08	06.18234	20	41	21.64	-18	17	57.5	801
1986	QA4	1991	08	06.19562	20	41	20.98	-18	18	00.7	801
1986	QA4	1991	08	11.11060	20	37	29.50	-18	36	38.2	801
1986	QA4	1991	08	11.13655	20	37	28.28	-18	36	44.3	801

1986	QY4	1991	08	06.15801	20	07	18.05	-20	34	49.3		801
1986	QY4	1991	08	06.17435	20	07	17.24	-20	34	52.4		801
1986	QY4	1991	08	08.14713	20	05	44.14	-20	40	55.1		801
1986	QY4	1991	08	08.16604	20	05	43.23	-20	40	58.4		801
1986	TM	1991	08	06.34642	01	57	22.79	+06	00	22.0		801
1986	TM	1991	08	06.35646	01	57	23.09	+06	00	30.0		801
1986	TM	1991	08	08.35536	01	58	22.71	+06	28	09.9		801
1986	TM	1991	08	08.36083	01	58	22.86	+06	28	13.9		801
1986	TU	1991	08	11.36208	03	45	12.08	+08	15	44.6		801
1986	TU	1991	08	11.36483	03	45	12.42	+08	15	42.9		801
1986	TU	1991	08	12.33324	03	47	15.92	+08	05	31.1		801
1986	TU	1991	08	12.33891	03	47	16.63	+08	05	27.4		801
1986	UA	1991	08	06.23847	21	40	29.14	-14	25	17.7		801
1986	UA	1991	08	06.25912	21	40	28.19	-14	25	23.2		801
1986	UA	1991	08	08.26368	21	38	59.84	-14	34	09.0		801
1986	UA	1991	08	08.28116	21	38	59.09	-14	34	13.5		801
1986	VF5	1991	08	12.21042	00	50	16.75	+03	40	30.4		801
1986	VF5	1991	08	12.26513	00	50	16.53	+03	40	38.3		801
1987	DU6	1991	08	06.15617	20	22	06.71	-15	09	32.5		801
1987	DU6	1991	08	06.16935	20	22	05.92	-15	09	33.2		801
1987	DU6	1991	08	07.18001	20	21	08.82	-15	10	26.0		801
1987	DU6	1991	08	07.20030	20	21	07.62	-15	10	27.0		801
1987	QS1	1991	08	06.24394	21	47	05.70	-15	12	35.0		801
1987	QS1	1991	08	06.26167	21	47	04.61	-15	12	37.6		801
1987	QS1	1991	08	11.21635	21	42	00.03	-15	23	50.0		801
1987	QS1	1991	08	11.23931	21	41	58.54	-15	23	52.9		801
1987	QS1	1991	08	12.12823	21	41	03.32	-15	25	51.9		801
1987	QS1	1991	08	12.13836	21	41	02.66	-15	25	53.2		801
1987	QN7	1991	08	07.31152	23	44	45.26	-02	38	06.4		801
1987	QN7	1991	08	07.35117	23	44	45.65	-02	38	15.9		801
1987	RO3	1991	08	12.16440	23	19	24.29	+04	29	32.7		801
1987	RO3	1991	08	12.23890	23	19	23.31	+04	29	30.5		801
1987	RP3	1991	08	06.11530	19	40	18.05	-18	47	12.0		801
1987	RP3	1991	08	06.13201	19	40	17.25	-18	47	12.5		801
1987	RP3	1991	08	08.13414	19	38	43.85	-18	48	32.2		801
1987	RP3	1991	08	08.15237	19	38	42.99	-18	48	32.6		801
1987	SJ	1991	08	06.26928	22	00	28.11	-02	46	05.6		801
1987	SJ	1991	08	06.29528	22	00	27.44	-02	46	11.4		801
1987	SJ	1991	08	11.25270	21	58	21.35	-03	07	21.2		801
1987	SJ	1991	08	11.28127	21	58	20.46	-03	07	29.7		801
1987	SB1	1991	08	06.15065	20	17	40.07	-02	50	30.1		801
1987	SB1	1991	08	06.16764	20	17	39.31	-02	50	40.4		801
1987	SB1	1991	08	07.17784	20	16	56.16	-03	00	54.5		801
1987	SB1	1991	08	07.19472	20	16	55.41	-03	01	04.9		801
1987	SG1	1991	08	06.27608	22	19	58.84	+03	41	52.4		801
1987	SG1	1991	08	06.29330	22	19	58.41	+03	41	41.8		801
1987	SG1	1991	08	11.27329	22	17	50.45	+02	48	44.5		801
1987	SG1	1991	08	11.28846	22	17	49.98	+02	48	34.0		801
1987	YL1	1991	08	08.26059	21	26	23.16	-13	34	02.2		801
1987	YL1	1991	08	08.27880	21	26	22.38	-13	34	13.1		801
1987	YL1	1991	08	11.21139	21	24	19.99	-14	03	30.4	I	801
1987	YL1	1991	08	11.23427	21	24	18.95	-14	03	44.1		801
1988	AA5	1991	08	11.14514	20	53	07.75	-07	50	00.5		801
1988	AA5	1991	08	11.15993	20	53	06.94	-07	50	05.3		801
1988	AA5	1991	08	12.11220	20	52	17.63	-07	55	07.6		801
1988	BW1	1991	03	21.27388	14	15	41.60	+02	20	31.8		801
1988	RD3	1991	08	07.24485	22	16	23.37	-07	24	15.9		801
1988	RD3	1991	08	07.26025	22	16	22.60	-07	24	20.5		801
1988	RD3	1991	08	12.16137	22	12	23.13	-07	51	11.0		801

1988	RD3	1991	08	12.17632	22	12	22.31	-07	51	16.3	801
1988	UB	1991	08	11.18105	21	09	49.78	-16	31	31.7	801
1988	UB	1991	08	11.19256	21	09	49.00	-16	31	34.2	801
1988	VF1	1991	08	06.31056	23	37	13.88	+04	02	50.1	801
1988	VF1	1991	08	06.33845	23	37	13.99	+04	02	56.2	801
1988	VF1	1991	08	12.18602	23	37	19.52	+04	20	25.4	801
1988	VF1	1991	08	12.24571	23	37	19.04	+04	20	33.4	801
1988	VM3	1991	08	11.32150	00	22	49.26	+01	12	09.6	801
1988	VM3	1991	08	11.35778	00	22	49.59	+01	12	15.7	801
1988	VM3	1991	08	12.30041	00	23	00.02	+01	14	45.9	801
1988	VM3	1991	08	12.34867	00	23	00.35	+01	14	53.8	801
1988	VZ3	1991	08	06.24117	21	38	13.33	-05	36	06.8	801
1988	VZ3	1991	08	06.25690	21	38	12.40	-05	36	08.1	801
1988	VZ3	1991	08	08.26648	21	36	14.13	-05	39	23.8	801
1988	VZ3	1991	08	08.33134	21	36	10.14	-05	39	30.5	801
1988	WE	1991	08	06.16030	20	25	19.66	-22	24	52.4	801
1988	WE	1991	08	06.17172	20	25	18.96	-22	24	56.6	801
1988	WE	1991	08	07.18675	20	24	17.76	-22	31	14.5	801
1988	WE	1991	08	07.20284	20	24	16.76	-22	31	20.4	801
1988	WE	1991	08	12.11737	20	19	30.29	-23	00	13.0	801
1988	WE	1991	08	12.12562	20	19	29.81	-23	00	15.7	801
1988	XP	1991	08	08.08455	18	14	28.18	-17	29	58.0	801
1988	XP	1991	08	08.11264	18	14	27.35	-17	30	07.0	801
1988	XP	1991	08	11.09813	18	13	15.35	-17	45	07.9	I 801
1988	XP	1991	08	11.12476	18	13	14.81	-17	45	15.4	801
1988	XP	1991	08	12.07083	18	12	55.67	-17	49	59.3	801
1988	XP	1991	08	12.08521	18	12	55.24	-17	50	04.5	801
1988	XE1	1991	08	11.28332	22	29	06.23	+01	03	53.3	801
1988	XE1	1991	08	11.29700	22	29	05.55	+01	03	51.2	801
1988	XE1	1991	08	12.19059	22	28	23.10	+01	01	26.1	801
1988	XE1	1991	08	12.21269	22	28	22.00	+01	01	22.6	801
1988	XO1	1991	08	06.09566	18	09	45.88	-06	15	04.6	801
1988	XO1	1991	08	11.09292	18	07	52.90	-06	36	45.4	W 801
1988	XO1	1991	08	11.11745	18	07	52.42	-06	36	52.0	W 801
1989	AX1	1991	08	12.36138	03	17	22.06	+21	01	14.5	801
1989	AX1	1991	08	12.36785	03	17	22.76	+21	01	19.4	801
1989	BT	1991	08	06.10804	19	35	30.06	-19	04	56.0	801
1989	BT	1991	08	06.12550	19	35	29.19	-19	04	56.0	801
1989	BT	1991	08	08.10527	19	33	58.26	-19	07	31.4	801
1989	BT	1991	08	08.12362	19	33	57.41	-19	07	33.3	801
1989	BY	1991	08	12.28108	00	01	25.35	-04	29	52.5	801
1989	BY	1991	08	12.30964	00	01	24.90	-04	29	59.0	801
1989	CU8	1991	08	06.28519	22	40	06.20	-10	58	09.6	801
1989	CU8	1991	08	06.30463	22	40	05.45	-10	58	13.7	801
1989	CU8	1991	08	08.30212	22	38	50.41	-11	05	32.8	801
1989	CU8	1991	08	08.32359	22	38	49.57	-11	05	37.5	801
1989	WL2	1991	05	17.30086	18	06	34.72	+12	17	27.0	801
1990	BM	1991	05	13.25266	17	21	40.60	-17	10	11.2	801
1990	BM	1991	05	13.27580	17	21	39.58	-17	10	10.0	801
1990	DM3	1991	08	12.20779	00	36	51.63	+02	25	40.7	801
1990	DM3	1991	08	12.26769	00	36	51.34	+02	25	48.3	801
1990	LA	1991	08	08.31877	23	48	36.68	+03	06	29.5	801
1990	LA	1991	08	08.34279	23	48	36.26	+03	06	22.4	801
1990	LA	1991	08	12.26249	23	47	21.78	+02	45	46.2	801
1990	LA	1991	08	12.28810	23	47	21.19	+02	45	37.6	801
1990	SQ	1990	12	14.95913	22	34	00.76	+42	25	34.7	801
1990	SQ	1990	12	14.96613	22	34	02.09	+42	25	50.6	801
1991	DG	1991	08	06.32017	00	19	29.14	+28	00	26.4	801
1991	DG	1991	08	06.32485	00	19	28.85	+28	00	17.7	801

1991	DG	1991	08	12.27521	00	14	15.12	+24	48	39.0	801
1991	DG	1991	08	12.28434	00	14	14.29	+24	48	20.6	801
1991	GP1	1991	08	12.04019	14	14	16.32	+00	56	35.6	801
1991	GP1	1991	08	12.04760	14	14	16.97	+00	56	29.3	801
1991	JX	1991	08	06.32993	00	39	35.04	+15	14	13.0	801
1991	JX	1991	08	06.35207	00	39	34.23	+15	13	57.0	801
1991	JX	1991	08	11.32552	00	36	46.85	+14	05	43.4	801
1991	JX	1991	08	11.33595	00	36	46.30	+14	05	34.3	801
1991	JY1	1991	08	07.06141	16	05	07.48	+06	07	47.6	801
1991	JY1	1991	08	07.10284	16	05	08.94	+06	07	33.4	801
1991	JY1	1991	08	11.05748	16	07	42.75	+05	45	07.5	801
1991	JY1	1991	08	11.06740	16	07	43.17	+05	45	04.3	801
1991	JZ1	1991	08	12.04284	15	13	15.64	-07	11	08.6	801
1991	JZ1	1991	08	12.05546	15	13	16.20	-07	11	14.4	801
1991	LZ	1991	08	11.08328	17	13	39.73	-05	41	58.8	801
1991	LZ	1991	08	11.09545	17	13	40.25	-05	42	04.1	801
1991	LZ	1991	08	12.06502	17	14	24.67	-05	49	25.7	801
1991	LZ	1991	08	12.07674	17	14	25.18	-05	49	31.0	801
1991	NA	1991	08	06.05865	18	48	54.23	-11	13	52.9	801
1991	NA	1991	08	06.07723	18	48	53.89	-11	13	41.2	801
1991	NA	1991	08	07.11135	18	48	39.93	-11	01	54.2	801
1991	NA	1991	08	07.16037	18	48	39.02	-11	01	21.0	801
2018	P-L	1991	08	06.28867	22	52	47.96	-11	33	52.5	801
2018	P-L	1991	08	06.30766	22	52	47.12	-11	33	54.2	801
2018	P-L	1991	08	08.30661	22	51	19.81	-11	37	02.3	801
2018	P-L	1991	08	08.32690	22	51	18.83	-11	37	04.3	801
4594	P-L	1991	08	08.31443	23	04	14.22	+00	42	26.8	801
4594	P-L	1991	08	08.33638	23	04	13.50	+00	42	18.5	801
4594	P-L	1991	08	11.28608	23	02	36.55	+00	22	55.5	801
4594	P-L	1991	08	11.30240	23	02	35.97	+00	22	48.7	801
1246	T-2	1991	08	06.14763	20	06	26.59	-08	13	54.4	801
1246	T-2	1991	08	06.16585	20	06	25.77	-08	14	00.0	801
1246	T-2	1991	08	07.17568	20	05	41.40	-08	19	23.0	801
1246	T-2	1991	08	07.19703	20	05	40.42	-08	19	29.9	801
348		1934	02	03.97603	04	03	49.26	+18	54	10.8	t 801
348		1934	02	04.05913	04	03	51.16	+18	54	30.2	t 801
348		1934	02	10.01505	04	03	51.95	+19	13	46.4	t 801
348		1934	02	10.11893	04	03	55.30	+19	14	13.8	t 801
951		1991	08	06.03702	15	28	39.46	-18	19	12.7	801
951		1991	08	06.04827	15	28	39.96	-18	19	13.9	801
951		1991	08	08.03926	15	30	05.44	-18	22	02.0	801
951		1991	08	08.04718	15	30	05.82	-18	22	02.0	801
4596		1991	08	06.15345	20	26	20.87	+17	07	11.5	801
4596		1991	08	06.16329	20	26	19.94	+17	06	55.3	801
4596		1991	08	07.18295	20	24	50.58	+16	38	31.3	801
4596		1991	08	07.19211	20	24	49.90	+16	38	15.4	801
4891		1991	07	12.28103	21	15	16.91	-17	44	10.8	801
4891		1991	07	12.30302	21	15	16.10	-17	44	14.1	801
4891		1991	07	13.28843	21	14	41.29	-17	46	34.4	801
4891		1991	08	06.19009	20	57	08.12	-18	50	50.4	801
4891		1991	08	06.20228	20	57	07.48	-18	50	52.5	801
4896		1991	08	06.32277	00	09	42.48	+25	24	07.4	801
4896		1991	08	06.35450	00	09	42.54	+25	24	22.9	801
4896		1991	08	12.27093	00	09	37.36	+26	09	19.0	801
4896		1991	08	12.29600	00	09	37.18	+26	09	29.6	801

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Observer D. M. Rehner
0.9-m reflector + CCD

1991 PN	*	1991 08 05.14062	20 01 34.15	-10 41 11.7			19		807
1991 PN		1991 08 06.16429	20 00 45.83	-10 41 55.9					807

809 European Southern Observatory
E. W. Elst, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels, Belgium
Observers E. W. Elst, G. Pizarro, O. Pizarro
Measurer E. W. Elst
1.0-m Schmidt, GPO 0.4-m astrograph
SAOC

1978 PY2		1991 08 05.25833	21 01 32.06	-13 30 58.6					809
1978 PY2		1991 08 05.27153	21 01 31.30	-13 31 02.2					809
1978 PY2		1991 08 05.28472	21 01 30.60	-13 31 05.3					809
1981 SY1		1991 08 03.09167	21 13 56.04	-16 57 19.0			17.5		809
1981 SY1		1991 08 03.10486	21 13 55.17	-16 57 20.1					809
1981 SY1		1991 08 03.11806	21 13 54.35	-16 57 21.0					809
1981 SY1		1991 08 05.25833	21 11 45.83	-16 59 39.7					809
1981 SY1		1991 08 05.27153	21 11 44.96	-16 59 41.0					809
1981 SY1		1991 08 05.28472	21 11 44.09	-16 59 41.5					809
1982 UP2		1991 08 02.13125	20 58 06.24	-17 47 31.0			18.6		809
1982 UP2		1991 08 07.09792	20 53 51.27	-18 02 52.9			18.5		809
1982 UP2		1991 08 07.11111	20 53 50.63	-18 02 54.8					809
1982 UP2		1991 08 07.12431	20 53 49.85	-18 02 57.7					809
1983 TW1		1991 08 03.09167	21 21 00.99	-16 54 44.8			17.7		809
1983 TW1		1991 08 03.10486	21 21 00.38	-16 54 50.6					809
1983 TW1		1991 08 03.11806	21 20 59.78	-16 54 54.7					809
1986 QS3		1991 08 06.24444	21 51 03.05	-13 09 55.9			18.4		809
1986 QS3		1991 08 06.25764	21 51 02.55	-13 10 01.6					809
1986 QS3		1991 08 06.27083	21 51 01.95	-13 10 07.4					809
1986 QS3		1991 08 14.20625	21 45 25.88	-14 11 52.9					809
1986 QS3		1991 08 14.21944	21 45 25.26	-14 11 59.5					809
1986 QS3		1991 08 14.23264	21 45 24.68	-14 12 04.8					809
1987 DC6		1990 09 25.17778	23 57 53.70	-04 32 02.1			18.2		809
1987 DC6		1990 09 25.19097	23 57 53.15	-04 32 07.2					809
1987 DC6		1990 09 25.20417	23 57 52.52	-04 32 12.7					809
1987 QS1		1991 08 14.35486	21 38 43.79	-15 30 37.7			17.0		809
1987 QS1		1991 08 14.36562	21 38 43.09	-15 30 38.8					809
1987 QS1		1991 08 16.32569	21 36 40.88	-15 34 49.6					809
1987 QS1		1991 08 16.33611	21 36 40.20	-15 34 51.1					809
1987 QS1		1991 08 16.34722	21 36 39.43	-15 34 52.0					809
1987 RD1		1991 08 02.13125	20 50 27.93	-20 19 45.2			18.5		809
1988 RR3		1991 08 02.13125	21 07 42.94	-22 12 57.1			18.4		809
1988 RR3		1991 08 07.09792	21 02 22.00	-22 32 43.0			18.7		809
1988 RR3		1991 08 07.11111	21 02 21.02	-22 32 46.3					809
1988 RR3		1991 08 07.12431	21 02 20.19	-22 32 48.8					809
1988 UB		1991 08 03.09167	21 18 19.53	-15 58 31.1			18.8		809
1988 UB		1991 08 03.10486	21 18 18.69	-15 58 33.3					809
1988 UB		1991 08 03.11806	21 18 17.97	-15 58 36.1					809
1988 UB		1991 08 05.25833	21 16 05.63	-16 07 16.8					809
1988 UB		1991 08 05.27153	21 16 04.76	-16 07 20.6					809
1988 UB		1991 08 05.28472	21 16 03.93	-16 07 22.5					809
1989 CL1		1991 08 06.24444	21 48 50.94	-16 08 10.1			19.0		809
1989 CL1		1991 08 06.25764	21 48 50.28	-16 08 13.5					809
1989 CL1		1991 08 06.27083	21 48 49.61	-16 08 17.0					809
1989 CL1		1991 08 14.20625	21 42 58.05	-16 39 50.7					809
1989 CL1		1991 08 14.21944	21 42 57.37	-16 39 53.4					809
1989 CL1		1991 08 14.23264	21 42 56.69	-16 39 56.3					809

1991	LW	1991	06	06.12153	16	23	54.70	-13	34	12.6	18.1	4 809
1991	LW	1991	06	06.13472	16	23	53.88	-13	34	16.0		4 809
1991	LW	1991	06	06.14792	16	23	53.02	-13	34	20.8		4 809
1991	LW	1991	06	08.09722	16	21	58.38	-13	45	16.9		4 809
1991	LW	1991	06	08.11042	16	21	57.58	-13	45	21.9		4 809
1991	LW	1991	06	08.12361	16	21	56.75	-13	45	25.8		4 809
1991	NC1	1991	08	03.09167	21	19	10.27	-17	16	58.5	18.0	809
1991	NC1	1991	08	03.10486	21	19	09.53	-17	17	06.0		809
1991	NC1	1991	08	03.11806	21	19	08.86	-17	17	12.6		809
1991	NJ1	1991	08	06.24444	21	52	11.38	-17	41	25.4	18.5	809
1991	NJ1	1991	08	06.25764	21	52	10.86	-17	41	34.1		809
1991	NJ1	1991	08	06.27083	21	52	10.27	-17	41	43.8		809
1991	NJ1	1991	08	14.20625	21	47	12.29	-19	06	59.5		809
1991	NJ1	1991	08	14.21944	21	47	11.60	-19	07	07.2		809
1991	NJ1	1991	08	14.23264	21	47	11.04	-19	07	15.7		809
1991	PA	1991	08	02.13472	21	25	59.23	-14	35	24.8	16.6	809
1991	PA	1991	08	02.14514	21	25	58.80	-14	35	24.6		809
1991	PA	1991	08	02.15556	21	25	58.38	-14	35	25.0		809
1991	PA	1991	08	03.09167	21	25	17.95	-14	35	17.4	18.0	809
1991	PA	1991	08	03.10486	21	25	17.34	-14	35	17.2		809
1991	PA	1991	08	03.11806	21	25	16.71	-14	35	16.7		809
1991	PA	1991	08	05.15972	21	23	46.29	-14	35	11.9		809
1991	PA	1991	08	05.17014	21	23	45.80	-14	35	12.4		809
1991	PA	1991	08	05.18056	21	23	45.37	-14	35	12.0		809
1991	PA	1991	08	05.26458	21	23	41.25	-14	35	12.6		809
1991	PA	1991	08	05.27500	21	23	40.81	-14	35	12.8		809
1991	PA	1991	08	05.28542	21	23	40.32	-14	35	11.5		809
1991	PA	1991	08	10.26528	21	19	51.53	-14	35	26.9		809
1991	PA	1991	08	10.27708	21	19	50.93	-14	35	27.0		809
1991	PA	1991	08	10.28750	21	19	50.40	-14	35	26.7		809
1991	PB	1991	08	03.09167	21	08	48.71	-14	31	55.3	17.0	809
1991	PB	1991	08	03.10486	21	08	48.01	-14	32	00.8		809
1991	PB	1991	08	03.11806	21	08	47.40	-14	32	04.4		809
1991	PB	1991	08	05.25833	21	07	15.83	-14	44	38.7		809
1991	PB	1991	08	05.27153	21	07	15.16	-14	44	43.3		809
1991	PB	1991	08	05.28472	21	07	14.50	-14	44	48.0		809
1991	PE	1991	08	14.35486	21	37	42.22	-15	57	26.0	16.0	809
1991	PE	1991	08	14.36562	21	37	41.71	-15	57	28.9		809
1991	PE	1991	08	16.32569	21	36	18.17	-16	07	37.4		809
1991	PE	1991	08	16.33611	21	36	17.71	-16	07	40.2		809
1991	PE	1991	08	16.34722	21	36	17.31	-16	07	43.1		809
1991	PG	1991	08	06.24444	21	54	23.83	-13	23	13.9	18.2	809
1991	PG	1991	08	06.25764	21	54	23.16	-13	23	17.4		809
1991	PG	1991	08	06.27083	21	54	22.53	-13	23	20.2		809
1991	PG	1991	08	14.20625	21	48	23.34	-13	54	00.2		809
1991	PG	1991	08	14.21944	21	48	22.69	-13	54	02.5		809
1991	PG	1991	08	14.23264	21	48	22.06	-13	54	06.0		809
1991	PJ	1991	08	06.24444	21	56	14.42	-15	56	08.5	18.0	809
1991	PJ	1991	08	06.25764	21	56	13.83	-15	56	15.3		809
1991	PJ	1991	08	06.27083	21	56	13.21	-15	56	21.8		809
1991	PJ	1991	08	14.20625	21	50	18.17	-17	05	47.9		809
1991	PJ	1991	08	14.21944	21	50	17.45	-17	05	54.6		809
1991	PJ	1991	08	14.23264	21	50	16.80	-17	06	01.0		809
1991	PQ	1991	08	06.14792	21	11	13.09	-11	44	10.2	16.0	809
1991	PQ	1991	08	06.15833	21	11	12.52	-11	44	09.8		809
1991	PQ	1991	08	06.16875	21	11	12.01	-11	44	09.4		809
1991	PQ	1991	08	11.27778	21	07	00.24	-11	41	39.5	16.7	809
1991	PQ	1991	08	11.28819	21	06	59.65	-11	41	39.2		809
1991	PQ	1991	08	11.29861	21	06	59.18	-11	41	39.6		809

1991	PS		1991	08	06.14792	21	12	19.10	-11	16	40.3	17.3	809
1991	PS		1991	08	06.15833	21	12	18.35	-11	16	42.8		809
1991	PS		1991	08	06.16875	21	12	17.82	-11	16	44.0		809
1991	PS		1991	08	11.27778	21	07	02.21	-11	30	49.2	17.5	809
1991	PS		1991	08	11.28819	21	07	01.50	-11	30	50.8		809
1991	PS		1991	08	11.29861	21	07	00.80	-11	30	53.3		809
1991	PU		1991	08	03.09167	21	16	22.80	-12	45	17.7	18.5	809
1991	PU		1991	08	03.10486	21	16	22.05	-12	45	18.8		809
1991	PU		1991	08	03.11806	21	16	21.33	-12	45	20.9		809
1991	PV		1991	08	06.19653	21	25	47.52	-10	40	25.0	17.4	809
1991	PV		1991	08	06.20694	21	25	47.05	-10	40	26.7		809
1991	PV		1991	08	06.21736	21	25	46.49	-10	40	29.9		809
1991	PV		1991	08	10.30278	21	22	29.65	-10	56	14.2		809
1991	PV		1991	08	10.31319	21	22	28.99	-10	56	17.2		809
1991	PV		1991	08	10.32361	21	22	28.44	-10	56	19.3		809
1991	PV		1991	08	11.31250	21	21	40.18	-11	00	22.8	17.7	809
1991	PV		1991	08	11.32292	21	21	39.61	-11	00	25.3		809
1991	PV		1991	08	11.33333	21	21	39.09	-11	00	28.6		809
1991	PV		1991	08	14.28194	21	19	15.43	-11	12	55.3		809
1991	PV		1991	08	14.29236	21	19	14.90	-11	12	58.0		809
1991	PV		1991	08	14.30278	21	19	14.40	-11	13	00.6	16.9	809
1991	PW		1991	08	06.19653	21	26	34.22	-09	19	38.2	17.0	809
1991	PW		1991	08	06.20694	21	26	33.69	-09	19	39.4		809
1991	PW		1991	08	06.21736	21	26	33.13	-09	19	40.3		809
1991	PN1	*	1991	08	02.13472	21	25	58.43	-15	17	08.0	17.0	809
1991	PN1		1991	08	02.14514	21	25	57.92	-15	17	08.3		809
1991	PN1		1991	08	02.15556	21	25	57.40	-15	17	06.9		809
1991	PN1		1991	08	03.09167	21	25	11.36	-15	16	07.2	18.5	809
1991	PN1		1991	08	03.10486	21	25	10.72	-15	16	06.0		809
1991	PN1		1991	08	03.11806	21	25	10.05	-15	16	05.3		809
1991	PN1		1991	08	05.15972	21	23	26.17	-15	14	01.6		809
1991	PN1		1991	08	05.17014	21	23	25.63	-15	14	01.1		809
1991	PN1		1991	08	05.18056	21	23	25.05	-15	14	00.6		809
1991	PN1		1991	08	05.26458	21	23	20.36	-15	13	55.9		809
1991	PN1		1991	08	05.27500	21	23	19.77	-15	13	56.3		809
1991	PN1		1991	08	05.28542	21	23	19.18	-15	13	55.0		809
1991	PN1		1991	08	10.26528	21	18	53.22	-15	09	11.3		809
1991	PN1		1991	08	10.27708	21	18	52.48	-15	09	10.6		809
1991	PN1		1991	08	10.28750	21	18	51.86	-15	09	08.8		809
1991	PO1	*	1991	08	02.13472	21	26	43.36	-14	20	39.5	18.0	809
1991	PO1		1991	08	02.14514	21	26	42.97	-14	20	43.7		809
1991	PO1		1991	08	02.15556	21	26	42.65	-14	20	47.6		809
1991	PO1		1991	08	03.09167	21	26	03.56	-14	26	51.9	18.7	809
1991	PO1		1991	08	03.10486	21	26	03.04	-14	26	56.6		809
1991	PO1		1991	08	03.11806	21	26	02.44	-14	27	01.7		809
1991	PO1		1991	08	05.15972	21	24	36.60	-14	40	19.7		809
1991	PO1		1991	08	05.17014	21	24	36.13	-14	40	24.0		809
1991	PO1		1991	08	05.18056	21	24	35.69	-14	40	27.7		809
1991	PO1		1991	08	05.26458	21	24	31.98	-14	41	00.9		809
1991	PO1		1991	08	05.27500	21	24	31.49	-14	41	04.7		809
1991	PO1		1991	08	05.28542	21	24	31.08	-14	41	08.5		809
1991	PP1	*	1991	08	02.13472	21	26	48.14	-15	15	16.3	17.8	809
1991	PP1		1991	08	02.14514	21	26	47.51	-15	15	22.0		809
1991	PP1		1991	08	02.15556	21	26	46.85	-15	15	23.3		809
1991	PP1		1991	08	03.09167	21	26	03.62	-15	18	15.3	18.7	809
1991	PP1		1991	08	03.10486	21	26	03.00	-15	18	17.8		809
1991	PP1		1991	08	03.11806	21	26	02.36	-15	18	19.6		809
1991	PP1		1991	08	05.15972	21	24	25.85	-15	24	43.1		809
1991	PP1		1991	08	05.17014	21	24	25.35	-15	24	44.8		809

1991	PP1		1991	08	05.18056	21	24	24.88	-15	24	47.7	809
1991	PP1		1991	08	05.26458	21	24	20.66	-15	25	03.4	809
1991	PP1		1991	08	05.27500	21	24	20.12	-15	25	04.6	809
1991	PP1		1991	08	05.28542	21	24	19.62	-15	25	06.4	809
1991	PP1		1991	08	10.26528	21	20	17.48	-15	40	55.6	809
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1991	PP1		1991	08	10.28750	21	20	16.26	-15	40	59.5	809
1991	PQ1	*	1991	08	05.15972	21	25	40.56	-14	13	21.2	809
1991	PQ1		1991	08	05.17014	21	25	40.09	-14	13	23.7	809
1991	PQ1		1991	08	05.18056	21	25	39.58	-14	13	26.2	809
1991	PQ1		1991	08	10.26528	21	21	36.16	-14	37	54.1	17.0 809
1991	PQ1		1991	08	10.27708	21	21	35.52	-14	37	58.4	809
1991	PQ1		1991	08	10.28750	21	21	35.03	-14	38	00.8	809
1991	PR1	*	1991	08	10.30278	21	22	53.84	-11	10	23.1	809
1991	PR1		1991	08	10.31319	21	22	53.35	-11	10	24.0	809
1991	PR1		1991	08	10.32361	21	22	52.82	-11	10	25.4	809
1991	PR1		1991	08	11.31250	21	22	02.59	-11	11	41.1	17.3 809
1991	PR1		1991	08	11.32292	21	22	02.04	-11	11	42.6	809
1991	PR1		1991	08	11.33333	21	22	01.50	-11	11	44.3	809
1991	PR1		1991	08	14.28194	21	19	31.71	-11	15	36.1	809
1991	PR1		1991	08	14.29236	21	19	31.26	-11	15	37.0	809
1991	PR1		1991	08	14.30278	21	19	30.70	-11	15	37.4	17.0 809
1991	PS1	*	1991	08	10.30278	21	24	27.64	-11	34	38.2	809
1991	PS1		1991	08	10.31319	21	24	27.08	-11	34	35.0	809
1991	PS1		1991	08	10.32361	21	24	26.53	-11	34	32.3	809
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1991	PS1		1991	08	14.29236	21	20	44.48	-11	13	24.0	809
1991	PS1		1991	08	14.30278	21	20	43.90	-11	13	21.0	17.8 809
1991	PT1	*	1991	08	10.30278	21	24	41.87	-10	11	31.5	809
1991	PT1		1991	08	10.31319	21	24	41.23	-10	11	35.2	809
1991	PT1		1991	08	10.32361	21	24	40.72	-10	11	38.2	809
1991	PT1		1991	08	14.28194	21	20	53.13	-10	35	09.6	809
1991	PT1		1991	08	14.29236	21	20	52.45	-10	35	13.4	809
1991	PT1		1991	08	14.30278	21	20	51.90	-10	35	16.9	17.4 809
1991	PU1	*	1991	08	10.30278	21	24	45.61	-10	44	09.8	809
1991	PU1		1991	08	10.31319	21	24	44.96	-10	44	12.3	809
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1991	PU1		1991	08	14.28194	21	21	13.48	-11	09	03.8	809
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1991	PV1	*	1991	08	10.30278	21	25	53.54	-09	57	49.5	809
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1991	PV1		1991	08	10.32361	21	25	52.58	-09	57	59.6	809
1991	PV1		1991	08	14.28194	21	22	48.89	-10	27	55.4	809
1991	PV1		1991	08	14.29236	21	22	48.34	-10	28	00.2	809
1991	PV1		1991	08	14.30278	21	22	47.85	-10	28	04.0	17.0 809
1991	PW1	*	1991	08	10.30278	21	26	48.63	-10	51	44.8	809
1991	PW1		1991	08	10.31319	21	26	48.22	-10	51	48.5	809
1991	PW1		1991	08	10.32361	21	26	47.81	-10	51	50.2	809
1991	PW1		1991	08	14.28194	21	24	08.66	-11	06	53.5	809
1991	PW1		1991	08	14.29236	21	24	08.12	-11	06	57.0	809
1991	PW1		1991	08	14.30278	21	24	07.66	-11	07	01.3	18.2 809
1991	PX1	*	1991	08	10.30278	21	28	29.39	-10	16	49.4	809
1991	PX1		1991	08	10.31319	21	28	29.32	-10	16	52.3	809
1991	PX1		1991	08	10.32361	21	28	28.62	-10	16	53.8	809
1991	PX1		1991	08	14.28194	21	24	41.12	-10	46	08.2	809
1991	PX1		1991	08	14.29236	21	24	40.39	-10	46	14.0	809
1991	PX1		1991	08	14.30278	21	24	39.81	-10	46	17.1	18.0 809
1991	PY1	*	1991	08	02.13125	20	48	05.02	-20	29	01.4	18.4 809

1991	PY1		1991	08	07.09792	20	43	46.31	-21	09	53.1	18.6	809
1991	PY1		1991	08	07.11111	20	43	45.55	-21	10	00.0		809
1991	PY1		1991	08	07.12431	20	43	44.85	-21	10	05.7		809
1991	PZ1	*	1991	08	02.13125	20	48	45.63	-20	30	49.5	18.7	809
1991	PZ1		1991	08	07.09792	20	43	54.61	-20	52	09.5	19.2	809
1991	PZ1		1991	08	07.11111	20	43	53.69	-20	52	13.5		809
1991	PZ1		1991	08	07.12431	20	43	52.86	-20	52	18.1		809
1991	PA2	*	1991	08	02.13125	20	49	48.51	-20	00	19.2	18.7	809
1991	PA2		1991	08	07.09792	20	45	51.40	-20	18	22.1	19.6	809
1991	PA2		1991	08	07.11111	20	45	50.61	-20	18	25.5		809
1991	PA2		1991	08	07.12431	20	45	49.73	-20	18	31.1		809
1991	PB2	*	1991	08	02.13125	20	50	13.10	-21	03	01.7	18.4	809
1991	PB2		1991	08	07.09792	20	45	41.45	-21	33	46.8	19.3	809
1991	PB2		1991	08	07.11111	20	45	40.51	-21	33	52.2		809
1991	PB2		1991	08	07.12431	20	45	39.72	-21	33	58.1		809
1991	PC2	*	1991	08	02.13125	20	50	44.25	-19	30	16.0	18.4	809
1991	PC2		1991	08	07.09792	20	46	10.86	-19	36	45.6	18.8	809
1991	PC2		1991	08	07.11111	20	46	10.03	-19	36	46.9		809
1991	PC2		1991	08	07.12431	20	46	09.32	-19	36	48.1		809
1991	PD2	*	1991	08	02.13125	20	50	54.39	-20	58	28.9	18.5	809
1991	PD2		1991	08	07.09792	20	46	45.26	-21	26	58.1	19.0	809
1991	PD2		1991	08	07.11111	20	46	44.30	-21	27	02.6		809
1991	PD2		1991	08	07.12431	20	46	43.65	-21	27	04.4		809
1991	PE2	*	1991	08	02.13125	20	51	08.71	-21	42	41.7	18.5	809
1991	PE2		1991	08	07.09792	20	46	42.63	-21	55	34.4	18.7	809
1991	PE2		1991	08	07.11111	20	46	41.88	-21	55	36.1		809
1991	PE2		1991	08	07.12431	20	46	41.04	-21	55	38.2		809
1991	PF2	*	1991	08	02.13125	20	51	08.93	-18	32	54.5	18.6	809
1991	PF2		1991	08	07.09792	20	47	10.06	-19	04	16.2	19.0	809
1991	PF2		1991	08	07.11111	20	47	09.30	-19	04	21.6		809
1991	PF2		1991	08	07.12431	20	47	08.71	-19	04	26.4		809
1991	PG2	*	1991	08	02.13125	20	51	14.09	-21	05	16.5	18.6	809
1991	PG2		1991	08	07.09792	20	47	01.59	-21	33	03.2	19.2	809
1991	PG2		1991	08	07.11111	20	47	00.89	-21	33	07.9		809
1991	PG2		1991	08	07.12431	20	47	00.19	-21	33	16.0		809
1991	PH2	*	1991	08	02.13125	20	51	37.30	-19	26	08.7	18.5	809
1991	PH2		1991	08	07.09792	20	47	03.96	-19	46	18.0	19.0	809
1991	PH2		1991	08	07.11111	20	47	03.12	-19	46	21.6		809
1991	PH2		1991	08	07.12431	20	47	02.34	-19	46	25.9		809
1991	PJ2	*	1991	08	02.13125	20	52	07.87	-22	00	52.6	18.6	809
1991	PJ2		1991	08	07.09792	20	49	10.38	-22	18	14.2	19.6	809
1991	PJ2		1991	08	07.11111	20	49	09.63	-22	18	20.4		809
1991	PJ2		1991	08	07.12431	20	49	08.91	-22	18	25.2		809
1991	PK2	*	1991	08	02.13125	20	52	30.39	-22	03	58.8	18.6	809
1991	PK2		1991	08	07.09792	20	48	47.18	-22	35	29.0	19.6	809
1991	PK2		1991	08	07.11111	20	48	46.51	-22	35	30.8		809
1991	PK2		1991	08	07.12431	20	48	46.06	-22	35	31.7		809
1991	PL2	*	1991	08	02.13125	20	52	34.79	-21	46	37.3	18.5	809
1991	PL2		1991	08	07.09792	20	47	50.18	-21	49	02.3	18.7	809
1991	PL2		1991	08	07.11111	20	47	49.44	-21	49	02.7		809
1991	PL2		1991	08	07.12431	20	47	48.59	-21	49	02.5		809
1991	PM2	*	1991	08	02.13125	20	52	38.55	-19	48	23.2	18.5	809
1991	PM2		1991	08	07.09792	20	48	26.70	-20	08	16.5	19.5	809
1991	PM2		1991	08	07.11111	20	48	25.81	-20	08	18.2		809
1991	PM2		1991	08	07.12431	20	48	25.13	-20	08	19.7		809
1991	PN2	*	1991	08	02.13125	20	52	46.42	-21	49	34.4	18.3	809
1991	PN2		1991	08	07.09792	20	48	30.41	-22	19	11.2	18.6	809
1991	PN2		1991	08	07.11111	20	48	29.71	-22	19	15.8		809
1991	PN2		1991	08	07.12431	20	48	28.98	-22	19	21.1		809

1991	PO2	*	1991	08	02.13125	20	53	11.17	-20	01	58.8	18.5	809
1991	PO2		1991	08	07.09792	20	49	15.26	-20	19	11.6	19.2	809
1991	PO2		1991	08	07.11111	20	49	14.59	-20	19	14.6		809
1991	PO2		1991	08	07.12431	20	49	13.88	-20	19	18.7		809
1991	PP2	*	1991	08	02.13125	20	53	18.00	-19	55	13.2	18.6	809
1991	PP2		1991	08	07.09792	20	48	43.34	-20	08	57.8	19.2	809
1991	PP2		1991	08	07.11111	20	48	42.59	-20	09	00.5		809
1991	PP2		1991	08	07.12431	20	48	41.98	-20	09	04.8		809
1991	PQ2	*	1991	08	02.13125	20	53	31.78	-21	05	43.4	18.3	809
1991	PQ2		1991	08	07.09792	20	48	41.98	-21	20	56.4	18.6	809
1991	PQ2		1991	08	07.11111	20	48	41.16	-21	20	59.2		809
1991	PQ2		1991	08	07.12431	20	48	40.26	-21	21	01.8		809
1991	PR2	*	1991	08	02.13125	20	53	57.51	-19	58	32.0	18.3	809
1991	PR2		1991	08	07.09792	20	48	27.87	-19	43	46.7	18.6	809
1991	PR2		1991	08	07.11111	20	48	26.91	-19	43	43.8		809
1991	PR2		1991	08	07.12431	20	48	26.01	-19	43	41.5		809
1991	PS2	*	1991	08	02.13125	20	54	17.94	-20	47	00.5	18.0	809
1991	PS2		1991	08	07.09792	20	50	20.17	-21	45	14.5	18.6	809
1991	PS2		1991	08	07.11111	20	50	19.44	-21	45	23.5		809
1991	PS2		1991	08	07.12431	20	50	18.87	-21	45	32.4		809
1991	PT2	*	1991	08	02.13125	20	56	11.03	-20	15	31.0	18.2	809
1991	PT2		1991	08	07.09792	20	52	28.60	-20	50	21.4	18.6	809
1991	PT2		1991	08	07.11111	20	52	27.92	-20	50	26.7		809
1991	PT2		1991	08	07.12431	20	52	27.28	-20	50	32.7		809
1991	PU2	*	1991	08	02.13125	20	56	16.69	-22	37	34.0	18.5	809
1991	PU2		1991	08	07.09792	20	51	19.70	-22	32	47.9	18.6	809
1991	PU2		1991	08	07.11111	20	51	18.85	-22	32	46.5		809
1991	PU2		1991	08	07.12431	20	51	17.93	-22	32	46.6		809
1991	PV2	*	1991	08	02.13125	20	57	19.46	-19	02	16.2	18.0	809
1991	PV2		1991	08	07.09792	20	52	46.02	-19	02	59.4	18.3	809
1991	PV2		1991	08	07.11111	20	52	45.20	-19	02	59.0		809
1991	PV2		1991	08	07.12431	20	52	44.50	-19	02	59.2		809
1991	PW2	*	1991	08	02.13125	20	57	45.04	-18	34	23.2	18.4	809
1991	PW2		1991	08	07.09792	20	52	18.56	-18	49	32.6	18.6	809
1991	PW2		1991	08	07.11111	20	52	17.63	-18	49	35.2		809
1991	PW2		1991	08	07.12431	20	52	16.80	-18	49	37.3		809
1991	PX2	*	1991	08	02.13125	20	57	54.82	-20	09	06.2	18.5	809
1991	PX2		1991	08	07.09792	20	53	16.93	-20	16	23.4	19.0	809
1991	PX2		1991	08	07.11111	20	53	16.12	-20	16	24.1		809
1991	PX2		1991	08	07.12431	20	53	15.10	-20	16	25.7		809
1991	PY2	*	1991	08	02.13125	20	58	08.69	-20	51	58.6	18.6	809
1991	PY2		1991	08	07.09792	20	52	45.30	-20	56	51.2	19.4	809
1991	PY2		1991	08	07.11111	20	52	44.42	-20	56	52.9		809
1991	PY2		1991	08	07.12431	20	52	43.66	-20	56	53.7		809
1991	PZ2	*	1991	08	02.13125	20	59	00.04	-19	17	13.8	18.5	809
1991	PZ2		1991	08	07.09792	20	54	09.79	-19	48	32.5	19.5	809
1991	PZ2		1991	08	07.11111	20	54	08.97	-19	48	37.0		809
1991	PZ2		1991	08	07.12431	20	54	08.31	-19	48	41.2		809
1991	PA3	*	1991	08	02.13125	21	00	03.16	-18	53	42.6	18.6	809
1991	PA3		1991	08	07.09792	20	53	26.37	-18	35	00.3	19.3	809
1991	PA3		1991	08	07.11111	20	53	25.20	-18	34	55.8		809
1991	PA3		1991	08	07.12431	20	53	24.31	-18	34	53.9		809
1991	PB3	*	1991	08	02.13125	21	00	34.60	-21	58	01.6	18.3	809
1991	PB3		1991	08	07.09792	20	55	26.34	-21	44	50.4	18.5	809
1991	PB3		1991	08	07.11111	20	55	25.47	-21	44	48.6		809
1991	PB3		1991	08	07.12431	20	55	24.66	-21	44	46.7		809
1991	PC3	*	1991	08	02.13125	21	01	39.12	-18	01	48.5	18.7	809
1991	PC3		1991	08	07.09792	20	57	55.95	-18	42	03.7	19.2	809
1991	PC3		1991	08	07.11111	20	57	55.29	-18	42	10.4		809

1991	PC3		1991	08	07.12431	20	57	54.79	-18	42	17.1		809
1991	PD3	*	1991	08	02.13125	21	02	06.97	-18	32	22.4	17.8	809
1991	PD3		1991	08	07.09792	20	56	51.86	-18	25	12.1	18.0	809
1991	PD3		1991	08	07.11111	20	56	50.94	-18	25	10.4		809
1991	PD3		1991	08	07.12431	20	56	50.05	-18	25	09.6		809
1991	PE3	*	1991	08	02.13125	21	02	27.71	-18	59	43.3	18.4	809
1991	PE3		1991	08	07.09792	20	57	35.16	-19	28	37.2	18.5	809
1991	PE3		1991	08	07.11111	20	57	34.28	-19	28	41.4		809
1991	PE3		1991	08	07.12431	20	57	33.43	-19	28	47.3		809
1991	PF3	*	1991	08	02.13125	21	02	40.33	-19	15	56.7	18.4	809
1991	PF3		1991	08	07.09792	20	58	28.27	-20	00	02.5	19.6	809
1991	PF3		1991	08	07.11111	20	58	27.74	-20	00	08.7		809
1991	PF3		1991	08	07.12431	20	58	26.95	-20	00	16.8		809
1991	PG3	*	1991	08	02.13125	21	03	10.16	-19	41	24.6	18.6	809
1991	PG3		1991	08	07.09792	20	59	05.25	-20	01	38.7	19.3	809
1991	PG3		1991	08	07.11111	20	59	04.70	-20	01	41.8		809
1991	PG3		1991	08	07.12431	20	59	04.18	-20	01	43.5		809
1991	PH3	*	1991	08	02.13125	21	03	11.61	-20	48	34.9	18.1	809
1991	PH3		1991	08	07.09792	20	58	42.31	-21	17	16.1	18.2	809
1991	PH3		1991	08	07.11111	20	58	41.58	-21	17	20.5		809
1991	PH3		1991	08	07.12431	20	58	40.86	-21	17	25.4		809
1991	PJ3	*	1991	08	02.13125	21	04	09.16	-21	59	48.3	18.5	809
1991	PJ3		1991	08	07.09792	20	58	48.14	-22	13	39.5	19.0	809
1991	PJ3		1991	08	07.11111	20	58	47.14	-22	13	42.9		809
1991	PJ3		1991	08	07.12431	20	58	46.26	-22	13	45.8		809
1991	PK3	*	1991	08	02.13125	21	04	38.02	-20	59	17.0	18.2	809
1991	PK3		1991	08	07.09792	21	00	02.43	-21	20	31.1	18.7	809
1991	PK3		1991	08	07.11111	21	00	01.61	-21	20	35.2		809
1991	PK3		1991	08	07.12431	21	00	00.84	-21	20	38.6		809
1991	PL3	*	1991	08	02.13125	21	05	17.95	-22	36	57.8	18.5	809
1991	PL3		1991	08	07.09792	21	00	57.27	-22	55	42.7	18.7	809
1991	PL3		1991	08	07.11111	21	00	56.50	-22	55	45.6		809
1991	PL3		1991	08	07.12431	21	00	55.93	-22	55	47.8		809
1991	PM3	*	1991	08	02.13125	21	05	25.76	-20	09	10.5	18.3	809
1991	PM3		1991	08	07.09792	21	00	51.54	-20	53	32.9	18.6	809
1991	PM3		1991	08	07.11111	21	00	50.75	-20	53	39.7		809
1991	PM3		1991	08	07.12431	21	00	50.04	-20	53	47.2		809
1991	PN3	*	1991	08	02.13125	21	05	51.82	-21	14	52.0	19.0	809
1991	PN3		1991	08	07.09792	21	00	57.33	-21	20	41.5	19.4	809
1991	PN3		1991	08	07.11111	21	00	56.56	-21	20	42.6		809
1991	PN3		1991	08	07.12431	21	00	55.80	-21	20	44.1		809
1991	PO3	*	1991	08	02.13125	21	06	11.52	-19	14	35.2	18.6	809
1991	PO3		1991	08	07.09792	21	01	41.40	-19	24	18.4	19.0	809
1991	PO3		1991	08	07.11111	21	01	40.61	-19	24	19.7		809
1991	PO3		1991	08	07.12431	21	01	39.85	-19	24	21.5		809
1991	PP3	*	1991	08	02.13125	21	07	01.23	-20	27	57.0	18.6	809
1991	PP3		1991	08	07.09792	21	02	45.56	-20	51	05.3	18.8	809
1991	PP3		1991	08	07.11111	21	02	44.86	-20	51	09.2		809
1991	PP3		1991	08	07.12431	21	02	44.11	-20	51	13.3		809
1991	PQ3	*	1991	08	02.13125	21	07	52.59	-20	21	47.3	18.5	809
1991	PQ3		1991	08	07.09792	21	03	25.31	-20	35	44.4	19.0	809
1991	PQ3		1991	08	07.11111	21	03	24.59	-20	35	45.7		809
1991	PQ3		1991	08	07.12431	21	03	23.80	-20	35	48.6		809
1991	PR3	*	1991	08	03.09167	21	04	55.21	-14	02	04.0	18.5	809
1991	PR3		1991	08	03.10486	21	04	54.43	-14	02	10.7		809
1991	PR3		1991	08	03.11806	21	04	53.69	-14	02	15.7		809
1991	PR3		1991	08	05.25833	21	03	01.83	-14	18	13.7		809
1991	PR3		1991	08	05.27153	21	03	01.07	-14	18	19.1		809
1991	PR3		1991	08	05.28472	21	03	00.39	-14	18	24.7		809

1991	PS3	*	1991	08	03.09167	21	06	17.46	-13	02	50.6	18.6 809
1991	PS3		1991	08	03.10486	21	06	16.74	-13	02	53.9	809
1991	PS3		1991	08	03.11806	21	06	16.17	-13	02	57.4	809
1991	PS3		1991	08	05.25833	21	04	41.27	-13	12	13.6	809
1991	PS3		1991	08	05.27153	21	04	40.60	-13	12	16.9	809
1991	PS3		1991	08	05.28472	21	04	40.09	-13	12	19.9	809
1991	PT3	*	1991	08	03.09167	21	06	38.14	-13	54	43.9	18.6 809
1991	PT3		1991	08	03.10486	21	06	37.32	-13	54	44.7	809
1991	PT3		1991	08	03.11806	21	06	36.63	-13	54	46.2	809
1991	PT3		1991	08	05.25833	21	04	45.28	-13	57	06.3	809
1991	PT3		1991	08	05.27153	21	04	44.55	-13	57	06.9	809
1991	PT3		1991	08	05.28472	21	04	43.84	-13	57	07.2	809
1991	PU3	*	1991	08	03.09167	21	06	48.02	-14	51	46.1	18.8 809
1991	PU3		1991	08	03.10486	21	06	47.26	-14	51	50.7	809
1991	PU3		1991	08	03.11806	21	06	46.55	-14	51	54.5	809
1991	PU3		1991	08	05.25833	21	04	53.33	-15	01	31.2	809
1991	PU3		1991	08	05.27153	21	04	52.51	-15	01	34.8	809
1991	PU3		1991	08	05.28472	21	04	51.75	-15	01	38.8	809
1991	PV3	*	1991	08	03.09167	21	06	48.79	-15	01	42.4	19.0 809
1991	PV3		1991	08	03.10486	21	06	48.14	-15	01	47.6	809
1991	PV3		1991	08	03.11806	21	06	47.35	-15	01	52.9	809
1991	PV3		1991	08	05.25833	21	06	00.93	-15	04	16.5	809
1991	PV3		1991	08	05.27153	21	06	00.24	-15	04	17.9	809
1991	PV3		1991	08	05.28472	21	05	59.64	-15	04	20.4	809
1991	PW3	*	1991	08	03.09167	21	06	59.10	-16	27	48.6	18.7 809
1991	PW3		1991	08	03.10486	21	06	58.26	-16	27	54.2	809
1991	PW3		1991	08	03.11806	21	06	57.47	-16	27	58.6	809
1991	PW3		1991	08	05.25833	21	04	56.23	-16	40	30.0	809
1991	PW3		1991	08	05.27153	21	04	55.33	-16	40	33.7	809
1991	PW3		1991	08	05.28472	21	04	54.64	-16	40	39.5	809
1991	PX3	*	1991	08	03.09167	21	07	01.21	-16	42	10.1	19.4 809
1991	PX3		1991	08	03.10486	21	07	00.39	-16	42	18.0	809
1991	PX3		1991	08	03.11806	21	06	59.65	-16	42	24.7	809
1991	PX3		1991	08	05.25833	21	04	56.24	-16	50	56.8	809
1991	PX3		1991	08	05.27153	21	04	55.41	-16	51	01.2	809
1991	PX3		1991	08	05.28472	21	04	54.67	-16	51	05.6	809
1991	PY3	*	1991	08	03.09167	21	07	12.72	-16	03	05.0	18.6 809
1991	PY3		1991	08	03.10486	21	07	12.02	-16	03	07.5	809
1991	PY3		1991	08	03.11806	21	07	11.22	-16	03	10.7	809
1991	PY3		1991	08	05.25833	21	05	16.08	-16	10	33.3	809
1991	PY3		1991	08	05.27153	21	05	15.26	-16	10	36.5	809
1991	PY3		1991	08	05.28472	21	05	14.59	-16	10	39.8	809
1991	PZ3	*	1991	08	03.09167	21	07	36.45	-15	03	52.5	19.0 809
1991	PZ3		1991	08	03.10486	21	07	35.87	-15	04	00.0	809
1991	PZ3		1991	08	03.11806	21	07	35.11	-15	04	10.5	809
1991	PZ3		1991	08	05.25833	21	06	01.38	-15	28	05.7	809
1991	PZ3		1991	08	05.27153	21	06	00.72	-15	28	14.6	809
1991	PZ3		1991	08	05.28472	21	06	00.02	-15	28	23.7	809
1991	PA4	*	1991	08	03.09167	21	07	37.20	-14	17	46.6	18.5 809
1991	PA4		1991	08	03.10486	21	07	36.45	-14	17	49.5	809
1991	PA4		1991	08	03.11806	21	07	35.75	-14	17	52.8	809
1991	PA4		1991	08	05.25833	21	05	51.24	-14	26	21.5	809
1991	PA4		1991	08	05.27153	21	05	50.51	-14	26	24.5	809
1991	PA4		1991	08	05.28472	21	05	49.89	-14	26	27.2	809
1991	PB4	*	1991	08	03.09167	21	08	41.71	-14	43	14.9	18.0 809
1991	PB4		1991	08	03.10486	21	08	40.84	-14	43	13.6	809
1991	PB4		1991	08	03.11806	21	08	40.00	-14	43	13.1	809
1991	PB4		1991	08	05.25833	21	06	28.29	-14	41	05.9	809
1991	PB4		1991	08	05.27153	21	06	27.38	-14	41	05.2	809

