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ERRATA.

MPC	Line	
15217	-21	For (M-N) read (M-N, Ceres)
15384	-25	For (M-N) read (M-N, Ceres)
15384	-17	For (M-N) read (M-N, Ceres)
15384	-13	For (M-N) read (M-N, Ceres)
16652	9	For (4064) read (2883)
16652	10	For (2883) read (4064)
17480	-23 to -24	The corrected observations of (42) on 1969 Feb. 24 should be removed.
17597	4	The orbit for 1990 QM2 should be deleted.
17602	8	For H 13.1 read H 13.3
17639	- 7	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.
1957 KG	1957 05	29.22359	17 19 29.43	-18 22 52.2	MPC10503		2 760
1957 KG	1957 05	29.26586	17 19 27.00	-18 22 51.0	MPC10503		2 760
1969 TP1	1969 11	11.81063	01 28 13.99	+07 36 28.3	MPC 3135	16.0	3 095
1976 GE7 *	1976 04	04.90602	13 15 33.17	-06 07 07.3	MPC 4432	18.0	095
1979 UD1 *	1979 10	24.90278	01 19 31.25	+03 13 05.1	MPC 5252	17.2	4 033
1979 UD1	1979 10	24.94167	01 19 29.68	+03 12 54.5	MPC 5252		4 033
1979 UD1	1979 10	24.95208	01 19 28.99	+03 12 51.5	MPC 5252		4 033
1979 UD1	1979 10	24.99097	01 19 27.45	+03 12 42.5	MPC 5252		4 033
1979 UD1	1979 10	24.99722	01 19 27.07	+03 12 40.0	MPC 5252		4 033
1979 UD1	1979 10	25.03611	01 19 25.59	+03 12 32.2	MPC 5252		4 033
1990 SA	1990 09	19.62474	23 05 54.66	-08 54 12.1	MPC16952		C 474
1	1945 05	24.05348	13 50 20.37	-00 02 05.8	MPC 411		5 804
1	1965 09	24.91391	00 03 57.18	-16 51 50.0	MPC 3174		089
2	1940 03	01.77884	07 00 10.01	-14 24 39.2	MPC 90		066
2	1940 04	17.82716	07 48 23.73	+01 56 01.9	MPC 90		066
2	1947 09	17.86405	22 03 29.28	+01 41 09.5	MPC 2340		6 047
3	1965 07	21.84942	20 40 09.22	-03 47 58.8	MPC 2959		5 073
3	1965 07	21.85819	20 40 08.78	-03 48 01.2	MPC 2959		5 073
3	1965 08	04.85874	20 28 13.76	-05 09 28.7	MPC 2529	9.0	7 021
3	1965 08	04.87312	20 28 12.88	-05 09 22.9	MPC 2529	9.0	7 021
4	1956 07	02.90833	14 03 06.79	-04 59 58.8	MPC 1563		990
4	1956 07	03.90139	14 03 42.62	-05 08 35.8	MPC 1563		990
4	1967 06	03.87735	15 19 11.52	-09 05 11.6	MPC 3797		8 006

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 4       1967 07 27.82646  15 18 17.07  -13 58 29.7  MPC 3394         5 073
 4       1967 07 27.83477  15 18 17.41  -13 58 33.4  MPC 3394         5 073
 4       1967 07 27.84170  15 18 17.71  -13 58 36.5  MPC 3394         5 073
 4       1968 08 29.97561  02 24 03.86  +03 52 11.2  MPC 3394         7 073
 4       1968 08 29.98253  02 24 03.91  +03 52 09.7  MPC 3394         7 073
 4       1968 08 29.99219  02 24 03.98  +03 52 08.3  MPC 3394         7 073
 4       1968 09 14.07335  02 23 10.57  +02 55 23.3  MPC 3394         5 073
 4       1968 09 14.08028  02 23 10.48  +02 55 21.5  MPC 3394         5 073
 4       1968 09 14.09275  02 23 10.39  +02 55 20.3  MPC 3395         5 073
 5       1961 12 30.00559  06 38 25.16  +16 30 41.6  MPC 2191         5 006
 6       1968 07 06.86976  18 23 15.78  -07 08 04.6  MPC 3396         1 073
 6       1968 07 06.88361  18 23 14.92  -07 08 09.4  MPC 3396         1 073
 6       1968 07 16.87438  18 13 50.70  -08 20 59.9  MPC 3396         1 073
 6       1968 07 16.88685  18 13 50.00  -08 21 06.0  MPC 3396         1 073
 6       1968 07 23.80120  18 08 14.28  -09 19 05.2  MPC 3396         1 073
 6       1968 07 23.81366  18 08 13.70  -09 19 11.5  MPC 3396         1 073
 6       1968 07 24.83205  18 07 29.47  -09 28 07.8  MPC 3396           073
 6       1968 08 08.80558  17 59 55.91  -11 46 09.6  MPC 3396         1 073
 6       1968 08 08.81320  17 59 55.73  -11 46 13.9  MPC 3396         1 073
 6       1968 08 12.79808  17 59 03.52  -12 23 46.9  MPC 3396         1 073
 6       1968 08 12.80570  17 59 03.46  -12 23 51.3  MPC 3396         1 073
 6       1968 08 17.76437  17 58 41.24  -13 10 20.5  MPC 3396         1 073
 6       1968 08 17.77822  17 58 41.23  -13 10 27.8  MPC 3396         1 073
 6       1968 08 29.75384  18 01 03.79  -14 59 06.5  MPC 3396         A 073
 6       1968 08 29.76146  18 01 03.95  -14 59 10.3  MPC 3396         9 073
 6       1968 08 29.76908  18 01 04.12  -14 59 14.9  MPC 3396         A 073
 6       1968 09 03.77247  18 03 23.95  -15 42 13.4  MPC 3396         1 073
 6       1968 09 03.78008  18 03 24.19  -15 42 17.8  MPC 3396         1 073
 6       1968 09 10.78551  18 07 54.63  -16 39 23.7  MPC17478         1 073
 6       1968 09 10.79244  18 07 54.95  -16 39 27.0  MPC 3396         1 073
 7       1962 12 22.69653  07 41 07.40  +17 18 38.2  MPC 2316           334
 7       1965 06 21.93674  21 13 32.99  -10 30 12.4  MPC 2961         B 073
 7       1965 06 21.94366  21 13 32.92  -10 30 11.1  MPC 2961         B 073
 7       1965 07 21.86698  20 57 29.35  -09 47 46.2  MPC 2961         5 073
 7       1965 07 21.87689  20 57 28.80  -09 47 46.3  MPC 2961         5 073
 8       1947 05 11.06138  14 09 28.60  -03 24 28.5  MPC  120          804
 8       1951 07 31.02422  20 40 54.19  -21 34 16.1  MPC  797         5 983
 9       1969 03 07.77786  09 30 38.64  +24 25 46.1  MPC 3067   9.0     021
10       1973 09 05.78924  21 05 07.09  -12 56 40.6  MPC 5146         C 073
10       1973 09 05.79824  21 05 06.86  -12 56 41.5  MPC 5146         C 073
11       1955 12 09.56632  04 20 45     +15 13.0     MPC 1670           377
11       1955 12 09.63229  04 20 43     +15 13.0     MPC 4191           377
12       1946 08 09.79950  18 09 33.36  -09 39 52.0  MPC   91           066
13       1958 12 31.02725  06 07 17.54  +45 15 50.4  MPC 1998         5 006
14       1963 01 05.89549  11 56 19.98  +12 10 14.9  MPC 2468         7 330
18       1955 04 14.82985  09 14 04.37  +17 27 58.0  MPC 1386           035
18       1965 02 12.72247  04 57 13.15  +12 01 19.6  MPC 2963         C 073
19       1950 04 14.0      13 15.2      -08 24       MPC  454          D 020
19       1955 07 23.83218  22 14 22.39  -08 14 49.1  MPC 2318         5 337
19       1976 02 10.18889  08 34 44.84  +16 03 56.3  MPC 4152         E 786
19       1976 02 10.20277  08 34 44.03  +16 03 59.8  MPC 4152         E 786
20       1975 06 14.05221  21 59 01.74  -11 23 39.2  MPC 5336         5 073
20       1975 06 14.05983  21 59 01.80  -11 23 38.9  MPC 5336         5 073
21       1968 02 19.97013  10 03 09.66  +16 36 02.8  MPC 3301           057
22       1948 02 28.92110  10 21 22.94  +32 12 24.6  MPC 2341         5 047
22       1962 01 23.71359  02 52 09.33  +16 44 18.9  MPC 2541           073
24       1944 08 18.904    22 11.2      -12 15       RI  2566  11.0     078
24       1950 09 16.67659  23 45 37     -02 20.5     MPC  651          377
26       1971 10 21.82515  23 23 05.01  -07 52 44.5  MPC 4038         F 999
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29		1962 12 01.56226	02 04 19.61	+20 56 09.0	MPC 2316			334
29		1974 11 06.77300	23 59 53.35	+03 42 49.2	MPC 5150			073
29		1974 11 06.78270	23 59 53.15	+03 42 49.0	MPC 5150			073
30		1954 01 07.87708	05 45 47.30	+25 22 49.8	MPC 1144			990
126		1954 02 25.97050	10 36 56.93	+12 22 42.0	MPC 1205			057
341		1950 04 14.0	13 12.9	-06 11	MPC 454		D	020
492		1959 01 06.07825	06 15 32.87	+25 11 19.4	MPC 2354	15.2		760
492		1959 01 06.13097	06 15 30.51	+25 11 22.7	MPC 2354			760
514		1956 09 01.21	21 39.0	-08 45	MPC 1582	15.5	5	760
541		1956 09 01.21	21 48.8	-04 15	MPC 1582	16.2	5	760
1625		1957 03 05.08403	08 50 58.87	+19 11 51.5	MPC 2131	15.7		760
1625		1957 03 05.11389	08 50 57.71	+19 11 50.5	MPC 2131			760
1651		1963 10 22.28059	03 22 59.35	+13 28 03.3	MPC 3029			760

Note 1: positions interchanged. 2: 1957 KG = (4150). 3: 1969 TP1 = (3126). 4: these six trail-end positions replace the earlier mid-trail positions. 5: date changed by +1 day. 6: time changed by +12 hours. 7: date changed by -1 day. 8: date changed by -2 days. 9: time changed by +2 hours. A = 1+9. B: year originally given as 1964. C: date originally in error. D: date changed by +2 days. E: time changed by -10 hours. F: date changed by -5 days.

* * * * *

DELETED OBSERVATIONS.

The following observations are to be deleted.

Object		Date	UT	R. A. (1950)	Decl.	Reference		Obs.
1990 QV9	*	1990 08 29.40694	22 53 01.02	-07 47 05.6	MPC17336			675
1990 QV9		1990 08 29.44375	22 52 59.20	-07 47 15.6	MPC17336			675
1		1952 11 24.78762	04 44 59.94	+18 53 38.2	MPC 884			021
1		1952 12 05.80318	04 34 10.42	+19 11 49.3	MPC 884			021
1		1952 12 15.80671	04 24 11.43	+19 32 03.8	MPC 884			021
1		1958 01 17.85208	07 42 05.84	+31 00 03.2	MPC 1814			990
1		1958 01 18.78958	07 41 26.48	+31 03 24.9	MPC 1814			990
1		1968 05 22.83172	13 41 16.78	+00 57 58.3	MPC 3390			073
1		1968 05 22.83379	13 41 16.78	+00 57 58.7	MPC 3390			073
1		1968 06 12.84305	13 35 30.80	+00 41 00.7	MPC 3390			073
1		1968 06 12.85067	13 35 30.84	+00 41 01.0	MPC 3390			073
1		1972 01 13.96526	09 48 52.00	+26 32 56.7	MPC 3783			128
1		1972 02 07.77731	09 30 26.86	+29 44 44.0	MPC 3783			128
2		1940 01 11.05794	07 17 53.17	-30 36 58.4	MPC 614			804
2		1946 07 02.04843	18 18 36.20	+23 43 00.2	MPC 117			804
2		1956 08 29.91111	21 12 12.03	+08 28 00.2	MPC 1563			990
2		1956 08 29.92500	21 12 32.57	+08 28 04.2	MPC 1563			990
2		1956 08 29.92500	21 12 16.04	+08 27 25.9	MPC 1563			990
2		1956 09 07.88395	21 06 25.17	+06 39 01.9	MPC 1535			012
2		1964 07 24.82714	15 50 15.83	+21 38 04.7	MPC 2957			073
2		1965 11 03.76866	20 20 44.62	-00 45 37.6	MPC 2958			073
2		1965 11 03.77786	20 20 45.01	-00 45 36.1	MPC 2958			073
3		1950 03 15.91667	11 50 35.7	+02 23 13	MPC 526			021
3		1951 04 28.00991	16 32 20.39	-05 15 01.6	MPC 705			077
3		1965 07 02.91866	20 52 36.59	-02 43 00.4	MPC 2959			073
3		1965 07 02.92674	20 52 36.38	-02 43 01.4	MPC 2959			073
3		1965 08 14.84290	20 19 25.74	-06 23 25.2	MPC 2959			073
3		1965 10 16.73142	20 15 16.34	-13 24 21.7	MPC 2960			073
3		1967 01 12.03077	08 31 49.47	+01 25 25.0	MPC 2951			013
3		1968 06 12.87801	13 59 28.60	+01 38 30.0	MPC 3393			073
3		1968 06 12.88702	13 59 28.30	+01 38 29.8	MPC 3393			073

4		1948	03	22.79439	07	03	35.00	+26	11	21.8	MPC 131 066
4		1950	10	14.85164	03	19	06.49	+07	49	25.5	MPC 526 021
4		1955	01	20.74402	05	04	03.22	+20	41	51.4	MPC 1345 021
4		1957	09	28.85625	01	16	41.31	-04	45	38.5	MPC 1699 990
4		1957	10	16.86458	01	00	12.16	-06	23	31.5	MPC 1699 990
4		1957	10	17.84861	00	59	21.83	-06	27	02.0	MPC 1699 990
4		1963	04	17.84970	11	30	10.36	+15	35	15.7	MPC 2756 073
5		1948	10	28.07352	01	19	55.35	+00	28	56.9	MPC 188 804
5		1950	03	15.91667	12	08	51.8	+05	09	27	MPC 526 021
5		1951	07	01.67733	19	40	35.03	-16	56	42.6	MPC 2336 330
5		1951	07	26.65000	19	22	25.92	-18	23	03.1	MPC 2336 330
5		1961	11	28.92777	07	03	59.81	+15	43	18.0	MPC 2541 073
5		1961	11	28.94024	07	03	59.63	+15	43	17.8	MPC 2541 073
5		1961	12	17.82950	06	50	40.48	+15	57	35.5	MPC 2153 021
5		1965	10	07.09129	05	23	43.45	+16	40	04.9	MPC 2851 020
5		1965	10	07.09752	05	23	43.78	+16	39	48.6	MPC 2851 020
5		1965	10	07.10029	05	23	43.75	+16	39	49.2	MPC 2851 020
5		1965	10	23.21	05	29.6		+16	02		MPC 2648 020
5		1967	02	22.15082	16	08	49.47	-15	10	08.6	MPC 3324 020
5		1967	02	22.15429	16	08	50.07	-15	10	04.9	MPC 3324 020
5		1967	02	22.15776	16	08	50.44	-15	09	53.0	MPC 3324 020
5		1968	11	07.73897	21	28	38.88	-16	45	09.6	MPC 3411 020
5		1968	11	07.74867	21	28	34.19	-16	45	09.6	MPC 3411 020
5		1969	12	10.82535	03	23	53.24	+09	40	44.3	MPC 3405 022
6		1938	08	13.00320	20	37	59.94	-15	43	17.0	MPC 576 804
6		1938	08	16.97461	20	34	51.63	-16	34	02.0	MPC 576 804
6		1959	01	29.99444	10	16	56.74	+12	45	28.6	MPC 2365 051
6		1964	07	11.91042	16	44	39.25	-00	48	27.2	MPC 2961 073
6		1964	07	11.91734	16	44	39.22	-00	48	27.4	MPC 2961 073
6		1965	10	19.18136	05	30	09.77	+00	31	35.5	MPC 2851 020
6		1965	10	19.18690	05	30	09.61	+00	31	35.8	MPC 2851 020
6		1965	10	19.19002	05	30	09.40	+00	31	34.3	MPC 2851 020
6		1968	06	26.93365	18	33	10.45	-06	14	28.7	MPC 3300 057
6		1968	08	25.90937	18	00	18.16	-14	23	17.1	MPC 3411 020
6		1968	08	25.91146	18	00	18.17	-14	23	17.4	MPC 3411 020
6		1970	01	29.82420	07	06	20.33	+12	56	54.4	MPC 3385 021
6		1970	02	24.87361	06	56	10.14	+16	46	07.0	MPC 3783 128
6		1975	06	13.86025	14	28	45.73	+06	49	53.0	MPC 5019 128
6		1976	12	16.66006	00	32	01.38	-15	49	16.4	MPC 5336 073
6		1976	12	16.66057	00	32	01.17	-15	49	19.8	MPC 5336 073
7		1947	10	22.18569	03	00	05.40	+25	03	11.4	MPC 18 012
7		1954	09	24.82975	20	49	31.01	-08	53	54.4	MPC 1190 021
7		1962	11	21.01169	07	39	23.07	+17	54	02.1	MPC 2474 089
7		1963	02	19.79763	06	54	15.75	+16	41	16.8	MPC 2474 089
7		1965	08	05.87312	20	43	39.20	-10	06	19.9	MPC 2529 021
7		1969	11	01.74577	00	22	48.52	+12	15	53.0	MPC 3067 021
7		1969	11	04.73505	00	22	08.66	+11	53	56.9	MPC 3067 021
7		1969	12	09.78259	00	38	37.38	+09	52	05.6	MPC 3067 021
7		1971	07	19.98954	12	25	19.00	-07	14	02.3	MPC 3308 822
8		1948	09	23.94897	00	31	16.92	-09	25	17.2	MPC 340 021
8		1948	09	24.85092	00	30	30.40	-09	32	15.5	MPC 340 021
8		1948	09	26.83547	00	28	54.41	-09	48	31.3	MPC 340 021
8		1961	09	07.89668	23	31	11.22	-14	13	42.8	MPC 2539 073
8		1961	09	07.92174	23	31	45.18	-14	13	31.8	MPC 2539 073
8		1961	09	18.86993	23	21	15.33	-15	33	28.0	MPC 2540 073
8		1961	10	10.77366	23	06	40.21	-16	56	49.6	MPC 2540 073
8		1961	11	09.70960	23	10	26.72	-14	47	10.0	MPC 2541 073
8		1961	12	02.71052	23	31	50.08	-11	20	18.6	MPC 2541 073
8		1961	12	11.85936	23	43	41.16	-09	34	49.0	MPC 2541 073

8	1961	12	11.86905	23	43	41.91	-09	34	42.6	MPC 2541	073
8	1969	01	20.68958	06	28	24.22	+22	37	29.4	MPC 3961	075
9	1942	12	21.20642	07	53	43.57	+26	27	32.6	RI 2438	028
9	1960	10	11.97112	02	10	39.51	+06	21	19.9	MPC 2537	073
9	1960	11	07.70901	01	48	20.31	+04	46	55.0	MPC 2538	073
9	1960	11	07.72009	01	48	19.86	+04	46	55.5	MPC 2538	073
9	1960	11	28.66618	01	37	13.38	+05	15	07.1	MPC 2538	073
9	1960	11	28.67865	01	37	13.35	+05	15	07.2	MPC 2538	073
9	1960	12	06.66372	01	38	25.24	+05	36	52.3	MPC 2538	073
9	1960	12	15.69765	01	28	49.64	+06	24	06.6	MPC 2538	073
9	1960	12	15.71981	01	28	49.86	+06	23	58.3	MPC 2538	073
9	1962	05	12.83855	12	29	53.53	+03	14	05.0	MPC 2541	073
9	1975	10	30.71182	05	32	41.45	+22	24	49.4	MPC 4948	330
9	1981	06	29.86371	16	16	32.89	-22	41	51.6	MPC 7531	073
9	1981	06	29.87895	16	16	32.84	-22	41	58.6	MPC 7531	073
10	1941	12	20.08626	03	37	14.00	+22	43	32.4	MPC 391	804
10	1950	06	06.61508	17	03	20	-25	42.5		MPC 494	377
10	1962	07	06.95049	22	23	50.23	-06	12	18.1	MPC 2864	073
10	1962	07	06.96711	22	23	50.39	-06	12	17.0	MPC 2864	073
10	1962	08	25.81563	22	01	57.61	-07	38	58.5	MPC 2864	073
10	1962	08	25.83087	22	01	56.89	-07	39	00.5	MPC 2864	073
10	1962	08	31.81041	21	57	16.58	-08	00	08.6	MPC 2864	073
10	1962	08	31.81872	21	57	26.56	-08	00	10.8	MPC 2864	073
10	1962	09	03.86315	21	55	28.27	-08	09	55.7	MPC 2864	073
10	1962	09	03.87771	21	55	27.69	-08	09	57.2	MPC 2864	073
10	1962	09	04.78495	21	54	36.43	-08	14	07.9	MPC 2865	073
10	1962	09	04.80018	21	54	35.75	-08	14	11.0	MPC 2865	073
10	1962	09	29.74439	21	41	52.57	-09	24	55.2	MPC 2865	073
10	1962	09	29.76101	21	41	52.27	-09	24	57.4	MPC 2865	073
10	1962	10	05.75156	21	40	11.34	-09	25	03.0	MPC 2865	073
10	1962	10	12.74803	21	40	02.47	-09	42	04.8	MPC 2865	073
10	1962	10	12.75565	21	40	02.67	-09	42	05.0	MPC 2865	073
10	1962	10	13.70063	21	40	03.27	-09	42	43.0	MPC 2865	073
10	1963	11	19.83585	02	12	09.89	+17	46	44.5	MPC 2543	073
10	1963	11	19.84719	02	12	09.42	+17	46	44.8	MPC 2543	073
10	1971	03	18.75139	08	21	29.66	+16	35	45.1	MPC 5101	073
10	1971	03	18.76455	08	21	28.98	+16	35	42.9	MPC 5101	073
11	1962	11	19.71033	22	18	18.71	-15	08	01.5	MPC 2615	073
11	1962	11	19.71916	22	18	18.88	-15	08	02.0	MPC 2615	073
11	1965	04	02.95819	13	51	35.83	-03	36	42.5	MPC 2906	084
11	1965	04	27.88002	13	28	49.35	-01	16	21.2	MPC 2906	084
11	1965	06	03.87507	13	12	35.19	-00	33	27.2	MPC 2963	073
11	1968	01	24.83861	07	58	18.86	+19	58	53.0	MPC 3413	020
11	1968	01	24.84138	07	58	18.66	+19	58	53.4	MPC 3413	020
11	1968	01	24.84415	07	58	18.54	+19	58	54.0	MPC 3413	020
11	1968	03	15.78562	07	33	09.42	+22	18	12.0	MPC 3398	073
11	1968	03	15.79531	07	33	09.41	+22	18	10.9	MPC 3398	073
11	1970	11	04.83027	01	10	10.59	-00	45	45.2	MPC 3399	073
11	1970	11	04.83997	01	10	08.90	-00	45	30.6	MPC 3399	073
11	1980	04	24.78320	10	46	24.10	+13	05	03.7	MPC 9326	073
11	1980	04	24.79411	10	46	24.08	+13	05	03.5	MPC 9326	073
12	1943	10	30.84884	03	04	43.51	+20	27	02.9	RI 2518	028
12	1943	10	30.93380	03	04	38.31	+20	26	16.2	RI 2518	028
12	1946	07	29.80417	18	10	12.50	-09	29	15.8	MPC 91	066
12	1947	12	17.00558	06	17	56.82	+15	50	04.8	MPC 60	006
12	1950	10	05.83958	01	42	18.2	+19	56	10	MPC 526	021
12	1950	10	06.83405	01	40	53.39	+19	54	14.9	MPC 526	021
12	1950	10	11.82399	01	37	44.37	+19	55	35.2	MPC 526	021
12	1961	11	28.90457	04	17	05.75	+18	47	17.6	MPC 2541	073

12	1961	11	28.91842	04	17	05.26	+18	47	12.5	MPC 2541 073
12	1968	11	19.96367	03	09	59.94	+19	24	25.2	MPC 3414 020
12	1968	11	19.97268	03	09	59.45	+19	24	34.4	MPC 3414 020
12	1969	02	06.81261	03	07	22.63	+14	54	38.4	MPC 3414 020
12	1969	02	06.81677	03	07	22.68	+14	54	38.3	MPC 3414 020
13	1943	04	04.90451	11	48	37.17	+21	58	41.9	RI 2519 028
13	1966	08	24.10717	03	50	49.09	+16	59	19.8	MPC 2798 012
13	1966	10	19.12284	04	01	57.99	+23	16	03.7	MPC 2986 012
13	1969	09	18.79948	19	49	30.50	-42	11	17.7	MPC 3415 020
13	1969	09	18.80190	19	49	30.70	-42	11	14.0	MPC 3415 020
14	1942	02	18.88750	09	34	51.51	+28	27	16.8	RI 2397 028
14	1961	11	09.81417	02	58	15.92	+07	21	48.3	MPC 2541 073
14	1961	11	25.02112	02	44	17.46	+06	58	24.7	MPC 2541 073
14	1961	11	25.32574	02	44	16.67	+06	58	24.0	MPC 2541 073
14	1971	02	02.77302	07	44	03.74	+30	13	24.6	MPC 3386 021
14	1973	10	23.87598	00	17	13.79	-11	58	34.5	MPC 4948 330
14	1973	11	19.70485	00	06	05.43	-11	18	14.3	MPC 5148 073
14	1973	11	19.71386	00	06	05.35	-11	17	58.0	MPC 5148 073
15	1938	12	03.49520	05	20	41.15	+35	34	46.0	RI 1911 337
15	1946	08	23.79635	21	59	18.10	+01	14	40.9	MPC 91 066
15	1946	09	12.75174	21	40	36.80	+00	53	32.5	MPC 91 066
15	1950	07	22.01472	19	36	39.81	-21	11	07.5	MPC 539 804
15	1959	08	22.93114	23	06	58.26	+10	54	47.2	MPC 2537 073
15	1959	08	25.96831	23	04	09.49	+11	01	26.8	MPC 2383 073
15	1961	04	11.7759	08	53	14.6	+07	56	59	MPC 2362 128
15	1961	04	14.7623	08	54	24.2	+07	55	21	MPC 2362 128
15	1961	04	15.7796	08	54	45.4	+07	54	31	MPC 2362 128
15	1963	08	16.85200	20	06	11.28	-14	41	35.0	MPC 2322 021
15	1963	08	26.86722	19	58	41.41	-14	24	06.0	MPC 2322 021
15	1963	10	17.72512	20	05	45.63	-12	30	55.7	MPC 2542 073
16	1939	08	10.08778	20	25	13.00	-17	22	24.6	MPC 605 804
16	1939	08	16.99185	20	19	54.94	-17	53	17.4	MPC 605 804
16	1955	12	20.90222	04	24	53.69	+17	00	40.3	MPC 1345 021
16	1965	12	28.96994	04	19	18.26	+16	54	18.0	MPC 2852 020
16	1965	12	28.99141	04	19	17.49	+16	54	19.1	MPC 2852 020
16	1968	05	03.94866	14	58	41.45	-12	25	28.8	MPC 3301 057
16	1968	08	16.84010	14	48	41.93	-13	01	31.7	MPC 3416 020
16	1968	08	16.84219	14	48	42.75	-13	01	21.3	MPC 3416 020
16	1969	11	03.75457	20	43	16.61	-18	10	08.2	MPC 3416 020
17	1938	07	01.98906	17	15	06.10	-16	55	15.6	MPC 577 804
17	1961	05	12.54738	13	56	29.96	-01	14	24.7	MPC 2222 334
18	1942	04	17.91945	15	23	44.38	-03	28	17.9	RI 2397 028
18	1948	02	20.05451	09	07	50.28	+13	43	14.5	MPC 167 804
18	1955	03	11.85599	09	16	19.53	+15	34	54.0	MPC 1499 084
18	1958	01	09.80967	04	12	56.44	+05	20	03.5	MPC 2011 084
18	1960	08	19.59961	19	45	47.82	-14	38	25.4	MPC 2222 334
18	1967	07	06.05859	21	01	46.33	-07	22	03.8	MPC 3326 020
18	1967	07	06.05928	21	01	46.44	-07	22	03.8	MPC 3326 020
18	1967	07	06.06275	21	01	46.39	-07	22	03.6	MPC 3326 020
19	1958	05	27.64089	15	11	35.9	-17	03	24	MPC 2193 337
19	1959	11	12.73887	23	35	25.00	-02	01	02.8	MPC 2537 073
19	1962	07	07.83037	16	08	05.01	-19	15	19.4	MPC 2864 073
19	1962	07	07.84422	16	08	05.39	-19	15	15.5	MPC 2864 073
19	1962	07	21.81674	16	01	10.11	-19	08	05.5	MPC 2864 073
19	1962	07	21.83059	16	01	10.05	-19	08	05.5	MPC 2864 073
19	1962	08	01.80056	16	02	14.83	-19	14	00.5	MPC 2864 073
19	1962	08	01.81441	16	02	15.35	-19	14	04.6	MPC 2864 073
19	1962	08	03.78510	16	02	48.46	-19	12	31.6	MPC 2864 073
19	1962	08	03.80410	16	02	48.74	-19	12	31.6	MPC 2864 073

19	1962	08	04.77990	16	03	15.20	-19	10	36.8	MPC 2864 073
19	1962	08	04.79791	16	03	15.48	-19	11	29.0	MPC 2864 073
19	1969	04	16.84722	12	39	47.82	-04	58	31.5	MPC 3187 990
19	1969	04	16.86805	12	39	46.66	-04	58	29.2	MPC 3187 990
20	1951	02	02.96555	09	43	14.11	+12	20	43.9	MPC 598 077
20	1951	03	06.60326	09	16	05.20	+14	48	38.1	MPC 2335 330
20	1951	03	07.55561	09	15	35.18	+14	51	26.3	MPC 2335 330
20	1951	03	13.60282	09	12	49.97	+15	09	08.2	MPC 2335 330
20	1951	03	14.66296	09	12	29.49	+15	11	14.7	MPC 2335 330
20	1951	04	03.50323	09	24	35.35	+14	41	50.1	MPC 2335 330
21	1943	11	05.03104	00	19	50.94	-02	40	08.3	MPC 403 804
21	1957	02	28.74722	12	36	57.55	+00	59	53.8	MPC 3060 388
21	1962	10	25.84447	00	25	48.15	+03	32	23.5	MPC 2542 073
21	1966	11	17.85453	02	33	09.03	+11	51	30.8	MPC 3326 020
21	1966	11	17.86768	02	33	08.47	+11	51	29.9	MPC 3326 020
22	1946	10	20.90713	02	50	11.66	+04	41	21.9	MPC 2340 047
22	1946	10	24.92662	02	46	40.44	+04	39	57.2	MPC 2340 047
22	1946	10	25.10668	02	46	30.45	+04	39	54.5	MPC 2340 047
22	1946	10	26.03952	02	45	39.31	+04	39	47.0	MPC 2340 047
22	1946	11	21.87873	02	20	55.72	+05	12	09.2	MPC 2340 047
22	1946	11	23.87875	02	19	22.62	+05	18	08.5	MPC 2340 047
22	1951	11	02.57292	02	59	14.78	+07	33	29.5	MPC 2336 330
22	1956	11	21.97884	02	56	12.30	+10	26	09.5	MPC 1623 006
22	1969	06	13.98120	15	20	32.98	-16	03	29.1	MPC 3418 020
22	1969	06	13.98605	15	20	32.84	-16	03	29.1	MPC 3418 020
22	1971	12	16.73270	03	23	47.0	+17	55	13	MPC 3386 021
24	1947	02	15.53428	08	43	38	+19	24.9		MPC 333 377
24	1953	03	06.8792	11	09	25.89	+06	26	11.3	MPC 917 990
24	1956	10	05.97847	01	38	22.21	+09	49	49.7	MPC 1564 990
24	1958	01	17.83284	07	02	32.57	+23	47	16.7	MPC 1814 990
25	1962	12	25.61745	05	14	14.89	-02	01	17.8	MPC 2316 334
26	1937	11	25.85346	03	05	30.92	+18	09	28.6	MPC 3202 020
26	1937	11	25.88445	03	05	29.16	+18	09	26.7	MPC 3202 020
26	1961	03	13.96042	12	40.0		+00	26		MPC 2120 990
27	1941	03	18.939	12	51.9		-02	36		MPC 61 031
27	1955	01	19.82653	08	24	04.00	+20	47	36.6	MPC 1345 021
27	1955	02	16.78347	07	59	31.87	+22	21	19.5	MPC 1345 021
27	1959	04	30.89583	12	23.8		-00	09		MPC 1993 990
28	1951	01	31.97324	09	52	09.21	+11	37	50.3	MPC 598 077
28	1954	12	23.47361	03	23	49.90	+04	27	17.0	MPC 2294 388
28	1954	12	23.48750	03	23	49.72	+04	27	17.7	MPC 2294 388
28	1958	10	14.81389	23	38.8		-11	15		MPC 1893 990
28	1958	10	15.82222	23	37.7		-11	25		MPC 1893 990
28	1961	05	21.57	15	35.3		-04	42		MPC 2549 388
28	1962	07	23.97090	20	56	42.53	-13	22	17.0	MPC 2281 006
28	1971	07	09.88470	19	32	08.09	-13	50	15.2	MPC 3487 006
28	1971	07	17.80867	19	25	42.65	-14	34	18.6	MPC 5103 073
28	1971	07	17.82182	19	25	43.18	-14	34	18.8	MPC 5103 073
29	1962	10	23.87295	02	39	03.73	+22	54	02.0	MPC 2542 073
29	1964	04	03.82056	11	09	23.58	+05	24	44.0	MPC 2416 021
29	1966	12	05.85417	01	18	29.69	+15	03	17.4	MPC 2733 990
29	1966	12	05.87500	01	18	29.44	+15	03	13.5	MPC 2733 990
30	1960	10	10.79936	02	39	19.80	+19	30	12.4	MPC 2537 073
30	1960	10	28.81356	02	23	31.57	+18	29	38.4	MPC 2538 073
30	1960	11	05.78444	02	13	44.06	+17	52	12.8	MPC 2538 073
30	1960	11	09.95564	02	12	57.77	+17	30	27.2	MPC 2538 073
30	1960	12	15.73055	01	57	16.11	+15	26	07.5	MPC 2538 073
30	1960	12	15.75756	01	57	16.24	+15	26	06.5	MPC 2538 073
30	1969	03	17.76944	09	56	32.54	+10	48	03.4	MPC 3961 075

30	1970 06 23.94449	16 43 33.64	-24 48 59.8	MPC 6359	020
30	1970 06 23.94691	16 43 33.57	-24 48 58.7	MPC 6359	020
30	1971 12 16.73270	03 05 49.9	+20 40 34	MPC 3386	021
348	1971 03 28.88741	12 30 41.67	+12 39 28.6	MPC 3458	095
348	1971 03 28.93185	12 30 41.73	+12 39 27.6	MPC 3458	095
501	1960 02 03.39	11 58.8	+06 03	MPC 2062	760

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IDENTIFICATION CHANGES.

Continuation to MPC 17484.

Object	Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	Obs.
1941 FN1 *	1941 03	20.98929	13 46 52.76	+07 34 44.0	1941 HA		062
1941 FN1	1941 03	21.03131	13 46 50.97	+07 35 03.9	1941 HA		062
1948 XS *	1948 12	03.933	06 00.06	+21 45.4	19		022
1948 XS	1948 12	04.875	05 59.15	+21 46.4	19		022
1979 YD10*	1979 12	23.86933	03 38 15.15	+09 55 55.9	2732	17.0	095
1982 SC13*	1982 09	17.82987	22 36 53.50	-07 38 13.9	1982 PW		095
1982 SD13*	1982 09	21.87836	23 23 03.94	-05 59 24.5	1982 SM5	17.0	095
1985 YO2 *	1985 12	17.44514	07 30 54.76	+19 22 12.3	1985 XN2		675
1985 YO2	1985 12	17.46597	07 30 53.97	+19 22 13.8	1985 XN2		675
1986 WD11*	1986 11	28.98537	04 12 09.28	+21 54 42.9	1986 WF1		046
1986 WD11	1986 11	28.99961	04 12 08.70	+21 54 40.7	1986 WF1		046
1988 EZ2 *	1988 03	13.22344	10 08 57.14	+04 30 18.5	1988 EG1		675
1989 SM12*	1989 09	28.46180	02 59 19.61	+12 23 38.0	1988 RK1	17.9	675
1989 SM12	1989 09	28.50555	02 59 18.87	+12 23 30.9	1988 RK1		675
1990 QY9 *	1990 08	26.20347	23 14 53.63	-05 33 08.2	1990 QK6	18.7	809
1990 QY9	1990 08	26.21667	23 14 53.04	-05 33 11.0	1990 QK6		809
1990 QY9	1990 08	26.22986	23 14 52.33	-05 33 13.6	1990 QK6		809
1990 RU5 *	1990 09	13.31979	22 41 07.00	-08 58 17.2	1990 QV9	17.2	675
1990 RU5	1990 09	13.35122	22 41 05.46	-08 58 25.2	1990 QV9		675
1990 VJ8 *	1990 11	12.61424	01 46 34.58	+16 08 30.4	1990 UK1	16.0	877
1990 VJ8	1990 11	12.63310	01 46 33.84	+16 08 21.4	1990 UK1		877

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IDENTIFICATION.

The following identification with a numbered minor planet, by G. V. Williams, continues the list on MPC 17484.

1948 XS = (182)

* * * * *

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

046 Klet. Observer A. Mrkos.
372 Geisei. 0.60-m reflector. Observer T. Seki.
376 Uenohara. Observer N. Kawasato.
391 Sendai Observatory Ayashi Station. 0.30-m reflector. Observer M. Koishikawa.
402 Dynic Astronomical Observatory. 0.25-m f/3.4 Schmidt. Observer A. Sugie.

409 Mizuho. 0.25-m f/5.4 reflector. Observer T. Hioki.
413 Siding Spring. 1.2-m and Uppsala Southern Schmidts. Observers M. Hartley, R. H. McNaught and P. McKenzie. Measured by R. H. McNaught and A. Boattini.
474 Mt. John University Observatory. 0.6-m reflector and 0.25-m astrograph. Observers A. C. Gilmore and P. M. Kilmartin.
540 Linz. Observers E. Meyer, E. Obermair and H. Raab.
547 Wroclaw. Observer J. Bem. Measured by B. Szszodrowska-Kozar.
589 Stroncone. 0.5-m f/7.5 Ritchey-Chretien. Observers A. Vagnozzi, G. C. Morando, S. Casulli and R. Castellani.
657 Victoria. 0.25-m Schmidt and 0.5-m reflector + CCD. Observers J. B. Tatum, D. D. Balam and R. M. Robb.
675 Palomar. 1.5-m reflector + CCD and 0.46-m Schmidt. Observers G. A. Carlson, J. Gibson, E. Helin, K. Lawrence, D. H. Levy, P. Rose, C. S. Shoemaker and E. M. Shoemaker.
688 Lowell Observatory, Anderson Mesa Station. 1.1-m Hall reflector + CCD. Observers B. A. Skiff and K. L. Faul. Measured by J. R. Pacatte and B. A. Skiff.
693 University of Arizona's Catalina Station. 1.5-m reflector encoders. Observer S. Larson.
801 Oak Ridge Observatory. 1.5-m reflector + CCD. Observers R. E. McCrosky, C.-Y. Shao and O. C. Dahl.
807 Cerro Tololo. Observer K. Meech.
875 Yorii. 0.30-m f/3.8 camera. Observers M. Arai and H. Mori.
877 Okutama. Observers T. Hioki and S. Hayakawa.
900 Kiryuu Observatory, Ohtsu. 0.16-m f/2.5 Schmidt. Observers K. Ikeda and Y. Ikari. Long. and Parallax 135.99, -350, -243 (see MPC 16637).
984 Eastfield. Observer H. B. Ridley. Communicated by G. M. Hurst.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
		Periodic Comet Smirnova-Chernykh					
/1984 V	1990	12 10.63368	05 17 58.48	+23 30 44.1	16.5T		372
/1984 V	1990	12 10.64653	05 17 58.27	+23 30 44.3			372
		Comet Levy-Rudenko (1984 XXIII)					
/1984 XXIII	1984	12 14.69359	18 34 10.08	+26 09 34.5			547
/1984 XXIII	1984	12 14.71119	18 34 09.24	+26 10 01.5			547
		Comet Furuyama (1988 IV)					
/1988 IV	1988	01 21.46806	01 51 45.51	-16 54 03.7			474
/1988 IV	1988	01 21.47581	01 51 44.96	-16 54 13.3			474
/1988 IV	1988	06 11.77046	02 50 29.69	-55 17 12.2			474
/1988 IV	1988	06 11.78204	02 50 30.50	-55 17 38.1			474
/1988 IV	1988	07 14.76793	04 20 02.92	-81 24 01.8			474
/1988 IV	1988	07 14.78101	04 20 09.82	-81 24 39.5			474
		Periodic Comet Tempel 2					
/1988 XIV	1990	04 29.98053	06 10 52.59	+20 28 33.5		1	807
/1988 XIV	1990	04 29.99089	06 10 52.83	+20 28 34.3		1	807
/1988 XIV	1990	04 29.99156	06 10 53.18	+20 28 33.7		1	807
/1988 XIV	1990	04 30.00075	06 10 53.62	+20 28 35.1		1	807
		Periodic Comet Kopff					
/1988k	1991	01 15.09146	01 41 01.58	+05 15 54.9	18.2T	2	688
/1988k	1991	01 15.09655	01 41 01.79	+05 15 56.3		2	688
/1988k	1991	01 15.10120	01 41 01.88	+05 15 59.0		2	688

Periodic Comet Kearns-Kwee

/1989u	1991	01	05.60972	06	56	38.24	+31	22	06.5			900
/1989u	1991	01	05.62188	06	56	38.14	+31	22	04.2			900
/1989u	1991	01	14.18311	06	49	58.46	+30	40	18.6			801
/1989u	1991	01	15.18657	06	49	15.44	+30	34	54.9			801
/1989u	1991	01	18.09074	06	47	17.65	+30	18	47.6			801
/1989u	1991	01	18.10903	06	47	16.90	+30	18	41.6			801
/1989u	1991	01	19.60625	06	46	20.18	+30	10	10.0			900
/1989u	1991	01	19.64167	06	46	18.78	+30	09	55.3			900
/1989u	1991	01	19.75017	06	46	15.31	+30	09	15.9			046
/1989u	1991	01	19.76441	06	46	14.76	+30	09	09.8			046
/1989u	1991	01	20.31372	06	45	54.39	+30	05	58.1			657
/1989u	1991	01	20.78176	06	45	38.29	+30	03	14.9			046

Comet Austin (1989c1)

/1989c1	1990	06	23.44450	15	41	05.94	-34	04	43.2	15	T	474
/1989c1	1990	06	23.45104	15	41	04.96	-34	04	48.2			474

Comet Skorichenko-George (1989e1)

/1989e1	1990	12	27.59122	08	57	57.25	-38	57	02.0	17.5N		474
/1989e1	1990	12	27.61610	08	57	55.71	-38	57	19.9			474
/1989e1	1991	02	07.51058	08	08	10.69	-42	49	27.5	17	T	3 413
/1989e1	1991	02	07.54530	08	08	08.46	-42	49	23.7			3 413

Comet Levy (1990c)

/1990c	1990	09	16.41889	16	28	47.07	-34	40	50.6			474
/1990c	1990	09	16.41976	16	28	46.80	-34	40	51.6			474
/1990c	1990	09	17.45807	16	23	37.86	-35	06	20.9			474
/1990c	1990	09	17.45865	16	23	37.66	-35	06	21.7			474
/1990c	1990	09	18.45459	16	18	58.49	-35	28	43.7			474
/1990c	1990	09	18.45517	16	18	58.32	-35	28	44.4			474
/1990c	1990	09	19.41537	16	14	43.67	-35	48	35.5			474
/1990c	1990	09	19.41595	16	14	43.53	-35	48	36.6			474
/1990c	1991	01	07.67402	12	58	29.10	-39	40	50.3			413
/1990c	1991	01	09.79188	12	51	42.75	-39	25	39.5	9	T	372
/1990c	1991	01	09.79406	12	51	42.31	-39	25	39.5			372
/1990c	1991	01	22.80017	12	00	49.44	-36	23	57.1	10	T	372
/1990c	1991	01	27.73895	11	37	44.17	-34	19	24.8		4	413
/1990c	1991	01	27.74274	11	37	43.24	-34	19	19.1		5	413
/1990c	1991	01	28.76603	11	32	44.88	-33	48	46.5			413
/1990c	1991	01	31.71979	11	18	10.5	-32	11	23			376

Periodic Comet Peters-Hartley

/1990d	1990	07	20.37019	14	12	51.59	-17	48	06.0	16	T	474
/1990d	1990	07	20.39166	14	12	55.05	-17	47	45.8			474

Periodic Comet Wolf-Harrington

/1990e	1991	01	13.95699	00	01	27.31	+12	18	08.9		6	801

Comet McNaught-Hughes (1990g)

/1990g	1990	06	23.47807	17	20	15.55	-64	55	47.2			474
/1990g	1990	06	23.51904	17	20	04.39	-64	55	19.6			474
/1990g	1990	07	20.41839	15	46	11.17	-56	23	24.2	17.2T		474
/1990g	1990	07	20.42852	15	46	09.84	-56	23	11.1			474
/1990g	1991	01	27.71997	16	18	26.88	-15	49	49.0	16	T	413
/1990g	1991	02	12.75969	16	18	12.14	-11	28	25.7	15.5T	7	413

Comet Tsuchiya-Kiuchi (1990i)

/1990i	1990	12	17.43061	05	22	49.22	-44	18	52.4	14.8N	474
/1990i	1990	12	17.43542	05	22	46.20	-44	18	49.8		474
/1990i	1991	01	11.47190	03	00	12.03	-32	10	37.5	16.3N	474
/1990i	1991	01	11.47676	03	00	11.31	-32	10	28.3		474
/1990i	1991	01	12.49377	02	57	43.68	-31	40	55.3	16.4N	474
/1990i	1991	01	12.50147	02	57	42.58	-31	40	42.7		474
/1990i	1991	01	17.45706	02	47	42.57	-29	24	56.7	16.5N	474
/1990i	1991	01	17.46464	02	47	41.66	-29	24	45.3		474

Periodic Comet Mueller 2

/1990j	1990	12	14.00453	00	46	09.71	+04	53	11.3		801
/1990j	1990	12	14.02484	00	46	10.91	+04	53	13.6		801
/1990j	1990	12	20.00924	00	52	38.37	+05	09	44.5		801
/1990j	1990	12	20.02437	00	52	39.37	+05	09	46.5		801

Periodic Comet Holt-Olmstead

/1990k	1990	12	14.00935	00	54	31.50	+17	25	48.9		801
/1990k	1990	12	14.03612	00	54	32.44	+17	25	59.6		801

Periodic Comet Mueller 3

/1990l	1990	12	15.03271	01	09	22.86	-04	24	29.0		801
/1990l	1990	12	15.06027	01	09	23.34	-04	24	23.3		801

Periodic Comet Harrington-Abell

/1990m	1990	09	18.28372	01	16	11.75	+17	49	56.8	22 N	8 675
/1990m	1990	09	18.30006	01	16	11.11	+17	49	57.0		8 675

Periodic Comet Taylor

/1990n	1991	01	05.22150	07	27	20.38	+21	02	59.2		657
/1990n	1991	01	05.23481	07	27	19.79	+21	03	14.1		657
/1990n	1991	01	14.20025	07	21	02.02	+24	03	18.7		801
/1990n	1991	01	14.21249	07	21	01.45	+24	03	33.5		801
/1990n	1991	01	16.16237	07	19	38.91	+24	41	59.1	9	801
/1990n	1991	01	16.17265	07	19	38.45	+24	42	11.2		801
/1990n	1991	02	05.46875	07	09	08.4	+30	30	42	A	376

Periodic Comet Shoemaker-Levy 1

/1990o	1991	01	18.05331	02	19	36.92	+24	02	01.5		801
/1990o	1991	01	18.05922	02	19	37.36	+24	02	06.7		801

Periodic Comet Shoemaker-Levy 2

/1990p	1991	01	15.11764	02	27	35.91	+13	28	06.8	18.2N	B 688
/1990p	1991	01	15.12272	02	27	36.39	+13	28	08.4		B 688

Periodic Comet Metcalf-Brewington

/1991a	1991	01	12.41944	00	20	17.79	-05	17	25.8	8.5T	372
/1991a	1991	01	12.42317	00	20	18.15	-05	17	16.8	13.6N	474
/1991a	1991	01	12.42757	00	20	18.92	-05	17	13.1		474
/1991a	1991	01	13.44583	00	23	02.48	-05	05	35.3	9 T	372
/1991a	1991	01	13.76389	00	23	53.76	-05	01	54.6		984
/1991a	1991	01	13.96525	00	24	26.13	-04	59	33.3		801
/1991a	1991	01	13.96880	00	24	26.68	-04	59	30.7		801
/1991a	1991	01	13.97088	00	24	27.01	-04	59	29.3		801
/1991a	1991	01	15.45590	00	28	25.95	-04	42	01.2	10 T	372
/1991a	1991	01	15.47882	00	28	29.52	-04	41	44.6		875
/1991a	1991	01	15.48449	00	28	30.35	-04	41	41.0		875
/1991a	1991	01	17.42708	00	33	43.95	-04	18	21.7	13.6N	474
/1991a	1991	01	17.42975	00	33	44.35	-04	18	20.8		474