1991	PB4		1991	08	05.28472	21	06	26.56	-14	41	03.9		809
1991	PC4	*	1991	08	03.09167	21	08	54.69	-12	58	54.4	19.4	809
1991	PC4		1991	08	03.10486	21	08	53.94	-12	58	59.1		809
1991	PC4		1991	08	03.11806	21	08	53.26	-12	59	02.9		809
1991	PC4		1991	08	05.25833	21	07	05.86	-13	09	26.1	19.5	809
1991	PC4		1991	08	05.27153	21	07	05.34	-13	09	26.8		809
1991	PC4		1991	08	05.28472	21	07	04.48	-13	09	32.8		809
1991	PD4	*	1991	08	03.09167	21	09	05.67	-17	15	01.7	19.4	809
1991	PD4		1991	08	03.10486	21	09	04.99	-17	15	09.0		809
1991	PD4		1991	08	03.11806	21	09	04.29	-17	15	17.8		809
1991	PD4		1991	08	05.25833	21	07	16.65	-17	36	51.0		809
1991	PD4		1991	08	05.27153	21	07	15.92	-17	36	59.4		809
1991	PD4		1991	08	05.28472	21	07	15.18	-17	37	06.7		809
1991	PE4	*	1991	08	03.09167	21	09	33.79	-16	43	44.4	18.0	809
1991	PE4		1991	08	03.10486	21	09	33.11	-16	43	49.2		809
1991	PE4		1991	08	03.11806	21	09	32.39	-16	43	53.0		809
1991	PE4		1991	08	05.25833	21	07	47.04	-16	55	57.5		809
1991	PE4		1991	08	05.27153	21	07	46.37	-16	56	01.7		809
1991	PE4		1991	08	05.28472	21	07	45.63	-16	56	05.4		809
1991	PF4	*	1991	08	03.09167	21	09	35.46	-17	18	55.4	18.5	809
1991	PF4		1991	08	03.10486	21	09	34.89	-17	19	00.0		809
1991	PF4		1991	08	03.11806	21	09	34.24	-17	19	03.5		809
1991	PF4		1991	08	05.25833	21	07	58.56	-17	31	01.3		809
1991	PF4		1991	08	05.27153	21	07	57.90	-17	31	06.0		809
1991	PF4		1991	08	05.28472	21	07	57.29	-17	31	10.4		809
1991	PG4	*	1991	08	03.09167	21	09	50.79	-15	48	16.7	18.7	809
1991	PG4		1991	08	03.10486	21	09	50.16	-15	48	19.8		809
1991	PG4		1991	08	03.11806	21	09	49.48	-15	48	24.0		809
1991	PG4		1991	08	05.25833	21	08	16.14	-16	00	19.6		809
1991	PG4		1991	08	05.27153	21	08	15.55	-16	00	24.6		809
1991	PG4		1991	08	05.28472	21	08	14.83	-16	00	28.6		809
1991	PH4	*	1991	08	03.09167	21	09	52.88	-15	37	10.3	18.5	809
1991	PH4		1991	08	03.10486	21	09	52.19	-15	37	13.4		809
1991	PH4		1991	08	03.11806	21	09	51.56	-15	37	18.2		809
1991	PH4		1991	08	05.25833	21	08	12.82	-15	45	53.7		809
1991	PH4		1991	08	05.27153	21	08	12.16	-15	45	57.6		809
1991	PH4		1991	08	05.28472	21	08	11.36	-15	46	00.9		809
1991	PJ4	*	1991	08	03.09167	21	09	56.25	-17	26	39.3	18.5	809
1991	PJ4		1991	08	03.10486	21	09	55.65	-17	26	44.6		809
1991	PJ4		1991	08	03.11806	21	09	54.99	-17	26	50.7		809
1991	PJ4		1991	08	05.25833	21	08	18.23	-17	40	44.8		809
1991	PJ4		1991	08	05.27153	21	08	17.53	-17	40	49.9		809
1991	PJ4		1991	08	05.28472	21	08	16.90	-17	40	55.5		809
1991	PK4	*	1991	08	03.09167	21	10	02.75	-14	03	31.2	18.7	809
1991	PK4		1991	08	03.10486	21	10	02.03	-14	03	34.5		809
1991	PK4		1991	08	03.11806	21	10	01.24	-14	03	37.6		809
1991	PK4		1991	08	05.25833	21	07	54.35	-14	11	38.5		809
1991	PK4		1991	08	05.27153	21	07	53.48	-14	11	42.1		809
1991	PK4		1991	08	05.28472	21	07	52.71	-14	11	44.1		809
1991	PL4	*	1991	08	03.09167	21	10	42.72	-14	08	38.6	19.6	809
1991	PL4		1991	08	03.10486	21	10	42.14	-14	08	42.5		809
1991	PL4		1991	08	03.11806	21	10	41.39	-14	08	46.9		809
1991	PL4		1991	08	05.25833	21	09	04.85	-14	11	28.6		809
1991	PL4		1991	08	05.27153	21	09	04.27	-14	11	32.0		809
1991	PL4		1991	08	05.28472	21	09	03.52	-14	11	35.3		809
1991	PM4	*	1991	08	03.09167	21	11	11.72	-16	45	17.8	18.4	809
1991	PM4		1991	08	03.10486	21	11	10.82	-16	45	19.2		809
1991	PM4		1991	08	03.11806	21	11	10.03	-16	45	19.7		809
1991	PM4		1991	08	05.25833	21	08	58.70	-16	46	18.1		809

1991	PM4		1991	08	05.27153	21	08	57.80	-16	46	18.1		809
1991	PM4		1991	08	05.28472	21	08	56.89	-16	46	18.7		809
1991	PN4	*	1991	08	03.09167	21	11	30.97	-16	25	29.6	18.7	809
1991	PN4		1991	08	03.10486	21	11	30.23	-16	25	34.5		809
1991	PN4		1991	08	03.11806	21	11	29.49	-16	25	39.8		809
1991	PN4		1991	08	05.25833	21	09	46.04	-16	39	12.6		809
1991	PN4		1991	08	05.27153	21	09	45.27	-16	39	17.4		809
1991	PN4		1991	08	05.28472	21	09	44.54	-16	39	22.6		809
1991	PO4	*	1991	08	03.09167	21	11	39.90	-14	59	09.7	18.5	809
1991	PO4		1991	08	03.10486	21	11	39.26	-14	59	14.2		809
1991	PO4		1991	08	03.11806	21	11	38.63	-14	59	16.9		809
1991	PO4		1991	08	05.25833	21	09	59.83	-15	07	58.7		809
1991	PO4		1991	08	05.27153	21	09	59.17	-15	08	01.8		809
1991	PO4		1991	08	05.28472	21	09	58.50	-15	08	04.7		809
1991	PP4	*	1991	08	03.09167	21	11	51.98	-14	45	27.9	19.0	809
1991	PP4		1991	08	03.10486	21	11	46.73	-14	45	30.6		809
1991	PP4		1991	08	03.11806	21	11	50.69	-14	45	37.7		809
1991	PP4		1991	08	05.25833	21	10	05.04	-14	59	11.1		809
1991	PP4		1991	08	05.27153	21	10	04.28	-14	59	16.4		809
1991	PP4		1991	08	05.28472	21	10	03.59	-14	59	20.7		809
1991	PQ4	*	1991	08	03.09167	21	12	14.91	-16	48	45.7	18.6	809
1991	PQ4		1991	08	03.10486	21	12	14.18	-16	48	51.6		809
1991	PQ4		1991	08	03.11806	21	12	13.33	-16	48	57.7		809
1991	PQ4		1991	08	05.25833	21	10	19.98	-17	04	24.3		809
1991	PQ4		1991	08	05.27153	21	10	19.16	-17	04	30.4		809
1991	PQ4		1991	08	05.28472	21	10	18.37	-17	04	35.7		809
1991	PR4	*	1991	08	03.09167	21	12	33.24	-14	06	08.3	19.4	809
1991	PR4		1991	08	03.10486	21	12	32.37	-14	06	09.8		809
1991	PR4		1991	08	03.11806	21	12	31.61	-14	06	11.0		809
1991	PR4		1991	08	05.25833	21	10	34.85	-14	11	28.4		809
1991	PR4		1991	08	05.27153	21	10	34.05	-14	11	30.3		809
1991	PR4		1991	08	05.28472	21	10	33.20	-14	11	31.7		809
1991	PS4	*	1991	08	03.09167	21	13	03.33	-14	23	46.7	18.5	809
1991	PS4		1991	08	03.10486	21	13	02.60	-14	23	48.0		809
1991	PS4		1991	08	03.11806	21	13	01.83	-14	23	50.6		809
1991	PS4		1991	08	05.25833	21	11	02.00	-14	30	49.7		809
1991	PS4		1991	08	05.27153	21	11	01.18	-14	30	51.5		809
1991	PS4		1991	08	05.28472	21	11	00.43	-14	30	54.3		809
1991	PT4	*	1991	08	03.09167	21	13	20.46	-14	28	45.0	18.3	809
1991	PT4		1991	08	03.10486	21	13	19.83	-14	28	47.7		809
1991	PT4		1991	08	03.11806	21	13	19.23	-14	28	50.1		809
1991	PT4		1991	08	05.25833	21	11	43.71	-14	35	44.5		809
1991	PT4		1991	08	05.27153	21	11	43.05	-14	35	46.5		809
1991	PT4		1991	08	05.28472	21	11	42.42	-14	35	48.7		809
1991	PU4	*	1991	08	03.09167	21	13	44.34	-13	56	51.9	19.5	809
1991	PU4		1991	08	03.10486	21	13	43.61	-13	56	56.5		809
1991	PU4		1991	08	03.11806	21	13	42.82	-13	57	00.1		809
1991	PU4		1991	08	05.25833	21	11	40.76	-14	07	53.0		809
1991	PU4		1991	08	05.27153	21	11	39.89	-14	07	56.1		809
1991	PU4		1991	08	05.28472	21	11	39.12	-14	08	00.1		809
1991	PV4	*	1991	08	03.09167	21	14	21.21	-16	44	18.2	18.6	809
1991	PV4		1991	08	03.10486	21	14	20.52	-16	44	21.3		809
1991	PV4		1991	08	03.11806	21	14	19.87	-16	44	24.2		809
1991	PV4		1991	08	05.25833	21	12	36.23	-16	52	05.8		809
1991	PV4		1991	08	05.27153	21	12	35.49	-16	52	07.6		809
1991	PV4		1991	08	05.28472	21	12	34.80	-16	52	09.9		809
1991	PW4	*	1991	08	03.09167	21	14	22.03	-13	58	07.1	18.6	809
1991	PW4		1991	08	03.10486	21	14	21.40	-13	58	13.6		809
1991	PW4		1991	08	03.11806	21	14	20.79	-13	58	19.0		809

1991	PW4		1991	08	05.25833	21	12	35.98	-14	14	34.9		809
1991	PW4		1991	08	05.27153	21	12	35.23	-14	14	41.3		809
1991	PW4		1991	08	05.28472	21	12	34.57	-14	14	46.5		809
1991	PX4	*	1991	08	03.09167	21	14	55.40	-14	51	28.4	18.6	809
1991	PX4		1991	08	03.10486	21	14	54.79	-14	51	32.9		809
1991	PX4		1991	08	03.11806	21	14	54.23	-14	51	35.6		809
1991	PX4		1991	08	05.25833	21	13	15.07	-15	00	07.5		809
1991	PX4		1991	08	05.27153	21	13	14.37	-15	00	10.6		809
1991	PX4		1991	08	05.28472	21	13	13.77	-15	00	13.2		809
1991	PY4	*	1991	08	03.09167	21	15	10.53	-15	24	49.5	19.4	809
1991	PY4		1991	08	03.10486	21	15	09.93	-15	24	56.8		809
1991	PY4		1991	08	03.11806	21	15	09.34	-15	25	02.5		809
1991	PY4		1991	08	05.25833	21	13	55.28	-15	33	02.5		809
1991	PY4		1991	08	05.27153	21	13	54.52	-15	33	11.0		809
1991	PY4		1991	08	05.28472	21	13	53.67	-15	33	19.0		809
1991	PZ4	*	1991	08	03.09167	21	15	20.82	-13	36	14.3	18.8	809
1991	PZ4		1991	08	03.10486	21	15	20.26	-13	36	17.1		809
1991	PZ4		1991	08	03.11806	21	15	19.53	-13	36	21.1		809
1991	PZ4		1991	08	05.25833	21	13	36.73	-13	45	02.9		809
1991	PZ4		1991	08	05.27153	21	13	36.14	-13	45	05.4		809
1991	PZ4		1991	08	05.28472	21	13	35.56	-13	45	07.1		809
1991	PA5	*	1991	08	03.09167	21	15	57.52	-15	10	54.0	18.5	809
1991	PA5		1991	08	03.10486	21	15	56.74	-15	10	55.4		809
1991	PA5		1991	08	03.11806	21	15	55.94	-15	10	56.9		809
1991	PA5		1991	08	05.25833	21	13	54.45	-15	13	39.8		809
1991	PA5		1991	08	05.27153	21	13	53.58	-15	13	40.8		809
1991	PA5		1991	08	05.28472	21	13	52.76	-15	13	42.3		809
1991	PB5	*	1991	08	03.09167	21	16	18.91	-14	08	01.5	18.7	809
1991	PB5		1991	08	03.10486	21	16	18.21	-14	08	07.9		809
1991	PB5		1991	08	03.11806	21	16	17.59	-14	08	13.3		809
1991	PB5		1991	08	05.25833	21	14	38.40	-14	21	39.7		809
1991	PB5		1991	08	05.27153	21	14	37.67	-14	21	43.7		809
1991	PB5		1991	08	05.28472	21	14	37.13	-14	21	46.6		809
1991	PC5	*	1991	08	03.09167	21	16	44.07	-14	42	17.5	19.3	809
1991	PC5		1991	08	03.10486	21	16	43.45	-14	42	19.4		809
1991	PC5		1991	08	03.11806	21	16	42.70	-14	42	20.5		809
1991	PC5		1991	08	05.25833	21	14	48.23	-14	46	55.8		809
1991	PC5		1991	08	05.27153	21	14	47.49	-14	46	57.2		809
1991	PC5		1991	08	05.28472	21	14	46.64	-14	47	00.8		809
1991	PD5	*	1991	08	03.09167	21	17	19.79	-16	10	45.5	19.0	809
1991	PD5		1991	08	03.10486	21	17	19.09	-16	10	49.3		809
1991	PD5		1991	08	03.11806	21	17	18.38	-16	10	54.2		809
1991	PD5		1991	08	05.25833	21	15	36.98	-16	21	52.7		809
1991	PD5		1991	08	05.27153	21	15	36.27	-16	21	56.3		809
1991	PD5		1991	08	05.28472	21	15	35.62	-16	22	00.9		809
1991	PE5	*	1991	08	03.09167	21	17	27.01	-13	55	37.9	18.3	809
1991	PE5		1991	08	03.10486	21	17	26.31	-13	55	40.4		809
1991	PE5		1991	08	03.11806	21	17	25.67	-13	55	43.3		809
1991	PE5		1991	08	05.25833	21	15	40.74	-14	03	17.5		809
1991	PE5		1991	08	05.27153	21	15	40.02	-14	03	20.2		809
1991	PE5		1991	08	05.28472	21	15	39.32	-14	03	22.8		809
1991	PF5	*	1991	08	03.09167	21	17	35.39	-15	29	28.0	18.3	809
1991	PF5		1991	08	03.10486	21	17	34.49	-15	29	30.0		809
1991	PF5		1991	08	03.11806	21	17	33.63	-15	29	30.4		809
1991	PF5		1991	08	05.25833	21	15	15.58	-15	33	00.5		809
1991	PF5		1991	08	05.27153	21	15	14.68	-15	33	00.7		809
1991	PF5		1991	08	05.28472	21	15	13.71	-15	33	01.8		809
1991	PG5	*	1991	08	03.09167	21	17	41.99	-14	09	21.7	19.0	809
1991	PG5		1991	08	03.10486	21	17	41.19	-14	09	25.0		809

1991	PG5		1991	08	03.11806	21	17	40.52	-14	09	28.0		809
1991	PG5		1991	08	05.25833	21	15	55.95	-14	17	15.6		809
1991	PG5		1991	08	05.27153	21	15	55.22	-14	17	18.8		809
1991	PG5		1991	08	05.28472	21	15	54.55	-14	17	21.0		809
1991	PH5	*	1991	08	03.09167	21	19	01.72	-16	11	54.4	19.5	809
1991	PH5		1991	08	03.10486	21	19	00.94	-16	11	58.5		809
1991	PH5		1991	08	03.11806	21	19	00.21	-16	12	00.9		809
1991	PH5		1991	08	05.25833	21	17	06.40	-16	18	14.0		809
1991	PH5		1991	08	05.27153	21	17	05.64	-16	18	16.9		809
1991	PH5		1991	08	05.28472	21	17	04.94	-16	18	21.6		809
1991	PJ5	*	1991	08	03.09167	21	19	20.31	-14	42	57.8	18.2	809
1991	PJ5		1991	08	03.10486	21	19	19.48	-14	43	01.1		809
1991	PJ5		1991	08	03.11806	21	19	18.70	-14	43	03.5		809
1991	PJ5		1991	08	05.25833	21	17	14.94	-14	51	18.3		809
1991	PJ5		1991	08	05.27153	21	17	14.12	-14	51	20.7		809
1991	PJ5		1991	08	05.28472	21	17	13.33	-14	51	23.4		809
1991	PK5	*	1991	08	03.09167	21	19	35.80	-16	21	57.4	19.5	809
1991	PK5		1991	08	03.10486	21	19	34.99	-16	21	57.3		809
1991	PK5		1991	08	03.11806	21	19	34.12	-16	21	57.3		809
1991	PK5		1991	08	05.25833	21	17	26.58	-16	19	45.6		809
1991	PK5		1991	08	05.27153	21	17	25.63	-16	19	44.3		809
1991	PK5		1991	08	05.28472	21	17	24.40	-16	19	42.1		809
1991	PL5	*	1991	08	03.09167	21	19	42.57	-15	00	15.1	18.6	809
1991	PL5		1991	08	03.10486	21	19	41.83	-15	00	17.5		809
1991	PL5		1991	08	03.11806	21	19	41.08	-15	00	19.2		809
1991	PL5		1991	08	05.25833	21	17	47.08	-15	06	51.3		809
1991	PL5		1991	08	05.27153	21	17	46.25	-15	06	53.9		809
1991	PL5		1991	08	05.28472	21	17	45.47	-15	06	55.9		809
1991	PM5	*	1991	08	03.09167	21	20	06.04	-15	05	20.3	18.0	809
1991	PM5		1991	08	03.10486	21	20	05.90	-15	05	55.9		809
1991	PM5		1991	08	03.11806	21	20	05.73	-15	06	32.6		809
1991	PM5		1991	08	05.25833	21	19	54.48	-16	41	06.8		809
1991	PM5		1991	08	05.27153	21	19	54.22	-16	41	42.0		809
1991	PM5		1991	08	05.28472	21	19	54.08	-16	42	16.2		809
1991	PN5	*	1991	08	03.09167	21	20	12.74	-16	04	07.3	19.4	809
1991	PN5		1991	08	03.10486	21	20	11.96	-16	04	12.6		809
1991	PN5		1991	08	03.11806	21	20	11.16	-16	04	18.7		809
1991	PN5		1991	08	05.25833	21	18	08.05	-16	18	07.2		809
1991	PN5		1991	08	05.27153	21	18	07.20	-16	18	12.0		809
1991	PN5		1991	08	05.28472	21	18	06.27	-16	18	17.4		809
1991	PO5	*	1991	08	03.09167	21	20	40.18	-14	38	39.9	18.4	809
1991	PO5		1991	08	03.10486	21	20	39.53	-14	38	42.7		809
1991	PO5		1991	08	03.11806	21	20	38.91	-14	38	44.8		809
1991	PO5		1991	08	05.25833	21	19	01.42	-14	45	57.7		809
1991	PO5		1991	08	05.27153	21	19	00.78	-14	46	00.8		809
1991	PO5		1991	08	05.28472	21	19	00.09	-14	46	02.9		809
1991	PP5	*	1991	08	03.09167	21	21	35.83	-15	28	59.9	19.3	809
1991	PP5		1991	08	03.10486	21	21	35.07	-15	29	03.4		809
1991	PP5		1991	08	03.11806	21	21	34.28	-15	29	07.7		809
1991	PP5		1991	08	05.25833	21	19	24.26	-15	38	22.6		809
1991	PP5		1991	08	05.27153	21	19	23.35	-15	38	25.7		809
1991	PP5		1991	08	05.28472	21	19	22.49	-15	38	28.8		809
1991	PQ5	*	1991	08	03.09167	21	21	39.23	-13	29	36.0	18.5	809
1991	PQ5		1991	08	03.10486	21	21	38.60	-13	29	43.2		809
1991	PQ5		1991	08	03.11806	21	21	37.89	-13	29	50.4		809
1991	PQ5		1991	08	05.25833	21	19	53.48	-13	49	37.0		809
1991	PQ5		1991	08	05.27153	21	19	52.77	-13	49	44.2		809
1991	PQ5		1991	08	05.28472	21	19	52.09	-13	49	51.7		809
1991	PR5	*	1991	08	03.09167	21	22	25.67	-15	58	00.3	19.2	809

1991	PR5		1991	08	03.10486	21	22	24.84	-15	58	00.3	809
1991	PR5		1991	08	03.11806	21	22	24.04	-15	58	00.9	809
1991	PR5		1991	08	05.25833	21	20	13.44	-16	00	56.3	809
1991	PR5		1991	08	05.27153	21	20	12.64	-16	00	57.1	809
1991	PR5		1991	08	05.28472	21	20	11.77	-16	00	58.6	809
1991	PS5	*	1991	08	03.09167	21	22	32.77	-13	50	04.8	18.7 809
1991	PS5		1991	08	03.10486	21	22	32.10	-13	50	09.4	809
1991	PS5		1991	08	03.11806	21	22	31.25	-13	50	15.6	809
1991	PS5		1991	08	05.25833	21	20	31.00	-14	05	45.6	809
1991	PS5		1991	08	05.27153	21	20	30.16	-14	05	50.7	809
1991	PS5		1991	08	05.28472	21	20	29.33	-14	05	57.8	809
1991	PU5	*	1991	08	06.24444	21	48	25.59	-15	06	05.5	18.7 809
1991	PU5		1991	08	06.25764	21	48	24.90	-15	06	10.5	809
1991	PU5		1991	08	06.27083	21	48	24.12	-15	06	16.7	809
1991	PU5		1991	08	14.20625	21	41	02.94	-16	01	45.8	809
1991	PU5		1991	08	14.21944	21	41	02.14	-16	01	51.5	809
1991	PU5		1991	08	14.23264	21	41	01.28	-16	01	57.4	809
1991	PV5	*	1991	08	06.24444	21	48	30.78	-14	09	24.5	18.8 809
1991	PV5		1991	08	06.25764	21	48	30.27	-14	09	31.1	809
1991	PV5		1991	08	06.27083	21	48	29.63	-14	09	37.7	809
1991	PV5		1991	08	14.20625	21	43	18.51	-15	16	20.2	809
1991	PV5		1991	08	14.21944	21	43	17.86	-15	16	27.0	809
1991	PV5		1991	08	14.23264	21	43	17.18	-15	16	33.8	809
1991	PW5	*	1991	08	06.24444	21	48	36.11	-17	00	18.8	18.7 809
1991	PW5		1991	08	06.25764	21	48	35.32	-17	00	21.5	809
1991	PW5		1991	08	06.27083	21	48	34.67	-17	00	23.4	809
1991	PW5		1991	08	14.20625	21	41	34.49	-17	24	12.4	809
1991	PW5		1991	08	14.21944	21	41	33.72	-17	24	14.8	809
1991	PW5		1991	08	14.23264	21	41	32.94	-17	24	16.3	809
1991	PX5	*	1991	08	06.24444	21	49	15.69	-17	08	48.2	18.7 809
1991	PX5		1991	08	06.25764	21	49	14.88	-17	08	49.9	809
1991	PX5		1991	08	06.27083	21	49	14.08	-17	08	51.1	809
1991	PX5		1991	08	14.20625	21	41	10.19	-17	26	02.1	809
1991	PX5		1991	08	14.21944	21	41	09.29	-17	26	03.7	809
1991	PX5		1991	08	14.23264	21	41	08.39	-17	26	05.6	809
1991	PY5	*	1991	08	06.24444	21	49	39.71	-13	18	20.5	18.5 809
1991	PY5		1991	08	06.25764	21	49	39.22	-13	18	28.5	809
1991	PY5		1991	08	06.27083	21	49	38.64	-13	18	37.2	809
1991	PY5		1991	08	14.20625	21	44	05.52	-14	41	52.6	809
1991	PY5		1991	08	14.21944	21	44	04.87	-14	42	01.0	809
1991	PY5		1991	08	14.23264	21	44	04.25	-14	42	09.4	809
1991	PZ5	*	1991	08	06.24444	21	49	47.30	-15	46	46.0	18.5 809
1991	PZ5		1991	08	06.25764	21	49	46.53	-15	46	46.8	809
1991	PZ5		1991	08	06.27083	21	49	45.69	-15	46	48.4	809
1991	PZ5		1991	08	14.20625	21	42	04.98	-16	00	32.9	18.5 809
1991	PZ5		1991	08	14.21944	21	42	04.13	-16	00	33.8	809
1991	PZ5		1991	08	14.23264	21	42	03.30	-16	00	34.7	809
1991	PZ5		1991	08	14.35486	21	41	56.05	-16	00	48.4	17.5 809
1991	PZ5		1991	08	14.36562	21	41	55.43	-16	00	48.2	809
1991	PZ5		1991	08	16.32569	21	39	59.54	-16	03	57.7	809
1991	PZ5		1991	08	16.33611	21	39	58.91	-16	03	58.9	809
1991	PZ5		1991	08	16.34722	21	39	58.26	-16	03	59.7	809
1991	PA6	*	1991	08	06.24444	21	50	01.45	-14	05	38.0	19.5 809
1991	PA6		1991	08	06.25764	21	50	00.83	-14	05	40.5	809
1991	PA6		1991	08	06.27083	21	50	00.26	-14	05	42.6	809
1991	PA6		1991	08	14.20625	21	43	45.89	-14	34	36.7	18.7 809
1991	PA6		1991	08	14.21944	21	43	45.16	-14	34	39.3	809
1991	PA6		1991	08	14.23264	21	43	44.50	-14	34	42.1	809
1991	PB6	*	1991	08	06.24444	21	50	03.08	-16	59	36.0	19.0 809

1991	PB6		1991	08	06.25764	21	50	02.26	-16	59	42.0	809
1991	PB6		1991	08	06.27083	21	50	01.55	-16	59	45.5	809
1991	PB6		1991	08	14.20625	21	42	25.02	-17	50	28.9	809
1991	PB6		1991	08	14.21944	21	42	24.18	-17	50	33.8	809
1991	PB6		1991	08	14.23264	21	42	23.41	-17	50	38.1	809
1991	PC6	*	1991	08	06.24444	21	50	28.11	-16	26	49.0	18.7 809
1991	PC6		1991	08	06.25764	21	50	27.34	-16	26	56.7	809
1991	PC6		1991	08	06.27083	21	50	26.73	-16	27	02.4	809
1991	PC6		1991	08	14.20625	21	43	37.66	-17	36	03.6	809
1991	PC6		1991	08	14.21944	21	43	36.81	-17	36	11.3	809
1991	PC6		1991	08	14.23264	21	43	36.10	-17	36	17.7	809
1991	PD6	*	1991	08	06.24444	21	50	39.60	-13	58	35.8	19.0 809
1991	PD6		1991	08	06.25764	21	50	38.93	-13	58	38.9	809
1991	PD6		1991	08	06.27083	21	50	38.25	-13	58	40.9	809
1991	PD6		1991	08	14.20625	21	43	55.91	-14	24	48.3	18.6 809
1991	PD6		1991	08	14.21944	21	43	55.05	-14	24	50.3	809
1991	PD6		1991	08	14.23264	21	43	54.33	-14	24	52.5	809
1991	PE6	*	1991	08	06.24444	21	50	47.10	-17	12	19.4	18.5 809
1991	PE6		1991	08	06.25764	21	50	46.45	-17	12	21.7	809
1991	PE6		1991	08	06.27083	21	50	45.83	-17	12	24.5	809
1991	PE6		1991	08	14.20625	21	44	27.45	-17	41	52.3	809
1991	PE6		1991	08	14.21944	21	44	26.81	-17	41	54.6	809
1991	PE6		1991	08	14.23264	21	44	26.17	-17	41	57.4	809
1991	PH6	*	1991	08	06.24444	21	52	57.06	-14	13	42.6	19.2 809
1991	PH6		1991	08	06.25764	21	52	56.37	-14	13	49.7	809
1991	PH6		1991	08	06.27083	21	52	55.77	-14	13	54.9	809
1991	PH6		1991	08	14.20625	21	46	13.94	-15	19	59.4	809
1991	PH6		1991	08	14.21944	21	46	13.26	-15	20	05.0	809
1991	PH6		1991	08	14.23264	21	46	12.55	-15	20	11.4	809
1991	PJ6	*	1991	08	06.24444	21	52	57.30	-16	22	27.5	20.0 809
1991	PJ6		1991	08	06.25764	21	52	56.55	-16	22	30.0	809
1991	PJ6		1991	08	06.27083	21	52	55.81	-16	22	35.2	809
1991	PJ6		1991	08	14.20625	21	47	45.24	-16	47	41.7	19.0 809
1991	PJ6		1991	08	14.21944	21	47	44.47	-16	47	46.7	809
1991	PJ6		1991	08	14.23264	21	47	43.65	-16	47	51.3	809
1991	PK6	*	1991	08	06.24444	21	53	02.10	-17	10	37.1	19.0 809
1991	PK6		1991	08	06.25764	21	53	01.08	-17	10	34.3	809
1991	PK6		1991	08	06.27083	21	53	00.18	-17	10	31.6	809
1991	PK6		1991	08	14.20625	21	44	19.21	-16	45	33.5	809
1991	PK6		1991	08	14.21944	21	44	18.35	-16	45	30.7	809
1991	PK6		1991	08	14.23264	21	44	17.39	-16	45	27.3	809
1991	PL6	*	1991	08	06.24444	21	53	21.08	-14	06	50.3	19.2 809
1991	PL6		1991	08	06.25764	21	53	20.32	-14	06	53.8	809
1991	PL6		1991	08	06.27083	21	53	19.65	-14	06	56.5	809
1991	PL6		1991	08	14.20625	21	45	45.27	-14	44	15.1	19.0 809
1991	PL6		1991	08	14.21944	21	45	44.42	-14	44	18.8	809
1991	PL6		1991	08	14.23264	21	45	43.59	-14	44	22.8	809
1991	PM6	*	1991	08	06.24444	21	53	29.66	-17	26	37.3	18.7 809
1991	PM6		1991	08	06.25764	21	53	29.07	-17	26	40.1	809
1991	PM6		1991	08	06.27083	21	53	28.44	-17	26	44.2	809
1991	PM6		1991	08	14.20625	21	47	56.97	-17	59	08.5	809
1991	PM6		1991	08	14.21944	21	47	56.36	-17	59	10.9	809
1991	PM6		1991	08	14.23264	21	47	55.76	-17	59	15.0	809
1991	PN6	*	1991	08	06.24444	21	53	29.78	-17	10	45.6	18.5 809
1991	PN6		1991	08	06.25764	21	53	29.25	-17	10	52.1	809
1991	PN6		1991	08	06.27083	21	53	28.70	-17	10	58.5	809
1991	PN6		1991	08	14.20625	21	48	13.26	-18	14	12.5	809
1991	PN6		1991	08	14.21944	21	48	12.63	-18	14	19.4	809

1991	PN6		1991	08	14.23264	21	48	11.95	-18	14	25.3		809
1991	PO6	*	1991	08	06.24444	21	53	35.25	-14	02	54.3	19.0	809
1991	PO6		1991	08	06.25764	21	53	34.74	-14	02	56.9		809
1991	PO6		1991	08	06.27083	21	53	34.10	-14	02	59.8		809
1991	PO6		1991	08	14.20625	21	47	27.73	-14	31	11.9	19.3	809
1991	PO6		1991	08	14.21944	21	47	27.15	-14	31	14.2		809
1991	PO6		1991	08	14.23264	21	47	26.56	-14	31	16.3		809
1991	PP6	*	1991	08	06.24444	21	54	11.98	-17	30	53.8	18.8	809
1991	PP6		1991	08	06.25764	21	54	11.38	-17	30	55.1		809
1991	PP6		1991	08	06.27083	21	54	10.79	-17	30	56.6		809
1991	PP6		1991	08	14.20625	21	48	14.11	-17	48	11.7		809
1991	PP6		1991	08	14.21944	21	48	13.36	-17	48	13.4		809
1991	PP6		1991	08	14.23264	21	48	12.70	-17	48	13.7		809
1991	PQ6	*	1991	08	06.24444	21	54	28.28	-15	31	49.2	19.6	809
1991	PQ6		1991	08	06.25764	21	54	27.78	-15	31	54.0		809
1991	PQ6		1991	08	06.27083	21	54	27.23	-15	31	58.0		809
1991	PQ6		1991	08	14.20625	21	49	44.47	-16	23	13.7		809
1991	PQ6		1991	08	14.21944	21	49	43.94	-16	23	16.8		809
1991	PQ6		1991	08	14.23264	21	49	43.22	-16	23	21.1		809
1991	PR6	*	1991	08	06.24444	21	54	31.42	-14	45	09.9	20.0	809
1991	PR6		1991	08	06.25764	21	54	30.63	-14	45	14.6		809
1991	PR6		1991	08	06.27083	21	54	30.07	-14	45	17.3		809
1991	PR6		1991	08	14.20625	21	47	22.08	-15	32	03.0		809
1991	PR6		1991	08	14.21944	21	47	21.20	-15	32	05.8		809
1991	PR6		1991	08	14.23264	21	47	20.48	-15	32	07.8		809
1991	PS6	*	1991	08	06.24444	21	54	40.43	-16	09	50.6	18.6	809
1991	PS6		1991	08	06.25764	21	54	39.87	-16	09	55.2		809
1991	PS6		1991	08	06.27083	21	54	39.25	-16	09	58.9		809
1991	PS6		1991	08	14.20625	21	48	49.60	-16	48	24.7		809
1991	PS6		1991	08	14.21944	21	48	49.00	-16	48	28.1		809
1991	PS6		1991	08	14.23264	21	48	48.34	-16	48	31.8		809
1991	PT6	*	1991	08	06.24444	21	55	06.91	-17	46	12.8	18.7	809
1991	PT6		1991	08	06.25764	21	55	06.16	-17	46	16.3		809
1991	PT6		1991	08	06.27083	21	55	05.31	-17	46	20.4		809
1991	PT6		1991	08	14.20625	21	47	36.72	-18	24	23.0		809
1991	PT6		1991	08	14.21944	21	47	35.77	-18	24	26.3		809
1991	PT6		1991	08	14.23264	21	47	34.91	-18	24	30.6		809
1991	PU6	*	1991	08	06.24444	21	55	35.46	-13	44	39.2	19.6	809
1991	PU6		1991	08	06.25764	21	55	34.74	-13	44	41.2		809
1991	PU6		1991	08	06.27083	21	55	34.02	-13	44	43.9		809
1991	PU6		1991	08	14.20625	21	48	24.15	-14	07	13.7		809
1991	PU6		1991	08	14.21944	21	48	23.32	-14	07	15.7		809
1991	PU6		1991	08	14.23264	21	48	22.55	-14	07	18.5		809
1991	PV6	*	1991	08	06.24444	21	55	51.89	-14	45	16.0	19.8	809
1991	PV6		1991	08	06.25764	21	55	51.09	-14	45	15.8		809
1991	PV6		1991	08	06.27083	21	55	50.20	-14	45	14.4		809
1991	PV6		1991	08	14.20625	21	47	38.68	-14	39	07.7		809
1991	PV6		1991	08	14.21944	21	47	37.76	-14	39	08.1		809
1991	PV6		1991	08	14.23264	21	47	36.88	-14	39	06.8		809
1991	PW6	*	1991	08	06.24444	21	56	07.47	-14	23	34.7	19.6	809
1991	PW6		1991	08	06.25764	21	56	06.76	-14	23	40.5		809
1991	PW6		1991	08	06.27083	21	56	06.14	-14	23	46.7		809
1991	PW6		1991	08	14.20625	21	50	25.39	-15	16	29.2		809
1991	PW6		1991	08	14.21944	21	50	24.68	-15	16	34.8		809
1991	PW6		1991	08	14.23264	21	50	24.07	-15	16	38.5		809
1991	PX6	*	1991	08	06.24444	21	56	19.14	-16	30	27.3	18.7	809
1991	PX6		1991	08	06.25764	21	56	18.41	-16	30	31.0		809
1991	PX6		1991	08	06.27083	21	56	17.67	-16	30	34.5		809

1991	PX6		1991	08	14.20625	21	49	23.89	-17	05	37.6	809
1991	PX6		1991	08	14.21944	21	49	23.09	-17	05	40.9	809
1991	PX6		1991	08	14.23264	21	49	22.31	-17	05	44.7	809
1991	PY6	*	1991	08	06.24444	21	56	29.52	-14	20	48.9	19.2 809
1991	PY6		1991	08	06.25764	21	56	28.92	-14	21	00.6	809
1991	PY6		1991	08	06.27083	21	56	28.38	-14	21	11.3	809
1991	PY6		1991	08	14.20625	21	50	53.10	-16	04	28.6	809
1991	PY6		1991	08	14.21944	21	50	52.49	-16	04	38.7	809
1991	PY6		1991	08	14.23264	21	50	51.85	-16	04	50.4	809
1991	PZ6	*	1991	08	06.24444	21	56	42.48	-15	41	58.5	18.6 809
1991	PZ6		1991	08	06.25764	21	56	41.88	-15	42	00.6	809
1991	PZ6		1991	08	06.27083	21	56	41.29	-15	42	03.8	809
1991	PZ6		1991	08	14.20625	21	50	47.56	-16	13	00.9	809
1991	PZ6		1991	08	14.21944	21	50	46.82	-16	13	03.4	809
1991	PZ6		1991	08	14.23264	21	50	46.26	-16	13	05.9	809
1991	PA7	*	1991	08	06.24444	21	57	56.39	-14	32	14.0	18.5 809
1991	PA7		1991	08	06.25764	21	57	55.73	-14	32	16.1	809
1991	PA7		1991	08	06.27083	21	57	55.04	-14	32	18.3	809
1991	PA7		1991	08	14.20625	21	50	55.73	-14	56	51.2	809
1991	PA7		1991	08	14.21944	21	50	54.89	-14	56	53.6	809
1991	PA7		1991	08	14.23264	21	50	54.12	-14	56	56.3	809
1991	PB7	*	1991	08	06.24444	21	58	01.99	-17	16	05.4	18.8 809
1991	PB7		1991	08	06.25764	21	58	01.25	-17	16	08.5	809
1991	PB7		1991	08	06.27083	21	58	00.52	-17	16	12.1	809
1991	PB7		1991	08	14.20625	21	51	03.09	-17	48	24.1	809
1991	PB7		1991	08	14.21944	21	51	02.21	-17	48	28.6	809
1991	PB7		1991	08	14.23264	21	51	01.34	-17	48	31.4	809
1991	PC7	*	1991	08	06.24444	21	59	06.97	-15	56	21.2	18.6 809
1991	PC7		1991	08	06.25764	21	59	06.27	-15	56	25.7	809
1991	PC7		1991	08	06.27083	21	59	05.67	-15	56	29.2	809
1991	PC7		1991	08	14.20625	21	53	00.64	-16	38	14.7	18.6 809
1991	PC7		1991	08	14.21944	21	52	59.89	-16	38	19.2	809
1991	PC7		1991	08	14.23264	21	52	59.25	-16	38	22.5	809
1991	PD7	*	1991	08	06.24444	21	59	26.16	-14	08	36.0	18.7 809
1991	PD7		1991	08	06.25764	21	59	25.61	-14	08	42.7	809
1991	PD7		1991	08	06.27083	21	59	24.91	-14	08	49.5	809
1991	PD7		1991	08	14.20625	21	53	17.16	-15	13	04.3	809
1991	PD7		1991	08	14.21944	21	53	16.45	-15	13	11.0	809
1991	PD7		1991	08	14.23264	21	53	15.75	-15	13	16.8	809
1991	PE7	*	1991	08	06.24444	21	59	41.35	-16	36	59.0	18.5 809
1991	PE7		1991	08	06.25764	21	59	40.50	-16	36	58.1	809
1991	PE7		1991	08	06.27083	21	59	39.66	-16	36	57.3	809
1991	PE7		1991	08	14.20625	21	51	04.53	-16	28	38.3	809
1991	PE7		1991	08	14.21944	21	51	03.65	-16	28	37.3	809
1991	PE7		1991	08	14.23264	21	51	02.70	-16	28	35.9	809
1991	PF7	*	1991	08	06.24444	21	59	43.31	-17	20	20.7	18.6 809
1991	PF7		1991	08	06.25764	21	59	42.59	-17	20	22.9	809
1991	PF7		1991	08	06.27083	21	59	41.75	-17	20	27.5	809
1991	PF7		1991	08	14.20625	21	57	29.14	-17	38	46.2	809
1991	PF7		1991	08	14.21944	21	57	28.48	-17	38	53.8	809
1991	PF7		1991	08	14.23264	21	57	27.93	-17	39	02.0	809
1991	PG7	*	1991	08	06.24444	21	59	53.28	-17	19	14.5	18.5 809
1991	PG7		1991	08	06.25764	21	59	52.73	-17	19	15.8	809
1991	PG7		1991	08	06.27083	21	59	52.20	-17	19	17.6	809
1991	PG7		1991	08	14.20625	21	54	31.50	-17	35	46.6	809
1991	PG7		1991	08	14.21944	21	54	30.89	-17	35	48.0	809
1991	PG7		1991	08	14.23264	21	54	30.29	-17	35	48.9	809
1991	PH7	*	1991	08	06.24444	22	00	05.06	-17	34	33.9	18.3 809

1991	PH7		1991	08	06.25764	22	00	04.45	-17	34	36.5	809
1991	PH7		1991	08	06.27083	22	00	03.78	-17	34	38.8	809
1991	PH7		1991	08	14.20625	21	53	58.16	-18	00	41.6	809
1991	PH7		1991	08	14.21944	21	53	57.39	-18	00	42.9	809
1991	PH7		1991	08	14.23264	21	53	56.71	-18	00	45.3	809
1991	PJ7	*	1991	08	06.24444	22	00	05.77	-15	54	27.0	18.5 809
1991	PJ7		1991	08	06.25764	22	00	05.03	-15	54	27.5	809
1991	PJ7		1991	08	06.27083	22	00	04.27	-15	54	28.3	809
1991	PJ7		1991	08	14.20625	21	52	27.87	-16	01	29.1	809
1991	PJ7		1991	08	14.21944	21	52	26.99	-16	01	29.4	809
1991	PJ7		1991	08	14.23264	21	52	26.08	-16	01	30.4	809
1991	PK7	*	1991	08	06.24444	22	00	43.91	-16	12	42.8	18.6 809
1991	PK7		1991	08	06.25764	22	00	43.28	-16	12	50.7	809
1991	PK7		1991	08	06.27083	22	00	42.69	-16	12	59.7	809
1991	PK7		1991	08	14.20625	21	54	46.54	-17	39	29.2	809
1991	PK7		1991	08	14.21944	21	54	45.80	-17	39	38.2	809
1991	PK7		1991	08	14.23264	21	54	45.16	-17	39	46.2	809
1991	PL7	*	1991	08	06.24444	22	00	54.82	-13	40	33.8	19.0 809
1991	PL7		1991	08	06.25764	22	00	54.16	-13	40	35.8	809
1991	PL7		1991	08	06.27083	22	00	53.57	-13	40	38.6	809
1991	PL7		1991	08	14.20625	21	54	38.62	-14	11	05.6	809
1991	PL7		1991	08	14.21944	21	54	37.89	-14	11	08.1	809
1991	PL7		1991	08	14.23264	21	54	37.33	-14	11	11.0	809
1991	PM7	*	1991	08	06.24444	22	00	59.99	-14	45	15.8	18.6 809
1991	PM7		1991	08	06.25764	22	00	59.42	-14	45	22.2	809
1991	PM7		1991	08	06.27083	22	00	58.90	-14	45	27.1	809
1991	PM7		1991	08	14.20625	21	55	37.07	-15	46	05.6	809
1991	PM7		1991	08	14.21944	21	55	36.43	-15	46	11.8	809
1991	PM7		1991	08	14.23264	21	55	35.85	-15	46	18.1	809
1991	PN7	*	1991	08	06.24444	22	01	17.17	-16	43	08.7	18.6 809
1991	PN7		1991	08	06.25764	22	01	16.56	-16	43	12.4	809
1991	PN7		1991	08	06.27083	22	01	15.91	-16	43	15.9	809
1991	PN7		1991	08	14.20625	21	54	55.94	-17	19	08.2	809
1991	PN7		1991	08	14.21944	21	54	55.20	-17	19	11.9	809
1991	PN7		1991	08	14.23264	21	54	54.51	-17	19	14.7	809
1991	PO7	*	1991	08	06.24444	22	01	18.61	-15	13	50.7	19.2 809
1991	PO7		1991	08	06.25764	22	01	17.93	-15	13	54.7	809
1991	PO7		1991	08	06.27083	22	01	17.36	-15	13	56.2	809
1991	PO7		1991	08	14.20625	21	50	59.47	-16	33	49.8	809
1991	PO7		1991	08	14.21944	21	50	58.58	-16	33	52.7	809
1991	PO7		1991	08	14.23264	21	50	57.72	-16	33	55.5	809
1991	PP7	*	1991	08	06.24444	22	03	47.15	-17	38	03.3	18.6 809
1991	PP7		1991	08	06.25764	22	03	46.61	-17	38	07.8	809
1991	PP7		1991	08	06.27083	22	03	46.05	-17	38	12.8	809
1991	PP7		1991	08	14.20625	21	57	50.08	-18	50	07.3	809
1991	PP7		1991	08	14.21944	21	57	49.33	-18	50	13.2	809
1991	PP7		1991	08	14.23264	21	57	48.67	-18	50	18.1	809
1991	PQ7	*	1991	08	06.24444	22	03	49.54	-17	02	16.9	18.8 809
1991	PQ7		1991	08	06.25764	22	03	48.98	-17	02	20.7	809
1991	PQ7		1991	08	06.27083	22	03	48.45	-17	02	25.8	809
1991	PQ7		1991	08	14.20625	21	58	16.14	-17	39	21.2	809
1991	PQ7		1991	08	14.21944	21	58	15.56	-17	39	25.7	809
1991	PQ7		1991	08	14.23264	21	58	14.94	-17	39	28.1	809
1991	PR7	*	1991	08	06.24444	22	03	54.08	-16	45	54.4	18.5 809
1991	PR7		1991	08	06.25764	22	03	53.57	-16	46	01.5	809
1991	PR7		1991	08	06.27083	22	03	53.03	-16	46	08.6	809
1991	PR7		1991	08	14.20625	21	58	32.23	-17	56	39.2	809
1991	PR7		1991	08	14.21944	21	58	31.56	-17	56	46.1	809

1991	PR7		1991	08	14.23264	21	58	31.03	-17	56	52.8		809
1991	PS7	*	1991	08	06.24444	22	04	05.84	-13	17	30.8	18.5	809
1991	PS7		1991	08	06.25764	22	04	05.15	-13	17	36.1		809
1991	PS7		1991	08	06.27083	22	04	04.47	-13	17	42.6		809
1991	PS7		1991	08	14.20625	21	57	12.19	-14	21	29.1		809
1991	PS7		1991	08	14.21944	21	57	11.43	-14	21	35.3		809
1991	PS7		1991	08	14.23264	21	57	10.68	-14	21	41.6		809
1991	PT7	*	1991	08	06.24444	22	04	12.34	-15	22	10.9	18.5	809
1991	PT7		1991	08	06.25764	22	04	11.57	-15	22	13.6		809
1991	PT7		1991	08	06.27083	22	04	10.88	-15	22	16.9		809
1991	PT7		1991	08	14.20625	21	56	59.72	-15	53	00.0	18.5	809
1991	PT7		1991	08	14.21944	21	56	58.87	-15	53	02.4		809
1991	PT7		1991	08	14.23264	21	56	58.14	-15	53	05.8		809
1991	PU7	*	1991	08	06.24444	22	05	29.96	-14	01	04.4	20.0	809
1991	PU7		1991	08	06.25764	22	05	29.50	-14	01	07.8		809
1991	PU7		1991	08	06.27083	22	05	28.98	-14	01	10.8		809
1991	PU7		1991	08	14.20625	21	59	55.32	-14	38	59.4		809
1991	PU7		1991	08	14.21944	21	59	54.71	-14	39	02.4		809
1991	PU7		1991	08	14.23264	21	59	54.11	-14	39	06.8		809
1991	PV7	*	1991	08	06.24444	22	05	35.25	-13	56	12.1	18.5	809
1991	PV7		1991	08	06.25764	22	05	34.74	-13	56	18.9		809
1991	PV7		1991	08	06.27083	22	05	34.22	-13	56	26.7		809
1991	PV7		1991	08	14.20625	22	00	05.37	-15	10	54.0		809
1991	PV7		1991	08	14.21944	22	00	04.75	-15	11	01.5		809
1991	PV7		1991	08	14.23264	22	00	04.09	-15	11	09.1		809
1991	PW7	*	1991	08	06.24444	22	05	43.56	-14	42	56.6	18.2	809
1991	PW7		1991	08	06.25764	22	05	43.05	-14	43	02.4		809
1991	PW7		1991	08	06.27083	22	05	42.57	-14	43	08.1		809
1991	PW7		1991	08	14.20625	22	00	44.19	-15	39	56.2		809
1991	PW7		1991	08	14.21944	22	00	43.55	-15	40	02.2		809
1991	PW7		1991	08	14.23264	22	00	42.95	-15	40	07.1		809
1991	PX7	*	1991	08	06.24444	22	06	04.83	-16	26	23.8	18.5	809
1991	PX7		1991	08	06.25764	22	06	04.10	-16	26	25.0		809
1991	PX7		1991	08	06.27083	22	06	03.42	-16	26	26.4		809
1991	PX7		1991	08	14.20625	21	59	00.54	-16	37	45.7		809
1991	PX7		1991	08	14.21944	21	58	59.78	-16	37	46.6		809
1991	PX7		1991	08	14.23264	21	58	58.94	-16	37	48.2		809
1991	PY7	*	1991	08	06.24444	22	06	38.43	-14	47	10.9	18.6	809
1991	PY7		1991	08	06.25764	22	06	37.71	-14	47	15.4		809
1991	PY7		1991	08	06.27083	22	06	36.99	-14	47	20.2		809
1991	PY7		1991	08	14.20625	21	59	11.82	-15	35	15.2		809
1991	PY7		1991	08	14.21944	21	59	11.02	-15	35	21.2		809
1991	PY7		1991	08	14.23264	21	59	10.15	-15	35	25.8		809
1991	PZ7	*	1991	08	06.24444	22	06	39.78	-14	37	41.8	18.7	809
1991	PZ7		1991	08	06.25764	22	06	39.24	-14	37	49.6		809
1991	PZ7		1991	08	06.27083	22	06	38.80	-14	37	58.3		809
1991	PZ7		1991	08	14.20625	22	01	41.92	-16	01	48.2	18.6	809
1991	PZ7		1991	08	14.21944	22	01	41.30	-16	01	57.3		809
1991	PZ7		1991	08	14.23264	22	01	40.78	-16	02	04.6		809
1991	PA8	*	1991	08	06.24444	22	08	00.80	-16	10	26.2	18.6	809
1991	PA8		1991	08	06.25764	22	08	00.36	-16	10	33.3		809
1991	PA8		1991	08	06.27083	22	07	59.81	-16	10	39.8		809
1991	PA8		1991	08	14.20625	22	03	00.44	-17	19	21.9		809
1991	PA8		1991	08	14.21944	22	02	59.84	-17	19	27.9		809
1991	PA8		1991	08	14.23264	22	02	59.29	-17	19	35.1		809
1991	PB8	*	1991	08	06.24444	22	08	09.43	-15	47	04.9	19.5	809
1991	PB8		1991	08	06.25764	22	08	08.73	-15	47	01.4		809
1991	PB8		1991	08	06.27083	22	08	08.00	-15	47	00.5		809

1991	PB8		1991	08	14.20625	21	59	58.22	-15	31	18.2	809
1991	PB8		1991	08	14.21944	21	59	57.25	-15	31	15.8	809
1991	PB8		1991	08	14.23264	21	59	56.29	-15	31	13.0	809
1991	PC8	*	1991	08	06.24444	22	08	11.33	-16	05	11.4	18.6 809
1991	PC8		1991	08	06.25764	22	08	10.68	-16	05	15.9	809
1991	PC8		1991	08	06.27083	22	08	10.13	-16	05	19.4	809
1991	PC8		1991	08	14.20625	22	02	02.95	-16	45	20.9	809
1991	PC8		1991	08	14.21944	22	02	02.19	-16	45	24.8	809
1991	PC8		1991	08	14.23264	22	02	01.53	-16	45	28.4	809
1991	PD8	*	1991	08	06.24444	22	08	27.05	-15	45	45.7	19.2 809
1991	PD8		1991	08	06.25764	22	08	26.44	-15	45	48.9	809
1991	PD8		1991	08	06.27083	22	08	25.83	-15	45	51.9	809
1991	PD8		1991	08	14.20625	22	02	33.60	-16	11	11.6	809
1991	PD8		1991	08	14.21944	22	02	32.93	-16	11	13.5	809
1991	PD8		1991	08	14.23264	22	02	32.26	-16	11	15.7	809
1991	PE8		1991	08	05.25833	21	01	33.83	-17	38	45.0	809
1991	PE8		1991	08	05.27153	21	01	33.00	-17	38	48.6	809
1991	PE8		1991	08	05.28472	21	01	32.33	-17	38	53.8	809
1991	PF8		1991	08	05.25833	21	01	45.95	-15	00	52.0	809
1991	PF8		1991	08	05.27153	21	01	45.31	-15	00	55.5	809
1991	PF8		1991	08	05.28472	21	01	44.68	-15	00	57.5	809
1991	PK8		1991	08	03.09167	21	18	15.85	-17	33	19.6	17.8 809
1991	PK8		1991	08	03.10486	21	18	15.30	-17	33	26.1	809
1991	PK8		1991	08	03.11806	21	18	14.68	-17	33	32.8	809
1991	PM8		1991	08	03.09167	21	25	31.89	-14	59	27.1	18.6 809
1991	PM8		1991	08	03.10486	21	25	31.21	-14	59	31.4	809
1991	PM8		1991	08	03.11806	21	25	30.41	-14	59	34.6	809
1991	PM8		1991	08	05.15972	21	23	35.38	-15	09	08.5	809
1991	PM8		1991	08	05.17014	21	23	34.88	-15	09	10.7	809
1991	PM8		1991	08	05.18056	21	23	34.36	-15	09	13.7	809
1991	PM8		1991	08	05.26458	21	23	29.34	-15	09	38.0	17.6 809
1991	PM8		1991	08	05.27500	21	23	28.84	-15	09	39.2	809
1991	PM8		1991	08	05.28542	21	23	28.22	-15	09	42.8	809
1991	PQ8		1991	08	05.15972	21	27	45.28	-16	00	08.3	809
1991	PQ8		1991	08	05.17014	21	27	44.76	-16	00	11.0	809
1991	PQ8		1991	08	05.18056	21	27	44.36	-16	00	13.8	809
1991	PQ8		1991	08	05.26458	21	27	40.49	-16	00	36.8	18.0 809
1991	PQ8		1991	08	05.27500	21	27	39.95	-16	00	38.7	809
1991	PQ8		1991	08	05.28542	21	27	39.43	-16	00	42.6	809
1991	PU8		1991	08	06.14792	21	14	01.76	-10	15	40.5	17.5 809
1991	PU8		1991	08	06.15833	21	14	01.10	-10	15	42.2	809
1991	PU8		1991	08	06.16875	21	14	00.46	-10	15	41.1	809
1991	PV8		1991	08	06.14792	21	15	54.49	-09	47	35.0	17.6 809
1991	PV8		1991	08	06.15833	21	15	53.90	-09	47	34.7	809
1991	PV8		1991	08	06.16875	21	15	53.34	-09	47	35.3	809
1991	PZ8		1991	08	14.28194	21	20	46.92	-10	22	50.0	809
1991	PZ8		1991	08	14.29236	21	20	46.53	-10	22	51.6	809
1991	PZ8		1991	08	14.30278	21	20	46.02	-10	22	52.8	18.0 809
1991	PM9		1991	08	03.09167	21	04	43.84	-15	54	34.6	18.3 809
1991	PM9		1991	08	03.10486	21	04	43.01	-15	54	37.1	809
1991	PM9		1991	08	03.11806	21	04	42.18	-15	54	39.2	809
1991	PM9		1991	08	05.25833	21	02	37.60	-16	00	19.0	809
1991	PM9		1991	08	05.27153	21	02	36.79	-16	00	20.4	809
1991	PM9		1991	08	05.28472	21	02	35.94	-16	00	22.0	809
1991	PQ9		1991	08	03.09167	21	22	27.41	-13	30	29.0	18.6 809
1991	PQ9		1991	08	03.10486	21	22	26.79	-13	30	29.0	809
1991	PQ9		1991	08	03.11806	21	22	26.17	-13	30	27.4	809
1991	PS9		1991	08	06.24444	21	56	27.30	-12	41	32.4	18.8 809

1991	PS9		1991	08	06.25764	21	56	26.57	-12	41	30.6		809
1991	PS9		1991	08	06.27083	21	56	25.76	-12	41	29.5		809
1991	PW9	*	1991	08	06.14792	21	08	16.75	-11	36	38.8	17.5	809
1991	PW9		1991	08	06.15833	21	08	16.24	-11	36	44.2		809
1991	PW9		1991	08	06.16875	21	08	15.81	-11	36	49.3		809
1991	PW9		1991	08	11.27778	21	04	34.71	-12	09	59.9	17.5	809
1991	PW9		1991	08	11.28819	21	04	34.13	-12	10	06.0		809
1991	PW9		1991	08	11.29861	21	04	33.72	-12	10	11.2		809
1991	PX9	*	1991	08	06.14792	21	12	40.50	-11	46	00.4	17.7	809
1991	PX9		1991	08	06.15833	21	12	39.84	-11	46	02.3		809
1991	PX9		1991	08	06.16875	21	12	39.10	-11	46	03.9		809
1991	PX9		1991	08	11.27778	21	07	21.71	-11	59	13.3	17.7	809
1991	PX9		1991	08	11.28819	21	07	21.02	-11	59	15.0		809
1991	PX9		1991	08	11.29861	21	07	20.30	-11	59	17.8		809
1991	PY9	*	1991	08	06.19653	21	20	07.68	-10	09	09.6	17.7	809
1991	PY9		1991	08	06.20694	21	20	07.05	-10	09	15.0		809
1991	PY9		1991	08	06.21736	21	20	06.40	-10	09	19.5		809
1991	PY9		1991	08	11.31250	21	15	10.21	-10	43	14.6	18.0	809
1991	PY9		1991	08	11.32292	21	15	09.62	-10	43	19.0		809
1991	PY9		1991	08	11.33333	21	15	08.99	-10	43	24.0		809
1991	PZ9	*	1991	08	06.19653	21	20	28.66	-10	41	33.2	18.1	809
1991	PZ9		1991	08	06.20694	21	20	28.02	-10	41	33.6		809
1991	PZ9		1991	08	06.21736	21	20	27.40	-10	41	38.9		809
1991	PZ9		1991	08	11.31250	21	16	04.12	-11	03	37.0	18.2	809
1991	PZ9		1991	08	11.32292	21	16	03.58	-11	03	40.6		809
1991	PZ9		1991	08	11.33333	21	16	02.98	-11	03	44.3		809
1991	PL10	*	1991	08	14.35486	21	38	43.90	-16	03	43.1	17.3	809
1991	PL10		1991	08	14.36562	21	38	43.28	-16	03	50.2		809
1991	PL10		1991	08	16.32569	21	37	10.95	-16	22	28.8		809
1991	PL10		1991	08	16.33611	21	37	10.37	-16	22	35.0		809
1991	PL10		1991	08	16.34722	21	37	09.85	-16	22	41.3		809
1991	PM10	*	1991	08	14.35486	21	39	13.39	-15	32	36.2	17.8	809
1991	PM10		1991	08	14.36562	21	39	12.78	-15	32	38.9		809
1991	PM10		1991	08	16.32569	21	37	30.67	-15	39	37.2		809
1991	PM10		1991	08	16.33611	21	37	30.11	-15	39	38.2		809
1991	PM10		1991	08	16.34722	21	37	29.58	-15	39	40.5		809
1991	PM14		1991	08	14.20625	21	43	51.22	-18	32	04.4		809
1991	PM14		1991	08	14.21944	21	43	50.50	-18	32	11.2		809
1991	PM14		1991	08	14.23264	21	43	49.93	-18	32	15.3		809
1991	PN14		1991	08	06.24444	21	50	55.41	-16	54	14.5	18.6	809
1991	PN14		1991	08	06.25764	21	50	54.82	-16	54	20.8		809
1991	PN14		1991	08	06.27083	21	50	54.24	-16	54	25.3		809
1991	PN14		1991	08	14.20625	21	45	22.66	-17	45	51.0		809
1991	PN14		1991	08	14.21944	21	45	22.00	-17	45	55.7		809
1991	PN14		1991	08	14.23264	21	45	21.32	-17	46	00.1		809
1991	PS14		1991	08	14.20625	21	47	05.54	-18	53	47.6	18.5	809
1991	PS14		1991	08	14.21944	21	47	04.66	-18	53	49.0		809
1991	PS14		1991	08	14.23264	21	47	03.82	-18	53	48.8		809
1991	PL15		1991	08	14.20625	21	42	55.92	-16	23	45.8		809
1991	PL15		1991	08	14.21944	21	42	55.32	-16	23	50.9		809
1991	PL15		1991	08	14.23264	21	42	54.67	-16	23	56.0		809
52			1991	08	03.09167	21	11	35.67	-17	10	12.2	12.0	809
52			1991	08	03.10486	21	11	34.90	-17	10	17.6		809
52			1991	08	03.11806	21	11	34.33	-17	10	21.2		809
52			1991	08	05.25833	21	09	58.31	-17	21	15.8		809
52			1991	08	05.27153	21	09	57.64	-17	21	20.1		809
52			1991	08	05.28472	21	09	56.87	-17	21	23.7		809
129			1991	08	03.09167	21	08	15.03	-15	19	20.3	12.0	809
129			1991	08	03.10486	21	08	14.21	-15	19	29.7		809

129	1991	08	03.11806	21	08	13.57	-15	19	35.9	809
129	1991	08	05.25833	21	06	31.76	-15	39	00.8	809
129	1991	08	05.27153	21	06	31.09	-15	39	07.5	809
129	1991	08	05.28472	21	06	30.27	-15	39	15.1	809
140	1991	08	06.24444	21	48	14.12	-16	36	33.7	12.0 809
140	1991	08	06.25764	21	48	13.35	-16	36	39.0	809
140	1991	08	06.27083	21	48	12.78	-16	36	43.7	809
140	1991	08	14.20625	21	42	12.46	-17	23	10.1	809
140	1991	08	14.21944	21	42	11.65	-17	23	14.2	809
140	1991	08	14.23264	21	42	10.90	-17	23	19.1	809
414	1991	08	02.13125	21	01	08.80	-21	42	52.2	17.0 809
414	1991	08	07.09792	20	57	38.45	-22	06	19.8	17.8 809
414	1991	08	07.11111	20	57	37.76	-22	06	23.1	809
414	1991	08	07.12431	20	57	37.14	-22	06	27.4	809
1171	1991	08	02.13125	20	57	54.07	-17	52	43.8	16.0 809
1171	1991	08	07.09792	20	53	57.27	-18	13	24.2	17.7 809
1171	1991	08	07.11111	20	53	56.53	-18	13	27.0	809
1171	1991	08	07.12431	20	53	55.89	-18	13	30.8	809
1218	1991	08	02.13125	21	03	50.15	-21	52	41.3	17.8 809
1218	1991	08	07.09792	20	58	36.94	-22	16	35.8	18.4 809
1218	1991	08	07.11111	20	58	35.98	-22	16	40.1	809
1218	1991	08	07.12431	20	58	35.10	-22	16	44.4	809
1305	1991	08	02.13125	20	59	57.33	-20	25	48.7	16.0 809
1305	1991	08	07.09792	20	55	51.27	-20	43	41.4	17.9 809
1305	1991	08	07.11111	20	55	50.52	-20	43	44.2	809
1305	1991	08	07.12431	20	55	49.84	-20	43	47.3	809
1345	1991	08	02.13472	21	25	39.52	-15	04	32.6	16.0 809
1345	1991	08	02.14514	21	25	39.22	-15	04	35.0	809
1345	1991	08	02.15556	21	25	38.86	-15	04	37.3	809
1345	1991	08	03.09167	21	25	07.14	-15	08	27.8	18.0 809
1345	1991	08	03.10486	21	25	06.67	-15	08	31.4	809
1345	1991	08	03.11806	21	25	06.20	-15	08	34.0	809
1345	1991	08	05.15972	21	23	56.15	-15	17	02.8	809
1345	1991	08	05.17014	21	23	55.78	-15	17	04.7	809
1345	1991	08	05.18056	21	23	55.43	-15	17	07.2	809
1345	1991	08	05.26458	21	23	52.44	-15	17	29.1	809
1345	1991	08	05.27500	21	23	52.10	-15	17	31.7	809
1345	1991	08	05.28542	21	23	51.72	-15	17	33.8	809
1345	1991	08	10.26528	21	20	57.74	-15	38	21.3	809
1345	1991	08	10.27708	21	20	57.26	-15	38	23.8	809
1345	1991	08	10.28750	21	20	56.93	-15	38	26.3	809
1415	1991	08	06.24444	22	02	07.55	-12	53	22.9	17.8 809
1415	1991	08	06.25764	22	02	06.78	-12	53	24.9	809
1415	1991	08	06.27083	22	02	05.97	-12	53	27.8	809
1435	1991	08	06.14792	21	09	25.39	-11	16	19.4	17.6 809
1435	1991	08	06.15833	21	09	24.82	-11	16	24.7	809
1435	1991	08	06.16875	21	09	24.16	-11	16	27.1	809
1435	1991	08	11.27778	21	04	56.75	-11	39	12.8	17.6 809
1435	1991	08	11.28819	21	04	56.24	-11	39	16.3	809
1435	1991	08	11.29861	21	04	55.68	-11	39	18.8	809
1463	1991	08	06.24444	21	59	13.93	-14	07	41.8	17.7 809
1463	1991	08	06.25764	21	59	13.29	-14	07	42.9	809
1463	1991	08	06.27083	21	59	12.66	-14	07	44.5	809
1463	1991	08	14.20625	21	52	50.43	-14	22	59.5	809
1463	1991	08	14.21944	21	52	49.68	-14	23	00.9	809
1463	1991	08	14.23264	21	52	49.00	-14	23	02.4	809
1551	1991	08	02.13125	20	54	20.11	-20	11	59.9	16.0 809
1551	1991	08	07.09792	20	49	38.31	-20	40	38.2	17.8 809
1551	1991	08	07.11111	20	49	37.51	-20	40	42.5	809

1551	1991	08	07.12431	20	49	36.70	-20	40	47.7	809
1709	1991	08	06.19653	21	19	52.82	-10	56	07.5	15.5 809
1709	1991	08	06.20694	21	19	52.16	-10	56	06.0	809
1709	1991	08	06.21736	21	19	51.52	-10	56	04.0	809
1709	1991	08	11.31250	21	14	48.59	-10	42	17.8	16.0 809
1709	1991	08	11.32292	21	14	47.97	-10	42	15.6	809
1709	1991	08	11.33333	21	14	47.33	-10	42	13.7	809
1721	1991	08	02.13125	21	03	11.12	-19	20	02.4	18.0 809
1721	1991	08	07.09792	20	58	40.71	-19	18	04.6	18.0 809
1721	1991	08	07.11111	20	58	39.93	-19	18	03.7	809
1721	1991	08	07.12431	20	58	39.22	-19	18	03.8	809
1737	1991	08	02.13125	20	53	44.71	-21	56	47.2	17.5 809
1737	1991	08	07.09792	20	49	16.83	-22	00	43.1	17.9 809
1737	1991	08	07.11111	20	49	16.03	-22	00	43.9	809
1737	1991	08	07.12431	20	49	15.30	-22	00	44.6	809
1891	1991	08	06.24444	21	55	21.44	-12	50	03.2	18.0 809
1891	1991	08	06.25764	21	55	20.69	-12	50	02.3	809
1891	1991	08	06.27083	21	55	19.93	-12	50	02.0	809
2187	1991	08	06.24444	21	50	39.45	-14	12	21.8	17.9 809
2187	1991	08	06.25764	21	50	38.88	-14	12	30.8	809
2187	1991	08	06.27083	21	50	38.32	-14	12	39.8	809
2187	1991	08	14.20625	21	44	47.64	-15	46	32.3	809
2187	1991	08	14.21944	21	44	46.97	-15	46	41.4	809
2187	1991	08	14.23264	21	44	46.31	-15	46	50.9	809
2187	1991	08	14.35486	21	44	40.53	-15	48	19.0	16.5 809
2187	1991	08	14.36562	21	44	39.92	-15	48	26.7	809
2197	1991	08	02.13125	21	05	00.12	-20	15	56.6	17.8 809
2197	1991	08	07.09792	21	01	09.34	-20	32	49.7	18.1 809
2197	1991	08	07.11111	21	01	08.63	-20	32	51.8	809
2197	1991	08	07.12431	21	01	08.04	-20	32	55.8	809
2246	1991	08	03.09167	21	05	25.57	-13	20	33.9	18.3 809
2246	1991	08	03.10486	21	05	25.03	-13	20	37.6	809
2246	1991	08	03.11806	21	05	24.46	-13	20	39.9	809
2246	1991	08	05.25833	21	04	05.50	-13	28	23.7	809
2246	1991	08	05.27153	21	04	04.90	-13	28	26.0	809
2246	1991	08	05.28472	21	04	04.48	-13	28	28.3	809
2338	1991	08	06.24444	22	06	35.30	-14	23	30.2	18.1 809
2338	1991	08	06.25764	22	06	34.68	-14	23	35.0	809
2338	1991	08	06.27083	22	06	34.08	-14	23	38.8	809
2338	1991	08	14.20625	22	00	36.19	-15	06	44.8	809
2338	1991	08	14.21944	22	00	35.48	-15	06	49.7	809
2338	1991	08	14.23264	22	00	34.78	-15	06	53.8	809
2496	1991	08	03.09167	21	14	46.95	-15	06	46.4	17.8 809
2496	1991	08	03.10486	21	14	46.09	-15	06	51.3	809
2496	1991	08	03.11806	21	14	45.20	-15	06	55.4	809
2496	1991	08	05.25833	21	12	33.96	-15	17	40.5	809
2496	1991	08	05.27153	21	12	33.07	-15	17	44.2	809
2496	1991	08	05.28472	21	12	32.21	-15	17	48.3	809
2516	1991	08	06.24444	21	52	49.58	-13	28	06.5	18.5 809
2516	1991	08	06.25764	21	52	48.84	-13	28	10.3	809
2516	1991	08	06.27083	21	52	48.08	-13	28	14.5	809
2516	1991	08	14.20625	21	45	14.81	-14	11	58.4	809
2516	1991	08	14.21944	21	45	13.99	-14	12	02.6	809
2516	1991	08	14.23264	21	45	13.19	-14	12	07.2	809
2727	1991	08	06.14792	21	16	03.10	-10	40	57.5	16.8 809
2727	1991	08	06.15833	21	16	02.47	-10	41	00.9	809
2727	1991	08	06.16875	21	16	01.95	-10	41	03.9	809
2727	1991	08	11.27778	21	11	35.31	-11	03	31.3	17.5 809
2727	1991	08	11.28819	21	11	34.77	-11	03	35.9	809

2727	1991	08	11.29861	21	11	34.25	-11	03	38.6	809
2881	1991	08	10.30278	21	27	33.19	-10	36	08.5	809
2881	1991	08	10.31319	21	27	32.60	-10	36	12.4	809
2881	1991	08	10.32361	21	27	31.92	-10	36	15.6	809
2881	1991	08	14.28194	21	23	40.61	-11	00	44.3	809
2881	1991	08	14.29236	21	23	39.92	-11	00	48.2	809
2881	1991	08	14.30278	21	23	39.31	-11	00	52.2	17.5 809
3027	1991	08	03.09167	21	10	25.87	-12	54	31.0	18.0 809
3027	1991	08	03.10486	21	10	25.19	-12	54	35.0	809
3027	1991	08	03.11806	21	10	24.49	-12	54	36.9	809
3027	1991	08	05.25833	21	08	41.01	-13	03	10.7	809
3027	1991	08	05.27153	21	08	40.34	-13	03	13.1	809
3027	1991	08	05.28472	21	08	39.66	-13	03	16.0	809
3136	1991	08	14.20625	21	56	24.45	-18	37	34.1	18.6 809
3136	1991	08	14.21944	21	56	23.78	-18	37	37.4	809
3136	1991	08	14.23264	21	56	23.20	-18	37	40.1	809
3505	1991	08	10.30278	21	28	39.69	-10	26	53.7	809
3505	1991	08	10.31319	21	28	39.09	-10	26	54.3	809
3505	1991	08	10.32361	21	28	38.62	-10	26	55.2	809
3505	1991	08	14.28194	21	25	12.73	-10	30	56.9	809
3505	1991	08	14.29236	21	25	12.14	-10	30	57.0	809
3505	1991	08	14.30278	21	25	11.59	-10	30	58.0	16.5 809
3656	1991	08	03.09167	21	18	03.62	-15	45	17.2	17.8 809
3656	1991	08	03.10486	21	18	02.79	-15	45	20.2	809
3656	1991	08	03.11806	21	18	01.98	-15	45	23.4	809
3676	1991	08	06.24444	21	57	53.26	-16	16	24.8	18.2 809
3676	1991	08	06.25764	21	57	52.40	-16	16	28.2	809
3676	1991	08	06.27083	21	57	51.58	-16	16	31.3	809
3676	1991	08	14.20625	21	49	35.08	-16	48	40.6	809
3676	1991	08	14.21944	21	49	34.17	-16	48	43.2	809
3676	1991	08	14.23264	21	49	33.27	-16	48	46.0	809
3730	1991	08	05.25833	21	01	29.28	-15	15	07.8	809
3730	1991	08	05.27153	21	01	28.46	-15	15	07.2	809
3730	1991	08	05.28472	21	01	27.67	-15	15	07.5	809
3952	1991	08	03.09167	21	20	09.90	-14	05	19.6	18.6 809
3952	1991	08	03.10486	21	20	09.18	-14	05	22.3	809
3952	1991	08	03.11806	21	20	08.46	-14	05	25.3	809
3952	1991	08	05.25833	21	18	04.88	-14	13	23.9	809
3952	1991	08	05.27153	21	18	04.04	-14	13	27.4	809
3952	1991	08	05.28472	21	18	03.17	-14	13	30.3	809
3972	1991	08	11.31250	21	16	07.05	-11	39	40.2	16.3 809
3972	1991	08	11.32292	21	16	06.55	-11	39	45.1	809
3972	1991	08	11.33333	21	16	06.00	-11	39	49.8	809
4026	1991	08	05.25833	21	01	04.65	-16	33	09.7	809
4026	1991	08	05.27153	21	01	03.85	-16	33	13.7	809
4026	1991	08	05.28472	21	01	03.08	-16	33	17.1	809
4067	1991	08	02.13125	21	01	35.43	-20	10	04.9	18.0 809
4067	1991	08	07.09792	20	56	38.37	-20	19	15.8	18.3 809
4067	1991	08	07.11111	20	56	37.45	-20	19	16.9	809
4067	1991	08	07.12431	20	56	36.64	-20	19	18.7	809
4195	1991	08	05.25833	20	59	58.81	-14	39	49.7	809
4195	1991	08	05.27153	20	59	58.11	-14	39	53.2	809
4195	1991	08	05.28472	20	59	57.41	-14	39	56.0	809
4308	1991	08	10.30278	21	23	41.91	-10	15	23.8	809
4308	1991	08	10.31319	21	23	41.27	-10	15	24.0	809
4308	1991	08	10.32361	21	23	40.68	-10	15	24.0	809
4308	1991	08	14.28194	21	19	40.54	-10	13	27.0	809
4308	1991	08	14.29236	21	19	39.86	-10	13	26.6	809
4308	1991	08	14.30278	21	19	39.25	-10	13	26.5	16.8 809

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4491       1991 08 02.13472  21 29 12.69  -14 39 32.0            16.7    809
4491       1991 08 02.14514  21 29 12.01  -14 39 34.0                    809
4491       1991 08 02.15556  21 29 11.43  -14 39 35.8                    809
4491       1991 08 05.15972  21 26 05.23  -14 47 08.3                    809
4491       1991 08 05.17014  21 26 04.54  -14 47 09.7                    809
4491       1991 08 05.18056  21 26 03.93  -14 47 10.8                    809
4491       1991 08 05.26458  21 25 58.35  -14 47 24.6                    809
4491       1991 08 05.27500  21 25 57.68  -14 47 25.6                    809
4491       1991 08 05.28542  21 25 57.02  -14 47 26.7                    809
4491       1991 08 10.26528  21 20 37.27  -15 00 26.4                    809
4491       1991 08 10.27708  21 20 36.38  -15 00 28.4                    809
4491       1991 08 10.28750  21 20 35.74  -15 00 29.4                    809
4494       1991 08 03.09167  21 20 46.99  -14 00 35.3            18.5    809
4494       1991 08 03.10486  21 20 46.21  -14 00 38.6                    809
4494       1991 08 03.11806  21 20 45.34  -14 00 41.1                    809
4494       1991 08 05.25833  21 18 38.82  -14 08 23.2                    809
4494       1991 08 05.27153  21 18 37.97  -14 08 26.2                    809
4494       1991 08 05.28472  21 18 37.22  -14 08 28.5                    809
4858       1991 08 05.25833  21 08 49.43  -18 06 47.1                    809
4858       1991 08 05.27153  21 08 48.49  -18 06 49.7                    809
4858       1991 08 05.28472  21 08 47.56  -18 06 51.2                    809
4891       1991 08 02.13125  21 00 23.50  -18 39 42.7            18.5    809
4891       1991 08 07.09792  20 56 24.48  -18 53 09.5            18.7    809
4891       1991 08 07.11111  20 56 23.83  -18 53 11.9                    809
4891       1991 08 07.12431  20 56 23.20  -18 53 14.7                    809

881 Toyota
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers K. Suzuki, T. Urata
Measurer T. Urata
0.31-m f/5.7 reflector
1987 SJ    1991 08 03.61493  22 01 24.09  -02 37 35.9            15.5    881
1987 SJ    1991 08 03.62535  22 01 23.87  -02 37 38.1                    881
1987 SJ    1991 08 31.57396  21 48 05.56  -05 26 33.8            15      881
1987 SJ    1991 08 31.59757  21 48 04.82  -05 26 46.4                    881

885 JCPM Yakiimo Station
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers A. Natori, T. Urata
Measurer T. Urata
1991 PA1 * 1991 08 15.71597  23 20 12.15  -11 19 32.0            16      885
1991 PA1   1991 08 17.59861  23 19 14.35  -11 31 57.3            16      885
1991 PA1   1991 08 17.60694  23 19 13.99  -11 32 00.5                    885
1991 PA1   1991 08 18.61736  23 18 41.63  -11 38 43.4            16.5    885
1991 PA1   1991 08 18.63264  23 18 41.08  -11 38 49.5                    885
1991 PA1   1991 08 31.54931  23 10 42.17  -13 06 55.1            16      885
1991 PA1   1991 08 31.56458  23 10 41.49  -13 07 01.1                    885
1991 PA1   1991 09 01.68889  23 09 55.35  -13 14 36.7            16      885
1991 PA1   1991 09 01.70417  23 09 54.77  -13 14 44.7                    885
1991 PA1   1991 09 06.63958  23 06 28.98  -13 47 31.0            16      885
1991 PA1   1991 09 06.64688  23 06 28.68  -13 47 32.9                    885
1991 RN  * 1991 09 05.73889  00 14 21.5   +09 01 15             15.5  p 885
1991 RN    1991 09 05.75417  00 14 20.78  +09 01 16.3                    885
1991 RN    1991 09 06.66493  00 13 37.25  +09 02 37.9            15.5    885
1991 RN    1991 09 06.67986  00 13 36.50  +09 02 39.3                    885
1991 RO    1991 09 01.69653  23 12 27.7   -13 38 00             16    F 885
1991 RO    1991 09 01.71181  23 12 26.6   -13 38 00                   F 885
1991 RO  * 1991 09 06.63958  23 07 04.15  -13 51 58.0            16      885
1991 RO    1991 09 06.65417  23 07 03.09  -13 52 00.9                    885
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886 Susono
T. Furuta, 17-2 Mitsuike, Kagiya, Tokai 477, Japan
Observers M. Akiyama, T. Furuta
Measurer T. Furuta

1991 NS		1991 07 08.59132	19 35 46.1	-26 13 18			15.0	886

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

1981 SY1		1991 08 15.58854	21 01 30.98	-17 09 10.2				894
1981 SY1		1991 08 15.64167	21 01 27.82	-17 09 12.3				894
1981 SY1		1991 08 17.69410	20 59 32.95	-17 10 20.4				894
1991 PB		1991 08 17.69410	20 58 24.81	-16 00 06.2			15.7	894
1991 PB		1991 08 31.55055	20 51 28.50	-17 11 49.1				894
1991 PB		1991 08 31.56285	20 51 28.16	-17 11 52.5				894
1991 PM4		1991 08 03.62813	21 10 38.77	-16 45 42.5			16.7	894
1991 PM4		1991 08 03.63924	21 10 37.98	-16 45 42.6			16.7	894
1991 PM4		1991 08 15.58854	20 58 35.61	-16 49 25.5				894
1991 PM4		1991 08 15.60000	20 58 35.00	-16 49 27.3				894
1991 PM4		1991 08 17.69410	20 56 36.71	-16 49 30.5				894
1991 QC	*	1991 08 17.71076	22 31 10.18	-02 29 06.0			16.4	894
1991 QC		1991 08 17.72257	22 31 09.63	-02 29 07.5				894
1991 QC		1991 08 31.58455	22 19 43.92	-03 42 19.8			16.4	894
1991 QC		1991 08 31.59653	22 19 43.29	-03 42 24.5				894
1991 QD	*	1991 08 17.73715	22 44 46.15	-01 39 35.3			16.5	894
1991 QD		1991 08 17.75174	22 44 45.35	-01 39 34.0				894
1991 QD		1991 08 31.61024	22 31 24.02	-01 41 18.8			16.2	894
1991 QD		1991 08 31.62083	22 31 23.27	-01 41 19.0				894
1709		1991 08 03.57205	21 22 24.07	-11 04 09.7				894
1709		1991 08 03.58559	21 22 23.22	-11 04 06.5				894

* * * * *

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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.

Comet McNaught-Russell (1991w)

T 1991 Jan. 12.97545 ET				Marsden
q 7.1125762		(1950.0)	P	Q
	Peri.	154.05626	+0.83086712	+0.25869624
	Node	149.35167	-0.50013630	-0.04101774
e 1.0	Incl.	104.87568	+0.24397443	-0.96508746

From 9 observations 1991 Sept. 5-8.

Periodic Comet Levy (1991q)

Epoch 1991 July 3.0 ET = JDE 2448440.5				
T 1991 July 8.19273 ET				Marsden
q 0.9825148		(1950.0)	P	Q
n 0.01922144	Peri.	41.47723	+0.96510026	-0.19868024
a 13.8021081	Node	328.72239	+0.04702043	+0.77235538
e 0.9288142	Incl.	19.18445	+0.25762486	+0.60331860
P 51.28				

From 49 observations 1991 June 15-Sept. 2, mean residual 0".8.

Comet Helin-Alu (1991r)

T 1992 Feb. 20.07406 ET				Marsden
q 4.8500688		(1950.0)	P	Q
	Peri.	30.81334	+0.06748806	+0.68546643
	Node	252.95253	-0.99767676	+0.03959350
e 1.0	Incl.	49.31343	-0.00929715	+0.72702691

From 28 observations 1991 June 13-Aug. 14.

Comet McNaught-Russell (1991v)

T 1992 Apr. 24.44483 ET				Marsden
q 3.3227580		(1950.0)	P	Q
	Peri.	253.59854	+0.11903002	-0.48860891
	Node	120.15466	+0.14539102	+0.86972807
e 1.0	Incl.	91.57594	-0.98218802	+0.06952999

From 5 observations 1991 Aug. 3-Sept. 1.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1980 WE5	12.5	801117	5.38	187.95	229.75	14.15	0.1017	3.1286	18	3	D	W
1988 BH	12.4	880120	355.78	192.74	290.52	7.05	0.1683	2.8011	28	0		N
1988 UF	11.5	881026	31.47	327.69	24.33	11.01	0.1133	3.0336	28	0		N
1988 VL3	13.0	881026	7.42	161.09	218.77	14.52	0.1958	2.6153	31	0		N
1990 OY	13.2	900817	343.57	188.27	154.12	14.13	0.2030	2.5483	58	0		E
1990 OD1	14.3	900817	26.59	156.15	127.11	7.54	0.1324	2.3192	57	0		E

1990	OC2	13.0	900817	342.69	298.45	56.39	8.20	0.2223	3.0200	48	6		W
1990	OD2	14.8	900817	358.35	282.15	47.22	6.71	0.1849	2.2759	48	5		E
1990	SM16	13.0	900906	357.08	222.52	114.16	6.75	0.0897	2.3851	2	6	E	W
1990	SQ16	13.4	900926	318.54	290.27	97.63	5.44	0.0619	2.2092	5	6		E
1990	SS16	14.0	900906	45.43	140.80	115.39	7.28	0.3220	2.3216	5	5		W
1990	ST16	14.0	900926	53.05	139.54	112.25	6.13	0.3324	2.4286	5	6		E
1990	SU16	13.5	900906	43.97	169.54	110.00	6.27	0.1375	2.4682	6	6		W
1990	SW16	14.0	900906	29.16	241.46	58.09	3.69	0.1298	2.3505	6	6		W
1990	SX16	13.0	900906	6.38	316.62	10.53	10.41	0.1052	2.9516	6	6		W
1990	SH17	12.2	900926	344.76	354.94	3.58	15.84	0.1545	3.2332	6	6		E
1990	VE	12.4	901125	2.37	346.12	70.08	6.94	0.1778	2.7640	28	0		N
1991	FD	12.9	910325	15.43	358.43	167.18	24.92	0.1814	2.3471	54	0		E
1991	GV	12.0	910414	280.84	234.24	63.49	9.20	0.2007	2.5213	14	8		N
1991	GA2	14.0	910414	307.61	115.66	185.50	22.55	0.2541	2.4302	30	7		W
1991	HN	10.7	910524	169.14	304.05	90.45	8.25	0.0107	5.0842	49	0		E
1991	KE	14.5	910524	7.80	109.82	122.09	27.43	0.2552	2.6763	23	7		W
1991	LZ	12.5	910703	12.06	47.50	202.16	10.89	0.2314	2.4157	59	0		B
1991	NA	15.0	910723	348.44	40.32	277.39	11.76	0.3324	2.3828	31	0		B
1991	NF	13.5	910723	31.23	340.25	285.50	24.05	0.0552	1.9875	38	5		W
1991	NG	11.5	910723	341.34	37.07	275.52	14.33	0.1371	2.5968	40	6		M
1991	NK	13.0	910723	8.46	39.83	239.40	13.18	0.2491	2.6683	38	5		W
1991	NL	13.0	910723	349.27	51.75	259.54	15.28	0.1918	2.5626	39	8		W
1991	NM	13.0	910703	348.37	49.00	247.51	15.42	0.2340	3.1209	8	8		W
1991	NP	12.5	910723	22.98	347.51	284.69	23.39	0.1176	2.3637	38	7		W
1991	NS	10.5	890713	355.44	13.37	96.50	12.88	0.1182	2.4711	2	6	E	N
1991	NU	11.5	910723	354.85	64.93	228.28	14.33	0.1259	2.5960	39	8		M
1991	NB1	14.0	910723	356.31	70.02	237.61	7.67	0.2444	2.4733	37	7		W
1991	NC1	14.5	910723	28.24	140.01	125.68	5.71	0.2109	2.2812	26	0		W
1991	NE1	12.2	910723	301.71	74.77	304.54	8.50	0.0604	3.1745	27	0		E
1991	NJ1	15.5	910723	351.98	204.16	119.63	6.17	0.2197	2.2404	33	0		M
1991	NK1	11.4	910723	56.85	127.84	128.28	10.30	0.0424	3.1655	29	0		E
1991	NS1	13.6	910723	4.58	129.21	172.22	6.70	0.1724	2.4355	23	6		E
1991	NV1	13.5	910723	295.36	134.96	252.68	6.18	0.1215	2.3842	27	8		E
1991	NS2	13.6	910723	25.08	95.90	185.12	7.65	0.1782	2.5626	26	5		E
1991	OO	14.5	910723	341.31	108.73	230.98	3.38	0.2023	2.2939	23	8		E
1991	OR	14.5	910723	311.56	232.38	134.66	24.23	0.0898	1.9437	31	0		W
1991	OU	12.0	910703	100.25	275.36	281.33	11.60	0.1631	2.4967	6	7		W
1991	OV	14.6	910723	356.71	152.39	165.04	5.27	0.1833	2.2571	22	6		E
1991	OW	14.4	910723	38.02	336.63	281.66	5.86	0.2016	2.2953	22	6		E
1991	OY	14.0	910723	347.86	182.99	149.93	8.67	0.2073	2.5538	23	7		W
1991	OZ	13.4	910723	71.64	332.89	254.26	4.20	0.1602	2.3865	22	6		E
1991	PA	13.5	910723	351.42	17.03	310.85	4.42	0.3192	3.0616	29	0		M
1991	PB	13.8	910812	350.87	182.13	149.62	2.59	0.2474	2.3384	28	0		N
1991	PG	12.0	910723	37.05	246.45	18.47	0.47	0.1920	3.2068	9	0		M
1991	PJ	12.5	910723	301.07	264.94	129.73	10.13	0.1711	2.7429	9	0		M
1991	PK	15.3	910812	330.22	212.64	153.33	2.66	0.2000	2.1884	3	6	E	E
1991	PL	14.9	910812	15.24	141.40	162.48	1.73	0.1000	2.1808	3	6	E	E
1991	PQ	11.0	910723	343.75	27.94	304.54	15.34	0.0822	3.5161	6	0		M
1991	PS	13.5	910723	280.79	124.41	274.53	3.91	0.0772	2.2560	6	0		M
1991	PT	14.9	910812	15.56	15.87	277.47	5.83	0.2184	2.2730	4	7		E
1991	PU	12.5	910723	276.82	122.24	294.87	5.57	0.1868	2.8034	5	9		W
1991	PV	15.0	910723	356.09	95.24	220.66	1.89	0.2054	2.2892	9	0		M
1991	PW	14.5	910723	350.42	60.08	265.28	3.16	0.2131	2.3295	3	7		M
1991	PG1	14.5	910723	354.15	194.71	127.18	12.51	0.2768	2.4354	10	7		W
1991	PL1	13.5	910812	343.77	207.61	150.33	22.58	0.1996	2.3426	9	7		W
1991	PN1	15.0	910723	337.45	33.52	314.22	4.49	0.2644	2.3752	8	0		W
1991	PO1	12.0	910723	108.99	44.05	138.15	16.86	0.2511	3.2296	3	0	E	M
1991	PP1	13.5	910723	339.21	20.43	320.37	1.30	0.1526	2.9759	8	0		M
1991	PQ1	13.0	910723	15.89	139.24	150.41	2.02	0.1711	2.8412	5	0		W

1991 PR1	11.5	910812	184.90	190.61	304.43	11.03	0.0856	3.0056	4	9	E	M
1991 PV1	14.5	910723	13.18	129.56	163.92	6.17	0.1784	2.6195	9	0		W
1991 PY3	14.5	910723	7.00	6.97	293.72	0.83	0.0984	2.6083	4	0		W
1991 PB4	15.0	910723	327.14	51.76	304.23	5.36	0.1997	2.2160	4	0		M
1991 PJ4	14.0	910723	26.09	137.67	127.05	6.39	0.2680	3.1544	4	0	E	W
1991 PM4	14.6	910812	22.40	330.22	315.18	4.96	0.1501	2.3212	15	0		N
1991 PO4	12.5	910723	310.33	233.36	154.67	2.10	0.2562	3.2482	4	0		M
1991 PT4	14.0	910723	351.86	93.74	229.85	0.92	0.2172	3.2111	4	8	E	W
1991 PV4	13.5	910723	45.43	216.44	34.86	0.45	0.1554	3.0810	4	0		W
1991 PQ5	16.0	910723	14.72	145.66	142.56	5.45	0.1655	2.1757	4	0		W
1991 PR5	12.5	910723	176.86	178.44	316.88	11.94	0.2150	2.4486	4	0		W
1991 PX5	15.0	910723	14.87	313.72	342.29	4.87	0.0859	2.3119	8	0		W
1991 PZ5	13.0	910723	127.71	210.26	329.51	9.80	0.1173	2.6095	11	0		M
1991 PE6	13.0	910723	22.95	252.26	29.09	2.53	0.1995	3.0590	8	0		W
1991 PK8	12.0	910723	350.71	194.19	129.34	13.38	0.1137	3.1821	26	9		W
1991 PM8	13.0	910723	213.83	331.41	141.79	0.93	0.2650	2.3791	4	0		W
1991 PO8	15.3	910812	344.20	10.89	333.27	6.06	0.2506	2.5296	5	8		E
1991 PP8	13.5	910812	358.87	239.45	79.62	2.47	0.1613	3.1310	5	5		E
1991 PU8	14.0	910723	23.49	355.07	286.12	6.12	0.1217	2.4815	3	7		M
1991 PV8	13.0	910723	312.81	88.84	290.47	7.69	0.2020	2.6705	3	7		M
1991 PZ8	13.0	910723	191.92	188.17	296.33	7.97	0.0390	2.7857	9	7		W
1991 PG9	13.0	910723	356.10	134.27	182.41	9.00	0.1507	2.7981	11	8		W
1991 PM9	15.0	910723	28.29	324.46	299.67	1.76	0.2133	2.3147	4	0		W
1991 PQ9	14.5	910723	356.97	9.40	307.09	7.45	0.2581	3.0502	5	7	E	W
1991 PW9	13.5	910723	348.67	171.34	155.52	7.97	0.1619	3.1189	6	0	E	W
1991 PD10	13.9	910812	49.15	302.22	330.61	6.40	0.1381	2.5036	3	5		E
1991 PE10	14.0	910812	13.63	335.04	337.69	7.41	0.2311	2.8967	3	5		E
1991 PF10	15.0	910723	23.53	146.71	141.06	1.70	0.2074	2.1941	3	5	E	W
1991 PH10	14.1	910812	355.10	229.56	112.59	1.54	0.1300	2.5672	3	7	E	E
1991 PN10	13.9	910812	252.53	277.94	166.27	24.98	0.0100	1.9560	3	6	E	E
1991 PO10	13.0	910812	355.67	144.52	198.14	6.47	0.1200	2.2616	3	6	E	E
1991 PX10	14.5	910723	355.79	152.03	186.05	8.83	0.2955	2.6467	3	3	E	W
1991 PY10	12.9	910812	343.50	174.79	188.81	8.45	0.1000	2.7430	3	4	E	E
1991 PA11	13.0	910723	356.72	145.65	190.51	5.76	0.2761	2.5802	3	4	E	W
1991 PC11	12.9	910812	307.80	258.93	145.43	6.85	0.2000	2.5852	3	5	E	E
1991 PD11	14.4	910812	35.88	135.85	140.36	5.93	0.2000	2.1558	3	5	E	E
1991 PE11	13.9	910812	3.60	344.96	340.63	4.51	0.1921	2.7645	5	6		E
1991 PF11	12.3	910812	263.59	159.34	298.91	10.67	0.2041	2.7818	3	6		E
1991 PT11	13.0	910723	320.85	213.71	179.53	3.95	0.2601	3.2270	3	5	E	M
1991 PM14	16.0	910723	348.58	226.28	103.87	3.32	0.2408	2.3558	8	7		W
1991 PS14	15.5	910723	358.24	319.96	354.03	4.20	0.1975	2.2339	8	7		W
1991 PL15	14.0	910723	3.77	183.02	127.41	6.17	0.1773	3.0947	6	7		W
1991 QA	12.0	910723	332.95	51.89	315.18	7.97	0.2388	3.1524	12	9		W

1980 WE5 = 1980 VV2 (G. V. Williams)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell

(736) Harvard	Obs. 52	M 132.37920	Peri.	199.97916
H 11.64 G 0.15	Opp. 18	n 0.30159882	Node	136.10101
rms res. 0".78 (M-P)	1912-1990	e 0.1651381	Incl.	4.37290

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell

(2113) Ehrdni	Obs. 14	M 337.41454	Peri.	347.44490
H 13.17 G 0.15	Opp. 7	n 0.25333220	Node	23.54109
rms res. 0".66 (M-P)	1958-1991	e 0.0974251	Incl.	6.45433

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell

(2197) Shanghai	Obs. 44	M 219.28028	Peri.	61.80891
H 11.2 G 0.15	Opp. 11	n 0.17519699	Node	57.26337
rms res. 0".99 (M-P)	1955-1991	e 0.1146161	Incl.	2.52373

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2265) Verbaandert Obs. 34 M 343.29623 Peri. 339.53042
H 13.1 G 0.15 Opp. 6 n 0.23288366 Node 133.58821
rms res. 0".71 (M-P) 1950-1990 e 0.2104134 Incl. 19.82325

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2300) Stebbins Obs. 60 M 341.10909 Peri. 355.95919
H 11.9 G 0.15 Opp. 9 n 0.20607705 Node 32.08928
rms res. 0".90 (M-P) 1953-1991 e 0.0777768 Incl. 2.32794

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2328) Robeson Obs. 15 M 221.80464 Peri. 339.89875
H 12.5 G 0.15 Opp. 6 n 0.27500930 Node 182.42791
rms res. 0".95 (M-P) 1972-1991 e 0.1449182 Incl. 9.99409

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2381) Landi Obs. 19 M 309.85482 Peri. 276.56568
H 11.4 G 0.15 Opp. 8 n 0.23350737 Node 150.73030
rms res. 0".82 (M-P) 1951-1991 e 0.1663114 Incl. 13.61493

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2504) Gaviola Obs. 50 M 190.69388 Peri. 160.27117
H 12.1 G 0.15 Opp. 13 n 0.21462422 Node 10.40220
rms res. 0".98 (M-P) 1967-1991 e 0.0853541 Incl. 4.07628

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2545) Verbiest Obs. 32 M 291.69857 Peri. 105.59660
H 13.0 G 0.15 Opp. 10 n 0.29608805 Node 322.98966
rms res. 0".94 (M-P) 1933-1991 e 0.1254618 Incl. 5.97414

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2606) Odessa Obs. 18 M 153.99451 Peri. 351.98965
H 11.3 G 0.15 Opp. 8 n 0.21408545 Node 197.75609
rms res. 0".86 (M-P) 1955-1991 e 0.2588372 Incl. 12.35725

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2614) Torrence Obs. 28 M 18.53693 Peri. 227.46646
H 13.3 G 0.15 Opp. 6 n 0.27569652 Node 105.81685
rms res. 0".90 (M-P) 1977-1991 e 0.1688644 Incl. 6.92215

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2692) Chkalov Obs. 24 M 155.73754 Peri. 300.00098
H 12.3 G 0.15 Opp. 8 n 0.23742896 Node 236.58668
rms res. 0".81 (M-P) 1955-1991 e 0.1816642 Incl. 9.29901

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2702) Batrakov Obs. 14 M 181.74227 Peri. 311.07387
H 11.0 G 0.15 Opp. 7 n 0.15486601 Node 247.01841
rms res. 0".98 (M-P) 1971-1990 e 0.0752448 Incl. 1.58431

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2721) Vsekhsvyatskij Obs. 18 M 48.99826 Peri. 277.82474
H 12.0 G 0.15 Opp. 6 n 0.17071267 Node 85.28259
rms res. 0".86 (M-P) 1956-1990 e 0.1920143 Incl. 2.23143

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2727) Paton Obs. 35 M 227.02748 Peri. 279.58243
H 12.3 G 0.15 Opp. 13 n 0.23355666 Node 202.68831
rms res. 1".02 (M-P) 1939-1991 e 0.0991428 Incl. 3.50949

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2738) 1940 EC Obs. 29 M 171.86680 Peri. 267.33189
H 12.2 G 0.15 Opp. 8 n 0.21972117 Node 291.30598
rms res. 0".68 (M-P) 1954-1991 e 0.1138674 Incl. 1.11635

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2752) Wu Chien-Shiung Obs. 26 M 347.83191 Peri. 193.56804
H 11.4 G 0.15 Opp. 8 n 0.18740298 Node 186.92689
rms res. 0".97 (M-P) 1933-1991 e 0.1092886 Incl. 10.11966

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2802) Weisell Obs. 18 M 164.30987 Peri. 62.95925
H 11.0 G 0.15 Opp. 8 n 0.17904975 Node 129.69081
rms res. 0".90 (M-P) 1939-1991 e 0.1165957 Incl. 9.59575

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2854) 1964 JE Obs. 20 M 157.38770 Peri. 279.85422
H 13.2 G 0.15 Opp. 9 n 0.30095255 Node 292.70548
rms res. 0".98 (M-P) 1931-1991 e 0.1213858 Incl. 5.76777

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2889) 1981 WT1 Obs. 25 M 23.66085 Peri. 119.91511
H 11.5 G 0.15 Opp. 9 n 0.18777160 Node 220.97485
rms res. 0".88 (M-P) 1953-1991 e 0.1200672 Incl. 9.48035

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2918) Salazar Obs. 13 M 47.00976 Peri. 168.92979
H 11.9 G 0.15 Opp. 7 n 0.17489357 Node 135.86950
rms res. 1".07 (M-P) 1952-1991 e 0.1597993 Incl. 2.09007

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(2993) Wendy Obs. 44 M 356.03958 Peri. 73.39161
H 12.3 G 0.15 Opp. 7 n 0.23691399 Node 313.97844
rms res. 0".89 (M-P) 1970-1991 e 0.1961579 Incl. 12.28646

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3019) Kulin Obs. 75 M 309.07364 Peri. 317.52151
H 11.7 G 0.15 Opp. 10 n 0.20333038 Node 104.46316
rms res. 0".72 (M-P) 1940-1991 e 0.0508872 Incl. 3.21697

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3027) Shavarsh Obs. 27 M 6.81618 Peri. 153.59118
H 13.3 G 0.15 Opp. 9 n 0.22554650 Node 195.05999
rms res. 0".87 (M-P) 1952-1991 e 0.2193912 Incl. 1.95948

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3032) Evans Obs. 66 M 5.08651 Peri. 273.79510
H 11.4 G 0.15 Opp. 11 n 0.20026246 Node 88.69145
rms res. 0".84 (M-P) 1952-1991 e 0.0831102 Incl. 3.22561

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3110) 1975 SC Obs. 36 M 297.14921 Peri. 73.10395
H 13.2 G 0.15 Opp. 8 n 0.24029784 Node 348.37924
rms res. 0".85 (M-P) 1930-1991 e 0.1235377 Incl. 2.24725

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3134) Kostinsky Obs. 44 M 318.37017 Peri. 165.44568
H 10.7 G 0.15 Opp. 9 n 0.12441623 Node 257.34201
rms res. 0".70 (M-P) 1921-1991 e 0.2225233 Incl. 7.62681

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3149) Okudzhava Obs. 15 M 319.78345 Peri. 236.89540
H 14.0 G 0.15 Opp. 5 n 0.29245410 Node 188.53631
rms res. 0".88 (M-P) 1951-1991 e 0.1567338 Incl. 7.12474

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3247) Di Martino Obs. 20 M 170.36551 Peri. 145.00958
H 13.0 G 0.15 Opp. 8 n 0.26877655 Node 45.83701
rms res. 0".87 (M-P) 1909-1991 e 0.1271637 Incl. 3.93182

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3255) Tholen Obs. 19 M 349.13209 Peri. 79.21575
H 13.7 G 0.15 Opp. 5 n 0.26968280 Node 337.46285
rms res. 0".87 (M-P) 1969-1991 e 0.3625378 Incl. 21.37129

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3265) 1953 VN2 Obs. 36 M 95.73481 Peri. 296.96283
H 13.3 G 0.15 Opp. 6 n 0.26325741 Node 73.19799
rms res. 0".89 (M-P) 1934-1990 e 0.1409700 Incl. 6.93780

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3371) Giacconi Obs. 16 M 78.85071 Peri. 348.29270
H 12.3 G 0.15 Opp. 6 n 0.21748425 Node 294.01405
rms res. 0".80 (M-P) 1955-1991 e 0.0157048 Incl. 9.67568

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3374) Namur Obs. 39 M 103.37903 Peri. 158.56446
H 12.8 G 0.15 Opp. 5 n 0.19463294 Node 75.60748
rms res. 0".90 (M-P) 1980-1991 e 0.0162492 Incl. 3.02938

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3394) 1986 DB Obs. 20 M 217.53138 Peri. 334.76875
H 13.3 G 0.15 Opp. 7 n 0.27929083 Node 192.62860
rms res. 0".84 (M-P) 1958-1991 e 0.1965150 Incl. 7.07239

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3410) 1978 SZ7 Obs. 23 M 208.73942 Peri. 155.48734
H 13.2 G 0.15 Opp. 7 n 0.29004998 Node 339.94533
rms res. 1".03 (M-P) 1974-1991 e 0.0972872 Incl. 4.74076

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3435) Boury Obs. 40 M 262.01232 Peri. 296.33734
H 13.0 G 0.15 Opp. 5 n 0.27820710 Node 171.04974
rms res. 0".85 (M-P) 1976-1991 e 0.0458636 Incl. 7.71318

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3524) 1981 EE27 Obs. 25 M 216.67059 Peri. 330.82152
H 13.3 G 0.15 Opp. 5 n 0.23303418 Node 180.41530
rms res. 0".91 (M-P) 1981-1991 e 0.1273000 Incl. 13.06500

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3601) 1979 SP9 Obs. 39 M 4.43661 Peri. 346.63132
H 12.4 G 0.15 Opp. 6 n 0.16836652 Node 61.97875
rms res. 0".76 (M-P) 1973-1990 e 0.1474082 Incl. 2.31019

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3620) Platonov Obs. 22 M 333.17481 Peri. 121.85497
H 12.1 G 0.15 Opp. 5 n 0.19035427 Node 272.98463
rms res. 0".84 (M-P) 1955-1991 e 0.1089528 Incl. 8.94806

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3696) Herald Obs. 16 M 26.37682 Peri. 17.12846
H 12.5 G 0.15 Opp. 6 n 0.17958296 Node 313.06470
rms res. 0".71 (M-P) 1977-1991 e 0.1591457 Incl. 10.16465

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3759) Piironen Obs. 18 M 281.40609 Peri. 164.73538
H 11.9 G 0.15 Opp. 5 n 0.21964100 Node 293.25544
rms res. 0".98 (M-P) 1984-1991 e 0.1158933 Incl. 13.04787

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3807) 1981 SE1 Obs. 15 M 66.68898 Peri. 128.95012
H 13.4 G 0.15 Opp. 6 n 0.29136257 Node 161.17975
rms res. 0".70 (M-P) 1974-1991 e 0.1680527 Incl. 4.29274

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3843) OISCA Obs. 41 M 294.03742 Peri. 27.23758
H 10.6 G 0.15 Opp. 5 n 0.12274693 Node 29.51096
rms res. 0".88 (M-P) 1976-1991 e 0.1284348 Incl. 3.92797

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3845) 1979 SA10 Obs. 25 M 290.58918 Peri. 254.29533
H 11.7 G 0.15 Opp. 5 n 0.15712637 Node 190.09695
rms res. 0".81 (M-P) 1979-1991 e 0.1846448 Incl. 5.90605

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3954) Mendelssohn Obs. 25 M 127.29157 Peri. 72.03612
H 15.0 G 0.15 Opp. 4 n 0.31385112 Node 161.81648
rms res. 0".73 (M-P) 1984-1991 e 0.0927804 Incl. 3.18096

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(3972) Richard Obs. 19 M 20.94922 Peri. 178.61973
H 14.6 G 0.15 Opp. 5 n 0.30974671 Node 163.43028
rms res. 0".71 (M-P) 1950-1991 e 0.1778035 Incl. 4.14305

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4014) 1979 SG10 Obs. 19 M 310.32391 Peri. 131.59140
H 11.9 G 0.15 Opp. 7 n 0.15574453 Node 273.50861
rms res. 0".96 (M-P) 1977-1991 e 0.0462834 Incl. 1.10963

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4026) Beet Obs. 18 M 216.52938 Peri. 352.47001
H 13.3 G 0.15 Opp. 5 n 0.25817184 Node 137.70562
rms res. 1".15 (M-P) 1969-1991 e 0.1203979 Incl. 3.18527

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4040) Purcell Obs. 35 M 18.68108 Peri. 269.51772
H 12.8 G 0.15 Opp. 6 n 0.22562375 Node 56.01402
rms res. 0".86 (M-P) 1969-1991 e 0.0700602 Incl. 2.34544

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4173) Thicksten Obs. 24 M 326.23982 Peri. 17.46046
H 13.0 G 0.15 Opp. 7 n 0.27207122 Node 107.44587
rms res. 0".78 (M-P) 1951-1990 e 0.1207925 Incl. 4.14723

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4344) Buxtehude Obs. 30 M 175.66306 Peri. 97.22871
H 12.5 G 0.15 Opp. 5 n 0.17990832 Node 114.68712
rms res. 0".83 (M-P) 1978-1990 e 0.1222354 Incl. 2.39092

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 ** J2000.0 ** Bowell
(4529) Webern Obs. 21 M 192.25049 Peri. 5.32754
H 11.6 G 0.15 Opp. 5 n 0.18800752 Node 132.15754
rms res. 0".68 (M-P) 1981-1990 e 0.0513964 Incl. 10.97443

(4908)* 1933 SD = 1972 TK2 = 1978 NC4 = 1988 PU1
Discovered 1933 Sept. 17 by F. Rigaux at Uccle.
Id. B. G. Marsden (MPC 14181)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M 353.85107	(1950.0)	P	Q
n 0.30437335	Peri. 165.39246	+0.99618102	+0.08627755
a 2.1887608	Node 189.68778	-0.08594589	+0.94193674
e 0.2340524	Incl. 4.56723	-0.01538430	+0.32451712
P 3.24	H 14.3	G 0.15	

Residuals in seconds of arc

330917	012	2.2+	0.4+	880815	511	1.0-	0.9+	880916	095	0.6+	2.5+
330921	012	(1.3+	3.4+)	880818	511	0.1-	1.5-	880917	511	1.2-	1.1-
330925	012	0.4-	0.8-	880818	511	0.3-	0.2+	880917	511	2.0-	0.3+
330927	012	(5.2+	3.6+)	880818	511	1.0+	0.7-	881104	807	0.3-	0.0
331012	012	(2.5+	4.7+)	880908	046	0.1-	1.1-	881106	807	0.5-	0.8+
331014	012	1.1+	0.0	880908	046	1.0+	0.1-	910609	801	0.4+	0.8-
331017	012	(3.8-	3.4+)	880910	046	1.4+	1.1-	910609	801	0.5+	0.7-
331019	012	0.1-	0.9-	880910	046	1.0+	0.5-	910610	801	0.5+	0.5-
331020	012	1.8-	2.1-	880912	511	0.3-	0.8-	910610	801	0.5+	0.5-
721008	095	0.1-	0.2-	880912	511	0.3+	0.6-	910709	801	0.4-	0.4-
780710	095	0.2-	0.9+	880912	511	2.1+	1.1+	910709	801	0.5-	0.4+
880812	511	0.5-	1.7+	880914	095	0.3+	1.3+	910710	801	0.6-	1.8-
880812	511	1.5-	2.4+	880914	095	(0.3+	4.7+)	910710	801	0.0	0.4+
880814	511	1.7-	0.8+	880916	095	(2.7+	2.3+)				

(4909)* 1949 SA1 = 1949 SD = 1949 TJ = 1949 UG1 = 1959 NK = 1966 QO
= 1973 SW3 = 1990 RA
Discovered 1949 Sept. 28 by M. Laugier at Nice.
Id. O. Kippes (d, NAZ 12, 23), W. Strobel (d, MPC 782), S. Nakano (MPC 17011), E. Bowell (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 127.44944	(1950.0)	P	Q
n 0.28738686	Peri. 234.35717	+0.97779265	+0.20600371
a 2.2741797	Node 113.72690	-0.17608849	+0.90723357
e 0.2459607	Incl. 2.41169	-0.11364140	+0.36672839
P 3.43	H 13.5	G 0.15	

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

490928	020	(0.24-	0.04+)X	801201	675	0.0	2.4-	900829	675	0.0	0.0
490929	020	0.6+	2.7-	900818	809	(3.6+	4.6+)	900829	675	1.0-	0.6+
491015	020	(10.6+	1.7+)	900818	809	(2.7+	3.6+)	900913	392	0.5-	1.4-
491017	094	(8.4+	19.4+)X	900818	809	(1.6+	4.3+)	900913	392	1.5+	0.5-
491023	020	(0.08+	0.01+)X	900822	675	0.1-	0.0	900915	392	0.6+	0.7-
491026	020	0.4-	1.3+	900822	675	0.2-	0.1-	900916	675	0.8+	0.8-
590710	760	0.3+	2.0-	900826	809	0.0	1.7+	900916	675	0.5+	0.6-
590710	760	1.1+	2.6-	900826	809	0.3-	1.8+	900916	400	0.3+	2.4+
660822	095	1.2-	0.7-	900826	809	1.1-	1.8+	900916	400	0.6-	2.8+
660918	095	(4.5+	3.2-)	900826	403	2.3-	1.1- Y	900916	400	(1.2+	4.4+)
730925	095	(1.5-	5.7-)	900826	403	0.3-	0.5+ Y	900916	400	(0.1-	4.9+)
730927	095	2.1+	1.0+	900827	675	(1.0+	3.3-)				
801129	675	0.4-	1.0-	900827	675	1.0+	2.4-				

(4910)* 1953 PR = 1953 QF = 1930 OJ = 1930 PA = 1934 TH = 1976 SP5
= 1976 UE15
Discovered 1953 Aug. 11 by K. Reinmuth at Heidelberg.