/1991a	1991	01	17.76667	00	34	39.00	-04	14	26.5		984
/1991a	1991	01	17.97122	00	35	12.18	-04	11	58.1	C	801
/1991a	1991	01	20.17031	00	41	08.29	-03	45	11.0		657
/1991a	1991	01	25.72083	00	56	11.05	-02	36	02.8		046
/1991a	1991	01	25.72257	00	56	11.24	-02	35	59.8		046

Comet Arai (1991b)

/1991b	1991	01	08.72049	08	47	01.76	+18	56	14.0		409
/1991b	1991	01	09.60660	08	44	41.63	+20	54	37.6		409
/1991b	1991	01	13.49031	08	33	20.64	+29	27	43.4	11.5T	372
/1991b	1991	01	13.49186	08	33	20.29	+29	27	54.9	11.5T	372
/1991b	1991	01	13.49340	08	33	19.94	+29	28	06.4	11.5T	372
/1991b	1991	01	14.23133	08	30	57.96	+31	02	39.8		801
/1991b	1991	01	14.26575	08	30	51.09	+31	07	02.5		801
/1991b	1991	01	14.87604	08	28	52.20	+32	24	00.4		540
/1991b	1991	01	14.88785	08	28	49.65	+32	25	27.5		540
/1991b	1991	01	14.89028	08	28	49.45	+32	25	44.8		984
/1991b	1991	01	14.89907	08	28	47.33	+32	26	51.7		540
/1991b	1991	01	15.54097	08	26	38.99	+33	46	42.1		875
/1991b	1991	01	15.55185	08	26	36.66	+33	48	01.0		875
/1991b	1991	01	16.84758	08	22	09.18	+36	24	36.1		540
/1991b	1991	01	16.85938	08	22	06.40	+36	26	01.7		540
/1991b	1991	01	16.87118	08	22	03.76	+36	27	27.2		540
/1991b	1991	01	18.18738	08	17	20.64	+39	00	01.5		801
/1991b	1991	01	18.76354	08	15	12.60	+40	04	28.4		391
/1991b	1991	01	18.76910	08	15	11.55	+40	05	04.8		391
/1991b	1991	01	18.77465	08	15	10.16	+40	05	43.2		391
/1991b	1991	01	18.85382	08	14	54.07	+40	14	24.9		540
/1991b	1991	01	18.86840	08	14	50.54	+40	16	03.5		540
/1991b	1991	01	18.88229	08	14	47.55	+40	17	35.8		540
/1991b	1991	01	19.59514	08	12	07.38	+41	35	04.8		900
/1991b	1991	01	19.61563	08	12	02.46	+41	37	18.2		900
/1991b	1991	01	19.82639	08	11	14.98	+41	59	46.6		589
/1991b	1991	01	19.82986	08	11	14.07	+42	00	06.5		589
/1991b	1991	01	19.84722	08	11	10.11	+42	01	56.2		589
/1991b	1991	01	19.84896	08	11	09.78	+42	02	06.0		589
/1991b	1991	01	19.85069	08	11	09.39	+42	02	15.2		589
/1991b	1991	01	19.86458	08	11	05.90	+42	03	51.8		589
/1991b	1991	01	19.86805	08	11	05.19	+42	04	12.2		589
/1991b	1991	01	19.87153	08	11	04.40	+42	04	32.3		589
/1991b	1991	01	19.87500	08	11	03.79	+42	04	52.4		589
/1991b	1991	01	20.30382	08	09	25.14	+42	49	51.1		657
/1991b	1991	01	20.87014	08	07	13.85	+43	47	59.0		589
/1991b	1991	01	20.87361	08	07	13.09	+43	48	19.7		589
/1991b	1991	01	20.87708	08	07	12.30	+43	48	40.4		589
/1991b	1991	01	20.88055	08	07	11.47	+43	49	02.0		589
/1991b	1991	01	20.88403	08	07	10.79	+43	49	22.7		589
/1991b	1991	01	20.88750	08	07	09.73	+43	49	44.0		589
/1991b	1991	01	21.86111	08	03	20.44	+45	26	04.1		589
/1991b	1991	01	21.86458	08	03	19.77	+45	26	23.0		589
/1991b	1991	01	21.86805	08	03	18.85	+45	26	42.8		589
/1991b	1991	01	21.87153	08	03	18.20	+45	27	01.8		589
/1991b	1991	01	21.87500	08	03	17.37	+45	27	21.2		589
/1991b	1991	01	21.87847	08	03	16.54	+45	27	41.1		589
/1991b	1991	01	21.88194	08	03	15.72	+45	28	01.4		589
/1991b	1991	01	21.88542	08	03	14.90	+45	28	21.1		589
/1991b	1991	01	22.64861	08	00	11.51	+46	40	47.8	11 T	372
/1991b	1991	01	25.73941	07	47	30.86	+51	05	45.5		046
/1991b	1991	01	25.74184	07	47	30.13	+51	05	52.4		046

/1991b	1991	01	25.77234	07	47	20.87	+51	08	23.5	11	T	877
/1991b	1991	01	25.78264	07	47	18.21	+51	09	12.4			877
/1991b	1991	02	07.45972	06	54	53.86	+62	34	26.8	15	T	372
/1991b	1991	02	13.51979	06	33	53.46	+65	23	25.7			391
/1991b	1991	02	13.52743	06	33	51.98	+65	23	38.1			391

Comet Shoemaker-Levy (1991d)

/1991d	1991	01	13.44844	09	44	27.17	-03	23	18.0	15.0	T	675
/1991d	1991	01	13.46736	09	44	26.49	-03	23	08.3			675
/1991d	1991	01	15.49896	09	43	15.41	-03	06	03.4			675
/1991d	1991	01	15.52326	09	43	14.47	-03	05	53.0			675
/1991d	1991	01	19.65104	09	40	38.59	-02	28	24.8	15	T	391
/1991d	1991	01	19.67535	09	40	37.98	-02	28	11.2			391
/1991d	1991	01	22.42569	09	38	45.73	-02	01	18.2	15.5	T	675
/1991d	1991	01	22.45469	09	38	44.45	-02	01	01.1			675
/1991d	1991	01	28.76094	09	34	05.39	-00	53	19.4	15.5	T	413
/1991d	1991	01	29.64278	09	33	24.21	-00	43	14.3	16	T	372
/1991d	1991	01	29.66840	09	33	22.80	-00	42	58.3			372
/1991d	1991	02	07.55277	09	26	03.28	+01	06	57.2	16	T	372
/1991d	1991	02	07.56458	09	26	02.66	+01	07	06.7			372
/1991d	1991	02	07.69514	09	25	55.78	+01	08	51.1	15	T	402
/1991d	1991	02	07.70556	09	25	55.23	+01	09	01.1			402
/1991d	1991	02	13.67014	09	20	41.74	+02	30	23.8			391
/1991d	1991	02	13.68403	09	20	40.97	+02	30	35.5			391

Periodic Comet Shoemaker-Levy 3

/1991e	1991	02	07.34149	09	20	10.76	+13	28	17.8	16.5	T	675
/1991e	1991	02	08.26041	09	19	28.22	+13	29	53.0			675
/1991e	1991	02	08.33216	09	19	24.04	+13	30	00.6			693
/1991e	1991	02	09.17072	09	18	45.65	+13	31	27.1			801
/1991e	1991	02	09.19856	09	18	44.31	+13	31	30.2			801
/1991e	1991	02	09.36041	09	18	36.56	+13	31	47.0			801
/1991e	1991	02	09.49549	09	18	30.27	+13	32	05.3	17	T	402
/1991e	1991	02	09.51215	09	18	29.07	+13	32	06.4			402
/1991e	1991	02	10.15613	09	17	59.78	+13	33	11.4			801
/1991e	1991	02	10.17293	09	17	58.97	+13	33	12.9			801
/1991e	1991	02	10.56528	09	17	40.88	+13	33	59.0	17	T	413
/1991e	1991	02	10.65556	09	17	36.19	+13	34	03.9	17	T	372
/1991e	1991	02	10.71111	09	17	33.58	+13	34	07.8			372
/1991e	1991	02	11.17399	09	17	12.51	+13	34	58.3			801
/1991e	1991	02	11.29214	09	17	06.94	+13	35	10.4		D	801
/1991e	1991	02	11.47634	09	16	58.72	+13	35	34.5		E	413
/1991e	1991	02	12.28321	09	16	21.11	+13	36	53.9			801
/1991e	1991	02	12.30396	09	16	20.11	+13	36	57.4			801
/1991e	1991	02	12.52431	09	16	10.32	+13	37	18.9	17	T	372
/1991e	1991	02	17.14657	09	12	41.78	+13	45	15.5			801
/1991e	1991	02	17.16405	09	12	40.97	+13	45	17.1			801

Periodic Comet Shoemaker-Levy 4

/1991f	1991	02	09.45590	12	09	18.15	+02	30	56.6	17	T	675
/1991f	1991	02	11.27244	12	08	47.67	+02	42	27.5			675
/1991f	1991	02	12.74356	12	08	18.31	+02	52	13.2	17	T	413
/1991f	1991	02	12.76840	12	08	17.74	+02	52	16.1	16.5	T	372
/1991f	1991	02	12.77951	12	08	17.55	+02	52	21.5			372
/1991f	1991	02	13.63558	12	07	59.54	+02	58	12.8			413
/1991f	1991	02	14.46372	12	07	41.15	+03	03	46.3	17.0	T	675
/1991f	1991	02	16.28935	12	06	56.05	+03	16	40.0			801
/1991f	1991	02	16.33456	12	06	55.18	+03	16	59.3			801

Comet McNaught-Russell (1991g)

/1991g	1991	01	26.71715	11	23	43.87	-25 29 12.5		F 413
/1991g	1991	02	12.66106	11	09	35.31	-22 53 42.8	16.5T	G 413
/1991g	1991	02	12.70273	11	09	33.08	-22 53 15.7		G 413
/1991g	1991	02	13.59457	11	08	43.13	-22 43 19.9	17.5N	474
/1991g	1991	02	13.62034	11	08	41.87	-22 43 05.1		413
/1991g	1991	02	13.66755	11	08	38.98	-22 42 31.7		474
/1991g	1991	02	14.48740	11	07	53.12	-22 33 17.9		H 413
/1991g	1991	02	15.53275	11	06	54.00	-22 21 17.1		I 413

Note 1: correction to MPC 16935. 2: poor distribution of reference stars. 3: strongly condensed with very faint coma. 4: overexposed. 5: under-exposed. 6: bad tracking. 7: strongly condensed, 3′ coma to southeast. 8: prerecovery image. 9: stellar. A: faint, diffuse image. B: straight, narrow tail 59" long in p.a. 70 . C: very weak. D: near star. E: faint. F: diffuse, trailed, prediscovery image. G: moderately condensed with 1′ tail in p.a. 185 . H: well condensed. I: weak image on short exposure.

* * * * *

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.
012 Uccle							
T. Pauwels, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels, Belgium							
Double astrograph							
4719	1991 01	15.03750	07 23 37.33	+34 46 51.8	15		012
4719	1991 01	15.05833	07 23 35.53	+34 46 49.6			012
017 Hoher List							
E. W. Elst, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels, Belgium							
Observers E. W. Elst, E. Geyer							
Measurer E. W. Elst							
1990 XC1	1991 01	15.05556	07 49 21.37	+21 03 05.7			017
1990 XC1	1991 01	15.94722	07 48 16.75	+21 02 37.7			017
1990 XC1	1991 01	15.97014	07 48 15.11	+21 02 45.4			017
1990 XC1	1991 01	15.99028	07 48 13.57	+21 02 38.8	17.5		017
1990 XC1	1991 01	16.01319	07 48 11.54	+21 02 39.5			017
1991 AJ	1991 01	15.94722	08 06 42.82	+22 02 37.3			017
1991 AJ	1991 01	15.97014	08 06 41.34	+22 02 49.8			017
1991 AJ	1991 01	15.99028	08 06 39.11	+22 03 08.0	17.7		017
1991 AJ	1991 01	16.01319	08 06 37.30	+22 03 22.3			017
1991 BM2	1991 01	15.05556	07 52 01.53	+21 47 36.8	17.5		017
11	1991 01	15.05556	07 46 30.37	+19 49 43.3	12.0		017
925	1991 01	15.05556	08 03 35.95	+22 07 54.0			017
925	1991 01	15.94722	08 02 30.15	+22 02 42.0			017
925	1991 01	15.97014	08 02 28.38	+22 02 39.6			017
925	1991 01	15.99028	08 02 27.17	+22 02 30.4	14.5		017
925	1991 01	16.01319	08 02 25.30	+22 02 22.6			017
1067	1991 01	15.05556	07 54 46.04	+18 55 01.7			017
1067	1991 01	15.94722	07 53 50.21	+18 53 43.9			017
1067	1991 01	15.97014	07 53 48.89	+18 53 47.8			017
1067	1991 01	15.99028	07 53 47.60	+18 53 43.8	17.0		017
1067	1991 01	16.01319	07 53 46.07	+18 53 41.1			017
1785	1991 01	15.94722	08 10 23.58	+18 12 15.5			017
1785	1991 01	15.97014	08 10 22.44	+18 12 23.4			017
1785	1991 01	15.99028	08 10 20.67	+18 12 21.6	17.5		017
1785	1991 01	16.01319	08 10 19.13	+18 12 22.3			017
2264	1991 01	15.05556	08 08 46.42	+19 59 23.0			017
2264	1991 01	15.94722	08 08 02.46	+20 01 34.9			017
2264	1991 01	15.97014	08 08 01.37	+20 01 45.6			017
2264	1991 01	15.99028	08 08 00.64	+20 01 42.9	17.5		017
2264	1991 01	16.01319	08 07 59.44	+20 01 46.4			017
2510	1991 01	15.94722	08 05 14.59	+22 30 15.7			017
2510	1991 01	15.97014	08 05 13.48	+22 30 26.0			017
2510	1991 01	15.99028	08 05 12.07	+22 30 30.5	18.0		017
2510	1991 01	16.01319	08 05 10.91	+22 30 38.1			017
4720	1991 01	15.05556	07 45 49.94	+19 54 32.6	17.0		017
033 Tautenburg							
F. Borngen, Karl Schwarzschild Observatorium, O-6901 Tautenburg, Federal Republic of Germany							
Observer F. Borngen							
1.3-m Schmidt telescope							
1961 BC	1991 01	09.89722	06 42 24.76	+25 08 59.4			033
1961 BC	1991 01	15.92361	06 35 31.77	+25 30 52.4	17.7		033
1961 BC	1991 01	15.96806	06 35 28.77	+25 31 01.7			033
1961 BC	1991 01	16.92361	06 34 26.29	+25 34 13.8			033

1979	UD1		1990	12	19.07812	09	15	39.52	+15	05	24.2	18.3	033
1979	UD1		1990	12	23.99167	09	14	25.39	+15	14	05.0		033
1979	UD1		1990	12	28.15313	09	12	55.54	+15	23	35.9		033
1979	UD1		1991	01	15.04028	09	02	20.23	+16	23	49.1		033
1979	UD1		1991	01	15.09306	09	02	17.73	+16	23	59.9		033
1979	UD1		1991	01	15.94583	09	01	39.07	+16	27	29.5	17.9	033
1979	UD1		1991	01	15.99028	09	01	36.93	+16	27	39.9		033
1979	UD1		1991	01	16.94722	09	00	52.68	+16	31	37.6		033
1982	UQ3		1990	11	25.06076	07	25	22.47	+23	33	45.0	18.1	033
1982	UQ3		1991	01	09.89722	06	46	27.43	+24	44	30.9		033
1982	UQ3		1991	01	15.92361	06	40	10.00	+24	48	40.8	17.6	033
1982	UQ3		1991	01	15.96806	06	40	07.27	+24	48	42.6		033
1982	UQ3		1991	01	16.92361	06	39	11.66	+24	49	09.0		033
1990	YP		1991	01	15.04028	09	03	10.82	+16	07	54.9		033
1990	YP		1991	01	15.09306	09	03	07.70	+16	07	33.6		033
1990	YP		1991	01	15.94583	09	02	19.41	+16	01	43.0	17.0	033
1990	YP		1991	01	15.99028	09	02	16.76	+16	01	24.3		033
1990	YP		1991	01	16.94722	09	01	20.94	+15	54	52.6		033
1991	AW		1991	01	15.04028	09	02	33.57	+15	59	00.3		033
1991	AW		1991	01	15.09306	09	02	31.16	+15	59	34.1		033
1991	AW		1991	01	15.94583	09	01	54.04	+16	08	53.0	15.7	033
1991	AW		1991	01	15.99028	09	01	51.99	+16	09	21.9		033
1991	AW		1991	01	16.94722	09	01	09.01	+16	19	55.3		033
1991	AF1		1991	01	15.04028	08	55	24.30	+15	32	55.2		033
1991	AF1		1991	01	15.09306	08	55	21.57	+15	32	54.2		033
1991	AF1		1991	01	15.94583	08	54	38.53	+15	32	49.0	16.5	033
1991	AF1		1991	01	15.99028	08	54	36.14	+15	32	48.7		033
1991	AF1		1991	01	16.94722	08	53	46.90	+15	32	45.4		033
1991	AH1		1991	01	15.04028	08	59	52.35	+15	42	18.3		033
1991	AH1		1991	01	15.09306	08	59	49.66	+15	42	25.7		033
1991	AH1		1991	01	15.94583	08	59	07.77	+15	44	38.2	18.6	033
1991	AH1		1991	01	15.99028	08	59	05.43	+15	44	44.2		033
1991	AH1		1991	01	16.94722	08	58	16.83	+15	47	18.4		033
1991	AQ2	*	1991	01	15.04028	08	56	31.36	+17	14	51.0		033
1991	AQ2		1991	01	15.09306	08	56	28.75	+17	15	00.7		033
1991	AQ2		1991	01	15.94583	08	55	46.42	+17	17	53.0	17.8	033
1991	AQ2		1991	01	15.99028	08	55	44.02	+17	18	01.9		033
1991	AQ2		1991	01	16.94722	08	54	55.17	+17	21	20.4		033
1991	AR2	*	1991	01	15.04028	08	57	30.59	+16	03	09.7		033
1991	AR2		1991	01	15.09306	08	57	27.45	+16	03	17.6		033
1991	AR2		1991	01	15.94583	08	56	34.79	+16	05	37.2	19.2	033
1991	AR2		1991	01	15.99028	08	56	31.93	+16	05	45.1		033
1991	AR2		1991	01	16.94722	08	55	32.03	+16	08	25.4		033
1991	AS2	*	1991	01	15.04028	08	57	34.61	+15	39	45.7		033
1991	AS2		1991	01	15.09306	08	57	31.45	+15	39	50.8		033
1991	AS2		1991	01	15.94583	08	56	40.64	+15	41	24.5	19.1	033
1991	AS2		1991	01	15.99028	08	56	37.88	+15	41	28.5		033
1991	AS2		1991	01	16.94722	08	55	39.85	+15	43	16.5		033
1991	AT2	*	1991	01	15.04028	08	58	13.88	+14	52	42.1		033
1991	AT2		1991	01	15.09306	08	58	11.61	+14	52	55.2		033
1991	AT2		1991	01	15.94583	08	57	36.94	+14	56	33.0	17.7	033
1991	AT2		1991	01	15.99028	08	57	35.02	+14	56	44.7		033
1991	AT2		1991	01	16.94722	08	56	55.05	+15	00	53.8		033
1991	AU2	*	1991	01	15.04028	09	02	05.07	+16	43	41.9		033
1991	AU2		1991	01	15.09306	09	02	02.25	+16	43	44.4		033
1991	AU2		1991	01	15.94583	09	01	18.93	+16	44	32.1	19.0	033
1991	AU2		1991	01	15.99028	09	01	16.52	+16	44	33.9		033
1991	AU2		1991	01	16.94722	09	00	26.37	+16	45	30.0		033
1991	AV2	*	1991	01	15.04028	09	03	11.43	+17	35	19.7		033

1991	AV2		1991	01	15.09306	09	03	08.76	+17	35	27.4		033
1991	AV2		1991	01	15.94583	09	02	27.30	+17	37	39.4	17.5	033
1991	AV2		1991	01	15.99028	09	02	25.00	+17	37	46.7		033
1991	AV2		1991	01	16.94722	09	01	36.88	+17	40	18.8		033
1991	AW2	*	1991	01	15.04028	09	05	50.40	+15	25	04.7		033
1991	AW2		1991	01	15.09306	09	05	48.34	+15	25	32.7		033
1991	AW2		1991	01	15.94583	09	05	15.67	+15	33	01.8	18.1	033
1991	AW2		1991	01	15.99028	09	05	13.81	+15	33	23.9		033
1991	AW2		1991	01	16.94722	09	04	36.02	+15	41	53.5		033
1991	AX2	*	1991	01	15.04028	09	06	17.73	+17	00	15.3		033
1991	AX2		1991	01	15.09306	09	06	14.72	+17	00	33.9		033
1991	AX2		1991	01	15.94583	09	05	27.45	+17	05	36.4	18.0	033
1991	AX2		1991	01	15.99028	09	05	24.83	+17	05	52.2		033
1991	AX2		1991	01	16.94722	09	04	30.36	+17	11	36.8		033
1991	AY2	*	1991	01	15.04028	09	07	02.29	+17	03	37.6		033
1991	AY2		1991	01	15.09306	09	06	59.40	+17	03	47.7		033
1991	AY2		1991	01	15.94583	09	06	14.29	+17	06	51.5	18.7	033
1991	AY2		1991	01	15.99028	09	06	11.77	+17	07	00.9		033
1991	AY2		1991	01	16.94722	09	05	19.50	+17	10	31.6		033
1991	AZ2	*	1991	01	15.04028	09	07	44.50	+15	06	11.3		033
1991	AZ2		1991	01	15.09306	09	07	42.04	+15	06	14.1		033
1991	AZ2		1991	01	15.94583	09	07	02.63	+15	06	53.6	17.9	033
1991	AZ2		1991	01	15.99028	09	07	00.51	+15	06	56.9		033
1991	AZ2		1991	01	16.94722	09	06	15.24	+15	07	44.2		033
1991	AA3	*	1991	01	15.04028	09	07	48.46	+17	32	47.1		033
1991	AA3		1991	01	15.09306	09	07	45.41	+17	32	55.1		033
1991	AA3		1991	01	15.94583	09	06	57.73	+17	35	20.2	18.8	033
1991	AA3		1991	01	15.99028	09	06	55.09	+17	35	27.4		033
1991	AA3		1991	01	16.94722	09	06	00.40	+17	38	12.5		033
1991	AB3	*	1991	01	15.94583	08	57	01.54	+16	11	18.9	18.9	033
1991	AB3		1991	01	15.99028	08	56	59.53	+16	11	26.6		033
1991	AB3		1991	01	16.94722	08	56	17.54	+16	14	21.2		033
1991	AC3	*	1991	01	15.94583	09	00	47.74	+15	55	56.0	19.0	033
1991	AC3		1991	01	15.99028	09	00	45.52	+15	56	07.3		033
1991	AC3		1991	01	16.94722	08	59	59.24	+16	00	36.7		033
1991	AD3	*	1991	01	15.94583	09	03	09.15	+16	44	25.6	19.5	033
1991	AD3		1991	01	15.99028	09	03	06.32	+16	44	30.8		033
1991	AD3		1991	01	16.94722	09	02	08.41	+16	46	39.7		033
1991	AE3	*	1991	01	15.94583	09	07	25.94	+15	15	28.3	17.6	033
1991	AE3		1991	01	15.99028	09	07	23.76	+15	15	41.6		033
1991	AE3		1991	01	16.94722	09	06	37.77	+15	20	29.2		033
1991	BG		1991	01	15.04028	08	59	30.19	+16	24	15.2		033
1991	BG		1991	01	15.09306	08	59	27.87	+16	24	25.1		033
1991	BG		1991	01	15.94583	08	58	52.13	+16	27	20.0	17.8	033
1991	BG		1991	01	15.99028	08	58	50.21	+16	27	28.8		033
1991	BG		1991	01	16.94722	08	58	09.29	+16	30	48.1		033
100			1991	01	15.04028	09	07	45.02	+16	46	19.8		033
100			1991	01	15.09306	09	07	42.82	+16	46	33.0		033
100			1991	01	15.94583	09	07	08.18	+16	50	11.0	14.1	033
100			1991	01	15.99028	09	07	06.32	+16	50	22.5		033
100			1991	01	16.94722	09	06	26.65	+16	54	30.2		033
1714			1991	01	15.04028	09	00	43.04	+15	39	49.7		033
1714			1991	01	15.09306	09	00	40.16	+15	39	53.3		033
1714			1991	01	15.94583	08	59	54.54	+15	40	45.7	16.6	033
1714			1991	01	15.99028	08	59	52.07	+15	40	48.3		033
1714			1991	01	16.94722	08	58	59.81	+15	41	50.1		033

046 Klet
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Observers A. Mrkos, Z. Vavrova
0.6-m Maksutov reflector

1980	TP		1991	01	18.89688	07	51	58.43	+19	01	51.9	16.8	046
1980	TP		1991	01	18.91117	07	51	57.40	+19	01	53.8		046
1984	UB3		1991	01	17.88646	07	52	39.22	+20	04	43.3		046
1984	UB3		1991	01	17.89965	07	52	38.45	+20	04	45.2		046
1984	UB3		1991	01	18.89688	07	51	43.83	+20	07	02.9		046
1984	UB3		1991	01	18.91117	07	51	43.17	+20	07	03.5		046
1984	UB3		1991	01	19.80313	07	50	54.49	+20	09	02.7		046
1984	UB3		1991	01	19.81667	07	50	53.87	+20	09	03.4		046
1985	PE2		1991	01	17.85451	07	43	14.74	+21	13	25.7		046
1985	PE2		1991	01	17.86748	07	43	14.03	+21	13	28.2		046
1985	PE2		1991	01	18.86076	07	42	07.13	+21	19	14.0		046
1985	PE2		1991	01	18.87361	07	42	06.27	+21	19	18.8		046
1986	WE		1991	01	14.90596	06	58	35.80	+24	34	17.1		046
1986	WE		1991	01	14.92014	06	58	34.94	+24	34	21.0		046
1986	WE		1991	01	17.78406	06	55	42.31	+24	51	07.6		046
1986	WE		1991	01	17.79832	06	55	41.45	+24	51	12.6		046
1988	RX11		1991	01	19.83576	08	03	57.95	+20	45	17.3		046
1988	RX11		1991	01	19.84844	08	03	57.25	+20	45	19.0		046
1988	RX11		1991	01	20.81093	08	03	05.81	+20	47	51.4		046
1988	RX11		1991	01	20.82256	08	03	05.30	+20	47	53.8		046
1989	RM2		1991	01	17.82315	07	22	56.09	+21	43	47.2		046
1989	RM2		1991	01	17.83594	07	22	55.32	+21	43	47.5		046
1989	RM2		1991	01	18.81892	07	21	56.95	+21	44	22.5		046
1989	RM2		1991	01	18.83316	07	21	56.40	+21	44	24.2		046
1990	SQ		1991	01	14.74336	01	12	21.87	+56	50	03.9		046
1990	SQ		1991	01	14.75100	01	12	25.35	+56	50	10.0		046
1990	SQ		1991	01	17.73154	01	33	33.30	+57	21	09.1		046
1990	SQ		1991	01	17.73738	01	33	35.71	+57	21	11.5		046
1990	SQ		1991	01	19.72622	01	47	58.61	+57	34	56.1		046
1990	SQ		1991	01	19.73073	01	48	00.42	+57	34	57.2		046
1990	SQ		1991	01	20.72516	01	55	14.89	+57	39	43.1		046
1990	SQ		1991	01	20.72968	01	55	16.74	+57	39	44.2		046
1991	AJ		1991	01	19.83576	08	03	25.68	+22	29	27.3		046
1991	AJ		1991	01	19.84844	08	03	25.16	+22	29	31.4		046
1991	AJ		1991	01	20.81093	08	02	36.09	+22	36	02.6		046
1991	AJ		1991	01	20.82256	08	02	35.62	+22	36	04.8		046
1991	BZ		1991	01	17.88646	07	59	09.80	+18	58	11.8	16.7	046
1991	BZ		1991	01	17.89965	07	59	08.95	+18	58	10.9		046
1991	BZ		1991	01	18.89688	07	58	07.31	+18	58	04.6		046
1991	BZ		1991	01	18.91117	07	58	06.64	+18	58	05.9		046
1991	BA1		1991	01	19.80313	07	49	45.56	+18	48	37.2	16.9	046
1991	BA1		1991	01	19.81667	07	49	44.84	+18	48	39.9		046
1991	BF1		1991	01	18.89688	07	55	31.03	+21	18	30.4	16.6	046
1991	BF1		1991	01	18.91117	07	55	30.20	+21	18	37.2		046
1991	BK2	*	1991	01	16.82634	07	44	21.31	+23	32	15.5	16.6	046
1991	BK2		1991	01	16.84093	07	44	20.36	+23	32	20.4		046
1991	BK2		1991	01	17.85451	07	43	25.57	+23	35	33.9		046
1991	BK2		1991	01	17.86748	07	43	24.81	+23	35	36.8		046
1991	BK2		1991	01	18.86076	07	42	30.91	+23	38	48.2		046
1991	BK2		1991	01	18.87361	07	42	30.43	+23	38	50.8		046
1991	BL2	*	1991	01	17.85451	07	45	59.72	+21	33	55.0	16.9	046
1991	BL2		1991	01	17.86748	07	45	59.03	+21	34	01.0		046
1991	BL2		1991	01	18.86076	07	44	55.34	+21	34	43.7		046
1991	BL2		1991	01	18.87361	07	44	54.44	+21	34	46.2		046
1991	BM2	*	1991	01	17.85451	07	49	30.89	+21	54	02.8	16.8	046
1991	BM2		1991	01	17.86748	07	49	30.08	+21	54	06.9		046

1991	BM2		1991	01	18.86076	07	48	36.84	+21	56	21.7		046
1991	BM2		1991	01	18.87361	07	48	36.10	+21	56	23.7		046
1991	BN2	*	1991	01	17.88646	07	49	54.33	+20	21	20.3	16.7	046
1991	BN2		1991	01	17.89965	07	49	53.68	+20	21	22.4		046
1991	BN2		1991	01	18.89688	07	48	53.96	+20	22	27.9		046
1991	BN2		1991	01	18.91117	07	48	52.83	+20	22	29.6		046
1991	BN2		1991	01	19.80313	07	47	59.75	+20	23	23.5		046
1991	BN2		1991	01	19.81667	07	47	58.81	+20	23	24.2		046
1991	BO2	*	1991	01	19.83576	08	06	15.04	+20	07	32.6	16.5	046
1991	BO2		1991	01	19.84844	08	06	14.25	+20	07	37.6		046
1991	BO2		1991	01	20.81093	08	05	10.78	+20	13	36.6		046
1991	BO2		1991	01	20.82256	08	05	10.15	+20	13	40.5		046
47			1991	01	14.85671	06	02	37.74	+30	28	28.8		046
47			1991	01	14.87083	06	02	37.05	+30	28	27.9		046
102			1991	01	05.77628	05	28	26.53	+16	09	54.4		046
102			1991	01	05.79052	05	28	25.80	+16	09	53.8		046
925			1991	01	19.83576	07	57	40.49	+21	39	48.1		046
925			1991	01	19.84844	07	57	39.56	+21	39	43.1		046
925			1991	01	20.81093	07	56	27.81	+21	33	53.8		046
925			1991	01	20.82256	07	56	26.97	+21	33	48.9		046
988			1991	01	16.82634	07	42	03.21	+23	36	43.3		046
988			1991	01	16.84093	07	42	02.41	+23	36	46.3		046
988			1991	01	17.85451	07	41	07.33	+23	38	58.3		046
988			1991	01	17.86748	07	41	06.72	+23	38	58.8		046
988			1991	01	18.86076	07	40	12.47	+23	41	09.7		046
988			1991	01	18.87361	07	40	11.87	+23	41	11.3		046
1017			1991	01	19.83576	08	07	30.15	+20	22	45.7		046
1017			1991	01	19.84844	08	07	29.38	+20	22	50.7		046
1017			1991	01	20.81093	08	06	33.12	+20	29	03.0		046
1017			1991	01	20.82256	08	06	32.29	+20	29	08.2		046
1057			1991	01	19.80313	07	42	50.72	+18	05	55.4		046
1057			1991	01	19.81667	07	42	49.95	+18	05	57.2		046
1067			1991	01	17.88646	07	51	49.86	+18	51	01.3		046
1067			1991	01	17.89965	07	51	48.98	+18	50	59.8		046
1067			1991	01	18.89688	07	50	47.17	+18	49	36.4		046
1067			1991	01	18.91117	07	50	46.33	+18	49	35.3		046
1067			1991	01	19.80313	07	49	51.61	+18	48	19.7		046
1067			1991	01	19.81667	07	49	50.78	+18	48	18.6		046
1251			1991	01	05.77628	05	22	39.56	+15	56	04.7		046
1251			1991	01	05.79052	05	22	38.89	+15	56	06.7		046
1382			1991	01	17.78406	06	51	02.23	+25	18	40.0		046
1382			1991	01	17.79832	06	51	01.32	+25	18	40.8		046
1682			1991	01	17.85451	07	49	58.41	+24	22	04.1		046
1682			1991	01	17.86748	07	49	57.50	+24	22	04.9		046
1682			1991	01	18.86076	07	48	44.78	+24	23	41.8		046
1682			1991	01	18.87361	07	48	43.85	+24	23	44.8		046
2366			1991	01	19.83576	08	12	15.98	+20	16	18.3		046
2366			1991	01	19.84844	08	12	15.20	+20	16	20.4		046
2764			1991	01	17.82315	07	28	23.02	+21	15	17.0		046
2764			1991	01	17.83594	07	28	22.00	+21	15	17.6		046
2764			1991	01	18.81892	07	27	13.82	+21	16	30.5		046
2764			1991	01	18.83316	07	27	12.97	+21	16	31.3		046
2978			1991	01	14.90596	06	57	49.70	+24	21	24.5		046
2978			1991	01	14.92014	06	57	49.07	+24	21	24.1		046
2999			1991	01	14.85671	06	11	37.58	+29	24	03.3		046
2999			1991	01	14.87083	06	11	36.67	+29	24	06.2		046
3137			1991	01	17.82315	07	18	13.55	+21	44	16.7		046
3137			1991	01	17.83594	07	18	12.67	+21	44	17.8		046
3137			1991	01	18.81892	07	17	11.58	+21	44	33.9		046

3137		1991	01	18.83316	07	17	10.98	+21	44	34.5	046
3814		1991	01	17.88646	07	50	56.08	+20	01	11.3	046
3814		1991	01	17.89965	07	50	55.49	+20	01	13.9	046
3814		1991	01	19.80313	07	49	16.42	+20	06	15.2	046
3814		1991	01	19.81667	07	49	15.78	+20	06	19.0	046
4249		1991	01	19.83576	08	01	21.44	+23	21	33.3	046
4249		1991	01	19.84844	08	01	20.80	+23	21	32.4	046
4249		1991	01	20.81093	08	00	24.96	+23	22	23.6	046
4249		1991	01	20.82256	08	00	24.39	+23	22	24.4	046
4263		1991	01	17.82315	07	27	20.24	+22	46	46.9	046
4263		1991	01	17.83594	07	27	19.21	+22	46	46.5	046
4263		1991	01	18.81892	07	26	07.51	+22	46	40.0	046
4263		1991	01	18.83316	07	26	06.55	+22	46	40.1	046
4277		1991	01	16.82634	07	45	45.81	+22	47	58.3	046
4277		1991	01	16.84093	07	45	44.96	+22	47	57.2	046
4277		1991	01	17.85451	07	44	38.89	+22	46	16.9	046
4277		1991	01	17.86748	07	44	37.89	+22	46	15.8	046
4277		1991	01	18.86076	07	43	33.37	+22	44	38.2	046
4277		1991	01	18.87361	07	43	32.61	+22	44	38.1	046
4301		1991	01	17.85451	07	40	48.41	+24	37	19.3	046
4301		1991	01	17.86748	07	40	47.81	+24	37	20.4	046
4301		1991	01	18.86076	07	39	52.91	+24	39	48.6	046
4301		1991	01	18.87361	07	39	52.17	+24	39	49.8	046
4702		1991	01	19.86840	09	08	42.99	+31	33	24.5	046
4702		1991	01	19.88125	09	08	42.56	+31	33	27.8	046
4702		1991	01	20.83958	09	07	48.39	+31	37	34.7	046
4702		1991	01	20.85086	09	07	47.60	+31	37	37.9	046
4709		1990	12	08.81471	04	46	48.84	+21	50	22.3	046
4709		1990	12	08.82756	04	46	48.39	+21	50	20.0	046

071 Bulgarian National Observatory
V. G. Shkodrov, Department of Astronomy, Bulgarian Academy of Sciences,
72 Lenin Boulevard, BG-1784 Sofia, Bulgaria
Observers V. G. Shkodrov, V. G. Ivanova, Ch. Dinev, V. I. Umlenski,
Measurer V. I. Umlenski

1989 YU9	*	1989	12	21.83715	03	30	36.11	+26	53	51.0	071
1989 YU9		1989	12	21.87950	03	30	34.32	+26	53	37.9	071
1989 YU9		1989	12	22.79449	03	29	57.29	+26	48	42.0	071
1989 YU9		1989	12	22.83344	03	29	55.70	+26	48	28.9	071
1989 YU9		1989	12	23.80138	03	29	18.37	+26	43	20.6	071
1989 YU9		1989	12	23.83836	03	29	17.01	+26	43	09.3	071
1		1989	12	21.92557	05	48	32.62	+25	50	03.8	071
1		1989	12	21.95925	05	48	29.84	+25	50	13.6	071
1		1989	12	22.87539	05	47	32.35	+25	53	35.8	071
1		1989	12	22.91839	05	47	29.53	+25	53	42.4	071
1		1989	12	23.87453	05	46	28.92	+25	57	11.9	071
1		1989	12	23.92181	05	46	25.95	+25	57	21.7	071
77		1989	12	22.87539	05	57	54.19	+27	37	35.5	071
77		1989	12	22.91839	05	57	51.44	+27	37	34.2	071
77		1989	12	23.87453	05	56	50.57	+27	37	25.9	071
77		1989	12	23.92181	05	56	47.49	+27	37	25.6	071
146		1989	12	21.92557	05	43	53.36	+24	42	36.0	071
146		1989	12	21.95925	05	43	50.74	+24	42	46.0	071
146		1989	12	22.87539	05	42	53.05	+24	46	06.8	071
146		1989	12	22.91839	05	42	50.27	+24	46	15.4	071
146		1989	12	23.87453	05	41	49.75	+24	49	44.9	071
146		1989	12	23.92181	05	41	46.63	+24	49	54.3	071
190		1989	12	21.94767	06	52	33.10	+14	26	28.9	071
190		1989	12	21.98639	06	52	31.48	+14	26	30.2	071

190	1989	12	22.94044	06	51	51.95	+14	27	06.3		071
190	1989	12	22.98066	06	51	50.27	+14	27	06.7		071
190	1989	12	23.89929	06	51	11.92	+14	27	45.2		071
201	1989	12	21.76752	02	03	56.57	+04	34	55.2		071
201	1989	12	21.80942	02	03	56.98	+04	35	04.0		071
201	1989	12	22.77447	02	04	09.62	+04	38	33.3		071
201	1989	12	22.81411	02	04	10.07	+04	38	41.5		071
201	1989	12	23.78314	02	04	24.17	+04	42	19.4		071
201	1989	12	23.81943	02	04	24.72	+04	42	28.3		071
295	1989	12	21.92557	05	55	48.47	+23	59	20.2		071
295	1989	12	21.95925	05	55	45.83	+23	59	16.7		071
295	1989	12	22.87539	05	54	51.82	+23	57	50.3		071
295	1989	12	22.91839	05	54	49.09	+23	57	46.9		071
295	1989	12	23.87453	05	53	52.24	+23	56	15.7		071
295	1989	12	23.92181	05	53	49.37	+23	56	10.4		071
425	1989	12	21.92557	05	47	55.57	+26	13	01.7		071
425	1989	12	21.95925	05	47	53.03	+26	13	03.2		071
425	1989	12	22.87539	05	46	59.10	+26	13	47.9		071
425	1989	12	22.91839	05	46	56.45	+26	13	49.3		071
425	1989	12	23.87453	05	45	59.73	+26	14	33.3		071
425	1989	12	23.92181	05	45	56.85	+26	14	36.1		071
444	1989	12	22.01064	07	24	56.16	+06	46	44.3	N	071
444	1989	12	22.02973	07	24	55.19	+06	46	44.2	N	071
444	1989	12	22.95890	07	24	10.10	+06	46	24.9	N	071
444	1989	12	23.00068	07	24	08.28	+06	46	22.8	N	071
444	1989	12	23.95925	07	23	21.12	+06	46	08.8	N	071
444	1989	12	23.99617	07	23	19.29	+06	46	10.8	N	071
579	1989	12	21.92557	05	40	00.94	+24	33	06.3		071
579	1989	12	21.95925	05	39	58.53	+24	33	12.8		071
579	1989	12	22.87539	05	39	06.94	+24	35	19.6		071
579	1989	12	22.91839	05	39	04.41	+24	35	25.6		071
579	1989	12	23.87453	05	38	10.19	+24	37	37.5		071
579	1989	12	23.92181	05	38	07.33	+24	37	44.4		071
677	1989	12	21.92557	05	49	37.31	+24	25	48.9		071
677	1989	12	21.95925	05	49	34.76	+24	25	41.8		071
677	1989	12	22.87539	05	48	42.27	+24	23	09.0		071
677	1989	12	22.91839	05	48	39.84	+24	22	59.8		071
677	1989	12	23.87453	05	47	44.56	+24	20	17.8		071
677	1989	12	23.92181	05	47	42.05	+24	20	09.6		071
974	1989	12	22.87539	05	59	10.04	+24	04	34.0		071
974	1989	12	22.91839	05	59	07.07	+24	04	42.9		071
974	1989	12	23.92181	05	58	01.17	+24	07	20.1		071
2288	1989	12	21.76752	02	17	07.58	+04	41	22.3		071
2288	1989	12	21.80942	02	17	06.99	+04	41	34.2		071
2288	1989	12	22.77447	02	16	53.80	+04	45	50.2		071
2288	1989	12	22.81411	02	16	53.25	+04	46	00.3		071
2288	1989	12	23.78314	02	16	41.40	+04	50	25.3		071
2288	1989	12	23.81943	02	16	40.83	+04	50	34.9		071
2512	1989	12	23.02603	09	22	13.67	+23	35	42.5		071
2512	1989	12	23.97800	09	22	12.14	+23	41	42.2		071
2512	1989	12	24.01405	09	22	11.80	+23	41	54.4		071
2962	1989	12	21.83715	03	29	32.98	+25	09	24.0		071
2962	1989	12	21.87950	03	29	31.03	+25	09	27.4		071
2962	1989	12	22.79449	03	28	51.10	+25	10	57.0		071
2962	1989	12	22.83344	03	28	49.35	+25	11	00.0		071
2962	1989	12	23.80138	03	28	08.87	+25	12	33.3		071
2962	1989	12	23.83836	03	28	07.07	+25	12	39.5		071
4410	1989	12	21.83715	03	26	15.77	+24	59	10.8		071
4410	1989	12	21.87950	03	26	14.28	+24	59	09.3		071

4410	1989 12 22.79449	03 25 44.38	+24 59 00.7		071
4410	1989 12 22.83344	03 25 43.11	+24 58 59.6		071
4410	1989 12 23.80138	03 25 12.92	+24 58 50.2		071
4410	1989 12 23.83836	03 25 11.72	+24 58 51.7		071

073 Bucharest
G. Bocsa, Center for Astronomy and Space Sciences, Cutitul de Argint 5, R-75212 Bucharest, Romania
0.38-m f/16 astrograph
SAOC

2	1988 10 13.69292	19 55 41.49	+02 47 28.4		073
2	1988 10 13.70469	19 55 41.78	+02 47 22.1		073
2	1988 10 17.68823	19 57 34.66	+02 09 50.7		073
2	1988 10 17.69724	19 57 34.94	+02 09 46.0		073
2	1988 10 24.67674	20 01 30.39	+01 08 56.0		073
2	1988 10 24.68505	20 01 30.67	+01 08 53.0		073
4	1988 04 07.73907	07 54 39.37	+25 54 13.2		073
4	1988 04 07.74392	07 54 39.71	+25 54 11.9		073
4	1989 07 04.85023	18 08 13.39	-21 53 30.8		073
4	1989 07 04.85992	18 08 12.76	-21 53 33.8		073
4	1989 07 10.83316	18 02 40.94	-22 22 02.1		073
4	1989 07 10.83869	18 02 40.61	-22 22 03.8		073
6	1989 03 01.70579	07 56 23.39	+18 35 18.4		073
6	1989 03 01.71410	07 56 23.22	+18 35 21.9		073
14	1988 04 07.79033	11 40 42.97	+19 19 43.9		073
14	1988 04 11.79222	11 38 27.23	+19 13 22.6		073
14	1988 04 11.79984	11 38 26.97	+19 13 21.7		073
15	1989 09 18.77430	21 42 27.92	+01 50 04.7		073
15	1989 09 18.78469	21 42 27.50	+01 50 03.7		073
15	1989 09 19.77503	21 41 50.80	+01 47 43.7		073
15	1989 09 19.78542	21 41 50.42	+01 47 41.9		073
18	1988 10 13.75386	22 35 59.39	-18 11 44.5		073
18	1988 10 13.76356	22 35 59.50	-18 11 46.5		073
18	1988 10 17.71420	22 37 12.77	-18 20 48.1		073
18	1988 10 17.72113	22 37 12.86	-18 20 49.4		073
63	1988 10 13.72547	21 23 13.03	-14 46 03.5		073
63	1988 10 13.73655	21 23 13.26	-14 46 01.1		073
71	1989 09 20.76954	21 27 53.74	-02 50 47.5		073
71	1989 09 20.78962	21 27 53.09	-02 50 46.3		073
105	1988 07 07.80333	16 31 06.49	+15 00 27.2		073
105	1988 07 07.81441	16 31 06.36	+15 00 22.1		073
444	1988 09 12.76336	22 34 02.29	+01 05 51.5		073
444	1988 09 12.77306	22 34 01.95	+01 05 39.6		073
980	1989 09 18.73933	21 00 20.05	+04 01 57.1		073
980	1989 09 18.75526	21 00 19.72	+04 01 57.2		073
980	1989 09 19.71997	21 00 02.19	+04 00 15.2		073
980	1989 09 19.73729	21 00 01.85	+04 00 14.2		073
980	1989 09 20.73249	20 59 45.65	+03 58 28.1		073
980	1989 09 20.74980	20 59 45.29	+03 58 26.9		073

091 Aurec-sur-Loire
R. Chanal, Observatoire de Nurol, F-43110 Aurec-sur-Loire, France
0.41-m reflector

957	1990 07 18.92292	19 41 20.74	-01 33 47.5		091
957	1990 07 19.01667	19 41 15.99	-01 33 49.5		091
957	1990 07 19.92569	19 40 31.66	-01 34 10.2		091
957	1990 07 19.99097	19 40 28.60	-01 34 13.0		091
1291	1990 07 18.98125	19 06 58.33	-08 43 22.2		091
1291	1990 07 19.89375	19 06 15.40	-08 44 38.8		091

1291		1990 07 19.95764	19 06 12.35	-08 44 46.9						091
1291		1990 07 21.89097	19 04 42.84	-08 47 45.6						091
2291		1990 07 18.90764	19 16 45.46	+07 39 35.7						091
2291		1990 07 18.99792	19 16 41.39	+07 39 05.0						091
2291		1990 07 19.90972	19 16 01.04	+07 33 55.1						091
2291		1990 07 19.97222	19 15 58.30	+07 33 28.6						091
2291		1990 07 21.90625	19 14 33.69	+07 22 02.9						091
2291		1990 07 21.92014	19 14 33.09	+07 21 58.6						091

220 Kavalur
R. Rajamohan, Indian Institute of Astrophysics, Bangalore 560034, India
Observers V. Moorthy, R. Rajamohan
0.45-m f/3 Schmidt
SAOC

1991 BV		1991 02 07.67917	09 35 54.68	+13 06 39.9					13.4	220
1991 BV		1991 02 07.76737	09 35 49.98	+13 07 40.1						220
1991 BV		1991 02 08.70626	09 35 02.99	+13 18 03.9						220
1991 CN		1991 02 08.77501	09 54 21.99	+17 41 06.7					16.1	220
1991 CN		1991 02 09.76876	09 53 18.61	+17 44 49.3						220
1991 CN		1991 02 09.82500	09 53 14.61	+17 45 02.7						220
1991 CF1	*	1991 02 07.67917	09 43 47.59	+14 51 36.4					16	220
1991 CF1		1991 02 07.76737	09 43 42.53	+14 51 47.7						220
1991 CF1		1991 02 08.70626	09 42 47.42	+14 53 31.1						220
1756		1991 01 20.68264	08 21 24.25	+17 47 34.5					14.5	220
1756		1991 01 20.81250	08 21 15.31	+17 47 45.0						220
1756		1991 01 21.72500	08 20 15.55	+17 48 58.1						220
2106		1991 01 20.83194	08 16 13.63	+13 14 28.4					15	220
2106		1991 01 20.90208	08 16 09.64	+13 14 52.7						220
2106		1991 01 21.74167	08 15 24.22	+13 19 39.7						220
2367		1991 02 08.80001	09 54 04.45	+09 52 41.7					13.9	220
2367		1991 02 09.68542	09 53 13.40	+09 57 58.6						220
2367		1991 02 09.74098	09 53 09.98	+09 58 19.0						220
3208		1991 01 20.68264	08 16 31.28	+18 46 19.5					14.5	220
3208		1991 01 20.81250	08 16 24.31	+18 46 48.2						220
3208		1991 01 21.72500	08 15 37.27	+18 50 04.9						220