Id. O. Kippes (d, MPC 1330-1331), S. Nakano (MPC 9360)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 17.51434	(1950.0)	P	Q	
n 0.25890277	Peri. 154.79630	+0.90105776	+0.43369843	
a 2.4380630	Node 179.49928	-0.41120489	+0.85488075	
e 0.3301338	Incl. 5.00248	-0.13786025	+0.28475352	
P 3.81	H 14.6	G 0.15		

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

300722	078(0.03-	0.01-)X	760924 095	1.6-	1.0-	900304 809	0.1-	0.9+
300729	078(41.1+	72.1+)X	761022 381	0.8-	0.4+	900304 809	1.0+	0.1+
300802	094(0.04-	0.00+)X	761022 381	0.2-	0.3+	900304 809	1.0-	0.1+
341005	094(89.6+	38.2-)X	761024 381	0.5-	0.2+	910614 801	0.7-	0.4+
530811	024	0.3+ 1.1-	761024 381	0.2-	0.1-	910614 801	0.7-	0.4+
530818	760 (3.9+	4.0+)	801129 675	2.1+	0.8+	910709 801	0.3+	0.8+
530818	760	1.7+ 0.0	801201 675	1.4+	0.8+	910709 801	0.5+	0.6+
530905	024	0.4+ 2.2-	900302 809	0.8-	1.3-	910710 801	0.3+	0.4+
530909	760	0.5- 1.3-	900302 809	0.4-	2.2-	910710 801	0.3+	0.4+
530909	760 (5.7+	1.6-)	900302 809	2.0-	2.0-			

(4911)* 1953 UD = 1987 SM
Discovered 1953 Oct. 16 at the Goethe Link Observatory.
Id. C. M. Bardwell (MPC 12316)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 345.77554	(1950.0)	P	Q	
n 0.23010090	Peri. 156.88763	+0.98877392	-0.09976782	
a 2.6374880	Node 209.51238	+0.07509376	+0.97538533	
e 0.1807746	Incl. 13.04993	+0.12917838	+0.19664650	
P 4.28	H 12.4	G 0.15		

Residuals in seconds of arc

531016	760	1.0- 0.3-	870920 026	1.2+	0.3-	910609 801	0.1+	0.4+
531016	760	0.4+ 1.2+	870922 026	(4.5+	1.8+)	910614 801	0.2+	0.1+
531105	760	2.5+ 0.9+	870923 095	1.2-	1.1-	910614 801	0.1+	0.1+
531105	760	0.6+ 0.7+	870929 026	0.9+	0.2+	910709 801	0.4+	0.4-
531106	760 (1.3+	3.3+)	870930 026	0.8-	1.5-	910709 801	0.4+	0.3-
531106	760	0.2+ 1.0-	871019 657	(0.1+	4.7-)	910709 657	0.7-	0.2+
531116	760	0.8- 0.4-	871019 657	(1.3+	3.8-)	910709 657	0.9-	0.3+
531116	760	2.2- 0.3+	871112 026	0.6+	0.1+	910710 657	0.0	0.1+
870918	675	0.8- 1.0+	890111 413	0.0	0.2-	910710 801	0.1+	0.1-
870918	095	0.5- 0.2+	890111 413	0.1-	0.4-	910710 657	0.1+	0.2+
870920	675	1.0+ 0.2-	910609 801	0.0	0.3+	910710 801	0.1+	0.2-

(4912)* 1953 VX1 = 1953 XE = 1979 FE1 = 1980 LV = 1981 WU8 = 1988 XN
Discovered 1953 Nov. 11 at the Goethe Link Observatory.
Id. C. M. Bardwell (d, MPC 4772), T. Kobayashi (MPC 14011)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M 336.58087	(1950.0)	P	Q	
n 0.28213464	Peri. 205.28298	+0.80041245	-0.59931242	
a 2.3023169	Node 191.56428	+0.56025831	+0.75552093	
e 0.1379312	Incl. 3.66849	+0.21319130	+0.26459920	
P 3.49	H 13.4	G 0.15		

Residuals in seconds of arc

531109	024	1.0- 1.3-	800610 675	0.7-	0.6-	910715 801	0.9+	0.3+
531111	760	0.2+ 0.4-	811125 095	2.2+	0.2-	910715 801	0.4-	0.3-
531111	760	1.4- 0.2+	881205 897	0.1+	1.0-	910806 801	0.1+	0.2+
531205	760	1.5+ 0.5+	881205 897	1.2-	1.2+	910806 801	0.1+	0.1+
531205	760	0.2+ 0.7+	881207 897	0.3+	0.4-	910811 801	0.1-	0.1-
790323	095	0.5+ 0.6-	881207 897	1.6-	0.1-	910811 801	0.0	0.0

(4913)* 1965 SO = 1988 TT2

Discovered 1965 Sept. 20 at the Purple Mountain Observatory.

Id. C. M. Bardwell (MPC 14182)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	342.35226	(1950.0)	P	Q	
n	0.25806314	Peri.	277.85745	+0.75469130	+0.65514158
a	2.4433484	Node	41.22185	-0.57898318	+0.69020154
e	0.1887458	Incl.	3.05146	-0.30857660	+0.30726428
P	3.82	H	12.8	G 0.15	

Residuals in seconds of arc

650920	330	2.9+	1.4-	881016	046	1.2+	0.8-	910512	801	0.1-	0.8-
650923	330	0.4+	0.2+	881103	033	0.2-	0.6+	910513	801	0.0	0.8-
651018	330	0.5-	0.1-	881103	033	0.2-	0.3+	910513	801	0.1+	0.7-
651021	330	1.4-	1.6-	881104	033	0.0	0.7+	910711	801	1.1-	1.2-
881011	046	1.2+	1.8-	900127	675	0.6+	1.6-	910711	801	0.5-	1.2-
881012	046	1.8+	0.8-	900127	675	0.4-	0.1-	910713	801	1.6-	0.7-
881014	046	1.0-	0.7-	900223	675	0.2-	2.9-	910713	801	1.2-	1.3-
881014	046	0.2-	0.1-	900223	675	1.7-	0.9-				
881016	046	0.7-	0.1-	910512	801	0.0	0.7-				

(4914)* 1969 GD = 1988 XF2

Discovered 1969 Apr. 9 by C. U. Cesco at El Leoncito.

Id. S. Nakano (MPC 14183)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	262.70050	(1950.0)	P	Q	
n	0.23167777	Peri.	150.94934	+0.68450179	-0.69814608
a	2.6255068	Node	254.96688	+0.61979128	+0.70888607
e	0.1597030	Incl.	12.55149	+0.38381776	+0.10036230
P	4.25	H	11.8	G 0.15	

Residuals in seconds of arc

690409	808	0.4-	1.4-	881215	888	2.9-	2.5+	900329	801	0.2+	0.5+
690410	808	0.1+	0.0	881228	888	1.1+	0.2+	910711	801	0.1-	1.2+
690412	808	0.7+	0.7+	881228	888	1.8+	0.5+	910711	801	0.0	1.2+
690413	808	0.0	1.1-	890101	888	1.3+	0.7-	910712	801	0.2-	0.7+
690419	808	0.6-	1.1+	890101	888	0.3+	1.0-	910712	801	0.2-	0.8+
690424	808	0.6+	0.1-	890103	888	0.7+	0.3+	910806	801	0.9-	0.6-
690508	808	0.1-	1.6+	890103	888	0.4+	0.0	910806	801	0.1+	0.1+
881214	888	(7.3-	1.5-)	900325	474	0.1-	0.9+	910812	801	0.6+	0.3+
881214	888	(5.5-	0.5-)	900325	474	0.0	0.6-	910812	801	0.5+	0.7+
881215	888	2.9-	2.9+	900329	801	0.4+	0.6+				

(4915)* 1969 TJ2 = 1985 RD6

Discovered 1969 Oct. 8 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (MPC 14470)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	1.58851	(1950.0)	P	Q	
n	0.18214735	Peri.	318.45422	+0.23034274	-0.97131833
a	3.0821527	Node	118.15130	+0.90950001	+0.19332255
e	0.2779755	Incl.	3.83792	+0.34605195	+0.13844528
P	5.41	H	13.0	G 0.15	

Residuals in seconds of arc

691008	095	0.8+	1.0-	801129	675	1.0-	2.0+	900727	675	3.0-	0.2+
691013	095	0.5+	1.7-	801201	675	0.1+	1.9+	900914	675	1.2+	1.8+
691016	095	2.3+	2.2-	850915	095	1.2-	2.5+	900914	675	0.5+	1.9+
691104	095	1.3-	0.7+	850920	095	0.6+	1.2-	900915	675	1.9+	0.8-
691111	095	0.6-	0.7-	900727	675	1.7-	0.1-	900915	675	0.9+	0.8-

(4916)* 1970 PS = 1938 QM = 1978 CR = 1983 BS = 1986 QZ3

Discovered 1970 Aug. 10 at the Crimean Astrophysical Observatory.

Id. D. W. E. Green (k, MPC 14183; MPC 14470), B. G. Marsden (MPC 14470), S. Nakano (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	291.53673	(1950.0)	P	Q
n	0.18534640	Peri. 268.77318	+0.53865236	-0.83669632
a	3.0465849	Node 147.99884	+0.82803302	+0.50402745
e	0.0919727	Incl. 10.76246	+0.15561159	+0.21423258
P	5.32	H 11.7	G 0.15	

Residuals in seconds of arc

380825	754	(32.4+	21.6+)	830114	095	0.3+	0.4-	890206	071	0.4-	0.8-
380825	754	(35.4+	23.1+)	830121	688	0.3+	0.4+	910713	801	0.7-	0.4-
380827	754	(7.9+	35.4+)	830121	688	2.1+	0.4+	910715	801	0.8-	0.5-
380827	754	(8.0+	34.2+)	830210	095	2.6-	2.5-	910715	801	0.9-	0.4-
380829	754	0.5-	0.5+	860812	095	0.8+	1.9-	910805	675	(1.9+	3.0-)
700810	095	(0.3-	4.9-)	860830	095	1.1-	0.7+	910805	675	1.3+	1.3+
700828	095	1.1+	0.2-	860907	095	0.0	0.4-	910805	675	0.8+	2.6-
700831	095	(3.0-	2.6+)	860912	095	0.3-	0.5-	910805	675	1.0+	0.4+
780202	330	0.4+	0.1-	890206	071	0.9-	1.4-				

(4917)* 1973 SC6 = 1955 SM2 = 1955 UH = 1964 TO1 = 1982 RD

Discovered 1973 Sept. 28 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. C. M. Bardwell (MPC 14943)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	351.05632	(1950.0)	P	Q
n	0.21711518	Peri. 195.68173	+0.96084919	-0.27707151
a	2.7416326	Node 180.40462	+0.26064526	+0.90444171
e	0.1096186	Incl. 3.70835	+0.09398342	+0.32437103
P	4.54	H 12.8	G 0.15	

Residuals in seconds of arc

550923	024	1.9+	1.4-	730929	675	0.8+	0.5+	820921	688	0.8-	0.6-
551020	760	0.1+	0.1-	730929	675	2.0-	2.7+	820921	095	2.6-	1.5+
551020	760	1.4-	1.7-	730930	675	0.2+	0.6-	820922	688	0.8-	0.2-
641009	330	1.7+	0.9+	730930	675	0.9+	0.6-	820922	688	(3.4+	1.9-)
641101	330	0.3+	2.0-	731004	675	1.2+	0.6-	910715	801	0.2+	0.2+
730919	675	0.6+	1.8-	731004	675	0.6-	1.1+	910715	801	0.3+	0.4+
730919	675	0.8+	0.0	731004	675	0.6+	0.2+	910807	801	0.1+	0.3+
730920	675	1.6-	0.1-	731004	675	0.4-	1.6+	910807	801	0.2+	0.3+
730924	675	0.5+	0.8-	731005	675	1.0-	0.3+	910807	675	0.7+	1.4-
730924	675	0.8+	0.3-	731005	675	1.5-	2.0+	910807	675	0.0	0.7-
730925	675	0.0	0.1+	731005	675	0.1+	0.0	910808	801	0.2+	0.2+
730925	675	0.2+	0.3+	731005	675	1.0-	1.0+	910808	801	0.1+	0.2+
730928	095	1.9+	0.7-	820915	688	1.1+	0.2-	910808	675	0.5-	0.1-
730929	675	0.6+	0.2+	820915	688	1.6+	2.9-	910808	675	0.7-	0.7-
730929	675	0.9-	2.7+	820916	095	1.3-	0.7+				

(4918)* 1974 QU1 = 1983 YC

Discovered 1974 Aug. 24 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. C. M. Bardwell (MPC 8533)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	335.34578	(1950.0)	P	Q
n	0.22986671	Peri. 194.24678	+0.77525367	-0.63151597
a	2.6392792	Node 204.92967	+0.58248012	+0.72272238
e	0.2348576	Incl. 1.76914	+0.24433311	+0.28082012
P	4.29	H 13.2	G 0.15	

Residuals in seconds of arc

740824	095	0.2-	0.0	840101	046	0.5-	1.0-	910716	675	2.1-	2.3+
740827	095	1.4+	0.3-	840101	046	0.8-	2.4+	910716	675	1.5-	0.5+
740911	095	0.7-	1.4+	870926	688	0.4+	0.6+	910805	675	0.1+	1.2-
740914	095	0.7+	0.4+	870926	688	1.4-	2.3-	910805	675	0.8+	0.8-
740919	095	2.0-	2.1-	870927	399	1.5+	0.4+	910806	801	1.0+	0.2+
740923	095	0.6+	1.0+	870927	399	0.2-	0.4+	910806	801	1.0+	0.2+
831225	046	2.0-	0.4-	870927	399	0.5+	0.4+	910808	675	0.3+	0.5-
831225	046	(3.4-	3.0+)	870929	054	0.7-	0.2+	910808	675	0.4-	0.8-
831228	046	1.2+	2.1-	870930	054	0.3-	0.2+	910812	801	0.1+	0.1-
831228	046	2.1+	1.2+	870930	054	0.3-	0.2+	910812	801	0.1+	0.2-

(4919)* 1974 SR1 = 1933 UG1 = 1981 SM7

Discovered 1974 Sept. 19 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. T. Kobayashi (MPC 12004)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	37.81344	(1950.0)	P	Q	
n	0.28818434	Peri.	326.81649	+0.72644602	+0.68704742
a	2.2699823	Node	349.74172	-0.60993267	+0.63414841
e	0.2433473	Incl.	5.01161	-0.31663594	+0.35471346
P	3.42	H	13.7	G	0.15

Residuals in seconds of arc

331019	024	1.4+	3.3-	881104	033	0.3+	0.3+	910716	801	0.3+	0.1-
740919	095	2.6-	1.5+	881104	033	0.3-	0.5+	910716	801	0.3+	0.4-
740921	095	0.5+	1.4+	900302	809	0.3-	0.6-	910807	801	0.3+	0.7-
740923	095	1.0+	1.2+	900302	809	0.0	0.6-	910807	801	0.2+	0.5-
741009	095	0.0	0.2-	900302	809	0.2+	0.6-	910811	801	0.1-	0.1-
810929	095	0.6-	1.2-	900303	809	0.5-	0.1-	910811	801	0.2-	0.5-
811002	095	0.6+	0.3-	900303	809	0.3-	0.0				
881103	033	0.2-	0.1+	900303	809	0.0	0.1-				

(4920)* 1978 PY2 = 1977 KZ1 = 1987 SM1

Discovered 1978 Aug. 8 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. E. Bowell (MPC 12443)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	313.77021	(1950.0)	P	Q	
n	0.22360724	Peri.	207.73152	+0.79333998	-0.60873642
a	2.6883067	Node	189.77640	+0.56605923	+0.74196168
e	0.0873281	Incl.	2.42547	+0.22402816	+0.28094988
P	4.41	H	13.0	G	0.15

Residuals in seconds of arc

770518	675	0.5+	0.1+	780910	809	0.4+	1.5+	910715	801	0.4-	0.2+
770519	675	0.4-	0.6+	780910	809	1.0+	0.8-	910716	801	0.4-	0.2+
780808	095	2.0-	1.0+	870904	095	(0.9-	3.1+)	910716	801	0.0	0.1+
780902	809	0.3+	0.4-	870921	688	1.3+	1.5+	910805	809	(4.0+	2.4-)
780902	809	0.0	0.7-	870921	688	1.8+	1.1+	910805	809	(3.3+	2.7-)
780902	809	0.2-	0.7-	870921	046	1.1-	1.0-	910805	809	(3.4+	2.5-)
780902	809	0.0	0.1+	870921	046	(2.5-	3.0-)	910806	801	0.2+	0.0
780902	809	0.2+	0.4-	870924	095	0.3+	2.2+	910806	801	0.2+	0.2+
780903	095	(3.3-	0.9+)	870927	095	1.5-	0.0	910811	801	0.7+	0.4-
780906	809	0.3+	0.1-	870929	688	2.0-	1.6-	910811	801	0.1-	1.2-
780910	809	0.5-	1.9+	870929	688	0.6+	1.1-				
780910	809	0.5+	1.6-	910715	801	(2.6-	1.5+)				

(4921)* 1980 SJ = 1935 QM = 1954 UB

Discovered 1980 Sept. 29 by Z. Vavrova at Klet.

Id. T. Kobayashi (MPC 14015)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 345.06921	(1950.0)		P	Q
n 0.26301296	Peri.	144.37542	+0.95357883	-0.29241139
a 2.4125961	Node	232.78583	+0.25107332	+0.90398135
e 0.1422266	Incl.	5.18664	+0.16628170	+0.31195080
P 3.75	H 13.6	G 0.15		

Residuals in seconds of arc

350831	024	(4.6- 7.0-)	801003	046	0.6+ 2.9-	910805	675	0.1+ 1.2-
541031	024	0.7+ 0.9+	801003	046	1.4+ 1.5+	910805	675	0.1+ 0.8-
541101	024	0.8- 0.9-	801008	095	1.6- 2.2+	910806	801	0.7+ 0.2-
800913	675	1.3- 0.2+	881230	046	0.6- 1.0-	910806	801	0.5+ 0.1-
800914	675	1.1- 0.8+	881230	046	0.3+ 1.9-	910809	675	0.1+ 0.4-
800929	046	0.5+ 1.9+	910715	801	0.1- 0.2-	910809	675	0.2+ 0.9-
800929	046	0.5+ 0.4-	910715	801	0.1- 0.1-	910811	801	0.1- 0.1+
801001	046	0.5+ 0.2+	910716	801	0.2- 0.1-	910811	801	0.2- 0.1+
801001	046	0.0 1.1-	910716	801	0.1- 0.1-			

(4922)* 1981 EH4

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

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 355.84536	(1950.0)		P	Q
n 0.23219650	Peri.	138.05479	+0.98685850	-0.12055863
a 2.6215950	Node	229.19958	+0.08211714	+0.94762833
e 0.2313486	Incl.	8.17115	+0.13916561	+0.29574678
P 4.24	H 13.9	G 0.15		

Residuals in seconds of arc

780705	675	0.8- 0.9+	810409	413	1.6- 0.7+	910715	801	0.1- 0.6+
780706	675	0.6+ 1.2+	810409	413	0.6+ 0.8-	910715	801	0.0 0.7+
810202	413	0.4+ 1.0-	810429	413	0.7+ 0.7-	910716	801	0.2- 0.8+
810214	413	0.1+ 0.4-	870921	688	1.3- 1.0+	910716	801	0.4- 0.9+
810302	413	(5.1- 2.7+)	870921	688	(3.2- 0.4+)	910806	801	0.0 0.0
810302	413	2.2+ 0.7-	870921	010	0.4- 0.7-	910806	801	0.0 1.7-
810307	413	1.2- 1.9+	870922	010	1.3+ 0.4+	910809	675	0.9+ 1.1-
810307	413	0.6+ 0.8+	870923	095	(4.3- 6.5+)	910809	675	0.1+ 1.4-
810310	413	1.0- 1.6+	870929	688	0.4- 1.1+	910811	801	0.2+ 0.0
810310	413	1.3+ 0.7+	870929	688	0.4- 1.7+	910811	801	0.2+ 0.7-
810312	413	1.9- 1.6+	871016	688	(2.6- 2.9+)			
810312	413	1.0+ 1.0-	871023	095	(1.9- 5.2+)			

(4923)* 1981 EO27 = 1972 NJ

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

Id. W. Landgraf (MPC 8288)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 55.92073	(1950.0)		P	Q
n 0.31379790	Peri.	108.14849	+0.44098056	+0.89736829
a 2.1447139	Node	188.07568	-0.86108371	+0.41788202
e 0.2025245	Incl.	6.67076	-0.25312250	+0.14179129
P 3.14	H 14.0	G 0.15		

Residuals in seconds of arc

720713	095	0.1- 2.4+	810306	413	(2.8+ 1.3-)	810407	413	0.4- 0.1+
720716	095	(0.5+ 3.7+)	810311	413	0.6- 0.3-	810407	413	0.5+ 1.2-
810212	413	0.1- 0.6-	810311	413	0.1+ 0.8-	810410	413	2.0- 1.0+
810212	413	0.1- 0.6-	810315	413	0.1- 0.5-	810426	413	(3.4+ 4.0-)
810301	413	(2.8+ 1.0-)	810405	413	0.8- 0.5-	810501	413	1.4+ 1.1-
810302	413	0.5+ 1.4+	810405	413	(4.1+ 4.1-)	870110	413	(2.6- 0.1+)
810302	413	0.8+ 0.8+	810406	413	1.2- 1.3+	870110	413	0.3+ 0.1-
810306	413	0.8- 0.3+	810406	413	2.1+ 1.6-	881015	399	0.0 0.3-

881015	399	0.5-	1.0-		910712	675	0.0	1.1-		910807	801	0.2+	0.4+
881015	399	0.6+	0.5+		910715	801	0.2+	0.2-		910807	801	0.2+	0.4+
910709	801	0.1+	0.3-		910715	801	0.2+	0.2-		910811	801	0.0	0.3+
910709	801	0.2-	0.1-		910718	675	0.1+	0.8-		910811	801	0.1+	0.3+
910712	675	0.2-	1.3-		910718	675	0.2-	0.9-					

(4924)* 1981 EQ40 = 1985 PF1

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

Id. E. Bowell (MPC 10167)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	5.46050		(1950.0)	P	Q
n	0.31184237	Peri.	148.26739	+0.84682587	+0.53187019
a	2.1536707	Node	179.60053	-0.49405533	+0.78676470
e	0.2150871	Incl.	1.72933	-0.19696515	+0.31323380
P	3.16	H	15.6	G 0.15	

Residuals in seconds of arc

810209	413	(1.6+ | 2.2-)	850908	809	0.1-	0.1+		850915	095	0.7-	0.3-
810213	413	0.3+	0.3+	850908	809	0.2+	0.1+		850918	688	(3.3+ | 1.1+)
810302	413	0.7-	1.6-	850908	809	0.4+	0.2+		850918	688	1.4+	0.7+
810306	413	(8.4+ | 3.7-)	850910	809	1.4-	0.4-		850920	095	0.7+	1.1+
810311	413	1.0-	1.8-	850910	809	0.9-	0.3-		900125	688	0.7+	1.4-
810311	413	0.5-	1.6-	850910	809	0.5-	0.4-		900125	688	0.6+	1.0-
810311	413	0.6+	0.0	850914	809	1.0-	0.8-		900128	688	0.3-	0.1+
810316	413	(0.2- | 2.5-)	850914	809	0.7-	0.9-		900128	688	1.3-	0.2+
810502	413	(0.4- | 2.9+)	850914	809	0.4-	0.9-		910512	801	0.1+	1.4-
810502	413	1.2-	1.0-	850914	809	0.1+	0.8-		910512	801	0.0	0.3-
850815	688	2.0+	0.5-	850914	809	0.4+	0.8-		910606	809	0.6-	0.2+
850815	688	2.3+	0.2-	850914	809	0.8+	0.8-		910606	809	0.2-	0.2+
850818	095	1.2-	1.1-	850914	688	1.0+	0.7-		910606	809	0.1+	0.4+
850823	095	0.9+	0.3-	850914	688	0.3+	0.6-		910608	809	0.1-	0.4+
850906	809	0.1+	0.2+	850915	809	0.9-	0.7+		910608	809	0.3+	0.6+
850906	809	0.2+	0.0	850915	809	0.7-	0.8+		910608	809	0.4+	0.0
850906	809	0.5+	0.0	850915	809	0.4-	0.8+					

(4925)* 1981 XH2 = 1954 RL

Discovered 1981 Dec. 3 at the Purple Mountain Observatory.

Id. C. M. Bardwell (MPC 11344)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	347.40589		(1950.0)	P	Q
n	0.18532519	Peri.	136.49523	+0.93139246	-0.34038651
a	3.0468173	Node	243.81776	+0.28200277	+0.89882140
e	0.2490456	Incl.	8.26589	+0.23017933	+0.27614691
P	5.32	H	11.6	G 0.15	

Residuals in seconds of arc

540906	760	0.6+	0.2-	811229	330	(15.1- | 13.9+)		910712	675	0.5-	0.2-
540906	760	0.8-	0.1+	861003	054	0.2-	0.7-		910716	801	0.7+	0.5+
811023	095	0.1-	0.9+	861004	054	0.2-	1.2-		910716	801	0.6+	0.5+
811025	095	(3.8+ | 1.2-)	861008	054	0.8+	0.4-		910718	675	1.0-	0.9-
811028	095	1.0+	1.6-	861104	095	0.3+	1.3+		910718	675	0.2-	0.7-
811125	095	0.7-	0.3+	861201	801	0.4-	2.1-		910806	801	0.2-	0.6+
811203	330	0.6-	1.0+	910710	801	0.2+	0.6+		910806	801	0.4-	0.6+
811220	330	0.3+	0.0	910710	801	0.4+	0.7+		910811	801	0.4-	0.2+
811223	330	0.2+	0.4+	910712	675	0.9-	1.0-		910811	801	0.3-	0.4+

(4926)* 1982 ST6 = 1977 RM2 = 1983 YC1

Discovered 1982 Sept. 16 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. A. Lowe (k, MPC 13675), D. W. E. Green (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	39.67642	(1950.0)	P	Q
n	0.20685509	Peri. 329.03634	+0.53072873	+0.84747923
a	2.8315565	Node 333.01430	-0.77284834	+0.47893450
e	0.0530471	Incl. 1.29994	-0.34789720	+0.22891199
P	4.76	H 12.7	G 0.15	

Residuals in seconds of arc

770909	675	0.7+	0.2+	890104	413	0.5+	1.9-	910717	675	(0.2-	3.0-)
770909	095	0.9-	0.2-	890110	413	(3.7-	1.2+)	910805	675	1.1-	1.4-
770910	675	0.6+	0.4-	890110	413	1.2+	2.0-	910805	675	(0.5+	2.8+)
820916	095	0.9+	2.1+	910712	675	0.5+	0.6-	910805	675	0.1+	0.6-
820928	095	1.2-	0.1-	910712	675	0.0	0.6-	910805	675	1.4+	0.9+
831230	675	0.3-	0.5-	910714	675	0.5+	0.7-	910807	675	0.3-	0.8-
840108	675	1.5-	0.0	910714	675	0.0	0.5+	910807	675	0.5-	0.9-
890104	413	1.6-	0.9-	910717	675	1.0+	1.1-				

(4927)* 1982 UP2 = 1972 TX = 1987 YC4

Discovered 1982 Oct. 21 by Z. Vavrova at Klet.

Id. T. Kobayashi (MPC 14474)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kobayashi

M	336.90914	(1950.0)	P	Q
n	0.20079839	Peri. 38.78241	+0.99033745	-0.13828612
a	2.8882131	Node 329.16149	+0.12162243	+0.90219820
e	0.0864860	Incl. 1.16533	+0.06663126	+0.40855276
P	4.91	H 12.9	G 0.15	

Residuals in seconds of arc

721007	095	0.1-	0.2+	821114	095	0.4-	0.5+	910802	809	0.0	1.3+
771018	675	1.1+	0.3+	871028	095	0.9+	0.3-	910806	801	0.9+	0.1+
771019	675	1.5+	0.5+	871223	010	(9.1-	1.7-)	910806	801	0.7+	0.1+
821020	095	1.3-	0.7+	871223	010	0.6-	0.5-	910807	809	0.6-	1.0-
821021	046	0.5+	1.4-	910715	801	0.3-	0.5+	910807	809	0.3+	0.4-
821021	046	1.1+	1.9-	910715	801	0.6-	0.2+	910807	809	0.8-	0.8-
821025	095	0.8-	1.4+	910716	801	0.6-	0.4-	910811	801	0.6+	0.1-
821109	095	0.3+	1.3+	910716	801	0.6+	0.6+	910811	801	0.3+	0.1-

(4928)* 1982 UG7 = 1982 XR3

Discovered 1982 Oct. 21 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. W. Landgraf (d, MPC 8892)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	14.46312	(1950.0)	P	Q
n	0.31325539	Peri. 131.22070	+0.92859117	+0.37059164
a	2.1471893	Node 207.04419	-0.35201174	+0.86296216
e	0.1898713	Incl. 2.45813	-0.11749969	+0.34345036
P	3.15	H 14.3	G 0.15	

Residuals in seconds of arc

821021	095	1.6+	0.7+	851018	095	1.0-	2.4+	880812	511	2.6-	0.0
821023	095	0.6-	0.9+	851020	688	1.2-	0.7+	880812	511	1.6-	0.6+
821112	095	0.8+	0.5+	851020	688	1.1-	0.2-	880814	511	0.1-	0.4+
821213	381	0.9-	1.3-	851107	688	1.8+	1.1+	880814	511	2.0-	0.2-
821214	381	0.3+	1.1-	851107	688	1.3+	0.6-	880814	511	(4.0-	0.6+)
821214	381	0.5-	0.6-	851112	095	(3.0-	1.1+)	880815	511	2.4-	0.9+
850921	095	1.2-	1.3+	880808	095	1.1+	1.6+	880815	511	1.9-	0.2+
851008	881	1.0-	1.6-	880809	095	0.3-	0.7+	880816	511	1.9-	0.8+
851008	881	1.2-	0.5-	880809	688	0.6+	0.3-	880818	511	0.9-	0.2+
851012	293	0.5+	0.3-	880809	688	0.4+	0.1-	880818	511	1.1-	0.4-
851012	293	2.0+	0.1-	880809	095	2.1+	1.5+	880818	511	1.5+	0.6-
851015	688	0.9+	0.8+	880809	095	(9.2-	4.3-)	880908	046	0.2-	2.4-
851015	688	1.2-	1.5-	880810	801	1.0-	2.5+	880908	046	1.2+	1.5-

880909 046 0.9+ 1.0- 880914 095 0.8+ 2.3+ 910711 801 0.6+ 0.1+
880909 046 1.4+ 1.7- 880914 095 1.0+ 1.5+ 910711 801 0.6+ 0.1+
880910 046 2.3+ 1.5- 880916 095 1.2+ 2.9+ 910712 801 0.6+ 0.2+
880910 046 1.9+ 1.8- 880916 095 1.4+ 1.1+ 910712 801 0.9+ 0.6-
880912 801 1.5+ 0.5+ 880917 511 (2.0- 2.9-) 910806 801 0.6- 0.5-
880912 511 2.5- 2.6- 880917 511 (3.6- 1.0-) 910806 801 0.2- 0.6-
880912 511 0.1- 1.7- 881104 807 1.3- 0.9- 910808 801 1.0- 0.4-
880912 511 1.9+ 0.1+ 881106 807 1.2- 0.1+ 910808 801 1.1- 1.2-

(4929)* 1982 XV = 1964 FJ = 1984 HK

Discovered 1982 Dec. 13 by H. Kosai and K. Hurukawa at the Kiso Station of the Tokyo Astronomical Observatory.

Id. S. Nakano (MPC 12000)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 109.73683	(1950.0)	P	Q
n 0.29984731	Peri. 89.02908	-0.80749753	+0.58885122
a 2.2107312	Node 127.04555	-0.55698089	-0.74180312
e 0.0582348	Incl. 2.48955	-0.19421645	-0.32090866
P 3.29	H 13.4	G 0.15	

Residuals in seconds of arc

640318 760 0.5+ 0.3- 880903 809 0.9- 0.5- 880912 809 0.1- 0.6+
640318 760 (3.9+ 5.4+) 880903 809 0.6- 0.3- 880915 809 0.4+ 0.0
821213 381 0.2- 1.3+ 880903 809 0.5- 0.0 880915 809 0.4+ 0.0
821213 381 0.7+ 0.4+ 880906 809 0.8+ 0.3- 880915 809 0.3+ 0.1+
821214 381 1.4+ 0.5- 880906 809 1.2+ 0.2- 880916 809 0.2- 0.9+
821214 381 0.9- 0.1+ 880906 809 1.0+ 0.1- 880916 809 0.3- 0.7+
840419 046 0.0 2.1- 880907 809 0.1+ 0.1+ 880916 809 0.2- 0.7+
840419 046 0.3- 0.1+ 880907 809 0.2+ 0.1+ 910614 801 0.5+ 0.4+
840425 046 0.3+ 1.1+ 880907 809 0.3+ 0.1+ 910614 801 1.1+ 0.4-
840425 046 1.5- 2.0+ 880909 809 0.0 0.2- 910711 801 0.4+ 0.3+
880810 801 0.5+ 0.7- 880909 809 0.4+ 0.1- 910711 801 0.4+ 0.3+
880901 809 2.5- 1.7- 880909 809 0.6+ 0.1+ 910712 801 0.9+ 0.3+
880901 809 2.0- 1.2- 880912 809 0.1- 0.8+ 910712 801 0.4+ 0.2+
880901 809 1.8- 0.9- 880912 809 0.1+ 0.6+

(4930)* 1983 AO2 = 1950 CD = 1965 WU = 1990 HE1

Discovered 1983 Jan. 10 by S. Salyards at Palomar.

Id. B. G. Marsden (MPC 16577)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M 221.12316	(1950.0)	P	Q
n 0.17826541	Peri. 342.46431	-0.25884763	-0.93897797
a 3.1267368	Node 121.98740	+0.91510719	-0.31345552
e 0.0445929	Incl. 15.49111	+0.30915486	+0.14165451
P 5.53	H 11.6	G 0.15	

Residuals in seconds of arc

500208 760 0.7- 0.8+ 900427 675 0.5- 0.8+ 910711 801 0.1- 0.2+
500208 760 0.9+ 0.7- 900427 675 0.5- 1.2+ 910712 801 0.3- 0.3+
651128 330 (4.7- 1.1+) 900429 675 0.8+ 0.1- 910712 801 0.4- 0.4+
830106 095 (0.0 3.3+) 900429 675 0.8+ 0.6- 910807 801 0.4+ 0.6-
830110 675 0.4- 0.3+ 900518 675 0.9- 0.0 910807 801 0.1- 0.1+
830111 675 1.4- 1.0+ 900518 675 0.9+ 0.4- 910808 801 0.7+ 2.0-
830112 675 0.1+ 0.3+ 900521 675 0.9+ 0.4+ 910808 801 0.2+ 0.4-
890226 400 0.1- 1.6- 900521 675 1.7- 1.0+
890226 400 1.5+ 2.1- 910711 801 0.2- 0.2+

(4931)* 1983 CN3 = 1987 DL

Discovered 1983 Feb. 11 by H. Debehogne and G. DeSanctis at the European Southern Observatory.

Id. C. M. Bardwell (MPC 11736)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	108.26458	(1950.0)	P	Q
n	0.23834329	Peri. 281.82709	+0.20267703	-0.96444840
a	2.5763257	Node 154.47978	+0.97923423	+0.19877623
e	0.2844391	Incl. 23.18116	+0.00472621	+0.17414734
P	4.14	H 12.2	G 0.15	

Residuals in seconds of arc

810903	675	0.0	0.7-	830219	809	2.2-	0.6+	901114	801	1.3+	0.4-
810904	675	0.4-	1.6-	830219	809	1.8-	0.8+	901114	801	0.9+	0.0
830211	809	2.0+	0.3-	870223	675	3.0-	1.7-	901217	801	0.4-	0.4+
830211	809	2.0+	0.3-	870223	675	1.4-	0.1-	901217	801	0.4-	0.9+
830211	809	2.1+	0.2-	870227	675	1.9-	0.2-	901220	801	0.3-	0.5+
830213	809	1.4+	0.2-	870227	675	(4.7-	2.3+)	901220	801	0.5-	0.5+
830213	809	1.7+	0.4-	870330	801	0.0	1.0-	910214	675	1.6+	0.3+
830213	809	1.6+	0.4-	870428	675	2.9+	1.4+	910214	675	0.1-	2.3-
830219	809	2.8-	0.6+	870430	675	(3.4+	0.8+)				

(4932)* 1984 EA1 = 1989 CG

Discovered 1984 Mar. 9 by B. A. Skiff at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (MPC 14349)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	282.44366	(1950.0)	P	Q
n	0.17940594	Peri. 255.62080	+0.78304328	-0.60619654
a	3.1134711	Node 141.41337	+0.62105143	+0.74992635
e	0.0226395	Incl. 12.89360	+0.03373940	+0.26483246
P	5.49	H 11.5	G 0.15	

Residuals in seconds of arc

840309	688	(1.1+	3.1-)	890204	399	0.3+	0.1+	910709	801	1.0+	0.9-
840309	688	0.1-	1.9-	890204	399	0.4-	1.5-	910709	801	0.1-	0.3-
840403	688	0.4+	1.7-	890204	399	0.6-	0.2+	910710	801	1.3+	0.3+
840403	688	0.1+	1.3-	900322	801	0.2+	0.9+	910710	801	1.2+	0.1-
840408	688	0.6+	1.7-	900322	801	0.0	0.7+	910806	801	0.9-	0.4-
840408	688	2.5-	0.2+	900326	801	0.2+	0.9+	910806	801	0.8-	0.6-
890203	399	0.8+	0.1-	900326	801	0.8+	0.7+	910807	801	0.2-	0.2+
890203	399	0.0	0.6+	900423	801	0.4+	1.3+	910807	801	1.8-	1.4-
890203	399	0.1-	1.1+	900424	801	0.0	1.2+				
890203	399	0.1+	0.2-	900424	801	(0.2+	3.2+)				

(4933)* 1984 EN1 = 1978 QN3 = 1988 JY

Discovered 1984 Mar. 2 by H. Debehogne at the European Southern Observatory.

Id. S. Nakano (MPC 13448)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	357.32335	(1950.0)	P	Q
n	0.27693927	Peri. 86.49467	-0.54198129	+0.84023893
a	2.3310219	Node 150.66901	-0.78336923	-0.49823868
e	0.1193166	Incl. 1.86744	-0.30428430	-0.21390829
P	3.56	H 14.0	G 0.15	

Residuals in seconds of arc

780826	414	1.1+	0.3+	840305	809	0.1+	0.7-	840308	809	0.8-	0.5-
780826	414	0.1-	0.5-	840305	809	0.4+	0.5-	840308	809	0.5-	0.1-
840226	095	1.7+	1.0-	840305	809	0.1+	0.1-	840308	809	0.3-	0.5-
840302	809	1.2-	1.2+	840306	809	0.2+	0.5-	840309	809	0.2-	0.0
840302	809	1.0-	1.2+	840306	809	0.1+	0.4-	840309	809	0.1-	0.1-
840302	809	1.2-	1.1+	840306	809	0.2+	0.0	840309	809	0.2+	0.1-
840303	809	0.9-	1.0+	840307	809	0.3-	0.7-	840310	809	0.2+	0.8-
840303	809	0.3-	0.7+	840307	809	0.4+	0.4-	840310	809	0.1-	0.7-
840303	809	0.2+	0.5+	840307	809	1.1+	0.1-	840310	809	0.2-	0.4-

840311	809	0.1+	0.8+	880512	046	1.0+	0.9-	910317	801	0.3+	0.0
840311	809	0.3+	0.7+	891004	807	0.5+	1.4-	910317	801	0.3+	0.1+
840311	809	0.5+	0.6+	891124	675	0.6-	1.9-	910321	801	0.2+	0.0
880509	046	0.5-	1.5-	891124	675	(0.1-	2.7-)	910321	801	0.3+	0.1+
880509	046	0.2-	1.1+	910122	675	0.5+	0.8-				
880512	046	1.0-	1.1-	910122	675	0.3-	1.0-				

(4934)* 1985 JJ = 1981 SV2

Discovered 1985 May 15 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (MPC 13449)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	2.86670		(1950.0)	P	Q
n	0.18977440	Peri.	148.82721	+0.91430412	+0.40427937
a	2.9990081	Node	187.45313	-0.39958080	+0.89040271
e	0.1148461	Incl.	10.94133	-0.06620542	+0.20914399
P	5.19	H	12.2	G 0.15	

Residuals in seconds of arc

810928	095	1.9+	1.1-	850521	688	0.1-	1.2+	910709	801	0.4+	0.5-
810929	511	0.8-	1.2+	860906	095	(1.7+	4.0+)	910710	801	0.2+	0.3-
810929	511	1.2-	1.2+	900427	801	0.2+	0.7+	910710	801	0.2+	0.3-
810929	511	0.4-	1.3+	900520	801	0.1+	0.1-	910806	801	0.1-	0.0
850515	688	0.8-	0.2+	900520	801	0.4-	0.5+	910806	801	0.4-	0.5-
850515	688	0.6-	1.2-	900525	801	0.2+	0.3+	910807	801	0.0	0.2-
850518	688	0.3+	0.3-	900525	801	0.4+	0.5+	910807	801	0.1-	0.2-
850518	688	0.9+	0.6+	910709	801	0.1-	0.2-				

(4935)* 1985 PD2 = 1969 VN1 = 1974 FH1 = 1977 DA1 = 1977 EE2 = 1979 YX7 = 1980 BA4

Discovered 1985 Aug. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (MPC 14020), T. A. Vinogradova

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	292.99937		(1950.0)	P	Q
n	0.30309492	Peri.	274.39608	+0.79838329	-0.59619689
a	2.1949111	Node	122.22505	+0.58444018	+0.73347516
e	0.1464603	Incl.	5.72987	+0.14496137	+0.32644059
P	3.25	H	13.8	G 0.15	

Residuals in seconds of arc

691113	095	1.0-	0.9+	850813	095	0.8+	0.3+	910613	801	0.9-	0.3+
740321	095	0.8+	2.1-	850815	095	0.4+	2.5-	910614	801	0.6-	0.3+
770218	381	0.5-	1.3-	850817	095	1.3+	1.9-	910614	801	0.4+	1.2+
770218	381	1.5-	2.1-	850819	095	1.5+	0.6-	910711	801	0.6+	0.4-
770219	381	1.1+	0.8+	850824	095	1.2-	0.2+	910711	801	0.0	0.0
770219	381	1.2+	0.2-	850911	095	0.7+	2.2+	910712	801	1.0+	1.6-
770313	095	0.8-	2.1+	850919	095	0.6-	1.6-	910712	801	0.0	0.8-
791223	095	0.0	0.3+	850920	095	0.2-	0.2+				
800122	095	0.4-	3.6-	910613	801	2.1-	0.0				

(4936)* 1985 UY4 = 1978 TK4 = 1978 VH12

Discovered 1985 Oct. 22 by L. V. Zhuravleva at the Crimean Astrophysical Observatory.

Id. C. M. Bardwell (MPC 12317)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	253.44673		(1950.0)	P	Q
n	0.28694198	Peri.	283.46556	+0.19257370	-0.98033797
a	2.2765297	Node	155.30514	+0.93542618	+0.17014505
e	0.1257052	Incl.	5.91369	+0.29646793	+0.09994060
P	3.43	H	13.4	G 0.15	

Residuals in seconds of arc

781004	095	0.2-	1.1-		900302	809	0.8+	0.1+		900322	399	1.7+	0.1-
781102	095	0.6+	0.1-		900303	809	0.9-	0.1+		900322	399	1.0+	0.6-
851022	095	0.1-	0.6-		900303	809	0.7-	0.0		910709	801	0.7-	0.0
851111	095	0.2+	0.0		900303	809	0.2-	0.1-		910709	801	0.2-	0.1+
851120	095	(2.0-	5.6+)		900304	809	1.1-	0.6-		910710	801	0.9+	0.2+
900127	801	0.3+	0.1+		900304	809	0.8-	0.6-		910710	801	0.4-	1.3-
900127	801	0.2+	0.7+		900304	809	0.6-	1.0-		910716	801	1.0+	0.8-
900218	399	0.1+	1.7+		900315	046	1.7+	0.0		910716	801	0.9-	0.4+
900218	399	(2.6- | 3.1+)		900315	046	(3.5+ | 0.1+)		910808	801	0.6+	0.1-
900221	801	0.1-	0.4+		900316	046	(3.5+	2.1-)		910808	801	0.3+	0.2+
900221	801	0.9-	0.3+		900316	046	1.3-	0.6+		910811	801	0.0	0.2-
900302	809	0.0	0.1+		900322	399	0.0	0.9-		910811	801	0.6-	0.0
900302	809	0.4+	0.0		900322	399	0.2+	1.7-					

(4937)* 1986 CL1 = 1980 YT = 1987 OD

Discovered 1986 Feb. 1 by H. Debehogne at the Euopean Southern Observatory.

Id. C. M. Bardwell (MPC 12318)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	62.52576	(1950.0)	P	Q	
n	0.23563858	Peri.	336.04041	-0.30852810	+0.90578857
a	2.5960026	Node	274.92725	-0.81879214	-0.40830157
e	0.1645073	Incl.	16.94903	-0.48413825	+0.11330004
P	4.18	H	11.9	G 0.15	

Residuals in seconds of arc

801230	552	0.8-	0.6-		860208	809	2.2-	0.2+		860216	809	0.5+	0.3+
801230	552	1.0-	0.5-		860208	809	2.1-	0.1+		860216	809	0.3+	0.2+
860201	809	0.0	1.0-		860209	809	0.8-	0.5+		860217	809	0.0	0.0
860201	809	0.2+	0.9-		860209	809	0.2-	0.1+		860217	809	0.4+	0.0
860201	809	0.1-	0.8-		860209	809	0.1+	0.2+		870726	675	0.3-	0.8+
860202	809	0.1-	0.3-		860210	809	0.2-	0.7+		870726	675	0.1-	0.1+
860202	809	0.1+	0.3-		860210	809	0.2-	0.7+		870821	801	0.3+	0.6-
860202	809	0.4+	0.3-		860210	809	0.3-	0.6+		870828	095	0.6+	2.6+
860204	809	1.5+	0.8+		860211	809	0.5-	0.5+		900328	801	0.4-	1.0-
860204	809	1.8+	1.0+		860211	809	0.2-	0.5+		900328	801	0.2-	0.8-
860204	809	2.0+	0.8+		860211	809	0.1-	0.4+		900329	801	0.2-	1.0-
860205	809	1.1+	0.1+		860212	809	0.3+	0.8+		900329	801	0.4-	1.1-
860205	809	0.8+	0.1-		860212	809	0.6+	0.8+		910609	801	0.4+	0.2-
860205	809	0.7+	0.1-		860212	809	0.7+	0.7+		910609	801	0.2+	0.2-
860206	809	0.2+	0.0		860213	809	1.1-	0.0		910614	801	0.3+	0.3-
860206	809	0.1+	0.0		860213	809	0.9-	0.1+		910614	801	0.4+	0.4-
860206	809	0.4+	0.0		860214	809	1.5-	0.5-		910709	801	0.2-	0.6-
860207	809	1.6+	0.4-		860214	809	0.8-	0.3-		910709	801	0.2-	0.5-
860207	809	1.7+	0.7-		860215	809	1.2-	0.4-		910710	801	0.4-	0.6-
860207	809	1.8+	1.1-		860215	809	0.6-	0.5-		910710	801	0.3-	0.6-

(4938)* 1986 CQ1 = 1988 UG

Discovered 1986 Feb. 5 by H. Debehogne at the European Southern Observatory.

Id. S. Nakano (MPC 13857)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	289.19632	(1950.0)	P	Q	
n	0.27308443	Peri.	194.72929	+0.55096519	-0.83283902
a	2.3529070	Node	221.87433	+0.77344551	+0.53348624
e	0.0764919	Incl.	4.56024	+0.31339975	+0.14755203
P	3.61	H	13.1	G 0.15	

Residuals in seconds of arc

860205	809	0.1-	0.5-	860212	809	0.6+	0.1+	881018	400	0.4-	0.8-
860205	809	0.0	0.6-	860213	809	0.3-	0.2-	881019	400	1.9+	2.1-
860205	809	0.0	0.6-	860213	809	0.0	0.1-	881019	400	(4.7+	1.1-)
860206	809	0.6-	0.4-	860213	809	0.1-	0.1-	881102	400	(3.4+	3.1+)
860206	809	0.6-	0.1-	860214	809	1.1+	0.2+	881102	400	0.3+	0.1+
860206	809	0.4-	0.2-	860214	809	1.2+	0.1+	881102	400	0.3-	0.0
860207	809	0.2-	0.2+	860214	809	1.2+	0.2+	900326	801	0.3+	0.4+
860207	809	0.3-	0.3+	860215	809	0.1-	0.1+	900326	801	0.0	0.6+
860207	809	0.2+	0.2+	860215	809	0.0	0.2+	900329	801	0.2+	0.6+
860208	809	0.3-	0.3-	860215	809	0.2+	0.2+	900329	801	0.2+	0.4+
860208	809	0.0	0.3-	860216	809	0.8-	0.2-	900424	801	0.3-	0.9-
860208	809	0.0	0.2-	860216	809	0.7-	0.2-	900424	801	0.2-	0.9-
860209	809	0.3-	0.1+	860216	809	0.8-	0.0	900428	801	0.1-	0.3-
860209	809	0.3-	0.1+	860217	809	0.2+	0.3-	900428	801	0.3-	0.3-
860209	809	0.1+	0.1-	860217	809	0.4+	0.3-	910709	801	0.5+	0.1+
860210	809	0.1+	0.8+	860217	809	0.5+	0.3-	910709	801	0.4+	0.1+
860210	809	0.3+	0.8+	881016	400	0.3-	0.6+	910710	801	0.2+	0.2+
860210	809	0.4+	0.9+	881016	400	0.5-	0.6-	910710	801	0.4+	0.0
860211	809	0.7-	0.1+	881016	400	(2.5-	1.2-)	910806	801	0.3-	0.3+
860211	809	0.3-	0.1-	881016	400	(2.6-	1.2+)	910806	801	0.2-	0.2+
860211	809	0.3-	0.1+	881016	400	(1.2-	2.5-)	910808	801	0.7-	0.8-
860212	809	0.1+	0.3+	881016	400	0.8-	1.9+	910808	801	0.4-	0.1+
860212	809	0.5+	0.3+	881018	400	0.1+	0.5+				

(4939)* 1986 QL1 = 1984 BZ

Discovered 1986 Aug. 27 by H. Debehogne at the European Southern Observatory.