327 Peking Observatory, Xinglong Station
Y.-L. Ge, Purple Mountain Observatory, Nanking, Peoples Republic of China
Observer Y.-L. Ge
Measurer Q. Wang

1991 BH	*	1991 01 16.75535	08 40 25.53	+20 11 33.4					14.5	327
1991 BH		1991 01 16.80014	08 40 21.79	+20 10 53.1						327
1991 BH		1991 01 17.61612	08 39 14.80	+19 58 49.2					14.5	327
1991 BH		1991 01 17.69580	08 39 07.58	+19 57 33.5						327
1991 BH		1991 01 17.76716	08 39 01.88	+19 56 31.5						327

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

1990 YB		1990 12 27.75868	08 17 04.16	+18 04 38.4					18	372
1990 YB		1990 12 27.77118	08 17 03.39	+18 04 42.4						372
1990 YB		1991 01 21.67622	07 56 19.63	+19 23 07.0					18	372
1990 YB		1991 01 21.68924	07 56 19.05	+19 23 14.2						372
1990 YP		1991 01 21.70278	08 56 26.91	+15 22 52.5					18	372
1990 YP		1991 01 21.71458	08 56 26.04	+15 22 49.2						372
1990 YX		1991 01 13.47395	06 43 58.69	+32 18 38.4					18	372
1991 AP		1991 01 21.72882	09 18 55.71	+19 19 47.1					18	372
1991 AP		1991 01 21.74063	09 18 55.22	+19 19 50.4						372
1991 BZ	*	1991 01 21.67622	07 55 16.90	+18 57 50.0					18	372

1991	BZ		1991	01	21.68924	07	55	16.35	+18 57 50.5	372
1991	BZ		1991	01	22.62431	07	54	19.76	+18 57 43.0	18 372
1991	BZ		1991	01	22.63681	07	54	19.04	+18 57 43.0	372
1991	BZ		1991	01	23.70347	07	53	14.86	+18 57 33.9	18 372
1991	BZ		1991	01	23.71389	07	53	14.28	+18 57 34.3	372
1091			1991	01	12.65278	09	32	09.24	+15 55 59.8	16 372
1091			1991	01	12.66493	09	32	08.84	+15 56 00.9	372
1130			1991	01	21.78160	10	33	09.36	+05 52 53.1	16.5 372
1130			1991	01	21.79479	10	33	08.85	+05 52 57.3	372
1295			1991	01	22.74479	10	49	23.12	+05 06 16.6	16 372
1295			1991	01	22.75833	10	49	22.81	+05 06 20.5	372
2683			1991	01	12.65278	09	32	26.19	+15 44 31.5	16.5 372
2683			1991	01	12.66493	09	32	25.75	+15 44 34.2	372
2928			1991	02	10.65556	09	16	42.45	+13 36 46.0	16 372
2928			1991	02	10.71111	09	16	39.39	+13 36 49.4	372
3535			1991	01	21.81024	10	38	47.24	+06 05 37.0	18.5 372
3535			1991	01	21.82326	10	38	47.00	+06 05 40.2	372
3535			1991	02	07.65932	10	26	29.55	+07 00 37.6	18 372
3535			1991	02	07.67326	10	26	28.93	+07 00 43.2	372
4350			1991	01	25.84722	13	47	22.74	-01 09 19.8	17 372

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

1852			1991	02	08.58646	10	44	05.37	+22 34 44.7	376
1852			1991	02	08.61563	10	44	04.37	+22 35 01.8	376

385 Nihondaira Observatory Oohira station
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers A. Natori, T. Urata
Measurer T. Urata
0.30-m f/3.8 hyperboloid astrocamera

1991	CY		1991	02	11.64444	10	18	50.83	-00 52 18.4	16.5 385

391 Sendai Observatory, Ayashi Station
M. Koishikawa, Sendai Municipal Observatory, 1-1 Sakuragaoka-koen, Sendai 980, Japan
Observer M. Koishikawa
0.30-m f/3.8 astrocamera

1985	UV4		1991	02	13.62500	09	31	42.88	+05 52 56.9	16.0 391
1985	UV4		1991	02	13.64722	09	31	41.78	+05 53 07.0	391
1991	BL	*	1991	01	19.65278	08	19	11.90	+07 24 29.4	16.5 391
1991	BL		1991	01	19.67361	08	19	10.71	+07 24 26.1	391
1991	BL		1991	01	20.68056	08	18	09.07	+07 22 13.8	391
1991	BL		1991	01	20.70139	08	18	07.94	+07 22 10.6	391
1991	BL		1991	01	22.72083	08	16	03.21	+07 18 17.4	391
1991	BL		1991	01	22.74167	08	16	01.74	+07 18 15.1	391
1991	BL		1991	01	23.73264	08	14	59.94	+07 16 38.7	391
1991	BL		1991	01	23.75417	08	14	58.91	+07 16 34.7	391
1991	BM	*	1991	01	19.65278	08	20	26.60	+08 34 01.8	17.0 391
1991	BM		1991	01	19.67361	08	20	25.26	+08 33 59.8	391
1991	BM		1991	01	22.72083	08	17	16.62	+08 33 09.6	391
1991	BM		1991	01	22.74167	08	17	15.35	+08 33 09.2	391
1991	CZ	*	1991	02	13.62500	09	31	31.65	+05 15 11.7	15.0 391
1991	CZ		1991	02	13.64722	09	31	30.28	+05 15 43.9	391

399 Kushiro
H. Kaneda, Taiyo MS 2-H, 2 chome 2-15, kawazoe 8 jo, Minami-ku, Sapporo 005, Japan

Observers S. Ueda, M. Matsuyama
Measurers H. Kaneda, K. Watanabe
0.16-m f/3.8 Wright-Schmidt camera, 0.25-m f/3.5 Schmidt camera

1988	CU7	1990	11	12.62396	04	41	24.09	+31	50	19.7	16.5	399
1988	CU7	1990	11	12.64340	04	41	23.08	+31	50	20.4		399
1988	CU7	1990	11	12.66146	04	41	21.70	+31	50	23.8		399
1988	CU7	1990	11	21.54444	04	31	39.74	+31	55	48.5	17	399
1988	CU7	1990	11	21.56007	04	31	38.72	+31	55	49.1		399
1988	CU7	1990	12	13.46528	04	05	39.84	+31	13	12.0	17	399
1988	CU7	1990	12	13.48021	04	05	38.88	+31	13	08.7		399
1988	CU7	1990	12	13.49659	04	05	37.85	+31	13	04.3		399
1988	CU7	1990	12	15.49028	04	03	32.79	+31	06	03.2	17	399
1988	CU7	1990	12	15.50521	04	03	31.78	+31	06	01.0		399
1989	AS	1989	01	13.57361	06	52	49.01	+22	54	03.1	17	399
1989	AS	1989	01	13.59028	06	52	48.01	+22	53	56.1		399
1989	AS	1989	01	13.60486	06	52	46.85	+22	53	47.8		399
1989	TP1	1991	01	14.63993	08	33	21.61	+17	37	39.3	16.5	399
1989	TP1	1991	01	14.65330	08	33	20.90	+17	37	41.8		399
1989	TP1	1991	01	14.66979	08	33	20.02	+17	37	45.3	16.5	399
1989	TP1	1991	01	14.68351	08	33	19.43	+17	37	47.2		399
1989	WB	1991	02	08.64253	11	31	06.66	+21	26	23.5	17	399
1989	WB	1991	02	08.66424	11	31	05.72	+21	26	32.0		399
1990	XV	1991	01	05.44236	07	20	02.19	+25	04	44.1	16.5	399
1990	XV	1991	01	05.45833	07	20	00.96	+25	04	40.8		399
1990	XV	1991	01	05.47361	07	20	00.13	+25	04	37.9		399
1990	YC	1991	01	14.51192	07	00	14.03	+25	13	23.6	16	399
1990	YC	1991	01	14.52674	07	00	13.23	+25	13	26.8		399
1990	YC	1991	01	14.54271	07	00	12.23	+25	13	29.5		399
1990	YK	1990	12	24.63681	07	58	29.18	+16	30	10.6	16.5	399
1990	YK	1990	12	24.65139	07	58	28.61	+16	30	11.5		399
1990	YK	1991	02	03.40278	07	21	05.98	+18	36	18.0	16.5	399
1990	YK	1991	02	03.41736	07	21	05.43	+18	36	20.9		399
1990	YL	1991	02	03.53299	08	13	08.69	+25	47	29.8	16	399
1990	YL	1991	02	03.54844	08	13	07.91	+25	47	32.1		399
1990	YL	1991	02	04.43750	08	12	23.76	+25	49	22.5	16.5	399
1990	YL	1991	02	04.45150	08	12	23.00	+25	49	23.4		399
1990	YL	1991	02	04.50775	08	12	20.13	+25	49	31.0		399
1990	YM	1991	02	03.46806	08	22	16.48	+41	34	05.1	15	399
1990	YM	1991	02	03.48264	08	22	15.50	+41	34	25.7		399
1990	YT	1991	01	23.63912	06	29	41.75	+19	58	29.0	16.5	399
1990	YT	1991	01	23.65686	06	29	40.73	+19	58	31.9		399
1991	AE	1991	01	14.56458	08	41	07.20	+17	40	40.0	16.5	399
1991	AE	1991	01	14.57917	08	41	06.28	+17	40	45.6		399
1991	AE	1991	01	14.63993	08	41	03.19	+17	41	12.5	16.5	399
1991	AE	1991	01	14.65330	08	41	02.76	+17	41	17.8		399
1991	AE	1991	01	14.66979	08	41	01.80	+17	41	23.8	16.5	399
1991	AE	1991	01	14.68351	08	41	01.06	+17	41	30.7		399
1991	AE	1991	01	23.69184	08	33	07.62	+18	45	40.9	16	399
1991	AE	1991	01	23.70729	08	33	06.61	+18	45	45.9		399
1991	AE	1991	01	23.72760	08	33	05.64	+18	45	53.3		399
1991	AE	1991	01	23.74340	08	33	04.92	+18	45	59.6		399
1991	AE	1991	02	08.58767	08	18	44.31	+20	37	00.7	16	399
1991	AE	1991	02	08.60799	08	18	43.30	+20	37	07.4		399
1991	AW	1991	01	14.61840	09	02	51.79	+15	54	27.0	15.5	399
1991	AW	1991	01	14.63333	09	02	51.16	+15	54	35.7		399
1991	AW	1991	01	14.65220	09	02	50.66	+15	54	50.2		399
1991	AB1	1991	01	14.56458	08	49	10.68	+16	09	15.5	16	399
1991	AB1	1991	01	14.57917	08	49	09.94	+16	09	21.1		399
1991	AB1	1991	01	14.59618	08	49	09.16	+16	09	25.2		399

1991	AF1		1991	01	14.61840	08	55	45.47	+15	32	59.4	16.5	399
1991	AF1		1991	01	14.63333	08	55	44.75	+15	32	58.6		399
1991	AF1		1991	01	14.65220	08	55	43.63	+15	32	58.0		399
1991	AP1		1991	01	05.44236	07	10	50.65	+24	38	04.6	16.5	399
1991	AP1		1991	01	05.45833	07	10	49.18	+24	38	05.6		399
1991	AP1		1991	01	05.47361	07	10	48.15	+24	38	06.2		399
1991	AX1		1991	01	14.56458	08	42	38.07	+18	00	23.9	16.5	399
1991	AX1		1991	01	14.57917	08	42	37.41	+18	00	28.7		399
1991	AX1	*	1991	01	14.65330	08	42	33.79	+18	00	43.8	16.5	399
1991	AX1		1991	01	14.66979	08	42	32.90	+18	00	51.0		399
1991	AX1		1991	01	14.68351	08	42	32.19	+18	00	55.5		399
1991	AX1		1991	01	23.69184	08	34	48.18	+18	39	22.2	16.5	399
1991	AX1		1991	01	23.70729	08	34	47.31	+18	39	25.1		399
1991	AX1		1991	01	23.72760	08	34	46.37	+18	39	30.4		399
1991	AX1		1991	01	23.74340	08	34	45.39	+18	39	31.6		399
1991	BA2	*	1991	01	23.73542	10	44	41.45	-01	36	07.1	16.5	399
1991	BA2		1991	01	23.75660	10	44	40.97	-01	36	08.4		399
1991	BA2		1991	02	04.56192	10	38	38.96	-01	39	27.7	16.5	399
1991	BA2		1991	02	04.57731	10	38	38.34	-01	39	25.6		399
1991	BA2		1991	02	14.69468	10	30	56.05	-01	19	28.3	16.5	399
1991	BA2		1991	02	14.70972	10	30	55.26	-01	19	25.1		399
1991	BP2	*	1991	01	23.69184	08	29	51.93	+18	35	28.6	14.5	399
1991	BP2		1991	01	23.70729	08	29	50.31	+18	35	15.5		399
1991	BP2		1991	01	23.72760	08	29	48.24	+18	34	57.8		399
1991	BP2		1991	01	23.74340	08	29	46.70	+18	34	42.5		399
1991	BP2		1991	02	08.51302	08	05	52.42	+14	50	03.4	16	399
1991	BP2		1991	02	08.52674	08	05	51.42	+14	49	55.3		399
1991	BP2		1991	02	08.54392	08	05	49.68	+14	49	38.6		399
1991	BP2		1991	02	08.55677	08	05	48.76	+14	49	26.6		399
1991	BQ2	*	1991	01	23.78351	11	32	34.90	+17	37	56.1	16	399
1991	BQ2		1991	01	23.80313	11	32	35.02	+17	38	07.9		399
1991	BQ2		1991	02	08.64253	11	29	21.58	+20	27	28.0	15.5	399
1991	BQ2		1991	02	08.66424	11	29	20.94	+20	27	43.0		399
1991	CA	*	1991	02	03.50064	10	26	49.68	+08	39	12.3	16.5	399
1991	CA		1991	02	03.51534	10	26	49.08	+08	39	16.2		399
1991	CA		1991	02	04.52668	10	26	06.16	+08	43	28.6	16	399
1991	CA		1991	02	04.54167	10	26	05.45	+08	43	32.1		399
1991	CA		1991	02	14.50012	10	17	49.04	+09	32	45.4	15.5	399
1991	CA		1991	02	14.51806	10	17	48.06	+09	32	53.1		399
4711			1990	12	20.61319	07	03	39.15	+17	58	26.1	16	399
4711			1990	12	20.63073	07	03	37.93	+17	58	32.2		399
4711			1990	12	25.68194	06	58	02.77	+18	28	31.6	16	399
4711			1990	12	25.69549	06	58	01.79	+18	28	34.7		399
4711			1990	12	25.72297	06	58	00.02	+18	28	45.1		399
4711			1990	12	25.73750	06	57	58.89	+18	28	51.1		399

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

1988	DA		1990	12	15.63333	05	59	57.46	+32	00	58.1	16.5	400
1988	DA		1990	12	15.65417	05	59	55.89	+32	01	00.3		400
1988	DA		1990	12	20.59931	05	53	40.98	+32	04	51.6	16.5	400
1988	DA		1990	12	20.62014	05	53	39.48	+32	04	53.6		400
1988	DA		1991	01	06.45764	05	33	13.98	+31	49	09.7	17	400
1988	DA		1991	01	06.47847	05	33	12.84	+31	49	07.1		400

1989	TP1		1991	01	05.49896	08	40	11.24	+17	12	31.1	17	400
1989	TP1		1991	01	05.51771	08	40	10.30	+17	12	32.8		400
1990	RW7		1990	09	16.57500	22	58	38.83	-06	48	25.3	16.0	400
1990	RW7		1990	09	16.59236	22	58	37.89	-06	48	29.4		400
1990	YQ		1991	01	05.45937	06	43	08.03	+20	23	05.5	16.5	400
1990	YQ		1991	01	05.47743	06	43	06.74	+20	23	06.6		400
1990	YQ		1991	01	06.46840	06	42	02.95	+20	24	14.6	16.5	400
1990	YQ		1991	01	06.48715	06	42	01.68	+20	24	16.6		400
1990	YT		1991	01	05.45937	06	48	24.63	+19	38	48.6	17	400
1990	YT		1991	01	05.47743	06	48	23.44	+19	38	49.4		400
1990	YT		1991	01	06.46840	06	47	17.22	+19	39	52.4	16.5	400
1990	YT		1991	01	06.48715	06	47	15.83	+19	39	53.3		400
1991	AA		1991	01	14.53750	05	41	53.31	+29	55	18.7	17	400
1991	AA		1991	01	14.56042	05	41	52.17	+29	55	16.9		400
1991	AS1		1991	01	23.58368	09	26	46.24	+22	50	07.5	16	400
1991	AS1		1991	01	23.60035	09	26	44.68	+22	49	59.8		400
1991	BW	*	1991	01	19.47604	08	43	05.54	+12	55	39.7	16.5	400
1991	BW		1991	01	19.49201	08	43	04.67	+12	55	37.7		400
1991	BW		1991	01	23.54514	08	38	48.64	+12	45	15.2	16	400
1991	BW		1991	01	23.56215	08	38	47.50	+12	45	13.4		400
1991	BW		1991	02	04.54410	08	26	03.52	+12	19	43.6	16.5	400
1991	BW		1991	02	04.55938	08	26	02.45	+12	19	42.5		400
1991	BX	*	1991	01	19.50521	08	37	57.14	+12	47	43.9	16.5	400
1991	BX		1991	01	19.52118	08	37	56.02	+12	47	44.7		400
1991	BX		1991	01	23.54514	08	34	35.43	+12	55	52.9	16.5	400
1991	BX		1991	01	23.56215	08	34	34.65	+12	55	55.1		400
1991	BX		1991	02	04.54410	08	24	32.93	+13	24	31.9	16.5	400
1991	BX		1991	02	04.55938	08	24	32.14	+13	24	32.1		400
1991	BG2	*	1991	01	23.58368	09	26	49.09	+19	29	34.5	16	400
1991	BG2		1991	01	23.60035	09	26	48.12	+19	29	39.6		400
1991	BG2		1991	02	04.47951	09	17	21.57	+20	21	26.5	16.0	400
1991	BG2		1991	02	04.49514	09	17	20.74	+20	21	30.6		400
1991	BH2	*	1991	01	23.58368	09	27	57.62	+23	27	58.7	16	400
1991	BH2		1991	01	23.60035	09	27	56.74	+23	27	59.7		400
1991	BH2		1991	02	04.47951	09	16	44.27	+23	42	08.1	16.5	400
1991	BH2		1991	02	04.49514	09	16	43.55	+23	42	10.9		400
1991	BJ2	*	1991	01	23.61597	09	44	25.80	+20	08	19.9	16.5	400
1991	BJ2		1991	01	23.63403	09	44	24.87	+20	08	24.9		400
1991	BJ2		1991	02	04.51458	09	34	00.19	+20	59	37.2	16.5	400
1991	BJ2		1991	02	04.53021	09	33	59.44	+20	59	40.1		400
1991	CB	*	1991	02	03.45382	09	13	14.85	+19	40	44.7	16.0	400
1991	CB		1991	02	04.47951	09	12	23.07	+19	52	10.1	16.0	400
1991	CB		1991	02	04.49514	09	12	22.30	+19	52	20.7		400
1991	CC	*	1991	02	04.53819	10	07	15.90	+29	08	12.9	15.5	400
1991	CC		1991	02	04.55903	10	07	14.89	+29	08	21.6		400
1991	CC		1991	02	06.54931	10	05	43.92	+29	22	54.0	15.5	400
1991	CC		1991	02	06.57222	10	05	42.67	+29	23	03.7		400
1991	CD	*	1991	02	04.57326	09	52	37.79	+20	21	09.2	16.5	400
1991	CD		1991	02	04.58854	09	52	36.60	+20	21	14.3		400
1991	CD		1991	02	07.48924	09	49	18.53	+20	26	26.0	16.5	400
1991	CD		1991	02	07.50382	09	49	17.46	+20	26	29.0		400
1089			1991	02	04.51458	09	33	00.44	+21	18	24.1	13.5	400
1089			1991	02	04.53021	09	32	59.39	+21	18	30.5		400
3191			1991	02	04.47951	09	17	01.13	+20	08	42.9	16.0	400
3191			1991	02	04.49514	09	17	00.26	+20	08	48.1		400

402 Dynic Astronomical Observatory
A. Sugie, Dynic Astronomical Observatory, Taga 270, Taga-Cho, Inukami-Gun, Shiga-Ken, 522-03, Japan

Observer A. Sugie
Measurer A. Sugie
0.25-m f/3.4 Schmidt
AGK3

1988 PR1		1991 01	19.65278	08	39	09.13	+06	58	09.2	17.5	402
1988 PR1		1991 01	19.66823	08	39	08.29	+06	58	13.0		402
1988 PR1		1991 01	23.71458	08	35	51.21	+07	17	40.9		402
1988 PR1		1991 01	23.72847	08	35	50.49	+07	17	45.2		402
1991 AQ		1991 01	23.70278	05	42	43.97	+54	53	21.5		402
1991 AQ		1991 01	23.70764	05	42	29.61	+54	54	12.3		402
1991 BP	*	1991 01	19.65278	08	39	22.06	+06	46	29.4	17.5	402
1991 BP		1991 01	19.66823	08	39	21.30	+06	46	30.2		402
1991 BP		1991 01	23.71458	08	35	13.30	+06	38	08.8		402
1991 BP		1991 01	23.72847	08	35	12.45	+06	38	09.5		402
1991 BP		1991 02	09.52431	08	18	28.89	+06	26	58.2	17.5	402
1991 BP		1991 02	09.54485	08	18	27.72	+06	26	57.7		402
1991 BQ	*	1991 01	19.65278	08	42	47.65	+05	36	42.7	17.5	402
1991 BQ		1991 01	19.66823	08	42	46.79	+05	36	48.5		402
1991 BQ		1991 01	23.71458	08	39	03.39	+06	01	06.3		402
1991 BQ		1991 01	23.72847	08	39	02.66	+06	01	11.7		402
1991 BQ		1991 02	09.52431	08	22	02.21	+08	26	44.9	17.5	402
1991 BQ		1991 02	09.54485	08	22	00.82	+08	27	01.7		402
1991 BR	*	1991 01	19.65278	08	43	58.19	+08	24	25.8	17.5	402
1991 BR		1991 01	19.66823	08	43	57.46	+08	24	30.6		402
1991 BR		1991 01	23.71458	08	40	16.66	+08	42	59.5		402
1991 BR		1991 01	23.72847	08	40	16.12	+08	43	04.6		402
1991 BR		1991 02	09.52431	08	24	21.29	+10	20	35.4	17.5	402
1991 BR		1991 02	09.54485	08	24	20.02	+10	20	43.6		402
1991 BS	*	1991 01	19.62014	08	55	05.97	+06	39	13.7	16.5	402
1991 BS		1991 01	19.63542	08	55	05.14	+06	39	11.4		402
1991 BS		1991 01	23.73889	08	51	27.45	+06	28	13.9		402
1991 BS		1991 01	23.75278	08	51	26.64	+06	28	13.4		402
1991 BT	*	1991 01	19.62014	09	01	21.85	+05	53	19.9	16.0	402
1991 BT		1991 01	19.63542	09	01	21.02	+05	53	23.4		402
1991 BT		1991 01	20.50451	09	00	35.74	+05	55	24.7		402
1991 BT		1991 01	20.52378	09	00	34.74	+05	55	27.7		402
1991 BT		1991 01	20.53785	09	00	34.08	+05	55	26.7		402
1991 BT		1991 01	23.73889	08	57	40.02	+06	04	14.9		402
1991 BT		1991 01	23.75278	08	57	39.06	+06	04	19.8		402
1991 BU	*	1991 01	19.62014	09	11	47.24	+06	29	15.2	17.0	402
1991 BU		1991 01	19.63542	09	11	46.67	+06	29	17.8		402
1991 BU		1991 01	23.73889	09	09	36.32	+06	49	46.4		402
1991 BU		1991 01	23.75278	09	09	35.73	+06	49	56.5		402
1991 BV	*	1991 01	19.69514	09	49	36.72	+09	51	48.9	16.0	402
1991 BV		1991 01	19.71389	09	49	36.08	+09	51	59.3		402
1991 BV		1991 01	20.55000	09	49	08.29	+09	59	31.0		402
1991 BV		1991 02	07.59514	09	35	58.80	+13	05	47.0	16.0	402
1991 BV		1991 02	07.60764	09	35	58.18	+13	05	56.3		402
1991 BV		1991 02	09.49549	09	34	23.47	+13	26	55.6		402
1991 BV		1991 02	09.51215	09	34	22.58	+13	27	06.1		402
1991 CZ		1991 02	09.55660	09	35	47.30	+03	33	22.2	15.5	402
1991 CZ		1991 02	09.57407	09	35	46.10	+03	33	48.8		402

403 Kani
T. Furuta, Mitsuike 17-2, Kakiya-Cho, Tokai, Aichi-Ken 477, Japan
Observers Y. Mizuno, T. Furuta
Measurer T. Furuta
0.25-m f/4.2 Wright-Schmidt camera
AGK3

1991	AW		1991	01	18.60451	08	59	51.99	+16	38	26.1	15.5	403
1991	AW		1991	01	18.61539	08	59	51.43	+16	38	33.7		403
1991	AW		1991	01	20.57743	08	58	16.9	+17	00	47		403
1991	AW		1991	01	20.58819	08	58	16.3	+17	00	53		403
1991	CE	*	1991	02	05.60069	10	07	56.4	+20	27	52	16.0	403
1991	CE		1991	02	05.61215	10	07	55.9	+20	27	56		403
1991	CE		1991	02	08.62049	10	05	39.3	+20	45	32		403
1991	CE		1991	02	08.63160	10	05	38.6	+20	45	39		403

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers M. Hartley, P. McKenzie, R. H. McNaught, K. S. Russell
Measurer R. H. McNaught
1.2-m U.K. Schmidt, Uppsala Southern Schmidt

1948	AF		1990	11	28.69965	04	54	23.84	-13	03	19.6		413
1976	YA		1990	12	26.52066	04	27	11.75	+13	32	28.8	15 V	413
1976	YA		1990	12	26.58316	04	27	09.39	+13	32	02.8		413
1983	CC		1991	02	07.53646	08	37	48.59	+17	15	58.6		413
1983	CC		1991	02	07.55455	08	37	47.37	+17	16	21.6		413
1983	CC		1991	02	09.61493	08	35	25.63	+18	00	01.4		413
1983	CC		1991	02	10.53372	08	34	23.90	+18	19	16.1		413
1983	CC		1991	02	10.54936	08	34	22.88	+18	19	36.9		413
1985	TS1		1990	10	12.51282	23	32	35.89	+10	16	37.2		413
1985	TS1		1990	10	12.56838	23	32	33.90	+10	16	18.5		413
1986	AE		1991	01	17.69715	11	04	23.53	-25	02	34.5	V	413
1989	NE		1991	01	07.47100	04	13	34.02	+01	21	24.8	17 V	413
1989	NE		1991	01	08.51181	04	13	08.30	+01	27	54.9		413
1989	NE		1991	01	12.44727	04	11	46.22	+01	53	29.5		413
1990	UG2		1989	08	30.46367	19	41	41.43	-26	02	16.2	17 V	413
1990	VG1		1990	11	19.63782	05	16	01.74	-18	00	55.8		413
1990	VG1		1990	11	26.69410	05	10	05.22	-18	50	49.5		413
1990	VG1		1991	01	17.49696	04	35	34.31	-13	42	10.2		413
1990	VG1		1991	01	17.60763	04	35	33.87	-13	40	36.8		413
1990	WL		1983	07	14.53369	18	01	00.73	-14	36	06.7	17 V	413
1990	XK		1991	01	07.59463	06	29	44.13	+14	11	15.9	16 V	413
1990	XK		1991	01	08.60417	06	28	42.64	+14	07	53.2		413
1990	XP		1982	04	22.62326	15	18	59.24	-13	38	23.2	17 V	413
1990	XP		1982	04	22.68044	15	18	56.18	-13	38	03.9		413
1990	XP		1985	05	12.45328	12	21	22.56	-00	27	19.2	17.5V	413
1990	XP		1991	01	17.51640	06	21	27.44	+14	20	15.5		413
1990	XP		1991	02	07.52156	06	11	53.63	+15	37	18.7		413
1990	XP		1991	02	09.59963	06	11	49.78	+15	45	28.1		413
1990	YW		1990	11	20.61205	04	44	12.45	+07	31	03.5	17 V	413
1990	YW		1990	11	20.66413	04	44	10.29	+07	30	41.3		413
1991	AF		1991	01	17.53020	06	12	52.73	+17	24	24.5		413
1991	AF1		1991	02	07.53646	08	33	53.05	+15	37	30.5		413
1991	AF1		1991	02	07.55455	08	33	51.98	+15	37	30.9		413
1991	AF1		1991	02	09.61493	08	32	02.46	+15	38	02.4		413
1991	AF1		1991	02	10.53372	08	31	14.78	+15	38	15.2		413
1991	AF1		1991	02	10.54936	08	31	13.96	+15	38	16.2		413
1991	AH1		1991	02	07.53646	08	37	02.14	+16	56	53.3		413
1991	AH1		1991	02	07.55455	08	37	01.01	+16	56	57.1		413
1991	AH1		1991	02	09.61493	08	35	00.54	+17	03	32.3		413
1991	AH1		1991	02	10.53372	08	34	08.38	+17	06	25.0		413
1991	AH1		1991	02	10.54936	08	34	07.47	+17	06	28.6		413
1991	AE2	*	1991	01	07.47100	04	13	28.65	+00	05	39.7	17.5V	413
1991	AE2		1991	01	08.51181	04	13	16.27	+00	15	25.0		413
1991	AE2		1991	01	08.52431	04	13	16.19	+00	15	31.7		413

1991	AE2		1991	01	12.44727	04	12	48.55	+00	53	40.3			413
1991	AE2		1991	02	04.44271	04	19	31.69	+05	00	52.6			413
1991	AE2		1991	02	04.45683	04	19	32.16	+05	01	01.7			413
1991	AF2		1990	11	20.61205	04	46	44.26	+03	20	01.8	18	V	413
1991	AF2		1990	11	20.66413	04	46	41.70	+03	19	40.0			413
1991	AF2	*	1991	01	07.47100	04	14	12.72	+02	11	57.9	18	V	413
1991	AF2		1991	01	08.51181	04	14	02.57	+02	16	47.7			413
1991	AF2		1991	01	12.44727	04	13	43.06	+02	36	44.5			413
1991	AF2		1991	02	04.44271	04	21	12.39	+05	11	59.4		V	413
1991	AF2		1991	02	04.45683	04	21	13.02	+05	12	05.4		V	413
1991	AG2		1990	11	23.64483	04	42	00.53	-06	47	02.1	16.5	V	413
1991	AG2	*	1991	01	07.47100	04	16	27.95	-02	13	28.3	17	V	413
1991	AG2		1991	01	08.52431	04	16	27.60	-02	00	39.3			413
1991	AG2		1991	01	12.44727	04	16	45.30	-01	11	47.9			413
1991	AG2		1991	01	17.54615	04	17	50.98	-00	06	22.2			413
1991	AG2		1991	01	17.56179	04	17	51.27	-00	06	09.8			413
1991	AG2		1991	02	04.47292	04	27	42.65	+03	48	15.6			413
1991	AG2		1991	02	04.48652	04	27	43.19	+03	48	24.5			413
1991	AH2	*	1991	01	07.47100	04	17	23.48	+02	21	36.4	17	V	413
1991	AH2		1991	01	08.51181	04	16	58.37	+02	30	39.6			413
1991	AH2		1991	01	12.44727	04	15	38.97	+03	05	36.9			413
1991	AH2		1991	02	04.44271	04	15	50.60	+06	42	28.6			413
1991	AH2		1991	02	04.45683	04	15	50.80	+06	42	36.6			413
1991	AJ2	*	1991	01	07.47100	04	17	36.75	-01	56	05.2	18	V	413
1991	AJ2		1991	01	12.46902	04	15	55.60	-01	30	11.8		F	413
1991	AK2		1990	11	20.61205	04	52	33.20	+06	02	13.3	18.5	V F	413
1991	AK2	*	1991	01	07.47100	04	19	54.78	+02	21	23.4	18.5	V	413
1991	AK2		1991	01	08.51181	04	19	33.25	+02	20	59.9			413
1991	AK2		1991	01	12.44727	04	18	25.17	+02	21	06.3			413
1991	AL2	*	1991	01	07.47100	04	22	00.59	+02	50	39.0	17	V	413
1991	AL2		1991	01	08.51181	04	21	40.27	+02	53	25.8			413
1991	AL2		1991	01	12.46902	04	20	42.23	+03	05	58.8			413
1991	AL2		1991	02	04.44271	04	25	08.61	+05	07	27.8			413
1991	AL2		1991	02	04.45683	04	25	09.02	+05	07	33.5			413
1991	AM2	*	1991	01	07.47100	04	24	53.68	-00	29	56.6	18.5	V	413
1991	AM2		1991	01	12.44727	04	23	03.70	-00	01	49.0			413
1991	AN2	*	1991	01	07.47100	04	28	35.22	-01	52	01.9	17	V	413
1991	AN2		1991	01	08.56424	04	28	05.71	-01	43	34.8			413
1991	AN2		1991	01	12.44727	04	26	36.48	-01	12	18.6			413
1991	AN2		1991	01	17.59302	04	25	14.46	-00	28	34.0		V	413
1991	AN2		1991	02	04.47292	04	25	50.05	+02	15	53.1			413
1991	AN2		1991	02	04.48652	04	25	50.22	+02	15	59.4			413
1991	AO2		1984	07	18.38325	14	55	19.01	-03	15	22.3	18	V	413
1991	AO2		1984	07	18.43762	14	55	19.66	-03	15	35.0			413
1991	AO2	*	1991	01	07.47100	04	31	53.72	+02	53	21.1	16	V	413
1991	AO2		1991	01	08.54884	04	31	34.98	+02	59	12.5			413
1991	AO2		1991	01	17.57809	04	30	19.56	+03	54	46.7			413
1991	AO2		1991	02	02.45394	04	33	55.29	+05	50	56.1			413
1991	AT2		1991	02	07.55455	08	40	00.80	+16	45	26.2			413
1991	AT2		1991	02	09.61493	08	38	25.54	+16	55	24.2	17.5	V	413
1991	AT2		1991	02	10.54936	08	37	43.49	+16	59	53.2			413
1991	AC3		1991	02	09.61493	08	38	26.51	+18	00	14.8	18.5	V	413
1991	AC3		1991	02	10.54936	08	37	35.83	+18	04	49.4			413
1991	BB		1991	01	27.73334	07	34	54.54	-06	29	16.8		F	413
1991	BB		1991	01	28.75451	07	29	40.55	-07	30	39.1	16	V F	413
1991	BG		1982	07	27.78125	23	53	02.93	-02	12	55.2	17	V	413
1991	BG		1982	10	18.44894	23	09	23.48	-07	46	02.1	17.5	V	413
1991	BG		1982	10	18.50992	23	09	22.23	-07	46	09.6			413
1991	BG		1987	09	27.47286	19	09	07.32	-21	52	59.4		F	413

1991	BG		1988	11	03.51765	00	51	00.43	+02	07	06.7	17.5V	413
1991	BG		1991	02	07.53646	08	41	12.75	+17	50	12.1	17.5V	413
1991	BG		1991	02	07.55455	08	41	11.90	+17	50	16.4		413
1991	BG		1991	02	10.54936	08	38	50.92	+18	00	55.4		413
1991	CQ	*	1991	02	10.48924	06	52	55.90	-31	53	35.8	17.5V V	413
1991	CQ		1991	02	10.52743	06	52	58.88	-31	51	49.2		413
1991	CQ		1991	02	11.45700	06	54	24.92	-31	07	48.6	F	413
1991	CQ		1991	02	12.53227	06	56	05.55	-30	15	54.2	F	413
1991	CQ		1991	02	12.54616	06	56	06.66	-30	15	14.2		413
1991	CQ		1991	02	14.46830	06	59	14.24	-28	39	54.9		413
1991	CR	*	1991	02	12.68190	11	12	08.81	-22	29	36.8	17.5V	413
1991	CR		1991	02	13.62034	11	11	33.86	-22	30	50.8	I	413
1991	CS		1991	01	19.59017	07	07	50.28	-73	54	06.0	18 V F	413
1991	CS		1991	02	11.48374	07	09	54.08	-46	54	31.1		413
1991	CS		1991	02	11.52193	07	09	54.60	-46	49	37.4		413
1991	CS	*	1991	02	13.50457	07	11	09.64	-42	20	41.6	16.5V	413
1991	CS		1991	02	13.54277	07	11	10.42	-42	15	15.4		413
1991	CS		1991	02	15.52027	07	12	37.08	-37	17	15.2		413
1991	CS		1991	02	15.52236	07	12	37.14	-37	16	54.1		413
1991	CS		1991	02	15.52376	07	12	37.21	-37	16	44.0		413
1991	CT	*	1991	02	07.53646	08	32	21.21	+15	27	37.6	18.5V	413
1991	CT		1991	02	07.55455	08	32	20.16	+15	27	40.9		413
1991	CT		1991	02	09.61493	08	30	31.95	+15	33	22.0		413
1991	CU	*	1991	02	07.53646	08	39	12.98	+16	01	58.7		413
1991	CU		1991	02	07.55455	08	39	11.92	+16	02	06.6		413
1991	CU		1991	02	09.61493	08	37	22.79	+16	16	29.9		413
1991	CU		1991	02	10.54936	08	36	34.38	+16	22	58.3		413
1991	CV	*	1991	02	09.61493	08	26	05.28	+17	23	23.2	17 V	413
1991	CV		1991	02	10.53372	08	25	13.66	+17	23	59.6		413
2170	T-2		1991	01	07.47100	04	14	01.16	+02	25	50.6	18 V	413
2170	T-2		1991	01	12.44727	04	12	11.88	+02	40	27.5		413
5010	T-3		1990	11	20.63809	04	42	51.34	+06	54	13.4		413
276			1991	01	07.47100	04	31	19.65	-00	59	53.2		413
276			1991	01	08.56424	04	30	52.16	-00	59	19.9		413
276			1991	01	12.46902	04	29	28.36	-00	55	38.0		413
1714			1991	02	07.53646	08	37	13.76	+16	10	53.9		413
1714			1991	02	07.55455	08	37	12.62	+16	10	55.6		413
1714			1991	02	09.61493	08	35	08.36	+16	13	37.0		413
1714			1991	02	10.53372	08	34	13.98	+16	14	47.5		413
1714			1991	02	10.54936	08	34	13.09	+16	14	48.9		413
1740			1991	02	07.53646	08	29	53.07	+18	10	28.6		413
1740			1991	02	07.55455	08	29	52.03	+18	10	31.0		413
1740			1991	02	10.53372	08	27	00.63	+18	18	40.4		413
2304			1991	01	20.72152	10	59	33.61	-07	37	51.6		413
2560			1991	02	07.53646	08	39	30.77	+15	40	38.8		413
2560			1991	02	07.55455	08	39	29.77	+15	40	45.1		413
2560			1991	02	09.61493	08	37	44.88	+15	52	19.0		413
2560			1991	02	10.54936	08	36	58.41	+15	57	31.5		413
3616			1990	11	20.63809	04	37	05.09	+06	35	04.6		413

474 Mount John
A. C. Gilmore, P.O. Box 57, Lake Tekapo, New Zealand
Observer A. C. Gilmore
Measurer P. M. Kilmartin
0.25-m astrograph (1) and 0.6-m f/14 Cassegrain reflector
AGK3, SAOC, CPZ, field plates from Carter Observatory

1927	TC		1990	06	23.71163	22	14	35.68	-26	43	09.6	15.1 1	474
1927	TC		1990	06	23.74638	22	14	39.60	-26	42	44.9	1	474
1931	UD		1990	07	18.68964	20	39	15.08	-32	39	01.0	17.5	474

1931	UD	1990	07	18.70654	20	39	13.95	-32	39	00.7	474
1977	EV	1990	07	14.43131	18	03	48.83	-39	47	17.8	17.4 474
1977	EV	1990	07	14.44421	18	03	48.01	-39	47	12.0	474
1980	SD	1988	08	12.53258	20	54	33.02	-39	47	03.9	16.6 474
1980	SD	1988	08	12.54994	20	54	31.86	-39	47	00.9	474
1981	GD1	1991	01	11.53394	08	25	33.40	+14	03	01.0	18.2 474
1981	GD1	1991	01	11.58584	08	25	30.79	+14	03	07.4	474
1981	QC	1988	09	14.53260	22	29	34.56	-56	49	37.0	17.8 474
1981	QC	1988	09	14.55541	22	29	32.78	-56	49	30.8	474
1985	GU1	1990	07	18.74890	21	58	13.44	-38	42	09.3	14.6 474
1985	GU1	1990	07	18.76281	21	58	12.86	-38	42	12.0	474
1985	GU1	1990	09	16.45384	21	03	39.90	-34	38	18.9	16.5 474
1985	GU1	1990	09	16.46866	21	03	39.63	-34	38	08.8	474
1985	XB	1990	09	18.65176	00	57	54.25	-45	43	02.8	18.6 474
1985	XB	1990	09	18.68370	00	57	51.39	-45	43	14.6	474
1986	TM	1990	07	18.63281	19	38	55.49	-66	43	33.3	18.9 474
1986	TM	1990	07	18.66175	19	38	52.09	-66	43	32.7	474
1989	GP6	1990	09	19.46323	21	21	30.94	-20	31	11.1	474
1989	GP6	1990	09	19.48586	21	21	30.42	-20	31	17.0	474
1989	SG5	1991	01	11.53394	08	25	48.05	+13	41	10.0	17.6 474
1989	SG5	1991	01	11.58584	08	25	45.11	+13	41	25.5	474
1990	BG	1990	09	17.60286	04	52	24.14	-39	02	50.8	18.0 474
1990	BG	1990	09	17.62120	04	52	23.68	-39	03	14.7	474
1990	BG	1990	09	19.67758	04	51	18.60	-39	45	08.9	18.2 474
1990	BG	1990	09	19.70021	04	51	17.75	-39	45	36.1	474
1990	MA	1990	07	14.39253	15	23	49.77	-26	54	25.8	474
1990	MA	1990	07	14.40561	15	23	49.03	-26	54	51.7	17.2 474
1990	MA	1990	09	18.48313	16	25	25.63	-49	02	42.9	17.8 474
1990	MA	1990	09	18.50193	16	25	28.00	-49	02	54.2	474
1990	OA	1990	09	18.53509	21	39	06.59	-26	41	34.2	18.0 474
1990	OA	1990	09	18.55315	21	39	07.85	-26	41	30.2	474
1990	OA	1990	09	19.58001	21	40	17.01	-26	38	12.4	18.2 474
1990	OA	1990	09	19.60438	21	40	18.59	-26	38	07.3	474
1990	OL	1990	09	17.51478	21	57	08.50	-21	09	07.6	18.3 474
1990	OL	1990	09	17.53637	21	57	09.45	-21	09	28.1	474
1990	OL	1990	09	19.51196	21	58	44.99	-21	37	26.0	17.8 474
1990	OL	1990	09	19.53684	21	58	46.17	-21	37	46.2	474
1990	SM	1990	10	16.51007	22	31	33.90	-30	48	55.8	17.3 474
1990	SM	1990	10	16.54641	22	31	38.33	-30	47	51.6	474
1991	CQ	1991	02	13.46784	06	57	35.48	-29	29	49.3	17.9 474
1991	CQ	1991	02	13.54399	06	57	42.56	-29	25	58.6	474
4554		1990	06	19.48455	16	28	13.22	-21	43	09.2	16.5 474
4554		1990	06	19.51429	16	28	11.88	-21	42	58.9	474
4688		1991	01	11.48880	06	23	10.31	-15	49	32.8	17.2 474
4688		1991	01	11.49644	06	23	12.41	-15	49	38.9	474

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Observer K. Birkle
Measurers K. Birkle, J. M. Baur
0.8-m f/3 Schmidt

1990	VC	1990	12	07.83715	01	44	36.79	+12	54	15.5	493
1990	VC	1990	12	07.85868	01	44	36.55	+12	54	07.1	493
1990	VC	1990	12	12.78356	01	44	09.23	+12	25	51.1	493
1990	VC	1990	12	12.80579	01	44	09.05	+12	25	43.6	493

494 Stakenbridge
B. Manning, Moonrakers, Stakenbridge, Churchill, Kidderminster,
Worcs. DY10 3LS, England

1991	AF1	*	1991	01	12.98364	08	57	05.85	+15	33	20.1	16 V 494
1991	AF1		1991	01	13.01099	08	57	04.53	+15	33	18.8	494
1991	AF1		1991	01	13.98429	08	56	17.05	+15	33	06.7	494
1991	AF1		1991	01	15.97934	08	54	36.72	+15	32	49.5	494
1991	AH1	*	1991	01	12.98364	09	01	29.77	+15	37	19.0	17 V 494
1991	AH1		1991	01	13.01099	09	01	28.53	+15	37	23.4	494
1991	AH1		1991	01	13.98429	09	00	43.34	+15	39	40.8	494
1991	AH1		1991	01	15.97934	08	59	06.12	+15	44	42.0	494
1991	AH1		1991	01	17.98173	08	57	22.75	+15	50	08.1	494
1991	AB3		1991	01	12.98364	08	59	07.19	+16	02	36.1	17.5V 494
1991	AB3		1991	01	13.01099	08	59	06.18	+16	02	41.5	494
1991	BG	*	1991	01	17.98173	08	57	24.24	+16	34	22.3	E 494
1991	BG		1991	01	21.97348	08	54	25.05	+16	48	46.1	16.7V 494
1714			1991	01	12.98364	09	02	30.28	+15	37	54.3	16.5V 494
1714			1991	01	13.01099	09	02	28.95	+15	37	56.2	494
1714			1991	01	13.98429	09	01	38.77	+15	38	48.5	494
1714			1991	01	15.97934	08	59	52.74	+15	40	48.0	494
1714			1991	01	17.98173	08	58	02.16	+15	42	58.4	494

511 Haute Provence
E. W. Elst, Royal Observatory, B-1180 Brussels, Belgium
Observers E. W. Elst, G. Traversa
Measurer E. W. Elst
0.6-m Schmidt

1980	TP		1991	01	18.01181	07	53	01.95	+18	58	23.2	511
1980	TP		1991	01	18.98472	07	51	51.96	+19	02	11.3	17.7 511
1984	UB3		1991	01	18.01181	07	52	32.10	+20	05	03.2	511
1984	UB3		1991	01	18.98472	07	51	38.92	+20	07	15.5	17.2 511
1986	TK1		1991	01	18.01181	07	51	17.02	+18	24	35.5	511
1986	TK1		1991	01	18.98472	07	50	09.26	+18	26	02.2	18.3 511
1986	TL1		1991	01	21.07708	09	31	55.21	+10	06	45.5	511
1986	TL1		1991	01	21.11181	09	31	53.20	+10	06	49.7	18.0 511
1986	TL1		1991	01	23.00556	09	30	05.42	+10	10	48.3	511
1988	RX11		1991	01	18.01181	08	05	34.64	+20	40	24.7	511
1988	RX11		1991	01	18.98472	08	04	43.05	+20	43	00.8	17.5 511
1991	BD		1991	01	18.01181	07	56	48.99	+18	01	47.5	511
1991	BD		1991	01	18.98472	07	55	42.85	+18	01	57.0	17.5 511
1991	BZ		1991	01	18.01181	07	59	01.85	+18	58	08.5	511
1991	BZ		1991	01	18.98472	07	58	01.81	+18	58	02.1	17.3 511
1991	BA1	*	1991	01	18.01181	07	51	46.32	+18	37	51.6	511
1991	BA1		1991	01	18.98472	07	50	40.68	+18	43	41.7	17.7 511
1991	BB1	*	1991	01	18.01181	07	53	43.79	+19	41	04.4	511
1991	BB1		1991	01	18.98472	07	52	46.58	+19	43	17.3	18.0 511
1991	BC1	*	1991	01	18.01181	07	54	25.65	+21	05	28.6	511
1991	BC1		1991	01	18.98472	07	53	28.17	+21	09	44.7	17.8 511
1991	BD1	*	1991	01	18.01181	07	54	51.96	+21	11	22.4	511
1991	BD1		1991	01	18.98472	07	53	54.01	+21	17	05.2	17.2 511
1991	BE1	*	1991	01	18.01181	07	56	06.62	+20	17	27.0	511
1991	BE1		1991	01	18.98472	07	54	37.99	+20	08	57.4	17.8 511
1991	BF1	*	1991	01	18.01181	07	56	27.05	+21	09	25.4	511
1991	BF1		1991	01	18.98472	07	55	25.54	+21	19	25.3	17.0 511
1991	BG1	*	1991	01	18.01181	07	56	48.29	+18	07	01.9	511
1991	BG1		1991	01	18.98472	07	55	50.89	+18	09	04.0	18.0 511
1991	BH1	*	1991	01	18.01181	07	58	04.67	+20	35	09.6	511
1991	BH1		1991	01	18.98472	07	57	12.94	+20	37	44.6	17.5 511
1991	BJ1	*	1991	01	18.01181	07	58	25.04	+21	09	37.0	511
1991	BJ1		1991	01	18.98472	07	57	18.98	+21	15	58.8	17.5 511
1991	BK1	*	1991	01	18.01181	08	00	52.97	+19	19	41.4	511
1991	BK1		1991	01	18.98472	07	59	57.29	+19	28	26.1	17.7 511

1991	BL1	*	1991	01	18.01181	08	01	16.44	+19	38	10.5	511
1991	BL1		1991	01	18.98472	08	00	14.48	+19	42	30.5	18.2 511
1991	BM1	*	1991	01	18.01181	08	01	53.66	+18	01	42.2	511
1991	BM1		1991	01	18.98472	08	01	00.59	+18	04	38.6	17.7 511
1991	BN1	*	1991	01	18.01181	08	02	07.02	+19	14	26.5	511
1991	BN1		1991	01	18.98472	08	01	07.79	+19	16	19.5	18.5 511
1991	BO1	*	1991	01	18.01181	08	02	50.34	+20	53	43.6	511
1991	BO1		1991	01	18.98472	08	01	42.90	+20	51	28.3	17.7 511
1991	BP1	*	1991	01	18.01181	08	03	44.87	+19	03	47.9	511
1991	BP1		1991	01	18.98472	08	02	35.18	+19	06	12.7	18.6 511
1991	BQ1	*	1991	01	18.01181	08	04	49.81	+20	07	10.4	511
1991	BQ1		1991	01	18.98472	08	03	56.95	+20	15	04.0	18.2 511
1991	BR1	*	1991	01	18.01181	08	05	48.28	+19	17	02.4	511
1991	BR1		1991	01	18.98472	08	04	59.19	+19	20	56.4	18.5 511
1991	BS1	*	1991	01	18.01181	08	06	19.83	+21	05	34.3	511
1991	BS1		1991	01	18.98472	08	05	31.27	+21	08	29.2	17.6 511
1991	BT1	*	1991	01	21.00903	09	06	56.01	+11	59	22.0	511
1991	BT1		1991	01	22.07847	09	06	02.53	+11	58	59.8	511
1991	BT1		1991	01	22.11319	09	06	00.77	+11	58	58.7	18.0 511
1991	BU1	*	1991	01	21.00903	09	07	22.93	+11	08	55.0	511
1991	BU1		1991	01	22.07847	09	06	16.59	+11	07	55.7	511
1991	BU1		1991	01	22.11319	09	06	14.43	+11	07	54.5	17.8 511
1991	BV1	*	1991	01	21.00903	09	14	38.14	+10	36	53.8	511
1991	BV1		1991	01	22.07847	09	13	49.73	+10	43	02.1	511
1991	BV1		1991	01	22.11319	09	13	48.08	+10	43	15.1	17.5 511
1991	BW1	*	1991	01	21.00903	09	16	42.12	+11	06	19.5	511
1991	BW1		1991	01	22.07847	09	15	45.87	+11	10	46.7	511
1991	BW1		1991	01	22.11319	09	15	43.91	+11	10	55.6	17.9 511
1991	BX1	*	1991	01	21.00903	09	18	01.56	+11	41	36.1	511
1991	BX1		1991	01	22.07847	09	17	11.36	+11	42	25.8	511
1991	BX1		1991	01	22.11319	09	17	09.74	+11	42	25.1	17.6 511
1991	BB2	*	1991	01	21.07708	09	23	29.17	+11	53	34.5	511
1991	BB2		1991	01	21.11181	09	23	27.03	+11	53	43.2	18.5 511
1991	BB2		1991	01	23.00556	09	21	42.26	+12	00	01.8	511
1991	BC2	*	1991	01	21.07708	09	24	04.59	+10	14	43.9	511
1991	BC2		1991	01	21.11181	09	24	02.58	+10	14	48.7	18.0 511
1991	BC2		1991	01	23.00556	09	22	13.35	+10	19	41.7	511
1991	BD2	*	1991	01	21.07708	09	28	58.45	+11	06	25.5	511
1991	BD2		1991	01	21.11181	09	28	56.64	+11	06	20.1	17.8 511
1991	BD2		1991	01	23.00556	09	27	22.62	+11	02	51.7	511
1991	BE2	*	1991	01	21.07708	09	32	05.83	+11	53	58.5	511
1991	BE2		1991	01	21.11181	09	32	04.40	+11	54	03.0	18.0 511
1991	BE2		1991	01	23.00556	09	30	45.96	+11	58	42.4	511
1991	BF2	*	1991	01	21.07708	09	34	45.22	+10	17	36.9	511
1991	BF2		1991	01	21.11181	09	34	43.27	+10	17	32.7	17.8 511
1991	BF2		1991	01	23.00556	09	32	56.66	+10	15	22.8	511
1991	BN2		1991	01	18.01181	07	49	46.55	+20	21	31.2	17.6 511
9511	P-L		1991	01	18.01181	08	05	12.36	+19	31	39.5	511
9511	P-L		1991	01	18.98472	08	04	23.78	+19	34	12.0	18.4 511
893			1991	01	22.07847	09	02	33.06	+10	37	07.0	511
893			1991	01	22.11319	09	02	31.52	+10	37	20.9	16.0 511
925			1991	01	18.01181	07	59	56.24	+21	50	40.2	511
925			1991	01	18.98472	07	58	43.62	+21	44	52.0	15.0 511
1067			1991	01	18.01181	07	51	41.94	+18	50	52.3	511
1067			1991	01	18.98472	07	50	41.84	+18	49	29.2	16.8 511
1284			1991	01	21.07708	09	26	01.64	+11	58	12.5	511
1284			1991	01	21.11181	09	25	59.51	+11	58	10.8	16.0 511
1284			1991	01	23.00556	09	24	09.64	+11	56	35.7	511
1793			1991	01	21.07708	09	33	16.85	+11	37	35.5	511

1793	1991	01	21.11181	09	33	15.19	+11	37	40.9	16.5	511
1793	1991	01	23.00556	09	31	42.74	+11	43	51.1		511
2264	1991	01	18.01181	08	06	20.59	+20	06	41.8		511
2264	1991	01	18.98472	08	05	32.17	+20	09	05.4	16.5	511
2711	1991	01	21.00903	09	13	04.74	+09	30	43.9		511
2711	1991	01	22.07847	09	12	18.55	+09	36	07.1		511
2711	1991	01	22.11319	09	12	16.98	+09	36	18.3	17.2	511
3059	1991	01	21.07708	09	31	20.15	+11	17	36.4		511
3059	1991	01	21.11181	09	31	18.24	+11	17	45.6	17.3	511
3059	1991	01	23.00556	09	29	39.29	+11	26	35.5		511
3814	1991	01	18.01181	07	50	49.18	+20	01	33.5		511
3814	1991	01	18.98472	07	49	58.77	+20	04	08.5	17.5	511
4420	1991	01	18.01181	08	05	58.88	+20	55	41.1		511
4420	1991	01	18.98472	08	05	02.83	+20	57	14.3	17.7	511

547 Wroclaw
J. Bem, Astronomical Observatory, Wroclaw University, Ul. Kopernika 11, PL-51622 Wroclaw, Poland
Observer J. Bem
Measurer B. Szszodrowska-Kozar

1	1984	11	03.00385	03	18	12.67	+08	49	07.7		547
1	1984	11	03.01039	03	18	12.31	+08	49	06.9		547
3	1985	04	21.91514	12	05	51.65	+06	07	48.0		547
3	1985	04	21.92447	12	05	51.35	+06	07	50.4		547
4	1985	04	21.96680	13	59	59.01	+01	09	51.8		547
4	1985	04	21.97371	13	59	58.62	+01	09	53.9		547
6	1984	11	02.09478	06	48	14.70	+04	16	11.8		547
6	1984	11	02.10278	06	48	14.81	+04	16	09.3		547
6	1984	11	03.10393	06	48	32.39	+04	12	09.2		547
6	1984	11	03.11343	06	48	32.51	+04	12	07.5		547
7	1984	11	02.06983	05	52	15.60	+25	55	58.9		547
7	1984	11	02.07858	05	52	15.52	+25	55	56.8		547
7	1984	11	03.07500	05	52	24.75	+25	52	45.5		547
7	1984	11	03.08237	05	52	24.76	+25	52	44.0		547
8	1984	12	14.76744	01	16	51.80	-00	37	42.5		547
8	1984	12	14.77627	01	16	52.16	-00	37	37.7		547
31	1985	04	21.88094	11	15	09.51	+28	02	40.7		547
31	1985	04	21.89064	11	15	09.42	+28	02	32.6		547
37	1984	11	02.87454	01	15	15.78	+10	09	00.0		547
37	1984	11	02.88352	01	15	15.21	+10	08	56.9		547
37	1984	12	14.73776	01	07	13.23	+09	50	21.7		547
37	1984	12	14.74948	01	07	13.57	+09	50	24.4		547
40	1984	11	02.12782	07	00	00.14	+21	21	16.9		547
40	1984	11	02.13580	07	00	00.22	+21	21	16.3		547
40	1984	11	03.13193	07	00	23.87	+21	21	56.3		547
40	1984	11	03.14192	07	00	24.01	+21	21	56.6		547
41	1985	04	21.94534	13	07	03.65	+06	21	43.3		547
41	1985	04	21.95347	13	07	03.41	+06	21	48.9		547
144	1984	11	02.97795	02	47	59.65	+10	45	49.9		547
144	1984	11	02.98889	02	47	58.96	+10	45	48.5		547

568 Mauna Kea Observatory
D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive, Honolulu, HI 96822, U.S.A.
Observers D. J. Tholen, W. Golisch, D. Griep, C. Kaminski
IRTF encoders
SAOC

1991 AQ	1991	01	20.48194	07	14	03.67	+45	29	23.0		568
1991 AQ	1991	01	21.20833	07	01	38.19	+47	19	15.8		568

1991 AQ	1991 01 21.40521	06 57 32.86	+47 51 52.3		13.4V		568
1991 AQ	1991 01 23.20625	06 05 11.31	+53 19 55.6				568
1991 AQ	1991 01 25.43472	03 44 13.91	+58 09 46.1				568
1991 AQ	1991 01 26.38368	02 18 07.17	+55 58 36.4				568
1991 AQ	1991 01 27.22222	01 08 08.21	+50 42 51.9				568
951	1991 01 26.60434	15 31 19.98	-21 30 05.8				568

591 Resse Observatory
N. Ehring, Wiesenstrasse 7, W-3002 Wedemark 15, Federal Republic of Germany

1990 SQ	1991 01 04.75742	00 07 52.23	+53 42 30.1				591
1990 SQ	1991 01 04.76464	00 07 54.71	+53 42 40.6				591
1990 SQ	1991 01 16.74344	01 26 28.42	+57 12 14.7				591
1990 SQ	1991 01 16.75477	01 26 33.17	+57 12 21.1				591
1990 SQ	1991 01 17.74838	01 33 40.36	+57 21 17.3				591
1990 SQ	1991 01 17.76337	01 33 46.72	+57 21 24.6				591
1990 SQ	1991 01 18.78906	01 41 09.67	+57 29 09.1				591
1990 SQ	1991 01 18.80075	01 41 14.66	+57 29 13.6				591
170	1991 01 07.79557	05 28 00.11	+34 37 53.3				591
170	1991 01 07.80650	05 27 59.50	+34 37 47.6				591
218	1991 01 06.82626	04 54 49.33	+00 56 15.4				591
218	1991 01 06.83395	04 54 49.04	+00 56 17.1				591
360	1991 01 04.77512	05 05 36.67	+09 35 12.1				591
360	1991 01 04.84596	05 05 33.96	+09 35 36.6				591
1040	1991 01 07.81830	07 01 43.82	+19 59 28.2				591
1040	1991 01 07.83605	07 01 42.71	+19 59 22.2				591

592 Solingen
B. Koch, Fliederweg 10, W-5650 Solingen 11, Federal Republic of Germany
Observer B. Koch
0.20-m reflector

1990 KA	1990 05 26.92049	15 13 31.91	+07 57 24.8				592
1990 KA	1990 05 26.92920	15 13 32.19	+07 57 11.1				592
1990 KA	1990 05 26.95313	15 13 32.90	+07 56 39.6				592
1990 KA	1990 05 26.95486	15 13 33.03	+07 56 36.2				592
1991 AQ	1991 01 22.81875	06 19 34.78	+52 04 53.0			s	592
1991 AQ	1991 01 22.82222	06 19 27.09	+52 05 38.0			s	592
1991 AQ	1991 01 22.82743	06 19 16.66	+52 06 34.7			s	592

657 Victoria, Climenhaga Observatory
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Observers J. B. Tatum, D. D. Balam

1991 AQ	1991 01 19.12160	07 31 38.41	+42 32 50.3				657
1991 AQ	1991 01 19.13549	07 31 29.30	+42 34 28.1				657
1991 AQ	1991 01 20.28924	07 17 01.82	+45 01 33.7				657
1991 AQ	1991 01 20.42882	07 14 52.73	+45 21 04.8				657

674 Ford Observatory, Wrightwood
J. B. Child, World Space Foundation, P.O. Box Y, South Pasadena CA 91031, U.S.A.

1991 AQ	1991 01 20.43994	07 14 41.10	+45 22 51.5				674
973	1991 01 20.39966	07 30 56.03	+41 41 50.5				674

675 Palomar
J. Gibson, OAO Corporation and Jet Propulsion Laboratory, MS 238-332, Pasadena, CA 91109, U.S.A. (1)
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C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The Netherlands (4)
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J. Mueller, Palomar Observatory, Palomar Mountain, CA 92060, U.S.A. (7)
9 = 3 + 6
Observers R. Bambery (2, S), J. A. Brown (3, S), T. Gehrels (4, L), J. Gibson (1, C), E. Helin (2, S), H. E. Holt (3, S), H. R. Holt (3, S), K. Lawrence (2, S), D. H. Levy (3, S), D. Mendenhall (7, L), J. Mueller (7, L), P. Rose (2, S), C. S. Shoemaker (3, S), E. M. Shoemaker (3, S)
Measurers E. Bowell (6), J. Gibson (1), K. A. Lawler (3), K. Lawrence (2), C. M. Olmstead (6), P. Rose (2), C. S. Shoemaker (3), C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)
1.5-m reflector + CCD (C), 1.2-m (L) and 0.46-m (S) Schmidt telescopes

1971 TY2	1991 01 13.38194	07 39 44.02	+17 40 44.2		15.0	2	675
1971 TY2	1991 01 13.40833	07 39 42.30	+17 40 38.8			2	675
1971 TY2	1991 01 14.41024	07 38 41.54	+17 37 12.6			2	675
1971 TY2	1991 01 14.43403	07 38 40.02	+17 37 06.6			2	675
1971 TY2	1991 01 15.35851	07 37 44.12	+17 33 59.8			2	675
1978 VG10	1990 12 17.47431	07 55 50.27	+20 11 29.4		16.8	2	675
1978 VG10	1990 12 17.49479	07 55 49.53	+20 11 31.5			2	675
1978 VG10	1991 01 14.41024	07 34 30.43	+21 07 38.2		16.7	2	675
1978 VG10	1991 01 14.43403	07 34 29.25	+21 07 42.2			2	675
1978 VG10	1991 01 15.35851	07 33 42.29	+21 09 34.8			2	675
1978 VL11	1991 01 12.51059	11 40 02.62	+10 41 26.1		16.5	2	675
1978 VL11	1991 01 12.53160	11 40 03.19	+10 41 26.5			2	675
1978 VL11	1991 01 14.52396	11 41 00.73	+10 44 02.5			2	675
1978 VL11	1991 01 14.54809	11 41 01.43	+10 44 05.8			2	675
1978 XQ	1991 01 13.33003	07 19 01.48	+20 49 32.7		16.0	2	675
1978 XQ	1991 01 13.36042	07 18 59.71	+20 49 36.5			2	675
1978 XQ	1991 01 14.33507	07 18 08.09	+20 51 19.9			2	675
1978 XQ	1991 01 14.35851	07 18 06.87	+20 51 22.5			2	675
1979 HE5	1991 01 11.26563	05 35 17.82	+21 35 39.0		17.0	2	675
1979 HE5	1991 01 11.29566	05 35 16.03	+21 35 43.4			2	675
1979 HE5	1991 01 13.22813	05 33 33.33	+21 39 57.0			2	675
1979 HE5	1991 01 13.25451	05 33 31.82	+21 40 00.6			2	675
1986 JS	1989 02 11.42326	11 34 28.46	+08 41 01.6		16.5	2	675
1986 JS	1989 02 11.45781	11 34 27.49	+08 41 16.4			2	675
1986 JN1	1991 01 20.36215	09 17 48.50	+52 23 09.1		17.5	3	675
1986 JN1	1991 01 22.36389	09 15 16.01	+53 02 30.4			3	675
1986 RW	1991 01 12.16649	02 10 21.54	+22 23 44.3		16.5	2	675
1986 RW	1991 01 12.18611	02 10 23.12	+22 23 44.5			2	675
1986 RW	1991 01 13.16042	02 11 46.49	+22 24 02.9			2	675
1986 RW	1991 01 13.18351	02 11 48.40	+22 24 03.3			2	675
1986 TJ2	1991 01 12.45938	10 06 44.82	+13 42 55.7		16.2	2	675
1986 TJ2	1991 01 12.47899	10 06 44.29	+13 43 05.2			2	675
1986 TJ2	1991 01 14.50625	10 05 59.43	+13 56 57.6			2	675
1986 TJ2	1991 01 14.53021	10 05 58.86	+13 57 07.2			2	675
1986 WE	1991 01 14.38507	06 59 07.34	+24 31 12.3		16.0	2	675
1986 WE	1991 01 14.41667	06 59 05.27	+24 31 25.2			2	675
1986 WE	1991 01 15.32500	06 58 09.79	+24 36 50.5			2	675
1987 FF1	1991 01 12.49618	11 28 05.16	+20 22 18.4		16.3	2	675
1987 FF1	1991 01 12.51762	11 28 05.43	+20 22 29.4			2	675
1987 FF1	1991 01 14.51806	11 28 37.65	+20 40 03.6			2	675
1987 FF1	1991 01 14.54184	11 28 37.91	+20 40 15.5			2	675
1987 SJ3	1990 10 20.45313	03 19 40.36	+42 02 14.0		16.7	3	675
1987 SJ3	1990 10 22.41337	03 16 30.56	+42 38 49.3			3	675
1987 SJ3	1990 11 13.25382	02 31 03.60	+47 10 07.6			3	675
1987 SJ3	1990 11 15.22118	02 26 43.33	+47 20 08.2			3	675

1988	EJ1	1991	01	11.36701	07	31	26.00	+14	40	18.4	15.7	2 675
1988	EJ1	1991	01	11.39514	07	31	24.00	+14	40	20.6		2 675
1988	EJ1	1991	01	15.31892	07	26	58.23	+14	45	36.2		2 675
1988	EJ1	1991	01	15.35226	07	26	55.89	+14	45	39.2		2 675
1988	JV	1991	01	17.36805	08	22	57.26	+31	36	09.7	15.5	3 675
1988	JV	1991	01	17.40156	08	22	54.87	+31	36	29.7		3 675
1988	JA1	1991	01	16.38402	08	51	30.32	+18	51	45.7	16.5	3 675
1988	JA1	1991	01	22.33315	08	45	41.69	+20	12	43.6		3 675
1988	LB	1991	01	12.40816	08	43	30.81	+08	46	00.4	17.0	2 675
1988	LB	1991	01	12.42309	08	43	30.05	+08	45	59.4		2 675
1988	PP	1991	01	12.46389	11	16	30.47	+10	10	09.6	16.8	2 675
1988	PP	1991	01	12.48576	11	16	30.74	+10	10	16.3		2 675
1988	PP	1991	01	14.51215	11	16	53.61	+10	21	34.4		2 675
1988	PP	1991	01	14.53594	11	16	53.83	+10	21	42.2		2 675
1988	PT	1991	01	13.44201	09	22	45.63	-02	48	14.5	16.7	2 675
1988	PT	1991	01	13.46094	09	22	44.78	-02	48	14.0		2 675
1988	PT	1991	01	15.48628	09	21	29.96	-02	47	00.5		2 675
1988	PT	1991	01	15.51111	09	21	28.74	-02	46	59.8		2 675
1988	PB1	1990	10	20.37152	02	23	38.45	+36	23	50.3	17.7	3 675
1988	PB1	1990	10	22.32899	02	22	31.03	+36	17	08.1		3 675
1988	PB1	1990	11	13.24549	02	09	49.10	+34	32	44.8		3 675
1988	QE	1989	11	02.16909	23	42	21.72	+06	19	08.1	18	3 675
1988	QE	1989	11	03.12326	23	42	09.35	+06	16	05.5		3 675
1989	GH4	1990	09	18.19097	22	26	00.32	-11	01	27.5	18.0	9 675
1989	GH4	1990	09	18.22222	22	25	58.82	-11	01	30.7		9 675
1989	LU	1991	01	11.24740	05	22	55.52	+24	36	48.0	16.8	2 675
1989	LU	1991	01	11.28003	05	22	53.93	+24	36	42.5		2 675
1989	LU	1991	01	13.22205	05	21	27.91	+24	33	11.1		2 675
1989	LU	1991	01	13.24809	05	21	26.71	+24	33	07.5		2 675
1989	NE	1990	11	18.40677	04	53	54.11	-00	20	45.0	16.7	2 675
1989	NE	1990	11	18.43212	04	53	52.86	-00	20	50.4		2 675
1989	NR	1991	01	11.42153	08	11	21.00	+24	26	25.2	16.0	2 675
1989	NR	1991	01	11.44896	08	11	18.77	+24	26	22.9		2 675
1989	NR	1991	01	15.41059	08	06	17.74	+24	24	34.7	16.5	2 675
1989	NR	1991	01	15.43819	08	06	15.56	+24	24	33.6		2 675
1989	SC7	1988	09	14.21180	21	57	32.01	+07	54	32.4	17.6	3 675
1989	SC7	1988	09	14.26458	21	57	31.15	+07	54	25.5		3 675
1989	SC7	1990	10	20.37934	02	41	44.77	+22	50	24.2	17.6	3 675
1989	SC7	1990	10	22.38906	02	40	46.03	+22	43	44.6		3 675
1990	RW	1990	08	23.43941	23	11	35.09	-05	32	45.8	17.2	9 675
1990	RW	1990	08	23.47517	23	11	33.87	-05	32	54.0		9 675
1990	RA6	1990	08	27.36354	22	27	09.03	-11	27	34.0	17.5	9 675
1990	RA6	1990	08	27.39615	22	27	07.34	-11	27	42.5		9 675
1990	RB6	1990	08	27.36354	22	29	35.40	-12	45	00.1	17.5	9 675
1990	RB6	1990	08	27.39615	22	29	33.34	-12	45	05.8		9 675
1990	RH6	1990	09	13.31979	22	29	01.06	-08	42	51.5	17.5	9 675
1990	RH6	1990	09	13.35122	22	28	59.52	-08	42	58.6		9 675
1990	RX6	1990	09	18.19097	22	52	02.73	-06	34	54.2	18.0	9 675
1990	RX6	1990	09	18.22222	22	52	01.31	-06	35	06.9		9 675
1990	RA7	1990	09	14.32222	22	58	18.08	-07	18	13.1	17.8	9 675
1990	RA7	1990	09	14.35938	22	58	16.14	-07	18	32.9		9 675
1990	RW7	1990	09	14.32222	23	00	12.66	-06	35	26.8	17.5	9 675
1990	RW7	1990	09	14.35938	23	00	11.07	-06	35	39.1		9 675
1990	SQ	1991	01	11.14965	00	47	51.82	+55	56	43.7	13.5	2 675
1990	SQ	1991	01	11.16944	00	47	59.53	+55	57	03.5		2 675
1990	SQ	1991	01	15.11823	01	14	59.26	+56	54	42.1		2 675
1990	SQ	1991	01	15.14965	01	15	12.16	+56	55	03.6		2 675
1990	TL4	1991	01	13.11858	01	07	13.13	+14	46	34.1	16.3	2 675
1990	TL4	1991	01	13.14253	01	07	14.68	+14	46	37.5		2 675

1990	TO14*	1990	10	14.38038	01	37	09.29	+17	15	51.7		16.5	2 675
1990	TO14	1990	10	14.40313	01	37	08.05	+17	15	17.6			2 675
1990	TO14	1990	10	15.29010	01	36	23.75	+16	52	59.9			2 675
1990	TO14	1990	10	15.31597	01	36	22.09	+16	52	19.6			2 675
1990	TO14	1990	10	16.32917	01	35	30.91	+16	26	39.5			2 675
1990	TO14	1990	10	16.35851	01	35	29.32	+16	25	53.7			2 675
1990	TO14	1990	10	17.36667	01	34	38.27	+16	00	10.2			2 675
1990	TO14	1990	10	17.39809	01	34	36.58	+15	59	22.5			2 675
1990	VC4	1990	12	15.25174	03	47	56.08	+16	42	32.6		15.8	2 675
1990	VC4	1990	12	15.28108	03	47	54.79	+16	42	35.1			2 675
1990	VC4	1990	12	18.19965	03	45	45.99	+16	49	34.2			2 675
1990	VC4	1990	12	18.22014	03	45	45.07	+16	49	37.9			2 675
1990	VH7	1989	09	28.35399	00	58	38.64	+22	14	05.8		17.4	3 675
1990	VH7	1989	09	29.38524	00	58	06.86	+22	11	40.3			3 675
1990	VH7	1989	09	30.40747	00	57	35.27	+22	09	12.1			3 675
1990	VH7	1989	11	03.21962	00	40	55.47	+22	03	50.9		17.5	3 675
1990	VH7	1989	11	04.17499	00	40	33.30	+19	59	37.8			3 675
1990	VK8 *	1990	11	15.42639	04	13	23.66	+07	58	00.3		17.8	3 675
1990	VK8	1990	11	17.43854	04	10	57.28	+07	19	28.8			3 675
1990	WA	1991	01	11.25694	05	25	27.86	+66	57	04.6		16.5	2 675
1990	WA	1991	01	11.28802	05	25	26.53	+66	57	43.9			2 675
1990	WA	1991	01	14.24028	05	24	17.79	+67	53	22.1			2 675
1990	WA	1991	01	14.26181	05	24	17.03	+67	53	43.3			2 675
1990	WW2	1991	01	11.24740	05	14	23.93	+23	58	05.1		16.0	2 675
1990	WW2	1991	01	11.28003	05	14	22.68	+23	58	20.5			2 675
1990	WW2	1991	01	13.22205	05	13	20.06	+24	12	19.5			2 675
1990	WW2	1991	01	13.24809	05	13	19.28	+24	12	31.3			2 675
1990	XJ	1991	01	13.16597	02	51	21.37	+07	47	57.6		16.7	2 675
1990	XJ	1991	01	13.18906	02	51	23.72	+07	47	27.5			2 675
1990	XJ	1991	01	15.16962	02	54	44.28	+07	08	14.7			2 675
1990	XJ	1991	01	15.20035	02	54	47.43	+07	07	38.3			2 675
1990	XB1	1991	01	13.40243	08	18	35.69	+30	44	14.6		15.0	2 675
1990	XB1	1991	01	13.42639	08	18	34.40	+30	44	26.1			2 675
1990	XB1	1991	01	15.41736	08	16	47.91	+31	01	50.0			2 675
1990	XB1	1991	01	15.44566	08	16	46.27	+31	02	04.0			2 675
1991	AQ *	1991	01	14.39792	08	02	22.70	+36	02	19.3		15.5	2 675
1991	AQ	1991	01	14.42240	08	02	16.57	+36	03	44.3			2 675
1991	AQ	1991	01	15.38542	07	58	06.95	+37	04	04.9			2 675
1991	AQ	1991	01	19.31181	07	29	30.11	+42	55	51.7		14.7	3 675
1991	AQ	1991	01	20.30017	07	16	51.21	+45	03	26.6			3 675
1991	AS *	1991	01	11.31649	06	30	06.65	+28	13	15.4		16.5	2 675
1991	AS	1991	01	11.34045	06	30	04.97	+28	13	04.9			2 675
1991	AS	1991	01	14.29340	06	27	07.08	+27	54	43.2			2 675
1991	AS	1991	01	14.31684	06	27	05.51	+27	54	34.8			2 675
1991	AT *	1991	01	11.31649	06	32	39.34	+27	40	09.7		16.3	2 675
1991	AT	1991	01	11.34045	06	32	37.63	+27	40	00.0			2 675
1991	AT	1991	01	14.29340	06	29	33.12	+27	20	32.7			2 675
1991	AT	1991	01	14.31684	06	29	31.57	+27	20	22.8			2 675
1991	AU *	1991	01	11.31649	06	54	54.00	+26	49	15.3		15.8	2 675
1991	AU	1991	01	11.34045	06	54	52.22	+26	49	25.1			2 675
1991	AU	1991	01	14.29340	06	51	37.42	+27	07	52.0			2 675
1991	AU	1991	01	14.31684	06	51	35.85	+27	08	01.5			2 675
1991	AV *	1991	01	11.31649	06	56	47.26	+26	44	04.9		16.0	2 675
1991	AV	1991	01	11.34045	06	56	45.66	+26	44	09.5			2 675
1991	AV	1991	01	14.29340	06	53	53.08	+26	51	15.6			2 675
1991	AV	1991	01	14.31684	06	53	51.61	+26	51	20.7			2 675
1991	AW *	1991	01	12.41493	09	04	22.47	+15	30	58.5		16.0	2 675
1991	AW	1991	01	12.43472	09	04	21.65	+15	31	10.5			2 675
1991	AW	1991	01	14.45642	09	02	58.42	+15	52	42.8			2 675

1991	AW		1991	01	14.48646	09	02	57.15	+15	53	02.4	2 675
1991	AY	*	1991	01	13.33819	07	27	11.92	+32	18	02.6	16.0 2 675
1991	AY		1991	01	13.36753	07	27	09.88	+32	18	07.9	2 675
1991	AY		1991	01	14.34097	07	26	04.93	+32	21	01.8	2 675
1991	AY		1991	01	14.36458	07	26	03.29	+32	21	06.9	2 675
1991	AZ	*	1991	01	13.33819	07	39	48.61	+34	42	36.7	16.3 2 675
1991	AZ		1991	01	13.36753	07	39	46.49	+34	42	49.3	2 675
1991	AZ		1991	01	14.34097	07	38	39.09	+34	50	17.1	2 675
1991	AZ		1991	01	14.36458	07	38	37.43	+34	50	27.6	2 675
1991	AC1	*	1991	01	13.33003	07	16	51.76	+26	03	04.7	16.8 2 675
1991	AC1		1991	01	13.36042	07	16	49.66	+26	03	21.7	2 675
1991	AC1		1991	01	14.38507	07	15	41.74	+26	12	55.0	2 675
1991	AC1		1991	01	14.41667	07	15	39.60	+26	13	13.7	2 675
1991	AD1	*	1991	01	13.33003	07	19	47.01	+20	23	38.2	16.3 2 675
1991	AD1		1991	01	13.36042	07	19	44.86	+20	23	46.5	2 675
1991	AD1		1991	01	14.33507	07	18	38.09	+20	28	38.9	2 675
1991	AD1		1991	01	14.35851	07	18	36.41	+20	28	45.1	2 675
1991	AE1	*	1991	01	14.35260	07	40	55.62	+07	34	30.5	16.0 2 675
1991	AE1		1991	01	14.37639	07	40	53.81	+07	35	08.6	2 675
1991	AE1		1991	01	15.33993	07	39	43.25	+07	59	53.0	2 675
1991	AN1	*	1991	01	11.32205	06	24	35.10	+18	31	50.7	16.3 2 675
1991	AN1		1991	01	11.34601	06	24	33.42	+18	31	56.0	2 675
1991	AN1		1991	01	14.30556	06	21	25.52	+18	42	47.4	2 675
1991	AN1		1991	01	14.32830	06	21	24.21	+18	42	52.1	2 675
1991	AO1	*	1991	01	11.32205	06	25	07.15	+17	37	50.5	16.4 2 675
1991	AO1		1991	01	11.34601	06	25	05.67	+17	38	06.5	2 675
1991	AO1		1991	01	14.30556	06	22	15.61	+18	09	24.2	2 675
1991	AO1		1991	01	14.32830	06	22	14.34	+18	09	38.5	2 675
1991	AP1	*	1991	01	14.38507	07	00	59.57	+24	44	04.5	16.5 2 675
1991	AP1		1991	01	14.41667	07	00	57.40	+24	44	05.0	2 675
1991	AP1		1991	01	15.32500	07	00	01.29	+24	44	22.9	2 675
1991	AQ1	*	1991	01	11.24740	05	30	35.81	+29	06	13.6	16.7 2 675
1991	AQ1		1991	01	11.28003	05	30	34.15	+29	06	00.1	2 675
1991	AQ1		1991	01	13.22205	05	29	10.45	+28	53	13.0	2 675
1991	AQ1		1991	01	13.24809	05	29	09.24	+28	53	03.5	2 675
1991	AR1	*	1991	01	11.24740	05	21	34.37	+24	16	10.3	16.3 2 675
1991	AR1		1991	01	11.28003	05	21	33.27	+24	16	09.5	2 675
1991	AR1		1991	01	13.22205	05	20	29.12	+24	14	53.9	2 675
1991	AR1		1991	01	13.24809	05	20	28.34	+24	14	53.3	2 675
1991	AS1	*	1991	01	14.44896	09	41	08.27	+24	23	33.4	16.3 2 675
1991	AS1		1991	01	14.47969	09	41	05.44	+24	23	15.5	2 675
1991	AS1		1991	01	15.46563	09	39	38.87	+24	13	40.0	2 675
1991	AT1	*	1991	01	14.44896	09	44	37.28	+27	14	54.4	16.2 2 675
1991	AT1		1991	01	14.47969	09	44	36.21	+27	15	15.0	2 675
1991	AT1		1991	01	15.46563	09	44	04.27	+27	26	09.5	2 675
1991	AU1	*	1991	01	12.51059	11	42	31.06	+10	19	08.9	16.7 2 675
1991	AU1		1991	01	12.53160	11	42	31.13	+10	18	52.0	2 675
1991	AU1		1991	01	14.52396	11	42	31.38	+09	52	22.5	2 675
1991	AU1		1991	01	14.54809	11	42	31.12	+09	52	01.2	2 675
1991	AV1	*	1991	01	13.38194	07	35	01.17	+20	45	52.4	16.7 2 675
1991	AV1		1991	01	13.40833	07	34	59.31	+20	45	54.3	2 675
1991	AV1		1991	01	14.41024	07	33	53.11	+20	47	05.7	2 675
1991	AV1		1991	01	14.43403	07	33	51.32	+20	47	08.2	2 675
1991	AV1		1991	01	15.35851	07	32	50.34	+20	48	13.8	2 675
1991	AW1	*	1991	01	13.38194	07	37	38.53	+20	41	55.7	16.7 2 675
1991	AW1		1991	01	13.40833	07	37	37.19	+20	41	52.9	2 675
1991	AW1		1991	01	14.41024	07	36	42.48	+20	40	55.4	2 675
1991	AW1		1991	01	14.43403	07	36	41.00	+20	40	53.0	2 675
1991	AY1	*	1991	01	11.20747	04	12	13.70	+06	55	10.5	16.8 2 675

1991	AY1		1991	01	11.23281	04	12	13.14	+06	55	16.9		2 675
1991	AY1		1991	01	15.23003	04	11	23.93	+07	11	47.7		2 675
1991	AY1		1991	01	15.25174	04	11	23.74	+07	11	54.0		2 675
1991	AZ1	*	1991	01	11.36701	07	39	36.55	+14	55	04.3	16.3	2 675
1991	AZ1		1991	01	11.39514	07	39	34.98	+14	55	18.2		2 675
1991	AZ1		1991	01	15.31892	07	35	49.34	+15	28	21.2		2 675
1991	AZ1		1991	01	15.35226	07	35	47.18	+15	28	38.0		2 675
1991	AA2	*	1991	01	11.26563	05	36	04.08	+21	29	25.1	17.0	2 675
1991	AA2		1991	01	11.29566	05	36	02.49	+21	29	33.1		2 675
1991	AA2		1991	01	13.22813	05	34	31.58	+21	37	10.7	17.0	2 675
1991	AA2		1991	01	13.25451	05	34	30.20	+21	37	17.3		2 675
1991	AB2	*	1991	01	11.36701	07	33	54.40	+14	36	39.6	15.7	2 675
1991	AB2		1991	01	11.39514	07	33	52.52	+14	36	44.9		2 675
1991	AB2		1991	01	15.31892	07	29	42.30	+14	50	49.9		2 675
1991	AB2		1991	01	15.35226	07	29	40.02	+14	50	57.3		2 675
1991	AC2	*	1991	01	12.41493	09	09	41.51	+14	22	26.1	16.8	2 675
1991	AC2		1991	01	12.43472	09	09	40.66	+14	22	34.8		2 675
1991	AC2		1991	01	14.45642	09	08	12.63	+14	35	48.1		2 675
1991	AC2		1991	01	14.48646	09	08	11.10	+14	35	59.6		2 675
1991	AD2	*	1991	01	12.41493	09	16	16.38	+14	20	38.2	16.5	2 675
1991	AD2		1991	01	12.43472	09	16	15.35	+14	20	43.6		2 675
1991	AD2		1991	01	14.45642	09	14	44.38	+14	30	07.2		2 675
1991	AD2		1991	01	14.48646	09	14	42.94	+14	30	15.1		2 675
1991	AP2	*	1991	01	12.44844	09	39	57.91	+02	53	44.9	16.0	2 675
1991	AP2		1991	01	15.49288	09	38	43.30	+03	10	27.7		2 675
1991	AP2		1991	01	15.51719	09	38	42.72	+03	10	35.3		2 675
1991	BB		1991	01	12.40816	08	50	21.78	+09	26	51.0	16.7	2 675
1991	BB		1991	01	12.42292	08	50	17.94	+09	26	00.5		2 675
1991	BB		1991	01	16.34600	08	32	36.13	+05	32	01.5		3 675
1991	BB		1991	01	16.37673	08	32	27.29	+05	30	06.7		3 675
1991	BB	*	1991	01	19.31389	08	18	10.16	+02	25	01.2	17	7 675
1991	BB		1991	01	19.38333	08	17	49.10	+02	20	39.3		7 675
1991	BB		1991	01	20.31458	08	13	08.83	+01	20	49.9		7 675
1991	BB		1991	01	20.35278	08	12	57.15	+01	18	24.5		7 675
1991	BB		1991	01	22.31024	08	02	58.52	-00	47	49.4	16.2	3 675
1991	BE		1991	01	15.37274	08	00	56.46	+17	18	04.5	15.0	2 675
1991	BE		1991	01	15.39757	08	00	54.30	+17	17	50.7		2 675
1991	CA1	*	1991	02	14.34983	09	58	47.59	+33	16	51.9	16.5	2 675
1991	CA1		1991	02	14.37413	09	58	45.71	+33	17	24.8		2 675
1991	CA1		1991	02	16.40625	09	56	28.68	+34	10	44.1	16.5	2 675
1991	CA1		1991	02	16.53785	09	56	19.40	+34	13	58.3		2 675
1991	CC1	*	1991	02	14.46372	12	11	43.50	+02	24	52.2	16.0	2 675
1991	CC1		1991	02	16.44306	12	11	28.54	+02	38	33.5		2 675
1991	CD1	*	1991	02	10.45277	11	34	38.63	+24	08	23.0	15.8	3 675
1991	CD1		1991	02	13.41649	11	34	29.15	+25	25	33.4		3 675
2577	P-L	*	1960	09	24.46184	00	52	59.63	+06	01	09.2	18.4	4 675
2577	P-L		1960	09	26.37988	00	51	16.29	+05	50	52.8		4 675
2577	P-L		1960	09	28.43822	00	49	23.17	+05	39	40.4		4 675
2577	P-L		1960	09	29.39514	00	48	30.13	+05	34	22.3		4 675
2577	P-L		1960	10	17.30420	00	32	20.27	+03	55	40.3		4 675
2577	P-L		1960	10	17.31529	00	32	19.71	+03	55	34.7		4 675
2577	P-L		1960	10	22.26809	00	28	30.56	+03	31	51.2		4 675
2577	P-L		1960	10	25.30351	00	26	24.77	+03	18	46.1		4 675
2577	P-L		1960	10	26.35766	00	25	43.89	+03	14	32.5		4 675
3045	P-L	*	1960	09	24.27708	00	21	59.93	+15	56	05.3	17.3	4 675
3045	P-L		1960	09	24.36250	00	21	54.46	+15	56	03.4		4 675
3045	P-L		1960	09	25.22986	00	21	00.31	+15	55	42.1		4 675
3045	P-L		1960	09	25.36042	00	20	51.90	+15	55	38.1		4 675
3045	P-L		1960	09	25.46250	00	20	45.22	+15	55	35.1		4 675

3045	P-L		1960	09	26.24514	00	19	56.65	+15	55	07.9		4 675
3045	P-L		1960	09	26.29514	00	19	53.44	+15	55	05.3		4 675
3045	P-L		1960	09	26.40208	00	19	46.42	+15	54	59.8		4 675
3045	P-L		1960	09	27.27569	00	18	51.74	+15	54	20.2		4 675
3045	P-L		1960	09	27.44444	00	18	40.80	+15	54	09.7		4 675
3045	P-L		1960	09	28.34722	00	17	44.31	+15	53	17.9		4 675
3045	P-L		1960	09	28.40764	00	17	40.36	+15	53	13.5		4 675
3045	P-L		1960	09	28.46181	00	17	36.86	+15	53	10.4		4 675
3045	P-L		1960	09	29.34722	00	16	41.54	+15	52	07.7		4 675
3045	P-L		1960	09	29.47153	00	16	33.56	+15	51	59.9		4 675
3045	P-L		1960	10	17.17917	23	59	45.40	+15	09	10.4		4 675
3045	P-L		1960	10	17.33750	23	59	37.44	+15	08	39.9		4 675
3045	P-L		1960	10	24.21256	23	54	45.76	+14	46	04.3		4 675
4545	P-L	*	1960	09	24.41183	00	21	43.74	+02	55	56.7	18.5	4 675
4545	P-L		1960	09	26.31530	00	20	16.79	+02	45	42.6		4 675
4545	P-L		1960	09	27.40836	00	19	26.55	+02	39	49.4		4 675
4545	P-L		1960	09	28.39725	00	18	41.17	+02	34	28.7		4 675
4545	P-L		1960	10	17.27085	00	05	17.30	+00	58	15.6		4 675
4545	P-L		1960	10	22.22293	00	02	27.74	+00	37	21.3		4 675
4545	P-L		1960	10	24.35836	00	01	22.24	+00	29	10.3		4 675
4545	P-L		1960	10	26.32573	00	00	26.62	+00	22	09.7		4 675
7082	P-L		1990	09	17.29722	23	51	05.05	+15	09	16.8	17.2	9 675
7082	P-L		1990	09	17.33108	23	51	02.85	+15	09	12.6		9 675
3013	T-2		1973	09	19.21250	00	05	27.53	-01	46	03.5		4 675
3013	T-2		1973	09	19.26354	00	05	25.06	-01	46	25.5		4 675
3013	T-2		1973	09	20.27795	00	04	36.87	-01	53	44.5		4 675
3013	T-2		1973	09	24.37431	00	01	19.58	-02	23	09.7		4 675
3013	T-2		1973	09	24.44167	00	01	16.25	-02	23	39.8		4 675
3013	T-2		1973	09	25.26875	00	00	36.72	-02	29	32.4		4 675
3013	T-2		1973	09	25.33299	00	00	33.36	-02	29	59.8		4 675
3013	T-2		1973	09	29.27986	23	57	24.24	-02	57	38.8		4 675
3013	T-2		1973	09	30.23524	23	56	39.13	-03	04	12.4		4 675
3013	T-2	*	1973	09	30.30174	23	56	35.85	-03	04	39.7	18.3	4 675
3013	T-2		1973	10	04.31493	23	53	30.87	-03	31	17.7		4 675
3013	T-2		1973	10	04.37674	23	53	27.95	-03	31	41.7		4 675
3013	T-2		1973	10	05.34167	23	52	44.89	-03	37	51.0		4 675
3013	T-2		1973	10	05.40347	23	52	42.14	-03	38	12.8		4 675
4354	T-3	*	1977	10	16.28368	01	33	13.82	+01	45	11.8	17.2	4 675
4354	T-3		1977	10	16.34931	01	33	09.83	+01	44	45.2		4 675
4354	T-3		1977	10	17.28628	01	32	15.97	+01	38	34.8		4 675
4354	T-3		1977	10	17.35313	01	32	11.98	+01	38	10.0		4 675
4354	T-3		1977	10	21.38698	01	28	20.73	+01	13	06.8		4 675
4354	T-3		1977	10	21.44705	01	28	17.12	+01	12	45.9		4 675
4354	T-3		1977	10	22.38542	01	27	24.14	+01	07	17.3		4 675
4354	T-3		1977	10	22.44878	01	27	20.60	+01	06	57.4		4 675
951			1989	10	19.47932	08	39	59.85	+16	26	40.6		1 675
951			1989	10	19.48406	08	40	00.26	+16	26	38.4		1 675
951			1989	10	19.49244	08	40	00.95	+16	26	34.7		1 675
951			1989	10	19.49829	08	40	01.46	+16	26	32.1		1 675
951			1989	10	19.50233	08	40	01.82	+16	26	30.3		1 675
951			1989	10	19.50608	08	40	02.14	+16	26	28.6		1 675
951			1989	11	10.46766	09	07	18.71	+13	44	53.6		1 675
951			1989	11	10.47106	09	07	18.91	+13	44	52.2		1 675
951			1989	11	10.47618	09	07	19.21	+13	44	50.0		1 675
951			1989	12	10.40024	09	25	19.52	+10	57	00.0		1 675
951			1989	12	10.40463	09	25	19.56	+10	56	59.0		1 675
951			1989	12	10.41330	09	25	19.62	+10	56	57.1		1 675
951			1990	01	07.29284	09	16	10.37	+10	13	22.3		1 675
951			1990	01	07.29676	09	16	10.18	+10	13	22.6		1 675

951		1990	01	07.30000	09	16	10.02	+10	13	22.7	1	675
951		1990	01	07.30877	09	16	09.59	+10	13	23.0	1	675
1801		1991	01	13.40243	08	17	04.42	+30	45	15.7	15.0 2	675
1801		1991	01	13.42639	08	17	03.10	+30	45	23.3	2	675
1801		1991	01	15.41736	08	15	13.66	+30	57	48.8	2	675
1801		1991	01	15.44566	08	15	12.02	+30	57	58.7	2	675
1900		1986	05	03.40694	15	06	09.55	-26	38	32.3	16.2 2	675
1900		1986	05	03.42986	15	06	08.19	-26	38	25.0	2	675
4719		1991	01	13.33819	07	25	30.16	+34	46	50.2	15.8 2	675
4719		1991	01	13.36753	07	25	28.18	+34	46	50.9	2	675
4719		1991	01	14.34097	07	24	23.27	+34	46	53.9	2	675
4719		1991	01	14.36458	07	24	21.61	+34	46	55.4	2	675

688 Lowell Observatory, Anderson Mesa Station
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observers B. A. Skiff, K. L. Faul, S. J. Bus
Measurers J. R. Pacatte, S. J. Bus
1.1-m reflector + CCD

1981	EN4	1991	01	15.33221	07	53	30.13	+10	04	38.5	17.2R N	688
1981	EN4	1991	01	15.33591	07	53	29.93	+10	04	38.4	N	688
1981	EL5	1991	01	15.34984	08	26	21.77	+06	25	26.5	17.0R	688
1981	EL5	1991	01	15.37569	08	26	20.46	+06	25	26.3		688
1986	UU	1991	01	15.38204	09	51	27.56	+03	34	55.8	17.7R	688
1986	UU	1991	01	15.38566	09	51	27.40	+03	34	56.2		688
1988	RH12	1991	01	15.24751	04	49	14.90	+11	08	18.7	19.0R	688
1988	RH12	1991	01	15.25870	04	49	14.70	+11	08	19.5		688
1990	VB	1991	01	15.18317	02	26	48.25	+14	19	56.2	18.5R	688
1990	VB	1991	01	15.18745	02	26	48.93	+14	19	56.2		688
1990	YY	1991	01	12.19578	03	20	44.44	+18	01	49.1	19.5	688
1990	YY	1991	01	13.15728	03	20	39.67	+18	01	59.4		688
2028		1991	01	15.28164	06	16	49.92	+15	21	06.0	17.7R	688
2028		1991	01	15.28542	06	16	49.68	+15	21	05.8		688
3075		1991	01	15.41410	10	59	03.99	+08	43	59.9	18.2R r	688
3075		1991	01	15.41795	10	59	03.88	+08	44	00.2	r	688
3287		1991	01	15.32139	07	36	05.49	+03	48	59.3	18.5R	688
3287		1991	01	15.32788	07	36	05.06	+03	49	00.2		688

690 Lowell Observatory
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observer C. W. Tombaugh
Measurer B. A. Skiff
0.3-m photographic telescope

1931	VK1	1931	11	03.24374	02	28	36.07	+10	44	55.6		690
1931	VK1	1931	11	06.22569	02	26	14.89	+10	07	46.7		690
69		1931	10	31.12813	02	02	37.09	+06	11	16.4		690
69		1931	11	03.24374	02	00	14.43	+05	50	39.8		690
69		1931	11	06.22569	01	58	00.92	+05	31	43.1		690
83		1931	10	31.12813	02	08	54.43	+14	09	40.0	R	690
83		1931	11	03.24374	02	05	44.98	+13	59	08.7	R	690
83		1931	11	06.22569	02	02	46.94	+13	49	05.9		690
178		1931	11	06.22569	02	32	04.37	+14	22	53.5		690
196		1931	10	31.12813	02	21	33.81	+07	15	52.5		690
196		1931	11	03.24374	02	19	01.41	+07	08	31.8		690
196		1931	11	06.22569	02	16	37.07	+07	02	02.0		690
332		1931	10	31.12813	02	20	58.96	+14	29	50.0		690
332		1931	11	03.24374	02	18	08.76	+14	19	10.9		690
332		1931	11	06.22569	02	15	28.36	+14	08	56.5		690