Id. S. Nakano (MPC 12133)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	0.69471	(1950.0)	P	Q	
n	0.24535060	Peri.	94.19285	-0.23083480	-0.97287754
a	2.5270353	Node	9.19474	+0.85130982	-0.20940066
e	0.1583932	Incl.	5.38143	+0.47115485	-0.09828861
P	4.02	H	13.2	G 0.15	

Residuals in seconds of arc

840129	704	0.8-	1.3+	860904	809	1.6-	0.0	860913	809	1.7+	0.8-	
840129	704	0.5+	1.9+	860904	809	1.5-	0.1-	871222	801	0.1-	1.4+	
840130	704	0.7+	0.3-	860904	809	1.4-	0.1-	880116	877	(3.4+	2.0-)	
840201	704	(0.5+	4.7+)	860905	809	0.5-	0.3+	880116	877	0.7-	1.8-	
840203	704	0.3+	0.5+	860905	809	0.6-	0.5+	880123	801	0.0	0.1-	
860827	809	0.1-	0.3-	860905	809	0.6-	0.3+	880124	877	2.3+	1.0-	Y
860827	809	0.1-	0.3-	860907	809	0.5-	0.2+	880124	877	0.8-	1.5-	Y
860827	809	0.1+	0.3-	860907	809	0.5-	0.3+	880124	877	0.8-	1.5-	Y
860828	809	0.6-	0.3+	860907	809	0.7-	0.7+	880219	801	1.5-	1.5+	
860828	809	0.5-	0.3+	860909	809	0.3+	0.6+	880222	801	1.1+	0.6+	
860828	809	0.3-	0.2+	860909	809	0.4+	0.5+	900827	675	0.4+	0.1-	
860901	809	0.3-	0.7+	860909	809	0.6+	0.6+	900827	675	1.2+	0.4-	
860901	809	0.5-	0.6+	860911	809	1.3+	0.5+	900917	675	0.6-	0.6-	
860901	809	0.4-	0.5+	860911	809	1.3+	0.6+	900917	675	0.9+	1.3-	
860902	809	0.8-	0.1-	860911	809	1.5+	0.5+	900920	675	0.5-	1.7-	
860902	809	0.5-	0.2-	860913	809	1.7+	0.4-	900920	675	0.3-	0.2+	
860902	809	0.4-	0.3-	860913	809	1.8+	0.7-					

(4940)* 1986 QY4 = 1954 XF = 1975 RQ1 = 1977 BO = 1981 TM2 = 1981 WB3 = 1983 CD1

Discovered 1986 Aug. 18 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. S. Nakano (MPC 14788)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	321.11039	(1950.0)	P	Q
n	0.18078569	Peri. 267.39409	+0.89943844	-0.43564383
a	3.0976096	Node 118.43016	+0.41511996	+0.82652086
e	0.1816608	Incl. 2.28093	+0.13669644	+0.35647963
P	5.45	H 11.8	G 0.15	

Residuals in seconds of arc

541201	024	0.5+	1.8+	830211	688	(4.8+ 0.5-)	861006 095	1.1- 0.6+
750905	095	0.1+	1.1-	830214	381	0.7- 0.1+	910711 801	0.4+ 0.2+
770120	095	0.9-	0.4+	830219	688	0.4+ 1.1-	910711 801	0.3+ 0.3+
780315	675	1.2-	1.3+	830219	688	1.9+ 0.3+	910712 801	0.2+ 0.4+
780316	675	0.9-	0.9+	860818	095	0.3- 0.2-	910712 801	0.5+ 0.4+
811004	095	1.2+	1.1-	860830	095	(4.4+ 1.8+)	910806 801	0.3- 0.1-
811124	033	0.4-	0.7-	860907	095	2.4+ 0.2+	910806 801	0.4- 0.2-
811124	033	1.0-	0.9-	860909	095	2.2- 2.7+	910808 801	0.2- 0.4-
830211	688	1.4+	0.8-	860929	095	0.5+ 0.2-	910808 801	0.1- 0.3-

(4941)* 1986 UA = 1969 TR5 = 1975 VW1

Discovered 1986 Oct. 25 by K. Suzuki and T. Urata at Toyota.

Id. T. Urata (MPC 11351)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Urata

M	331.37391	(1950.0)	P	Q
n	0.17451077	Peri. 259.61961	+0.87036897	-0.49176604
a	3.1714258	Node 129.83229	+0.46352229	+0.80115145
e	0.1930556	Incl. 1.86413	+0.16614734	+0.34106087
P	5.65	H 12.1	G 0.15	

Residuals in seconds of arc

691015	095	1.1-	3.2-	861030	883	1.4- 1.5-	910716 801	0.9- 0.1-
691017	095	2.0+	0.8+	861031	399	0.3+ 0.8-	910717 675	1.2+ 1.2-
751102	095	0.0	0.3+	861106	688	(1.4+ 2.5+)	910717 675	0.2+ 0.3-
751201	095	(1.2+	6.6-)	861106	688	1.4+ 1.8+	910805 675	0.4- 0.0
861004	095	0.8-	0.8-	861204	688	0.3+ 1.1+	910805 675	0.0 0.8+
861007	095	1.2+	0.5-	861204	688	0.6- 1.2+	910806 801	0.1- 0.4+
861012	095	(0.3+	3.1-)	910712	675	0.2+ 0.4+	910806 801	0.4- 0.2+
861025	881	0.3+	1.0-	910712	675	0.0 0.4+	910808 801	0.2- 0.3+
861025	881	0.9+	1.0+	910714	675	0.2+ 0.6-	910808 801	0.6+ 0.4+
861030	881	0.8-	0.1-	910714	675	0.1+ 0.5+	910808 675	0.0 0.0
861030	399	1.5+	1.9+	910715	801	0.5- 0.1-	910808 675	0.2+ 0.1+
861030	881	1.1-	0.6-	910715	801	0.2- 0.1+		
861030	883	2.0-	0.3+	910716	801	0.5- 0.1+		

(4942)* 1987 DU6 = 1955 MS = 1971 GE = 1990 CB

Discovered 1987 Feb. 24 by H. Debehogne at the European Southern Observatory.

Id. S. Nakano (MPC 16025)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	53.11988	(1950.0)	P	Q
n	0.30172576	Peri. 11.03120	+0.32026742	+0.94500913
a	2.2015461	Node 277.67354	-0.87412162	+0.26784646
e	0.1362019	Incl. 3.83190	-0.36515772	+0.18765934
P	3.27	H 13.3	G 0.15	

Residuals in seconds of arc

550623	076	0.7+	1.9-	870226	809	0.6- 0.6-	870302 809	0.4+ 1.1+
710402	805	0.4-	1.4+	870228	809	0.8- 0.7+	870302 809	0.5+ 1.1+
870224	809	(0.6-	2.5-)	870228	809	0.6- 0.3+	870302 809	0.8+ 1.1+
870224	809	(1.0-	2.3-)	870228	809	0.1+ 0.4+	870303 809	0.8+ 0.0
870224	809	(0.9-	2.2-)	870301	809	0.2- 0.4+	870303 809	0.3+ 0.0
870226	809	1.2-	0.7-	870301	809	0.1- 0.4+	870303 809	0.4+ 0.3+
870226	809	0.9-	0.7-	870301	809	0.1- 0.5+	870304 809	0.1+ 0.5-

870304	809	0.5+	0.4-	870310	809	0.1+	0.9-	900216	402	(3.4+	0.3+)
870304	809	0.7+	0.3-	870310	809	0.5+	1.0-	910711	801	0.4-	0.2+
870305	809	0.1-	0.5-	900201	402	0.3-	1.9+	910711	801	0.4-	0.4+
870305	809	0.0	0.4-	900201	402	(2.7+	2.6+)	910712	801	0.4-	0.0
870305	809	0.0	0.6-	900202	402	0.3-	1.4-	910712	801	0.2-	0.1+
870308	809	0.2-	0.1+	900202	402	1.8-	0.1+	910806	801	0.2+	0.6+
870308	809	0.0	0.3-	900216	402	0.2+	0.6+	910806	801	0.2+	0.6+
870308	809	0.4+	0.1-	900216	402	1.7+	1.0+	910807	801	0.1+	0.4+
870310	809	0.3+	0.9-	900216	402	(4.5+	2.2+)	910807	801	0.1+	0.4+

(4943)* 1987 OQ = 1979 XR1

Discovered 1987 July 27 by E. W. Elst at Haute Provence.

Id. S. Nakano (MPC 12322)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	325.41351	(1950.0)	P	Q	
n	0.22871286	Peri.	134.85034	+0.94805648	-0.26106435
a	2.6481484	Node	241.08301	+0.20013727	+0.93363774
e	0.1771731	Incl.	11.98420	+0.24725287	+0.24528752
P	4.31	H	13.2	G 0.15	

Residuals in seconds of arc

791214	095	0.5-	1.2-	870821	809	0.8+	0.1+	890207	809	0.3-	1.2-
791218	095	0.3-	1.5-	870821	809	1.0+	0.1+	890207	809	0.2+	0.9-
870727	511	(5.7-	4.2-)	870822	033	0.8-	0.4-	890207	809	0.6-	1.2-
870727	511	(4.9-	0.1+)	870822	033	0.5-	0.3-	910614	801	0.2-	0.4-
870819	809	0.1-	1.1-	870826	809	2.1+	0.4+	910614	801	0.3+	1.3-
870819	809	0.2-	0.5-	870826	809	0.8+	0.9+	910615	801	0.5+	0.4-
870819	809	0.3-	0.1+	870918	071	0.7-	1.9+	910615	801	0.4+	0.9-
870820	809	0.2-	0.4-	870918	071	(1.0-	5.1-)	910709	801	0.0	1.5-
870820	809	0.1-	0.6-	890205	809	0.8-	0.7-	910709	801	0.6-	2.1-
870820	809	0.7-	0.5-	890205	809	0.3+	0.6-				
870821	809	0.5+	0.3-	890205	809	0.1-	0.8-				

(4944)* 1987 RP3 = 1978 VK13 = 1985 DP2

Discovered 1987 Sept. 2 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (MPC 15248)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	332.31723	(1950.0)	P	Q	
n	0.21682795	Peri.	83.03669	+0.99619767	-0.04019178
a	2.7440533	Node	279.24568	+0.00515692	+0.91287665
e	0.0654577	Incl.	4.49168	+0.08696896	+0.40625219
P	4.55	H	12.8	G 0.15	

Residuals in seconds of arc

781101	095	0.7+	1.7-	870917	095	(3.2-	4.7-)	910710	801	0.3-	0.1+
850224	675	(3.5-	0.3-)	870926	095	0.3-	0.8-	910806	801	0.4+	0.6-
850224	675	0.2+	1.3-	871023	095	1.0+	0.1+	910806	801	0.8+	0.4-
850227	675	1.7-	0.3-	910709	801	0.5-	0.5-	910808	801	0.5+	0.2-
850227	675	0.2+	1.4-	910709	801	0.4-	0.3-	910808	801	0.5+	0.1+
870902	095	0.3-	0.5+	910710	801	0.5-	0.3-				

(4945)* 1987 SJ = 1954 UX = 1958 RP = 1979 WF3 = 1979 YQ6

Discovered 1987 Sept. 18 by K. Suzuki and T. Urata at Toyota.

Id. T. Kobayashi (MPC 12455), S. Nakano (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	24.80685	(1950.0)	P	Q	
n	0.23862631	Peri.	137.56053	+0.87497537	+0.48375368
a	2.5742882	Node	193.54998	-0.46396758	+0.82593984
e	0.3148524	Incl.	4.89986	-0.13839141	+0.28949225
P	4.13	H	12.9	G 0.15	

Residuals in seconds of arc

541022	760	0.9+	0.6-	871001	881	0.0	0.3+	910712	675	0.3-	0.6+
541022	760	1.2-	1.7-	871001	881	0.2+	1.0+	910716	675	1.1-	1.9-
580910	690	(7.5-	0.5+)Y	871002	881	0.6-	0.6+	910716	675	0.9-	2.7-
580910	690	2.6+	1.3-	871002	881	0.4+	0.6+	910718	675	0.7-	1.6-
580911	690	0.5-	2.5-	871013	881	1.0-	1.3-	910718	675	0.7-	0.6+
791116	095	0.1+	0.6+	871013	881	0.5-	0.8-	910718	675	0.2-	2.2-
791223	095	0.1+	0.7+	871018	881	0.1-	0.4+	910718	675	0.7-	0.6+
870903	095	0.9-	0.0	871018	881	0.7-	1.0+	910803	881	0.3-	0.8+
870917	095	0.8+	1.0-	871022	881	0.0	0.1+	910803	881	0.0	0.3+
870918	881	2.0-	0.9+	871022	881	0.5+	0.2+	910803	885	0.1+	0.3-
870918	881	0.5-	0.9+	871023	095	(3.6+	1.7-)	910803	885	0.8+	0.1-
870921	071	(4.5-	0.8-)	910708	385	2.0+	1.0+	910806	801	0.0	0.7+
870921	071	(4.2-	0.2+)	910708	385	0.2-	0.8+	910806	801	0.1+	0.5+
870923	095	0.8+	1.7-	910709	801	0.3+	0.8+	910811	801	0.3+	0.5+
870926	688	1.0+	0.8+	910709	801	0.3+	0.7+	910811	801	0.4+	0.5+
870926	688	0.4+	0.7+	910710	801	0.2+	0.8+	910831	881	0.1-	1.2+
870928	881	0.9+	0.0	910710	801	0.1+	0.7+	910831	881	0.4-	0.0
870928	881	0.5+	0.5+	910712	675	0.5-	0.6+				

(4946)* 1988 BW1

Discovered 1988 Jan. 21 by C. S. Shoemaker at Palomar.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	328.75320	(1950.0)	P	Q	
n	0.08123131	Peri.	201.84166	-0.19271866	+0.92847075
a	5.2802408	Node	58.37783	-0.83600498	+0.01404922
e	0.0488643	Incl.	21.89163	-0.51376570	-0.37113971
P	12.13	H	9.9	G 0.15	

Residuals in seconds of arc

880121	675	1.4+	0.6-	900327	675	0.6+	1.9+	910416	675	0.6+	1.3-
880123	675	0.2-	0.8+	900331	675	1.2+	0.3+	910416	675	0.2+	2.4-
880124	675	0.2+	0.9+	900401	675	0.6+	0.1+	910513	801	0.3-	1.8+
880216	675	0.0	0.3+	910312	675	1.5-	0.6-	910513	801	0.3-	1.8+
880217	675	0.3+	0.6-	910312	675	0.6-	1.4-	910514	801	0.2-	1.8+
880220	675	1.5-	0.1-	910321	801	0.4+	1.1+	910514	801	0.5-	1.8+
880317	675	0.4-	0.4+	910413	801	1.4+	1.0+	910514	675	2.4+	0.6+
880318	675	0.1+	0.5-	910413	801	1.0+	1.0+	910514	675	1.0-	0.1-
900221	675	2.1-	1.9-	910414	675	0.3-	1.7-	910515	675	0.8-	0.9-
900224	675	1.6-	1.7-	910414	675	1.2+	0.7-	910515	675	0.7-	0.9-

(4947)* 1988 TJ1

Discovered 1988 Oct. 12 by C. S. Shoemaker at Palomar.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	328.10615	(1950.0)	P	Q	
n	0.61487330	Peri.	192.68787	+0.67967283	-0.71712202
a	1.3696585	Node	214.85666	+0.69433405	+0.69678051
e	0.1681036	Incl.	15.65371	+0.23652710	+0.01526219
P	1.60	H	18.5	G 0.15	

Residuals in seconds of arc

801208	413	0.7-	1.4-	881104	675	0.0	0.9+	910511	691	0.6+	1.1-
801211	413	0.2+	0.9-	881106	675	0.7-	0.6-	910512	691	1.1-	0.5-
881012	675	0.0	0.5+	890118	675	0.6-	0.4+	910513	691	0.9-	0.8-
881012	675	2.0+	1.7-	890118	675	0.2-	0.3-	910513	691	0.7-	0.1-
881013	675	0.3-	0.6+	890118	675	0.2-	0.7-	910513	691	0.7-	0.6-
881103	413	0.3-	0.0	910511	801	1.2+	0.3+	910516	801	0.3+	0.0
881103	413	(2.0-	5.5+)	910511	691	0.7+	1.5-	910516	801	0.1-	0.5+

(4948)* 1988 VF1 = 1959 RO = 1972 TH4 = 1972 VM = 1980 BW2

Discovered 1988 Nov. 3 by W. Kakei, M. Kizawa and T. Urata at the Oohira Station of the Nihondaira Observatory.

Id. S. Nakano (MPC 14026)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	13.84992	(1950.0)	P	Q
n	0.30856736	Peri. 124.24301	+0.98259598	-0.17908870
a	2.1688827	Node 246.11729	+0.14769601	+0.91425113
e	0.1933391	Incl. 3.09190	+0.11265450	+0.36341727
P	3.19	H 13.9	G 0.15	

Residuals in seconds of arc

590909	760	(1.5-	3.7-)	881107	385	(2.8-	3.2-)	881203	372	0.3+	2.3+
590909	760	0.3-	0.7+	881110	385	(5.8-	2.0-)	881203	372	1.4+	0.9+
590911	760	0.2+	0.2+	881110	385	(3.7-	1.9-)	881208	385	0.3-	1.4-
590911	760	0.6+	1.1-	881111	888	0.3-	0.8-	881208	385	(4.0-	1.8-)
721005	095	1.1-	1.1+	881111	888	0.7+	0.5-	910711	801	0.0	0.2+
721108	095	(1.0-	6.3-)	881113	385	0.6+	0.8+	910711	801	0.1+	0.5+
800124	095	0.4-	0.7-	881113	385	(3.6+	1.5-)	910713	801	0.4-	0.0
881103	385	(0.1-	4.7-)	881113	385	0.9-	2.2-	910806	801	0.0	0.1+
881103	385	0.5+	1.2-	881118	372	0.7-	1.0-	910806	801	0.0	0.0
881106	385	0.4+	0.3+	881118	372	1.0-	1.6+	910807	675	0.4+	1.3-
881106	385	(0.4-	7.7-)	881127	385	0.5+	0.1-	910808	675	0.5-	0.4-
881107	385	(4.6-	4.0-)	881127	385	0.8+	0.2+	910812	801	0.1+	0.3+
881107	385	(4.6-	4.0-)	881201	888	0.2-	0.1+	910812	801	0.1-	0.2+
881107	385	(2.8-	3.2-)	881201	888	0.9-	0.5+				

(4949)* 1988 WE = 1978 YE = 1981 RL5 = 1981 SV6

Discovered 1988 Nov. 29 by T. Kojima at the YGCO Chiyoda station.

Id. H. Kaneda (MPC 16698), N. S. Chernykh (d, ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	338.95935	(1950.0)	P	Q
n	0.28775401	Peri. 274.78405	+0.91662345	-0.39173155
a	2.2722448	Node 108.29562	+0.39190497	+0.84130596
e	0.1686162	Incl. 4.81366	+0.07881589	+0.37249251
P	3.43	H 13.6	G 0.15	

Residuals in seconds of arc

781223	330	1.3-	0.2-	881210	897	1.1+	1.3+	910806	801	0.0	0.1-
781229	330	1.3+	1.3-	881210	897	0.1-	0.5+	910806	801	0.2+	0.0
810908	095	0.9+	1.4-	910709	801	0.3+	0.1+	910807	801	0.0	0.1-
810928	095	0.5-	0.4+	910709	801	0.3+	0.2+	910807	801	0.1+	0.1-
881129	897	0.3-	1.8+	910710	801	0.2+	0.3-	910812	801	0.0	0.4-
881129	897	(0.3-	3.8+)	910710	801	0.5-	1.5+	910812	801	0.1+	0.3-
881201	897	1.2-	1.0-	910716	801	0.2-	0.0				
881201	897	0.1-	0.8-	910716	801	0.5-	0.0				

(4950)* 1988 XO1

Discovered 1988 Dec. 7 by E. F. Helin at Palomar.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	242.46567	(1950.0)	P	Q
n	0.21634442	Peri. 249.67851	+0.18755719	-0.98154766
a	2.7481404	Node 189.73812	+0.96316654	+0.19121721
e	0.1820865	Incl. 12.71722	+0.19269797	-0.00040318
P	4.56	H 11.3	G 0.15	

Residuals in seconds of arc

881207	675	(1.2-	3.6-)	890207	675	0.5-	0.3-	900519	675	0.8-	0.2+
881208	675	0.1+	0.3+	900425	675	0.7+	0.5-	900519	675	0.2-	0.0
890103	675	1.0+	0.8-	900425	675	0.8+	0.1+	900522	675	(4.5-	2.2-)
890103	675	0.8-	1.7+	900428	675	0.6-	0.0	900522	675	0.3+	1.2+
890207	675	0.0	0.9-	900428	675	0.1-	0.6-	910708	675	1.1-	0.3+

910708 675 0.2+ 0.7- 910710 801 0.5+ 0.6+ 910811 801 1.0- 0.3-
910709 801 0.3- 0.1+ 910710 675 1.1+ 0.1- 910811 801 0.6- 0.3-
910709 801 0.1- 0.1+ 910710 675 1.0+ 0.7-
910710 801 0.6+ 1.2+ 910806 801 0.5- 0.2-

(4951)* 1990 BM = 1989 WS3 = 1931 UQ = 1985 QN6 = 1985 RH5
Discovered 1990 Jan. 21 by Y. Mizuno and T. Furuta at Kani.
Id. S. Nakano (MPC 16239)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	226.97539	(1950.0)	P	Q
n	0.29068422	Peri. 339.41474	+0.16993037	-0.97700628
a	2.2569490	Node 100.62824	+0.92143458	+0.11119685
e	0.1663686	Incl. 7.52856	+0.34940233	+0.18191755
P	3.39	H 13.3	G 0.15	

Residuals in seconds of arc
311017 690 2.6+ 0.9- 900117 403 2.6- 1.9+ Y 900201 403 0.5- 1.4-
311018 690 2.0- 0.5- 900121 403 (3.6+ 6.9-)Y 910513 801 0.2+ 0.8-
850824 095 0.3- 1.6- 900121 403 (1.5+ 3.3-)Y 910513 801 1.2+ 0.6+
850911 095 0.4+ 0.4+ 900123 403 0.4- 1.7- 910611 801 0.3+ 0.6-
891129 033 0.1+ 1.5+ 900123 403 0.2+ 1.4- 910611 801 0.4- 0.2-
891129 033 1.0+ 1.6+ 900126 403 1.2+ 0.9- 910614 801 0.4- 0.1+
891202 033 1.0+ 1.6+ 900126 403 0.9+ 2.6- 910614 801 0.5- 0.1-
900117 403 (3.2- 1.0+)Y 900201 403 0.3- 1.2+

(4952)* 1990 FC1 = 1975 TL6 = 1989 AR9 = 1989 CX7
Discovered 1990 Mar. 26 by A. Sugie at the Dynic Astronomical Observatory.
Id. S. Nakano (MPC 16437)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	75.03521	(1950.0)	P	Q
n	0.17484868	Peri. 103.76942	-0.66639693	+0.70283481
a	3.1673385	Node 121.60255	-0.74546667	-0.62182230
e	0.0980109	Incl. 16.99016	-0.01394897	-0.34548554
P	5.64	H 11.5	G 0.15	

Residuals in seconds of arc
751001 808 0.9+ 0.5- 890202 033 0.5- 0.2- 900526 413 0.3- 1.7+
751002 808 0.9- 2.3- 900326 402 0.1- 0.3- 910614 293 2.5- 1.2-
751002 808 (0.6- 4.1-) 900326 402 0.5+ 0.1+ 910614 293 2.4- 1.1-
751004 808 0.7+ 0.5+ 900402 402 1.2+ 0.8+ 910709 801 1.5+ 0.1-
751004 808 0.2- 0.1+ 900402 402 0.4- 1.6- 910709 801 1.4+ 0.4-
890109 033 0.8+ 1.0- 900424 402 1.7- 0.7- 910710 801 1.3+ 0.2+
890109 033 1.2+ 0.8- 900424 402 0.1+ 0.2+ 910710 801 0.2+ 0.1+
890201 033 1.0- 1.1- 900526 413 0.0 1.8-

(4953)* 1990 MU
Discovered 1990 June 23 by R. H. McNaught at Siding Spring.
Id. R. H. McNaught (1974, 1976, 1978, 1987, 1988 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	314.93204	(1950.0)	P	Q
n	0.47747786	Peri. 77.36315	-0.81969725	-0.40648536
a	1.6211899	Node 77.44875	+0.21252932	-0.87009375
e	0.6572021	Incl. 24.42157	+0.53190949	-0.27875889
P	2.06	H 14.3	G 0.15	

Residuals in seconds of arc
740721 413 1.5- 1.4- 760820 413 1.3+ 1.0+ 871126 413 0.8- 0.8-
740723 413 1.6- 0.7- 780810 413 1.7+ 2.2+ 871126 413 1.6- 0.7+
740723 413 1.0- 1.2- 871126 413 1.9+ 1.1- 871127 413 0.4+ 1.0+

880712 413 2.2+ 0.1- 900623 413 0.2- 1.0+ 900725 413 1.0- 0.1+
880712 413 3.1+ 0.4+ 900629 413 1.4- 0.7- 900725 413 0.1- 0.0
900623 413 1.7- 0.8- 900629 413 (3.9- 0.9-)

(4954)* 1990 SQ

Discovered 1990 Sept. 23 by B. Roman at Palomar.
Id. R. H. McNaught (1975, 1978, 1980, 1987, 1989 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	131.23268	(1950.0)	P	Q	
n	0.34820559	Peri.	51.93801	+0.64013354	-0.76820393
a	2.0009929	Node	358.17362	+0.57639194	+0.48846900
e	0.4485286	Incl.	17.49290	+0.50793837	+0.41383664
P	2.83	H	12.5	G 0.15	

Residuals in seconds of arc

750607 413 0.1- 0.3+ 901020 801 0.3+ 1.7+ 901211 046 0.9+ 0.7+
750607 413 0.3- 0.1- 901021 675 0.2+ 0.2- 901211 046 1.3+ 1.2+
780527 413 0.6+ 0.2- 901021 675 0.2+ 0.1+ 901212 568 1.1- 0.1+
800221 413 0.5- 0.0 901022 589 1.8- 0.9- 901214 056 1.6- 0.1+
800221 413 0.2- 0.1+ 901022 589 0.8- 1.9- 901214 056 (5.8- 6.3-)
870717 413 0.9+ 0.4+ 901022 589 (0.8+ 4.0-) 901214 801 0.1+ 0.1+
870717 413 0.6+ 0.2+ 901023 675 0.2- 1.3- 901214 801 0.1+ 0.0
890329 413 1.9- 0.5- 901023 675 0.4+ 0.7- 901215 675 0.8+ 0.0
900915 675 0.4- 1.2+ 901105 479 (2.5+ 6.5+) 901215 675 0.9+ 0.5+
900915 675 0.2- 1.6+ 901105 479 (2.0+ 3.1+) 901217 056 (3.0- 0.9-)
900923 675 (4.3+ 0.9+) 901107 479 0.1- 1.8- 901217 056 (0.5+ 2.4+)
900923 675 (0.7+ 2.2+) 901107 479 0.8- 1.0- 901218 675 0.0 0.1-
900925 675 0.1- 0.5- 901107 589 0.3- 0.2- 901218 675 0.5- 0.9+
900925 675 0.6- 1.1+ 901107 589 0.2+ 0.8- 901220 595 1.5- 1.7-
900926 675 0.5+ 0.4- 901107 589 0.1+ 0.1+ 901220 595 (0.6- 2.7-)
900926 675 1.5+ 1.2- 901108 589 0.7+ 0.7+ 901220 595 (3.4- 0.9-)
900927 657 1.2+ 0.6- 901108 589 0.9+ 0.7+ 901220 801 0.2+ 0.6+
900927 657 1.2+ 0.2+ 901108 589 0.7+ 1.2+ 901220 801 0.1- 0.5+
900927 385 (2.4- 3.4+) 901109 589 1.0- 1.1- 910104 591 (8.5- 4.3+)
900927 385 1.5- 0.1- 901109 589 0.7+ 1.0- 910104 591 (8.5- 4.3+)
900930 657 0.9- 0.3+ 901109 589 0.5+ 1.2- 910111 675 0.4- 0.3+
901006 657 0.9- 1.4- 901112 091 0.3+ 1.5+ 910111 675 0.4- 0.7+
901008 385 (0.6- 2.2-) 901112 091 0.2+ 0.2- 910114 046 1.8- 0.4+
901008 385 (0.3- 2.9-) 901113 589 1.1- 1.0- 910114 046 1.0+ 1.0+
901010 413 0.8+ 0.1- 901113 589 0.9+ 0.5- 910115 675 0.4+ 0.1+
901014 675 1.6+ 0.5+ 901113 589 0.7+ 1.5- 910115 675 0.2+ 0.1+
901014 568 0.9- 0.1+ 901114 801 0.4+ 0.5+ 910115 595 (8.7+ 5.8-)
901015 801 0.3- 0.9+ 901114 801 0.3+ 0.5+ 910115 595 (2.3+ 4.6-)
901015 801 0.3- 0.7+ 901114 479 0.1+ 2.0+ 910116 591 (4.5- 1.5+)
901015 568 0.9- 0.9+ 901114 479 (3.4+ 1.9+) 910116 591 (4.5- 1.4+)
901015 589 1.1- 0.0 901115 801 0.5- 0.0 910117 046 1.4+ 0.5+
901015 589 0.5- 1.3- 901115 801 0.6- 0.0 910117 046 0.9+ 0.1+
901015 589 0.6+ 1.6- 901116 479 0.3+ 1.0+ 910117 591 0.1- 1.4+
901015 589 0.5+ 0.7- 901116 479 0.1+ 0.6+ 910117 591 0.0 1.4+
901015 589 0.8+ 1.3- 901118 675 0.7+ 0.0 910118 801 0.0 0.2-
901015 589 0.9+ 1.9- 901118 675 0.1+ 0.0 910118 801 0.1+ 0.2-
901016 801 0.3- 0.8+ 901206 046 0.8+ 1.4- 910118 591 (4.6- 1.7+)
901016 801 0.3- 0.9+ 901206 046 1.3+ 1.6- 910118 591 (4.6- 1.7+)
901016 012 0.5- 1.6- 901207 657 0.1- 0.8- 910119 046 (2.3+ 0.2+)
901016 012 1.2- 0.6- 901207 657 0.7+ 0.5- 910119 046 1.3+ 0.2-
901017 675 0.0 1.9+ 901207 046 0.6+ 0.0 910120 046 0.9+ 0.2-
901017 675 0.1- 1.8+ 901207 046 0.1+ 1.8- 910120 046 0.2+ 0.2-
901017 801 0.1- 1.3+ 901208 046 0.5+ 0.2+ 910121 595 (6.1+ 5.2-)
901017 801 0.2- 1.2+ 901208 046 0.4+ 0.3+ 910121 595 (1.6+ 3.6-)
901020 801 0.3+ 1.7+ 901211 568 0.2- 0.5+ 910122 595 (0.3- 3.4-)

910122	595	(0.5-	2.4-)	910214	595	0.3-	1.5+	910408	595	1.2-	1.4+
910123	595	(3.5+	0.5-)	910214	595	0.6-	0.1+	910408	595	1.0-	0.9+
910123	595	0.4-	1.1+	910214	595	1.7-	1.0+	910409	675	0.8+	1.0-
910124	595	(4.8-	3.3-)	910214	595	1.3+	0.7+	910409	675	0.6-	0.5-
910125	595	0.3-	0.8-	910217	046	0.1+	0.3+	910409	595	1.7-	0.7+
910125	595	1.0-	0.5-	910217	046	0.5+	1.1+	910413	675	0.1-	0.0
910128	595	1.2-	1.0+	910218	046	0.5-	1.1+	910413	675	0.4+	0.2-
910131	595	1.4-	0.3+	910218	046	0.0	0.2+	910419	801	0.3-	0.3-
910201	595	0.5+	0.6-	910313	801	0.2-	0.1-	910419	801	0.0	0.2-
910201	595	1.4+	0.5+	910313	801	0.2-	0.1-	910509	675	1.1-	0.6-
910202	046	1.2+	0.1-	910314	595	1.4-	1.5-	910509	675	(0.6-	3.8-)
910202	046	1.4+	0.3-	910317	801	0.1-	0.3-	910511	801	0.4+	1.1-
910210	801	0.6-	0.5+	910317	801	0.2-	0.4-	910511	801	0.4-	0.2-
910210	801	0.5-	0.6+	910320	801	0.1-	0.7-	910513	801	0.1+	0.2-
910213	801	0.1+	0.1+	910320	801	0.5-	0.8-	910513	801	0.1-	0.1-
910213	801	0.0	0.2+	910406	413	0.0	1.2-	910618	568	0.1-	1.8-

(4955)* 1990 SF2 = 1990 WB = 1987 BQ2

Discovered 1990 Sept. 17 by H. E. Holt at Palomar.

Id. H. Kaneda (MPC 17640)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	109.24353		(1950.0)	P	Q
n	0.17662120	Peri.	241.03786	+0.86824691	+0.47894933
a	3.1461118	Node	90.07911	-0.39809141	+0.82824852
e	0.1390885	Incl.	7.43727	-0.29609211	+0.29088129
P	5.58	H	11.0	G 0.15	

Residuals in seconds of arc

840802	413	0.0	0.3-	851216	413	0.4+	0.2+	900917	675	0.4-	1.7-
840802	413	0.7-	1.4-	851217	413	0.7-	1.0+	900917	675	0.0	0.4-
841113	413	0.8+	0.4-	870131	046	0.8+	2.1-	900919	675	0.9+	1.4-
841114	413	0.6-	0.7+	870131	046	1.5-	1.0-	900919	675	0.1-	2.3-
841115	413	1.6+	0.6-	870201	046	1.4-	1.0-	901119	413	0.2-	0.9+
841116	413	0.0	0.7+	870202	046	(2.8+	6.8-)	901119	413	0.6+	1.2+
851204	413	1.1-	0.7-	870202	046	(0.9+	4.7-)	901121	413	0.5-	1.0+
851212	413	0.4-	0.1-	870203	046	1.7+	0.2+	901125	413	0.3-	2.2+
851212	413	1.2+	0.5-	870203	046	0.0	0.7+	901205	413	0.3+	1.0+

(4956)* 1990 VG1 = 1991 AH = 1982 SG

Discovered 1990 Nov. 12 by R. H. McNaught at Siding Spring.

Id. R. H. McNaught (d, MPC 17827; 1978, 1984, 1988 obs.), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	138.51382		(1950.0)	P	Q
n	0.25746980	Peri.	201.33462	+0.97812811	-0.19224021
a	2.4471008	Node	168.82454	+0.19238282	+0.98130206
e	0.2014174	Incl.	24.19380	-0.07908377	+0.00948496
P	3.83	H	13.4	G 0.15	

Residuals in seconds of arc

781121	413	2.3+	2.0-	840306	413	0.0	1.1-	901119	413	0.0	1.3+
781122	413	0.7+	0.7-	840306	413	1.0+	1.8-	901126	413	1.6+	0.2-
781123	413	0.3-	1.9-	840518	413	2.4-	1.2-	910108	413	0.7-	0.2+
781124	413	1.5-	0.5+	880218	413	1.6+	0.6-	910109	413	0.5+	1.0+
781125	413	0.8-	0.3-	880218	413	0.4-	0.1-	910117	413	0.3-	0.6-
781126	413	1.5-	0.1+	901112	413	0.5-	0.6-	910117	413	0.1-	0.3-
820922	688	0.3+	1.1-	901112	413	1.4-	0.9+				
820922	688	(4.5+	0.7+)	901113	413	0.1+	0.2-				

(4957)* 1990 XJ

Discovered 1990 Dec. 15 by E. F. Helin at Palomar.

Id. R. H. McNaught (1976, 1982 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	232.07495	(1950.0)	P	Q
n	0.50319472	Peri. 97.45840	+0.81700070	+0.16581986
a	1.5654721	Node 254.30784	-0.31319589	+0.93178118
e	0.2190831	Incl. 35.00595	+0.48416752	+0.32293593
P	1.96	H 15.0	G 0.15	

Residuals in seconds of arc

760311	413	1.7+ 0.4+	901218	675	0.6- 0.2+	910113	675	1.5- 0.2+
760401	413	0.7- 0.0	901218	675	0.1+ 1.0-	910113	675	0.1- 1.2-
760628	413	0.6- 0.3+	901218	413	(1.7+ 2.9-)	910115	675	(2.3- 1.7+)
820710	413	0.2+ 0.7+	901218	413	1.5- 0.8+	910115	675	0.3- 0.3+
820710	413	0.1+ 1.4-	901219	675	0.2+ 0.0	910120	801	0.6- 0.2+
901215	675	(6.3+ 0.2-)	901219	675	0.5- 0.4+	910120	801	0.4- 0.4+
901215	675	1.9+ 1.1+	901220	801	0.6- 0.6+	910210	801	0.6- 0.0
901216	675	(4.3+ 0.9+)	901220	801	0.6- 0.4+	910210	801	0.3- 0.2-
901216	675	1.1+ 0.7-	910106	413	1.2+ 0.4-	910212	801	0.1- 0.3+
901217	801	0.2+ 0.6+	910106	413	1.2+ 0.3-	910318	801	0.2- 0.4-
901217	801	0.1+ 1.2-	910108	413	0.8+ 0.8-	910318	801	0.7- 1.0+

(4958)* 1991 NT1 = 1931 AF1 = 1950 TC3 = 1953 JP = 1961 WA = 1980 NG
= 1982 YA3 = 1984 FG2 = 1989 EE8

Discovered 1991 July 13 by H. E. Holt at Palomar.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	235.40573	(1950.0)	P	Q
n	0.18833690	Peri. 214.02659	-0.28180763	-0.94753962
a	3.0142489	Node 252.74254	+0.91167850	-0.21544123
e	0.0704602	Incl. 9.08806	+0.29904309	-0.23612232
P	5.23	H 11.5	G 0.15	

Residuals in seconds of arc

310113	690	(7.1+ 1.4-)	611207	760	0.8+ 1.0-	890308	897	0.1+ 0.7+
310115	690	0.2- 1.6-	611207	760	(2.7+ 4.2+)	910713	675	0.2+ 0.0
310116	690	0.8- 1.6-	800711	805	1.0+ 0.2+	910713	675	0.4+ 0.1+
501015	760	1.4+ 1.9-	800712	805	0.2- 0.1-	910719	675	1.3- 0.1-
501015	760	0.7- 0.1+	800712	805	0.4+ 0.2+	910719	675	1.4+ 0.2-
501016	760	1.5- 0.8-	800713	805	0.1- 0.5-	910805	675	0.2+ 0.4-
530505	078	0.0 0.5-	800713	805	0.5- 0.0	910805	675	0.8+ 1.1-
611130	760	1.3+ 0.3-	821222	095	0.2+ 1.9+	910809	675	2.1- 0.3+
611130	760	1.9+ 0.8-	840330	095	(1.6- 4.0-)	910809	675	1.2+ 0.7-
611203	760	(0.9- 3.6+)	840404	095	0.3- 2.1-			
611203	760	2.1- 2.0+	890308	897	1.4- 0.0			

(4959)* 1991 PA1 = 1958 TZ = 1966 CB = 1968 MC = 1972 EB = 1979 OU13
= 1980 TG1 = 1980 TS8 = 1984 OO = 1985 OD = 1986 VS1
= 1989 FE1

Discovered 1991 Aug. 15 by A. Natori and T. Urata at the JCPM Yakiimo Station.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Urata

M	350.74078	(1950.0)	P	Q
n	0.17637486	Peri. 240.76510	+0.97801180	-0.16929677
a	3.1490406	Node 128.71045	+0.19908734	+0.93181357
e	0.0139705	Incl. 8.97892	-0.06210596	+0.32103283
P	5.59	H 10.8	G 0.15	

Residuals in seconds of arc

581011	760	0.2- 0.1-	720313	095	(18.1+ 10.0-)	840718	413	0.5+ 0.2-
581011	760	0.3- 1.1-	790717	095	0.3- 2.0+	850718	046	(1.7+ 3.4-)
660214	020	(24.9- 7.6+)X	801005	809	0.3- 0.2+	850718	046	0.0 0.6+
660215	020	(29.0+ 39.5+)X	801005	809	0.5+ 0.0	850719	046	0.4+ 0.7-
660217	020	(17.9+ 0.1+)X	801013	095	2.4+ 0.7-	850719	046	0.9+ 1.6-
680628	095	(4.7+ 1.2-)	840718	413	0.3+ 0.3+	850721	046	1.4+ 0.5-

850722	046	1.4-	0.6-	890403	675	0.2-	1.4-	910831	885	0.9-	1.1-
861103	010	(1.2-	4.6-)	910815	885	0.6+	1.7+	910901	885	1.1-	0.5+
861103	010	(8.4+	3.4-)	910817	885	0.4+	0.2-	910901	885	0.1-	1.3-
861103	010	(2.9+	4.2-)	910817	885	0.8-	0.1-	910906	885	0.1-	0.1-
890330	675	0.3-	0.7-	910818	885	0.1+	0.6+	910906	885	0.2+	0.8+
890330	675	0.5-	0.2-	910818	885	0.4-	0.7+				
890403	675	0.1-	0.7-	910831	885	0.3-	1.4-				

(4960)* 4657 P-L = 1976 SD6 = 1976 US11 = 1981 SK6

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. K. Hurukawa (MPC 9301), O. Kippes (ibid.), E. Bowell (ibid.), H. Oishi (d, MPC 9063; MPC 14206)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	316.88926		(1950.0)	P	Q
n	0.18781942	Peri.	272.15529	+0.84711027	-0.53122669
a	3.0197829	Node	119.93338	+0.49383639	+0.77703401
e	0.0931750	Incl.	0.94061	+0.19629011	+0.33766308
P	5.25	H	12.9	G 0.15	

Residuals in seconds of arc

600924	675	0.8+	0.9-	601026	675	0.0	1.2-	910712	675	0.3+	0.5+
600924	675	0.5-	0.6-	760924	095	0.8+	0.2+	910712	675	0.0	1.2+
600926	675	0.8+	0.2-	761022	381	0.7-	0.5+	910714	675	1.3-	0.9+
600927	675	0.4-	0.3+	761022	381	0.0	0.6+	910805	675	0.5-	0.1-
600928	675	0.6+	0.1+	761024	381	0.7-	0.7+	910805	675	0.4+	0.3+
601017	675	0.4+	0.0	810928	095	0.3-	0.7+	910807	675	0.9+	1.1-
601022	675	0.2-	0.2+	860905	688	(4.8+	1.0-)	910807	675	0.1-	0.8-
601025	675	0.3-	0.8-	860905	688	0.1-	0.2+				

1972 RF = 1987 QE

Id. B. G. Marsden (MPC 12312)

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

M	62.05582		(1950.0)	P	Q
n	0.26249638	Peri.	149.13757	+0.81572930	+0.57737749
a	2.4157651	Node	175.14052	-0.57808542	+0.81584551
e	0.2299176	Incl.	24.36065	-0.02007380	-0.03211442
P	3.75	H	13.0	G 0.15	

Residuals in seconds of arc

710324	675	1.1-	1.1-	870919	809	0.4+	0.5-	870928	809	0.7+	0.6-
710325	675	0.1+	1.1+	870919	675	0.0	0.9-	870929	809	0.0	0.2-
710325	675	0.2+	0.0	870919	675	0.8+	0.0	870929	809	0.1+	0.3-
710326	675	0.8+	0.3+	870920	675	0.9-	0.6+	870929	809	0.0	0.5-
710327	675	0.0	0.8+	870922	809	0.4-	0.3-	870930	809	0.4+	0.0
720915	675	0.3+	0.9+	870922	809	0.1-	0.4-	870930	809	0.2+	0.0
720916	675	0.0	0.6+	870922	809	0.2+	0.0	870930	809	0.2-	0.2-
720917	675	0.5+	1.6+	870922	809	0.4+	0.3-	871001	809	0.5-	0.0
720918	675	0.3-	0.5+	870922	809	0.4+	0.4-	871001	809	0.2-	0.0
720919	675	0.7-	1.2+	870923	095	(0.8+	3.1-)	871001	809	0.2-	0.1-
720920	675	0.3+	1.1+	870924	809	0.1-	0.8-	871002	809	0.1-	0.2+
870824	675	(3.8-	0.6+)	870924	809	0.0	0.7-	871002	809	0.1-	0.2+
870826	675	(8.3-	2.1+)	870924	809	0.1+	0.4-	871002	809	0.1-	0.2+
870916	095	(1.3+	7.1-)	870925	809	0.1-	0.6-	871002	809	0.7-	0.1+
870917	809	0.0	0.5+	870925	809	0.1+	0.4-	871002	809	0.6-	0.1+
870917	809	0.0	1.0+	870925	809	0.2+	0.6-	871002	809	0.3-	0.2+
870917	809	0.0	0.9+	870927	809	0.4-	0.1+	871004	809	0.7-	0.4+
870917	095	(2.5+	2.7+)	870927	809	0.4-	0.2-	871004	809	0.8-	0.4+
870918	675	2.1+	0.4+	870927	809	0.3-	0.2-	871004	809	0.8-	0.3+
870919	809	0.2+	0.7-	870928	809	0.4+	0.9-	871021	657	(2.8-	0.1-)
870919	809	0.3+	0.5-	870928	809	0.4+	0.5-				

1974 PC = 1991 PF1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden
M 26.44991 (1950.0) P Q
n 0.29121896 Peri. 212.07531 +0.95970011 +0.10598183
a 2.2541853 Node 139.19366 -0.08562178 +0.99239942
e 0.2927164 Incl. 23.47053 -0.26766510 +0.06253996
P 3.38 H 15.0 G 0.15
Residuals in seconds of arc

740812	675	0.3+	0.9+	740912	675	1.1-	2.0-	910904	413	0.4+	0.0
740813	675	0.2+	0.7+	910815	675	1.9-	2.3-	910904	413	0.1+	1.3+
740814	675	0.1+	0.5+	910815	675	0.8+	1.1-	910905	413	0.0	1.6+
740816	675	0.3+	0.3-	910816	675	0.4+	0.4+				

1975 VR5 = 1975 XD4 = 1983 CR4 = 1991 PS7
Id. O. Kippes (d, MPC 5973), B. G. Marsden, E. Bowell
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 314.09475 (1950.0) P Q
n 0.29774018 Peri. 282.79677 +0.55423974 -0.82962901
a 2.2211537 Node 133.33494 +0.79504958 +0.50371482
e 0.0998932 Incl. 5.31178 +0.24640307 +0.24080508
P 3.31 H 14.0 G 0.15
Residuals in seconds of arc

751103	095	2.3-	3.9-	910806	809	0.6-	0.2-	910808	675	0.7-	0.5-
751112	095	0.0	0.1-	910806	809	0.9-	0.6+	910814	809	0.7+	0.1-
751203	095	2.0+	3.9+	910806	809	1.0-	0.3+	910814	809	0.8+	0.2+
830214	381	0.1+	0.5+	910808	675	0.4+	0.4+	910814	809	1.0+	0.4+

1976 SK3 = 1991 OJ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 31.59322 (1950.0) P Q
n 0.18985417 Peri. 284.56341 +0.47572131 +0.87850185
a 2.9981679 Node 14.09429 -0.72160677 +0.41830176
e 0.0838763 Incl. 10.37623 -0.50296411 +0.23077725
P 5.19 H 12.2 G 0.15
Residuals in seconds of arc

760924	095	1.1-	1.0+	761026	095	0.5-	0.8-	910716	675	0.3+	0.3-
760929	095	1.2+	1.2-	910713	675	1.0-	0.1-	910716	675	0.4+	0.3+
761025	095	0.5+	1.1+	910713	675	0.2+	0.1+				

1977 RG
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green
M 100.61252 (1950.0) P Q
n 0.21165477 Peri. 83.87449 -0.32786328 +0.94401325
a 2.7885913 Node 166.80747 -0.91780734 -0.30908199
e 0.1123470 Incl. 9.24596 -0.22390926 -0.11535727
P 4.66 H 13.5 G 0.15
Residuals in seconds of arc

710324	675	2.1-	1.6-	770909	801	2.2-	0.1+	771016	801	0.5+	0.2-
710325	675	1.2+	1.7-	770909	675	0.9-	0.0	771211	801	0.0	0.6-
710325	675	0.0	0.1-	770911	801	2.0+	1.4+	850322	688	0.2+	3.7+
710326	675	0.0	0.4-	770912	801	0.8+	0.3-	850322	688	1.9-	0.8-
770908	801	0.1+	0.6-	770915	801	1.8+	1.4-	850425	801	2.5+	0.1-
770908	675	0.8-	0.2+	771007	801	1.2-	0.2-				

1978 RH9 = 1978 RG16 = 1991 PR3
Id. S. Nakano (d, MPC 11142), B. G. Marsden

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

M	47.09141	(1950.0)	P	Q
n	0.30091431	Peri. 152.07590	+0.51196192	+0.85819184
a	2.2055065	Node 148.67654	-0.80089719	+0.49263305
e	0.1422184	Incl. 4.12991	-0.31057799	+0.14428944
P	3.28	H 15.0	G 0.15	

Residuals in seconds of arc

780902	809	0.5-	0.3-	780910	809	1.0+	1.1+	910805	675	0.1+	1.1-
780902	809	0.1-	0.5-	910803	809	2.2+	1.2+	910805	809	1.7-	0.9+
780902	809	0.3+	0.2-	910803	809	1.3+	0.5+	910805	675	0.6+	1.3-
780902	809	0.4-	0.1-	910803	809	1.0+	1.4+	910807	675	0.4+	0.8-
780902	809	0.1-	0.8-	910805	809	2.1-	0.2+	910807	675	0.8+	1.7-
780906	809	0.2-	0.8+	910805	809	2.5-	0.7+				

1978 RD10 = 1981 EC36
Id. H. Kaneda (MPC 15700)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	187.03173	(1950.0)	P	Q
n	0.19626299	Peri. 223.27656	+0.85478128	-0.51893312
a	2.9325447	Node 167.97743	+0.48550900	+0.79439742
e	0.1113914	Incl. 2.08419	+0.18338477	+0.31565987
P	5.02	H 13.3	G 0.15	

Residuals in seconds of arc

710324	675	0.1+	0.3-	780902	809	1.1-	0.5-	810311	413	1.3+	0.2-
710325	675	0.7+	0.9-	780906	809	0.6-	0.3-	810311	413	1.2-	0.7+
710325	675	0.6+	0.1+	780910	809	0.8+	1.1+	810311	413	0.9+	0.0
710326	675	1.2-	0.3+	780910	809	0.9+	0.0	810315	413	2.2+	0.9-
710327	675	1.0-	0.1-	810209	413	1.3+	0.2+	810316	413	0.8-	1.5-
710402	675	1.2+	1.1-	810213	413	0.1-	0.2-	810316	413	0.9-	1.0-
710416	675	1.9+	0.6+	810303	413	1.5-	0.3-	810405	413	1.3-	0.2+
710416	675	0.4-	1.3+	810306	413	1.5-	1.7+	810405	413	3.3+	2.1-
780902	809	0.2-	0.2-	810307	413	0.9-	0.3+	810426	413	2.7+	1.0-
780902	809	0.1+	0.1+	810307	413	0.2-	0.4+	810502	413	0.0	1.1+
780902	809	0.0	0.4-	810311	413	2.9-	1.5+				

1979 MB4 = 1979 OQ9 = 1980 WJ5
Id. H. Oishi (d, JAM 2064), S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	228.84341	(1950.0)	P	Q
n	0.27965217	Peri. 83.49260	-0.42700516	+0.90376175
a	2.3159219	Node 161.14370	-0.86166689	-0.39672164
e	0.1106802	Incl. 5.27022	-0.27422029	-0.16070667
P	3.52	H 15.9	G 0.15	

Residuals in seconds of arc

790623	413	0.9+	0.0	790724	413	0.6-	0.7-	801129	675	0.4-	0.1+
790624	413	0.6-	0.3-	790726	675	0.5+	0.7-	801201	675	0.4+	0.0
790625	413	0.8+	0.4+	790727	675	1.1-	0.3+				
790629	413	1.2-	0.2+	790728	413	1.4+	0.9+				

1979 MX5 = 1980 WD3
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	299.76000	(1950.0)	P	Q
n	0.28620605	Peri. 38.04835	-0.92368232	+0.38298604
a	2.2804305	Node 164.45832	-0.36122458	-0.86038604
e	0.1013950	Incl. 2.46375	-0.12778018	-0.33624033
P	3.44	H 15.2	G 0.15	

Residuals in seconds of arc

790623	413	1.0+	0.7+	790724	413	0.6+	1.2-	790823	675	1.8-	0.9-
790624	413	0.5-	0.3+	790726	675	1.5+	1.0+	801129	675	0.0	0.5+
790625	413	0.6-	1.1+	790727	675	0.4-	1.3-	801201	675	0.2-	0.1+
790629	413	1.9-	0.5+	790727	675	1.6+	0.2+				

1979 MK6 = 1980 WG5
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	208.40646	(1950.0)		P	Q
n	0.22298591	Peri.	227.24469	+0.86974686	-0.49329107
a	2.6932981	Node	162.29740	+0.46537802	+0.81020579
e	0.0907866	Incl.	2.69437	+0.16420628	+0.31659202
P	4.42	H	14.5	G 0.15	

Residuals in seconds of arc

790623	413	0.5-	0.7-	790629	413	1.7+	0.0	790823	675	1.2+	0.5-
790624	413	0.1-	1.5-	790726	675	1.0-	1.9+	801129	675	0.4+	0.1+
790625	413	0.3+	0.0	790727	675	1.4-	0.3+	801201	675	0.3-	0.3-

1979 SU11 = 1984 QW = 1985 YY1
Id. B. G. Marsden (MPC 11739)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	89.67802	(1950.0)		P	Q
n	0.17683922	Peri.	265.68622	+0.99410158	+0.09927961
a	3.1435317	Node	88.61196	-0.07380275	+0.91420630
e	0.1653342	Incl.	2.50268	-0.07946827	+0.39289999
P	5.57	H	12.5	G 0.15	

Residuals in seconds of arc

710324	675	2.5-	1.3-	790924	095	0.9-	0.2+	900918	675	0.4-	1.3-
710325	675	1.2-	0.3+	791014	095	0.6-	0.8+	900920	675	0.1-	3.3-
710325	675	1.9-	0.3+	791116	095	2.0-	2.0+	900920	675	1.2+	2.2-
710326	675	1.0-	0.5-	791122	095	1.9-	2.2+	900921	801	0.8-	0.3+
710327	675	1.8-	0.4-	840824	801	6.3+	1.7-	900921	801	0.8-	0.3+
710402	675	2.1+	1.7-	851217	010	2.2+	3.5-	901116	801	1.2-	1.2+
710416	675	1.4+	1.3-	851217	010	5.7+	1.3-	901116	801	1.1-	1.0+
710416	675	0.1-	0.9+	900918	675	0.6-	3.8-				

1979 UC4 = 1991 PD14
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	306.67165	(1950.0)		P	Q
n	0.23759825	Peri.	56.37549	+0.38453566	-0.92303449
a	2.5817086	Node	11.02847	+0.82511249	+0.33794489
e	0.2291304	Incl.	3.54175	+0.41391026	+0.18384934
P	4.15	H	13.9	G 0.15	

Residuals in seconds of arc

791016	095	0.0	0.2+	910806	675	0.5-	0.2-	910810	675	0.0	0.1-
791111	095	0.2+	1.3-	910806	675	0.1+	0.2-				
791116	095	0.2-	1.1+	910810	675	0.4+	0.5+				

1980 EF = 1981 RE7
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	124.56574	(1950.0)		P	Q
n	0.28646594	Peri.	194.28696	-0.96485275	+0.26277532
a	2.2790511	Node	0.96218	-0.22109662	-0.80579399
e	0.1579217	Incl.	9.87984	-0.14204034	-0.53070253
P	3.44	H	14.5	G 0.15	

Residuals in seconds of arc

800313 688	1.8-	0.6+	800316 688	1.5+	0.9-	810904 675	0.7-	0.4-
800314 688	0.5-	0.2-	800414 688	0.1-	0.0			
800314 688	0.8+	0.5+	810903 675	0.7+	0.4+			

1980 FT3 = 1978 XS = 1981 RE3
Id. T. Kobayashi (MPC 14344)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 12.56785		(1950.0)		P	Q
n 0.29261381	Peri.	131.45215	+0.94976311		+0.31241702
a 2.2470160	Node	210.35655	-0.29698386		+0.88091765
e 0.1475894	Incl.	2.10819	-0.09874520		+0.35549921
P 3.37	H	14.5	G	0.15	

Residuals in seconds of arc

781203 675	0.5+	0.5-	800316 809	0.2-	0.8-	910711 801	0.6-	0.6-
781203 675	0.1-	0.2-	800317 809	0.2+	0.1+	910712 801	0.4+	1.2-
781205 675	1.9+	0.3+	800317 809	0.3-	0.6+	910712 801	0.2-	1.7-
781206 675	0.5-	1.5-	800317 809	0.3+	0.3+	910806 801	0.5+	0.3+
781206 675	1.3-	0.5-	800317 809	0.3+	0.4-	910806 801	0.2+	0.4+
800316 809	0.1-	0.3+	800323 809	0.4-	0.9-	910808 801	0.2+	0.3+
800316 809	0.2+	0.0	810902 095	0.6-	1.7+	910808 801	0.1+	0.1+
800316 809	0.2-	0.0	910711 801	0.1-	0.6-			