364		1931	10	31.12813	02	28	17.81	+02	20	34.8	D	690
364		1931	11	03.24374	02	25	12.26	+02	12	10.5		690
364		1931	11	06.22569	02	22	16.18	+02	06	00.7	R	690
589		1931	10	31.12813	01	58	00.61	+02	46	50.6		690
589		1931	11	03.24374	01	55	50.24	+02	28	07.6		690
589		1931	11	06.22569	01	53	49.48	+02	11	17.1		690
700		1931	10	31.12813	02	08	09.03	+02	07	24.0		690
700		1931	11	03.24374	02	04	55.74	+01	56	43.1		690
700		1931	11	06.22569	02	01	55.35	+01	47	55.8		690
867		1931	10	31.12813	02	06	10.99	+10	32	38.4	R	690
867		1931	11	03.24374	02	03	32.86	+10	24	41.3		690
867		1931	11	06.22569	02	01	03.87	+10	17	23.2		690
873		1931	10	31.12813	02	07	21.29	+05	19	50.6	D	690
873		1931	11	03.24374	02	04	41.15	+05	04	45.7	D	690
873		1931	11	06.22569	02	02	11.92	+04	51	15.9		690
993		1931	10	31.12813	02	26	10.80	+12	54	30.1		690
993		1931	11	03.24374	02	23	32.84	+12	39	46.2		690
993		1931	11	06.22569	02	21	02.75	+12	25	45.7		690
1117		1931	10	31.12813	02	26	21.57	+06	49	08.4		690
1117		1931	11	03.24374	02	23	07.29	+06	32	04.7		690
1117		1931	11	06.22569	02	20	05.42	+06	16	52.0		690
1167		1931	10	31.12813	02	10	02.84	+14	44	28.0		690
1167		1931	11	03.24374	02	07	50.93	+14	28	46.0		690
1167		1931	11	06.22569	02	05	46.94	+14	13	47.7		690
1635		1931	10	31.12813	02	00	21.29	+10	51	55.0	R	690
1635		1931	11	03.24374	01	57	49.67	+10	36	46.1		690
1635		1931	11	06.22569	01	55	28.95	+10	22	42.9		690
1827		1931	10	31.12813	02	07	05.87	+13	43	34.8	R	690
1827		1931	11	03.24374	02	04	25.65	+13	22	23.4		690
1827		1931	11	06.22569	02	01	55.37	+13	02	06.5		690

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

1980 TP		1991	01	14.16867	07	57	38.64	+18	43	20.3	17.9V	691
1980 TP		1991	01	14.18671	07	57	37.32	+18	43	24.3		691
1980 TP		1991	01	14.20572	07	57	35.92	+18	43	28.9		691
1980 TP		1991	01	15.28006	07	56	18.57	+18	47	43.0	17.3V	691
1980 TP		1991	01	15.29375	07	56	17.53	+18	47	46.2		691
1980 TP		1991	01	15.30747	07	56	16.52	+18	47	49.2		691
1980 TP		1991	01	16.28568	07	55	06.15	+18	51	40.3	17.5V	691
1980 TP		1991	01	16.29670	07	55	05.32	+18	51	42.9		691
1980 TP		1991	01	16.30811	07	55	04.47	+18	51	45.6		691
1990 SS		1990	10	22.16860	22	50	38.30	+07	09	48.6	19.7V	691
1990 SS		1990	10	22.17780	22	50	36.85	+07	09	54.6		691
1990 SS		1990	10	22.18861	22	50	35.25	+07	10	01.1		691
1990 SS		1990	11	14.09664	22	11	43.33	+11	48	46.2	20.3V	691
1990 SS		1990	11	14.10941	22	11	42.55	+11	48	56.5		691
1991 AM		1991	01	19.46066	14	12	37.74	+14	09	42.4		691
1991 AM		1991	01	19.46703	14	12	39.77	+14	09	46.4		691
1991 AM		1991	01	19.48017	14	12	43.67	+14	09	55.1	18.8V	691
1991 AM		1991	02	05.47389	15	59	57.85	+17	12	09.7	18.0V	691
1991 AM		1991	02	05.51723	16	00	17.54	+17	12	31.1		691
1991 BA	*	1991	01	18.22620	08	05	09.6	+12	35	49		691
1991 BA		1991	01	18.30358	08	12	29.8	+11	29	05	17.5V	691

1991	BA		1991	01	18.31493	08	13	46.8	+11	17	03		691
1991	BA		1991	01	18.32672	08	15	10.9	+11	03	50		691
1991	BA		1991	01	18.35716	08	19	11.0	+10	25	46		691
1991	BA		1991	01	18.36578	08	20	25.8	+10	13	48		691
1991	BA		1991	01	18.41914	08	29	34.4	+08	45	10		691
1991	BN	*	1991	01	19.24860	08	22	52.82	+14	46	02.6		691
1991	BN		1991	01	19.26885	08	22	50.08	+14	46	08.9	20.9V	691
1991	BN		1991	01	19.28808	08	22	47.49	+14	46	15.1		691
1991	BN		1991	01	20.20565	08	20	48.14	+14	50	55.1	20.8V	691
1991	BN		1991	01	20.21050	08	20	47.43	+14	50	56.2		691
1991	BN		1991	01	20.22488	08	20	45.66	+14	51	01.0		691
1991	BN		1991	01	21.21734	08	18	37.24	+14	56	05.4		691
1991	BN		1991	01	21.23716	08	18	34.56	+14	56	11.1		691
1991	BN		1991	01	21.40477	08	18	12.33	+14	57	02.9		691
1991	BN		1991	01	21.41228	08	18	11.20	+14	57	05.0		691
1991	BN		1991	01	21.42541	08	18	09.48	+14	57	08.6		691
1991	BN		1991	01	24.33041	08	12	02.46	+15	11	46.2	20.7V	691
1991	BN		1991	01	24.33619	08	12	01.68	+15	11	48.6		691
1991	BN		1991	02	05.24619	07	50	15.73	+16	05	50.0		691
1991	BN		1991	02	05.26454	07	50	13.93	+16	05	54.1	21.6V	691
1991	BN		1991	02	05.28238	07	50	12.09	+16	05	58.1		691
1991	CB1	*	1991	02	15.22906	09	23	42.99	+13	07	45.8	21.1V	691
1991	CB1		1991	02	15.25022	09	23	40.85	+13	07	49.5		691
1991	CB1		1991	02	15.27648	09	23	38.17	+13	07	55.4		691
1991	CB1		1991	02	16.37862	09	21	48.79	+13	11	44.2		691
1991	CB1		1991	02	16.38373	09	21	48.27	+13	11	45.4		691
1991	CB1		1991	02	17.25764	09	20	22.09	+13	14	45.5		691
1991	CB1		1991	02	17.26885	09	20	20.92	+13	14	47.2		691
1991	CB1		1991	02	17.28062	09	20	19.73	+13	14	50.3		691
1067			1991	01	14.16731	07	55	41.55	+18	56	18.9	14.6V	691
1067			1991	01	14.18536	07	55	40.40	+18	56	17.4		691
1067			1991	01	14.20438	07	55	39.18	+18	56	16.0		691

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W. T. Hughes, D. A. Klinglesmith, Jr., S. F. Pellicori, Jr.,
R. K. Riddle, C. T. van Sant, K. L. Yu
Measurer C. M. Olmstead
0.25-m refractor
PDS scanning microdensitometer
AGK3 and Perth 70 secondary nets, global solutions

1957	KH		1957	05	29.22359	17	09	49.00	-18	57	21.0		760
1957	KH		1957	05	29.26586	17	09	46.42	-18	56	57.2		760
1957	WM		1957	11	23.26734	02	30	11.46	+24	19	58.5	D	760
1957	WM		1957	11	23.31317	02	30	08.48	+24	20	00.7		760
46			1957	05	29.22359	17	14	57.51	-19	21	49.7	12.6	760
46			1957	05	29.26586	17	14	55.11	-19	21	45.4		760
46			1957	06	26.17574	16	48	05.27	-18	37	53.0	12.2	760
72			1957	05	29.22359	17	16	48.57	-15	37	02.2	10.6	760
72			1957	05	29.26586	17	16	46.28	-15	36	50.3		760
72			1957	06	26.17574	16	50	20.71	-13	56	55.4	12.0	760
123			1956	08	16.24549	21	14	44.10	-13	57	12.4	14.1	760
123			1956	08	16.26632	21	14	43.04	-13	57	15.9		760
200			1956	08	16.24549	21	22	03.08	-16	28	03.2	13.7	760
200			1956	08	16.26632	21	22	01.87	-16	28	05.4		760
202			1957	03	05.08403	08	35	37.07	+19	04	20.8	13.3	760
202			1957	03	05.11389	08	35	36.37	+19	04	28.5		760

224	1957	11	23.26734	02	47	40.81	+24	16	14.3	13.5	760
224	1957	11	23.31317	02	47	38.26	+24	16	03.9		760
235	1961	10	11.28818	02	16	33.94	+04	49	42.7	14.0 A	760
235	1961	10	11.34617	02	16	32.10	+04	49	35.4	A	760
338	1957	11	23.26734	02	47	12.02	+24	07	02.3	13.6	760
338	1957	11	23.31317	02	47	09.75	+24	06	47.8		760
343	1957	03	05.08403	08	34	06.12	+23	59	10.3	15.4	760
343	1957	03	05.11389	08	34	05.36	+23	59	09.8		760
365	1961	10	11.28818	02	19	00.28	+05	12	32.5	13.0 A	760
380	1957	05	29.22359	17	11	46.45	-19	22	27.1	13.8	760
380	1957	05	29.26586	17	11	44.14	-19	22	29.7		760
380	1957	06	26.17574	16	45	49.57	-19	53	04.6	13.9	760
394	1957	05	25.16176	14	09	39.78	-09	08	57.5	14.7	760
394	1957	05	25.20133	14	09	38.11	-09	08	54.7		760
513	1961	10	11.28818	02	00	05.38	+06	29	10.1	15.0 A	760
513	1961	10	11.34617	02	00	03.68	+06	28	49.9	A	760
514	1956	09	01.20767	21	39	02.70	-08	44	17.7	15.5	760
514	1956	09	01.24863	21	39	00.73	-08	44	27.8		760
516	1961	12	06.21563	04	22	35.14	+39	47	40.9	13.8 A	760
516	1961	12	06.27153	04	22	31.21	+39	47	29.3	A	760
518	1959	06	07.24165	18	30	39.78	-12	11	59.3	14.4 A	760
518	1959	06	07.28401	18	30	38.14	-12	11	49.3	A	760
518	1959	07	04.13953	18	08	30.60	-11	01	28.2	14.2 A	760
518	1959	07	04.18233	18	08	28.29	-11	01	27.2	A	760
522	1956	08	16.24549	21	22	26.09	-17	42	51.5	15.7 A	760
522	1956	08	16.26632	21	22	25.21	-17	42	57.4	A	760
522	1959	01	06.07825	06	14	54.96	+21	08	57.4	14.8	760
522	1959	01	06.13097	06	14	52.82	+21	09	03.3		760
527	1957	03	05.08403	08	39	36.24	+22	24	35.6	15.5 A	760
527	1957	03	05.11389	08	39	35.25	+22	24	41.8	A	760
541	1956	09	01.20767	21	48	58.56	-04	16	17.6	16.2	760
541	1956	09	01.24863	21	48	56.36	-04	16	27.5		760
585	1961	10	11.28818	02	09	29.18	+07	12	00.5	15.0 A	760
615	1959	01	06.07825	06	27	48.94	+27	27	56.7	14.8	760
615	1959	01	06.13097	06	27	46.21	+27	27	58.4		760
662	1957	05	25.16176	14	07	58.43	-05	38	05.7	14.6	760
662	1957	05	25.20133	14	07	56.82	-05	38	01.5		760
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666	1957	05	25.20133	14	01	12.47	-11	06	37.1		760
715	1957	05	25.16176	14	03	20.91	-11	18	20.1	15.5	760
715	1957	05	25.20133	14	03	19.18	-11	18	21.7		760
816	1959	06	07.24165	18	38	48.73	-10	53	49.6	15.7	760
816	1959	06	07.28401	18	38	47.10	-10	53	53.7		760
850	1957	03	05.08403	08	38	47.38	+24	26	31.2	15.2	760
850	1957	03	05.11389	08	38	46.46	+24	26	40.0		760
1002	1961	12	06.21563	04	15	56.26	+38	08	26.9	15.7	760
1002	1961	12	06.27153	04	15	52.41	+38	08	14.1		760
1114	1959	06	07.24165	18	48	52.77	-08	11	06.2	15.0	760
1114	1959	06	07.28401	18	48	51.31	-08	10	59.7	D	760
1782	1957	05	25.20133	14	03	21.75	-10	19	44.8		760
2906	1957	05	29.22359	17	05	59.92	-14	10	10.4		760
2906	1957	05	29.26586	17	05	57.56	-14	10	22.2		760
2906	1957	06	26.17574	16	39	56.45	-16	36	41.1		760
2906	1957	06	26.21531	16	39	54.48	-16	36	51.7		760
4631	1957	11	23.26734	02	47	34.68	+23	20	03.0	17.1 A	760
4631	1957	11	23.31317	02	47	31.59	+23	20	01.7	A	760

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1925 BA    1991 01 14.41825  12 50 57.54  -16 07 43.0                    801
1925 BA    1991 01 14.43694  12 50 58.14  -16 07 53.1                    801
1925 BA    1991 01 16.39398  12 52 02.35  -16 25 13.2                    801
1925 BA    1991 01 16.41455  12 52 02.99  -16 25 24.0                    801
1927 TC    1991 01 18.04978  01 51 07.66  +24 14 29.4                    801
1927 TC    1991 01 18.05640  01 51 08.44  +24 14 31.2                    801
1931 TE4   1991 01 14.13648  06 16 17.64  +23 28 38.0                    801
1931 TE4   1991 01 14.16477  06 16 16.02  +23 28 42.1                    801
1931 TE4   1991 01 16.08506  06 14 32.99  +23 32 57.8                    801
1931 TE4   1991 01 16.10888  06 14 31.69  +23 33 00.9                    801
1937 TB    1987 02 25.24668  09 15 53.88  +20 09 17.5                    801
1937 TB    1991 01 14.11318  06 24 47.62  +28 09 09.3                    801
1937 TB    1991 01 14.13013  06 24 46.61  +28 09 09.0                    801
1937 TB    1991 01 15.17428  06 23 49.16  +28 09 03.4                    801
1937 TB    1991 01 15.19216  06 23 48.15  +28 09 03.2                    801
1950 HJ    1991 01 16.18991  07 22 35.02  +11 18 57.8                    801
1950 HJ    1991 01 16.20963  07 22 33.96  +11 18 58.7                    801
1950 HJ    1991 01 18.13786  07 20 54.22  +11 20 14.9                    801
1950 HJ    1991 01 18.16089  07 20 52.99  +11 20 15.9                    801
1968 OA1   1990 12 20.20360  04 44 08.55  +13 37 34.4                    801
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1968 OA1   1991 01 16.06742  04 30 09.70  +13 21 48.6                    801
1968 OA1   1991 01 16.11727  04 30 09.40  +13 21 52.6                    801
1973 ST    1991 01 14.01779  03 57 59.25  +20 26 54.7                    801
1973 ST    1991 01 14.08138  03 57 58.39  +20 26 52.3                    801
1975 YE    1991 01 14.39963  11 46 13.90  -07 10 17.8                    801
1975 YE    1991 01 18.38461  11 47 02.72  -07 10 21.3                    801
1975 YE    1991 01 18.44603  11 47 03.19  -07 10 19.7                    801
1976 SV10  1991 01 14.03810  04 28 11.00  +23 15 35.8                    801
1976 SV10  1991 01 14.07199  04 28 10.22  +23 15 31.7                    801
1976 SV10  1991 01 18.06608  04 27 01.21  +23 09 21.8                    801
1976 SV10  1991 01 18.11737  04 27 00.46  +23 09 17.5                    801
1978 SN4   1991 01 14.01196  03 59 13.68  +21 06 32.1                    801
1978 SN4   1991 01 14.09612  03 59 12.85  +21 06 31.1                    801
1978 VL11  1991 01 14.38641  11 40 57.06  +10 43 51.5                    801
1978 VL11  1991 01 14.41387  11 40 57.78  +10 43 53.7                    801
1978 VL11  1991 01 16.35787  11 41 48.15  +10 47 07.6                    801
1978 VL11  1991 01 16.38990  11 41 48.86  +10 47 11.1                    801
1979 HE5   1991 01 14.05104  05 32 51.82  +21 41 43.5                    801
1979 HE5   1991 01 14.06797  05 32 50.91  +21 41 45.5                    801
1979 HE5   1991 01 16.12160  05 31 12.28  +21 46 13.6                    801
1979 HE5   1991 01 16.14002  05 31 11.46  +21 46 15.8                    801
1979 MJ5   1991 01 14.03345  03 52 11.59  +13 37 34.3                    801
1979 MJ5   1991 01 14.09074  03 52 11.81  +13 37 44.4                    801
1979 OD15  1991 01 14.19028  07 04 42.48  +15 13 04.2                    801
1979 OD15  1991 01 14.20644  07 04 41.41  +15 13 07.3                    801
1979 OD15  1991 01 16.15385  07 02 37.11  +15 20 43.9                    801
1979 OD15  1991 01 16.16904  07 02 36.10  +15 20 47.0                    801
1979 OD15  1991 01 19.12250  06 59 34.05  +15 32 35.1                    801
1979 OD15  1991 01 19.16942  06 59 31.12  +15 32 46.5                    801
1979 SA8   1991 01 18.08731  06 39 39.49  +31 22 07.6                    801
1979 SA8   1991 01 18.10598  06 39 38.23  +31 22 07.7                    801
1979 SA8   1991 01 19.11654  06 38 31.54  +31 22 02.5                    801
1979 SA8   1991 01 19.13476  06 38 30.48  +31 22 03.2                    801
1979 VG    1991 01 16.20353  07 40 04.18  +32 22 59.9                    801
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1979	VG	1991	01	18.19975	07	37	37.41	+32	26	45.7	801
1979	VG	1991	01	18.21810	07	37	35.89	+32	26	47.9	801
1979	VS2	1991	01	19.23426	06	41	58.67	+55	46	59.4	801
1979	VS2	1991	01	19.25731	06	41	56.14	+55	47	00.6	801
1980	TM	1991	01	14.10491	06	10	26.23	+29	35	32.5	801
1980	TM	1991	01	14.12286	06	10	25.25	+29	35	31.8	801
1980	TM	1991	01	15.13959	06	09	32.60	+29	35	01.4	801
1980	TM	1991	01	15.16434	06	09	31.27	+29	35	00.6	801
1980	TP	1986	07	08.22817	19	04	15.58	-19	45	35.2	801
1981	GN1	1991	01	18.13171	07	11	48.42	+08	00	08.5	801
1981	GN1	1991	01	18.15711	07	11	46.87	+08	00	14.2	801
1981	GN1	1991	01	19.13046	07	10	48.85	+08	04	39.0	801
1981	GN1	1991	01	19.17766	07	10	46.01	+08	04	51.7	801
1981	JG	1991	01	18.26965	08	44	43.69	-06	18	41.9	801
1981	JG	1991	01	18.28721	08	44	42.87	-06	18	41.7	801
1982	SC2	1991	01	14.33615	10	20	40.44	+13	34	09.9	801
1982	SC2	1991	01	14.36639	10	20	39.81	+13	34	18.8	801
1982	SC2	1991	01	19.34160	10	18	42.05	+14	01	18.1	801
1982	SC2	1991	01	19.36929	10	18	41.21	+14	01	27.1	801
1982	SC6	1991	01	14.38138	11	43	39.84	+09	30	07.1	801
1982	SC6	1991	01	14.43043	11	43	40.50	+09	30	02.9	801
1982	SC6	1991	01	19.34979	11	44	31.21	+09	24	54.1	801
1982	SC6	1991	01	19.45455	11	44	31.58	+09	24	49.3	801
1983	AN	1991	01	16.40277	13	14	12.87	+01	16	53.1	801
1983	AN	1991	01	16.42373	13	14	13.87	+01	16	51.3	801
1983	AN	1991	01	19.43330	13	16	35.57	+01	13	21.0	801
1983	AN	1991	01	19.45169	13	16	36.38	+01	13	19.8	801
1983	AH1	1991	01	14.04747	05	26	12.12	+16	28	34.0	801
1983	AH1	1991	01	14.06032	05	26	11.61	+16	28	44.2	801
1983	AH1	1991	01	16.09017	05	24	58.45	+16	54	56.8	801
1983	BM	1991	01	14.03007	03	42	02.95	+35	06	45.7	801
1983	BM	1991	01	14.05769	03	42	02.77	+35	06	35.6	801
1983	BM	1991	01	16.06237	03	41	57.25	+34	54	46.5	801
1983	BM	1991	01	16.10074	03	41	57.16	+34	54	33.0	801
1983	CC	1991	01	14.27602	09	04	35.15	+08	52	46.6	801
1983	CC	1991	01	14.28656	09	04	34.56	+08	52	57.8	801
1983	CC	1991	01	15.27513	09	03	41.14	+09	11	02.6	801
1983	CC	1991	01	15.28516	09	03	40.56	+09	11	13.7	801
1984	DC1	1991	01	14.32547	10	14	34.00	+09	09	02.1	801
1984	DC1	1991	01	14.35194	10	14	33.23	+09	09	07.1	801
1984	DC1	1991	01	16.31028	10	13	36.13	+09	15	38.2	801
1984	DC1	1991	01	16.32700	10	13	35.53	+09	15	42.3	801
1984	UB3	1991	01	14.22631	07	55	59.12	+19	56	24.4	801
1984	UB3	1991	01	14.26304	07	55	57.06	+19	56	29.3	801
1984	UB3	1991	01	19.19995	07	51	27.22	+20	07	44.2	801
1984	UB3	1991	01	19.21946	07	51	26.11	+20	07	46.8	801
1985	PE2	1991	01	14.21649	07	47	17.49	+20	52	17.0	801
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1985	PE2	1991	01	16.22192	07	45	04.00	+21	03	57.6	801
1985	PE2	1991	01	16.23184	07	45	03.32	+21	04	01.0	801
1985	QH5	1991	01	15.21334	07	36	39.71	+18	27	24.1	801
1985	QH5	1991	01	15.22986	07	36	38.69	+18	27	27.7	801
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1985	QH5	1991	01	18.19271	07	33	47.02	+18	36	23.6	801
1985	QH5	1991	01	18.21193	07	33	45.87	+18	36	27.1	801
1985	RZ4	1991	01	16.08146	06	00	39.01	+41	48	39.4	801
1985	RZ4	1991	01	16.10523	06	00	37.61	+41	48	33.6	801
1985	RZ4	1991	01	18.07753	05	58	47.39	+41	39	55.7	801

1985	RZ4	1991	01	18.09448	05	58	46.46	+41	39	51.1	801
1985	UV4	1991	01	14.31230	09	53	21.00	+02	59	19.3	801
1985	UV4	1991	01	14.34201	09	53	20.19	+02	59	24.2	801
1985	UV4	1991	01	19.29197	09	50	52.10	+03	15	14.1	801
1985	UV4	1991	01	19.31392	09	50	51.32	+03	15	18.5	801
1985	VC1	1991	01	18.30010	08	28	31.45	+42	05	31.6	801
1985	VC1	1991	01	18.31656	08	28	30.19	+42	05	35.1	801
1985	VC1	1991	01	19.24861	08	27	22.08	+42	09	24.9	801
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1986	JN1	1991	01	18.30419	09	20	13.05	+51	40	42.3	801
1986	JN1	1991	01	18.30841	09	20	12.74	+51	40	47.6	801
1986	RJ	1991	01	15.20891	07	27	11.64	+19	52	04.8	801
1986	RJ	1991	01	15.24068	07	27	09.30	+19	52	08.3	W 801
1986	RJ	1991	01	16.19328	07	26	01.62	+19	53	46.7	801
1986	RJ	1991	01	16.20672	07	26	00.65	+19	53	48.0	801
1986	TK1	1991	01	18.23149	07	51	01.58	+18	24	55.3	801
1986	TK1	1991	01	18.25113	07	51	00.17	+18	24	57.0	801
1986	TK1	1991	01	19.19394	07	49	54.50	+18	26	22.7	801
1986	TK1	1991	01	19.21318	07	49	53.13	+18	26	24.3	801
1986	TL1	1989	08	26.11924	20	13	56.59	-14	53	36.8	801
1986	TJ2	1991	01	16.31363	10	05	12.68	+14	10	01.7	801
1986	TJ2	1991	01	16.33076	10	05	12.17	+14	10	09.4	801
1986	TJ2	1991	01	19.30005	10	03	40.93	+14	32	57.3	801
1986	TJ2	1991	01	19.31671	10	03	40.34	+14	33	05.2	801
1986	TK4	1991	01	15.21894	07	48	38.95	+33	28	25.1	801
1986	TK4	1991	01	15.23542	07	48	37.62	+33	28	28.0	801
1987	DF	1988	10	07.19033	00	24	44.72	-15	41	49.7	801
1987	DF	1991	01	14.44881	14	25	14.29	-02	47	30.3	801
1987	DF	1991	01	14.45345	14	25	14.80	-02	47	30.0	801
1987	EP	1991	01	16.30656	10	09	34.30	+19	24	44.2	801
1987	EP	1991	01	16.32375	10	09	33.62	+19	24	44.8	801
1987	FF1	1991	01	14.40358	11	28	36.08	+20	39	02.5	801
1987	FF1	1991	01	14.42612	11	28	36.33	+20	39	13.8	801
1987	FF1	1991	01	16.35022	11	29	00.77	+20	56	48.2	801
1987	GC	1991	01	14.29248	09	37	27.76	-03	39	49.2	801
1987	GC	1991	01	14.31928	09	37	26.85	-03	39	49.6	801
1987	GC	1991	01	19.28128	09	34	40.73	-03	34	04.1	801
1987	GC	1991	01	19.30418	09	34	39.87	-03	34	01.7	801
1987	GK	1991	01	14.28946	09	19	22.65	+03	08	43.4	801
1987	GK	1991	01	14.30953	09	19	21.92	+03	08	47.0	801
1987	GK	1991	01	19.27512	09	16	18.83	+03	32	09.9	801
1987	GK	1991	01	19.32037	09	16	16.93	+03	32	24.4	801
1988	DA	1991	01	14.05466	05	26	03.35	+31	30	15.4	801
1988	DA	1991	01	14.07598	05	26	02.26	+31	30	11.9	801
1988	DA	1991	01	16.07766	05	24	28.63	+31	24	27.1	801
1988	DA	1991	01	16.09729	05	24	27.71	+31	24	23.8	801
1988	JA1	1991	01	14.27344	08	53	24.05	+18	23	51.0	801
1988	JA1	1991	01	14.28458	08	53	23.44	+18	23	59.5	801
1988	JA1	1991	01	18.28971	08	49	42.64	+19	17	19.6	801
1988	PP	1991	01	14.35873	11	16	52.14	+10	20	41.0	801
1988	PP	1991	01	14.39461	11	16	52.45	+10	20	53.2	801
1988	PP	1991	01	16.34016	11	17	08.86	+10	32	30.6	801
1988	PP	1991	01	16.36807	11	17	09.01	+10	32	41.1	801
1988	PB1	1990	12	15.08010	01	57	56.22	+31	11	26.6	801
1988	PB1	1990	12	15.10815	01	57	55.92	+31	11	16.0	801
1988	PH1	1991	01	14.31564	10	08	09.63	+11	02	39.1	801
1988	PH1	1991	01	14.33906	10	08	08.81	+11	02	38.8	801
1988	PH1	1991	01	19.32395	10	05	05.71	+11	02	15.7	801
1988	PH1	1991	01	19.34484	10	05	04.89	+11	02	15.8	801

1988	RX11	1991	01	16.24855	08	07	07.61	+20	35	42.0		801
1988	RX11	1991	01	16.29293	08	07	05.20	+20	35	48.8		801
1988	RX11	1991	01	19.22354	08	04	30.19	+20	43	41.6		801
1988	RX11	1991	01	19.27155	08	04	27.60	+20	43	49.0		801
1989	AL2	1991	01	19.39692	13	55	36.45	+27	22	01.8		801
1989	AL2	1991	01	19.41961	13	55	36.88	+27	22	08.1		801
1989	LU	1991	01	16.07412	05	19	33.93	+24	28	00.7		801
1989	LU	1991	01	16.09322	05	19	33.18	+24	27	58.7		801
1989	LU	1991	01	18.07392	05	18	23.29	+24	24	30.3		801
1989	LU	1991	01	18.09867	05	18	22.41	+24	24	26.8		801
1989	NX	1991	01	16.22531	07	48	30.25	+08	07	09.6		801
1989	NX	1991	01	16.23817	07	48	29.41	+08	07	19.6		801
1989	NX	1991	01	18.20417	07	46	22.66	+08	28	01.6		801
1989	PC	1991	01	14.10944	06	19	49.54	+05	25	26.2		801
1989	PC	1991	01	14.12644	06	19	48.64	+05	25	36.6		801
1989	PC	1991	01	16.12904	06	18	10.85	+05	41	18.8		801
1989	PC	1991	01	16.14369	06	18	10.13	+05	41	25.7		801
1989	RB	1991	01	18.29608	08	18	22.32	+45	45	55.4		801
1989	RB	1991	01	18.31214	08	18	20.91	+45	45	56.6		801
1989	RB	1991	01	19.24178	08	17	04.86	+45	47	05.5		801
1989	RB	1991	01	19.26177	08	17	03.14	+45	47	06.5		801
1989	RH	1991	01	19.18272	07	35	01.21	+01	13	58.6		801
1989	RH	1991	01	19.19714	07	35	00.42	+01	14	03.7	I	801
1989	SG5	1991	01	18.25890	08	19	23.87	+14	12	39.6		801
1989	SG5	1991	01	18.27259	08	19	23.03	+14	12	43.7		801
1989	SG5	1991	01	19.22716	08	18	26.00	+14	17	33.7		801
1989	SG5	1991	01	19.26876	08	18	23.38	+14	17	46.8		801
1989	UD	1991	01	18.19631	07	37	02.60	+22	57	49.1		801
1989	UD	1991	01	18.21506	07	37	01.62	+22	57	51.8		801
1989	UD	1991	01	19.18703	07	36	12.13	+23	00	11.3		801
1989	UD	1991	01	19.20961	07	36	10.89	+23	00	13.9		801
1989	UY	1991	01	14.29876	09	37	39.02	-07	01	17.3		801
1989	UY	1991	01	14.32204	09	37	38.21	-07	01	21.9		801
1989	UY	1991	01	19.30722	09	34	39.67	-07	14	56.0		801
1989	VM	1991	01	18.26664	08	37	00.42	+01	34	35.7		801
1989	VM	1991	01	18.28448	08	36	59.58	+01	34	37.6		801
1989	VW	1991	01	14.28194	09	19	15.77	+24	35	03.3		801
1989	VW	1991	01	14.30188	09	19	15.03	+24	35	08.2		801
1989	VW	1991	01	18.28134	09	16	47.65	+24	50	42.7		801
1989	VW	1991	01	18.31955	09	16	46.12	+24	50	51.5		801
1989	WF	1991	01	16.39867	13	09	21.01	-01	28	38.5		801
1989	WF	1991	01	16.42021	13	09	22.04	-01	28	43.1		801
1989	WF	1991	01	19.38656	13	11	40.67	-01	38	37.7		801
1989	WF	1991	01	19.40367	13	11	41.39	-01	38	40.9		801
1989	WV	1991	01	16.34639	11	16	45.51	+26	01	52.1		801
1989	WV	1991	01	16.37112	11	16	45.40	+26	02	05.3		801
1989	WV	1991	01	18.36940	11	16	36.27	+26	20	10.9		801
1989	WV	1991	01	18.39025	11	16	36.12	+26	20	21.9		801
1989	WE1	1991	01	14.34912	10	58	50.34	+18	50	54.4		801
1989	WE1	1991	01	14.37733	10	58	49.99	+18	51	04.6		801
1989	WE1	1991	01	18.34700	10	57	55.20	+19	15	14.3		801
1989	WE1	1991	01	18.36656	10	57	54.86	+19	15	21.6		801
1989	XC1	1991	01	14.34549	10	46	19.22	+16	05	40.5		801
1989	XC1	1991	01	14.37400	10	46	18.76	+16	05	50.3		801
1989	XC1	1991	01	18.32801	10	45	07.51	+16	29	46.1		801
1989	XC1	1991	01	18.36169	10	45	06.75	+16	29	58.8		801
1990	SP	1991	01	19.43757	15	45	43.64	+07	17	02.6		801
1990	SP	1991	01	19.44781	15	45	44.36	+07	16	52.6		801

1990	SQ	1991	01	18.16870	01	36	40.57	+57	24	31.7	801
1990	SQ	1991	01	18.17816	01	36	44.67	+57	24	35.4	801
1990	TR	1991	01	20.06897	02	57	34.78	+28	32	08.9	801
1990	TR	1991	01	20.07678	02	57	35.61	+28	32	10.1	801
1990	WW2	1991	01	14.02709	05	12	56.62	+24	18	01.8	801
1990	WW2	1991	01	14.04519	05	12	56.07	+24	18	09.6	801
1990	WW2	1991	01	16.07080	05	12	02.66	+24	32	10.0	801
1990	WW2	1991	01	16.08784	05	12	02.21	+24	32	17.0	801
1990	XJ	1991	01	20.06450	03	03	02.25	+05	44	23.7	801
1990	XJ	1991	01	20.07263	03	03	03.07	+05	44	16.4	801
1991	AM	1991	01	18.43922	14	07	32.85	+13	58	54.0	801
1991	AM	1991	01	19.39134	14	12	16.79	+14	08	56.1	801
1991	AQ	1991	01	20.11853	07	19	29.05	+44	38	11.8	801
1991	AQ	1991	01	26.09438	02	44	39.64	+57	04	34.7	801
1991	AQ	1991	01	26.09760	02	44	21.65	+57	03	56.9	801
1991	AQ	1991	01	26.10914	02	43	17.22	+57	01	40.5	801
1991	AQ	1991	01	26.10998	02	43	12.56	+57	01	30.7	801
1991	AQ	1991	01	26.11405	02	42	49.90	+57	00	41.3	801
1991	AQ	1991	01	26.11480	02	42	45.77	+57	00	32.2	801
1991	AQ	1991	01	26.11680	02	42	34.57	+57	00	07.7	801
1991	AQ	1991	01	26.11769	02	42	29.61	+56	59	57.0	801
1991	AQ	1991	01	26.12220	02	42	04.49	+56	59	02.0	801
1991	AQ	1991	01	26.12297	02	42	00.23	+56	58	52.6	801
1991	AQ	1991	01	27.08289	01	18	46.64	+51	45	30.0	801
1991	AQ	1991	01	27.08851	01	18	20.08	+51	42	56.4	801
1991	AQ	1991	01	27.08951	01	18	15.28	+51	42	28.5	801
1991	AQ	1991	01	27.09499	01	17	49.50	+51	39	58.7	801
1991	AQ	1991	01	27.09590	01	17	45.26	+51	39	34.2	801
1991	CA1	1991	02	17.12523	09	55	40.94	+34	28	51.1	801
1991	CA1	1991	02	17.12988	09	55	40.62	+34	28	58.3	801
1991	CA1	1991	02	17.13345	09	55	40.37	+34	29	04.0	801
3045	T-3	1991	01	16.21803	07	45	50.00	+41	23	41.0	801
3045	T-3	1991	01	16.23455	07	45	48.98	+41	23	43.2	801
3045	T-3	1991	01	19.19081	07	42	49.72	+41	29	28.0	801
3045	T-3	1991	01	19.21637	07	42	48.13	+41	29	30.3	801
4059	T-3	1991	01	14.11675	06	29	34.96	+27	51	55.3	801
4059	T-3	1991	01	14.13204	06	29	34.03	+27	51	55.8	801
4059	T-3	1991	01	15.17809	06	28	31.42	+27	53	09.7	801
4059	T-3	1991	01	15.19628	06	28	30.32	+27	53	10.7	801
5010	T-3	1991	01	14.02383	04	18	06.61	+06	57	30.1	801
5010	T-3	1991	01	14.06362	04	18	06.00	+06	57	33.3	801
5010	T-3	1991	01	18.06267	04	17	16.12	+07	05	33.5	801
5010	T-3	1991	01	18.11317	04	17	15.53	+07	05	39.9	801
243		1991	01	13.94426	23	28	46.74	-02	35	33.8	801
243		1991	01	13.94956	23	28	47.15	-02	35	31.3	801
243		1991	01	17.94819	23	33	47.59	-02	03	17.2	801
243		1991	01	17.95735	23	33	48.27	-02	03	12.9	801
944		1991	01	17.94298	00	18	14.24	+20	28	20.2	801
944		1991	01	17.95028	00	18	14.65	+20	28	27.3	801
2212		1991	01	19.10145	04	42	11.45	+44	51	13.4	I 801
2212		1991	01	19.10596	04	42	10.21	+44	51	10.8	I 801
2212		1991	01	20.13571	04	38	21.23	+44	41	50.5	801
2212		1991	01	20.14039	04	38	20.18	+44	41	47.8	801
3590		1991	01	16.39867	13	09	29.48	-01	33	08.4	801
3590		1991	01	16.42021	13	09	30.83	-01	33	11.0	801
4267		1991	01	19.33155	10	24	43.43	+06	29	22.9	801
4267		1991	01	19.35428	10	24	42.51	+06	29	26.9	801
4688		1991	01	14.17890	06	35	39.10	-16	16	12.7	801

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Measurers H. Debehogne, J. Dumoulin, E. W. Elst
GPO 0.4-m astrograph and 1-m Schmidt
SAOC

1938	DM1	1990	09	23.23193	23	05	27.72	-07 12 17.6		17.3	3 809
1938	DM1	1990	09	23.24445	23	05	27.04	-07 12 19.8			3 809
1938	DM1	1990	09	23.25696	23	05	26.37	-07 12 22.0			3 809
1938	DM1	1990	09	24.17221	23	04	36.63	-07 14 52.9			3 809
1938	DM1	1990	09	24.18472	23	04	35.95	-07 14 54.9			3 809
1938	DM1	1990	09	24.19724	23	04	35.27	-07 14 57.4			3 809
1974	FJ	1990	09	14.18542	23	07	48.34	-06 17 13.4		17.7	3 809
1974	FJ	1990	09	14.19931	23	07	47.56	-06 17 16.8			3 809
1974	FJ	1990	09	14.21320	23	07	46.76	-06 17 20.3			3 809
1974	FJ	1990	09	15.17709	23	06	51.74	-06 21 18.1			3 809
1974	FJ	1990	09	15.19098	23	06	50.94	-06 21 21.6			3 809
1974	FJ	1990	09	15.20486	23	06	50.14	-06 21 25.0			3 809
1974	FJ	1990	09	16.29443	23	05	48.01	-06 25 51.2			3 809
1974	FJ	1990	09	16.30695	23	05	47.29	-06 25 54.4			3 809
1974	FJ	1990	09	16.31946	23	05	46.58	-06 25 57.2			3 809
1974	FO	1990	09	15.04166	22	28	14.69	-11 33 42.4		16.5	3 809
1974	FO	1990	09	15.05554	22	28	14.00	-11 33 43.3			3 809
1974	FO	1990	09	15.06946	22	28	13.31	-11 33 44.2			3 809
1974	FO	1990	09	16.20972	22	27	16.43	-11 35 03.1			3 809
1974	FO	1990	09	16.22360	22	27	15.75	-11 35 04.1			3 809
1974	FO	1990	09	16.23749	22	27	15.05	-11 35 05.1			3 809
1974	FO	1990	09	18.04166	22	25	49.44	-11 36 53.9			3 809
1974	FO	1990	09	18.05554	22	25	48.78	-11 36 54.7			3 809
1974	FO	1990	09	18.06946	22	25	48.12	-11 36 55.6			3 809
1976	UP18	1990	10	16.28472	03	18	52.51	+11 10 17.9			4 809
1976	UP18	1990	10	16.31111	03	18	51.87	+11 10 02.6			4 809
1976	UP18	1990	10	20.25764	03	17	02.70	+10 35 48.9			4 809
1976	UP18	1990	10	24.29722	03	14	41.12	+09 59 46.4		18.6	4 809
1976	UP18	1990	10	24.31042	03	14	40.55	+09 59 38.7			4 809
1976	UP18	1990	10	24.32361	03	14	39.91	+09 59 29.7			4 809
1977	QF1	1990	09	24.22501	23	19	58.00	-04 47 28.4		16.5	3 809
1977	QF1	1990	09	24.23819	23	19	57.13	-04 47 26.2			3 809
1977	QF1	1990	09	24.25140	23	19	56.24	-04 47 24.1			3 809
1978	NY7	1990	09	15.36182	00	39	12.08	-00 24 14.1		16.9	3 809
1978	NY7	1990	09	15.37430	00	39	11.58	-00 24 17.5			3 809
1978	NY7	1990	09	15.38681	00	39	11.07	-00 24 20.8			3 809
1978	NY7	1990	09	16.34168	00	38	33.01	-00 28 55.2			3 809
1978	NY7	1990	09	16.35416	00	38	32.50	-00 28 58.8			3 809
1978	NY7	1990	09	16.36667	00	38	32.00	-00 29 02.4			3 809
1979	MW2	1990	09	09.11528	22	38	03.28	-07 55 52.2		17.8	3 809
1979	MW2	1990	09	09.12500	22	38	02.86	-07 55 55.6			3 809
1979	MW2	1990	09	10.11667	22	37	20.75	-08 01 44.8			3 809
1979	MW2	1990	09	10.12778	22	37	20.27	-08 01 48.7			3 809
1979	MW2	1990	09	10.13889	22	37	19.79	-08 01 52.6			3 809
1979	MW2	1990	09	11.08784	22	36	39.96	-08 07 21.0			3 809
1979	MW2	1990	09	11.10243	22	36	39.34	-08 07 26.1			3 809
1979	MW2	1990	09	11.11702	22	36	38.72	-08 07 31.4			3 809
1979	QX9	1990	09	23.01388	23	21	09.06	-02 49 02.6		16.5	3 809
1979	QX9	1990	09	23.02640	23	21	08.56	-02 49 06.6			3 809
1979	QX9	1990	09	23.03888	23	21	08.07	-02 49 10.6			3 809

1979	QX9	1990	09	24.00833	23	20	28.44	-02	54	05.2		3 809
1979	QX9	1990	09	24.02084	23	20	27.93	-02	54	09.3		3 809
1979	QX9	1990	09	24.03333	23	20	27.41	-02	54	12.8		3 809
1979	QX9	1990	09	25.20901	23	19	39.81	-03	00	08.6		3 809
1979	QX9	1990	09	25.22153	23	19	39.31	-03	00	12.4		3 809
1979	QX9	1990	09	25.23404	23	19	38.82	-03	00	16.2		3 809
1979	WX3	1990	09	18.28125	23	34	44.05	-05	49	12.5	16.8	3 809
1979	WX3	1990	09	18.29513	23	34	43.35	-05	49	17.8		3 809
1979	WX3	1990	09	18.30902	23	34	42.64	-05	49	23.0		3 809
1979	WX3	1990	09	21.16147	23	32	19.11	-06	07	17.4		3 809
1979	WX3	1990	09	21.17465	23	32	18.45	-06	07	22.4		3 809
1979	WX3	1990	09	21.18784	23	32	17.79	-06	07	27.4		3 809
1980	FV2	1990	09	23.13681	23	34	19.01	-02	48	49.5	17.2	3 809
1980	FV2	1990	09	23.14929	23	34	18.21	-02	48	49.3		3 809
1980	FV2	1990	09	23.16180	23	34	17.44	-02	48	49.3		3 809
1980	FV2	1990	09	24.09097	23	33	21.31	-02	48	45.1		3 809
1980	FV2	1990	09	24.10349	23	33	20.56	-02	48	45.0		3 809
1980	FV2	1990	09	24.11597	23	33	19.80	-02	48	45.0		3 809
1980	TH	1990	09	09.03889	22	11	18.81	-10	55	40.4	17.5	3 809
1980	TH	1990	09	09.05139	22	11	18.21	-10	55	41.6		3 809
1980	TH	1990	09	09.06389	22	11	17.61	-10	55	42.8		3 809
1980	TH	1990	09	10.03889	22	10	31.19	-10	57	13.5		3 809
1980	TH	1990	09	10.05139	22	10	30.61	-10	57	14.4		3 809
1980	TH	1990	09	10.06389	22	10	30.01	-10	57	15.9		3 809
1980	TH	1990	09	10.99548	22	09	46.23	-10	58	39.4		3 809
1980	TH	1990	09	11.01007	22	09	45.55	-10	58	40.7		3 809
1980	TH	1990	09	11.02466	22	09	44.86	-10	58	42.0		3 809
1980	TH	1990	09	17.99792	22	04	38.08	-11	07	21.6		3 809
1980	TH	1990	09	18.01181	22	04	37.46	-11	07	22.7		3 809
1980	TH	1990	09	18.02570	22	04	36.83	-11	07	23.7		3 809
1981	ET25	1990	10	16.28472	03	08	31.31	+11	40	07.3		4 809
1981	ET25	1990	10	16.31111	03	08	30.15	+11	39	57.9		4 809
1981	ET25	1990	10	20.25764	03	05	31.05	+11	14	57.1		4 809
1981	EF26	1990	10	19.23819	02	58	56.96	+09	43	29.5		4 809
1981	EF26	1990	10	19.26458	02	58	56.04	+09	43	21.9		4 809
1981	EF26	1990	10	24.29722	02	55	38.46	+09	18	01.2	18.6	4 809
1981	EF26	1990	10	24.31042	02	55	37.86	+09	17	57.2		4 809
1981	EF26	1990	10	24.32361	02	55	37.43	+09	17	53.0		4 809
1981	EP26	1990	10	16.28472	03	06	35.14	+10	12	46.9		4 809
1981	EP26	1990	10	16.31111	03	06	33.82	+10	12	37.4		4 809
1981	EP26	1990	10	20.25764	03	03	35.08	+09	48	22.4		4 809
1981	EP26	1990	10	24.29722	03	00	14.48	+09	23	04.8	19.2	4 809
1981	EP26	1990	10	24.31042	03	00	13.63	+09	22	59.1		4 809
1981	EP26	1990	10	24.32361	03	00	13.06	+09	22	54.2		4 809
1982	DX3	1990	09	23.23193	23	05	27.28	-07	58	12.2	17.6	3 809
1982	DX3	1990	09	23.24445	23	05	26.52	-07	58	13.1		3 809
1982	DX3	1990	09	23.25696	23	05	25.77	-07	58	14.0		3 809
1982	DX3	1990	09	24.17221	23	04	31.46	-07	59	19.9		3 809
1982	DX3	1990	09	24.18472	23	04	30.72	-07	59	20.8		3 809
1982	DX3	1990	09	24.19724	23	04	29.98	-07	59	21.6		3 809
1982	MA	1990	09	09.03889	22	18	21.78	-10	27	07.9	17.5	3 809
1982	MA	1990	09	09.05139	22	18	21.22	-10	27	11.4		3 809
1982	MA	1990	09	09.06389	22	18	20.67	-10	27	14.5		3 809
1982	MA	1990	09	10.99548	22	16	54.05	-10	35	49.0		3 809
1982	MA	1990	09	11.01007	22	16	53.39	-10	35	52.9		3 809
1982	MA	1990	09	11.02466	22	16	52.74	-10	35	56.8		3 809
1983	RW3	1990	09	25.16876	23	22	53.66	-01	45	14.7	17.9	3 809
1983	RW3	1990	09	25.18124	23	22	52.80	-01	45	11.7		3 809
1983	RW3	1990	09	25.19376	23	22	51.93	-01	45	08.7		3 809