1980 RP = 1991 PG13
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M 27.20100		(1950.0)		P	Q
n 0.17882911	Peri.	344.61156	+0.77040910		+0.62569593
a 3.1201627	Node	335.34345	-0.54956585		+0.55444664
e 0.2144367	Incl.	17.05731	-0.32318292		+0.54871990
P 5.51	H	12.4	G	0.15	

Residuals in seconds of arc

800808 688	0.0	1.1+	800904 095	(2.4-	4.4+)	800911 095	(0.2+	2.8+)
800902 688	0.4+	1.2-	800907 688	0.6-	1.3-	801002 688	0.4+	0.8+
800902 688	0.4+	0.1+	800907 688	0.9+	1.0+	910805 675	0.3-	0.8+
800904 688	0.1+	0.9-	800907 095	(2.2-	4.8+)	910808 675	0.6+	1.0-
800904 688	0.6-	1.3+	800909 095	1.2-	0.5-			

1980 TQ14 = 1980 WG = 1976 SK1 = 1991 PH13
Id. S. Nakano (d, MPC 10752), E. Bowell (k), L. D. Schmadel, G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 355.10142		(1950.0)		P	Q
n 0.26150939	Peri.	239.70821	+0.93464098		-0.35339376
a 2.4218348	Node	140.94856	+0.34396584		+0.87032693
e 0.1870124	Incl.	3.59327	+0.09018726		+0.34299254
P 3.77	H	14.0	G	0.15	

Residuals in seconds of arc

760924 095	0.6-	1.4+	801129 879	0.1-	1.8+	910805 675	0.6+	1.2-
801013 095	0.7+	1.5+	801129 879	1.4-	0.5+	910808 675	0.1+	0.2-
801129 688	1.0+	1.2-	801129 879	(3.4-	1.1-)	910808 675	0.1-	0.4-
801129 688	0.1+	1.7-	801204 688	0.0	1.6-			

1981 DZ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 146.03219		(1950.0)		P	Q
n 0.22479967	Peri.	318.51073	-0.93612766		+0.32428925
a 2.6787917	Node	240.89581	-0.26740546		-0.90763568
e 0.0876925	Incl.	8.95603	-0.22838417		-0.26652196
P 4.38	H	13.5	G	0.15	

Residuals in seconds of arc

770518	675	1.6+	1.0-	810308	413	0.4-	0.2+	810409	413	0.6-	1.3+
770519	675	1.6-	0.8+	810308	413	0.8+	0.7-	810409	413	1.1+	0.1+
810209	413	0.1+	0.5-	810312	413	0.9-	0.0	810501	413	0.2+	0.3-
810209	413	1.3+	0.5-	810312	413	0.2+	0.4-	810503	413	0.2+	0.3-
810228	413	1.3-	0.2+	810407	413	0.2+	1.4+	871025	054	0.3-	0.9+
810228	413	0.4+	0.7-	810407	413	1.0-	0.3+	910718	675	0.2+	0.4+
810306	413	1.1-	0.6+	810408	413	0.6-	1.4+	910718	675	0.0	1.0-
810306	413	0.5+	1.7-	810408	413	1.4+	0.1-				

1981 DT2 = 1989 EM6 = 1991 PS11
Id. E. Bowell (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	301.77519	(1950.0)	P	Q	
n	0.23522881	Peri.	103.12540	+0.30406432	-0.94337197
a	2.5990165	Node	328.17676	+0.74713231	+0.32252981
e	0.0978498	Incl.	14.56934	+0.59104839	+0.07761347
P	4.19	H	13.0	G 0.15	

Residuals in seconds of arc

810209	413	0.2-	0.0	810308	413	0.8+	0.4-	810502	413	1.3+	1.0-
810212	413	(2.4+	3.7+)	810310	413	(3.6-	0.4-)	890307	033	0.0	0.0
810214	413	(3.2-	1.2-)	810310	413	1.2-	0.7-	910807	675	0.4+	1.1-
810228	413	1.1-	0.9+	810312	413	(4.4-	0.0)	910807	675	1.1+	0.0
810228	413	1.5+	0.5+	810312	413	0.8+	0.3-	910808	675	1.0-	0.1+
810306	413	1.9-	0.1+	810312	413	1.4-	1.1+	910808	675	0.3-	0.6+
810306	413	0.0	1.7-	810312	413	1.3+	0.5+				
810308	413	1.2-	0.3+	810430	413	1.4+	0.4+				

1981 ES4 = 1991 PS10
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	12.51836	(1950.0)	P	Q	
n	0.23344642	Peri.	35.55360	+0.98712088	-0.05430168
a	2.6122290	Node	326.58132	-0.04597585	+0.80465204
e	0.1815553	Incl.	15.85613	+0.15322723	+0.59125834
P	4.22	H	13.4	G 0.15	

Residuals in seconds of arc

810209	413	1.3-	0.8-	810307	413	1.6+	0.4+	810409	413	0.6-	0.3+
810214	413	0.3+	2.1-	810310	413	1.5+	0.9+	810430	413	1.0-	0.4-
810302	413	(4.4-	0.8-)	810312	413	1.4-	0.0	810502	413	0.6-	0.3-
810302	413	1.4+	0.4+	810312	413	2.2+	0.0	910807	675	0.3+	0.3-
810307	413	0.8-	1.0+	810409	413	1.4-	0.5+	910808	675	0.4-	0.5+

1981 EA12
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	139.56781	(1950.0)	P	Q	
n	0.29496256	Peri.	243.94239	-0.26629375	-0.96356487
a	2.2350761	Node	221.52685	+0.89729562	-0.23829707
e	0.0807198	Incl.	2.17037	+0.35206280	-0.12147944
P	3.34	H	16.5	G 0.15	

Residuals in seconds of arc

710324	675	0.9-	0.0	790919	675	0.5+	0.0	810311	413	1.1-	0.2+
710325	675	2.1-	1.1+	810212	413	0.3+	0.6-	810311	413	0.5+	0.3-
710325	675	1.8-	0.1+	810213	413	0.1-	0.8-	810315	413	1.3-	0.2+
710326	675	1.0+	1.3-	810302	413	0.8-	0.1+	810315	413	0.0	1.7+
710327	675	0.3-	0.5-	810306	413	0.0	1.0-	810315	413	0.9+	0.1+
710402	675	0.9+	1.4-	810306	413	2.7+	1.2-	810405	413	2.3-	0.2+
710416	675	1.2+	0.2-	810307	413	0.6+	0.7+	810405	413	1.5+	1.3-
710416	675	0.9+	1.6-	810311	413	2.3-	1.7+	810502	413	0.9-	0.2+
790918	675	0.1-	0.9-	810311	413	1.9+	0.9+	810503	413	1.2+	2.0+

1981 EY27 = 1990 SG17
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 133.45252 (1950.0) P Q
n 0.24548235 Peri. 301.52912 +0.59691293 +0.80208959
a 2.5261310 Node 5.23711 -0.64930636 +0.49659438
e 0.1843707 Incl. 11.77990 -0.47127084 +0.33173229
P 4.01 H 14.2 G 0.15
Residuals in seconds of arc

810212	413	(0.4+	3.1+)	810315	413	0.9+	0.5+	810503	413	0.6+	0.0
810213	413	0.0	2.0+	810405	413	(4.0+	0.8-)	900914	675	0.4+	1.2-
810302	413	0.5-	0.7-	810406	413	0.3+	0.8+	900914	675	0.8+	1.3-
810302	413	0.0	0.1-	810406	413	1.5+	0.5-	900917	675	0.7-	1.2+
810306	413	(3.0-	0.1-)	810407	413	0.9+	0.3-	900917	675	1.1-	1.5+
810306	413	0.5+	0.4-	810407	413	(2.8-	0.5-)	900920	675	0.3+	0.2+
810311	413	1.2-	0.2-	810410	413	0.4+	0.5+	900920	675	0.2+	0.2-
810311	413	0.4-	0.1+	810410	413	0.2-	0.4-				
810315	413	1.7-	0.7-	810501	413	1.0-	0.4-				

1981 ET47 = 1991 PG14
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 7.32528 (1950.0) P Q
n 0.22689359 Peri. 351.03941 +0.98193632 +0.18918661
a 2.6622851 Node 358.04723 -0.16750837 +0.86162102
e 0.1996929 Incl. 5.18490 -0.08798865 +0.47097521
P 4.34 H 14.3 G 0.15
Residuals in seconds of arc

810212	413	0.8+	0.1-	810306	413	(8.7-	1.7+)	910806	675	0.0	0.3-
810213	413	0.5-	0.1-	810311	413	0.4+	0.7-	910810	675	0.4-	0.2-
810302	413	(7.6+	0.8-)	810501	413	0.9-	0.1-	910810	675	0.2+	0.5+
810302	413	0.9+	0.4-	810503	413	0.8-	0.7+				
810306	413	0.1-	0.9+	910806	675	0.2+	0.0				

1981 SY1 = 1988 UM
Id. T. Kobayashi (MPC 13855)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano
M 52.45664 (1950.0) P Q
n 0.29005037 Peri. 332.98842 +0.37328396 +0.92671660
a 2.2602359 Node 318.89025 -0.83884563 +0.31733023
e 0.1539296 Incl. 3.75628 -0.39622858 +0.20124084
P 3.40 H 13.5 G 0.15
Residuals in seconds of arc

810902	095	0.3-	3.8+	910712	801	0.1-	1.1+	910806	801	0.3-	0.7+
810925	688	0.9+	0.4+	910712	801	0.2-	1.2+	910806	801	0.7-	1.1+
810925	688	2.5-	0.1-	910713	801	0.2-	1.2+	910807	675	1.3+	0.0
811005	688	0.0	0.5-	910803	809	0.2-	1.2-	910807	675	0.6+	0.2-
811005	688	0.1+	0.0	910803	809	0.9-	1.3-	910811	801	0.3+	0.5+
881016	400	1.1+	3.6-	910803	809	0.9-	1.2-	910811	801	0.4+	0.3+
881016	400	(2.3+	5.1-)	910805	809	1.1+	1.3-	910815	894	0.1-	0.9-
881016	400	0.1+	2.2-	910805	809	0.6+	1.9-	910815	894	0.4+	1.0-
881019	400	2.2-	3.4+	910805	675	0.2+	0.5+	910817	894	0.9-	1.5+
881019	400	1.8+	0.4+	910805	809	0.2+	1.6-				
881019	400	(4.4-	3.3+)	910805	675	0.8+	0.9+				

1981 SQ2 = 1964 TV1 = 1964 VG1 = 1985 XZ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	351.66936	(1950.0)	P	Q
n	0.28708641	Peri. 321.75729	+0.95078397	+0.30891259
a	2.2757661	Node 20.28881	-0.26436154	+0.84936508
e	0.1611963	Incl. 3.99239	-0.16162555	+0.42796257
P	3.43	H 13.5	G 0.15	

Residuals in seconds of arc

641009	330	1.2-	0.2-	810920	809	0.0	0.2-	810922	809	0.4-	1.2-
641101	330	0.1-	3.1+	810920	809	0.3-	0.2-	810922	809	0.3-	0.8-
810901	675	1.4+	0.9+	810920	809	0.1+	0.3-	851214	010	1.8-	0.5+
810902	675	0.9+	0.0	810922	809	0.6-	0.7-	851214	010	1.9+	2.7-

1981 TT = 1981 UE11 = 1991 OT
Id. S. Nakano (d, MPC 10752), E. Bowell
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	25.36977	(1950.0)	P	Q
n	0.29085888	Peri. 130.36504	+0.90395042	+0.42654299
a	2.2560454	Node 204.43300	-0.41132091	+0.84767560
e	0.1961245	Incl. 4.23884	-0.11699890	+0.31544755
P	3.39	H 14.5	G 0.15	

Residuals in seconds of arc

811006	046	0.9-	2.7-	910716	675	0.5-	0.5+	910807	675	0.4+	0.3-
811006	046	(2.8-	5.7-)	910716	675	0.2+	0.1+	910807	675	1.0-	0.5-
811022	095	1.5+	1.9+	910718	675	0.6+	0.4+				
811024	095	0.5-	1.0+	910718	675	0.3+	0.1+				

1981 TM3 = 1971 TV1 = 1980 FE10 = 1991 RO
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	94.46236	(1950.0)	P	Q
n	0.29028445	Peri. 242.12960	-0.17834041	+0.98325967
a	2.2590206	Node 17.71571	-0.85404976	-0.13582971
e	0.1391704	Incl. 7.05066	-0.48866523	-0.12145248
P	3.40	H 12.9	G 0.15	

Residuals in seconds of arc

711012	095	0.0	0.0	811022	095	0.9-	0.4-	910901	885	0.6-	1.4+ Y
800316	095	0.0	0.0	811024	095	0.9+	0.3+	910906	885	0.5+	0.4+
811007	095	(7.1-	2.5-)	910901	885	0.4+	1.4- Y	910906	885	0.4-	0.3-

1982 UQ6 = 1972 TZ6 = 1987 WY3
Id. W. Landgraf (MPC 12941), B. G. Marsden (ibid.), S. McDonald (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	306.63319	(1950.0)	P	Q
n	0.20073508	Peri. 190.59484	+0.67829688	-0.73466387
a	2.8888261	Node 216.69665	+0.67576396	+0.63092194
e	0.0607164	Incl. 1.29483	+0.28854188	+0.24941233
P	4.91	H 13.0	G 0.15	

Residuals in seconds of arc

721006	095	0.7-	1.9+	821114	095	1.5-	0.8-	910805	675	0.5+	1.2-
821020	095	1.5+	1.2+	871124	688	1.5-	1.4-	910808	675	0.2+	1.4+
821025	095	0.1+	0.1-	871124	688	1.8+	0.3-	910808	675	0.8-	0.8-
821109	095	0.0	0.4-	910805	675	0.4+	0.5-				

1983 AA3 = 1988 GA1
Id. C. M. Bardwell (MPC 13311)

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

M 356.52949	(1950.0)		P	Q
n 0.22558598	Peri.	97.48970	-0.49713094	-0.86538486
a 2.6725685	Node	22.66084	+0.71750175	-0.45083713
e 0.1423486	Incl.	9.41229	+0.48790580	-0.21875770
P 4.37	H 13.0		G 0.15	

Residuals in seconds of arc

810903	675	0.1+	0.1+	830109	095	1.2+	0.8-	880413	054	0.1-	0.1-
810904	675	0.1-	0.0	830114	095	1.6-	1.3+	880413	054	0.4-	0.0
830106	095	0.4+	0.6-	880409	054	0.5+	0.2+	880414	054	0.1+	0.1-

1983 JQ = 1982 DZ1
Id. D. W. E. Green (MPC 14190)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M 153.56228	(1950.0)		P	Q
n 0.17189046	Peri.	156.71864	+0.05583103	+0.99748210
a 3.2035812	Node	116.45766	-0.92351635	+0.06823831
e 0.1678493	Incl.	2.79981	-0.37947390	-0.01931290
P 5.73	H 12.3		G 0.15	

Residuals in seconds of arc

710326	675	1.0-	1.5-	820216	046	0.1+	2.3-	830514	095	0.0	0.0
710326	675	2.2-	0.8-	820216	046	0.5-	0.1-	830605	095	2.5+	0.5-
710327	675	1.0-	1.8-	820221	046	0.7+	0.3+	900918	675	2.1+	3.5-
710402	675	1.5-	0.6+	820221	046	0.9-	0.0	900918	675	0.8+	1.5-
710416	675	1.1+	0.7-	830506	688	1.0-	2.0-	900920	675	0.8+	1.0-
710416	675	0.9-	0.5-	830506	688	0.4-	1.0-	900920	675	1.9+	2.8-

1984 MR = 1981 SF7 = 1991 NN
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 4.17898	(1950.0)		P	Q
n 0.28264702	Peri.	184.03124	+0.87749849	+0.47410288
a 2.2995337	Node	147.35169	-0.43615197	+0.85158636
e 0.1516732	Incl.	7.69853	-0.19941879	+0.22366747
P 3.49	H 13.4		G 0.15	

Residuals in seconds of arc

810928	095	0.0	0.0	840702	095	0.1-	0.9+	910711	675	0.3-	0.0
840625	095	0.9-	0.5+	910710	675	0.7+	0.1+	910711	675	0.6-	0.1+
840628	095	1.0+	1.3-	910710	675	0.2+	0.3-				

1985 CC2 = 1985 DM = 1980 WL5 = 1988 AP3
Id. L. D. Schmadel (d, MPC 10291), E. Bowell (k), G. V. Williams, D. W. E. Green
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 310.00858	(1950.0)		P	Q
n 0.28775859	Peri.	80.13427	-0.93997719	+0.33645091
a 2.2722207	Node	119.50707	-0.33307776	-0.86835138
e 0.0344505	Incl.	3.75219	-0.07417606	-0.36437160
P 3.43	H 14.0		G 0.15	

Residuals in seconds of arc

801129	675	0.9-	0.6+	850216	809	0.2+	0.4+	850219	809	0.1-	0.7+
801201	675	0.7+	0.5+	850216	046	(1.6-	2.2-)	850219	809	0.3-	0.5+
850212	809	0.3+	0.6+	850216	046	0.7-	1.8-	850220	809	1.2+	0.4-
850212	809	0.8+	0.4+	850217	809	1.0-	0.2+	850220	809	1.0+	0.3-
850212	809	1.0+	0.4+	850217	809	0.7-	0.1+	850220	809	1.1+	0.3-
850214	809	0.0	0.8+	850217	809	0.5-	0.0	850220	675	0.2-	0.0
850214	809	0.1-	0.6+	850218	809	0.1-	0.4+	850220	046	(2.7-	0.9+)
850214	809	0.2+	0.4+	850218	809	0.1+	0.2+	850220	046	0.4+	1.4-
850216	809	0.4-	0.8+	850218	809	0.3+	0.4+	850221	809	0.4+	0.8+
850216	809	0.1-	0.5+	850219	809	0.0	0.8+	850221	809	0.4+	0.8+

850221 809	0.2+	0.7+	850225 809	0.3-	0.7-	850228 809	0.8+	0.2-
850222 675	(2.4+	0.8+)	850226 809	1.1-	0.1+	850228 809	1.0+	0.3-
850224 809	1.1-	0.1+	850226 809	0.7-	0.3-	850228 809	1.2+	0.3-
850224 809	0.6-	0.2-	850226 809	0.5-	0.6-	880112 033	0.9+	0.8-
850224 809	0.1+	0.4-	850227 809	0.4-	0.2-	880112 033	0.8-	1.0-
850225 809	0.7-	0.8-	850227 809	0.1-	0.3-			
850225 809	0.4-	0.7-	850227 809	0.1-	0.4-			

1986 PC1 = 1975 RK1 = 1985 GH = 1990 EU5
Id. G. V. Williams (MPC 17204; unpublished), K. Ichikawa (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	10.17440		(1950.0)	P	Q
n	0.17903411	Peri.	134.87350	+0.37074990	+0.92865546
a	3.1177804	Node	156.88038	-0.86042648	+0.34830940
e	0.1767515	Incl.	1.74856	-0.34958659	+0.12759153
P	5.51	H	12.0	G 0.15	

Residuals in seconds of arc

750903 095	0.1-	1.3-	860908 071	1.2-	0.6+	900308 809	0.5+	1.1-
750906 095	2.4+	0.9-	860908 071	1.4-	0.4+	910616 675	1.4+	0.1-
850414 688	2.0-	2.2+	860908 071	0.3-	0.6+	910616 675	1.6+	0.4+
850414 688	0.6+	1.4+	900307 809	0.7-	0.1-	910806 801	1.6-	1.2-
860801 675	(14.5+	0.6+)	900307 809	0.4-	0.1-	910806 801	0.8-	0.7-
860801 675	(12.1+	0.9+)	900307 809	0.3-	0.4-	910812 801	1.0+	1.0-
860804 675	(12.4+	1.1+)	900308 809	0.3+	1.1-	910812 801	0.1-	0.1+
860804 675	(9.7+	0.0)	900308 809	0.4+	1.3-			

1986 PS4 = 1986 RV4 = 1950 QL = 1987 YG3 = 1991 PV2
Id. E. W. Elst (d, MPC 12118), B. G. Marsden
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	355.23311		(1950.0)	P	Q
n	0.19156143	Peri.	29.51263	+0.96902752	+0.22246257
a	2.9803335	Node	317.19790	-0.24597565	+0.83089093
e	0.1057544	Incl.	9.07920	-0.02194658	+0.51003007
P	5.15	H	12.5	G 0.15	

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

500817 760	(0.01-	0.04-)X	860908 071	0.0	0.3+	910802 809	1.0+	1.8+
860806 071	(3.8+	3.1-)	860908 071	0.7+	0.5+	910807 809	0.1-	0.5-
860806 071	(6.2+	0.2-)	860908 071	(4.6+	1.7+)	910807 809	1.1-	0.0
860809 071	0.1-	1.8-	871220 010	0.7-	0.4-	910807 809	0.4-	0.1-
860809 071	(4.6-	0.1-)	871220 010	(1.8+	7.3+)			
860809 071	(4.7-	0.8+)	871220 010	0.7+	0.7+			

1986 RY5 = 1978 JD2 = 1990 WK7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	204.66729		(1950.0)	P	Q
n	0.27055573	Peri.	76.98625	+0.55754604	+0.82691608
a	2.3675449	Node	227.14646	-0.79505109	+0.50654467
e	0.1382198	Incl.	5.72733	-0.23882247	+0.24417676
P	3.64	H	12.8	G 0.15	

Residuals in seconds of arc

780506 095	0.4-	2.2-	861005 095	0.0	1.9-	901208 400	0.1-	0.6-
860907 095	0.3-	0.8+	901124 400	0.8-	0.0	901208 400	0.2+	0.0
860911 095	0.5+	0.5+	901124 400	0.8+	1.2-			

1986 SD2 = 1986 WE5 = 1971 TP2 = 1973 AQ3
Id. H. Oishi (MPC 17205), H. Kaneda

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	341.91701	(1950.0)		P	Q
n	0.19342735	Peri.	74.16864	+0.93255222	-0.31170949
a	2.9611299	Node	303.66201	+0.18528422	+0.84624886
e	0.0499759	Incl.	12.64220	+0.30986468	+0.43208802
P	5.10	H	11.5	G 0.15	

Residuals in seconds of arc

711013 095	0.2+	0.6+	861003 095	2.2-	0.2-	910806 675	0.6+	1.1-
730102 095	1.2+	0.6+	861127 010	0.1+	0.5-	910806 675	1.2+	2.2-
730104 095	2.1-	2.5-	861127 010	1.1-	0.9+	910808 675	0.7+	0.1+
860929 095	0.3-	2.0+	861127 010	(4.7+	1.7+)	910808 675	1.1+	0.3-

1986 TB5 = 1986 TP10 = 1969 TY4 = 1975 TT5 = 1975 VY7 = 1991 ND1
Id. A. Lowe (d, MPC 15053), S. Nakano (d), G. V. Williams, K. Ichikawa
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	31.39646	(1950.0)		P	Q
n	0.17490899	Peri.	260.68836	+0.53734370	+0.84315719
a	3.1666104	Node	41.83211	-0.76234121	+0.49505815
e	0.1691583	Incl.	1.60208	-0.36069049	+0.20976983
P	5.63	H	12.5	G 0.15	

Residuals in seconds of arc

691014 095	0.9-	1.9+	861008 095	1.2+	0.5-	910714 675	(2.3-	1.2+)
751014 095	0.9+	0.8+	861010 046	1.6-	0.2-	910717 675	0.7+	1.2+
751106 095	0.9-	0.6-	861010 046	0.4-	0.0	910717 675	0.0	1.6+
861001 010	1.7+	1.3-	910712 675	0.5+	0.1-	910805 675	0.8-	1.3-
861001 010	(3.4+	1.2-)	910712 675	0.5-	0.4-	910805 675	0.6-	1.2-
861003 095	(2.1-	0.3-)	910714 675	0.7+	0.4+			

1987 DD6 = 1991 LM4
Id. H. Kaneda, T. Kobayashi
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	99.66842	(1950.0)		P	Q
n	0.28159085	Peri.	41.38285	-0.96074364	+0.27568068
a	2.3052801	Node	154.56906	-0.26978957	-0.90214086
e	0.0901407	Incl.	4.16308	-0.06469351	-0.33187653
P	3.50	H	14.5	G 0.15	

Residuals in seconds of arc

870222 809	2.0-	0.2+	870228 809	1.5+	0.6-	870305 809	1.2-	0.8+
870222 809	1.7-	0.2+	870301 809	0.5+	0.2-	870305 809	1.0-	0.9+
870222 809	1.5-	0.7+	870301 809	0.6+	0.2-	870306 809	0.8-	0.2+
870223 809	0.6-	0.1-	870301 809	0.6+	0.0	870306 809	0.4-	0.2+
870223 809	0.3-	0.3-	870302 809	0.1+	0.1+	870306 809	0.7-	0.4+
870223 809	0.4-	0.4-	870302 809	0.2-	0.3+	870307 809	0.1+	0.2+
870224 809	1.4+	1.1-	870302 809	0.1-	0.3+	870307 809	0.4+	0.0
870224 809	1.2+	1.1-	870303 809	0.5-	0.5+	870307 809	0.5+	0.1+
870224 809	1.0+	0.9-	870303 809	0.3-	0.6+	910606 809	0.5+	0.2-
870227 809	1.9+	0.9-	870303 809	0.8-	0.7+	910606 809	0.8-	0.3+
870227 809	2.1+	0.9-	870304 809	1.0-	0.6+	910606 809	1.2-	0.9+
870227 809	2.1+	1.0-	870304 809	0.9-	0.6+	910608 809	1.1+	0.7-
870228 809	1.2+	0.7-	870304 809	1.3-	0.4+	910608 809	0.1-	0.5-
870228 809	1.4+	0.7-	870305 809	1.3-	0.9+	910608 809	0.5+	0.0

1987 EQ = 1991 PW2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	139.31020	(1950.0)		P	Q
n	0.30823573	Peri.	237.16056	-0.90703652	+0.42047761
a	2.1704424	Node	327.68870	-0.37123583	-0.82326727
e	0.0550815	Incl.	2.35723	-0.19866733	-0.38135230
P	3.20	H	15.0	G 0.15	

Residuals in seconds of arc

870224	809	1.8+	0.8-	870303	688	1.5-	2.2-	870306	809	0.4+	0.1+
870224	809	1.9+	0.8-	870303	809	1.2-	0.6+	870306	809	0.6+	0.1+
870224	809	1.8+	0.8-	870303	809	0.9-	0.6+	870307	809	0.7+	0.2-
870225	809	0.1-	0.9-	870303	809	0.5-	0.7+	870307	809	0.9+	0.1+
870225	809	0.0	1.0-	870303	688	2.9-	0.4-	870307	809	1.2+	0.6+
870225	809	0.2+	0.9-	870304	809	1.3-	0.1-	870310	809	3.2+	0.1+
870228	809	1.2-	0.3+	870304	809	1.0-	0.2-	870310	809	3.0+	0.1+
870228	809	1.0-	1.1+	870304	809	0.7-	0.1+	870310	809	3.0+	0.1+
870228	809	0.6-	0.5+	870305	809	0.8-	0.2+	910802	809	0.3+	0.5-
870302	809	1.5-	0.7+	870305	809	0.8-	0.1+	910807	809	0.1-	0.0
870302	809	1.4-	0.7+	870305	809	0.8-	0.2+	910807	809	0.5-	0.2-
870302	809	1.2-	0.9+	870306	809	0.5+	0.1+	910807	809	0.4+	0.1+

1987 JG = 1991 OQ
Id. B. A. Skiff
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	85.97913	(1950.0)	P	Q	
n	0.27998585	Peri.	14.35328	-0.17934121	+0.97944885
a	2.3140816	Node	245.38313	-0.91227975	-0.20068264
e	0.0821817	Incl.	5.82624	-0.36821513	+0.02015985
P	3.52	H	13.8	G 0.15	

Residuals in seconds of arc

870505	474	1.0+	0.0	870601	474	2.0+	0.8-	870621	474	0.3-	1.3+
870505	474	0.9-	1.4-	870601	474	0.5-	0.4+	870621	474	0.7-	1.3+
870507	474	0.3+	0.8-	870605	474	0.2-	0.3+	910716	675	1.3-	0.2-
870507	474	0.4-	1.4-	870605	474	0.2-	0.9+	910716	675	0.2-	0.1+
870530	413	1.1+	0.6-	870620	474	0.6-	0.7+	910718	675	1.0-	0.5-
870530	413	0.5+	0.9-	870620	474	1.3-	1.6+	910718	675	2.8+	0.4-

1987 RT3 = 1985 FK2 = 1991 PC2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	186.61510	(1950.0)	P	Q	
n	0.20977765	Peri.	188.75999	-0.83396117	-0.54400044
a	2.8052018	Node	317.84945	+0.51425595	-0.70532091
e	0.0923426	Incl.	7.93019	+0.20012390	-0.45451726
P	4.70	H	13.0	G 0.15	

Residuals in seconds of arc

850324	688	0.6+	0.5+	870917	095	1.2+	1.2+	910807	809	0.9+	0.2+
850324	688	0.6-	0.6-	870926	095	0.4-	0.6-	910807	809	0.4-	0.0
870902	095	0.8-	0.7-	910802	809	0.6-	0.0	910807	809	0.1+	0.2-

1987 SC1 = 1991 PX12
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	342.08811	(1950.0)	P	Q	
n	0.23655013	Peri.	260.90179	+0.76056401	-0.64640019
a	2.5893291	Node	139.33509	+0.62632880	+0.70575199
e	0.2534899	Incl.	5.36281	+0.17103980	+0.28996711
P	4.17	H	14.1	G 0.15	

Residuals in seconds of arc

870831	095	0.1-	1.3-	870922	071	0.4-	2.4+	870925	071	0.2-	0.1+
870919	688	(9.6+	5.0+)	870923	071	(3.7-	0.1+)	870927	095	(4.4+	0.6+)
870919	688	(4.8+	1.6-)	870923	071	0.3-	0.8+	910805	675	0.1+	0.0
870921	071	2.0+	0.5+	870923	071	(1.6-	4.1+)	910808	675	0.1+	0.1+
870921	071	(2.0+	3.8-)	870924	071	1.0-	2.8-	910808	675	0.3-	0.2+

1987 SM4 = 1979 VD2 = 1991 PB11
Id. E. Bowell (k), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 13.72027 (1950.0) P Q
n 0.23808710 Peri. 71.94206 +0.98905181 -0.03031463
a 2.5781735 Node 289.59725 -0.03680469 +0.89707099
e 0.1888128 Incl. 8.81831 +0.14290532 +0.44084540
P 4.14 H 13.0 G 0.15
Residuals in seconds of arc

791114 095	0.0	0.4-	870929 688	0.7+	0.5+	871026 688	1.0-	0.8+
870925 095	1.1-	1.3-	871020 688	1.0+	0.4-	910810 675	0.3+	0.1-
870926 095	(6.2+	1.6-)	871020 688	0.7-	1.3-	910810 675	0.2-	0.1-
870929 688	0.9+	1.1+	871026 688	0.0	1.0+			

1987 ST11 = 1969 UQ2
Id. H. Kaneda (MPC 16580)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green
M 32.34834 (1950.0) P Q
n 0.27172104 Peri. 355.47837 +0.76118204 -0.64462020
a 2.3607757 Node 44.92806 +0.59810987 +0.65532098
e 0.1304616 Incl. 5.78475 +0.25073191 +0.39372479
P 3.63 H 14.1 G 0.15
Residuals in seconds of arc

691018 095	2.4-	1.7-	710416 675	1.3+	0.6+	870924 095	(5.9-	0.3-)
691105 095	2.2+	2.0+	870923 809	2.3-	0.4+	870926 809	0.9-	0.9-
710326 675	(5.0+	1.2-)	870923 809	0.3+	1.3+	870926 809	0.7-	0.9-
710326 675	(4.8+	0.4-)	870923 809	0.4+	1.3+	870926 809	0.8-	0.9-
710327 675	0.9+	1.4-	870924 809	0.2-	0.4+	870930 809	0.9+	0.3-
710402 675	1.2-	1.3+	870924 809	0.1+	0.4+	870930 809	1.1+	0.2-
710416 675	0.4-	0.8+	870924 809	0.3+	0.4+	870930 809	1.3+	0.2-

1987 SN12 = 1979 WP1 = 1991 PH
Id. E. Bowell (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 24.81822 (1950.0) P Q
n 0.23969934 Peri. 183.63517 +0.84923799 +0.52777687
a 2.5665998 Node 144.49518 -0.48373172 +0.78959511
e 0.2134186 Incl. 1.54885 -0.21165648 +0.31303538
P 4.11 H 14.0 G 0.15
Residuals in seconds of arc

791116 095	0.2+	0.5-	870923 809	0.0	0.2-	870927 809	0.1-	0.2+
870916 809	0.1+	0.1+	870923 809	0.2-	0.1-	870928 809	0.2+	0.4+
870916 809	0.2+	0.0	870923 809	0.3-	0.1-	870928 809	0.4+	0.4+
870916 809	0.4+	0.2-	870924 809	0.0	0.1-	870928 809	0.5+	0.3+
870918 809	0.1+	0.1-	870924 809	0.3+	0.1-	910805 675	0.1-	0.1+
870918 809	0.0	0.1-	870924 809	0.4+	0.1-	910805 675	0.1+	0.5-
870918 809	0.2+	0.2-	870927 809	0.4-	0.2+	910808 675	0.1+	0.1+
870920 095	1.5-	0.0	870927 809	0.3-	0.2+	910808 675	0.0	0.1-

1988 CA1 = 1991 BA1
Id. H. Kaneda (MPC 18289)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 33.64412 (1950.0) P Q
n 0.30610498 Peri. 57.70692 -0.98561678 +0.15633858
a 2.1804985 Node 131.20256 -0.16891165 -0.92332064
e 0.0578295 Incl. 4.89264 +0.00533027 -0.35076665
P 3.22 H 14.9 G 0.15
Residuals in seconds of arc

801129 675	0.9+	0.5+	880214 033	0.6+	0.7-	880215 033	0.5+	0.1-
801201 675	0.9-	0.5-	880214 033	0.1-	0.8-	880215 033	0.3-	0.5-

880216 033 0.7- 2.2+ 910118 511 1.7- 1.1- 910119 046 (4.6+ 0.7-)
910114 801 0.0 0.1+ 910118 511 1.2+ 0.7-
910114 801 1.1- 0.1+ 910119 046 1.5+ 1.6+

1988 HE = 1989 SD14
Id. B. G. Marsden (MPC 18113)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	250.70892	(1950.0)		P	Q
n	0.24198168	Peri.	346.07366	+0.57397858	+0.80571637
a	2.5504408	Node	318.67901	-0.72846868	+0.42087416
e	0.1907234	Incl.	12.79115	-0.37400797	+0.41675662
P	4.07	H	12.5	G 0.15	

Residuals in seconds of arc
840526 413 0.1+ 1.0+ 880416 474 3.0+ 0.1+ 880605 474 1.5- 0.7-
840526 413 0.2- 0.4+ 880416 474 3.9+ 0.3- 890926 493 1.2+ 1.4+
840605 413 0.4- 0.4- 880418 474 1.2- 0.6- 890927 493 3.0+ 0.0
840605 413 0.2- 0.5+ 880418 474 0.9- 0.6- 891003 493 0.4+ 1.2+
840605 413 0.1- 0.4- 880421 474 1.0- 0.1- 891003 493 1.6- 1.2+
840623 413 2.5+ 1.6+ 880421 474 0.7- 0.0 891004 493 0.6- 0.6+
840623 413 0.9- 1.8- 880521 474 0.7- 2.2+ 891005 493 0.7- 0.5+
880415 474 0.2+ 0.7- 880521 474 0.9- 1.5+ 891005 493 1.4- 2.4-
880415 474 0.8+ 0.5- 880605 474 2.2- 1.1- 891006 493 0.0 2.6-

1988 VK = 1991 PH1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	359.35100	(1950.0)		P	Q
n	0.30303807	Peri.	268.44682	+0.94519235	-0.31241191
a	2.1951900	Node	109.74998	+0.32503225	+0.87260030
e	0.1546985	Incl.	5.78840	+0.03107180	+0.37545640
P	3.25	H	14.0	G 0.15	

Residuals in seconds of arc
881103 897 0.1- 3.4+ 881114 897 1.5+ 2.0- 910815 675 1.0- 0.6+
881103 897 1.5- 0.8+ 881114 897 1.3- 0.2- 910815 675 0.7- 0.0
881107 897 0.2- 2.2- 881129 897 1.4- 0.0 910816 675 0.6+ 0.3-
881107 897 1.5+ 0.5- 881129 897 1.5+ 0.8+ 910816 675 1.2+ 0.5-

1988 VP3 = 1981 RR7
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	330.52621	(1950.0)		P	Q
n	0.29572757	Peri.	17.37816	+0.63084711	-0.77371381
a	2.2312154	Node	33.57712	+0.69873249	+0.53382631
e	0.1250040	Incl.	6.05099	+0.33734972	+0.34116919
P	3.33	H	14.8	G 0.15	

Residuals in seconds of arc
810903 675 1.3+ 0.5+ 881114 888 0.1+ 0.8- 881211 888 0.3- 0.2+
810904 675 1.3- 0.5- 881201 888 0.1- 0.6+ 881211 888 0.5- 0.5-
881112 888 0.1- 1.5+ 881201 888 1.9+ 1.6+ 881214 888 1.5+ 0.0
881112 888 0.1+ 0.3+ 881201 888 0.5- 0.5+ 881214 888 1.3+ 0.8-
881114 888 0.1- 0.8- 881201 888 2.1+ 1.1+ 881215 888 0.7- 0.0
881114 888 0.9+ 0.2- 881207 888 2.0- 0.4- 881215 888 0.4- 0.6-
881114 888 1.6- 1.5- 881207 888 1.7- 0.2-

1988 VN4
Id. R. H. McNaught (1977 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 64.58668	(1950.0)	P	Q	
n 0.40399287	Peri. 230.53950	-0.11025371	-0.96770717	
a 1.8122589	Node 227.38571	+0.97997920	-0.06779995	
e 0.3209575	Incl. 17.94046	+0.16578564	-0.24278798	
P 2.44	H 17.0	G 0.15		

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

770216	413	0.1-	0.3+	881104	675	0.9-	0.7-	881209	801	0.4-	0.8-
881008	675	0.4+	0.1+	881109	675	0.2+	0.1+	890309	688	0.4-	0.1+
881008	675	1.0+	0.2+	881109	675	0.2-	1.1+	890309	688	0.4+	0.1-
881104	675	0.4-	0.4-	881206	801	0.5+	0.5+				

1988 VR5 = 1991 JZ3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 303.79142	(1950.0)	P	Q	
n 0.23725384	Peri. 139.44049	+0.98777936	+0.03506578	
a 2.5842065	Node 219.35356	-0.06784509	+0.97394347	
e 0.1343882	Incl. 13.85656	+0.14031742	+0.22406363	
P 4.15	H 13.6	G 0.15		

Residuals in seconds of arc

881104	046	(2.5+	4.0-)	881112	071	1.2-	2.4+	910512	809	(1.4+	99.1+)
881104	046	2.4+	1.0-	881113	071	(0.1+	3.0+)	910517	809	0.5-	0.4+
881105	046	0.8-	2.2-	881201	888	1.4+	0.2-	910517	809	0.7-	0.1+
881105	046	0.6+	0.2-	881201	888	0.6+	0.8-	910517	809	1.1-	0.4-
881112	046	1.1-	0.1-	910512	809	1.6+	0.1-				
881112	046	1.7-	2.0+	910512	809	0.8+	0.2+				

1988 VM9 = 1969 UQ = 1984 SZ6

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 253.31585	(1950.0)	P	Q	
n 0.25815230	Peri. 60.13098	+0.05031617	-0.99713810	
a 2.4427858	Node 27.15905	+0.86833066	+0.01576380	
e 0.1713127	Incl. 7.10084	+0.49342695	+0.07393998	
P 3.82	H 13.3	G 0.15		

Residuals in seconds of arc

691016	095	1.4+	3.8-	840929	809	0.1+	0.3-	881102	400	1.7+	1.3+
840928	809	0.9+	0.7-	840930	809	0.6-	0.7+	881102	400	0.7-	0.6+
840928	809	0.7+	0.7-	840930	809	0.4-	0.3+	881102	400	0.2-	0.4+
840928	809	0.8+	0.6-	840930	809	0.5-	0.1+	881108	400	0.4+	0.4+
840929	809	0.3-	0.3+	881018	400	1.6-	0.1+	881108	400	0.1-	0.1-
840929	809	0.1-	0.0	881018	400	1.9-	1.4+				

1988 XU1 = 1979 BV = 1983 XP1 = 1987 SC8 = 1991 LM2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 29.86242	(1950.0)	P	Q	
n 0.18992001	Peri. 172.66947	-0.22464310	+0.95526126	
a 2.9974750	Node 84.20772	-0.90351851	-0.13025097	
e 0.0568279	Incl. 11.14956	-0.36495176	-0.26553834	
P 5.19	H 11.7	G 0.15		

Residuals in seconds of arc

790124	095	0.6-	1.6-	881212	872	0.1-	1.3+	910606	809	0.2-	0.0
831204	561	0.9+	0.2+	881212	872	0.1+	1.2-	910606	809	0.5-	0.1+
831204	561	0.6+	0.6+	881213	872	0.5+	2.5-	910608	809	0.6+	0.5+
870918	010	0.0	0.9-	881213	872	1.7+	0.1+	910608	809	0.2+	0.1-
870918	010	0.4+	0.0	890101	872	3.5-	3.0+ Y	910608	809	0.8-	0.2+
870918	010	0.1-	0.3+	890101	872	(1.2+	4.5+)				
870918	010	0.0	0.3+	910606	809	0.9+	0.5-				

1989 AU1
Id. C. S. Shoemaker (1991 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	86.74242	(1950.0)	P	Q
n	0.08136966	Peri. 226.94178	-0.41346787	-0.90557700
a	5.2742541	Node 247.70487	+0.86228518	-0.35602528
e	0.0807058	Incl. 5.87675	+0.29241852	-0.23059988
P	12.11	H 10.0	G 0.15	

Residuals in seconds of arc

890101	888	0.1- 0.4+	890129	888	0.2- 0.6-	890207	888	0.8- 0.2+
890101	888	0.2- 0.4+	890129	888	0.6- 0.1-	890210	888	0.4+ 0.5+
890103	888	0.6- 1.7+	890201	675	0.5+ 2.1-	890210	888	0.7- 1.0+
890103	888	(3.7- 1.1+)	890201	675	1.0+ 0.4-	890226	888	1.2+ 0.0
890109	675	0.5- 0.7-	890203	888	0.1- 0.2+	890226	888	0.8- 0.5+
890111	675	1.1+ 2.2-	890203	888	0.3- 0.2+	910414	675	0.7- 0.0
890111	675	0.6+ 0.1+	890205	888	0.2+ 0.1-	910414	675	0.5+ 0.0
890127	888	0.6- 0.0	890205	888	0.0 0.2+	910416	675	0.2+ 0.0
890127	888	1.1+ 0.9+	890207	888	0.3- 0.1+			

1989 AN6 = 1981 UR16 = 1991 LX1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Ichikawa

M	329.08566	(1950.0)	P	Q
n	0.17472880	Peri. 243.72376	+0.89112429	+0.45175280
a	3.1687933	Node 89.39419	-0.39960778	+0.82581047
e	0.1754564	Incl. 2.44312	-0.21496772	+0.33757439
P	5.64	H 13.2	G 0.15	

Residuals in seconds of arc

811024	095	0.5- 1.3+	890202	033	0.4- 0.0	910606	809	0.2+ 0.8+
890111	033	0.2- 0.3+	890203	033	0.1+ 0.1-	910608	809	0.2- 0.4-
890111	033	0.1- 0.3+	910606	809	1.8+ 1.1+	910608	809	1.1- 0.5-
890114	033	1.0+ 0.6+	910606	809	0.4+ 1.0+	910608	809	0.8- 0.2-

1989 CL1 = 1973 FX = 1976 UT7
Id. S. Nakano (MPC 14360)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	188.62405	(1950.0)	P	Q
n	0.18245134	Peri. 78.35306	-0.86977370	-0.49215049
a	3.0787282	Node 72.15596	+0.43679123	-0.80162870
e	0.2091728	Incl. 2.15534	+0.22958034	-0.33938081
P	5.40	H 12.8	G 0.15	

Residuals in seconds of arc

730326	095	0.4+ 0.9+	890207	391	0.3- 0.3+	890310	391	(4.5+ 0.3-)
761022	381	0.1+ 0.3+	890207	391	1.2- 0.1-	910806	809	2.1+ 0.3+
761022	381	1.2- 0.0	890301	391	(10.4+ 1.1-)	910806	809	1.0+ 0.0
761022	381	0.1+ 0.1+	890301	391	(8.4+ 0.7+)	910806	809	0.2- 0.3-
761022	381	0.8- 0.1+	890306	391	0.8+ 0.1+	910814	809	0.1- 0.1+
761024	381	1.3+ 0.6+	890306	391	1.8+ 1.0+	910814	809	1.1- 0.5+
890205	071	0.1- 0.4-	890308	391	0.7+ 1.0-	910814	809	2.1- 0.7+
890205	071	2.2- 0.6+	890308	391	(3.8+ 1.3-)			
890206	391	0.4- 1.3+	890310	391	1.2+ 1.1-			

1989 ES = 1986 TX14 = 1991 PF9
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	222.11634	(1950.0)	P	Q
n	0.17290889	Peri. 305.08133	-0.47141150	-0.88114369
a	3.1909831	Node 172.75271	+0.87391072	-0.47234043
e	0.0757244	Incl. 16.97825	+0.11853800	-0.02191618
P	5.70	H 11.5	G 0.15	

Residuals in seconds of arc

861006 095	0.2+	1.6-	890406 675	0.1-	0.5-	910815 675	0.4+	0.3-
890301 675	0.5-	0.5+	890408 675	0.6-	0.4+	910816 675	1.1-	0.4+
890306 675	0.5+	2.8-	890408 675	0.5+	0.1-	910816 675	0.2+	1.7-
890406 675	0.1-	0.4+	910815 675	0.4+	1.0+			

1989 GJ = 1981 RW5
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M 162.59712		(1950.0)	P	Q	
n 0.22518619	Peri.	140.09426	+0.21172923	+0.96550888	
a 2.6757255	Node	141.42725	-0.94718957	+0.24092685	
e 0.1772941	Incl.	14.06596	-0.24083739	-0.09872614	
P 4.38	H	12.7	G 0.15		

Residuals in seconds of arc

810901 675	0.5+	0.4+	890405 675	0.2-	1.1+	890430 675	1.1-	0.1-
810902 675	0.5-	0.4-	890407 675	0.1-	0.5-	890502 675	1.1+	0.1+
890405 675	0.3+	0.5-	890407 675	0.0	0.1-			

1989 UY3 = 1980 WV4
Id. S. J. Bus
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M 136.00688		(1950.0)	P	Q	
n 0.21752219	Peri.	245.10289	-0.51516410	-0.79402457	
a 2.7382116	Node	239.77791	+0.85708798	-0.47616656	
e 0.4761698	Incl.	21.92871	+0.00247784	-0.37787614	
P 4.53	H	14.4	G 0.15		

Residuals in seconds of arc

801129 675	0.2+	0.6-	891029 675	0.0	0.1+	891229 801	0.3+	0.0
801201 675	0.2-	0.5+	891129 675	0.7+	0.6+	891229 801	0.2+	0.2-
891027 675	0.4+	0.3-	891129 675	0.4-	0.8-			
891027 675	(2.7-	2.8-)	891202 675	1.0-	0.7+			

1989 YB6 = 1986 NL = 1991 KF
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 74.21841		(1950.0)	P	Q	
n 0.17431748	Peri.	55.56512	-0.97532160	-0.03234830	
a 3.1737698	Node	121.65710	-0.02644460	-0.96497263	
e 0.2119616	Incl.	14.86753	+0.21919958	-0.26034863	
P 5.65	H	12.8	G 0.15		

Residuals in seconds of arc

860707 010	0.0	0.3+	891231 511	1.2-	1.0+	910505 413	1.1-	0.5+
860708 010	(8.5+	3.7+)	900102 511	1.6-	0.6+	910505 413	1.5+	0.5-
891229 511	2.1+	0.3-	900102 511	1.3-	0.0	910518 413	1.0-	0.4-
891229 511	1.6+	2.1-	900104 511	1.7-	1.7+	910518 413	0.6+	0.4+
891231 511	0.4+	0.7-	900104 511	1.8+	0.0			

1990 BG
Id. R. H. McNaught (1978 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 310.08336		(1950.0)	P	Q	
n 0.54383855	Peri.	135.66974	-0.28621129	+0.77906333	
a 1.4864697	Node	109.85680	-0.95747182	-0.25470765	
e 0.5698310	Incl.	36.37468	+0.03648043	-0.57287375	
P 1.81	H	14.0	G 0.15		

Residuals in seconds of arc

781206 413	0.4+	0.5+	900122 675	(1.0+	3.4-)	900125 675	0.1-	0.9-
781206 413	0.3+	1.9-	900124 675	0.7+	1.1-	900126 675	1.2-	1.1+
900121 675	0.8-	0.5+	900124 675	0.6+	0.8-	900126 675	2.8-	0.9+

900126 657 0.5+ 2.6+ 900228 801 1.1+ 0.3- 900324 675 2.0- 0.5+
900130 675 1.8- 0.4- 900228 675 0.8+ 0.0 900327 801 1.0+ 0.7+
900203 685 (4.5+ 10.1-) 900228 675 0.7+ 0.9+ 900327 801 1.3+ 0.7+
900203 685(13.4+ 17.0-) 900301 675 0.9- 0.2+ 900621 413 0.7- 0.2-
900220 675 1.1+ 0.6- 900301 675 0.9- 0.6+ 900917 474 0.5- 1.4+
900220 675 0.1+ 1.5- 900322 801 0.7+ 0.1+ 900917 474 0.5+ 0.3+
900223 675 0.7+ 0.6- 900322 801 0.6+ 0.0 900919 474 0.5+ 0.1-
900223 675 0.6+ 0.5- 900322 675 0.4- 0.4+ 900919 474 0.7+ 0.3+
900227 801 2.8+ 0.1- 900322 675 0.8- 0.8+ 910210 801 0.7- 0.7-
900228 801 1.8+ 0.3+ 900324 675 2.1- 0.3+ 910211 801 1.1- 0.7-

1990 CH = 1970 SR
Id. B. G. Marsden (MPC 16240), H. Kaneda (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 125.88386 (1950.0) P Q
n 0.27537961 Peri. 250.11309 -0.80859749 +0.58543367
a 2.3398197 Node 325.64715 -0.49341517 -0.72901506
e 0.0616574 Incl. 5.96389 -0.32048645 -0.35468925
P 3.58 H 13.0 G 0.15
Residuals in seconds of arc
700927 095 1.3+ 0.9+ 900223 046 0.6+ 1.6- 900302 400 (3.3+ 0.4+)
701001 095 0.6- 2.3- 900224 033 2.7- 0.6- 900316 400 1.8- 0.5-
900215 400 0.0 0.6- 900224 046 1.3+ 0.8+ 900316 400 1.6- 0.7+
900215 400 (3.0- 0.8-) 900224 046 (0.6- 3.3+) 910805 675 0.4- 0.1-
900222 406 0.6- 0.1+ 900228 400 0.4- 0.0 910805 675 0.6+ 0.4-
900222 406 0.5+ 1.1- 900228 400 1.6+ 0.3+ 910807 675 1.0+ 1.1-
900223 046 0.5+ 1.3- 900302 400 0.9+ 0.8+ 910807 675 0.2- 0.6-

1990 DA
Id. R. H. McNaught (1973, 1979 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 223.99993 (1950.0) P Q
n 0.30955729 Peri. 305.51812 -0.01438295 -0.96521027
a 2.1642563 Node 142.55820 +0.99854008 -0.02746127
e 0.4558118 Incl. 25.43190 +0.05206575 +0.26002888
P 3.18 H 13.5 G 0.15
Residuals in seconds of arc
731018 413 0.1+ 0.1- 900220 887 0.5- 0.1- 900227 402 0.4- 0.3-
731021 413 0.2- 0.2- 900220 898 (0.8- 3.0-) 900228 685 0.6+ 0.3+
790920 413 0.3- 1.6- 900220 887 0.0 0.7+ 900228 685 1.0+ 0.0
900130 675 (0.6- 2.4+) 900220 898 0.5- 0.5+ 900302 657 0.6- 0.1+
900130 675 0.3- 0.2+ 900220 374 1.3+ 0.1- 900302 657 1.0- 1.3-
900216 402 0.3+ 1.1+ 900220 374 0.6+ 0.1+ 900304 402 0.8+ 0.8+
900216 402 0.1- 0.6+ 900220 374 0.3- 0.5+ 900304 402 0.3- 0.8+
900217 402 0.7- 0.8+ 900221 385 0.6- 1.2+ 900312 568 (0.3- 2.7+)
900217 402 0.7+ 0.2- 900221 402 0.6- 0.0 900313 046 1.1- 1.2-
900217 402 0.5+ 1.2+ 900221 385 0.1- 0.0 900313 046 0.7- 0.1+
900217 402 0.2+ 0.7+ 900221 402 0.3- 0.2- 900315 046 0.9+ 1.1-
900217 402 0.1- 0.4+ 900221 898 1.2+ 1.1- 900315 046 1.3+ 0.3-
900219 413 0.2+ 0.5- 900221 898 (1.4- 2.3-) 900316 046 1.0+ 0.3-
900219 413 0.4+ 1.5- 900221 898 0.6- 0.8- 900316 046 (2.4+ 0.7+)
900219 413 0.5+ 1.2- 900222 568 0.1+ 0.0 900317 046 0.9+ 0.2+
900220 385 1.1- 1.7- 900223 675 0.2+ 0.6- 900317 046 0.4+ 0.1+
900220 385 0.6- 0.5+ 900223 675 0.4- 1.2- 900318 046 1.1+ 0.0
900220 881 (1.1- 2.5-) 900223 657 (1.6- 4.1-) 900318 046 0.9+ 1.0-
900220 896 0.1+ 0.1+ 900223 657 0.1+ 1.9- 900319 046 1.0+ 0.3-
900220 881 1.0- 0.6+ 900224 391 (1.4- 3.7-) 900319 046 0.7+ 0.4-
900220 896 0.5+ 0.3- 900224 391 0.2- 0.6- 900321 402 1.1+ 0.8+
900220 898 0.7- 0.1- 900227 402 0.3+ 1.5+ 900321 402 0.9- 0.1+

900322 801 0.9- 0.5+ 900323 801 1.3- 0.0 900428 801 0.6- 0.4+
900322 801 1.0- 0.6+ 900323 801 1.1- 0.0 900428 801 0.8- 0.5+
900322 675 0.2- 0.3+ 900324 675 0.6+ 0.7+ 900528 801 0.2+ 0.6-
900322 675 0.8- 0.1+ 900324 675 1.8+ 1.5+ 900528 801 0.1- 0.1+

1990 DL = 1991 PU13
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 163.22949 (1950.0) P Q
n 0.28890976 Peri. 205.85858 -0.99732659 +0.06448283
a 2.2661809 Node 337.75777 -0.04057783 -0.87993752
e 0.0678417 Incl. 5.21041 -0.06077100 -0.47069302
P 3.41 H 13.4 G 0.15
Residuals in seconds of arc
900224 552 1.0+ 0.7+ 900303 552 0.6- 1.8- 910806 675 1.0- 0.4+
900224 552 0.9+ 2.3+ 900316 552 0.8- 0.3- 910806 675 0.9- 0.1-
900302 552 0.0 0.7- 900316 552 1.9+ 0.7+ 910810 675 1.0+ 0.6+
900302 552 1.3- 0.1+ 900319 552 0.4- 0.1- 910810 675 0.8+ 0.8-
900303 552 0.2- 1.8- 900319 552 0.4- 0.9+

1990 DK3 = 1990 DC = 1979 GF = 1991 PU4
Id. S. Nakano (MPC 17444), R. Nagata (ibid.), B. G. Marsden
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 150.75602 (1950.0) P Q
n 0.26437132 Peri. 19.19425 -0.99811265 +0.06031800
a 2.4043297 Node 164.25055 -0.06041935 -0.93098527
e 0.1469798 Incl. 2.43404 -0.01098390 -0.36003911
P 3.73 H 14.5 G 0.15
Residuals in seconds of arc
790331 095 0.5- 1.4- 900218 399 1.4- 1.9+ 900227 809 0.8+ 0.9+
790401 809 0.3- 0.1+ 900224 809 0.2- 0.4+ 900227 809 1.2+ 1.0+
790402 809 0.2+ 0.3- 900224 809 0.2+ 0.4+ 910803 809 1.6- 0.2+
900216 399 2.7- 0.2- 900224 809 1.0+ 0.5+ 910803 809 1.1- 0.3-
900216 399 0.3+ 1.7- 900225 809 1.3+ 0.3- 910803 809 1.4- 0.2+
900216 399 1.4- 0.6+ 900225 809 1.9+ 0.5- 910805 809 1.9+ 0.4+
900218 399 1.6- 1.1+ 900225 809 2.5+ 0.6- 910805 809 0.6+ 1.3+
900218 399 1.1- 0.6- 900227 809 0.4+ 0.8+ 910805 809 0.7+ 1.3+

1990 EO = 1991 PG12
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 96.51079 (1950.0) P Q
n 0.28458406 Peri. 20.94402 -0.10108144 +0.99050902
a 2.2890872 Node 243.35469 -0.92691830 -0.12776938
e 0.0909218 Incl. 5.98125 -0.36139315 +0.05066422
P 3.46 H 13.4 G 0.15
Residuals in seconds of arc
900224 809 0.3+ 0.3- 900302 809 1.4- 0.5+ 910807 675 0.2- 0.2-
900224 809 0.1+ 0.2- 900304 809 0.7+ 0.1- 910810 675 0.4- 0.1+
900224 809 0.4- 0.5- 900304 809 0.8+ 0.5- 910810 675 0.0 0.9+
900302 809 0.1- 0.9+ 900304 809 0.5+ 0.8-
900302 809 0.6- 1.0+ 910807 675 0.6+ 0.8-

1990 ES1 = 1991 OA1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 66.56844 (1950.0) P Q
n 0.25889626 Peri. 352.37490 +0.17518987 +0.97825944
a 2.4381038 Node 287.66473 -0.89698795 +0.11212519
e 0.0963288 Incl. 6.68864 -0.40585850 +0.17446032
P 3.81 H 14.0 G 0.15

Residuals in seconds of arc

900224 809	0.5+	0.7+	900302 809	1.1+	0.0	910716 675	0.4-	0.4-
900224 809	0.3+	0.1+	900304 809	0.3+	0.8-	910718 675	0.0	0.4+
900224 809	0.2-	0.3-	900304 809	1.0-	0.3-	910718 675	0.4+	0.0
900302 809	0.7+	0.3+	900304 809	1.6-	0.1+	910807 675	1.4+	0.2+
900302 809	0.1-	0.1+	910716 675	1.0-	0.3+	910807 675	0.6-	0.6-

1990 FD1 = 1973 GJ1 = 1986 JP = 1991 NQ2
Id. H. E. Holt (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 145.16549		(1950.0)	P	Q
n 0.22880760	Peri.	76.52510	-0.97140806	+0.02086377
a 2.6474174	Node	104.27915	-0.10064911	-0.93837804
e 0.1155973	Incl.	14.12493	+0.21502590	-0.34498022
P 4.31	H	12.0	G 0.15	

Residuals in seconds of arc

730403 095	1.7+	3.1+	900402 402	0.5-	0.0	910714 675	0.3+	0.7+
860513 054	2.2-	3.8-	900402 402	0.0	1.1+	910714 675	0.2-	1.4+
900326 402	0.1+	0.4+	900424 402	0.1-	0.7-			
900326 402	0.7+	0.2+	900424 402	0.6+	0.2-			

1990 FW1 = 1975 JL
Id. H. Kaneda (MPC 16587)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 123.20705		(1950.0)	P	Q
n 0.25911359	Peri.	164.06784	-0.66586160	+0.74517030
a 2.4367403	Node	64.16789	-0.68885754	-0.59513905
e 0.1230515	Incl.	2.33915	-0.28653727	-0.30088326
P 3.80	H	14.0	G 0.15	

Residuals in seconds of arc

710324 675	1.1-	1.3-	750507 808	0.7+	0.9+	900318 046	0.1-	1.1+
710325 675	0.4+	0.6+	750511 808	0.7-	0.9-	900318 046	0.7-	0.4-
710325 675	0.2-	0.8+	750511 808	0.8+	0.3+	900319 046	2.1+	0.9-
710326 675	0.9+	0.7-	900316 046	0.5-	1.2-	900319 046	0.5+	0.7+
710327 675	0.0	0.2+	900316 046	0.4-	0.7-	900322 095	(5.7-	0.2+)
710402 675	0.2+	0.8+	900317 046	1.0-	0.9+			
750507 808	0.9-	0.3-	900317 046	0.1-	0.2+			

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

M 155.35816		(1950.0)	P	Q
n 0.23805276	Peri.	307.84918	-0.67350595	-0.73916267
a 2.5784214	Node	184.50009	+0.69766382	-0.63328366
e 0.6933462	Incl.	3.88563	+0.24424358	-0.22932586
P 4.14	H	17.0	G 0.15	

From 42 observations 1989 Oct. 25-1990 May 25, mean residual 1".2.