1983	RW3	1990	09	26.27084	23	21	38.17	-01	40	42.5		3 809
1983	RW3	1990	09	26.28055	23	21	37.51	-01	40	40.2		3 809
1983	RW3	1990	09	26.29028	23	21	36.85	-01	40	37.8		3 809
1983	WL	1990	10	16.28472	03	22	53.34	+09	15	50.7		4 809
1983	WL	1990	10	16.31111	03	22	52.10	+09	15	51.6		4 809
1983	WL	1990	10	20.25764	03	19	54.66	+09	16	18.2		4 809
1984	DF1	1990	09	10.15312	22	37	32.09	-09	30	42.5	17.6	3 809
1984	DF1	1990	09	10.16771	22	37	31.36	-09	30	46.2		3 809
1984	DF1	1990	09	10.18230	22	37	30.64	-09	30	49.6		3 809
1984	DF1	1990	09	11.13298	22	36	42.99	-09	34	27.9		3 809
1984	DF1	1990	09	11.14757	22	36	42.26	-09	34	31.2		3 809
1984	DF1	1990	09	11.16216	22	36	41.52	-09	34	34.5		3 809
1984	DF1	1990	09	12.05902	22	35	56.97	-09	37	56.3		3 809
1984	DF1	1990	09	12.07153	22	35	56.34	-09	37	59.1		3 809
1984	DF1	1990	09	12.08403	22	35	55.72	-09	38	01.9		3 809
1984	DF1	1990	09	12.99757	22	35	10.83	-09	41	26.1		3 809
1984	DF1	1990	09	13.01215	22	35	10.11	-09	41	29.4		3 809
1984	DF1	1990	09	13.02673	22	35	09.40	-09	41	32.6		3 809
1984	DF1	1990	09	13.99860	22	34	22.08	-09	45	05.6		3 809
1984	DF1	1990	09	14.01251	22	34	21.41	-09	45	08.7		3 809
1984	DF1	1990	09	14.02640	22	34	20.75	-09	45	11.4		3 809
1984	EC	1990	09	23.31457	00	02	38.78	+03	28	59.1	17.3	3 809
1984	EC	1990	09	23.32709	00	02	38.05	+03	28	57.3		3 809
1984	EC	1990	09	23.33957	00	02	37.34	+03	28	55.7		3 809
1984	EC	1990	09	24.31284	00	01	41.37	+03	26	43.7		3 809
1984	EC	1990	09	24.32535	00	01	40.65	+03	26	42.0		3 809
1984	EC	1990	09	24.33820	00	01	39.91	+03	26	40.3		3 809
1984	QJ	1990	09	18.28125	23	29	47.87	-06	16	53.7	16.7	3 809
1984	QJ	1990	09	18.29513	23	29	47.26	-06	16	57.9		3 809
1984	QJ	1990	09	18.30902	23	29	46.65	-06	17	02.4		3 809
1984	QJ	1990	09	21.16147	23	27	45.28	-06	31	38.9		3 809
1984	QJ	1990	09	21.17465	23	27	44.72	-06	31	42.8		3 809
1984	QJ	1990	09	21.18784	23	27	44.16	-06	31	46.9		3 809
1985	FB2	1990	09	14.29098	23	04	50.64	-11	19	01.3	17.5	3 809
1985	FB2	1990	09	14.30487	23	04	49.93	-11	19	08.4		3 809
1985	FB2	1990	09	14.31876	23	04	49.23	-11	19	15.7		3 809
1985	FB2	1990	09	15.23682	23	04	03.02	-11	27	05.4		3 809
1985	FB2	1990	09	15.25070	23	04	02.32	-11	27	12.6		3 809
1985	FB2	1990	09	15.26459	23	04	01.62	-11	27	19.7		3 809
1985	QM5	1990	09	23.17569	23	23	28.66	-05	49	14.7	17.2	3 809
1985	QM5	1990	09	23.18820	23	23	28.13	-05	49	18.7		3 809
1985	QM5	1990	09	23.20068	23	23	27.57	-05	49	22.7		3 809
1985	QM5	1990	09	24.22501	23	22	44.12	-05	54	54.8		3 809
1985	QM5	1990	09	24.23819	23	22	43.57	-05	54	59.3		3 809
1985	QM5	1990	09	24.25140	23	22	43.02	-05	55	03.8		3 809
1985	QM5	1990	09	25.12848	23	22	06.61	-05	59	44.2		3 809
1985	QM5	1990	09	25.14096	23	22	06.09	-05	59	48.3		3 809
1985	QM5	1990	09	25.15347	23	22	05.58	-05	59	52.7		3 809
1985	QM5	1990	09	27.12256	23	20	45.35	-06	10	04.8		3 809
1985	QM5	1990	09	27.12744	23	20	45.21	-06	10	06.0		3 809
1985	QM5	1990	09	27.13229	23	20	45.08	-06	10	07.2		3 809
1985	RC4	1990	09	18.23541	23	47	10.78	-04	05	34.2	17.2	3 809
1985	RC4	1990	09	18.24930	23	47	10.13	-04	05	39.1		3 809
1985	RC4	1990	09	18.26318	23	47	09.50	-04	05	43.8		3 809
1985	RC4	1990	09	21.11771	23	44	58.81	-04	22	15.3		3 809
1985	RC4	1990	09	21.13089	23	44	58.24	-04	22	19.8		3 809
1985	RC4	1990	09	21.14410	23	44	57.63	-04	22	24.4		3 809
1985	RC4	1990	09	22.14063	23	44	12.01	-04	28	05.4		3 809
1985	RC4	1990	09	22.15381	23	44	11.41	-04	28	10.3		3 809

1985	RC4	1990	09	22.16702	23	44	10.81	-04	28	14.5		3 809
1985	RC4	1990	09	23.05695	23	43	30.32	-04	33	18.2		3 809
1985	RC4	1990	09	23.06946	23	43	29.76	-04	33	22.4		3 809
1985	RC4	1990	09	23.08194	23	43	29.19	-04	33	26.5		3 809
1985	RR4	1990	10	16.28472	03	15	01.24	+08	13	24.5		4 809
1985	RR4	1990	10	16.31111	03	15	00.12	+08	13	11.3		4 809
1985	RR4	1990	10	20.25764	03	12	30.40	+07	43	39.2		4 809
1985	RR4	1990	10	24.29722	03	09	39.07	+07	13	28.7	18.6	4 809
1985	RR4	1990	10	24.31042	03	09	38.34	+07	13	22.4		4 809
1985	RR4	1990	10	24.32361	03	09	37.72	+07	13	16.1		4 809
1986	GY	1990	09	21.07327	23	33	54.33	-05	21	43.5	16.8	3 809
1986	GY	1990	09	21.08646	23	33	53.58	-05	21	45.9		3 809
1986	GY	1990	09	21.09964	23	33	52.81	-05	21	48.2		3 809
1986	GY	1990	09	22.24063	23	32	46.59	-05	25	12.0		3 809
1986	GY	1990	09	22.25381	23	32	45.83	-05	25	14.7		3 809
1986	GY	1990	09	22.26703	23	32	45.06	-05	25	17.1		3 809
1986	QG1	1990	10	16.28472	03	03	08.18	+09	34	40.5		4 809
1986	QG1	1990	10	16.31111	03	03	06.92	+09	34	33.4		4 809
1986	QG1	1990	10	19.23819	03	00	47.92	+09	21	55.9		4 809
1986	QG1	1990	10	19.26458	03	00	46.46	+09	21	49.2		4 809
1986	QG1	1990	10	20.25764	02	59	56.65	+09	17	29.6		4 809
1986	QG1	1990	10	24.25417	02	56	24.48	+08	59	54.7	18.8	4 809
1986	QG1	1990	10	24.26736	02	56	23.67	+08	59	50.6		4 809
1986	QG1	1990	10	24.28056	02	56	22.93	+08	59	45.5		4 809
1986	QG1	1990	10	24.29722	02	56	22.04	+08	59	45.9	18.8	4 809
1986	QG1	1990	10	24.31042	02	56	21.30	+08	59	42.3		4 809
1986	QG1	1990	10	24.32361	02	56	20.52	+08	59	38.0		4 809
1986	WO9	1990	09	25.20901	23	15	55.71	-02	47	01.3	16.8	3 809
1986	WO9	1990	09	25.22153	23	15	55.17	-02	47	05.8		3 809
1986	WO9	1990	09	25.23404	23	15	54.63	-02	47	10.2		3 809
1986	WO9	1990	09	27.20972	23	14	29.65	-02	58	47.9		3 809
1986	WO9	1990	09	27.22083	23	14	29.17	-02	58	51.8		3 809
1986	WO9	1990	09	27.23193	23	14	28.67	-02	58	55.7		3 809
1987	DP6	1990	10	16.28472	03	07	22.23	+08	25	11.7		4 809
1987	DP6	1990	10	16.31111	03	07	21.24	+08	25	03.9		4 809
1987	DP6	1990	10	19.23819	03	05	33.22	+08	11	19.2		4 809
1987	DP6	1990	10	19.26458	03	05	32.08	+08	11	12.2		4 809
1987	DP6	1990	10	20.25764	03	04	53.40	+08	06	27.8		4 809
1987	DP6	1990	10	24.29722	03	02	06.31	+07	47	20.2	18.5	4 809
1987	DP6	1990	10	24.31042	03	02	05.65	+07	47	16.4		4 809
1987	DP6	1990	10	24.32361	03	02	05.02	+07	47	13.0		4 809
1987	EH	1990	10	24.25417	02	47	40.44	+04	05	53.7	18.5	4 809
1987	EH	1990	10	24.26736	02	47	39.87	+04	05	49.0		4 809
1987	EH	1990	10	24.28056	02	47	39.22	+04	05	43.6		4 809
1989	EM	1990	09	23.31457	00	00	20.27	+02	14	02.3	17.6	3 809
1989	EM	1990	09	23.32709	00	00	19.56	+02	13	57.6		3 809
1989	EM	1990	09	23.33957	00	00	18.85	+02	13	52.8		3 809
1989	EM	1990	09	24.31284	23	59	23.70	+02	08	03.2		3 809
1989	EM	1990	09	24.32535	23	59	23.01	+02	07	58.4		3 809
1989	EM	1990	09	24.33820	23	59	22.28	+02	07	53.9		3 809
1989	EL2	1990	09	22.17153	00	24	48.61	-00	31	49.1	17.8	4 809
1989	EL2	1990	09	22.18472	00	24	47.76	-00	31	52.5		4 809
1989	EL2	1990	09	22.19792	00	24	46.87	-00	31	56.1		4 809
1989	FL	1990	09	11.13298	22	39	29.70	-09	29	46.5	17.7	3 809
1989	FL	1990	09	11.14757	22	39	28.95	-09	29	48.5		3 809
1989	FL	1990	09	11.16216	22	39	28.18	-09	29	50.6		3 809
1989	FL	1990	09	12.05902	22	38	41.61	-09	31	54.6		3 809
1989	FL	1990	09	12.07153	22	38	40.96	-09	31	56.4		3 809
1989	FL	1990	09	12.08403	22	38	40.32	-09	31	58.1		3 809

1989	FL	1990	09	12.99757	22	37	53.23	-09	34	02.1	3 809
1989	FL	1990	09	13.01215	22	37	52.46	-09	34	04.2	3 809
1989	FL	1990	09	13.02673	22	37	51.71	-09	34	06.1	3 809
1989	FL	1990	09	13.99860	22	37	02.25	-09	36	15.0	3 809
1989	FL	1990	09	14.01251	22	37	01.55	-09	36	17.0	3 809
1989	FL	1990	09	14.02640	22	37	00.84	-09	36	18.8	3 809
1990	QG1	1990	09	13.13474	22	59	10.50	-05	47	04.6	16.9 3 809
1990	QG1	1990	09	13.14862	22	59	09.67	-05	47	05.4	3 809
1990	QG1	1990	09	13.16251	22	59	08.85	-05	47	06.2	3 809
1990	QG1	1990	09	14.14166	22	58	10.68	-05	48	02.4	3 809
1990	QG1	1990	09	14.15555	22	58	09.86	-05	48	03.2	3 809
1990	QG1	1990	09	14.16943	22	58	09.01	-05	48	03.8	3 809
1990	QG1	1990	09	15.13055	22	57	12.60	-05	48	54.9	3 809
1990	QG1	1990	09	15.14444	22	57	11.78	-05	48	56.0	3 809
1990	QG1	1990	09	15.15833	22	57	10.95	-05	48	56.6	3 809
1990	QG1	1990	09	16.25485	22	56	06.94	-05	49	53.8	3 809
1990	QG1	1990	09	16.26737	22	56	06.15	-05	49	54.5	3 809
1990	QG1	1990	09	16.27985	22	56	05.39	-05	49	55.0	3 809
1990	QH1	1990	09	14.14166	22	59	03.18	-06	02	06.5	16.5 3 809
1990	QH1	1990	09	14.15555	22	59	02.36	-06	02	08.1	3 809
1990	QH1	1990	09	14.16943	22	59	01.53	-06	02	10.0	3 809
1990	QH1	1990	09	15.13055	22	58	05.61	-06	04	23.1	3 809
1990	QH1	1990	09	15.14444	22	58	04.79	-06	04	25.1	3 809
1990	QH1	1990	09	15.15833	22	58	03.96	-06	04	27.1	3 809
1990	QH1	1990	09	16.25485	22	57	00.50	-06	06	56.7	3 809
1990	QH1	1990	09	16.26737	22	56	59.74	-06	06	58.4	3 809
1990	QH1	1990	09	16.27985	22	56	58.99	-06	07	00.2	3 809
1990	QL1	1990	09	14.18542	23	08	02.26	-07	13	33.0	17.1 3 809
1990	QL1	1990	09	14.19931	23	08	01.71	-07	13	40.3	3 809
1990	QL1	1990	09	14.21320	23	08	01.15	-07	13	47.3	3 809
1990	QL1	1990	09	15.17709	23	07	22.37	-07	22	00.7	3 809
1990	QL1	1990	09	15.19098	23	07	21.81	-07	22	07.6	3 809
1990	QL1	1990	09	15.20486	23	07	21.27	-07	22	14.8	3 809
1990	QL1	1990	09	16.29443	23	06	37.40	-07	31	27.4	3 809
1990	QL1	1990	09	16.30695	23	06	36.90	-07	31	33.6	3 809
1990	QL1	1990	09	16.31946	23	06	36.39	-07	31	40.4	3 809
1990	QL1	1990	09	23.23193	23	02	09.65	-08	28	23.5	17.4 3 809
1990	QL1	1990	09	23.24445	23	02	09.20	-08	28	29.2	3 809
1990	QL1	1990	09	23.25696	23	02	08.75	-08	28	35.1	3 809
1990	QL1	1990	09	24.17221	23	01	35.35	-08	35	45.7	3 809
1990	QL1	1990	09	24.18472	23	01	34.89	-08	35	51.4	3 809
1990	QL1	1990	09	24.19724	23	01	34.43	-08	35	56.9	3 809
1990	QM1	1990	09	14.18542	23	07	04.09	-07	09	26.0	17.0 3 809
1990	QM1	1990	09	14.19931	23	07	03.49	-07	09	30.4	3 809
1990	QM1	1990	09	14.21320	23	07	02.90	-07	09	34.9	3 809
1990	QM1	1990	09	15.17709	23	06	21.58	-07	14	48.3	3 809
1990	QM1	1990	09	15.19098	23	06	20.99	-07	14	52.5	3 809
1990	QM1	1990	09	15.20486	23	06	20.39	-07	14	57.2	3 809
1990	QM1	1990	09	16.29443	23	05	33.72	-07	20	47.1	3 809
1990	QM1	1990	09	16.30695	23	05	33.20	-07	20	50.8	3 809
1990	QM1	1990	09	16.31946	23	05	32.66	-07	20	55.1	3 809
1990	QM1	1990	09	25.08612	22	59	37.86	-08	04	59.8	17.7 3 809
1990	QM1	1990	09	25.09860	22	59	37.36	-08	05	03.2	3 809
1990	QM1	1990	09	25.11112	22	59	36.89	-08	05	06.5	3 809
1990	QM1	1990	09	26.23682	22	58	54.51	-08	10	16.5	3 809
1990	QM1	1990	09	26.24652	22	58	54.14	-08	10	19.4	3 809
1990	QM1	1990	09	26.25626	22	58	53.78	-08	10	22.1	3 809
1990	QP1	1990	09	25.04721	22	56	11.74	-04	41	37.7	17.4 3 809
1990	QP1	1990	09	25.05972	22	56	11.20	-04	41	40.3	3 809

1990	QP1	1990	09	25.07224	22	56	10.66	-04	41	43.0		3 809
1990	QP1	1990	09	26.20624	22	55	21.48	-04	45	46.7		3 809
1990	QP1	1990	09	26.21597	22	55	21.03	-04	45	48.9		3 809
1990	QP1	1990	09	26.22571	22	55	20.60	-04	45	50.9		3 809
1990	QR1	1990	09	14.18542	23	10	06.73	-06	36	08.8	17.7	3 809
1990	QR1	1990	09	14.19931	23	10	06.07	-06	36	13.5		3 809
1990	QR1	1990	09	14.21320	23	10	05.42	-06	36	17.8		3 809
1990	QR1	1990	09	16.29443	23	08	26.75	-06	47	14.2		3 809
1990	QR1	1990	09	16.30695	23	08	26.15	-06	47	18.1		3 809
1990	QR1	1990	09	16.31946	23	08	25.55	-06	47	22.0		3 809
1990	QR1	1990	09	23.23193	23	03	12.67	-07	21	37.7	17.9	3 809
1990	QR1	1990	09	23.24445	23	03	12.11	-07	21	41.3		3 809
1990	QR1	1990	09	23.25696	23	03	11.56	-07	21	44.6		3 809
1990	QR1	1990	09	24.17221	23	02	32.63	-07	25	59.1		3 809
1990	QR1	1990	09	24.18472	23	02	32.09	-07	26	02.2		3 809
1990	QR1	1990	09	24.19724	23	02	31.56	-07	26	05.4		3 809
1990	QS1	1990	09	14.18542	23	09	39.51	-06	51	22.2	17.4	3 809
1990	QS1	1990	09	14.19931	23	09	38.79	-06	51	25.3		3 809
1990	QS1	1990	09	14.21320	23	09	38.07	-06	51	28.8		3 809
1990	QS1	1990	09	15.17709	23	08	48.17	-06	55	19.0		3 809
1990	QS1	1990	09	15.19098	23	08	47.46	-06	55	22.4		3 809
1990	QS1	1990	09	15.20486	23	08	46.75	-06	55	25.8		3 809
1990	QS1	1990	09	16.29443	23	07	50.42	-06	59	41.5		3 809
1990	QS1	1990	09	16.30695	23	07	49.76	-06	59	44.4		3 809
1990	QS1	1990	09	16.31946	23	07	49.11	-06	59	47.4		3 809
1990	QS1	1990	09	23.23193	23	02	05.89	-07	25	08.4	17.8	3 809
1990	QS1	1990	09	23.24445	23	02	05.30	-07	25	11.0		3 809
1990	QS1	1990	09	23.25696	23	02	04.72	-07	25	13.5		3 809
1990	QS1	1990	09	24.17221	23	01	21.71	-07	28	18.0		3 809
1990	QS1	1990	09	24.18472	23	01	21.10	-07	28	20.5		3 809
1990	QS1	1990	09	24.19724	23	01	20.49	-07	28	23.1		3 809
1990	QS1	1990	09	25.08612	23	00	39.50	-07	31	15.4	17.8	3 809
1990	QS1	1990	09	25.09860	23	00	38.93	-07	31	17.6		3 809
1990	QS1	1990	09	25.11112	23	00	38.36	-07	31	19.8		3 809
1990	QS1	1990	09	26.23682	22	59	46.87	-07	34	54.3		3 809
1990	QS1	1990	09	26.24652	22	59	46.44	-07	34	56.0		3 809
1990	QS1	1990	09	26.25626	22	59	46.00	-07	34	57.6		3 809
1990	QX1	1990	09	23.23193	23	06	27.21	-07	18	17.0	16.9	3 809
1990	QX1	1990	09	23.24445	23	06	26.55	-07	18	20.3		3 809
1990	QX1	1990	09	23.25696	23	06	25.90	-07	18	24.1		3 809
1990	QX1	1990	09	24.17221	23	05	37.93	-07	22	53.6		3 809
1990	QX1	1990	09	24.18472	23	05	37.27	-07	22	57.2		3 809
1990	QX1	1990	09	24.19724	23	05	36.62	-07	23	00.7		3 809
1990	QG2	1990	09	21.20590	23	19	50.93	-06	35	44.4	17.0	3 809
1990	QG2	1990	09	21.21909	23	19	50.42	-06	35	51.2		3 809
1990	QG2	1990	09	21.23230	23	19	49.92	-06	35	57.9		3 809
1990	QG2	1990	09	22.01285	23	19	19.83	-06	42	33.2		3 809
1990	QG2	1990	09	22.02603	23	19	19.33	-06	42	39.9		3 809
1990	QG2	1990	09	22.03925	23	19	18.82	-06	42	46.9		3 809
1990	QL2	1990	09	21.20590	23	19	30.36	-06	53	23.0	16.8	3 809
1990	QL2	1990	09	21.21909	23	19	29.74	-06	53	30.0		3 809
1990	QL2	1990	09	21.23230	23	19	29.12	-06	53	37.3		3 809
1990	QL2	1990	09	22.01285	23	18	52.71	-07	00	32.6		3 809
1990	QL2	1990	09	22.02603	23	18	52.08	-07	00	39.4		3 809
1990	QL2	1990	09	22.03925	23	18	51.47	-07	00	46.4		3 809
1990	QN2	1990	09	27.20972	23	10	53.99	-02	56	03.4	17.4	3 809
1990	QN2	1990	09	27.22083	23	10	53.40	-02	56	04.1		3 809
1990	QN2	1990	09	27.23193	23	10	52.82	-02	56	04.5		3 809
1990	QN2	1990	09	28.27152	23	09	58.82	-02	56	47.8		3 809

1990	QN2	1990	09	28.28125	23	09	58.32	-02	56	48.4		3 809
1990	QN2	1990	09	28.29098	23	09	57.81	-02	56	48.9		3 809
1990	QP2	1990	09	23.13681	23	39	09.02	-02	28	12.4	16.5	3 809
1990	QP2	1990	09	23.14929	23	39	08.42	-02	28	15.9		3 809
1990	QP2	1990	09	23.16180	23	39	07.79	-02	28	19.4		3 809
1990	QP2	1990	09	24.09097	23	38	23.15	-02	32	32.1		3 809
1990	QP2	1990	09	24.10349	23	38	22.54	-02	32	35.6		3 809
1990	QP2	1990	09	24.11597	23	38	21.94	-02	32	39.1		3 809
1990	QU2	1990	09	18.28125	23	33	30.25	-06	17	21.1	17.0	3 809
1990	QU2	1990	09	18.29513	23	33	29.84	-06	17	32.2		3 809
1990	QU2	1990	09	18.30902	23	33	29.42	-06	17	43.4		3 809
1990	QU2	1990	09	21.16147	23	32	06.03	-06	56	01.0		3 809
1990	QU2	1990	09	21.17465	23	32	05.64	-06	56	11.4		3 809
1990	QU2	1990	09	21.18784	23	32	05.26	-06	56	21.9		3 809
1990	QY2	1990	09	13.22708	23	02	37.64	-07	07	42.6	17.2	3 809
1990	QY2	1990	09	13.24097	23	02	36.88	-07	07	46.2		3 809
1990	QY2	1990	09	13.25485	23	02	36.11	-07	07	50.1		3 809
1990	QY2	1990	09	14.14166	23	01	47.89	-07	11	43.5		3 809
1990	QY2	1990	09	14.15555	23	01	47.14	-07	11	46.7		3 809
1990	QY2	1990	09	14.16943	23	01	46.38	-07	11	50.1		3 809
1990	QY2	1990	09	15.13055	23	00	53.99	-07	15	59.0		3 809
1990	QY2	1990	09	15.14444	23	00	53.23	-07	16	02.6		3 809
1990	QY2	1990	09	15.15833	23	00	52.48	-07	16	06.6		3 809
1990	QY2	1990	09	15.17709	23	00	51.45	-07	16	10.9		3 809
1990	QY2	1990	09	15.19098	23	00	50.69	-07	16	14.4		3 809
1990	QY2	1990	09	15.20486	23	00	49.93	-07	16	17.9		3 809
1990	QY2	1990	09	16.25485	22	59	53.11	-07	20	45.3		3 809
1990	QY2	1990	09	16.26737	22	59	52.41	-07	20	48.7		3 809
1990	QY2	1990	09	16.27985	22	59	51.73	-07	20	52.1		3 809
1990	QZ2	1990	09	14.18542	23	05	44.02	-06	12	30.9	17.5	3 809
1990	QZ2	1990	09	14.19931	23	05	43.34	-06	12	33.1		3 809
1990	QZ2	1990	09	14.21320	23	05	42.67	-06	12	35.1		3 809
1990	QZ2	1990	09	15.17709	23	04	55.46	-06	15	04.7		3 809
1990	QZ2	1990	09	15.19098	23	04	54.78	-06	15	06.9		3 809
1990	QZ2	1990	09	15.20486	23	04	54.09	-06	15	09.0		3 809
1990	QZ2	1990	09	16.29443	23	04	00.81	-06	17	55.8		3 809
1990	QZ2	1990	09	16.30695	23	04	00.20	-06	17	57.8		3 809
1990	QZ2	1990	09	16.31946	23	03	59.58	-06	17	59.6		3 809
1990	QB3	1990	09	14.18542	23	07	52.11	-06	55	46.5	17.3	3 809
1990	QB3	1990	09	14.19931	23	07	51.40	-06	55	53.7		3 809
1990	QB3	1990	09	14.21320	23	07	50.69	-06	56	01.1		3 809
1990	QB3	1990	09	15.17709	23	07	00.96	-07	04	30.1		3 809
1990	QB3	1990	09	15.19098	23	07	00.25	-07	04	37.2		3 809
1990	QB3	1990	09	15.20486	23	06	59.51	-07	04	44.6		3 809
1990	QB3	1990	09	16.29443	23	06	03.23	-07	14	14.2		3 809
1990	QB3	1990	09	16.30695	23	06	02.59	-07	14	20.9		3 809
1990	QB3	1990	09	16.31946	23	06	01.94	-07	14	27.8		3 809
1990	QC3	1990	09	14.18542	23	10	05.89	-06	11	47.7	17.2	3 809
1990	QC3	1990	09	14.19931	23	10	05.21	-06	11	54.6		3 809
1990	QC3	1990	09	14.21320	23	10	04.53	-06	12	01.5		3 809
1990	QC3	1990	09	16.29443	23	08	22.86	-06	29	06.3		3 809
1990	QC3	1990	09	16.30695	23	08	22.24	-06	29	12.4		3 809
1990	QC3	1990	09	16.31946	23	08	21.63	-06	29	18.6		3 809
1990	QC3	1990	09	23.23193	23	03	01.57	-07	23	33.3	17.2	3 809
1990	QC3	1990	09	23.24445	23	03	01.03	-07	23	39.2		3 809
1990	QC3	1990	09	23.25696	23	03	00.50	-07	23	45.1		3 809
1990	QC3	1990	09	24.17221	23	02	21.25	-07	30	28.8		3 809
1990	QC3	1990	09	24.18472	23	02	20.72	-07	30	34.6		3 809
1990	QC3	1990	09	24.19724	23	02	20.19	-07	30	39.9		3 809

1990	QC3	1990	09	25.08612	23	01	43.20	-07	37	04.8	17.5	3 809
1990	QC3	1990	09	25.09860	23	01	42.69	-07	37	10.3		3 809
1990	QC3	1990	09	25.11112	23	01	42.18	-07	37	15.6		3 809
1990	QC3	1990	09	26.23682	23	00	55.84	-07	45	11.8		3 809
1990	QC3	1990	09	26.24652	23	00	55.44	-07	45	16.1		3 809
1990	QC3	1990	09	26.25626	23	00	55.03	-07	45	20.0		3 809
1990	QL3	1990	09	27.20972	23	09	04.87	-04	17	32.4	17.3	3 809
1990	QL3	1990	09	27.22083	23	09	04.33	-04	17	33.4		3 809
1990	QL3	1990	09	27.23193	23	09	03.79	-04	17	34.3		3 809
1990	QL3	1990	09	28.27152	23	08	13.38	-04	19	01.3		3 809
1990	QL3	1990	09	28.28125	23	08	12.91	-04	19	02.3		3 809
1990	QL3	1990	09	28.29098	23	08	12.44	-04	19	03.2		3 809
1990	QO3	1990	09	13.17776	23	03	04.67	-08	42	00.4	17.1	3 809
1990	QO3	1990	09	13.19168	23	03	03.96	-08	42	01.8		3 809
1990	QO3	1990	09	13.20557	23	03	03.26	-08	42	03.1		3 809
1990	QO3	1990	09	14.24792	23	02	10.63	-08	43	42.6		3 809
1990	QO3	1990	09	14.26181	23	02	09.92	-08	43	44.0		3 809
1990	QO3	1990	09	14.27570	23	02	09.23	-08	43	45.6		3 809
1990	QP3	1990	09	13.17776	23	06	08.84	-09	57	40.7	16.8	3 809
1990	QP3	1990	09	13.19168	23	06	08.24	-09	57	44.5		3 809
1990	QP3	1990	09	13.20557	23	06	07.61	-09	57	48.8		3 809
1990	QP3	1990	09	14.24792	23	05	22.51	-10	02	38.7		3 809
1990	QP3	1990	09	14.26181	23	05	21.90	-10	02	42.6		3 809
1990	QP3	1990	09	14.27570	23	05	21.30	-10	02	46.4		3 809
1990	QY3	1990	09	13.13474	22	57	56.38	-05	49	02.3	17.0	3 809
1990	QY3	1990	09	13.14862	22	57	55.63	-05	49	05.9		3 809
1990	QY3	1990	09	13.16251	22	57	54.87	-05	49	08.9		3 809
1990	QY3	1990	09	14.14166	22	57	01.61	-05	53	01.1		3 809
1990	QY3	1990	09	14.15555	22	57	00.82	-05	53	04.5		3 809
1990	QY3	1990	09	14.16943	22	57	00.07	-05	53	07.9		3 809
1990	QY3	1990	09	15.13055	22	56	08.45	-05	56	52.8		3 809
1990	QY3	1990	09	15.14444	22	56	07.68	-05	56	55.9		3 809
1990	QY3	1990	09	15.15833	22	56	06.92	-05	56	59.4		3 809
1990	QY3	1990	09	16.25485	22	55	08.50	-06	01	13.3		3 809
1990	QY3	1990	09	16.26737	22	55	07.82	-06	01	16.3		3 809
1990	QY3	1990	09	16.27985	22	55	07.14	-06	01	19.4		3 809
1990	QZ3	1990	09	13.17776	23	03	18.05	-08	47	42.6	18.0	3 809
1990	QZ3	1990	09	13.19168	23	03	17.43	-08	47	50.4		3 809
1990	QZ3	1990	09	13.20557	23	03	16.80	-08	47	58.2		3 809
1990	QZ3	1990	09	14.24792	23	02	29.84	-08	57	42.2		3 809
1990	QZ3	1990	09	14.26181	23	02	29.19	-08	57	49.9		3 809
1990	QZ3	1990	09	14.27570	23	02	28.54	-08	57	57.6		3 809
1990	QB4	1990	09	10.15312	22	39	45.09	-09	07	18.6	17.0	3 809
1990	QB4	1990	09	10.16771	22	39	44.50	-09	07	24.1		3 809
1990	QB4	1990	09	10.18230	22	39	43.90	-09	07	29.3		3 809
1990	QB4	1990	09	11.13298	22	39	05.43	-09	13	05.8		3 809
1990	QB4	1990	09	11.14757	22	39	04.83	-09	13	10.8		3 809
1990	QB4	1990	09	11.16216	22	39	04.24	-09	13	16.1		3 809
1990	QB4	1990	09	12.05902	22	38	28.18	-09	18	30.6		3 809
1990	QB4	1990	09	12.07153	22	38	27.68	-09	18	35.0		3 809
1990	QB4	1990	09	12.08403	22	38	27.17	-09	18	39.6		3 809
1990	QB4	1990	09	12.99757	22	37	50.85	-09	23	58.9		3 809
1990	QB4	1990	09	13.01215	22	37	50.27	-09	24	04.0		3 809
1990	QB4	1990	09	13.02673	22	37	49.70	-09	24	09.1		3 809
1990	QB4	1990	09	13.99860	22	37	11.42	-09	29	44.1		3 809
1990	QB4	1990	09	14.01251	22	37	10.87	-09	29	48.6		3 809
1990	QB4	1990	09	14.02640	22	37	10.32	-09	29	53.6		3 809
1990	QH4	1990	09	11.13298	22	42	52.13	-08	37	50.9	17.8	3 809
1990	QH4	1990	09	11.14757	22	42	51.20	-08	37	53.8		3 809

1990	QH4	1990	09	11.16216	22	42	50.28	-08	37	56.8		3 809
1990	QJ4	1990	09	11.17882	22	47	56.55	-08	20	34.7	17.4	3 809
1990	QJ4	1990	09	11.19341	22	47	55.84	-08	20	40.4		3 809
1990	QJ4	1990	09	11.20799	22	47	55.14	-08	20	46.1		3 809
1990	QJ4	1990	09	12.09792	22	47	11.69	-08	26	36.7		3 809
1990	QJ4	1990	09	12.11041	22	47	11.08	-08	26	41.5		3 809
1990	QJ4	1990	09	12.12291	22	47	10.49	-08	26	46.3		3 809
1990	QJ4	1990	09	13.04376	22	46	25.71	-08	32	43.3		3 809
1990	QJ4	1990	09	13.05624	22	46	25.10	-08	32	48.2		3 809
1990	QJ4	1990	09	13.06876	22	46	24.51	-08	32	52.8		3 809
1990	QK4	1990	09	11.17882	22	51	49.88	-08	05	56.8	17.3	3 809
1990	QK4	1990	09	11.19341	22	51	49.25	-08	06	03.0		3 809
1990	QK4	1990	09	11.20799	22	51	48.63	-08	06	09.6		3 809
1990	QK4	1990	09	12.09792	22	51	10.37	-08	12	25.3		3 809
1990	QK4	1990	09	12.11041	22	51	09.84	-08	12	30.6		3 809
1990	QK4	1990	09	12.12291	22	51	09.27	-08	12	35.9		3 809
1990	QK4	1990	09	13.09515	22	50	27.67	-08	19	22.1		3 809
1990	QK4	1990	09	13.10763	22	50	27.14	-08	19	27.5		3 809
1990	QK4	1990	09	13.12015	22	50	26.60	-08	19	32.8		3 809
1990	QK4	1990	09	14.04654	22	49	47.73	-08	25	54.5		3 809
1990	QK4	1990	09	14.06042	22	49	47.12	-08	26	00.5		3 809
1990	QK4	1990	09	14.07431	22	49	46.54	-08	26	06.3		3 809
1990	QL4	1990	09	12.09792	22	52	15.54	-09	04	13.8	17.6	3 809
1990	QL4	1990	09	12.11041	22	52	14.90	-09	04	15.1		3 809
1990	QL4	1990	09	12.12291	22	52	14.29	-09	04	16.5		3 809
1990	QL4	1990	09	12.27777	22	52	06.51	-09	04	33.2		3 809
1990	QL4	1990	09	12.29028	22	52	05.87	-09	04	34.7		3 809
1990	QL4	1990	09	12.30278	22	52	05.25	-09	04	36.0		3 809
1990	QL4	1990	09	13.09515	22	51	25.45	-09	06	01.1		3 809
1990	QL4	1990	09	13.10763	22	51	24.81	-09	06	02.4		3 809
1990	QL4	1990	09	13.12015	22	51	24.17	-09	06	03.8		3 809
1990	QL4	1990	09	14.04654	22	50	37.86	-09	07	40.6		3 809
1990	QL4	1990	09	14.06042	22	50	37.17	-09	07	41.8		3 809
1990	QL4	1990	09	14.07431	22	50	36.46	-09	07	43.3		3 809
1990	QN4	1990	09	13.13474	22	57	05.90	-05	54	15.4	15.0	3 809
1990	QN4	1990	09	13.14862	22	57	05.34	-05	54	20.9		3 809
1990	QN4	1990	09	13.16251	22	57	04.77	-05	54	26.0		3 809
1990	QN4	1990	09	14.14166	22	56	24.83	-06	00	44.2		3 809
1990	QN4	1990	09	14.15555	22	56	24.24	-06	00	49.9		3 809
1990	QN4	1990	09	14.16943	22	56	23.68	-06	00	55.0		3 809
1990	QN4	1990	09	15.13055	22	55	44.82	-06	07	04.6		3 809
1990	QN4	1990	09	15.14444	22	55	44.26	-06	07	09.8		3 809
1990	QN4	1990	09	15.15833	22	55	43.70	-06	07	15.2		3 809
1990	QN4	1990	09	16.25485	22	54	59.45	-06	14	15.8		3 809
1990	QN4	1990	09	16.26737	22	54	58.92	-06	14	20.4		3 809
1990	QN4	1990	09	16.27985	22	54	58.38	-06	14	25.4		3 809
1990	QO4	1990	09	12.27777	22	55	45.93	-09	33	49.6	17.8	3 809
1990	QO4	1990	09	12.29028	22	55	45.29	-09	33	50.7		3 809
1990	QO4	1990	09	12.30278	22	55	44.65	-09	33	51.7		3 809
1990	QO4	1990	09	14.08957	22	54	13.46	-09	36	29.7		3 809
1990	QO4	1990	09	14.10349	22	54	12.74	-09	36	30.9		3 809
1990	QO4	1990	09	14.11737	22	54	12.00	-09	36	32.4		3 809
1990	QO4	1990	09	15.08542	22	53	23.02	-09	37	52.9		3 809
1990	QO4	1990	09	15.09930	22	53	22.30	-09	37	54.2		3 809
1990	QO4	1990	09	15.11319	22	53	21.59	-09	37	55.4		3 809
1990	QP4	1990	09	13.13474	22	59	02.41	-06	34	15.5	17.4	3 809
1990	QP4	1990	09	13.14862	22	59	01.65	-06	34	18.3		3 809
1990	QP4	1990	09	13.16251	22	59	00.93	-06	34	20.8		3 809
1990	QP4	1990	09	13.22708	22	58	57.57	-06	34	33.6		3 809

1990	QP4	1990	09	13.24097	22	58	56.84	-06	34	36.4		3 809
1990	QP4	1990	09	13.25485	22	58	56.11	-06	34	39.0		3 809
1990	QP4	1990	09	14.14166	22	58	09.53	-06	37	33.6		3 809
1990	QP4	1990	09	14.15555	22	58	08.79	-06	37	36.1		3 809
1990	QP4	1990	09	14.16943	22	58	08.08	-06	37	38.7		3 809
1990	QP4	1990	09	15.13055	22	57	18.27	-06	40	45.9		3 809
1990	QP4	1990	09	15.14444	22	57	17.55	-06	40	48.6		3 809
1990	QP4	1990	09	15.15833	22	57	16.83	-06	40	51.3		3 809
1990	QP4	1990	09	16.25485	22	56	20.45	-06	44	18.2		3 809
1990	QP4	1990	09	16.26737	22	56	19.78	-06	44	20.7		3 809
1990	QP4	1990	09	16.27985	22	56	19.11	-06	44	23.3		3 809
1990	QE5	1990	09	12.27777	22	54	46.75	-10	31	59.3	17.6	3 809
1990	QE5	1990	09	12.29028	22	54	46.01	-10	32	00.0		3 809
1990	QE5	1990	09	12.30278	22	54	45.26	-10	32	00.5		3 809
1990	QE5	1990	09	14.08957	22	52	59.75	-10	33	27.8		3 809
1990	QE5	1990	09	14.10349	22	52	58.93	-10	33	28.3		3 809
1990	QE5	1990	09	14.11737	22	52	58.12	-10	33	28.8		3 809
1990	QE5	1990	09	15.08542	22	52	01.71	-10	34	08.0		3 809
1990	QE5	1990	09	15.09930	22	52	00.88	-10	34	08.4		3 809
1990	QE5	1990	09	15.11319	22	52	00.06	-10	34	09.0		3 809
1990	QF5	1990	09	12.27777	22	58	20.44	-09	46	34.1	17.4	3 809
1990	QF5	1990	09	12.29028	22	58	19.82	-09	46	34.5		3 809
1990	QF5	1990	09	12.30278	22	58	19.17	-09	46	35.3		3 809
1990	QF5	1990	09	14.08957	22	56	48.71	-09	48	08.6		3 809
1990	QF5	1990	09	14.10349	22	56	48.00	-09	48	09.3		3 809
1990	QF5	1990	09	14.11737	22	56	47.29	-09	48	10.0		3 809
1990	QF5	1990	09	15.08542	22	55	58.59	-09	48	55.4		3 809
1990	QF5	1990	09	15.09930	22	55	57.87	-09	48	56.0		3 809
1990	QF5	1990	09	15.11319	22	55	57.18	-09	48	56.7		3 809
1990	QH5	1990	09	14.29098	23	01	07.23	-11	17	21.1	17.5	3 809
1990	QH5	1990	09	14.30487	23	01	06.41	-11	17	23.8		3 809
1990	QH5	1990	09	14.31876	23	01	05.60	-11	17	26.7		3 809
1990	QH5	1990	09	15.23682	23	00	11.69	-11	20	18.9		3 809
1990	QH5	1990	09	15.25070	23	00	10.88	-11	20	21.6		3 809
1990	QH5	1990	09	15.26459	23	00	10.06	-11	20	24.5		3 809
1990	QJ5	1990	09	13.17776	23	05	38.51	-09	07	24.9	16.9	3 809
1990	QJ5	1990	09	13.19168	23	05	37.76	-09	07	27.5		3 809
1990	QJ5	1990	09	13.20557	23	05	37.02	-09	07	30.5		3 809
1990	QJ5	1990	09	14.24792	23	04	40.89	-09	10	51.9		3 809
1990	QJ5	1990	09	14.26181	23	04	40.15	-09	10	54.5		3 809
1990	QJ5	1990	09	14.27570	23	04	39.39	-09	10	57.2		3 809
1990	QZ5	1990	09	10.15312	22	37	31.92	-09	20	52.3	17.4	3 809
1990	QZ5	1990	09	10.16771	22	37	31.31	-09	21	01.1		3 809
1990	QZ5	1990	09	10.18230	22	37	30.69	-09	21	09.5		3 809
1990	QZ5	1990	09	11.13298	22	36	51.15	-09	30	25.0		3 809
1990	QZ5	1990	09	11.14757	22	36	50.55	-09	30	33.6		3 809
1990	QZ5	1990	09	11.16216	22	36	49.95	-09	30	42.0		3 809
1990	QZ5	1990	09	12.05902	22	36	12.95	-09	39	21.8		3 809
1990	QZ5	1990	09	12.07153	22	36	12.43	-09	39	29.1		3 809
1990	QZ5	1990	09	12.08403	22	36	11.92	-09	39	36.3		3 809
1990	QZ5	1990	09	12.99757	22	35	34.64	-09	48	25.2		3 809
1990	QZ5	1990	09	13.01215	22	35	34.04	-09	48	33.5		3 809
1990	QZ5	1990	09	13.02673	22	35	33.45	-09	48	41.9		3 809
1990	QZ5	1990	09	13.99860	22	34	54.27	-09	57	56.9		3 809
1990	QZ5	1990	09	14.01251	22	34	53.71	-09	58	05.0		3 809
1990	QZ5	1990	09	14.02640	22	34	53.15	-09	58	12.9		3 809
1990	QZ5	1990	09	15.04166	22	34	12.61	-10	07	50.3		3 809
1990	QZ5	1990	09	15.05554	22	34	12.06	-10	07	58.2		3 809
1990	QZ5	1990	09	15.06946	22	34	11.50	-10	08	06.1		3 809

1990	QZ5	1990	09	16.20972	22	33	26.55	-10	18	45.0		3 809
1990	QZ5	1990	09	16.22360	22	33	26.00	-10	18	53.1		3 809
1990	QZ5	1990	09	16.23749	22	33	25.44	-10	19	01.3		3 809
1990	QZ5	1990	09	26.17291	22	27	42.93	-11	44	54.0		3 809
1990	QZ5	1990	09	26.18265	22	27	42.59	-11	44	59.0		3 809
1990	QZ5	1990	09	26.19235	22	27	42.25	-11	45	04.0		3 809
1990	QZ5	1990	09	27.03647	22	27	18.19	-11	51	39.6		3 809
1990	QZ5	1990	09	27.04132	22	27	18.06	-11	51	41.6		3 809
1990	QZ5	1990	09	27.04617	22	27	17.93	-11	51	44.1		3 809
1990	QZ5	1990	09	28.11319	22	26	48.12	-11	59	56.0		3 809
1990	QZ5	1990	09	28.12292	22	26	47.85	-12	00	00.7		3 809
1990	QZ5	1990	09	28.13263	22	26	47.57	-12	00	05.2		3 809
1990	QA6	1990	09	12.99757	22	33	04.58	-10	15	45.9	16.7	3 809
1990	QA6	1990	09	13.01215	22	33	03.80	-10	15	46.9		3 809
1990	QA6	1990	09	13.02673	22	33	03.03	-10	15	47.8		3 809
1990	QA6	1990	09	13.99860	22	32	11.07	-10	16	48.8		3 809
1990	QA6	1990	09	14.01251	22	32	10.32	-10	16	49.8		3 809
1990	QA6	1990	09	14.02640	22	32	09.58	-10	16	50.6		3 809
1990	QA6	1990	09	15.04166	22	31	16.16	-10	17	49.5		3 809
1990	QA6	1990	09	15.05554	22	31	15.43	-10	17	50.2		3 809
1990	QA6	1990	09	15.06946	22	31	14.70	-10	17	51.2		3 809
1990	QA6	1990	09	16.20972	22	30	15.98	-10	18	47.6		3 809
1990	QA6	1990	09	16.22360	22	30	15.24	-10	18	48.0		3 809
1990	QA6	1990	09	16.23749	22	30	14.49	-10	18	48.3		3 809
1990	QB6	1990	09	21.30243	00	33	11.07	+06	07	37.6	17.3	3 809
1990	QB6	1990	09	21.31561	00	33	10.12	+06	07	40.3		3 809
1990	QB6	1990	09	21.32883	00	33	09.18	+06	07	43.1		3 809
1990	QB6	1990	09	22.28229	00	32	01.41	+06	11	04.2		3 809
1990	QB6	1990	09	22.29547	00	32	00.47	+06	11	07.0		3 809
1990	QB6	1990	09	22.30869	00	31	59.53	+06	11	09.8		3 809
1990	QC6	1990	09	13.09515	22	54	15.61	-08	22	30.0	17.3	3 809
1990	QC6	1990	09	13.10763	22	54	14.92	-08	22	34.3		3 809
1990	QC6	1990	09	13.12015	22	54	14.22	-08	22	38.9		3 809
1990	QC6	1990	09	14.04654	22	53	23.46	-08	27	53.5		3 809
1990	QC6	1990	09	14.06042	22	53	22.70	-08	27	58.3		3 809
1990	QC6	1990	09	14.07431	22	53	21.94	-08	28	02.8		3 809
1990	QJ6	1990	09	13.22708	22	59	51.69	-07	28	38.7	17.5	3 809
1990	QJ6	1990	09	13.24097	22	59	51.11	-07	28	42.6		3 809
1990	QJ6	1990	09	13.25485	22	59	50.48	-07	28	46.1		3 809
1990	QJ6	1990	09	14.14166	22	59	11.76	-07	32	40.6		3 809
1990	QJ6	1990	09	14.15555	22	59	11.16	-07	32	44.0		3 809
1990	QJ6	1990	09	14.16943	22	59	10.55	-07	32	47.8		3 809
1990	QJ6	1990	09	15.13055	22	58	28.80	-07	37	00.4		3 809
1990	QJ6	1990	09	15.14444	22	58	28.17	-07	37	04.1		3 809
1990	QJ6	1990	09	15.15833	22	58	27.57	-07	37	08.0		3 809
1990	QJ6	1990	09	16.25485	22	57	40.22	-07	41	48.1		3 809
1990	QJ6	1990	09	16.26737	22	57	39.65	-07	41	51.4		3 809
1990	QJ6	1990	09	16.27985	22	57	39.10	-07	41	54.8		3 809
1990	QT6	1990	09	15.13055	23	00	33.44	-07	22	07.6	17.9	3 809
1990	QT6	1990	09	15.14444	23	00	32.66	-07	22	11.2		3 809
1990	QT6	1990	09	15.15833	23	00	31.87	-07	22	15.2		3 809
1990	QT6	1990	09	16.25485	22	59	31.91	-07	27	15.3		3 809
1990	QT6	1990	09	16.26737	22	59	31.21	-07	27	18.9		3 809
1990	QT6	1990	09	16.27985	22	59	30.49	-07	27	22.3		3 809
1990	QE7	1990	09	14.18542	23	08	12.50	-07	07	59.2	17.5	3 809
1990	QE7	1990	09	14.19931	23	08	11.78	-07	08	04.3		3 809
1990	QE7	1990	09	14.21320	23	08	11.08	-07	08	09.6		3 809
1990	QE7	1990	09	15.17709	23	07	21.30	-07	14	03.6		3 809
1990	QE7	1990	09	15.19098	23	07	20.58	-07	14	09.0		3 809

1990	QE7	1990	09	15.20486	23	07	19.86	-07	14	14.4		3 809
1990	QE7	1990	09	16.29443	23	06	23.63	-07	20	50.0		3 809
1990	QE7	1990	09	16.30695	23	06	22.98	-07	20	54.5		3 809
1990	QE7	1990	09	16.31946	23	06	22.33	-07	20	59.0		3 809
1990	QT7	1990	09	10.11667	22	32	22.55	-08	06	07.4	17.3	3 809
1990	QT7	1990	09	10.12778	22	32	22.08	-08	06	10.2		3 809
1990	QT7	1990	09	10.13889	22	32	21.62	-08	06	13.2		3 809
1990	QT7	1990	09	11.08784	22	31	41.75	-08	10	13.2		3 809
1990	QT7	1990	09	11.10243	22	31	41.12	-08	10	16.9		3 809
1990	QT7	1990	09	11.11702	22	31	40.49	-08	10	20.5		3 809
1990	QV7	1990	09	10.11667	22	31	45.08	-08	25	08.8	17.5	3 809
1990	QV7	1990	09	10.12778	22	31	44.59	-08	25	12.0		3 809
1990	QV7	1990	09	10.13889	22	31	44.09	-08	25	15.1		3 809
1990	QV7	1990	09	11.08784	22	31	01.44	-08	29	35.7		3 809
1990	QV7	1990	09	11.10243	22	31	00.77	-08	29	39.7		3 809
1990	QV7	1990	09	11.11702	22	31	00.12	-08	29	44.0		3 809
1990	QX7	1990	09	09.11528	22	34	06.07	-08	20	12.7	17.0	3 809
1990	QX7	1990	09	09.12500	22	34	05.65	-08	20	15.1		3 809
1990	QX7	1990	09	10.11667	22	33	22.10	-08	23	46.8		3 809
1990	QX7	1990	09	10.12778	22	33	21.60	-08	23	49.2		3 809
1990	QX7	1990	09	10.13889	22	33	21.10	-08	23	51.4		3 809
1990	QX7	1990	09	11.08784	22	32	39.92	-08	27	11.9		3 809
1990	QX7	1990	09	11.10243	22	32	39.28	-08	27	14.9		3 809
1990	QX7	1990	09	11.11702	22	32	38.63	-08	27	18.0		3 809
1990	QD8	1990	09	15.04166	22	34	16.41	-11	00	49.3	17.6	3 809
1990	QD8	1990	09	15.05554	22	34	15.90	-11	00	54.3		3 809
1990	QD8	1990	09	15.06946	22	34	15.38	-11	00	59.4		3 809
1990	QD8	1990	09	16.20972	22	33	32.98	-11	07	37.5		3 809
1990	QD8	1990	09	16.22360	22	33	32.46	-11	07	42.3		3 809
1990	QD8	1990	09	16.23749	22	33	31.94	-11	07	47.1		3 809
1990	QD8	1990	09	18.04166	22	32	27.62	-11	18	00.4		3 809
1990	QD8	1990	09	18.05554	22	32	27.13	-11	18	05.2		3 809
1990	QD8	1990	09	18.06946	22	32	26.62	-11	18	10.0		3 809
1990	QE9	1990	09	11.13298	22	42	45.82	-08	41	01.9	17.8	3 809
1990	QE9	1990	09	11.14757	22	42	45.13	-08	41	05.7		3 809
1990	QE9	1990	09	11.16216	22	42	44.44	-08	41	09.5		3 809
1990	QE9	1990	09	12.05902	22	42	01.97	-08	44	48.6		3 809
1990	QE9	1990	09	12.07153	22	42	01.38	-08	44	51.8		3 809
1990	QE9	1990	09	12.08403	22	42	00.79	-08	44	54.8		3 809
1990	QE9	1990	09	13.04376	22	41	15.76	-08	48	45.2		3 809
1990	QE9	1990	09	13.05624	22	41	15.17	-08	48	48.4		3 809
1990	QE9	1990	09	13.06876	22	41	14.58	-08	48	51.4		3 809
1990	QT9	1990	09	12.27777	22	52	55.99	-09	36	00.0	17.2	3 809
1990	QT9	1990	09	12.29028	22	52	55.32	-09	36	04.0		3 809
1990	QT9	1990	09	12.30278	22	52	54.66	-09	36	08.5		3 809
1990	QT9	1990	09	14.08957	22	51	19.53	-09	46	38.7		3 809
1990	QT9	1990	09	14.10349	22	51	18.79	-09	46	43.3		3 809
1990	QT9	1990	09	14.11737	22	51	18.05	-09	46	48.1		3 809
1990	QT9	1990	09	15.08542	22	50	27.30	-09	52	18.4		3 809
1990	QT9	1990	09	15.09930	22	50	26.57	-09	52	23.0		3 809
1990	QT9	1990	09	15.11319	22	50	25.84	-09	52	27.4		3 809
1990	QU9	1990	09	14.08957	22	52	21.40	-10	57	58.0	17.6	3 809
1990	QU9	1990	09	14.10349	22	52	20.66	-10	57	57.6		3 809
1990	QU9	1990	09	14.11737	22	52	19.93	-10	57	57.4		3 809
1990	QU9	1990	09	15.08542	22	51	28.31	-10	57	42.2		3 809
1990	QU9	1990	09	15.09930	22	51	27.57	-10	57	41.9		3 809
1990	QU9	1990	09	15.11319	22	51	26.83	-10	57	41.7		3 809
1990	QW9	1990	09	24.22501	23	18	38.24	-05	37	51.5	17.2	3 809
1990	QW9	1990	09	24.23819	23	18	37.72	-05	38	00.1		3 809

1990	QW9	1990	09	24.25140	23	18	37.19	-05	38	08.8		3 809
1990	QW9	1990	09	25.12848	23	18	02.55	-05	47	29.7		3 809
1990	QW9	1990	09	25.14096	23	18	02.08	-05	47	37.8		3 809
1990	QW9	1990	09	25.15347	23	18	01.58	-05	47	45.9		3 809
1990	QW9	1990	09	26.10138	23	17	24.85	-05	57	43.4		3 809
1990	QW9	1990	09	26.11112	23	17	24.45	-05	57	49.5		3 809
1990	QW9	1990	09	26.12082	23	17	24.08	-05	57	55.7		3 809
1990	QW9	1990	09	27.12256	23	16	46.18	-06	08	13.2		3 809
1990	QW9	1990	09	27.12744	23	16	46.00	-06	08	16.3		3 809
1990	QW9	1990	09	27.13229	23	16	45.81	-06	08	19.4		3 809
1990	RD	1990	09	25.04721	22	51	10.16	-05	43	10.9	17.3	3 809
1990	RD	1990	09	25.05972	22	51	09.75	-05	43	16.9		3 809
1990	RD	1990	09	25.07224	22	51	09.34	-05	43	23.2		3 809
1990	RD	1990	09	26.20624	22	50	32.61	-05	52	44.4		3 809
1990	RD	1990	09	26.21597	22	50	32.29	-05	52	49.3		3 809
1990	RD	1990	09	26.22571	22	50	31.97	-05	52	54.2		3 809
1990	RF	1990	09	25.04721	22	56	39.83	-04	29	44.3	17.0	3 809
1990	RF	1990	09	25.05972	22	56	39.41	-04	29	51.0		3 809
1990	RF	1990	09	25.07224	22	56	39.02	-04	29	57.5		3 809
1990	RF	1990	09	26.20624	22	56	01.91	-04	40	01.1		3 809
1990	RF	1990	09	26.21597	22	56	01.61	-04	40	06.3		3 809
1990	RF	1990	09	26.22571	22	56	01.30	-04	40	11.5		3 809
1990	RS	1990	09	11.17882	22	50	06.72	-09	07	59.7	17.0	3 809
1990	RS	1990	09	11.19341	22	50	05.76	-09	07	58.9		3 809
1990	RS	1990	09	11.20799	22	50	04.85	-09	07	58.3		3 809
1990	RS	1990	09	12.09792	22	49	07.45	-09	07	06.8		3 809
1990	RS	1990	09	12.11041	22	49	06.66	-09	07	05.8		3 809
1990	RS	1990	09	12.12291	22	49	05.82	-09	07	05.0		3 809
1990	RT	1990	09	13.09515	22	52	11.18	-07	47	29.4	17.7	3 809
1990	RT	1990	09	13.10763	22	52	10.69	-07	47	35.7		3 809
1990	RT	1990	09	13.12015	22	52	10.18	-07	47	42.0		3 809
1990	RT	1990	09	14.04654	22	51	33.23	-07	55	29.8		3 809
1990	RT	1990	09	14.06042	22	51	32.69	-07	55	36.9		3 809
1990	RT	1990	09	14.07431	22	51	32.13	-07	55	44.0		3 809
1990	RU	1990	09	12.13681	22	53	41.42	-07	29	33.1	16.5	3 809
1990	RU	1990	09	12.14931	22	53	40.93	-07	29	40.2		3 809
1990	RU	1990	09	12.16180	22	53	40.44	-07	29	47.7		3 809
1990	RU	1990	09	13.09515	22	53	03.87	-07	39	00.9		3 809
1990	RU	1990	09	13.10763	22	53	03.38	-07	39	08.5		3 809
1990	RU	1990	09	13.12015	22	53	02.89	-07	39	15.6		3 809
1990	RU	1990	09	13.13474	22	53	02.33	-07	39	24.1		3 809
1990	RU	1990	09	13.14862	22	53	01.78	-07	39	32.3		3 809
1990	RU	1990	09	13.16251	22	53	01.24	-07	39	40.6		3 809
1990	RU	1990	09	14.04654	22	52	27.59	-07	48	14.7		3 809
1990	RU	1990	09	14.06042	22	52	27.04	-07	48	22.8		3 809
1990	RU	1990	09	14.07431	22	52	26.51	-07	48	30.7		3 809
1990	RW	1990	08	26.20347	23	09	59.18	-05	41	56.8	17.8	4 809
1990	RW	1990	08	26.21667	23	09	58.63	-05	42	00.1		4 809
1990	RW	1990	08	26.22986	23	09	58.11	-05	42	02.8		4 809
1990	RW	1990	09	13.13474	22	58	45.96	-06	46	05.2	16.9	3 809
1990	RW	1990	09	13.14862	22	58	45.45	-06	46	08.2		3 809
1990	RW	1990	09	13.16251	22	58	44.93	-06	46	11.1		3 809
1990	RW	1990	09	13.22708	22	58	42.52	-06	46	24.9		3 809
1990	RW	1990	09	13.24097	22	58	42.00	-06	46	27.8		3 809
1990	RW	1990	09	13.25485	22	58	41.48	-06	46	30.7		3 809
1990	RW	1990	09	14.14166	22	58	08.24	-06	49	37.6		3 809
1990	RW	1990	09	14.15555	22	58	07.71	-06	49	40.6		3 809
1990	RW	1990	09	14.16943	22	58	07.20	-06	49	43.3		3 809
1990	RW	1990	09	15.13055	22	57	31.36	-06	53	06.1		3 809

1990	RW	1990	09	15.14444	22	57	30.84	-06	53	09.1		3 809
1990	RW	1990	09	15.15833	22	57	30.32	-06	53	12.0		3 809
1990	RW	1990	09	16.25485	22	56	49.58	-06	56	58.6		3 809
1990	RW	1990	09	16.26737	22	56	49.10	-06	57	01.2		3 809
1990	RW	1990	09	16.27985	22	56	48.62	-06	57	03.9		3 809
1990	RB1	1990	09	23.17569	23	22	20.00	-04	34	43.6	17.5	3 809
1990	RB1	1990	09	23.18820	23	22	19.55	-04	34	50.3		3 809
1990	RB1	1990	09	23.20068	23	22	19.11	-04	34	57.1		3 809
1990	RB1	1990	09	24.22501	23	21	42.88	-04	44	08.3		3 809
1990	RB1	1990	09	24.23819	23	21	42.42	-04	44	15.3		3 809
1990	RB1	1990	09	24.25140	23	21	41.95	-04	44	22.5		3 809
1990	RB1	1990	09	25.12848	23	21	11.79	-04	52	11.3		3 809
1990	RB1	1990	09	25.14096	23	21	11.36	-04	52	17.8		3 809
1990	RB1	1990	09	25.15347	23	21	10.93	-04	52	24.5		3 809
1990	RD1	1990	09	15.28125	23	30	48.50	-03	50	31.6	17.4	3 809
1990	RD1	1990	09	15.29376	23	30	47.99	-03	50	37.4		3 809
1990	RD1	1990	09	15.30624	23	30	47.50	-03	50	42.8		3 809
1990	RD1	1990	09	21.03021	23	26	57.68	-04	32	46.6		3 809
1990	RD1	1990	09	21.04340	23	26	57.16	-04	32	52.2		3 809
1990	RD1	1990	09	21.05661	23	26	56.65	-04	32	58.0		3 809
1990	RD1	1990	09	22.09549	23	26	15.35	-04	40	28.7		3 809
1990	RD1	1990	09	22.10867	23	26	14.82	-04	40	34.4		3 809
1990	RD1	1990	09	22.12189	23	26	14.30	-04	40	40.1		3 809
1990	RD1	1990	09	23.17569	23	25	32.72	-04	48	16.4		3 809
1990	RD1	1990	09	23.18820	23	25	32.23	-04	48	21.8		3 809
1990	RD1	1990	09	23.20068	23	25	31.73	-04	48	27.3		3 809
1990	RD1	1990	09	24.22501	23	24	51.61	-04	55	44.0		3 809
1990	RD1	1990	09	24.23819	23	24	51.09	-04	55	49.6		3 809
1990	RD1	1990	09	24.25140	23	24	50.58	-04	55	55.2		3 809
1990	RD1	1990	09	25.12848	23	24	16.73	-05	02	08.7		3 809
1990	RD1	1990	09	25.14096	23	24	16.26	-05	02	13.8		3 809
1990	RD1	1990	09	25.15347	23	24	15.78	-05	02	18.8		3 809
1990	RD1	1990	09	26.10138	23	23	39.71	-05	08	59.4		3 809
1990	RD1	1990	09	26.11112	23	23	39.26	-05	09	03.0		3 809
1990	RD1	1990	09	26.12082	23	23	38.80	-05	09	06.8		3 809
1990	RF1	1990	09	22.05383	23	27	22.57	-02	23	57.9	17.2	3 809
1990	RF1	1990	09	22.06702	23	27	22.00	-02	24	02.0		3 809
1990	RF1	1990	09	22.08020	23	27	21.44	-02	24	05.5		3 809
1990	RF1	1990	09	23.01388	23	26	40.97	-02	28	41.4		3 809
1990	RF1	1990	09	23.02640	23	26	40.44	-02	28	45.0		3 809
1990	RF1	1990	09	23.03888	23	26	39.92	-02	28	48.7		3 809
1990	RF1	1990	09	24.00833	23	25	58.46	-02	33	33.1		3 809
1990	RF1	1990	09	24.02084	23	25	57.93	-02	33	37.0		3 809
1990	RF1	1990	09	24.03333	23	25	57.40	-02	33	40.3		3 809
1990	RG1	1990	09	21.03021	23	27	26.53	-04	55	08.5	16.8	3 809
1990	RG1	1990	09	21.04340	23	27	25.73	-04	55	06.6		3 809
1990	RG1	1990	09	21.05661	23	27	24.93	-04	55	04.7		3 809
1990	RG1	1990	09	22.09549	23	26	22.06	-04	52	38.6		3 809
1990	RG1	1990	09	22.10867	23	26	21.26	-04	52	36.8		3 809
1990	RG1	1990	09	22.12189	23	26	20.45	-04	52	34.9		3 809
1990	RG1	1990	09	23.17569	23	25	17.27	-04	49	59.6		3 809
1990	RG1	1990	09	23.18820	23	25	16.52	-04	49	57.8		3 809
1990	RG1	1990	09	23.20068	23	25	15.74	-04	49	56.0		3 809
1990	RG1	1990	09	25.12848	23	23	22.81	-04	44	53.5		3 809
1990	RG1	1990	09	25.14096	23	23	22.07	-04	44	51.2		3 809
1990	RG1	1990	09	25.15347	23	23	21.34	-04	44	48.9		3 809
1990	RK1	1990	09	21.03021	23	31	04.82	-04	53	28.1	16.6	3 809
1990	RK1	1990	09	21.04340	23	31	03.99	-04	53	26.5		3 809
1990	RK1	1990	09	21.05661	23	31	03.14	-04	53	24.9		3 809

1990	RK1	1990	09	22.09549	23	29	56.44	-04	51	20.0		3 809
1990	RK1	1990	09	22.10867	23	29	55.61	-04	51	18.2		3 809
1990	RK1	1990	09	22.12189	23	29	54.75	-04	51	16.7		3 809
1990	RK1	1990	09	23.17569	23	28	47.31	-04	49	05.8		3 809
1990	RK1	1990	09	23.18820	23	28	46.51	-04	49	04.2		3 809
1990	RK1	1990	09	23.20068	23	28	45.71	-04	49	02.6		3 809
1990	RM1	1990	09	21.07327	23	33	44.09	-05	11	40.1	17.5	3 809
1990	RM1	1990	09	21.08646	23	33	43.23	-05	11	38.0		3 809
1990	RM1	1990	09	21.09964	23	33	42.37	-05	11	36.1		3 809
1990	RM1	1990	09	22.24063	23	32	28.48	-05	08	35.3		3 809
1990	RM1	1990	09	22.25381	23	32	27.63	-05	08	33.2		3 809
1990	RM1	1990	09	22.26703	23	32	26.79	-05	08	31.2		3 809
1990	RN1	1990	09	18.23541	23	40	19.83	-05	21	24.8	17.6	3 809
1990	RN1	1990	09	18.24930	23	40	19.06	-05	21	25.9		3 809
1990	RN1	1990	09	18.26318	23	40	18.30	-05	21	27.0		3 809
1990	RN1	1990	09	21.07327	23	37	42.42	-05	25	02.1		3 809
1990	RN1	1990	09	21.08646	23	37	41.70	-05	25	03.0		3 809
1990	RN1	1990	09	21.09964	23	37	40.95	-05	25	04.2		3 809
1990	RN1	1990	09	22.24063	23	36	38.03	-05	26	23.1		3 809
1990	RN1	1990	09	22.25381	23	36	37.30	-05	26	24.0		3 809
1990	RN1	1990	09	22.26703	23	36	36.57	-05	26	25.0		3 809
1990	RO1	1990	09	15.32013	23	44	12.93	-03	22	04.6	17.0	3 809
1990	RO1	1990	09	15.33264	23	44	12.37	-03	22	09.7		3 809
1990	RO1	1990	09	15.34515	23	44	11.80	-03	22	14.9		3 809
1990	RO1	1990	09	18.23541	23	41	59.15	-03	41	52.7		3 809
1990	RO1	1990	09	18.24930	23	41	58.51	-03	41	58.3		3 809
1990	RO1	1990	09	18.26318	23	41	57.88	-03	42	04.1		3 809
1990	RO1	1990	09	21.07327	23	39	48.67	-04	01	00.9		3 809
1990	RO1	1990	09	21.08646	23	39	48.06	-04	01	06.3		3 809
1990	RO1	1990	09	21.09964	23	39	47.45	-04	01	11.6		3 809
1990	RO1	1990	09	22.24063	23	38	54.82	-04	08	48.7		3 809
1990	RO1	1990	09	22.25381	23	38	54.19	-04	08	54.0		3 809
1990	RO1	1990	09	22.26703	23	38	53.58	-04	08	59.3		3 809
1990	RO1	1990	09	23.05695	23	38	17.81	-04	14	13.6		3 809
1990	RO1	1990	09	23.06946	23	38	17.26	-04	14	18.3		3 809
1990	RO1	1990	09	23.08194	23	38	16.67	-04	14	23.2		3 809
1990	RO1	1990	09	24.05139	23	37	32.56	-04	20	46.4		3 809
1990	RO1	1990	09	24.06390	23	37	31.99	-04	20	51.5		3 809
1990	RO1	1990	09	24.07638	23	37	31.41	-04	20	56.5		3 809
1990	RQ2	1990	09	23.31457	00	00	23.23	+03	26	22.0	16.4	3 809
1990	RQ2	1990	09	23.32709	00	00	22.45	+03	26	20.6		3 809
1990	RQ2	1990	09	23.33957	00	00	21.68	+03	26	19.4		3 809
1990	RQ2	1990	09	24.31284	23	59	21.68	+03	24	38.0		3 809
1990	RQ2	1990	09	24.32535	23	59	20.91	+03	24	36.7		3 809
1990	RQ2	1990	09	24.33820	23	59	20.11	+03	24	35.3		3 809
1990	RQ2	1990	09	28.23959	23	55	19.22	+03	17	21.3		3 809
1990	RQ2	1990	09	28.24930	23	55	18.61	+03	17	20.2		3 809
1990	RQ2	1990	09	28.25903	23	55	18.01	+03	17	19.1		3 809
1990	RQ2	1990	09	29.11597	23	54	25.65	+03	15	39.4		3 809
1990	RQ2	1990	09	29.12570	23	54	25.04	+03	15	38.2		3 809
1990	RQ2	1990	09	29.13541	23	54	24.44	+03	15	37.0		3 809
1990	RQ2	1990	09	30.08298	23	53	26.65	+03	13	44.9		3 809
1990	RQ2	1990	09	30.09341	23	53	26.02	+03	13	43.4		3 809
1990	RQ2	1990	09	30.10382	23	53	25.38	+03	13	42.1		3 809
1990	RR2	1990	09	23.31457	00	02	57.66	+03	14	22.9	16.2	3 809
1990	RR2	1990	09	23.32709	00	02	57.09	+03	14	15.6		3 809
1990	RR2	1990	09	23.33957	00	02	56.50	+03	14	08.1		3 809
1990	RR2	1990	09	24.31284	00	02	12.29	+03	04	44.0		3 809
1990	RR2	1990	09	24.32535	00	02	11.69	+03	04	36.6		3 809

1990	RR2	1990	09	24.33820	00	02	11.11	+03	04	29.4		3 809
1990	RR2	1990	09	28.23959	23	59	15.01	+02	26	29.6		3 809
1990	RR2	1990	09	28.24930	23	59	14.57	+02	26	23.9		3 809
1990	RR2	1990	09	28.25903	23	59	14.13	+02	26	18.1		3 809
1990	RR2	1990	09	29.11597	23	58	36.27	+02	17	55.9		3 809
1990	RR2	1990	09	29.12570	23	58	35.84	+02	17	50.4		3 809
1990	RR2	1990	09	29.13541	23	58	35.42	+02	17	44.6		3 809
1990	RT2	1990	09	23.31457	00	06	38.13	+02	48	58.6	17.2	3 809
1990	RT2	1990	09	23.32709	00	06	37.34	+02	48	59.5		3 809
1990	RT2	1990	09	23.33957	00	06	36.56	+02	49	00.2		3 809
1990	RT2	1990	09	24.31284	00	05	36.00	+02	50	02.4		3 809
1990	RT2	1990	09	24.32535	00	05	35.21	+02	50	03.2		3 809
1990	RT2	1990	09	24.33820	00	05	34.40	+02	50	04.2		3 809
1990	RT2	1990	09	28.23959	00	01	31.78	+02	53	53.8		3 809
1990	RT2	1990	09	28.24930	00	01	31.18	+02	53	54.4		3 809
1990	RT2	1990	09	28.25903	00	01	30.57	+02	53	54.8		3 809
1990	RA3	1990	09	22.18506	23	40	26.01	-00	22	14.5	17.9	3 809
1990	RA3	1990	09	22.19827	23	40	25.37	-00	22	19.1		3 809
1990	RA3	1990	09	22.21146	23	40	24.74	-00	22	23.7		3 809
1990	RA3	1990	09	23.27362	23	39	33.19	-00	28	21.9		3 809
1990	RA3	1990	09	23.28610	23	39	32.59	-00	28	26.1		3 809
1990	RA3	1990	09	23.29862	23	39	31.99	-00	28	30.1		3 809
1990	RA3	1990	09	24.13055	23	38	51.82	-00	33	09.6		3 809
1990	RA3	1990	09	24.14307	23	38	51.22	-00	33	13.8		3 809
1990	RA3	1990	09	24.15555	23	38	50.61	-00	33	18.0		3 809
1990	RB3	1990	09	22.18506	23	43	21.20	-00	11	50.1	17.8	3 809
1990	RB3	1990	09	22.19827	23	43	20.75	-00	12	04.5		3 809
1990	RB3	1990	09	22.21146	23	43	20.30	-00	12	18.9		3 809
1990	RB3	1990	09	23.09583	23	42	50.00	-00	28	21.3		3 809
1990	RB3	1990	09	23.10834	23	42	49.58	-00	28	35.0		3 809
1990	RB3	1990	09	23.12082	23	42	49.15	-00	28	48.8		3 809
1990	RB3	1990	09	24.13055	23	42	14.51	-00	47	05.0		3 809
1990	RB3	1990	09	24.14307	23	42	14.09	-00	47	18.5		3 809
1990	RB3	1990	09	24.15555	23	42	13.66	-00	47	32.0		3 809
1990	RF3	1990	09	23.13681	23	41	02.30	-02	37	25.5	18.0	3 809
1990	RF3	1990	09	23.14929	23	41	01.57	-02	37	22.8		3 809
1990	RF3	1990	09	23.16180	23	41	00.86	-02	37	20.1		3 809
1990	RF3	1990	09	24.09097	23	40	04.74	-02	34	03.6		3 809
1990	RF3	1990	09	24.10349	23	40	04.01	-02	34	00.7		3 809
1990	RF3	1990	09	24.11597	23	40	03.25	-02	33	58.4		3 809
1990	RG3	1990	09	22.18506	23	44	47.42	-01	20	19.7	17.2	3 809
1990	RG3	1990	09	22.19827	23	44	46.82	-01	20	24.4		3 809
1990	RG3	1990	09	22.21146	23	44	46.22	-01	20	28.7		3 809
1990	RG3	1990	09	23.09583	23	44	05.68	-01	25	32.0		3 809
1990	RG3	1990	09	23.10834	23	44	05.10	-01	25	36.0		3 809
1990	RG3	1990	09	23.12082	23	44	04.53	-01	25	40.3		3 809
1990	RG3	1990	09	24.13055	23	43	18.20	-01	31	24.9		3 809
1990	RG3	1990	09	24.14307	23	43	17.63	-01	31	29.1		3 809
1990	RG3	1990	09	24.15555	23	43	17.06	-01	31	33.0		3 809
1990	RG3	1990	09	29.29376	23	39	26.24	-02	00	11.0		3 809
1990	RG3	1990	09	29.30347	23	39	25.81	-02	00	14.2		3 809
1990	RG3	1990	09	29.31320	23	39	25.38	-02	00	17.6		3 809
1990	RH3	1990	09	22.18506	23	46	28.54	-01	41	17.7	17.2	3 809
1990	RH3	1990	09	22.19827	23	46	28.01	-01	41	24.6		3 809
1990	RH3	1990	09	22.21146	23	46	27.48	-01	41	31.4		3 809
1990	RH3	1990	09	23.09583	23	45	51.55	-01	49	11.6		3 809
1990	RH3	1990	09	23.10834	23	45	51.01	-01	49	18.0		3 809
1990	RH3	1990	09	23.12082	23	45	50.51	-01	49	24.7		3 809
1990	RH3	1990	09	24.13055	23	45	09.50	-01	58	09.0		3 809

1990	RH3		1990	09	24.14307	23	45	08.98	-01	58	15.5	3 809
1990	RH3		1990	09	24.15555	23	45	08.47	-01	58	21.6	3 809
1990	RH3		1990	09	29.29376	23	41	44.47	-02	41	53.4	3 809
1990	RH3		1990	09	29.30347	23	41	44.11	-02	41	58.5	3 809
1990	RH3		1990	09	29.31320	23	41	43.73	-02	42	03.3	3 809
1990	RJ3		1990	09	22.18506	23	43	46.52	-00	29	28.5	16.7 3 809
1990	RJ3		1990	09	22.19827	23	43	45.69	-00	29	30.7	3 809
1990	RJ3		1990	09	22.21146	23	43	44.86	-00	29	32.7	3 809
1990	RJ3		1990	09	23.09583	23	42	48.90	-00	31	43.9	3 809
1990	RJ3		1990	09	23.10834	23	42	48.11	-00	31	45.8	3 809
1990	RJ3		1990	09	23.12082	23	42	47.32	-00	31	47.6	3 809
1990	RJ3		1990	09	24.13055	23	41	43.40	-00	34	15.4	3 809
1990	RJ3		1990	09	24.14307	23	41	42.61	-00	34	17.2	3 809
1990	RJ3		1990	09	24.15555	23	41	41.82	-00	34	18.8	3 809
1990	RM3		1990	09	22.18506	23	47	37.70	-00	35	49.1	17.6 3 809
1990	RM3		1990	09	22.19827	23	47	36.85	-00	35	51.8	3 809
1990	RM3		1990	09	22.21146	23	47	35.98	-00	35	54.2	3 809
1990	RM3		1990	09	23.09583	23	46	39.19	-00	38	40.1	3 809
1990	RM3		1990	09	23.10834	23	46	38.39	-00	38	42.3	3 809
1990	RM3		1990	09	23.12082	23	46	37.59	-00	38	44.7	3 809
1990	RM3		1990	09	24.13055	23	45	32.83	-00	41	52.6	3 809
1990	RM3		1990	09	24.14307	23	45	32.03	-00	41	55.0	3 809
1990	RM3		1990	09	24.15555	23	45	31.22	-00	41	57.3	3 809
1990	RM3		1990	09	29.29376	23	40	11.45	-00	57	18.0	3 809
1990	RM3		1990	09	29.30347	23	40	10.84	-00	57	19.8	3 809
1990	RM3		1990	09	29.31320	23	40	10.23	-00	57	21.4	3 809
1990	RA5		1990	09	24.26737	23	30	17.49	-00	09	27.5	17.7 3 809
1990	RA5		1990	09	24.27985	23	30	16.96	-00	09	35.8	3 809
1990	RA5		1990	09	24.29236	23	30	16.43	-00	09	44.2	3 809
1990	RA5		1990	09	25.16876	23	29	39.06	-00	19	39.9	3 809
1990	RA5		1990	09	25.18124	23	29	38.54	-00	19	48.1	3 809
1990	RA5		1990	09	25.19376	23	29	38.01	-00	19	56.5	3 809
1990	RV5	*	1990	09	08.99480	22	10	50.88	-12	24	06.3	17.4 3 809
1990	RV5		1990	09	09.00937	22	10	50.15	-12	24	07.3	3 809
1990	RV5		1990	09	09.02396	22	10	49.38	-12	24	08.4	3 809
1990	RV5		1990	09	09.99271	22	09	58.80	-12	25	22.0	3 809
1990	RV5		1990	09	10.00729	22	09	58.04	-12	25	23.0	3 809
1990	RV5		1990	09	10.02188	22	09	57.28	-12	25	24.0	3 809
1990	RV5		1990	09	12.01944	22	08	16.94	-12	27	34.7	3 809
1990	RV5		1990	09	12.03195	22	08	16.32	-12	27	35.5	3 809
1990	RV5		1990	09	12.04445	22	08	15.68	-12	27	36.3	3 809
1990	RV5		1990	09	14.99792	22	05	57.59	-12	29	55.0	3 809
1990	RV5		1990	09	15.01181	22	05	56.94	-12	29	55.7	3 809
1990	RV5		1990	09	15.02570	22	05	56.28	-12	29	56.3	3 809
1990	RW5	*	1990	09	08.99480	22	13	17.78	-11	27	01.7	17.2 3 809
1990	RW5		1990	09	09.00937	22	13	17.17	-11	27	06.3	3 809
1990	RW5		1990	09	09.02396	22	13	16.54	-11	27	11.2	3 809
1990	RW5		1990	09	09.99271	22	12	34.43	-11	32	39.9	3 809
1990	RW5		1990	09	10.00729	22	12	33.80	-11	32	44.8	3 809
1990	RW5		1990	09	10.02188	22	12	33.17	-11	32	49.8	3 809
1990	RW5		1990	09	14.99792	22	09	14.33	-11	58	50.5	3 809
1990	RW5		1990	09	15.01181	22	09	13.76	-11	58	55.0	3 809
1990	RW5		1990	09	15.02570	22	09	13.21	-11	58	59.3	3 809
1990	RW5		1990	09	15.99792	22	08	38.29	-12	03	37.3	3 809
1990	RW5		1990	09	16.01215	22	08	37.76	-12	03	41.6	3 809
1990	RW5		1990	09	16.02640	22	08	37.25	-12	03	45.5	3 809
1990	RX5	*	1990	09	08.99480	22	13	45.38	-11	33	24.5	17.2 3 809
1990	RX5		1990	09	09.00937	22	13	44.79	-11	33	27.7	3 809
1990	RX5		1990	09	09.02396	22	13	44.21	-11	33	30.7	3 809

1990	RX5		1990	09	09.99271	22	13	05.15	-11	37	04.3	3 809
1990	RX5		1990	09	10.00729	22	13	04.58	-11	37	07.5	3 809
1990	RX5		1990	09	10.02188	22	13	04.01	-11	37	10.6	3 809
1990	RX5		1990	09	12.01944	22	11	44.75	-11	44	19.8	3 809
1990	RX5		1990	09	12.03195	22	11	44.26	-11	44	22.5	3 809
1990	RX5		1990	09	12.04445	22	11	43.79	-11	44	25.2	3 809
1990	RX5		1990	09	14.99792	22	09	51.17	-11	54	31.2	3 809
1990	RX5		1990	09	15.01181	22	09	50.64	-11	54	34.2	3 809
1990	RX5		1990	09	15.02570	22	09	50.11	-11	54	37.2	3 809
1990	RX5		1990	09	15.99792	22	09	14.22	-11	57	47.7	3 809
1990	RX5		1990	09	16.01215	22	09	13.69	-11	57	50.4	3 809
1990	RX5		1990	09	16.02640	22	09	13.14	-11	57	53.3	3 809
1990	RY5	*	1990	09	08.99480	22	14	08.53	-12	55	36.0	17.8 3 809
1990	RY5		1990	09	09.00937	22	14	07.76	-12	55	38.9	3 809
1990	RY5		1990	09	09.02396	22	14	07.01	-12	55	41.6	3 809
1990	RY5		1990	09	09.99271	22	13	16.23	-12	58	55.8	3 809
1990	RY5		1990	09	10.00729	22	13	15.47	-12	58	58.8	3 809
1990	RY5		1990	09	10.02188	22	13	14.70	-12	59	01.7	3 809
1990	RY5		1990	09	14.99792	22	09	04.14	-13	14	23.9	3 809
1990	RY5		1990	09	15.01181	22	09	03.46	-13	14	26.4	3 809
1990	RY5		1990	09	15.02570	22	09	02.78	-13	14	28.6	3 809
1990	RY5		1990	09	15.99792	22	08	16.18	-13	17	12.6	3 809
1990	RY5		1990	09	16.01215	22	08	15.51	-13	17	15.1	3 809
1990	RY5		1990	09	16.02640	22	08	14.84	-13	17	17.5	3 809
1990	RZ5	*	1990	09	08.99480	22	16	17.59	-11	46	34.7	17.0 3 809
1990	RZ5		1990	09	09.00937	22	16	16.88	-11	46	37.0	3 809
1990	RZ5		1990	09	09.02396	22	16	16.16	-11	46	39.3	3 809
1990	RZ5		1990	09	09.99271	22	15	28.81	-11	49	13.8	3 809
1990	RZ5		1990	09	10.00729	22	15	28.10	-11	49	15.9	3 809
1990	RZ5		1990	09	10.02188	22	15	27.39	-11	49	18.3	3 809
1990	RZ5		1990	09	12.01944	22	13	51.69	-11	54	22.5	3 809
1990	RZ5		1990	09	12.03195	22	13	51.09	-11	54	24.6	3 809
1990	RZ5		1990	09	12.04445	22	13	50.51	-11	54	26.3	3 809
1990	RZ5		1990	09	14.99792	22	11	35.12	-12	01	19.8	3 809
1990	RZ5		1990	09	15.01181	22	11	34.50	-12	01	21.8	3 809
1990	RZ5		1990	09	15.02570	22	11	33.85	-12	01	23.4	3 809
1990	RZ5		1990	09	15.99792	22	10	50.99	-12	03	27.4	3 809
1990	RZ5		1990	09	16.01215	22	10	50.37	-12	03	29.2	3 809
1990	RZ5		1990	09	16.02640	22	10	49.75	-12	03	31.0	3 809
1990	RA6	*	1990	09	08.99480	22	16	27.39	-12	08	55.2	17.4 3 809
1990	RA6		1990	09	09.00937	22	16	26.70	-12	08	57.7	3 809
1990	RA6		1990	09	09.02396	22	16	26.01	-12	09	00.2	3 809
1990	RA6		1990	09	09.99271	22	15	39.58	-12	11	47.4	3 809
1990	RA6		1990	09	10.00729	22	15	38.88	-12	11	49.9	3 809
1990	RA6		1990	09	10.02188	22	15	38.19	-12	11	52.5	3 809
1990	RA6		1990	09	12.01944	22	14	04.22	-12	17	25.4	3 809
1990	RA6		1990	09	12.03195	22	14	03.63	-12	17	27.5	3 809
1990	RA6		1990	09	12.04445	22	14	03.05	-12	17	29.6	3 809
1990	RA6		1990	09	14.99792	22	11	49.87	-12	25	05.6	3 809
1990	RA6		1990	09	15.01181	22	11	49.24	-12	25	07.8	3 809
1990	RA6		1990	09	15.02570	22	11	48.62	-12	25	10.0	3 809
1990	RA6		1990	09	15.99792	22	11	06.42	-12	27	30.2	3 809
1990	RA6		1990	09	16.01215	22	11	05.80	-12	27	32.2	3 809
1990	RA6		1990	09	16.02640	22	11	05.17	-12	27	34.4	3 809
1990	RB6	*	1990	09	08.99480	22	16	56.71	-13	15	05.3	17.5 3 809
1990	RB6		1990	09	09.00937	22	16	55.90	-13	15	06.9	3 809
1990	RB6		1990	09	09.02396	22	16	55.08	-13	15	08.3	3 809
1990	RB6		1990	09	09.99271	22	16	00.67	-13	16	52.2	3 809
1990	RB6		1990	09	10.00729	22	15	59.85	-13	16	53.8	3 809

1990	RB6		1990	09	10.02188	22	15	59.03	-13	16	55.1		3 809
1990	RB6		1990	09	12.01944	22	14	09.97	-13	20	11.9		3 809
1990	RB6		1990	09	12.03195	22	14	09.28	-13	20	13.2		3 809
1990	RB6		1990	09	12.04445	22	14	08.59	-13	20	14.3		3 809
1990	RB6		1990	09	14.99792	22	11	34.73	-13	24	12.6		3 809
1990	RB6		1990	09	15.01181	22	11	34.01	-13	24	13.4		3 809
1990	RB6		1990	09	15.02570	22	11	33.30	-13	24	14.6		3 809
1990	RB6		1990	09	15.99792	22	10	45.04	-13	25	19.5		3 809
1990	RB6		1990	09	16.01215	22	10	44.33	-13	25	20.4		3 809
1990	RB6		1990	09	16.02640	22	10	43.63	-13	25	21.4		3 809
1990	RC6	*	1990	09	08.99480	22	17	14.80	-12	21	52.9	17.5	3 809
1990	RC6		1990	09	09.00937	22	17	14.15	-12	22	01.1		3 809
1990	RC6		1990	09	09.02396	22	17	13.48	-12	22	09.2		3 809
1990	RC6		1990	09	09.99271	22	16	29.74	-12	31	13.8		3 809
1990	RC6		1990	09	10.00729	22	16	29.07	-12	31	22.1		3 809
1990	RC6		1990	09	10.02188	22	16	28.42	-12	31	30.4		3 809
1990	RC6		1990	09	12.01944	22	15	00.41	-12	49	53.6		3 809
1990	RC6		1990	09	12.03195	22	14	59.84	-12	50	00.4		3 809
1990	RC6		1990	09	12.04445	22	14	59.28	-12	50	07.5		3 809
1990	RC6		1990	09	14.99792	22	12	55.67	-13	16	18.2		3 809
1990	RC6		1990	09	15.01181	22	12	55.08	-13	16	25.6		3 809
1990	RC6		1990	09	15.02570	22	12	54.51	-13	16	33.0		3 809
1990	RC6		1990	09	15.99792	22	12	15.75	-13	24	52.5		3 809
1990	RC6		1990	09	16.01215	22	12	15.15	-13	24	59.9		3 809
1990	RC6		1990	09	16.02640	22	12	14.60	-13	25	07.4		3 809
1990	RD6	*	1990	09	08.99480	22	18	27.82	-12	36	26.5	17.1	3 809
1990	RD6		1990	09	09.00937	22	18	26.97	-12	36	24.2		3 809
1990	RD6		1990	09	09.02396	22	18	26.12	-12	36	22.1		3 809
1990	RD6		1990	09	09.99271	22	17	30.18	-12	33	50.2		3 809
1990	RD6		1990	09	10.00729	22	17	29.35	-12	33	48.2		3 809
1990	RD6		1990	09	10.02188	22	17	28.51	-12	33	46.3		3 809
1990	RD6		1990	09	12.01944	22	15	36.24	-12	28	23.8		3 809
1990	RD6		1990	09	12.03195	22	15	35.55	-12	28	21.7		3 809
1990	RD6		1990	09	12.04445	22	15	34.87	-12	28	19.6		3 809
1990	RD6		1990	09	14.99792	22	12	58.10	-12	19	43.3		3 809
1990	RD6		1990	09	15.01181	22	12	57.36	-12	19	40.9		3 809
1990	RD6		1990	09	15.02570	22	12	56.61	-12	19	38.4		3 809
1990	RD6		1990	09	15.99792	22	12	07.62	-12	16	38.0		3 809
1990	RD6		1990	09	16.01215	22	12	06.91	-12	16	35.4		3 809
1990	RD6		1990	09	16.02640	22	12	06.19	-12	16	32.8		3 809
1990	RE6	*	1990	09	09.03889	22	15	40.62	-10	28	38.8	16.7	3 809
1990	RE6		1990	09	09.05139	22	15	40.01	-10	28	43.6		3 809
1990	RE6		1990	09	09.06389	22	15	39.40	-10	28	48.3		3 809
1990	RE6		1990	09	10.03889	22	14	51.41	-10	34	57.7		3 809
1990	RE6		1990	09	10.05139	22	14	50.80	-10	35	02.4		3 809
1990	RE6		1990	09	10.06389	22	14	50.19	-10	35	07.1		3 809
1990	RE6		1990	09	10.99548	22	14	05.17	-10	40	52.9		3 809
1990	RE6		1990	09	11.01007	22	14	04.46	-10	40	58.3		3 809
1990	RE6		1990	09	11.02466	22	14	03.76	-10	41	03.8		3 809
1990	RE6		1990	09	17.99792	22	08	54.76	-11	21	03.0		3 809
1990	RE6		1990	09	18.01181	22	08	54.16	-11	21	07.7		3 809
1990	RE6		1990	09	18.02570	22	08	53.55	-11	21	12.1		3 809
1990	RF6	*	1990	09	09.03889	22	16	09.25	-09	34	32.5	17.4	3 809
1990	RF6		1990	09	09.05139	22	16	08.72	-09	34	37.3		3 809
1990	RF6		1990	09	09.06389	22	16	08.19	-09	34	42.2		3 809
1990	RF6		1990	09	10.03889	22	15	27.53	-09	40	58.9		3 809
1990	RF6		1990	09	10.05139	22	15	26.98	-09	41	03.7		3 809
1990	RF6		1990	09	10.06389	22	15	26.46	-09	41	08.6		3 809
1990	RF6		1990	09	10.99548	22	14	48.12	-09	47	04.1		3 809

1990	RF6		1990	09	11.01007	22	14	47.53	-09	47	09.9	3 809
1990	RF6		1990	09	11.02466	22	14	46.91	-09	47	15.3	3 809
1990	RG6	*	1990	09	09.03889	22	16	42.63	-10	15	47.5	17.5 3 809
1990	RG6		1990	09	09.05139	22	16	42.11	-10	15	52.5	3 809
1990	RG6		1990	09	09.06389	22	16	41.58	-10	15	57.5	3 809
1990	RG6		1990	09	10.03889	22	16	00.79	-10	22	35.5	3 809
1990	RG6		1990	09	10.05139	22	16	00.27	-10	22	40.7	3 809
1990	RG6		1990	09	10.06389	22	15	59.73	-10	22	45.7	3 809
1990	RG6		1990	09	10.99548	22	15	21.95	-10	28	57.4	3 809
1990	RG6		1990	09	11.01007	22	15	21.35	-10	29	03.3	3 809
1990	RG6		1990	09	11.02466	22	15	20.75	-10	29	09.2	3 809
1990	RH6	*	1990	09	09.11528	22	32	24.54	-08	27	44.7	16.6 3 809
1990	RH6		1990	09	09.12500	22	32	24.05	-08	27	47.1	3 809
1990	RH6		1990	09	10.11667	22	31	34.91	-08	31	23.9	3 809
1990	RH6		1990	09	10.12778	22	31	34.35	-08	31	26.2	3 809
1990	RH6		1990	09	10.13889	22	31	33.79	-08	31	28.5	3 809
1990	RH6		1990	09	11.08784	22	30	47.53	-08	34	52.5	3 809
1990	RH6		1990	09	11.10243	22	30	46.81	-08	34	55.7	3 809
1990	RH6		1990	09	11.11702	22	30	46.11	-08	34	59.2	3 809
1990	RJ6	*	1990	09	09.11528	22	34	38.14	-08	04	11.2	17.3 3 809
1990	RJ6		1990	09	09.12500	22	34	37.76	-08	04	15.1	3 809
1990	RJ6		1990	09	10.11667	22	33	57.13	-08	10	49.8	3 809
1990	RJ6		1990	09	10.12778	22	33	56.68	-08	10	54.3	3 809
1990	RJ6		1990	09	10.13889	22	33	56.22	-08	10	58.4	3 809
1990	RJ6		1990	09	11.08784	22	33	17.91	-08	17	13.0	3 809
1990	RJ6		1990	09	11.10243	22	33	17.31	-08	17	18.7	3 809
1990	RJ6		1990	09	11.11702	22	33	16.73	-08	17	24.3	3 809
1990	RK6	*	1990	09	10.03889	22	11	20.54	-09	41	50.9	17.7 3 809
1990	RK6		1990	09	10.05139	22	11	20.02	-09	41	53.9	3 809
1990	RK6		1990	09	10.06389	22	11	19.50	-09	41	57.4	3 809
1990	RK6		1990	09	10.99548	22	10	40.79	-09	46	03.8	3 809
1990	RK6		1990	09	11.01007	22	10	40.16	-09	46	07.7	3 809
1990	RK6		1990	09	11.02466	22	10	39.53	-09	46	11.6	3 809
1990	RL6	*	1990	09	10.03889	22	11	22.01	-09	42	56.1	17.5 3 809
1990	RL6		1990	09	10.05139	22	11	21.48	-09	42	59.4	3 809
1990	RL6		1990	09	10.06389	22	11	20.98	-09	43	02.8	3 809
1990	RL6		1990	09	10.99548	22	10	42.85	-09	47	06.6	3 809
1990	RL6		1990	09	11.01007	22	10	42.25	-09	47	10.5	3 809
1990	RL6		1990	09	11.02466	22	10	41.65	-09	47	14.4	3 809
1990	RM6	*	1990	09	10.11667	22	30	53.38	-07	29	03.9	17.6 3 809
1990	RM6		1990	09	10.12778	22	30	52.82	-07	29	09.2	3 809
1990	RM6		1990	09	10.13889	22	30	52.25	-07	29	14.0	3 809
1990	RM6		1990	09	11.08784	22	30	03.79	-07	36	14.1	3 809
1990	RM6		1990	09	11.10243	22	30	03.05	-07	36	20.4	3 809
1990	RM6		1990	09	11.11702	22	30	02.31	-07	36	27.0	3 809
1990	RN6	*	1990	09	10.11667	22	35	27.35	-06	53	13.2	17.3 3 809
1990	RN6		1990	09	10.12778	22	35	26.92	-06	53	19.1	3 809
1990	RN6		1990	09	10.13889	22	35	26.50	-06	53	24.9	3 809
1990	RN6		1990	09	11.08784	22	34	50.03	-07	01	39.7	3 809
1990	RN6		1990	09	11.10243	22	34	49.46	-07	01	47.3	3 809
1990	RN6		1990	09	11.11702	22	34	48.90	-07	01	54.9	3 809
1990	RO6	*	1990	09	10.15312	22	43	33.23	-08	45	49.5	17.6 3 809
1990	RO6		1990	09	10.16771	22	43	32.55	-08	45	52.9	3 809
1990	RO6		1990	09	10.18230	22	43	31.88	-08	45	56.5	3 809
1990	RO6		1990	09	11.13298	22	42	47.67	-08	49	44.8	3 809
1990	RO6		1990	09	11.14757	22	42	46.97	-08	49	48.2	3 809
1990	RO6		1990	09	11.16216	22	42	46.29	-08	49	51.6	3 809
1990	RO6		1990	09	12.05902	22	42	04.80	-08	53	20.5	3 809
1990	RO6		1990	09	12.07153	22	42	04.25	-08	53	23.3	3 809