1990 KG2 = 1974 HB3 = 1986 TD10 = 1991 PN11
Id. H. E. Holt (k), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M 61.91554		(1950.0)	P	Q
n 0.18889093	Peri.	115.43311	+0.57213179	+0.81960562
a 3.0083519	Node	189.63929	-0.80226216	+0.55161584
e 0.0880152	Incl.	10.38950	-0.17041315	+0.15481148
P 5.22	H	12.0	G 0.15	

Residuals in seconds of arc

740425 805	0.0	0.3-	900528 808	1.1-	0.8-	900620 808	0.3+	0.1+
861003 095	0.0	0.4-	900618 808	0.1-	0.1-	910809 675	0.0	0.3+
900528 808	1.4+	0.5+	900618 808	0.6-	0.3+	910810 675	0.0	0.1-

1990 MJ
Id. R. H. McNaught (1983 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	97.43046	(1950.0)		P	Q
n	0.22049849	Peri.	75.72676	+0.82436183	+0.30456177
a	2.7135155	Node	264.72611	-0.48173436	+0.82009893
e	0.3970500	Incl.	28.63160	+0.29725338	+0.48443769
P	4.47	H	13.0	G 0.15	

Residuals in seconds of arc

830114	413	0.8+	1.9+	900818	801	0.3-	0.1+	901019	801	1.4-	0.4-
830114	413	0.4+	0.1+	900820	801	0.2+	0.2+	901019	801	0.6-	0.6-
900628	675	(0.8-	4.6+)	900820	801	0.2-	0.0	901021	801	0.5+	0.5-
900628	675	0.8-	2.5+	900916	801	0.1+	0.1+	901021	801	0.8+	0.3-
900629	675	(0.9-	4.5+)	900916	801	0.8+	0.3+	901114	801	0.3-	0.5+
900718	675	0.5-	0.3-	900919	801	1.1+	0.5+	901114	801	0.2-	0.5+
900718	675	1.5-	0.7+	900919	801	1.0-	0.8+	901115	801	0.2-	0.2+
900721	675	0.7+	0.0	900921	801	0.1+	0.2+	901115	801	0.0	0.3+
900721	675	1.8+	0.2+	900921	801	0.0	0.3+	901207	688	0.6+	0.6+
900816	801	0.1+	1.3-	901015	801	0.1+	0.3+	901207	688	0.3+	0.8+
900816	801	0.2+	0.1+	901016	801	0.4+	0.4-	901214	801	0.5+	0.6+
900817	801	0.9+	0.4-	901016	801	0.2-	0.7-	901214	801	0.4+	0.7+
900817	801	1.8-	0.7-	901017	801	0.5-	1.3-				
900818	801	0.2+	0.2+	901017	801	0.5-	1.3-				

1990 QD2 = 1972 RT1 = 1972 TO8
Id. G. V. Williams (MPC 17213)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	145.12704	(1950.0)		P	Q
n	0.27233694	Peri.	197.61382	+0.71334042	+0.70029441
a	2.3572151	Node	117.90380	-0.63921080	+0.66598736
e	0.2103277	Incl.	1.75580	-0.28732385	+0.25699918
P	3.62	H	14.0	G 0.15	

Residuals in seconds of arc

710324	675	0.9-	2.4-	720911	095	0.0	1.3-	900914	675	0.7-	0.4-
710325	675	0.1-	1.9-	721013	095	1.9+	2.5-	900914	675	1.1-	0.2-
710325	675	0.5-	0.4+	900822	675	2.0+	0.5-	900919	675	2.1-	0.6-
710326	675	1.3-	1.1-	900822	675	1.3+	0.6-	900919	675	1.6-	0.4-
710327	675	1.1-	0.6+	900828	675	0.7+	0.4+				
710402	675	0.9+	1.4-	900828	675	0.8+	0.1-				

1990 QG2 = 1979 SZ12
Id. S. J. Bus (MPC 18296)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	12.72342	(1950.0)		P	Q
n	0.17793464	Peri.	262.83642	+0.35808815	-0.93168815
a	3.1306167	Node	165.71261	+0.92414556	+0.34434157
e	0.0976395	Incl.	14.32837	+0.13314599	+0.11569819
P	5.54	H	11.9	G 0.15	

Residuals in seconds of arc

710324	675	2.2+	1.2-	900828	675	0.1-	0.8-	900920	675	0.3-	0.6-
710326	675	0.1+	0.1-	900828	675	2.2+	1.2+	900921	809	0.2-	0.9+
710326	675	0.4+	0.3+	900914	675	0.6-	0.1-	900921	809	0.2+	0.8+
710327	675	2.7-	0.3-	900914	675	0.2+	0.8+	900921	809	0.7+	0.8+
790920	675	0.5+	1.6-	900914	675	1.1-	0.1-	900922	809	0.1+	1.4+
790921	675	0.4+	1.7-	900914	675	0.3+	0.2-	900922	809	0.4+	1.4+
900822	675	0.2-	0.2-	900919	675	0.2-	0.2-	900922	809	0.7+	1.1+
900822	675	0.1-	0.1-	900919	675	0.2+	0.5-				

1990 QB4 = 1968 UR2 = 1979 SF4
Id. H. Kaneda (MPC 17640), R. Nagata (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5	(J-P)		Green	
M 346.73879	(1950.0)		P	Q
n 0.17479196	Peri.	279.34486	+0.22992726	-0.97214625
a 3.1680300	Node	157.20693	+0.93257289	+0.20673456
e 0.0246972	Incl.	6.73648	+0.27828271	+0.11041964
P 5.64	H 12.0		G 0.15	

Residuals in seconds of arc

681023 095	1.4+	1.7-	900818 809	0.8-	1.0+	900911 809	0.4+	0.8+
710324 675	0.6+	1.6-	900822 675	0.8+	0.9-	900911 809	0.7+	0.7+
710326 675	0.7-	0.6+	900822 675	0.3-	1.6-	900912 809	1.4-	1.2+
710326 675	0.3+	0.4+	900823 675	0.7+	1.3-	900912 809	1.2-	1.2+
710327 675	0.1-	2.5-	900823 675	0.6+	1.5-	900912 809	1.1-	1.0+
710402 675	1.2-	0.7+	900826 809	0.2-	0.7+	900912 809	1.0-	0.3-
710416 675	0.2+	0.3+	900826 809	0.8+	0.9+	900913 809	0.9-	0.3-
710416 675	0.5+	0.3-	900826 809	0.2+	1.0+	900913 809	0.5-	0.3-
790924 095	1.8-	0.4+	900829 675	0.6+	2.0-	900913 675	0.4-	0.5-
900816 809	0.8+	0.4+	900829 675	1.8+	1.6-	900913 675	0.1-	0.8-
900816 809	0.9+	0.6+	900910 809	0.1-	0.8+	900913 809	0.1+	0.1-
900816 809	0.4+	0.7+	900910 809	0.3+	0.5+	900914 809	0.2+	0.3+
900818 809	0.0	0.8+	900910 809	0.5+	0.5+	900914 809	0.3+	0.1+
900818 809	1.4-	0.7+	900911 809	0.2+	0.7+			

1990 SB
Id. R. H. McNaught (1982, 1983 obs.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams
M 151.10726	(1950.0)		P	Q
n 0.26657091	Peri.	86.23008	+0.09818098	+0.99373590
a 2.3910806	Node	189.89305	-0.99092279	+0.09267180
e 0.5485038	Incl.	18.10110	-0.09182874	+0.06245722
P 3.70	H 13.5		G 0.15	

Residuals in seconds of arc

820413 413	0.3+	1.4+	900923 568	(0.5+	3.5+)	901016 675	1.2-	0.2-
831227 413	0.1-	0.3-	900924 568	0.3-	0.7+	901021 801	0.3-	0.2+
900916 675	1.6+	0.2-	900925 657	0.9+	0.5+	901021 801	0.3-	0.2+
900916 675	0.3+	0.5-	900925 657	1.5+	0.1+	901114 801	0.1-	0.4-
900918 675	0.7-	0.2-	900928 696	(1.3+	7.2+)Y	901114 801	0.5-	0.6-
900918 675	0.2-	2.1-	901010 413	0.6+	0.4+	901119 413	1.1+	0.7-
900920 657	0.1-	0.4+	901015 568	0.6-	2.0+	901207 688	0.1-	0.2-
900920 657	0.7-	0.2-	901016 808	0.8-	0.6+	901207 688	0.1-	0.3-
900920 675	0.1-	0.1+	901016 801	0.1+	0.3+	901214 801	0.1+	0.7-
900920 675	0.6-	0.3+	901016 808	0.4+	1.3-	901214 801	0.2-	0.8-
900923 657	1.0+	1.5+	901016 801	0.1-	0.4+			
900923 568	(0.3+	3.5+)	901016 675	0.9-	0.3-			

1990 SG4 = 1955 ST2
Id. R. H. McNaught (1986 obs.), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams
M 161.51440	(1950.0)		P	Q
n 0.28225688	Peri.	4.59402	+0.22691546	+0.96921104
a 2.3016522	Node	278.54334	-0.89655767	+0.16954407
e 0.3864033	Incl.	5.54759	-0.38038628	+0.17856306
P 3.49	H 13.5		G 0.15	

Residuals in seconds of arc

550917 760	1.3+	1.0-	860401 413	0.3-	1.0-	900923 675	0.4-	0.3+
550917 760	1.1-	0.5+	860401 413	0.1+	0.3-	900923 675	0.6-	0.9+
860314 413	0.8-	0.6-	900918 675	1.1+	1.8-	900925 675	0.6-	0.4+
860314 413	0.0	0.4-	900918 675	1.0+	1.2-	900925 675	0.7-	0.5+

901014 675 0.6+ 0.7- 901114 801 0.4+ 0.5+ 901213 801 0.8+ 0.2+
901014 675 0.4+ 0.6- 901114 801 0.5+ 0.4- 901214 801 0.5- 0.7-
901017 675 0.4- 0.4- 901116 801 0.7+ 1.1+
901017 675 1.5- 0.1- 901116 801 0.5+ 1.2+

1990 TQ1 = 1980 WQ4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 131.40277 (1950.0) P Q
n 0.28993410 Peri. 242.91642 +0.99054645 -0.10592564
a 2.2608401 Node 123.04489 +0.12970370 +0.93007772
e 0.1778837 Incl. 5.96861 -0.04466184 +0.35176015
P 3.40 H 15.1 G 0.15
Residuals in seconds of arc
801129 675 0.9- 0.4+ 901015 372 0.2- 0.7- 901020 372 0.4+ 0.3+
801201 675 0.9+ 0.5- 901017 372 0.8+ 0.3+ 901023 372 0.3- 0.1-
901015 372 0.6+ 0.9- 901017 372 1.3- 1.1+

1990 TE7 = 1980 WC5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 97.61099 (1950.0) P Q
n 0.19204640 Peri. 163.34172 +0.96778894 -0.23845135
a 2.9753081 Node 210.81597 +0.20923757 +0.94023498
e 0.0903416 Incl. 9.07272 +0.14001504 +0.24310314
P 5.13 H 14.2 G 0.15
Residuals in seconds of arc
801129 675 0.0 0.3- 901013 033 0.9- 0.0 901014 033 0.2+ 0.2+
801201 675 0.0 0.3+ 901013 033 0.6+ 0.2- 901018 033 0.1+ 0.0

1990 UF2 = 1980 WJ3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
M 344.53976 (1950.0) P Q
n 0.29079384 Peri. 338.09282 -0.99749600 +0.04940045
a 2.2563818 Node 204.90126 -0.03232774 -0.95495791
e 0.1353418 Incl. 6.90346 -0.06290191 -0.29260040
P 3.39 H 13.9 G 0.15
Residuals in seconds of arc
801129 675 0.1+ 0.5+ 901028 372 0.2- 0.9+ 901115 372 (7.3- 1.3-)
801201 675 0.1- 0.5- 901030 372 0.5+ 0.3- 901123 372 (3.6- 0.2+)
901027 372 (3.8- 0.4-) 901114 372 0.6+ 0.5- 901123 372 0.6- 0.3+
901027 372 0.9- 0.4- 901114 372 0.5+ 0.0

1990 VA
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 176.52809 (1950.0) P Q
n 1.00795574 Peri. 34.38465 -0.34992295 +0.92581053
a 0.9851637 Node 215.74482 -0.90501204 -0.37349491
e 0.2786550 Incl. 14.16222 -0.24188249 +0.05810690
P 0.98 H 19.5 G 0.15
From 19 observations 1990 Nov. 9-Dec. 7, mean residual 0".6.

1990 VX2
Id. R. H. McNaught (1984 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 81.47885 (1950.0) P Q
n 0.25744259 Peri. 41.69759 -0.02959666 -0.94367053
a 2.4472732 Node 52.72582 +0.77190295 -0.23104884
e 0.2937635 Incl. 24.46594 +0.63505108 +0.23685936
P 3.83 H 13.0 G 0.15

Residuals in seconds of arc

840525	413	1.0-	0.4-	901115	400	(2.2+	0.7-)	901120	801	0.7-	0.9+
840601	413	1.0+	0.4+	901117	399	(2.2+	0.6-)	901120	801	0.7-	0.8+
901111	675	0.7+	0.6-	901117	399	0.7+	1.5+	901121	801	0.6+	0.0
901111	675	0.3-	0.1-	901117	399	(1.9-	2.7+)	901121	801	0.5-	0.5+
901112	675	0.6-	0.3-	901118	675	0.7+	0.3+	901121	400	(0.6-	2.4+)
901113	675	0.2-	0.8-	901118	675	0.5-	0.2-	901121	400	(1.7-	3.1+)
901113	400	(2.8-	0.3-)	901119	399	(0.5+	2.3+)	901213	400	0.5+	0.5-
901113	400	0.3-	1.6-	901119	400	(0.6+	2.5+)	901213	400	1.7+	0.3-
901113	400	2.0-	0.1-	901119	399	1.2+	0.7-	910213	801	0.8-	0.6+
901113	374	0.1+	0.3-	901119	400	0.2+	0.3+	910213	801	0.6-	0.5-
901113	374	0.4-	0.4+	901119	413	0.8+	0.7+	910217	801	0.2+	0.2+
901115	400	1.0-	0.4-	901119	413	0.5+	0.7+	910217	801	0.3+	0.2+

1990 WA
Id. R. H. McNaught (1974, 1982 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	90.36397	(1950.0)	P	Q	
n	0.24854325	Peri.	11.98085	+0.14681240	-0.89822860
a	2.5053481	Node	70.72680	+0.86738964	-0.08441990
e	0.4677428	Incl.	26.03252	+0.47548010	+0.43134517
P	3.97	H	15.5	G 0.15	

Residuals in seconds of arc

740820	413	0.8+	0.3+	901120	413	0.8-	2.0+	901218	675	0.6+	0.4+
821205	413	0.8+	0.5+	901121	675	0.8+	2.2-	910111	675	0.8-	0.7-
821205	413	1.6-	0.4-	901121	675	0.0	0.7+	910111	675	0.2+	0.3+
901113	675	0.6+	1.2+	901128	413	0.9-	2.0+	910114	675	0.9+	1.1+
901113	675	0.4+	1.7-	901214	801	1.1-	0.1+	910114	675	0.2+	0.5+
901114	675	0.9-	1.4-	901214	801	1.0-	0.5+	910316	801	0.2+	1.4-
901114	675	1.3-	0.3-	901217	675	0.7+	0.2-	910316	801	0.2-	0.6-
901118	675	1.0+	1.8-	901217	675	1.2+	1.2-	910318	688	0.2-	1.8+
901118	675	1.2+	0.4-	901218	801	0.6-	0.2-	910318	688	0.1-	1.5+
901119	413	0.5-	0.7+	901218	801	0.4-	0.9-	910320	801	0.3-	0.2-
901119	413	0.7+	1.5+	901218	675	0.7+	0.2-	910320	801	0.6-	1.4-

1990 WW2
Id. R. H. McNaught (1984 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	93.97896	(1950.0)	P	Q	
n	0.18347450	Peri.	283.53574	+0.93496464	-0.22927368
a	3.0672717	Node	90.23349	+0.32293818	+0.86589608
e	0.4482103	Incl.	15.70564	-0.14680620	+0.44458695
P	5.37	H	12.5	G 0.15	

Residuals in seconds of arc

840605	413	0.6-	0.3+	901214	801	0.0	0.1+	910117	885	0.3+	1.3-
840605	413	0.6+	0.3-	901214	885	1.8-	0.4+	910209	801	0.5+	0.5+
901118	675	1.8+	0.5-	901214	885	0.0	1.2-	910210	801	0.3+	0.2-
901118	675	2.0+	0.0	901223	885	0.9+	0.9-	910210	801	0.4+	0.2-
901121	675	1.3+	0.4-	901223	885	0.3+	0.3-	910212	887	0.8-	1.0+
901121	675	0.7-	0.8+	910106	885	1.6-	1.1-	910212	887	0.8-	2.4+
901123	885	1.5-	0.8+	910111	675	0.6+	1.2-	910212	887	0.7-	0.9+
901123	885	0.5+	1.7+	910111	675	0.1-	0.1-	910217	801	0.7+	0.2-
901123	885	0.5+	0.5+	910113	675	0.9-	1.7-	910217	801	0.9+	0.3+
901126	885	1.8-	0.0	910113	675	0.0	1.0-	910219	889	0.5-	0.8+
901126	885	0.9-	0.3-	910114	801	0.2+	0.4+	910219	889	1.2+	0.2+
901210	885	0.1+	0.1-	910114	801	0.3+	0.5+	910318	801	0.9+	0.1-
901213	801	0.0	0.2+	910116	801	0.4+	0.1+	910318	801	0.4-	0.0
901213	801	0.1+	0.1+	910116	801	0.4+	0.1+				
901214	801	0.2+	0.6+	910117	885	1.7-	0.8-				

1990 WZ2
Id. R. H. McNaught (1975, 1976 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	96.90336	(1950.0)	P	Q
n	0.28623668	Peri. 62.22822	+0.42100065	-0.90684051
a	2.2802678	Node 3.08828	+0.64538969	+0.28400809
e	0.3365865	Incl. 21.75545	+0.63736222	+0.31141562
P	3.44	H 13.0	G 0.15	

Residuals in seconds of arc

750608	413	0.0	0.5+	901118	675	0.7+	0.8+	901217	675	0.6+	0.0
750608	413	0.6+	0.3+	901119	675	0.2-	0.6-	910216	801	0.5+	1.0-
760824	413	0.3+	0.9+	901119	675	0.9-	1.2+	910217	801	0.4-	0.7+
760824	413	0.0	1.5-	901215	675	0.5+	0.1-	910320	801	0.2-	0.1-
901118	675	(4.5-	0.2-)	901217	675	1.6-	0.9-	910320	801	0.0	0.1-

1991 BB
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	138.06033	(1950.0)	P	Q
n	0.76280647	Peri. 322.80614	-0.10260664	+0.81739744
a	1.1862962	Node 294.35519	-0.69516696	-0.46653148
e	0.2724514	Incl. 38.47974	-0.71148772	+0.33794941
P	1.29	H 16.0	G 0.15	

From 35 observations 1991 Jan. 12-Aug. 23, mean residual 1".00.

1991 CQ
Id. R. H. McNaught (1983 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	80.87642	(1950.0)	P	Q
n	0.24708134	Peri. 296.25310	-0.35789252	-0.93248379
a	2.5152206	Node 174.04636	+0.93206848	-0.35360332
e	0.4758309	Incl. 28.10067	-0.05622531	+0.07374737
P	3.99	H 16.5	G 0.15	

Residuals in seconds of arc

830311	413	1.0-	1.7-	910213	474	1.1-	1.5+	910313	801	0.5+	0.2-
830311	413	1.1+	1.9+	910213	474	(0.6-	4.2+)	910313	801	0.0	1.2-
910210	413	1.3+	0.9+	910214	413	0.8+	0.5-	910404	413	0.5-	0.1-
910210	413	1.6-	0.2-	910308	474	1.4+	1.4+	910404	413	0.2+	0.5+
910211	413	0.5+	0.1-	910308	474	0.3+	0.3+	910404	413	0.1-	0.2+
910212	413	0.8+	0.3-	910309	474	0.5-	0.2+				
910212	413	0.8-	1.1-	910309	474	0.4-	1.3-				

1991 DG
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	116.25218	(1950.0)	P	Q
n	0.57807872	Peri. 63.05695	-0.45858186	+0.88865134
a	1.4271777	Node 179.64060	-0.86841307	-0.44784733
e	0.3628525	Incl. 11.15844	-0.18857737	-0.09864867
P	1.70	H 18.5	G 0.15	

From 21 observations 1991 Feb. 20-Aug. 12, mean residual 0".9.

1991 EE
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	39.30974	(1950.0)	P	Q
n	0.29274616	Peri. 115.06753	+0.23674543	+0.97098029
a	2.2463388	Node 168.47238	-0.94126946	+0.23786695
e	0.6241559	Incl. 9.76519	-0.24075590	+0.02483115
P	3.37	H 17.5	G 0.15	

From 45 observations 1991 Mar. 13-Sept. 5, mean residual 0".5.

1991 FH
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 51.46946 (1950.0) P Q
n 0.17510755 Peri. 330.59505 -0.98629240 -0.07018868
a 3.1642161 Node 206.65923 +0.08601620 -0.99102680
e 0.1446991 Incl. 19.44056 -0.14081376 -0.11375164
P 5.63 H 13.0 G 0.15
From 7 observations 1991 Feb. 10-May 15, mean residual 0".63.

1991 GP1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 25.56799 (1950.0) P Q
n 0.21479767 Peri. 104.53179 -0.49859692 +0.84814060
a 2.7613175 Node 134.09904 -0.85984701 -0.45773961
e 0.2241618 Incl. 14.43754 -0.10983732 -0.26670578
P 4.59 H 11.5 G 0.15
From 14 observations 1991 Apr. 9-Aug. 12, mean residual 0".4.

1991 GG10 = 1977 DH = 1977 DH11
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 149.41773 (1950.0) P Q
n 0.28644630 Peri. 345.84843 -0.19163170 -0.97939970
a 2.2791552 Node 115.16759 +0.90713874 -0.20150956
e 0.1409738 Incl. 4.03382 +0.37466865 -0.01304327
P 3.44 H 14.3 G 0.15
Residuals in seconds of arc

770217	801	0.2-	0.4+	910409	033	0.5+	0.2+	910412 033 0.3+ 0.6-
770222	801	0.2+	0.4-	910411	033	0.9-	0.1+	910413 033 1.2- 0.5+
910409	033	0.4+	0.3+	910411	033	0.9+	0.4-	

1991 GP10 = 1979 OK3 = 1982 DF4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 286.25930 (1950.0) P Q
n 0.22921992 Peri. 215.62596 +0.87352946 +0.48324913
a 2.6442417 Node 115.37548 -0.43024835 +0.82267276
e 0.0499498 Incl. 3.70923 -0.22766785 +0.29946587
P 4.30 H 14.4 G 0.15
Residuals in seconds of arc

790724	675	0.7-	0.8+	820220	033	0.3+	0.3+	910409 033 0.3+ 0.4+
790724	413	0.3-	0.9-	820220	033	0.4-	0.1+	910411 033 0.3- 0.6+
790725	675	1.2+	1.0+	820221	033	1.2+	0.6-	910411 033 0.0 0.3-
790727	675	0.2-	0.9-	820221	033	0.8-	0.3+	910412 033 0.1- 0.6-
820220	033	0.3-	0.1-	910409	033	0.7-	0.9+	910413 033 0.7+ 1.0-

1991 GQ10 = 1989 WR3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 245.94561 (1950.0) P Q
n 0.21618522 Peri. 234.60195 +0.99181919 -0.11318301
a 2.7494894 Node 131.81868 +0.12671608 +0.92882395
e 0.1118881 Incl. 4.54286 -0.01541861 +0.35281111
P 4.56 H 12.5 G 0.15
Residuals in seconds of arc

891129	033	0.5+	0.5-	910409	033	0.5+	2.6+	910411 033 0.1+ 0.5-
891129	033	1.6+	1.0-	910409	033	1.0+	2.3+	910412 033 0.3- 1.7-
891202	033	2.1-	1.4+	910411	033	0.3-	0.8+	910413 033 1.0- 3.5-

1991 JW
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 78.62824 (1950.0) P Q
n 0.93197624 Peri. 301.70431 +0.98854972 +0.08918731
a 1.0380051 Node 53.45912 -0.02070619 +0.87917877
e 0.1182997 Incl. 8.71366 -0.14946807 +0.46807085
P 1.06 H 19.5 G 0.15
From 18 observations 1991 Apr. 19-July 1, mean residual 1".11.

1991 JX
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 41.22561 (1950.0) P Q
n 0.24619941 Peri. 64.52199 +0.11568024 +0.99305364
a 2.5212237 Node 212.14352 -0.92518214 +0.09984397
e 0.5986759 Incl. 2.31672 -0.36146382 +0.06225471
P 4.00 H 18.5 G 0.15
From 56 observations 1991 May 9-Aug. 11, mean residual 0".84.

1991 JY1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 350.66945 (1950.0) P Q
n 0.24122049 Peri. 116.93259 +0.81659556 +0.53149867
a 2.5557983 Node 212.46466 -0.55219686 +0.83291187
e 0.2279782 Incl. 24.79658 +0.16807829 +0.15416546
P 4.09 H 12.0 G 0.15
From 9 observations 1991 May 11-Aug. 11, mean residual 0".4.

1991 JZ1 = 1958 DK = 1970 KC
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Bardwell
M 359.79244 (1950.0) P Q
n 0.18482505 Peri. 143.98677 +0.09172113 +0.98525775
a 3.0523174 Node 130.80568 -0.95238720 +0.12914259
e 0.0777433 Incl. 10.99856 -0.29076769 -0.11220227
P 5.33 H 12.0 G 0.15
Residuals in seconds of arc
580218 760 0.7- 0.5- 910511 413 0.2- 0.7+ 910615 675 0.3+ 1.3-
580218 760 0.6+ 0.6+ 910511 413 (4.9+ 0.3+) 910812 801 0.4- 0.1+
700529 095 0.2+ 1.3+ 910613 675 0.4- 1.1- 910812 801 0.6- 0.1+
910508 413 1.4- 2.8+ 910613 675 1.1+ 1.7-
910508 413 0.3+ 0.9+ 910615 675 0.8+ 2.1-

1991 NQ = 1990 BH4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 74.36836 (1950.0) P Q
n 0.26723503 Peri. 313.84729 -0.32714211 +0.88030438
a 2.3871222 Node 294.09443 -0.72242527 -0.46735667
e 0.1973092 Incl. 22.10863 -0.60916318 +0.08149810
P 3.69 H 13.0 G 0.15
Residuals in seconds of arc
900124 033 0.2- 0.9- 910709 675 2.8- 0.2- 910815 675 0.2+ 1.0+
900125 033 0.3+ 0.9+ 910711 675 0.8+ 0.2- 910816 675 0.4+ 0.9+
910709 675 2.0+ 0.5+ 910815 675 1.8- 2.7- 910816 675 1.0+ 0.8+

1991 NG1 = 1982 YR = 1990 HV2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 2.56896 (1950.0) P Q
n 0.18901510 Peri. 39.18687 +0.96659691 +0.22380394
a 3.0070343 Node 307.42973 -0.25628593 +0.83863282
e 0.1150850 Incl. 9.04999 -0.00281598 +0.49659521
P 5.21 H 12.5 G 0.15
Residuals in seconds of arc

821222	511	0.5+	0.1+	910712	675	1.3+	0.9+	910805	675	0.2+	0.2+
821223	511	0.5-	0.3+	910712	675	0.5+	0.3+	910805	675	0.5-	1.0+
900428	413	0.5-	0.6-	910714	675	0.4-	0.3+	910808	675	0.2+	0.6-
900428	413	0.0	0.7+	910714	675	0.4-	1.0-	910808	675	0.1-	0.4-
900429	413	1.0-	0.1+	910717	675	0.7-	0.2+				
900429	413	1.4+	0.1+	910717	675	0.2-	0.6-				

1991 NH1 = 1982 VS8 = 1989 CV7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 5.81119 (1950.0) P Q
n 0.20103604 Peri. 345.45271 +0.94935270 +0.31420778
a 2.8859365 Node 356.23300 -0.28561054 +0.86065780
e 0.0765940 Incl. 1.48923 -0.13098116 +0.40067646
P 4.90 H 12.5 G 0.15
Residuals in seconds of arc

821109	095	1.3+	0.3+	910712	675	0.7-	0.3-	910805	675	0.2-	0.2+
821114	095	1.3-	0.4-	910714	675	0.4+	0.2-	910805	675	0.0	0.7+
890213	049	0.9-	1.8-	910714	675	0.3+	0.3+	910808	675	0.3-	0.2-
890213	049	0.9+	1.9+	910717	675	0.4+	1.2-	910808	675	0.4-	0.8+
910712	675	0.2+	0.7+	910717	675	0.3+	0.6-				

1991 NL1 = 1975 VG3 = 1986 SQ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 71.34930 (1950.0) P Q
n 0.17463485 Peri. 189.07323 -0.14708333 +0.98846816
a 3.1699234 Node 72.47504 -0.90507273 -0.11980687
e 0.0914749 Incl. 2.16455 -0.39901109 -0.09261211
P 5.64 H 12.0 G 0.15
Residuals in seconds of arc

751102	095	2.9-	1.3-	861001	046	1.7+	0.8+	910714	675	0.9-	1.0+
751109	381	1.5+	0.2-	861003	046	1.0+	1.5+	910717	675	0.6+	0.1-
751109	381	1.7+	0.9+	861003	046	2.9+	0.3-	910717	675	0.2+	1.2-
860930	046	2.5-	0.1+	910712	675	0.5+	0.0	910805	675	0.5+	0.2-
860930	046	2.4-	0.1+	910712	675	0.8-	0.5-	910808	675	0.5+	0.3+
861001	046	1.1-	1.5-	910714	675	0.3-	0.5+	910808	675	0.1-	0.2-

1991 NX1 = 1980 RZ5 = 1986 AJ2 = 1990 DQ5 = 1990 DL6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Ichikawa
M 122.44762 (1950.0) P Q
n 0.25373954 Peri. 231.74841 -0.96995413 +0.21194677
a 2.4710307 Node 320.08128 -0.12025959 -0.84448523
e 0.1113993 Incl. 10.72768 -0.21148668 -0.49185695
P 3.88 H 12.5 G 0.15
Residuals in seconds of arc

800913	675	0.3-	0.3+	900220	046	0.7+	1.1-	910717	675	0.5-	0.2+
800914	675	0.2-	0.3+	900223	033	0.6-	1.7+	910717	675	0.5+	0.0
860112	688	0.8+	0.1+	900223	033	1.2-	1.4+	910718	675	(0.3-	5.4-)
860112	688	0.8-	0.4-	910714	675	0.7+	0.8+	910718	675	1.0-	0.7-
900220	046	1.5+	0.6-	910714	675	0.2+	0.3+				

1991 NA2 = 1977 DU4 = 1990 DJ7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 87.47740 (1950.0) P Q
n 0.22907024 Peri. 113.03105 -0.47541968 +0.87107689
a 2.6453934 Node 127.99899 -0.85353007 -0.42272809
e 0.1586065 Incl. 9.00142 -0.21321947 -0.25005203
P 4.30 H 13.5 G 0.15
Residuals in seconds of arc

770218 381	0.4-	0.5-	900220 372	0.5+	1.6+	910717 675	0.0	0.2-
770218 381	0.1-	0.8-	910714 675	0.6-	0.5+	910805 675	0.1+	0.4-
770219 381	0.1-	0.9-	910714 675	1.1+	0.2+	910805 675	0.5-	0.2+
900220 372	(3.2+	4.5+)	910717 675	0.0	0.9-			

1991 OA
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 43.09376 (1950.0) P Q
n 0.24809349 Peri. 317.25017 -0.11632711 +0.99016016
a 2.5083750 Node 305.92300 -0.88329967 -0.13894775
e 0.5868682 Incl. 5.51214 -0.45414721 +0.01662464
P 3.97 H 18.0 G 0.15
From 24 observations 1991 Mar. 18-Aug. 21, mean residual 0".81.

1991 PE = 1986 TE1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 23.87026 (1950.0) P Q
n 0.18274858 Peri. 195.68842 +0.72894042 +0.68334387
a 3.0753950 Node 121.13154 -0.62278100 +0.68685610
e 0.2659994 Incl. 2.75033 -0.28423527 +0.24752747
P 5.39 H 12.5 G 0.15
Residuals in seconds of arc

861003 095	0.2-	1.3-	910805 675	0.4+	1.3+	910816 809	0.1-	1.5-
861004 688	0.6-	1.1+	910808 675	0.0	0.5+	910816 809	0.1-	1.2-
861004 688	0.9-	0.9+	910808 675	0.2-	0.9+	910816 809	1.3+	0.8-
861008 095	1.6+	0.5-	910814 809	0.4-	0.2-			
910805 675	0.1+	0.8+	910814 809	1.0-	0.1+			

1991 PT1 = 1987 HB2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 107.49441 (1950.0) P Q
n 0.28071135 Peri. 38.04763 -0.65962978 +0.75151276
a 2.3100927 Node 190.69556 -0.70304793 -0.62205349
e 0.1447364 Incl. 3.34301 -0.26572947 -0.21972263
P 3.51 H 14.5 G 0.15
Residuals in seconds of arc

870428 046	0.5+	1.3-	910805 675	0.1+	0.7-	910810 809	0.2-	0.6+
870428 046	1.9-	0.6-	910808 675	0.1-	0.5-	910814 809	1.1+	0.8+
870429 046	1.1+	2.2+	910808 675	0.6+	0.8-	910814 809	0.2+	0.7+
870429 046	0.4+	0.3-	910810 809	1.6-	0.0	910814 809	1.2+	0.9+
910805 675	0.6+	1.0-	910810 809	1.8-	0.0			

1991 PE5 = 1980 GB1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 209.77561 (1950.0) P Q
n 0.20240997 Peri. 247.09883 -0.65906478 -0.75184061
a 2.8728621 Node 244.14416 +0.69758279 -0.60155280
e 0.0195424 Incl. 1.22368 +0.28109050 -0.26994431
P 4.87 H 13.0 G 0.15

Residuals in seconds of arc

800414	805	0.4+	0.7+	910803	809	0.2+	0.3+	910805	675	0.3-	0.1+
800415	805	1.3-	0.9-	910805	809	0.8+	0.1+	910807	675	0.3+	0.4-
800416	805	1.0+	0.2+	910805	809	0.1+	0.2+	910807	675	0.3-	0.5-
910803	809	0.6+	0.1+	910805	675	1.1-	0.6-				
910803	809	0.0	0.4+	910805	809	0.3-	0.4+				

1991 RB

Epoch 1991 Sept. 1.0 ET = JDE 2448500.5 Marsden

M	333.16995	(1950.0)		P	Q
n	0.40816398	Peri.	65.75779	+0.44801297	-0.89385552
a	1.7998913	Node	357.41864	+0.61188794	+0.32085088
e	0.5919212	Incl.	22.88231	+0.65182630	+0.31317251
P	2.41	H	18.5	G 0.15	

From 5 observations 1991 Sept. 4-7.

1991 RC

Epoch 1991 Sept. 1.0 ET = JDE 2448500.5 Marsden

M	73.91631	(1950.0)		P	Q
n	0.74873585	Peri.	26.01519	-0.97928741	+0.19975806
a	1.2011123	Node	165.39328	-0.20098809	-0.93929891
e	0.6762986	Incl.	7.53263	-0.02449401	-0.27895211
P	1.32	H	18.0	G 0.15	

From 4 observations 1991 Sept. 3-5.

2197 P-L = 1980 WY3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	63.63965	(1950.0)		P	Q
n	0.25278173	Peri.	90.40642	+0.23654113	+0.97147433
a	2.4772638	Node	193.31273	-0.91806878	+0.21777205
e	0.1770540	Incl.	4.21116	-0.31811636	+0.09387732
P	3.90	H	14.0	G 0.15	

Residuals in seconds of arc

600924	675	0.8+	1.3-	601017	675	0.4-	0.0	801201	675	0.0	0.3-
600924	675	0.4-	0.2-	601022	675	0.7-	0.0	910808	675	0.4+	0.2-
600926	675	0.6+	0.9-	601025	675	0.0	0.4+	910808	675	0.5-	0.2+
600928	675	0.5+	1.5+	601026	675	0.3-	0.3+				
600929	675	0.0	0.3+	801129	675	0.1+	0.1+				

4026 P-L = 1981 RL7

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	224.56022	(1950.0)		P	Q
n	0.23178629	Peri.	248.70534	-0.37735752	+0.92606063
a	2.6246872	Node	359.10036	-0.74145487	-0.30446183
e	0.1249471	Incl.	13.27949	-0.55483869	-0.22296793
P	4.25	H	13.5	G 0.15	

Residuals in seconds of arc

600924	675	0.5+	0.1-	601017	675	0.1-	1.1+	810903	675	0.7+	0.3+
600925	675	0.4-	0.1-	601022	675	0.4+	0.3-	810904	675	0.7-	0.3-
600926	675	0.0	0.2-	601024	675	0.2-	0.3+				
600928	675	0.4+	0.2+	601026	675	0.6-	1.0-				

4606 P-L = 1991 PA14

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	79.80979	(1950.0)		P	Q
n	0.28364134	Peri.	214.95184	-0.06534905	+0.99746968
a	2.2941564	Node	51.31778	-0.90710728	-0.04769200
e	0.0807402	Incl.	2.05521	-0.41579548	-0.05272287
P	3.47	H	14.7	G 0.15	

Residuals in seconds of arc

600924	675	0.3+	0.6+	600928	675	1.4-	0.5-	910806	675	0.6-	0.4+
600926	675	0.5+	0.0	601017	675	0.1-	0.4-	910806	675	0.4+	0.5-
600927	675	1.2-	0.5+	601022	675	0.0	0.3-	910810	675	0.2+	0.1-
600927	675	0.8+	0.2+	601025	675	0.6+	0.4-				
600928	675	0.5+	0.1+	601026	675	0.0	0.2+				

7581 P-L = 1976 JM9 = 1987 UU6 = 1990 SA17

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	129.23397	(1950.0)	P	Q	
n	0.29404956	Peri.	306.10109	+0.94283007	+0.32873261
a	2.2396957	Node	34.80138	-0.26646471	+0.84236875
e	0.1063625	Incl.	5.51287	-0.20016997	+0.42702431
P	3.35	H	14.5	G 0.15	

Residuals in seconds of arc

601017	675	0.7-	0.1-	760502	809	0.0	0.0	900916	675	(2.5-	1.6+)
601022	675	0.0	0.6+	871027	095	0.6+	1.5-	900916	675	0.0	1.6+
601025	675	0.4-	0.6+	900915	675	0.4+	1.7-				
601026	675	0.0	1.3+	900915	675	0.0	1.0-				

9540 P-L = 1989 TV1

Id. S. Nakano (MPC 15571)

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

M	215.57264	(1950.0)	P	Q	
n	0.23926347	Peri.	330.99048	+0.97051545	+0.24081116
a	2.5697211	Node	15.08599	-0.21264507	+0.87584691
e	0.1269730	Incl.	2.30684	-0.11349818	+0.41821307
P	4.12	H	13.5	G 0.15	

Residuals in seconds of arc

600924	675	0.3-	0.3-	710325	675	0.3-	1.3-	891008	403	1.0-	1.2-
601017	675	0.5+	0.6+	710326	675	0.7-	0.3-	891009	400	0.4-	0.0
601022	675	0.2-	0.7-	710326	675	0.0	1.2-	891009	400	0.9+	2.0+
601024	675	1.4+	1.5-	710327	675	1.6+	1.1-	891009	400	0.1+	0.2+
601026	675	1.1+	1.0-	710402	675	2.9-	1.8+				
710324	675	0.5+	1.3-	891008	403	0.0	1.5-				

1269 T-2 = 1981 EP24

Id. S. Nakano (MPC 15079)

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

M	138.81842	(1950.0)	P	Q	
n	0.19557430	Peri.	149.88374	+0.08460169	-0.99630107
a	2.9394251	Node	295.25952	+0.91079173	+0.08345172
e	0.0080838	Incl.	0.95400	+0.40410515	+0.02049370
P	5.04	H	14.0	G 0.15	

Residuals in seconds of arc

710324	675	(2.7-	1.6-)	730925	675	0.6+	0.3-	810306	413	1.0-	0.4+
710325	675	0.5-	0.5-	730925	675	1.4-	0.2+	810306	413	0.4-	0.1+
710326	675	0.4+	1.3-	730929	675	0.3+	1.3+	810311	413	0.9-	0.5+
710326	675	0.3+	1.3-	730929	675	0.8+	0.2-	810311	413	0.6-	0.0
710327	675	0.9-	0.2+	730930	675	0.4-	1.1+	810315	413	1.2-	1.7+
710402	675	(4.5+	3.1-)	730930	675	0.1+	0.8+	810315	413	2.0+	0.3-
710402	675	1.7-	0.4+	731004	675	1.3+	1.0-	810405	413	0.4+	0.6+
710416	675	0.2-	1.8-	731004	675	0.5+	0.7+	810405	413	2.3+	1.0-
710416	675	0.9+	1.5+	731005	675	1.1+	1.3-	810406	413	1.4+	0.3+
730919	675	1.3+	0.4+	731005	675	0.3-	1.8-	810406	413	1.0+	0.3+
730919	675	1.1+	0.8-	810209	413	2.3+	1.8-	810410	413	0.8-	1.3+
730920	675	1.9-	0.7+	810213	413	(3.0+	0.1-)	810501	413	1.4-	0.1+
730924	675	1.8-	0.5+	810302	413	1.3-	0.2+	810502	413	(5.1-	0.5+)
730924	675	0.6-	0.0	810302	413	1.1+	1.3-	810503	413	2.4-	0.1+

1281 T-2 = 1990 UA4
Id. H. Kaneda (MPC 18132)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5		(J-P)		Green
M 56.86880		(1950.0)	P	Q
n 0.23582287	Peri.	261.24933	-0.08308402	-0.99514633
a 2.5946551	Node	193.85076	+0.97880439	-0.07155116
e 0.1686901	Incl.	12.72546	+0.18718709	-0.06755896
P 4.18	H	14.3	G 0.15	

Residuals in seconds of arc

710324	675	1.3+	0.8+	730930	675	0.4-	1.3+	901016	809	2.1-	0.5-
710325	675	1.6+	0.0	730930	675	0.4-	1.7+	901020	809	1.6+	0.5-
710326	675	1.1-	1.0-	731004	675	0.2+	1.5-	901020	809	1.0+	0.2+
710326	675	0.2-	0.7-	731004	675	0.2-	1.8-	901020	809	0.2+	0.4-
710327	675	0.2+	0.7-	731005	675	0.6+	1.5-	901024	809	1.1+	1.0+
710402	675	2.4-	1.9-	731005	675	0.8+	1.9-	901024	809	0.0	0.3-
730929	675	0.4+	0.2-	901016	809	0.1-	0.5+	901024	809	0.5-	0.0
730929	675	0.4-	0.4+	901016	809	1.1-	0.1-				

1298 T-2 = 1980 WK3

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell
M 55.83289		(1950.0)	P	Q
n 0.29749147	Peri.	321.18948	-0.67137414	-0.74097037
a 2.2223871	Node	170.94983	+0.70126440	-0.64161329
e 0.0714957	Incl.	5.40669	+0.23976031	-0.19823044
P 3.31	H	15.1	G 0.15	

Residuals in seconds of arc

730919	675	0.6+	0.2+	730925	675	0.3-	1.1-	731004	675	0.5+	0.5+
730919	675	0.1+	0.7+	730929	675	0.7-	0.2+	731004	675	0.5-	0.3+
730920	675	0.3-	0.7-	730929	675	0.9+	2.2+	731004	675	0.0	0.5-
730920	675	0.5-	0.3-	730929	675	0.9-	0.3+	731005	675	0.0	0.6-
730924	675	0.1-	1.6-	730929	675	0.8+	1.5+	731005	675	0.5+	0.5-
730924	675	1.2-	1.0-	730930	675	0.1+	0.2+	731005	675	0.6+	0.3-
730924	675	0.6+	0.9-	730930	675	1.4+	0.8+	731005	675	1.3+	0.3+
730925	675	2.5-	2.1-	730930	675	0.1+	0.1-	801129	675	0.7-	0.4-
730925	675	0.1+	0.7+	730930	675	1.5+	0.1+	801201	675	0.7+	0.3+
730925	675	0.6-	0.3+	731004	675	1.4-	1.4+				

1607 T-2 = 1982 BS6 = 1991 PG10
Id. E. Bowell (k), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams
M 351.76128		(1950.0)	P	Q
n 0.27240139	Peri.	41.99830	+0.89525002	-0.44417295
a 2.3568386	Node	344.26328	+0.36641124	+0.77884036
e 0.1256658	Incl.	7.45339	+0.25351568	+0.44285222
P 3.62	H	15.0	G 0.15	

Residuals in seconds of arc

730919	675	1.0-	0.6+	730925	675	0.6-	1.3-	910807	675	0.2-	1.3-
730919	675	0.6+	0.1+	730925	675	0.3-	0.0	910808	675	0.1-	0.2+
730920	675	1.1-	0.3-	820126	381	1.0-	0.1-	910808	675	0.2+	0.6+
730924	675	1.0+	0.7+	820126	381	1.0+	0.1+				
730924	675	1.4+	0.3+	910807	675	0.1+	0.4+				

2224 T-2 = 1978 RC2
Id. D. W. E. Green (MPC 14965)

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

M	216.30461	(1950.0)	P	Q
n	0.19507798	Peri. 323.31805	+0.99635446	-0.08071857
a	2.9444086	Node 41.33843	+0.08477402	+0.90058784
e	0.0819487	Incl. 2.39572	+0.00954748	+0.42711364
P	5.05	H 14.0	G 0.15	

Residuals in seconds of arc

710326	675	0.9-	0.2-	730925	675	0.3+	2.0-	731004	675	0.4+	0.4-
710326	675	1.0-	0.5-	730925	675	0.9-	2.0+	731004	675	(1.1-	3.0+)
710327	675	0.6+	0.1-	730925	675	(1.6+	2.9-)	731004	675	0.1+	1.0+
710402	675	2.0+	0.7+	730925	675	0.9-	1.9+	731004	675	0.8-	2.0+
710416	675	0.5-	0.4+	730929	675	0.6+	1.4-	731005	675	1.9+	0.8-
730919	675	0.4-	0.0	730929	675	1.5+	1.0-	731005	675	1.8-	2.1+
730919	675	1.6-	1.0+	730929	675	0.6-	0.6-	731005	675	0.3+	1.1-
730920	675	0.1+	0.9-	730929	675	2.1+	2.2-	731005	675	2.1-	1.7+
730924	675	0.4-	0.0	730930	675	0.5+	1.9-	780907	095	0.5+	0.4+
730924	675	0.1+	0.4-	730930	675	1.9+	2.0+	780912	095	0.3-	0.7-
730924	675	0.9-	0.5+	730930	675	0.6+	1.7-				
730924	675	0.3-	0.8+	730930	675	(2.3+	3.2+)				

2232 T-2 = 1991 PU1

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

M	4.41023	(1950.0)	P	Q
n	0.26969571	Peri. 178.36979	+0.99174537	+0.12804305
a	2.3725801	Node 174.26036	-0.11839169	+0.93475634
e	0.0951523	Incl. 3.89324	-0.04923960	+0.33141448
P	3.65	H 15.0	G 0.15	

Residuals in seconds of arc

730919	675	1.8-	1.0-	730930	675	2.2+	0.7-	731005	675	2.5-	1.2+
730919	675	0.7-	0.4-	730930	675	1.3+	1.2+	731005	675	0.7+	1.2-
730920	675	0.6-	2.7-	730930	675	0.5+	0.8-	731005	675	2.4-	1.0+
730924	675	0.4-	0.4+	730930	675	2.5+	3.8+	910810	809	0.2-	0.2-
730924	675	0.8-	0.6+	731004	675	0.0	0.9-	910810	809	1.2-	1.1+
730925	675	0.4-	2.8-	731004	675	0.3+	3.6+	910810	809	0.6-	1.2+
730925	675	1.1+	1.7-	731004	675	0.1+	0.3-	910814	809	0.5+	0.8-
730929	675	0.0	1.0-	731004	675	0.8-	3.5+	910814	809	0.5+	0.5-
730929	675	0.5+	0.6-	731005	675	1.2+	1.8-	910814	809	0.9+	0.2-

2281 T-2 = 1991 PM10

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

M	48.37177	(1950.0)	P	Q
n	0.21357218	Peri. 309.94748	+0.44664140	+0.89467303
a	2.7718760	Node 346.57335	-0.80932481	+0.39996466
e	0.0345378	Incl. 2.08877	-0.38145093	+0.19896843
P	4.61	H 13.5	G 0.15	

Residuals in seconds of arc

730920	675	1.5+	0.7+	730929	675	0.8+	1.8+	731005	675	0.5-	0.4+
730924	675	2.3-	1.3+	730930	675	0.2+	0.1+	910814	809	0.3+	2.1+
730924	675	2.5-	1.0+	730930	675	1.6+	0.2-	910814	809	0.2-	1.6+
730925	675	1.1+	3.4-	731004	675	0.1-	0.4-	910816	809	0.3-	2.0-
730925	675	1.3+	1.6-	731004	675	0.4-	0.1-	910816	809	0.4-	0.8-
730929	675	0.2+	0.9+	731005	675	0.9-	0.3-	910816	809	0.5+	0.9-

3201 T-2 = 1987 UZ7 = 1991 PE4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	20.29465	(1950.0)		P	Q
n	0.21472213	Peri.	191.89304	+0.78538410	+0.61647588
a	2.7619705	Node	129.90215	-0.56175483	+0.74778422
e	0.0994971	Incl.	4.18174	-0.26000640	+0.24652838
P	4.59	H	13.5	G 0.15	

Residuals in seconds of arc

730919	675	0.4+	0.3-	730930	675	1.6-	0.6-	910803	809	0.8-	1.2+
730919	675	1.1+	0.3+	730930	675	0.0	0.1-	910805	809	0.9-	1.7-
730920	675	0.2-	0.2+	731004	675	1.4+	1.6+	910805	809	0.8-	1.5-
730924	675	1.3-	0.1+	731004	675	0.6+	0.1-	910805	675	0.4+	0.8+
730924	675	1.5-	0.7-	731005	675	0.1-	0.9+	910805	809	1.6-	0.8-
730925	675	0.7-	0.6-	731005	675	1.1+	0.9+	910805	675	1.2+	1.1+
730925	675	0.9-	0.7-	871023	095	0.1+	0.3-	910807	675	1.7+	0.2-
730929	675	0.9+	0.2+	910803	809	0.2+	0.8+	910807	675	0.6+	0.1-
730929	675	0.7+	0.6-	910803	809	0.0	0.5+				

5490 T-2 = 1991 LS2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	355.22799	(1950.0)		P	Q
n	0.26425055	Peri.	75.95798	+0.74662902	+0.65644503
a	2.4050574	Node	242.89182	-0.64747319	+0.67987170
e	0.1252559	Incl.	6.95705	-0.15272060	+0.32688591
P	3.73	H	15.0	G 0.15	

Residuals in seconds of arc

730930	675	0.5-	0.2-	731005	675	0.2+	0.2+	910606	809	0.3+	0.5+
730930	675	0.4+	0.3-	731005	675	0.5+	0.6-	910608	809	0.3+	0.4+
731004	675	0.3+	0.6+	910606	809	0.3+	0.4-	910608	809	0.3-	0.3-
731004	675	0.8-	0.3+	910606	809	0.4-	0.7-	910608	809	0.3-	0.4+

1039 T-3 = 1981 RV1
Id. E. Bowell, G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	153.72930	(1950.0)		P	Q
n	0.22745314	Peri.	322.15647	+0.61849249	+0.78389820
a	2.6579171	Node	345.77634	-0.65587162	+0.47678887
e	0.1302276	Incl.	12.81617	-0.43278108	+0.39771345
P	4.33	H	14.5	G 0.15	

Residuals in seconds of arc

771007	675	0.4-	1.6-	771017	675	0.6+	0.4+	810906	809	(5.5+	20.8-)
771011	675	0.4+	1.0+	771017	675	0.4+	0.4+	810906	809	(5.6+	20.4-)
771011	675	0.5-	0.1-	771022	675	(1.4-	2.8-)	810907	809	0.3+	0.1+
771012	675	0.3+	1.0+	771022	675	0.1-	0.2-	810907	809	0.1-	0.0
771012	675	0.4+	1.6+	810901	675	0.6-	0.2+	810907	809	0.2-	0.0
771016	675	0.3-	1.6-	810902	675	0.5+	0.4-				
771016	675	0.9-	0.9-	810906	809	(5.0+	21.3-)				

2192 T-3 = 1991 PS4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	355.77665	(1950.0)		P	Q
n	0.27712080	Peri.	104.48279	+0.97038166	-0.24071848
a	2.3300085	Node	269.44922	+0.21305407	+0.89247232
e	0.2291710	Incl.	1.16600	+0.11387448	+0.38150724
P	3.56	H	16.0	G 0.15	

Residuals in seconds of arc

771007	675	0.4+	1.3+	771011	675	0.7-	0.3-	771012	675	0.8+	0.4-
771011	675	0.4-	1.2+	771011	675	0.3-	0.1+	771012	675	0.2-	0.4+
771011	675	0.6-	0.5+	771012	675	1.0-	1.4+	771012	675	0.3+	0.9+

771016 675 0.6- 1.7- 771021 675 0.4+ 0.6- 910803 809 0.6+ 0.2-
771016 675 0.2+ 1.8- 771021 675 0.6+ 2.3- 910805 809 0.4- 0.1+
771017 675 0.9+ 0.5+ 910803 809 0.4+ 1.5- 910805 809 0.9- 0.8+
771017 675 0.2+ 0.8+ 910803 809 0.8+ 0.2- 910805 809 0.4- 0.6+

4179 T-3 = 1989 UB6
Id. T. Kobayashi (MPC 15909)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Green

M	1.13407	(1950.0)	P	Q
n	0.08355942	Peri. 17.90547	-0.07126999	-0.99366340
a	5.1817125	Node 76.25027	+0.90381054	-0.10119332
e	0.0150904	Incl. 5.13345	+0.42195628	+0.04891788
P	11.80	H 11.8	G 0.15	

Residuals in seconds of arc
710325 675 0.1+ 0.4- 771012 675 0.0 1.0- 771022 675 (3.7+ 0.0)
710325 675 0.2- 0.2- 771016 675 0.1- 2.4+ 891004 807 1.2- 0.4+
710326 675 0.1+ 0.3- 771016 675 0.6- 1.4+ 891030 807 0.3+ 0.8+
710327 675 0.4- 0.1+ 771017 675 0.8+ 1.6- 891101 807 0.7+ 0.5+
771007 675 (0.7+ 3.6-) 771017 675 0.5- 1.3- 891129 688 0.0 0.4+
771011 675 0.8+ 0.1- 771021 675 0.9+ 0.8- 891129 688 0.1+ 0.3+
771011 675 1.1+ 1.1+ 771021 675 0.1- 0.2-
771012 675 0.3- 1.9- 771022 675 0.9- 0.4-

4181 T-3 = 1991 PN14
Id. E. Bowell
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	22.49764	(1950.0)	P	Q
n	0.27792120	Peri. 236.11027	+0.92807573	+0.36939808
a	2.3255282	Node 102.17216	-0.32374575	+0.86288589
e	0.2348878	Incl. 2.76307	-0.18402208	+0.34492463
P	3.55	H 16.0	G 0.15	

Residuals in seconds of arc
771007 675 0.5- 0.1+ 771017 675 0.2+ 0.5- 910806 675 0.8- 1.3-
771011 675 0.2+ 0.1- 771021 675 0.3+ 0.0 910806 675 0.3- 0.4+
771011 675 0.6+ 0.4+ 771021 675 0.8+ 0.4- 910810 675 0.7+ 0.0
771012 675 0.1+ 0.7- 771022 675 2.0- 0.0 910810 675 0.3+ 0.7-
771012 675 0.7- 0.4- 771022 675 1.1+ 0.8- 910814 809 0.2+ 0.1-
771016 675 0.1+ 2.2+ 910806 809 0.6+ 0.8+ 910814 809 0.0 0.3+
771016 675 0.5+ 1.7+ 910806 809 0.1+ 0.4- 910814 809 0.5- 0.9+
771017 675 0.7- 1.5- 910806 809 0.2- 0.1+

5016 T-3 = 1925 GC = 1981 RN6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	219.52228	(1950.0)	P	Q
n	0.21582520	Peri. 55.52191	-0.95960181	+0.25793811
a	2.7525462	Node 139.09982	-0.27941213	-0.92056168
e	0.1348974	Incl. 9.88438	+0.03306409	-0.29331575
P	4.57	H 13.5	G 0.15	

Residuals in seconds of arc
250401 024 0.0 0.0 771016 675 0.4+ 0.7- 771021 675 0.1+ 0.0
771011 675 0.3- 0.3+ 771016 675 0.9- 1.1+ 771022 675 1.5- 0.3+
771011 675 0.8+ 1.5+ 771017 675 0.2- 1.9- 771022 675 2.0+ 0.5-
771012 675 0.5- 0.3+ 771017 675 0.7- 0.3+ 810901 675 0.3+ 0.1-
771012 675 0.1- 0.7- 771021 675 0.9+ 0.1+ 810902 675 0.3- 0.0

5192 T-3 = 1988 XN4 = 1991 LL1

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Kaneda	
M 208.70609		(1950.0)		P	Q
n 0.18883303	Peri.	6.68399	+0.26010325	-0.94832983	
a 3.0089669	Node	68.36364	+0.87656083	+0.15298338	
e 0.0553120	Incl.	11.27266	+0.40495358	+0.27796873	
P 5.22	H	12.6	G	0.15	

Residuals in seconds of arc

771016	675	0.8+	1.7-	771022	675	0.6+	0.1-	910606	809	0.2+	0.2-
771016	675	0.3+	2.4-	881211	399	1.0+	0.9+	910606	809	0.2+	0.1+
771017	675	0.4-	1.5-	881211	399	0.0	0.4-	910606	809	0.7-	0.4+
771017	675	0.6+	1.8-	881211	399	0.3+	0.2+	910608	809	0.4+	0.4-
771021	675	0.3-	2.2+	881211	399	1.5-	0.3-	910608	809	0.2+	0.1+
771021	675	0.2-	2.6+	881215	399	0.4-	0.3-	910608	809	0.5-	0.3-
771022	675	1.6-	2.7+	881215	399	0.7+	0.4-				

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EPHEMERIDES.

1991 RB a,e,i = 1.80, 0.59, 23 Elements MPC 18830

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991	09 21	16 54.22	-46 59.3	0.113	0.994	81.6	91.9	17.0
1991	09 26	15 47.08	-24 19.6					
1991	10 01	15 04.59	-03 00.9	0.127	0.908	39.9	134.9	20.0
1991	10 06	14 35.65	+11 15.7					
1991	10 11	14 14.49	+19 41.0	0.205	0.832	31.8	140.7	21.6

Comet McNaught-Russell (1991v) Elements MPC 18773

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991	09 21	19 15.81	-54 42.5	3.528	3.885	103.4	14.6	16.6
1991	10 01	19 09.57	-55 13.4					
1991	10 11	19 06.63	-55 36.8	3.742	3.794	85.4	15.2	16.7
1991	10 21	19 06.88	-55 56.7					
1991	10 31	19 10.10	-56 15.7	3.940	3.709	69.4	14.5	16.7
1991	11 10	19 16.06	-56 35.7					
1991	11 20	19 24.54	-56 57.8	4.091	3.631	56.0	13.0	16.7
1991	11 30	19 35.35	-57 22.7					
1991	12 10	19 48.35	-57 50.7	4.175	3.561	45.9	11.5	16.6
1991	12 20	20 03.47	-58 21.8					
1991	12 30	20 20.64	-58 55.9	4.186	3.498	40.6	10.5	16.5

Comet McNaught-Russell (1991w) Elements MPC 18773

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991	09 21	21 46.79	-04 16.8	6.412	7.294	149.4	4.0	17.7
1991	10 01	21 42.64	-05 35.5					
1991	10 11	21 39.28	-06 49.2	6.667	7.323	127.9	6.2	17.8
1991	10 21	21 36.84	-07 56.8					
1991	10 31	21 35.34	-08 57.6	7.009	7.355	106.6	7.4	17.9
1991	11 10	21 34.79	-09 51.2					
1991	11 20	21 35.16	-10 37.6	7.390	7.388	86.0	7.7	18.0
1991	11 30	21 36.39	-11 17.2					
1991	12 10	21 38.40	-11 50.6	7.767	7.424	66.2	7.0	18.2
1991	12 20	21 41.10	-12 18.2					
1991	12 30	21 44.39	-12 40.9	8.099	7.461	46.9	5.5	18.3

1991 RC a,e,i = 1.20, 0.68, 8 Elements MPC 18830

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 09 21	21 47.76	-12 49.7	0.689	1.629	147.9	19.1	19.2
1991 10 01	21 39.37	-14 25.4					
1991 10 11	21 37.11	-15 13.6	0.974	1.749	125.0	27.9	20.4
1991 10 21	21 39.39	-15 28.6					
1991 10 31	21 44.96	-15 19.7	1.294	1.845	106.8	31.0	21.2

1991 EE a,e,i = 2.25, 0.62, 10 Elements MPC 18825

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 09 21	22 43.05	-16 46.8	0.144	1.139	157.6	19.7	14.6
1991 10 01	23 22.40	-17 11.5					
1991 10 11	23 40.66	-16 30.3	0.356	1.318	149.6	22.6	16.9
1991 10 21	23 52.79	-15 21.1					
1991 10 31	00 03.01	-13 55.9	0.614	1.501	136.9	26.9	18.5
1991 11 10	00 12.86	-12 20.1					
1991 11 20	00 23.03	-10 37.4	0.918	1.680	123.6	29.3	19.7
1991 11 30	00 33.70	-08 50.9					
1991 12 10	00 44.93	-07 02.3	1.262	1.851	110.3	29.9	20.6

(4953) 1990 MU a,e,i = 1.62, 0.66, 24 Elements MPC 18797

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 09 21	02 15.81	-29 48.0	1.270	2.103	134.9	19.8	17.4
1991 10 01	02 02.60	-32 39.2					
1991 10 11	01 44.00	-35 03.4	1.120	1.973	137.2	20.1	17.0
1991 10 21	01 21.32	-36 34.0					
1991 10 31	00 57.22	-36 52.2	1.056	1.827	126.1	26.1	16.9
1991 11 10	00 34.95	-35 53.0					
1991 11 20	00 17.15	-33 45.9	1.058	1.663	108.6	34.3	16.9
1991 11 30	00 04.96	-30 47.5					
1991 12 10	23 58.37	-27 12.8	1.086	1.480	91.1	41.7	17.0
1991 12 20	23 56.73	-23 12.1					
1991 12 30	23 59.10	-18 50.6	1.096	1.277	75.6	48.2	16.8
1992 01 09	00 04.64	-14 08.6					
1992 01 19	00 12.50	-09 03.6	1.057	1.054	62.1	55.6	16.6
1992 01 29	00 21.71	-03 30.7					
1992 02 08	00 30.92	+02 37.1	0.943	0.820	50.3	67.6	16.1
1992 02 18	00 37.54	+09 24.1					
1992 02 28	00 36.02	+16 37.9	0.743	0.616	38.4	93.1	15.9

1990 VA a,e,i = 0.99, 0.28, 14 Elements MPC 18823

Date ET	R. A. (1950)	Decl.	Delta	r	Variation		V
1991 09 21	05 32.18	+38 01.4	0.363	1.083	-6.26	+64.9	19.9
1991 09 26	05 33.22	+35 55.7					
1991 10 01	05 32.83	+33 38.1	0.336	1.122	-6.88	+57.8	19.5
1991 10 06	05 30.69	+31 05.8					
1991 10 11	05 26.50	+28 15.4	0.305	1.156	-7.62	+46.9	19.2
1991 10 16	05 20.02	+25 03.8					
1991 10 21	05 11.11	+21 28.5	0.277	1.186	-8.63	+29.9	18.7
1991 10 26	04 59.75	+17 29.1					
1991 10 31	04 46.06	+13 09.0	0.258	1.211	-9.97	+8.8	18.2
1991 11 05	04 30.45	+08 36.7					
1991 11 10	04 13.61	+04 05.9	0.256	1.231	-11.13	-6.1	17.9
1991 11 15	03 56.48	-00 07.1					
1991 11 20	03 40.03	-03 48.5	0.275	1.245	-11.02	-5.2	18.1
1991 11 25	03 25.05	-06 49.9					
1991 11 30	03 12.06	-09 09.1	0.312	1.255	-9.57	+5.2	18.7
1991 12 05	03 01.37	-10 48.5					
1991 12 10	02 53.08	-11 53.1	0.361	1.259	-7.65	+15.1	19.2

1991 12 15	02 47.09	-12 29.1					
1991 12 20	02 43.23	-12 42.3	0.419	1.259	-5.92	+21.0	19.7
1991 12 25	02 41.25	-12 37.7					
1991 12 30	02 40.90	-12 19.1	0.478	1.253	-4.57	+23.5	20.1

1990 SB a,e,i = 2.39, 0.55, 18 Elements MPC 18822

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 09 21	06 16.25	+06 31.5	3.466	3.490	83.0	16.6	19.8
1991 10 01	06 20.22	+05 36.0					
1991 10 11	06 22.43	+04 37.6	3.218	3.533	100.1	16.2	19.7
1991 10 21	06 22.70	+03 37.7					
1991 10 31	06 20.92	+02 38.5	2.987	3.571	118.7	14.1	19.4
1991 11 10	06 17.03	+01 42.4					
1991 11 20	06 11.13	+00 52.5	2.809	3.604	138.0	10.6	19.2
1991 11 30	06 03.50	+00 11.9					
1991 12 10	05 54.60	-00 16.4	2.723	3.633	153.7	6.9	19.0
1991 12 20	05 45.09	-00 30.1					
1991 12 30	05 35.70	-00 28.6	2.754	3.656	152.7	7.1	19.0
1992 01 09	05 27.15	-00 12.4					
1992 01 19	05 20.04	+00 16.6	2.901	3.675	136.3	10.7	19.3
1992 01 29	05 14.74	+00 55.5					
1992 02 08	05 11.45	+01 41.6	3.135	3.689	117.0	13.8	19.6
1992 02 18	05 10.22	+02 31.9					
1992 02 28	05 10.93	+03 23.8	3.421	3.698	98.4	15.4	19.9
1992 03 09	05 13.45	+04 15.4					
1992 03 19	05 17.59	+05 05.0	3.720	3.702	81.3	15.4	20.0

Comet McNaught-Russell (1991g) Elements MPC 17940

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 10 11	11 09.32	+09 00.1	6.348	5.526	31.9	5.5	17.9
1991 10 21	11 13.93	+09 27.6					
1991 10 31	11 18.04	+10 00.6	6.186	5.603	50.2	7.8	17.9
1991 11 10	11 21.51	+10 40.5					
1991 11 20	11 24.23	+11 28.5	5.954	5.683	69.5	9.4	17.9
1991 11 30	11 26.06	+12 25.8					
1991 12 10	11 26.89	+13 33.4	5.685	5.766	89.8	9.8	17.9
1991 12 20	11 26.57	+14 51.8					
1991 12 30	11 25.01	+16 21.0	5.423	5.851	111.3	9.0	17.8
1992 01 09	11 22.15	+18 00.1					
1992 01 19	11 17.95	+19 47.2	5.219	5.939	133.4	6.9	17.8
1992 01 29	11 12.50	+21 39.7					
1992 02 08	11 05.93	+23 33.8	5.125	6.028	154.1	4.1	17.9
1992 02 18	10 58.50	+25 25.2					
1992 02 28	10 50.56	+27 09.7	5.173	6.119	161.2	3.0	17.9
1992 03 09	10 42.49	+28 43.9					
1992 03 19	10 34.71	+30 05.3	5.368	6.212	145.3	5.2	18.1
1992 03 29	10 27.58	+31 12.8					
1992 04 08	10 21.42	+32 06.5	5.683	6.307	124.7	7.5	18.3
1992 04 18	10 16.43	+32 47.4					
1992 04 28	10 12.70	+33 17.1	6.076	6.403	104.5	8.8	18.5
1992 05 08	10 10.28	+33 37.3					
1992 05 18	10 09.12	+33 49.9	6.501	6.501	85.5	8.9	18.7
1992 05 28	10 09.13	+33 56.7					
1992 06 07	10 10.20	+33 58.9	6.914	6.599	67.9	8.2	18.9
1992 06 17	10 12.22	+33 58.0					
1992 06 27	10 15.05	+33 55.2	7.284	6.700	51.6	6.8	19.1
1992 07 07	10 18.58	+33 51.4					
1992 07 17	10 22.68	+33 47.5	7.584	6.801	37.1	5.2	19.2

Periodic Comet Wolf-Harrington (1990e) Elements MPC 13057

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	10 31	11 54.87	-14 40.0	3.241	2.485	34.3	13.0	20.0
1991	11 10	12 09.93	-16 38.2					
1991	11 20	12 24.13	-18 32.0	3.199	2.603	45.5	15.7	20.2
1991	11 30	12 37.39	-20 20.8					
1991	12 10	12 49.59	-22 04.1	3.110	2.720	58.0	17.9	20.3
1991	12 20	13 00.57	-23 41.4					
1991	12 30	13 10.15	-25 12.0	2.980	2.835	72.0	19.3	20.4
1992	01 09	13 18.12	-26 35.1					
1992	01 19	13 24.23	-27 49.5	2.821	2.949	87.6	19.5	20.4
1992	01 29	13 28.27	-28 53.8					
1992	02 08	13 30.00	-29 46.0	2.654	3.060	105.0	18.1	20.5
1992	02 18	13 29.28	-30 23.5					
1992	02 28	13 26.13	-30 43.7	2.508	3.169	123.9	15.0	20.5
1992	03 09	13 20.70	-30 43.6					
1992	03 19	13 13.47	-30 21.5	2.422	3.276	143.4	10.4	20.6
1992	03 29	13 05.10	-29 37.1					
1992	04 08	12 56.41	-28 32.9	2.428	3.379	158.3	6.3	20.7

Periodic Comet Tsuchinshan 1 Elements MPC 13057

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	10 31	12 08.51	+06 12.6	2.303	1.631	37.5	21.7	19.9
1991	11 10	12 33.78	+04 02.6					
1991	11 20	12 57.80	+02 00.9	2.280	1.722	44.6	23.7	20.2
1991	11 30	13 20.59	+00 09.5					
1991	12 10	13 42.10	-01 29.9	2.240	1.827	53.1	25.5	20.4
1991	12 20	14 02.23	-02 55.9					
1991	12 30	14 20.90	-04 07.9	2.176	1.943	63.2	26.9	20.6
1992	01 09	14 37.96	-05 05.4					
1992	01 19	14 53.22	-05 48.4	2.085	2.066	75.2	27.4	20.7
1992	01 29	15 06.49	-06 17.2					
1992	02 08	15 17.51	-06 32.0	1.972	2.192	89.2	26.7	20.9

Periodic Comet Harrington-Abell (1990m) Elements MPC 13045

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	10 31	12 11.97	-03 03.1	2.840	2.073	32.6	14.9	20.3
1991	11 10	12 30.31	-05 35.8					
1991	11 20	12 47.85	-08 02.0	2.791	2.168	42.5	17.9	20.4
1991	11 30	13 04.54	-10 21.1					
1991	12 10	13 20.30	-12 32.5	2.710	2.270	53.7	20.5	20.6
1991	12 20	13 35.01	-14 35.9					
1991	12 30	13 48.53	-16 31.1	2.596	2.376	66.2	22.3	20.6
1992	01 09	14 00.66	-18 17.9					
1992	01 19	14 11.17	-19 56.0	2.454	2.485	80.3	23.0	20.6
1992	01 29	14 19.81	-21 25.5					
1992	02 08	14 26.29	-22 45.7	2.298	2.597	96.2	22.2	20.5
1992	02 18	14 30.31	-23 56.0					
1992	02 28	14 31.65	-24 55.3	2.148	2.709	114.2	19.5	20.4
1992	03 09	14 30.16	-25 41.5					
1992	03 19	14 25.89	-26 12.7	2.034	2.821	134.3	14.6	20.2
1992	03 29	14 19.18	-26 26.8					
1992	04 08	14 10.62	-26 22.8	1.994	2.933	155.2	8.2	20.1
1992	04 18	14 01.15	-26 01.4					
1992	04 28	13 51.75	-25 26.0	2.055	3.044	166.7	4.3	20.1
1992	05 08	13 43.36	-24 41.7					
1992	05 18	13 36.69	-23 54.6	2.227	3.154	151.6	8.8	20.5
1992	05 28	13 32.12	-23 10.1					
1992	06 07	13 29.79	-22 32.4	2.494	3.262	132.0	13.4	21.0

Periodic Comet Kearns-Kwee (1989u) Elements MPC 15215

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	10 31	12 16.71	-07 12.9	4.162	3.340	30.2	8.6	19.8
1991	11 10	12 27.95	-08 42.2					
1991	11 20	12 38.54	-10 07.9	4.074	3.432	44.0	11.5	19.9
1991	11 30	12 48.40	-11 29.7					
1991	12 10	12 57.41	-12 47.0	3.931	3.524	58.9	13.8	19.9
1991	12 20	13 05.41	-13 59.1					
1991	12 30	13 12.26	-15 05.3	3.744	3.615	74.9	15.2	19.9
1992	01 09	13 17.79	-16 05.1					
1992	01 19	13 21.83	-16 57.4	3.533	3.706	92.3	15.4	19.9
1992	01 29	13 24.22	-17 41.3					
1992	02 08	13 24.83	-18 15.8	3.325	3.795	111.2	14.0	19.9
1992	02 18	13 23.59	-18 39.6					
1992	02 28	13 20.57	-18 51.8	3.154	3.883	131.6	11.0	19.9
1992	03 09	13 15.92	-18 51.5					
1992	03 19	13 09.97	-18 38.8	3.058	3.970	152.9	6.6	19.9
1992	03 29	13 03.19	-18 14.8					
1992	04 08	12 56.12	-17 41.5	3.068	4.056	169.0	2.7	20.0
1992	04 18	12 49.36	-17 02.1					
1992	04 28	12 43.40	-16 20.3	3.197	4.140	156.6	5.5	20.2
1992	05 08	12 38.63	-15 39.9					
1992	05 18	12 35.31	-15 03.9	3.433	4.223	136.4	9.5	20.4
1992	05 28	12 33.52	-14 34.7					
1992	06 07	12 33.28	-14 13.7	3.749	4.305	116.9	12.1	20.7

Comet Helin-Lawrence (1991l) Elements MPC 18395

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991	10 31	12 23.24	-31 28.6	2.654	1.880	31.5	16.0	11.4
1991	11 10	12 32.62	-36 41.7					
1991	11 20	12 43.18	-42 45.8	2.317	1.736	43.3	23.0	10.7
1991	11 30	12 55.75	-49 51.6					
1991	12 10	13 12.31	-58 09.1	1.993	1.621	53.9	29.4	10.1
1991	12 20	13 38.78	-67 40.1					
1991	12 30	14 43.2	-77 56.2	1.769	1.546	60.6	33.7	9.6
1992	01 09	19 46.4	-83 51.5					
1992	01 19	23 25.0	-75 12.2	1.734	1.518	60.7	34.4	9.5
1992	01 29	00 14.35	-64 13.7					
1992	02 08	00 37.33	-54 01.4	1.897	1.541	54.0	31.2	9.8
1992	02 18	00 52.44	-45 04.3					
1992	02 28	01 04.18	-37 24.1	2.175	1.612	43.7	25.1	10.3
1992	03 09	01 14.16	-30 52.2					
1992	03 19	01 23.06	-25 17.6	2.473	1.723	32.8	18.2	10.8

1991	11 10	04 11.60	+01 29.5	1.674	2.610	156.0	8.9	15.4
- 7.59	-0.76	- 66.3	+ 6.2	(4502)	16418	- 7.58	+0.77	- 7.7	+11.8
1991	12 10	03 46.00	-00 32.0	1.679	2.580	150.1	11.0	15.5

1991	11 10	04 13.14	+06 52.2	1.755	2.702	158.7	7.6	17.4
- 8.29	-0.78	- 50.4	+ 3.5	1985 FH	14617	- 8.36	+0.77	- 11.0	+ 8.7
1991	12 10	03 45.30	+05 10.2	1.747	2.669	154.3	9.2	17.5

1991	11 10	04 14.30	+18 29.4	1.799	2.755	161.3	6.6	17.7
- 9.23	-0.78	- 23.1	- 1.6	(4579)	16864	- 8.98	+0.86	- 20.4	+ 2.9
1991	12 10	03 43.95	+17 15.7	1.815	2.764	160.7	6.8	17.7

1991	11 10	04 19.02	+24 44.1	1.291	2.244	159.1	9.1	16.9
- 9.89	-1.18	- 18.7	- 5.9	1980 FY	13152	- 9.96	+1.17	- 39.5	+ 0.6
1991	12 10	03 44.87	+23 04.8	1.286	2.243	162.1	7.8	16.9

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1991 11 10    04 14.69   +19 54.1    2.055    3.010   161.1     6.1    17.4
- 7.73  -0.68  - 24.3  - 2.0  4545 P-L  17836  - 7.70  +0.69  - 24.9  + 2.1
1991 12 10    03 49.00   +18 32.7    2.063    3.016   162.2     5.7    17.4

1991 11 10    04 16.31   +21 44.4    1.974    2.927   160.5     6.5    16.8
- 7.94  -0.68  - 13.3  - 2.5  1974 SB5  10380  - 7.68  +0.75  - 18.9  + 1.2
1991 12 10    03 50.23   +20 49.2    2.021    2.977   163.1     5.5    16.8

1991 11 10    04 17.72   +22 53.4    1.890    2.840   159.9     6.9    17.2
- 8.09  -0.72  - 11.0  - 3.1  1985 RJ4  11511  - 7.80  +0.79  - 19.9  + 0.7
1991 12 10    03 51.10   +21 59.9    1.945    2.902   163.4     5.6    17.2

1991 11 10    04 21.10   +19 01.9    1.574    2.526   159.7     7.8    17.1
- 9.65  -0.99  -  6.0  - 1.6  1990 MX   16881  - 9.89  +0.93  -  6.8  + 2.0
1991 12 10    03 48.25   +18 36.0    1.577    2.532   162.1     6.9    17.0

1991 11 10    04 20.22   +21 23.5    1.122    2.079   159.6     9.5    17.0
- 7.10  -1.20  - 60.5  - 5.1  1983 XE   14947  - 7.57  +1.07  - 62.1  + 5.3
1991 12 10    03 53.99   +18 00.3    1.110    2.072   163.2     7.9    16.9

1991 11 10    04 23.54   +20 11.2    1.061    2.017   159.0    10.1    16.3
- 8.05  -1.38  - 50.9  - 4.4  1978 VR4  14945  - 9.06  +1.13  - 51.3  + 5.3
1991 12 10    03 53.20   +17 19.7    1.027    1.989   162.8     8.4    16.1

1991 11 10    04 29.44   +42 20.0    1.814    2.702   147.6    11.3    17.2
-10.78  -1.27  + 38.6  -11.3  1981 EF37 16695  -11.60  +1.05  - 34.2  - 9.9
1991 12 10    03 51.56   +42 24.1    1.807    2.734   155.4     8.6    17.1

1991 11 10    04 23.34   +23 58.5    1.795    2.740   158.4     7.7    16.0
- 7.89  -0.87  -  9.8  - 3.6  1931 TS1  12795  - 8.28  +0.76  - 23.1  + 0.1
1991 12 10    03 56.07   +23 02.3    1.798    2.760   164.6     5.4    15.9

1991 11 10    04 27.82   +38 54.6    2.131    3.031   150.2     9.4    16.7
-10.27  -1.00  + 29.0  - 8.8  1985 GU1  14948  -10.80  +0.85  - 25.9  - 7.3
1991 12 10    03 52.78   +38 56.5    2.136    3.071   158.0     6.9    16.6

1991 11 10    04 27.14   +16 44.6    1.028    1.982   158.2    10.7    15.0
- 9.54  -1.25  -  4.1  + 0.1  (4520)    16563  - 9.22  +1.29  +  7.2  + 3.8
1991 12 10    03 54.29   +16 42.2    1.094    2.055   162.8     8.2    15.1

1991 11 10    04 27.15   +32 59.4    2.051    2.973   153.9     8.4    18.0
- 9.49  -0.96  + 13.7  - 6.8  1986 QZ2  12134  -10.18  +0.77  - 26.2  - 4.7
1991 12 10    03 54.45   +32 37.0    2.032    2.984   162.0     5.9    17.9

1991 11 10    04 40.15   +42 20.6    1.131    2.030   146.1    15.8    17.0
-13.89  -2.60  +145.5  -12.0  1990 HP   18120  -18.51  +1.58  + 23.2  -21.5
1991 12 10    03 43.73   +46 51.9    1.102    2.021   151.1    13.6    16.8

1991 11 10    04 25.24   +16 36.2    1.198    2.151   158.7     9.6    16.4
- 7.73  -1.11  - 58.9  - 1.0  1983 TE1  15411  - 8.00  +1.02  - 39.3  + 7.3
1991 12 10    03 57.69   +13 53.4    1.224    2.183   162.2     7.9    16.4

1991 11 10    04 23.20   +06 57.9    2.356    3.289   156.6     6.9    16.5
- 7.33  -0.59  - 15.0  + 3.4  1983 HB1  18623  - 7.50  +0.54  + 13.0  + 5.4
1991 12 10    03 58.86   +06 51.3    2.397    3.330   157.9     6.4    16.5

1991 11 10    04 31.91   +20 39.2    1.738    2.678   157.0     8.3    16.9
-10.38  -0.96  + 11.2  - 2.1  1948 KF    8209  -10.67  +0.87  +  2.4     0.0
1991 12 10    03 56.94   +20 55.8    1.780    2.742   164.6     5.5    16.9
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1991 11 10    04 30.13   +11 53.5    1.414    2.357   156.7     9.6    17.5
- 9.17  -0.92  - 56.2  + 2.4  1983 PY   16231  - 8.87  +0.97  - 22.2  + 8.1
1991 12 10    03 59.57   +09 45.4    1.497    2.446   160.0     7.9    17.7

1991 11 10    04 32.66   +23 48.8    0.953    1.902   156.3    12.1    17.5
- 9.05  -1.60  -163.2  -13.7  1985 RW   11996  -10.15  +1.29  -176.7  +11.6
1991 12 10    03 58.49   +14 31.5    0.914    1.877   162.7     9.0    17.3

1991 11 10    04 30.90   +18 49.1    1.318    2.265   157.4     9.7    17.5
- 7.99  -1.26  - 21.8  - 1.8  1985 AE   12005  - 9.50  +0.86  - 19.3  + 3.3
1991 12 10    04 00.75   +17 38.0    1.277    2.242   164.6     6.7    17.3

1991 11 10    04 29.51   +30 43.0    2.018    2.943   154.6     8.3    15.9
- 7.54  -0.91  - 23.8  - 6.5  1978 LG   18281  - 8.47  +0.65  - 55.0  - 2.5
1991 12 10    04 02.61   +28 37.4    1.962    2.925   165.3     4.9    15.7

1991 11 10    04 26.72   -04 24.8    2.504    3.393   149.2     8.6    18.2
- 6.52  -0.57  - 62.6  + 6.6  1977 EL5  17012  - 6.91  +0.46  -  9.2  +10.0
1991 12 10    04 04.69   -06 18.9    2.544    3.417   147.6     8.9    18.3

1991 11 10    04 32.55   +05 02.3    2.105    3.024   153.6     8.4    17.6
- 7.40  -0.73  - 54.1  + 3.9  1976 GN2  16867  - 8.06  +0.54  - 15.2  + 8.2
1991 12 10    04 07.00   +03 10.3    2.120    3.047   156.2     7.5    17.6

1991 11 10    04 33.41   +17 51.3    1.814    2.752   156.8     8.2    16.1
- 7.26  -0.91  - 17.8  - 0.7  1981 WA1  17013  - 8.28  +0.62  - 12.8  + 2.7
1991 12 10    04 07.28   +16 59.2    1.803    2.768   165.7     5.0    15.9

1991 11 10    04 35.64   +20 21.8    1.906    2.840   156.2     8.1    15.7
- 7.56  -0.96  + 18.6  - 0.9  1982 BW   13056  - 9.01  +0.56  + 13.9  - 0.1
1991 12 10    04 07.96   +21 09.1    1.870    2.839   167.2     4.4    15.5

1991 11 10    04 37.76   +21 24.5    1.395    2.333   155.6    10.1    17.7
- 7.58  -1.33  - 24.6  - 3.4  1989 GA3  14795  - 9.94  +0.70  - 33.5  + 1.5
1991 12 10    04 07.72   +19 48.2    1.312    2.282   166.8     5.6    17.3

1991 11 10    04 42.84   +32 41.6    1.430    2.346   151.1    11.8    17.3
- 8.70  -1.49  +  8.3  - 8.1  1989 EO1  15252  -11.16  +0.84  - 42.9  - 6.3
1991 12 10    04 08.73   +31 46.6    1.366    2.331   165.0     6.3    17.0

1991 11 10    04 40.35   +14 53.5    1.558    2.491   154.9     9.7    18.1
- 7.97  -1.11  - 49.4  - 0.3  1989 CS2  14622  - 9.51  +0.68  - 32.7  + 5.8
1991 12 10    04 10.81   +12 39.0    1.530    2.492   164.0     6.2    17.9

1991 11 10    04 41.66   +22 47.4    1.120    2.059   154.5    12.0    18.0
- 7.56  -1.43  - 23.6  - 4.0  1979 MM5   9160  - 9.15  +0.97  - 33.8  + 1.8
1991 12 10    04 12.12   +21 10.5    1.133    2.107   168.2     5.5    17.8

1991 11 10    04 38.54   +17 23.4    2.249    3.177   155.5     7.4    17.0
- 6.87  -0.76  - 44.9  - 1.0  (4346)    15693  - 7.85  +0.47  - 38.5  + 3.3
1991 12 10    04 14.19   +15 10.3    2.233    3.198   166.2     4.2    16.8

1991 11 10    04 42.76   +18 05.9    1.011    1.952   154.6    12.6    16.2
- 7.19  -1.49  - 29.4  - 0.9  1976 SJ   13584  - 8.90  +0.99  - 17.8  + 5.0
1991 12 10    04 14.02   +16 44.3    1.033    2.005   167.0     6.3    16.1

1991 11 10    04 43.82   +27 34.3    1.747    2.668   152.9     9.7    17.4
- 7.50  -1.20  +  1.1  - 4.6  (4784)    18094  - 9.89  +0.55  - 25.9  - 2.9
1991 12 10    04 14.49   +26 54.1    1.659    2.631   168.3     4.4    17.0
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1991 11 10    04 40.95   +19 48.8    2.195    3.121   155.0     7.7    17.2
- 7.04  -0.79  - 29.2  - 1.5  1985 TL   16871  - 8.00  +0.50  - 28.8  + 1.9
1991 12 10    04 16.01   +18 15.5    2.202    3.172   168.2     3.7    17.1

1991 11 10    04 41.71   +17 20.0    2.332    3.256   154.8     7.4    15.5
- 7.10  -0.81  +  6.5  + 0.1  (4730)    17805  - 8.49  +0.40  + 10.0  + 1.3
1991 12 10    04 16.09   +17 42.7    2.296    3.265   167.9     3.6    15.3

1991 11 10    04 45.24   +24 55.1    1.548    2.473   153.3    10.4    17.6
- 7.72  -1.32  - 10.8  - 4.2  1989 GO4  14796  -10.36  +0.60  - 31.7  - 1.3
1991 12 10    04 14.55   +23 45.9    1.461    2.435   168.9     4.5    17.1

1991 11 10    04 47.75   +14 17.4    1.929    2.847   153.0     9.1    17.2
- 8.64  -1.00  -  1.8  + 1.2  1990 MV   17211  -10.23  +0.54  + 10.4  + 2.9
1991 12 10    04 16.60   +14 27.2    1.913    2.879   166.3     4.7    17.0

1991 11 10    04 44.20   +03 02.2    1.942    2.844   150.1    10.0    17.4
- 6.99  -0.95  - 53.0  + 4.4  1989 JK   17443  - 8.90  +0.41  -  7.7  + 9.7
1991 12 10    04 17.85   +01 21.4    1.874    2.802   156.0     8.2    17.2

1991 11 10    04 51.21   +34 12.9    1.151    2.064   148.9    14.4    16.2
- 8.40  -1.75  - 10.7  -10.7  1984 SJ7  14350  -10.96  +1.04  - 71.7  - 6.0
1991 12 10    04 17.00   +32 00.6    1.131    2.100   166.3     6.4    15.9

1991 11 10    04 46.02   +07 13.1    2.106    3.014   151.5     9.0    17.3
- 7.45  -0.76  - 57.7  + 3.4  1990 MC   17638  - 8.27  +0.51  - 22.6  + 7.6
1991 12 10    04 20.09   +05 04.9    2.162    3.104   159.5     6.4    17.3

1991 11 10    04 43.07   +39 58.1    4.203    5.065   147.2     6.1    17.0
- 5.61  -0.57  + 12.6  - 4.3  (4828)    18272  - 6.75  +0.23  - 15.1  - 4.3
1991 12 10    04 23.05   +39 54.3    4.116    5.057   160.9     3.6    16.8

1991 11 10    04 47.36   +24 12.4    2.201    3.116   153.0     8.3    17.5
- 7.27  -0.88  -  8.3  - 2.7  1985 RD   17016  - 8.65  +0.47  - 20.4  - 0.6
1991 12 10    04 21.00   +23 25.5    2.192    3.167   170.4     3.0    17.2

1991 11 10    04 52.81   +24 53.4    1.343    2.264   151.6    12.0    16.3
- 7.24  -1.55  + 34.7  - 2.3  1975 TX2  15699  -10.87  +0.58  + 12.9  - 3.6
1991 12 10    04 21.70   +26 07.4    1.273    2.250   170.1     4.3    15.9

1991 11 10    04 55.16   +27 58.1    1.014    1.938   150.4    14.6    16.8
- 7.98  -1.88  + 39.0  - 5.5  1984 SQ2  16870  -11.30  +0.98  -  3.8  - 6.0
1991 12 10    04 20.93   +28 52.0    1.012    1.988   168.8     5.5    16.5

1991 11 10    04 50.92   +08 40.3    2.049    2.954   150.9     9.4    17.3
- 7.08  -0.90  - 55.9  + 2.2  (4572)    16862  - 8.75  +0.41  - 26.1  + 7.2
1991 12 10    04 24.75   +06 28.1    2.022    2.972   161.3     6.1    17.2

1991 11 10    04 55.56   +26 02.1    1.713    2.622   150.8    10.6    17.7
- 7.95  -1.31  -  9.7  - 4.2  1989 AY6  18115  -10.86  +0.49  - 32.9  - 2.1
1991 12 10    04 24.00   +24 54.4    1.627    2.605   170.9     3.4    17.3

1991 11 10    04 54.04   +13 52.3    1.622    2.537   151.5    10.8    18.2
- 7.62  -1.22  - 55.5  - 0.2  1976 GD2  10830  -10.24  +0.49  - 37.8  + 6.1
1991 12 10    04 24.09   +11 20.6    1.554    2.519   165.3     5.7    17.9

1991 11 10    04 56.68   +23 45.0    1.313    2.231   150.9    12.4    16.6
- 7.86  -1.46  - 25.0  - 4.0  1969 TB3  15401  -10.35  +0.74  - 39.2  + 0.6
1991 12 10    04 25.29   +22 00.3    1.305    2.283   171.3     3.7    16.2
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1991 11 10    04 54.57   +12 08.9    1.543    2.457   151.0    11.3    15.9
- 6.73  -1.31  -  5.7  + 2.8  (4612)    17009  -10.09  +0.38  + 19.8  + 5.3
1991 12 10    04 26.22   +12 25.3    1.442    2.411   166.5     5.5    15.5

1991 11 10    04 58.75   +33 28.0    2.030    2.916   147.8    10.4    17.7
- 8.55  -1.23  -  1.3  - 6.4  1990 QC1  17024  -11.16  +0.49  - 42.5  - 5.6
1991 12 10    04 26.02   +32 21.1    1.949    2.918   167.5     4.2    17.4

1991 11 10    04 55.17   +27 46.6    2.292    3.191   150.4     8.8    17.9
- 6.56  -0.99  + 12.0  - 3.1  3290 T-2  17464  - 8.94  +0.31  -  8.8  - 2.9
1991 12 10    04 29.53   +27 51.2    2.204    3.180   170.9     2.8    17.5

1991 11 10    05 00.79   +23 55.6    1.045    1.966   150.0    14.6    16.4
- 7.61  -1.82  + 13.1  - 3.2  1981 VC1  10831  -11.19  +0.84  -  7.6  - 2.0
1991 12 10    04 27.67   +24 01.7    1.037    2.016   171.9     4.0    16.0

1991 11 10    04 59.80   +03 49.4    1.650    2.539   147.0    12.3    17.8
- 7.99  -1.09  - 41.8  + 6.0  (4551)    16689  - 9.81  +0.55  +  8.8  + 9.6
1991 12 10    04 30.05   +02 53.3    1.679    2.620   158.6     7.9    17.8

1991 11 10    05 00.63   +23 17.5    1.343    2.257   150.1    12.6    16.2
- 7.44  -1.46  - 39.4  - 4.0  1987 SE4  12450  -10.29  +0.65  - 50.9  + 1.4
1991 12 10    04 30.12   +20 52.0    1.320    2.299   172.2     3.3    15.7

1991 11 10    04 58.18   +19 36.0    2.018    2.924   150.9     9.5    16.6
- 6.55  -1.03  -  8.1  - 0.8  (4627)    17188  - 8.90  +0.34  -  8.5  + 1.0
1991 12 10    04 32.49   +19 07.8    1.963    2.942   172.0     2.7    16.2

1991 11 10    05 01.54   +43 28.0    2.493    3.333   142.4    10.5    16.8
- 7.53  -1.22  + 39.4  - 6.9  1982 FJ   17014  -10.70  +0.33  - 14.7  - 9.4
1991 12 10    04 31.34   +44 09.7    2.388    3.320   157.7     6.5    16.5

1991 11 10    05 04.44   +17 25.4    1.777    2.677   149.4    10.9    18.6
- 6.89  -1.25  - 17.3  - 0.3  6607 P-L  17463  -10.32  +0.28  - 12.1  + 2.3
1991 12 10    04 35.79   +16 36.5    1.669    2.646   171.1     3.3    18.0

1991 11 10    05 09.70   +34 48.2    1.558    2.437   145.2    13.4    16.9
- 7.81  -1.67  + 18.0  - 7.0  1989 BG   15894  -12.21  +0.47  - 35.9  - 8.6
1991 12 10    04 35.71   +34 24.6    1.467    2.437   167.0     5.2    16.4

1991 11 10    05 00.45   +14 16.0    2.207    3.104   150.0     9.2    17.8
- 5.49  -0.91  - 24.3  + 0.9  1981 EG21 17818  - 7.73  +0.25  - 10.8  + 3.6
1991 12 10    04 38.48   +13 18.4    2.144    3.116   168.9     3.5    17.5

1991 11 10    04 59.78   +44 03.3    4.305    5.125   142.3     6.8    16.5
- 5.65  -0.67  + 22.6  - 4.5  (4715)    17619  - 7.39  +0.15  -  9.0  - 5.4
1991 12 10    04 38.71   +44 25.3    4.211    5.136   157.8     4.2    16.3

1991 11 10    05 06.14   +20 34.5    1.905    2.801   149.0    10.5    17.7
- 6.49  -1.19  -  8.9  - 1.2  1976 GO3  12122  - 9.81  +0.25  - 12.7  + 0.4
1991 12 10    04 39.03   +19 59.2    1.798    2.779   173.8     2.2    17.1

1991 11 10    05 06.61   +19 44.0    2.238    3.128   148.9     9.4    18.4
- 6.60  -0.99  - 16.3  - 0.9  1989 GS4  17961  - 9.14  +0.25  - 17.4  + 1.0
1991 12 10    04 40.69   +18 49.9    2.165    3.145   173.5     2.0    18.0

1991 11 10    05 08.25   +33 25.8    2.219    3.090   146.0    10.3    17.3
- 6.99  -1.18  + 32.6  - 4.3  1985 TJ1  17016  -10.15  +0.27  -  2.6  - 6.1
1991 12 10    04 39.87   +34 14.4    2.145    3.113   167.5     3.9    17.0
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1991 11 10    05 06.45   +06 59.7    1.945    2.826   146.7    11.1    16.4
- 6.05  -1.08  - 70.0  + 2.1  1986 RU5  17205  - 9.01  +0.22  - 36.4  + 8.6
1991 12 10    04 41.47   +04 08.0    1.852    2.800   160.6     6.7    16.1

1991 11 10    05 11.65   +16 41.9    1.595    2.488   147.6    12.3    17.8
- 7.36  -1.35  - 29.6    0.0  1987 SR12 15888  -10.70  +0.39  - 19.9  + 3.5
1991 12 10    04 41.33   +15 21.2    1.548    2.526   171.0     3.5    17.4

1991 11 10    05 14.85   +24 28.4    1.336    2.231   146.7    14.1    17.7
- 8.06  -1.63  - 19.1  - 3.7  1971 QN    9472  -11.74  +0.59  - 36.6  - 0.7
1991 12 10    04 41.04   +22 59.6    1.316    2.299   175.0     2.1    17.2

1991 11 10    05 10.08   +05 17.1    1.896    2.768   145.3    11.8    17.8
- 6.84  -1.12  - 47.0  + 4.0  1986 JA   17017  - 9.78  +0.26  -  6.7  + 8.7
1991 12 10    04 42.59   +03 47.6    1.834    2.782   160.4     6.8    17.5

1991 11 10    05 16.01   +27 33.6    1.475    2.362   146.0    13.6    18.0
- 7.26  -1.68  +  7.7  - 3.8  1980 FF12  9589  -12.18  +0.32  - 22.1  - 4.5
1991 12 10    04 43.15   +27 13.4    1.376    2.357   173.7     2.6    17.3

1991 11 10    05 11.58   +32 59.9    2.235    3.102   145.5    10.4    16.4
- 6.35  -1.21  + 30.8  - 3.8  1988 GH   13154  -10.03  +0.15  -  1.9  - 6.0
1991 12 10    04 44.50   +33 47.5    2.110    3.080   168.3     3.7    15.9

1991 11 10    05 11.57   +22 01.5    1.427    2.325   147.7    13.2    17.9
- 5.30  -1.51  -  3.5  - 1.5  1988 CW2  13476  - 9.78  +0.26  - 10.9  - 0.2
1991 12 10    04 45.68   +21 37.7    1.336    2.319   175.9     1.7    17.2

1991 11 10    05 02.68   +21 27.7    4.799    5.677   -0.33    -0.6    18.1
- 4.20  -0.45  -  5.8  - 0.6  1989 TU5  16236  - 5.44  +0.07  -  7.9    0.0
1991 12 10    04 47.27   +21 06.0    4.692    5.675   -0.33    -0.8    17.7

1991 11 10    05 10.00   +20 16.7    2.803    3.682   148.1     8.2    17.9
- 5.85  -0.82  -  8.1  - 0.7  1983 JQ   18809  - 8.11  +0.14  -  9.8  + 0.4
1991 12 10    04 47.28   +19 47.9    2.717    3.700   175.3     1.2    17.5

1991 11 10    05 15.72   +24 02.7    1.689    2.574   146.6    12.2    17.4
- 6.78  -1.40  - 27.9  - 3.3  1979 MX6  16868  -10.73  +0.28  - 43.3  - 0.7
1991 12 10    04 46.36   +22 11.1    1.593    2.576   176.2     1.5    16.8

1991 11 10    05 16.72   +26 04.8    1.384    2.274   146.1    14.1    17.3
- 6.64  -1.63  -  0.4  - 3.5  1987 UV1  16428  -10.98  +0.41  - 23.3  - 2.7
1991 12 10    04 46.52   +25 28.0    1.338    2.321   175.4     1.9    16.7

1991 11 10    05 14.22   +15 39.7    1.436    2.329   146.9    13.4    16.8
- 5.54  -1.54  +  2.5  + 2.0  1985 GW   16870  -10.62  +0.13  + 19.0  + 3.3
1991 12 10    04 46.91   +16 09.6    1.308    2.287   172.4     3.3    16.1

1991 11 10    05 19.57   +33 21.3    1.163    2.048   143.8    16.6    16.3
- 6.15  -2.07  + 30.6  - 6.5  1977 QH4  12143  -12.20  +0.44  - 26.2  - 9.7
1991 12 10    04 47.41   +33 34.2    1.098    2.073   168.7     5.3    15.7

1991 11 10    05 16.75   +24 26.4    1.225    2.121   146.3    15.0    16.4
- 5.46  -1.82  + 41.0  - 0.6  1980 YC   15063  -11.25  +0.24  + 23.9  - 4.2
1991 12 10    04 47.88   +26 10.7    1.140    2.123   175.2     2.2    15.7

1991 11 10    05 20.79   +17 24.1    1.110    2.006   145.5    16.2    16.6
- 6.39  -1.90  -131.7  - 6.2  1988 VS4  18430  -11.95  +0.36  -125.5  + 9.8
1991 12 10    04 49.11   +10 28.4    1.021    1.993   167.3     6.3    16.0
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1991 11 10    05 18.88   +28 35.7    1.951    2.822   -1.41    +3.4    16.1
- 6.87  -1.29  - 36.3  - 5.0  1990 OA1  17446  -10.44  +0.25  - 63.2  - 2.6
1991 12 10    04 50.07   +26 02.0    1.848    2.831   -1.42    +2.4    15.5

1991 11 10    05 07.11   +19 28.8    4.403    5.275   148.8     5.6    17.2
- 4.13  -0.49  - 24.7  - 0.6  1989 SC7  17637  - 5.50  +0.07  - 24.5  + 0.7
1991 12 10    04 51.65   +18 12.6    4.296    5.277   174.7     1.0    16.8

1991 11 10    05 23.71   +16 16.2    2.078    2.942   144.7    11.2    18.0
- 7.81  -1.27  + 37.7  + 2.4  (4340)    15691  -11.91  +0.09  + 46.1  + 0.3
1991 12 10    04 51.63   +18 25.6    1.966    2.949   174.9     1.7    17.4

1991 11 10    05 22.41   +17 48.2    1.454    2.336   145.1    14.0    16.7
- 6.71  -1.54  -  4.9  + 0.7  (4556)    16691  -11.13  +0.29  +  2.1  + 1.9
1991 12 10    04 52.27   +17 41.8    1.402    2.384   174.3     2.3    16.1

1991 11 10    05 21.68   +24 27.7    1.787    2.661   145.2    12.3    17.1
- 6.69  -1.36  - 14.3  - 2.6  (4562)    16858  -10.58  +0.23  - 28.8  - 1.3
1991 12 10    04 52.84   +23 20.8    1.711    2.696   177.6     0.9    16.5

1991 11 10    05 15.29   +10 01.1    2.368    3.233   145.5    10.0    17.2
- 5.12  -0.92  - 56.5  + 1.2  1985 VL   18110  - 7.89  +0.10  - 35.0  + 5.7
1991 12 10    04 53.89   +07 35.5    2.267    3.227   164.7     4.6    16.8

1991 11 10    05 26.77   +34 45.7    1.684    2.538   141.9    13.9    17.9
- 6.75  -1.78  + 54.9  - 3.6  1982 FC   14347  -13.19   0.00  +  9.2  -10.2
1991 12 10    04 53.60   +36 34.4    1.535    2.503   166.1     5.4    17.4

1991 11 10    05 25.00   +19 01.2    1.292    2.177   144.6    15.3    17.0
- 6.50  -1.66  - 26.2  - 0.4  1987 QR   15887  -10.97  +0.38  - 20.8  + 2.7
1991 12 10    04 55.01   +17 45.1    1.270    2.253   174.6     2.3    16.4

1991 11 10    05 23.40   +09 39.2    1.794    2.657   143.5    12.8    17.6
- 6.03  -1.32  - 28.4  + 2.8  1989 EX1  15252  -10.48  +0.04  +  0.9  + 6.6
1991 12 10    04 56.14   +08 50.8    1.661    2.627   166.0     5.2    17.1

1991 11 10    05 20.02   +17 26.2    1.880    2.755   145.7    11.7    16.7
- 5.01  -1.18  - 48.3  - 0.9  1980 TO5  17956  - 8.62  +0.13  - 41.6  + 3.4
1991 12 10    04 57.15   +15 03.4    1.787    2.766   172.2     2.8    16.2

1991 11 10    05 25.32   +22 48.5    1.537    2.413   144.5    13.8    16.6
- 5.59  -1.54  -  0.8  - 1.3  1985 DY1  16579  -10.58  +0.13  - 10.2  - 1.1
1991 12 10    04 57.98   +22 31.7    1.444    2.428   178.9     0.5    15.8

1991 11 10    05 20.83   +19 58.4    2.007    2.879   145.6    11.2    16.2
- 4.85  -1.18  -  3.8  - 0.2  1965 DC   18618  - 8.80  +0.03  -  3.5  + 0.6
1991 12 10    04 58.12   +19 46.1    1.874    2.858   176.8     1.1    15.5

1991 11 10    05 28.71   +26 37.6    1.636    2.501   143.4    13.7    17.3
- 6.62  -1.56  - 13.0  - 3.5  1983 LL   18423  -11.48  +0.18  - 35.8  - 2.9
1991 12 10    04 58.34   +25 23.5    1.541    2.525   177.2     1.1    16.6

1991 11 10    05 18.99   +08 28.3    1.877    2.743   144.2    12.2    16.3
- 4.24  -1.15  - 44.4  + 2.6  3099 T-2  17025  - 8.07  +0.04  - 12.9  + 7.5
1991 12 10    04 58.35   +06 53.2    1.753    2.713   164.1     5.7    15.8

1991 11 10    05 32.49   +36 45.7    1.438    2.288   140.2    16.1    18.5
- 7.01  -1.98  + 50.4  - 6.0  1987 SV3  13585  -13.24  +0.27  - 10.0  -11.8
1991 12 10    04 57.95   +37 57.3    1.378    2.343   164.8     6.3    18.0
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