1990	RO6		1990	09	12.08403	22	42	03.67	-08	53	26.3	3 809
1990	RO6		1990	09	13.04376	22	41	19.80	-08	57	08.2	3 809
1990	RO6		1990	09	13.05624	22	41	19.22	-08	57	10.9	3 809
1990	RO6		1990	09	13.06876	22	41	18.63	-08	57	14.1	3 809
1990	RP6	*	1990	09	11.13298	22	37	25.24	-10	09	34.2	17.8 3 809
1990	RP6		1990	09	11.14757	22	37	24.53	-10	09	45.5	3 809
1990	RP6		1990	09	11.16216	22	37	23.81	-10	09	56.5	3 809
1990	RP6		1990	09	15.04166	22	34	14.48	-10	59	45.4	3 809
1990	RP6		1990	09	15.05554	22	34	13.81	-10	59	56.1	3 809
1990	RP6		1990	09	15.06946	22	34	13.13	-11	00	06.8	3 809
1990	RQ6	*	1990	09	11.17882	22	47	43.20	-08	02	35.8	17.7 3 809
1990	RQ6		1990	09	11.19341	22	47	42.57	-08	02	39.9	3 809
1990	RQ6		1990	09	11.20799	22	47	41.95	-08	02	43.9	3 809
1990	RQ6		1990	09	12.09792	22	47	04.31	-08	06	51.6	3 809
1990	RQ6		1990	09	12.11041	22	47	03.79	-08	06	55.2	3 809
1990	RQ6		1990	09	12.12291	22	47	03.26	-08	06	58.7	3 809
1990	RQ6		1990	09	13.04376	22	46	24.33	-08	11	13.7	3 809
1990	RQ6		1990	09	13.05624	22	46	23.81	-08	11	17.2	3 809
1990	RQ6		1990	09	13.06876	22	46	23.25	-08	11	20.7	3 809
1990	RR6	*	1990	09	11.17882	22	50	44.47	-08	38	05.5	17.3 3 809
1990	RR6		1990	09	11.19341	22	50	43.81	-08	38	14.2	3 809
1990	RR6		1990	09	11.20799	22	50	43.16	-08	38	22.9	3 809
1990	RR6		1990	09	12.09792	22	50	02.96	-08	47	07.8	3 809
1990	RR6		1990	09	12.11041	22	50	02.40	-08	47	14.8	3 809
1990	RR6		1990	09	12.12291	22	50	01.81	-08	47	22.1	3 809
1990	RS6	*	1990	09	11.17882	22	52	20.92	-08	05	11.1	18.0 3 809
1990	RS6		1990	09	11.19341	22	52	20.07	-08	05	13.8	3 809
1990	RS6		1990	09	11.20799	22	52	19.21	-08	05	16.5	3 809
1990	RS6		1990	09	12.09792	22	51	27.08	-08	08	02.3	3 809
1990	RS6		1990	09	12.11041	22	51	26.35	-08	08	04.9	3 809
1990	RS6		1990	09	12.12291	22	51	25.62	-08	08	07.3	3 809
1990	RS6		1990	09	13.09515	22	50	28.56	-08	11	07.7	3 809
1990	RS6		1990	09	13.10763	22	50	27.83	-08	11	09.8	3 809
1990	RS6		1990	09	13.12015	22	50	27.10	-08	11	11.9	3 809
1990	RS6		1990	09	14.04654	22	49	33.70	-08	13	58.8	3 809
1990	RS6		1990	09	14.06042	22	49	32.91	-08	14	01.0	3 809
1990	RS6		1990	09	14.07431	22	49	32.11	-08	14	03.4	3 809
1990	RT6	*	1990	09	11.23611	22	52	15.19	-07	28	42.1	17.0 3 809
1990	RT6		1990	09	11.24583	22	52	14.78	-07	28	44.9	3 809
1990	RT6		1990	09	11.25555	22	52	14.36	-07	28	47.6	3 809
1990	RT6		1990	09	12.13681	22	51	36.99	-07	32	57.8	3 809
1990	RT6		1990	09	12.14931	22	51	36.46	-07	33	01.2	3 809
1990	RT6		1990	09	12.16180	22	51	35.92	-07	33	04.8	3 809
1990	RT6		1990	09	13.09515	22	50	56.69	-07	37	29.8	3 809
1990	RT6		1990	09	13.10763	22	50	56.16	-07	37	33.2	3 809
1990	RT6		1990	09	13.12015	22	50	55.64	-07	37	36.7	3 809
1990	RT6		1990	09	14.04654	22	50	16.93	-07	41	56.9	3 809
1990	RT6		1990	09	14.06042	22	50	16.36	-07	42	00.9	3 809
1990	RT6		1990	09	14.07431	22	50	15.78	-07	42	04.8	3 809
1990	RU6	*	1990	09	12.99757	22	33	07.00	-09	42	58.6	17.4 3 809
1990	RU6		1990	09	13.01215	22	33	06.38	-09	43	07.4	3 809
1990	RU6		1990	09	13.02673	22	33	05.77	-09	43	16.3	3 809
1990	RU6		1990	09	13.99860	22	32	24.84	-09	53	07.0	3 809
1990	RU6		1990	09	14.01251	22	32	24.25	-09	53	15.7	3 809
1990	RU6		1990	09	14.02640	22	32	23.65	-09	53	24.0	3 809
1990	RV6	*	1990	09	13.09515	22	52	22.51	-07	56	20.3	17.4 3 809
1990	RV6		1990	09	13.10763	22	52	21.90	-07	56	21.9	3 809
1990	RV6		1990	09	13.12015	22	52	21.28	-07	56	23.5	3 809
1990	RV6		1990	09	14.04654	22	51	35.55	-07	58	25.9	3 809

1990	RV6		1990	09	14.06042	22	51	34.85	-07	58	27.8	3 809
1990	RV6		1990	09	14.07431	22	51	34.18	-07	58	29.5	3 809
1990	RW6	*	1990	09	13.09515	22	54	14.26	-07	46	18.3	17.5 3 809
1990	RW6		1990	09	13.10763	22	54	13.67	-07	46	21.6	3 809
1990	RW6		1990	09	13.12015	22	54	13.07	-07	46	24.8	3 809
1990	RW6		1990	09	14.04654	22	53	28.99	-07	50	22.9	3 809
1990	RW6		1990	09	14.06042	22	53	28.34	-07	50	26.2	3 809
1990	RW6		1990	09	14.07431	22	53	27.68	-07	50	29.7	3 809
1990	RX6	*	1990	09	13.13474	22	55	52.17	-06	05	41.4	17.3 3 809
1990	RX6		1990	09	13.14862	22	55	51.53	-06	05	46.3	3 809
1990	RX6		1990	09	13.16251	22	55	50.87	-06	05	51.5	3 809
1990	RX6		1990	09	14.14166	22	55	05.35	-06	11	36.2	3 809
1990	RX6		1990	09	14.15555	22	55	04.70	-06	11	41.1	3 809
1990	RX6		1990	09	14.16943	22	55	04.04	-06	11	45.9	3 809
1990	RX6		1990	09	15.13055	22	54	19.90	-06	17	21.7	3 809
1990	RX6		1990	09	15.14444	22	54	19.26	-06	17	26.5	3 809
1990	RX6		1990	09	15.15833	22	54	18.62	-06	17	31.4	3 809
1990	RY6		1990	08	20.23194	23	17	06.86	-04	47	16.2	18.7 4 809
1990	RY6		1990	08	20.24514	23	17	06.22	-04	47	19.5	4 809
1990	RY6		1990	08	20.25833	23	17	05.63	-04	47	22.0	4 809
1990	RY6		1990	08	26.20347	23	12	25.02	-05	15	09.8	18.8 4 809
1990	RY6		1990	08	26.21667	23	12	24.30	-05	15	13.4	4 809
1990	RY6		1990	08	26.22986	23	12	23.59	-05	15	17.0	4 809
1990	RY6	*	1990	09	13.13474	22	56	26.73	-06	48	48.8	17.6 3 809
1990	RY6		1990	09	13.14862	22	56	25.99	-06	48	53.2	3 809
1990	RY6		1990	09	13.16251	22	56	25.26	-06	48	57.4	3 809
1990	RY6		1990	09	14.14166	22	55	33.88	-06	53	54.1	3 809
1990	RY6		1990	09	14.15555	22	55	33.16	-06	53	58.3	3 809
1990	RY6		1990	09	14.16943	22	55	32.43	-06	54	02.6	3 809
1990	RY6		1990	09	15.13055	22	54	42.61	-06	58	50.8	3 809
1990	RY6		1990	09	15.14444	22	54	41.89	-06	58	54.9	3 809
1990	RY6		1990	09	15.15833	22	54	41.18	-06	58	59.0	3 809
1990	RZ6	*	1990	09	13.13474	22	56	36.04	-06	49	30.6	17.4 3 809
1990	RZ6		1990	09	13.14862	22	56	35.45	-06	49	34.3	3 809
1990	RZ6		1990	09	13.16251	22	56	34.87	-06	49	38.3	3 809
1990	RZ6		1990	09	14.14166	22	55	53.44	-06	54	15.5	3 809
1990	RZ6		1990	09	14.15555	22	55	52.85	-06	54	19.4	3 809
1990	RZ6		1990	09	14.16943	22	55	52.26	-06	54	23.4	3 809
1990	RZ6		1990	09	15.13055	22	55	11.79	-06	58	55.2	3 809
1990	RZ6		1990	09	15.14444	22	55	11.20	-06	58	59.1	3 809
1990	RZ6		1990	09	15.15833	22	55	10.61	-06	59	03.1	3 809
1990	RZ6		1990	09	16.25485	22	54	24.60	-07	04	09.8	3 809
1990	RZ6		1990	09	16.26737	22	54	24.07	-07	04	13.1	3 809
1990	RZ6		1990	09	16.27985	22	54	23.53	-07	04	16.7	3 809
1990	RA7	*	1990	09	13.13474	22	59	19.73	-07	06	55.5	17.6 3 809
1990	RA7		1990	09	13.14862	22	59	19.03	-07	07	03.3	3 809
1990	RA7		1990	09	13.16251	22	59	18.32	-07	07	11.2	3 809
1990	RA7		1990	09	13.22708	22	59	14.97	-07	07	47.8	3 809
1990	RA7		1990	09	13.24097	22	59	14.25	-07	07	55.8	3 809
1990	RA7		1990	09	13.25485	22	59	13.53	-07	08	03.4	3 809
1990	RA7		1990	09	14.14166	22	58	27.53	-07	16	23.6	3 809
1990	RA7		1990	09	14.15555	22	58	26.82	-07	16	31.4	3 809
1990	RA7		1990	09	14.16943	22	58	26.10	-07	16	39.0	3 809
1990	RA7		1990	09	15.13055	22	57	36.40	-07	25	40.6	3 809
1990	RA7		1990	09	15.14444	22	57	35.69	-07	25	48.6	3 809
1990	RA7		1990	09	15.15833	22	57	34.98	-07	25	56.4	3 809
1990	RA7		1990	09	16.25485	22	56	38.71	-07	36	03.7	3 809
1990	RA7		1990	09	16.26737	22	56	38.04	-07	36	10.9	3 809
1990	RA7		1990	09	16.27985	22	56	37.38	-07	36	17.9	3 809

1990	RB7	*	1990	09	13.17776	22	59	15.23	-08	59	41.4	17.8	3	809
1990	RB7		1990	09	13.19168	22	59	14.62	-08	59	47.7		3	809
1990	RB7		1990	09	13.20557	22	59	14.00	-08	59	54.3		3	809
1990	RB7		1990	09	14.24792	22	58	27.83	-09	07	58.0		3	809
1990	RB7		1990	09	14.26181	22	58	27.20	-09	08	04.4		3	809
1990	RB7		1990	09	14.27570	22	58	26.60	-09	08	10.9		3	809
1990	RB7		1990	09	15.08542	22	57	51.67	-09	14	23.6		3	809
1990	RB7		1990	09	15.09930	22	57	51.07	-09	14	29.7		3	809
1990	RB7		1990	09	15.11319	22	57	50.47	-09	14	36.1		3	809
1990	RC7	*	1990	09	13.17776	22	59	41.20	-09	06	10.6	17.9	3	809
1990	RC7		1990	09	13.19168	22	59	40.63	-09	06	16.5		3	809
1990	RC7		1990	09	13.20557	22	59	40.07	-09	06	22.5		3	809
1990	RC7		1990	09	14.24792	22	58	57.51	-09	13	34.1		3	809
1990	RC7		1990	09	14.26181	22	58	56.95	-09	13	39.9		3	809
1990	RC7		1990	09	14.27570	22	58	56.38	-09	13	45.8		3	809
1990	RC7		1990	09	15.08542	22	58	24.14	-09	19	06.3		3	809
1990	RC7		1990	09	15.09930	22	58	23.59	-09	19	11.8		3	809
1990	RC7		1990	09	15.11319	22	58	23.02	-09	19	17.5		3	809
1990	RD7	*	1990	09	13.17776	23	02	13.99	-09	36	57.6	17.8	3	809
1990	RD7		1990	09	13.19168	23	02	13.26	-09	37	02.2		3	809
1990	RD7		1990	09	13.20557	23	02	12.52	-09	37	06.8		3	809
1990	RD7		1990	09	14.24792	23	01	17.43	-09	42	48.8		3	809
1990	RD7		1990	09	14.26181	23	01	16.70	-09	42	53.4		3	809
1990	RD7		1990	09	14.27570	23	01	15.94	-09	42	58.0		3	809
1990	RE7	*	1990	09	13.17776	23	02	58.73	-10	01	22.4	17.5	3	809
1990	RE7		1990	09	13.19168	23	02	58.00	-10	01	23.8		3	809
1990	RE7		1990	09	13.20557	23	02	57.27	-10	01	25.1		3	809
1990	RE7		1990	09	14.24792	23	02	02.38	-10	03	07.7		3	809
1990	RE7		1990	09	14.26181	23	02	01.65	-10	03	09.1		3	809
1990	RE7		1990	09	14.27570	23	02	00.92	-10	03	10.4		3	809
1990	RF7	*	1990	09	13.17776	23	04	44.71	-09	16	07.8	17.8	3	809
1990	RF7		1990	09	13.19168	23	04	44.09	-09	16	12.0		3	809
1990	RF7		1990	09	13.20557	23	04	43.46	-09	16	16.2		3	809
1990	RF7		1990	09	14.24792	23	03	57.54	-09	21	24.2		3	809
1990	RF7		1990	09	14.26181	23	03	56.93	-09	21	28.3		3	809
1990	RF7		1990	09	14.27570	23	03	56.32	-09	21	32.1		3	809
1990	RG7	*	1990	09	13.17776	23	04	59.63	-10	16	40.1	17.4	3	809
1990	RG7		1990	09	13.19168	23	04	59.07	-10	16	50.7		3	809
1990	RG7		1990	09	13.20557	23	04	58.53	-10	17	01.0		3	809
1990	RG7		1990	09	14.24792	23	04	18.23	-10	30	14.1		3	809
1990	RG7		1990	09	14.26181	23	04	17.70	-10	30	24.6		3	809
1990	RG7		1990	09	14.27570	23	04	17.14	-10	30	35.2		3	809
1990	RH7	*	1990	09	13.17776	23	05	11.53	-09	52	40.0	17.6	3	809
1990	RH7		1990	09	13.19168	23	05	10.91	-09	52	43.8		3	809
1990	RH7		1990	09	13.20557	23	05	10.28	-09	52	47.4		3	809
1990	RH7		1990	09	14.24792	23	04	23.34	-09	57	28.6		3	809
1990	RH7		1990	09	14.26181	23	04	22.70	-09	57	32.4		3	809
1990	RH7		1990	09	14.27570	23	04	22.09	-09	57	35.9		3	809
1990	RJ7	*	1990	09	13.17776	23	05	13.67	-09	14	40.6	18.0	3	809
1990	RJ7		1990	09	13.19168	23	05	12.85	-09	14	43.5		3	809
1990	RJ7		1990	09	13.20557	23	05	12.03	-09	14	46.1		3	809
1990	RJ7		1990	09	14.24792	23	04	10.85	-09	18	08.8		3	809
1990	RJ7		1990	09	14.26181	23	04	10.03	-09	18	11.3		3	809
1990	RJ7		1990	09	14.27570	23	04	09.21	-09	18	14.0		3	809
1990	RK7	*	1990	09	13.17776	23	05	15.37	-08	51	13.1	18.0	3	809
1990	RK7		1990	09	13.19168	23	05	14.70	-08	51	17.1		3	809
1990	RK7		1990	09	13.20557	23	05	14.04	-08	51	21.3		3	809
1990	RK7		1990	09	14.24792	23	04	24.24	-08	56	42.8		3	809
1990	RK7		1990	09	14.26181	23	04	23.57	-08	56	47.3		3	809

1990	RK7		1990	09	14.27570	23	04	22.91	-08	56	51.4	3 809
1990	RL7	*	1990	09	13.22708	23	03	24.02	-06	57	04.8	17.7 3 809
1990	RL7		1990	09	13.24097	23	03	23.20	-06	57	08.3	3 809
1990	RL7		1990	09	13.25485	23	03	22.37	-06	57	11.9	3 809
1990	RL7		1990	09	14.18542	23	02	27.26	-07	01	09.5	3 809
1990	RL7		1990	09	14.19931	23	02	26.44	-07	01	13.4	3 809
1990	RL7		1990	09	14.21320	23	02	25.63	-07	01	17.0	3 809
1990	RL7		1990	09	15.17709	23	01	29.18	-07	05	18.7	3 809
1990	RL7		1990	09	15.19098	23	01	28.37	-07	05	22.2	3 809
1990	RL7		1990	09	15.20486	23	01	27.55	-07	05	25.7	3 809
1990	RL7		1990	09	16.25485	23	00	26.51	-07	09	44.9	3 809
1990	RL7		1990	09	16.26737	23	00	25.75	-07	09	47.9	3 809
1990	RL7		1990	09	16.27985	23	00	25.02	-07	09	51.1	3 809
1990	RM7	*	1990	09	13.22708	23	06	02.90	-07	29	47.1	17.6 3 809
1990	RM7		1990	09	13.24097	23	06	02.29	-07	29	50.8	3 809
1990	RM7		1990	09	13.25485	23	06	01.67	-07	29	54.5	3 809
1990	RM7		1990	09	14.18542	23	05	20.12	-07	33	49.4	3 809
1990	RM7		1990	09	14.19931	23	05	19.48	-07	33	52.8	3 809
1990	RM7		1990	09	14.21320	23	05	18.86	-07	33	56.5	3 809
1990	RM7		1990	09	15.17709	23	04	36.16	-07	37	57.3	3 809
1990	RM7		1990	09	15.19098	23	04	35.52	-07	38	00.8	3 809
1990	RM7		1990	09	15.20486	23	04	34.89	-07	38	04.6	3 809
1990	RN7	*	1990	09	13.27918	23	35	21.91	-04	24	14.6	17.8 3 809
1990	RN7		1990	09	13.29306	23	35	21.03	-04	24	14.5	3 809
1990	RN7		1990	09	13.30695	23	35	20.16	-04	24	14.2	3 809
1990	RN7		1990	09	14.33820	23	34	14.95	-04	23	50.1	3 809
1990	RN7		1990	09	14.35208	23	34	14.08	-04	23	49.8	3 809
1990	RN7		1990	09	14.36597	23	34	13.20	-04	23	49.3	3 809
1990	RN7		1990	09	15.28125	23	33	15.51	-04	23	27.2	3 809
1990	RN7		1990	09	15.29376	23	33	14.71	-04	23	26.9	3 809
1990	RN7		1990	09	15.30624	23	33	13.92	-04	23	26.5	3 809
1990	RN7		1990	09	21.03021	23	27	11.98	-04	20	31.8	3 809
1990	RN7		1990	09	21.04340	23	27	11.15	-04	20	31.5	3 809
1990	RN7		1990	09	21.05661	23	27	10.31	-04	20	31.0	3 809
1990	RO7	*	1990	09	13.27918	23	35	33.44	-03	42	26.8	3 809
1990	RO7		1990	09	13.29306	23	35	32.67	-03	42	32.9	3 809
1990	RO7		1990	09	13.30695	23	35	31.89	-03	42	38.9	3 809
1990	RO7		1990	09	15.28125	23	33	54.71	-03	56	20.6	3 809
1990	RO7		1990	09	15.29376	23	33	54.01	-03	56	26.3	3 809
1990	RO7		1990	09	15.30624	23	33	53.32	-03	56	31.9	3 809
1990	RO7		1990	09	18.19168	23	31	30.89	-04	16	29.6	3 809
1990	RO7		1990	09	18.20557	23	31	30.15	-04	16	35.7	3 809
1990	RO7		1990	09	18.21945	23	31	29.41	-04	16	41.6	3 809
1990	RO7		1990	09	21.03021	23	29	11.98	-04	35	50.9	3 809
1990	RO7		1990	09	21.04340	23	29	11.28	-04	35	56.6	3 809
1990	RO7		1990	09	21.05661	23	29	10.60	-04	36	02.2	3 809
1990	RO7		1990	09	22.09549	23	28	20.25	-04	42	58.9	3 809
1990	RO7		1990	09	22.10867	23	28	19.55	-04	43	04.5	3 809
1990	RO7		1990	09	22.12189	23	28	18.83	-04	43	10.0	3 809
1990	RO7		1990	09	23.17569	23	27	28.06	-04	50	10.4	3 809
1990	RO7		1990	09	23.18820	23	27	27.37	-04	50	16.0	3 809
1990	RO7		1990	09	23.20068	23	27	26.69	-04	50	21.5	3 809
1990	RP7	*	1990	09	13.27918	23	36	41.31	-04	07	36.0	17.2 3 809
1990	RP7		1990	09	13.29306	23	36	40.92	-04	07	39.7	3 809
1990	RP7		1990	09	13.30695	23	36	40.52	-04	07	43.4	3 809
1990	RP7		1990	09	15.28125	23	35	42.04	-04	15	36.9	3 809
1990	RP7		1990	09	15.29376	23	35	41.66	-04	15	39.8	3 809
1990	RP7		1990	09	15.30624	23	35	41.26	-04	15	42.6	3 809
1990	RP7		1990	09	18.19168	23	34	15.39	-04	27	05.7	3 809

1990	RP7		1990	09	18.20557	23	34	14.97	-04	27	09.2	3 809
1990	RP7		1990	09	18.21945	23	34	14.57	-04	27	12.4	3 809
1990	RP7		1990	09	21.03021	23	32	52.44	-04	37	55.2	3 809
1990	RP7		1990	09	21.04340	23	32	52.06	-04	37	58.2	3 809
1990	RP7		1990	09	21.05661	23	32	51.66	-04	38	00.9	3 809
1990	RP7		1990	09	22.09549	23	32	21.47	-04	41	49.5	3 809
1990	RP7		1990	09	22.10867	23	32	21.09	-04	41	52.2	3 809
1990	RP7		1990	09	22.12189	23	32	20.69	-04	41	55.1	3 809
1990	RQ7	*	1990	09	13.27918	23	38	44.72	-03	52	13.9	17.4 3 809
1990	RQ7		1990	09	13.29306	23	38	43.95	-03	52	18.9	3 809
1990	RQ7		1990	09	13.30695	23	38	43.19	-03	52	23.9	3 809
1990	RQ7		1990	09	15.28125	23	36	54.19	-04	04	02.2	3 809
1990	RQ7		1990	09	15.29376	23	36	53.48	-04	04	06.6	3 809
1990	RQ7		1990	09	15.30624	23	36	52.80	-04	04	11.1	3 809
1990	RQ7		1990	09	15.32013	23	36	52.03	-04	04	15.7	3 809
1990	RQ7		1990	09	15.33264	23	36	51.34	-04	04	20.4	3 809
1990	RQ7		1990	09	15.34515	23	36	50.65	-04	04	24.4	3 809
1990	RQ7		1990	09	18.19168	23	34	12.24	-04	21	11.0	3 809
1990	RQ7		1990	09	18.20557	23	34	11.47	-04	21	16.1	3 809
1990	RQ7		1990	09	18.21945	23	34	10.70	-04	21	21.0	3 809
1990	RQ7		1990	09	21.03021	23	31	35.01	-04	37	38.5	3 809
1990	RQ7		1990	09	21.04340	23	31	34.27	-04	37	43.1	3 809
1990	RQ7		1990	09	21.05661	23	31	33.52	-04	37	47.9	3 809
1990	RQ7		1990	09	22.09549	23	30	36.13	-04	43	41.4	3 809
1990	RQ7		1990	09	22.10867	23	30	35.40	-04	43	46.0	3 809
1990	RQ7		1990	09	22.12189	23	30	34.67	-04	43	50.4	3 809
1990	RQ7		1990	09	23.17569	23	29	36.66	-04	49	47.1	3 809
1990	RQ7		1990	09	23.18820	23	29	35.97	-04	49	51.2	3 809
1990	RQ7		1990	09	23.20068	23	29	35.28	-04	49	55.3	3 809
1990	RR7	*	1990	09	13.27918	23	42	10.01	-03	46	59.3	17.7 3 809
1990	RR7		1990	09	13.29306	23	42	09.34	-03	47	06.4	3 809
1990	RR7		1990	09	13.30695	23	42	08.67	-03	47	13.5	3 809
1990	RR7		1990	09	15.32013	23	40	31.23	-04	04	20.0	3 809
1990	RR7		1990	09	15.33264	23	40	30.61	-04	04	26.3	3 809
1990	RR7		1990	09	15.34515	23	40	30.02	-04	04	32.8	3 809
1990	RR7		1990	09	21.07327	23	35	53.77	-04	52	27.2	3 809
1990	RR7		1990	09	21.08646	23	35	53.14	-04	52	33.4	3 809
1990	RR7		1990	09	21.09964	23	35	52.49	-04	52	40.1	3 809
1990	RR7		1990	09	22.24063	23	34	57.88	-05	01	56.9	3 809
1990	RR7		1990	09	22.25381	23	34	57.23	-05	02	03.3	3 809
1990	RR7		1990	09	22.26703	23	34	56.61	-05	02	09.9	3 809
1990	RS7	*	1990	09	14.08957	22	52	27.53	-10	03	24.3	17.4 3 809
1990	RS7		1990	09	14.10349	22	52	26.84	-10	03	26.9	3 809
1990	RS7		1990	09	14.11737	22	52	26.16	-10	03	29.7	3 809
1990	RS7		1990	09	15.08542	22	51	39.21	-10	06	43.0	3 809
1990	RS7		1990	09	15.09930	22	51	38.51	-10	06	46.0	3 809
1990	RS7		1990	09	15.11319	22	51	37.84	-10	06	48.9	3 809
1990	RT7	*	1990	09	14.08957	22	56	34.77	-09	47	30.8	17.8 3 809
1990	RT7		1990	09	14.10349	22	56	34.10	-09	47	34.3	3 809
1990	RT7		1990	09	14.11737	22	56	33.43	-09	47	38.4	3 809
1990	RT7		1990	09	15.08542	22	55	47.14	-09	51	59.9	3 809
1990	RT7		1990	09	15.09930	22	55	46.49	-09	52	03.5	3 809
1990	RT7		1990	09	15.11319	22	55	45.82	-09	52	07.6	3 809
1990	RU7	*	1990	09	14.14166	22	56	59.01	-06	30	27.9	17.8 3 809
1990	RU7		1990	09	14.15555	22	56	58.28	-06	30	32.7	3 809
1990	RU7		1990	09	14.16943	22	56	57.56	-06	30	37.7	3 809
1990	RU7		1990	09	15.13055	22	56	07.10	-06	36	18.1	3 809
1990	RU7		1990	09	15.14444	22	56	06.38	-06	36	22.9	3 809
1990	RU7		1990	09	15.15833	22	56	05.66	-06	36	27.9	3 809

1990	RV7	*	1990	09	14.14166	22	57	47.41	-05	37	42.6	17.7	3	809
1990	RV7		1990	09	14.15555	22	57	46.77	-05	37	48.6		3	809
1990	RV7		1990	09	14.16943	22	57	46.13	-05	37	54.6		3	809
1990	RV7		1990	09	15.13055	22	57	02.14	-05	44	47.7		3	809
1990	RV7		1990	09	15.14444	22	57	01.50	-05	44	53.9		3	809
1990	RV7		1990	09	15.15833	22	57	00.88	-05	45	00.1		3	809
1990	RV7		1990	09	16.25485	22	56	10.78	-05	52	50.8		3	809
1990	RV7		1990	09	16.26737	22	56	10.18	-05	52	56.4		3	809
1990	RV7		1990	09	16.27985	22	56	09.59	-05	53	01.9		3	809
1990	RW7		1990	08	20.23194	23	16	48.62	-04	14	07.7	18.5	4	809
1990	RW7		1990	08	20.24514	23	16	48.12	-04	14	12.0		4	809
1990	RW7		1990	08	20.25833	23	16	47.65	-04	14	15.7		4	809
1990	RW7		1990	08	26.20347	23	13	20.20	-04	44	33.4	18.5	4	809
1990	RW7		1990	08	26.21667	23	13	19.69	-04	44	37.2		4	809
1990	RW7		1990	08	26.22986	23	13	19.10	-04	44	42.7		4	809
1990	RW7	*	1990	09	14.14166	23	00	20.34	-06	34	16.5	16.8	3	809
1990	RW7		1990	09	14.15555	23	00	19.75	-06	34	21.3		3	809
1990	RW7		1990	09	14.16943	23	00	19.15	-06	34	26.1		3	809
1990	RW7		1990	09	15.13055	22	59	38.88	-06	40	02.7		3	809
1990	RW7		1990	09	15.14444	22	59	38.29	-06	40	07.4		3	809
1990	RW7		1990	09	15.15833	22	59	37.69	-06	40	12.0		3	809
1990	RW7		1990	09	16.25485	22	58	51.88	-06	46	32.5		3	809
1990	RW7		1990	09	16.26737	22	58	51.33	-06	46	37.0		3	809
1990	RW7		1990	09	16.27985	22	58	50.80	-06	46	41.9		3	809
1990	RX7	*	1990	09	14.18542	23	03	31.78	-07	01	35.6	17.9	3	809
1990	RX7		1990	09	14.19931	23	03	31.14	-07	01	41.3		3	809
1990	RX7		1990	09	14.21320	23	03	30.51	-07	01	47.1		3	809
1990	RX7		1990	09	15.17709	23	02	46.43	-07	08	27.6		3	809
1990	RX7		1990	09	15.19098	23	02	45.80	-07	08	33.2		3	809
1990	RX7		1990	09	15.20486	23	02	45.16	-07	08	38.9		3	809
1990	RY7	*	1990	09	14.18542	23	06	46.01	-06	55	14.3	17.6	3	809
1990	RY7		1990	09	14.19931	23	06	45.31	-06	55	16.6		3	809
1990	RY7		1990	09	14.21320	23	06	44.62	-06	55	19.2		3	809
1990	RY7		1990	09	15.17709	23	05	57.02	-06	58	06.2		3	809
1990	RY7		1990	09	15.19098	23	05	56.33	-06	58	08.6		3	809
1990	RY7		1990	09	15.20486	23	05	55.65	-06	58	11.3		3	809
1990	RY7		1990	09	16.29443	23	05	01.91	-07	01	16.2		3	809
1990	RY7		1990	09	16.30695	23	05	01.29	-07	01	18.3		3	809
1990	RY7		1990	09	16.31946	23	05	00.65	-07	01	20.6		3	809
1990	RZ7	*	1990	09	14.18542	23	08	30.57	-06	44	18.9	17.7	3	809
1990	RZ7		1990	09	14.19931	23	08	29.87	-06	44	22.8		3	809
1990	RZ7		1990	09	14.21320	23	08	29.14	-06	44	27.0		3	809
1990	RZ7		1990	09	15.17709	23	07	39.95	-06	49	09.3		3	809
1990	RZ7		1990	09	15.19098	23	07	39.25	-06	49	13.3		3	809
1990	RZ7		1990	09	15.20486	23	07	38.54	-06	49	17.6		3	809
1990	RZ7		1990	09	16.29443	23	06	43.26	-06	54	30.2		3	809
1990	RZ7		1990	09	16.30695	23	06	42.62	-06	54	33.8		3	809
1990	RZ7		1990	09	16.31946	23	06	41.99	-06	54	37.3		3	809
1990	RA8	*	1990	09	14.18542	23	08	52.63	-07	17	12.5	17.5	3	809
1990	RA8		1990	09	14.19931	23	08	51.91	-07	17	14.9		3	809
1990	RA8		1990	09	14.21320	23	08	51.18	-07	17	17.4		3	809
1990	RA8		1990	09	15.17709	23	08	00.72	-07	20	19.3		3	809
1990	RA8		1990	09	15.19098	23	08	00.00	-07	20	22.1		3	809
1990	RA8		1990	09	15.20486	23	07	59.27	-07	20	24.8		3	809
1990	RA8		1990	09	16.29443	23	07	02.25	-07	23	43.9		3	809
1990	RA8		1990	09	16.30695	23	07	01.60	-07	23	46.0		3	809
1990	RA8		1990	09	16.31946	23	07	00.93	-07	23	48.3		3	809
1990	RB8	*	1990	09	14.29098	22	58	15.54	-12	07	01.3	17.8	3	809
1990	RB8		1990	09	14.30487	22	58	14.87	-12	07	04.9		3	809

1990	RB8		1990	09	14.31876	22	58	14.18	-12	07	08.4	3 809
1990	RB8		1990	09	15.23682	22	57	28.63	-12	11	02.3	3 809
1990	RB8		1990	09	15.25070	22	57	27.94	-12	11	05.9	3 809
1990	RB8		1990	09	15.26459	22	57	27.24	-12	11	09.3	3 809
1990	RC8	*	1990	09	14.29098	22	58	31.51	-11	49	38.4	17.9 3 809
1990	RC8		1990	09	14.30487	22	58	30.75	-11	49	44.9	3 809
1990	RC8		1990	09	14.31876	22	58	30.01	-11	49	51.6	3 809
1990	RC8		1990	09	15.23682	22	57	39.82	-11	56	59.9	3 809
1990	RC8		1990	09	15.25070	22	57	39.06	-11	57	06.5	3 809
1990	RC8		1990	09	15.26459	22	57	38.28	-11	57	12.9	3 809
1990	RD8	*	1990	09	14.29098	23	01	24.02	-11	59	25.0	17.5 3 809
1990	RD8		1990	09	14.30487	23	01	23.42	-11	59	28.4	3 809
1990	RD8		1990	09	14.31876	23	01	22.80	-11	59	31.8	3 809
1990	RD8		1990	09	15.23682	23	00	43.37	-12	03	22.0	3 809
1990	RD8		1990	09	15.25070	23	00	42.77	-12	03	25.6	3 809
1990	RD8		1990	09	15.26459	23	00	42.17	-12	03	29.0	3 809
1990	RE8	*	1990	09	14.29098	23	02	02.95	-11	43	38.9	17.4 3 809
1990	RE8		1990	09	14.30487	23	02	02.19	-11	43	42.9	3 809
1990	RE8		1990	09	14.31876	23	02	01.44	-11	43	47.4	3 809
1990	RE8		1990	09	15.23682	23	01	11.37	-11	48	34.2	3 809
1990	RE8		1990	09	15.25070	23	01	10.63	-11	48	38.3	3 809
1990	RE8		1990	09	15.26459	23	01	09.87	-11	48	42.5	3 809
1990	RF8	*	1990	09	14.29098	23	05	25.08	-11	40	26.8	17.3 3 809
1990	RF8		1990	09	14.30487	23	05	24.30	-11	40	28.9	3 809
1990	RF8		1990	09	14.31876	23	05	23.55	-11	40	31.0	3 809
1990	RF8		1990	09	15.23682	23	04	32.71	-11	42	38.6	3 809
1990	RF8		1990	09	15.25070	23	04	31.94	-11	42	40.9	3 809
1990	RF8		1990	09	15.26459	23	04	31.17	-11	42	43.0	3 809
1990	RG8	*	1990	09	14.29098	23	05	51.56	-12	16	25.9	17.6 3 809
1990	RG8		1990	09	14.30487	23	05	50.90	-12	16	29.0	3 809
1990	RG8		1990	09	14.31876	23	05	50.22	-12	16	32.1	3 809
1990	RG8		1990	09	15.23682	23	05	06.25	-12	19	52.4	3 809
1990	RG8		1990	09	15.25070	23	05	05.60	-12	19	55.5	3 809
1990	RG8		1990	09	15.26459	23	05	04.93	-12	19	58.5	3 809
1990	RH8	*	1990	09	14.33820	23	33	09.85	-04	19	14.6	17.8 3 809
1990	RH8		1990	09	14.35208	23	33	09.18	-04	19	20.4	3 809
1990	RH8		1990	09	14.36597	23	33	08.51	-04	19	26.3	3 809
1990	RH8		1990	09	15.28125	23	32	24.45	-04	25	58.6	3 809
1990	RH8		1990	09	15.29376	23	32	23.85	-04	26	03.9	3 809
1990	RH8		1990	09	15.30624	23	32	23.25	-04	26	09.4	3 809
1990	RH8		1990	09	21.03021	23	27	48.49	-05	06	34.7	3 809
1990	RH8		1990	09	21.04340	23	27	47.86	-05	06	40.3	3 809
1990	RH8		1990	09	21.05661	23	27	47.23	-05	06	46.0	3 809
1990	RH8		1990	09	22.09549	23	26	57.75	-05	13	57.9	3 809
1990	RH8		1990	09	22.10867	23	26	57.13	-05	14	03.5	3 809
1990	RH8		1990	09	22.12189	23	26	56.50	-05	14	09.1	3 809
1990	RH8		1990	09	23.17569	23	26	06.85	-05	21	21.6	3 809
1990	RH8		1990	09	23.18820	23	26	06.25	-05	21	26.7	3 809
1990	RH8		1990	09	23.20068	23	26	05.67	-05	21	31.9	3 809
1990	RH8		1990	09	24.22501	23	25	17.70	-05	28	26.3	3 809
1990	RH8		1990	09	24.23819	23	25	17.09	-05	28	32.0	3 809
1990	RH8		1990	09	24.25140	23	25	16.47	-05	28	37.6	3 809
1990	RH8		1990	09	25.12848	23	24	36.21	-05	34	30.2	3 809
1990	RH8		1990	09	25.14096	23	24	35.64	-05	34	35.2	3 809
1990	RH8		1990	09	25.15347	23	24	35.06	-05	34	40.3	3 809
1990	RJ8	*	1990	09	14.99792	22	06	53.41	-13	33	02.5	17.4 3 809
1990	RJ8		1990	09	15.01181	22	06	52.90	-13	33	07.5	3 809
1990	RJ8		1990	09	15.02570	22	06	52.39	-13	33	12.5	3 809
1990	RJ8		1990	09	15.99792	22	06	17.03	-13	39	03.0	3 809

1990	RJ8		1990	09	16.01215	22	06	16.52	-13	39	08.1	3 809
1990	RJ8		1990	09	16.02640	22	06	16.02	-13	39	03.0	3 809
1990	RK8	*	1990	09	14.99792	22	09	08.25	-12	03	21.4	17.9 3 809
1990	RK8		1990	09	15.01181	22	09	07.65	-12	03	26.2	3 809
1990	RK8		1990	09	15.02570	22	09	07.07	-12	03	31.2	3 809
1990	RK8		1990	09	15.99792	22	08	26.78	-12	09	09.4	3 809
1990	RK8		1990	09	16.01215	22	08	26.18	-12	09	14.1	3 809
1990	RK8		1990	09	16.02640	22	08	25.58	-12	09	18.8	3 809
1990	RL8	*	1990	09	15.04166	22	32	14.02	-11	09	10.5	17.5 3 809
1990	RL8		1990	09	15.05554	22	32	13.51	-11	09	15.3	3 809
1990	RL8		1990	09	15.06946	22	32	13.00	-11	09	20.2	3 809
1990	RL8		1990	09	16.20972	22	31	31.10	-11	16	00.7	3 809
1990	RL8		1990	09	16.22360	22	31	30.58	-11	16	05.5	3 809
1990	RL8		1990	09	16.23749	22	31	30.05	-11	16	10.4	3 809
1990	RM8	*	1990	09	15.13055	22	55	26.39	-05	39	43.0	17.9 3 809
1990	RM8		1990	09	15.14444	22	55	25.61	-05	39	47.8	3 809
1990	RM8		1990	09	15.15833	22	55	24.83	-05	39	52.7	3 809
1990	RM8		1990	09	16.25485	22	54	25.38	-05	46	07.5	3 809
1990	RM8		1990	09	16.26737	22	54	24.68	-05	46	11.8	3 809
1990	RM8		1990	09	16.27985	22	54	23.97	-05	46	16.1	3 809
1990	RN8	*	1990	09	15.17709	23	07	18.94	-05	40	12.6	17.7 3 809
1990	RN8		1990	09	15.19098	23	07	18.27	-05	40	18.0	3 809
1990	RN8		1990	09	15.20486	23	07	17.62	-05	40	23.3	3 809
1990	RN8		1990	09	16.29443	23	06	26.50	-05	47	19.8	3 809
1990	RN8		1990	09	16.30695	23	06	25.92	-05	47	24.6	3 809
1990	RN8		1990	09	16.31946	23	06	25.31	-05	47	29.4	3 809
1990	RO8	*	1990	09	15.17709	23	07	50.67	-06	28	15.9	17.6 3 809
1990	RO8		1990	09	15.19098	23	07	49.92	-06	28	21.6	3 809
1990	RO8		1990	09	15.20486	23	07	49.18	-06	28	27.3	3 809
1990	RO8		1990	09	16.29443	23	06	50.62	-06	35	56.0	3 809
1990	RO8		1990	09	16.30695	23	06	49.94	-06	36	01.3	3 809
1990	RO8		1990	09	16.31946	23	06	49.28	-06	36	06.3	3 809
1990	RP8	*	1990	09	15.28125	23	32	06.96	-03	23	51.1	17.6 3 809
1990	RP8		1990	09	15.29376	23	32	06.24	-03	23	53.5	3 809
1990	RP8		1990	09	15.30624	23	32	05.51	-03	23	56.0	3 809
1990	RP8		1990	09	21.03021	23	26	33.05	-03	42	38.3	3 809
1990	RP8		1990	09	21.04340	23	26	32.27	-03	42	40.9	3 809
1990	RP8		1990	09	21.05661	23	26	31.49	-03	42	43.3	3 809
1990	RQ8	*	1990	09	15.28125	23	32	43.23	-03	34	36.0	17.2 3 809
1990	RQ8		1990	09	15.29376	23	32	42.66	-03	34	39.3	3 809
1990	RQ8		1990	09	15.30624	23	32	42.08	-03	34	42.4	3 809
1990	RQ8		1990	09	21.03021	23	28	24.73	-03	58	46.2	3 809
1990	RQ8		1990	09	21.04340	23	28	24.14	-03	58	49.5	3 809
1990	RQ8		1990	09	21.05661	23	28	23.55	-03	58	52.8	3 809
1990	RQ8		1990	09	22.05383	23	27	39.45	-04	02	56.2	3 809
1990	RQ8		1990	09	22.06702	23	27	38.86	-04	02	59.4	3 809
1990	RQ8		1990	09	22.08020	23	27	38.28	-04	03	02.6	3 809
1990	RQ8		1990	09	22.09549	23	27	37.60	-04	03	06.2	3 809
1990	RQ8		1990	09	22.10867	23	27	37.02	-04	03	09.4	3 809
1990	RQ8		1990	09	22.12189	23	27	36.43	-04	03	12.7	3 809
1990	RQ8		1990	09	23.01388	23	26	57.46	-04	06	47.7	3 809
1990	RQ8		1990	09	23.02640	23	26	56.91	-04	06	50.9	3 809
1990	RQ8		1990	09	23.03888	23	26	56.37	-04	06	53.9	3 809
1990	RQ8		1990	09	24.00833	23	26	14.40	-04	10	45.9	3 809
1990	RQ8		1990	09	24.02084	23	26	13.84	-04	10	48.9	3 809
1990	RQ8		1990	09	24.03333	23	26	13.31	-04	10	51.9	3 809
1990	RR8	*	1990	09	15.28125	23	35	31.11	-04	40	51.3	17.7 3 809
1990	RR8		1990	09	15.29376	23	35	30.37	-04	40	54.9	3 809
1990	RR8		1990	09	15.30624	23	35	29.62	-04	40	58.4	3 809

1990	RR8		1990	09	21.03021	23	29	48.46	-05	07	53.0	3 809
1990	RR8		1990	09	21.04340	23	29	47.67	-05	07	56.8	3 809
1990	RR8		1990	09	21.05661	23	29	46.87	-05	08	00.5	3 809
1990	RR8		1990	09	22.09549	23	28	46.16	-05	12	39.7	3 809
1990	RR8		1990	09	22.10867	23	28	45.40	-05	12	43.2	3 809
1990	RR8		1990	09	22.12189	23	28	44.63	-05	12	47.1	3 809
1990	RR8		1990	09	23.17569	23	27	43.57	-05	17	24.0	3 809
1990	RR8		1990	09	23.18820	23	27	42.85	-05	17	27.3	3 809
1990	RR8		1990	09	23.20068	23	27	42.12	-05	17	30.6	3 809
1990	RS8	*	1990	09	15.28125	23	37	17.98	-03	32	13.5	18.0 3 809
1990	RS8		1990	09	15.29376	23	37	17.39	-03	32	19.0	3 809
1990	RS8		1990	09	15.30624	23	37	16.80	-03	32	24.5	3 809
1990	RS8		1990	09	15.32013	23	37	16.15	-03	32	30.5	3 809
1990	RS8		1990	09	15.33264	23	37	15.55	-03	32	36.0	3 809
1990	RS8		1990	09	15.34515	23	37	14.95	-03	32	41.8	3 809
1990	RS8		1990	09	21.03021	23	32	44.29	-04	14	40.8	3 809
1990	RS8		1990	09	21.04340	23	32	43.67	-04	14	46.6	3 809
1990	RS8		1990	09	21.05661	23	32	43.03	-04	14	52.5	3 809
1990	RT8	*	1990	09	15.32013	23	42	55.78	-04	05	01.3	17.5 3 809
1990	RT8		1990	09	15.33264	23	42	55.18	-04	05	06.9	3 809
1990	RT8		1990	09	15.34515	23	42	54.58	-04	05	12.4	3 809
1990	RT8		1990	09	21.07327	23	38	20.78	-04	47	18.1	3 809
1990	RT8		1990	09	21.08646	23	38	20.15	-04	47	23.9	3 809
1990	RT8		1990	09	21.09964	23	38	19.52	-04	47	29.7	3 809
1990	RT8		1990	09	22.24063	23	37	25.50	-04	55	32.3	3 809
1990	RT8		1990	09	22.25381	23	37	24.88	-04	55	37.9	3 809
1990	RT8		1990	09	22.26703	23	37	24.25	-04	55	43.4	3 809
1990	RU8	*	1990	09	15.32013	23	44	07.72	-03	40	38.4	17.6 3 809
1990	RU8		1990	09	15.33264	23	44	07.05	-03	40	44.0	3 809
1990	RU8		1990	09	15.34515	23	44	06.40	-03	40	49.3	3 809
1990	RU8		1990	09	18.23541	23	41	36.06	-04	02	07.9	3 809
1990	RU8		1990	09	18.24930	23	41	35.34	-04	02	14.1	3 809
1990	RU8		1990	09	18.26318	23	41	34.62	-04	02	20.1	3 809
1990	RU8		1990	09	21.07327	23	39	10.07	-04	22	33.0	3 809
1990	RU8		1990	09	21.08646	23	39	09.39	-04	22	38.4	3 809
1990	RU8		1990	09	21.09964	23	39	08.70	-04	22	44.1	3 809
1990	RU8		1990	09	22.24063	23	38	10.17	-04	30	45.7	3 809
1990	RU8		1990	09	22.25381	23	38	09.52	-04	30	51.3	3 809
1990	RU8		1990	09	22.26703	23	38	08.87	-04	30	56.9	3 809
1990	RU8		1990	09	23.05695	23	37	29.60	-04	36	25.1	3 809
1990	RU8		1990	09	23.06946	23	37	28.97	-04	36	30.1	3 809
1990	RU8		1990	09	23.08194	23	37	28.35	-04	36	35.3	3 809
1990	RU8		1990	09	24.05139	23	36	40.00	-04	43	12.6	3 809
1990	RU8		1990	09	24.06390	23	36	39.37	-04	43	17.7	3 809
1990	RU8		1990	09	24.07638	23	36	38.75	-04	43	23.1	3 809
1990	SL2		1990	09	30.35486	01	27	52.97	-02	47	04.3	15.9 3 809
1990	SL2		1990	09	30.36459	01	27	52.44	-02	47	06.5	3 809
1990	SL2		1990	09	30.37430	01	27	51.91	-02	47	08.6	3 809
1990	SL2		1990	10	01.35138	01	26	57.90	-02	50	47.6	3 809
1990	SL2		1990	10	01.36389	01	26	57.20	-02	50	50.2	3 809
1990	SL2		1990	10	01.37640	01	26	56.52	-02	50	53.0	3 809
1990	SM2		1990	09	30.35486	01	32	47.39	-03	15	57.7	16.2 3 809
1990	SM2		1990	09	30.36459	01	32	46.95	-03	16	00.4	3 809
1990	SM2		1990	09	30.37430	01	32	46.53	-03	16	03.3	3 809
1990	SM2		1990	10	01.35138	01	32	01.94	-03	20	53.8	3 809
1990	SM2		1990	10	01.36389	01	32	01.37	-03	20	57.5	3 809
1990	SM2		1990	10	01.37640	01	32	00.81	-03	21	01.1	3 809
1990	SJ5		1990	09	15.36182	00	33	53.87	-01	15	15.0	17.9 3 809
1990	SJ5		1990	09	15.37430	00	33	53.33	-01	15	16.5	3 809

1990	SJ5	1990	09	15.38681	00	33	52.81	-01	15	17.5		3 809
1990	SP5	1990	09	15.36182	00	36	23.63	-00	20	52.1	17.6	3 809
1990	SP5	1990	09	15.37430	00	36	22.98	-00	20	55.7		3 809
1990	SP5	1990	09	15.38681	00	36	22.35	-00	20	59.4		3 809
1990	SP5	1990	09	16.34168	00	35	33.08	-00	25	37.8		3 809
1990	SP5	1990	09	16.35416	00	35	32.43	-00	25	41.3		3 809
1990	SP5	1990	09	16.36667	00	35	31.80	-00	25	45.2		3 809
1990	SE6	1990	09	15.36182	00	39	10.99	-00	55	48.3	17.7	3 809
1990	SE6	1990	09	15.37430	00	39	10.49	-00	55	55.8		3 809
1990	SE6	1990	09	15.38681	00	39	10.01	-00	56	03.3		3 809
1990	SE6	1990	09	16.34168	00	38	33.39	-01	05	35.9		3 809
1990	SE6	1990	09	16.35416	00	38	32.90	-01	05	43.4		3 809
1990	SE6	1990	09	16.36667	00	38	32.43	-01	05	50.7		3 809
1990	SP6	1990	09	15.36182	00	40	10.65	-00	12	06.4	17.7	3 809
1990	SP6	1990	09	15.37430	00	40	10.25	-00	12	14.2		3 809
1990	SP6	1990	09	15.38681	00	40	09.86	-00	12	21.9		3 809
1990	SP6	1990	09	16.34168	00	39	39.40	-00	22	17.8		3 809
1990	SP6	1990	09	16.35416	00	39	39.01	-00	22	25.5		3 809
1990	SP6	1990	09	16.36667	00	39	38.61	-00	22	33.3		3 809
1990	SZ10	1990	09	23.13681	23	36	52.25	-02	23	35.4	17.7	3 809
1990	SZ10	1990	09	23.14929	23	36	51.53	-02	23	35.8		3 809
1990	SZ10	1990	09	23.16180	23	36	50.80	-02	23	36.3		3 809
1990	SZ10	1990	09	24.09097	23	35	55.94	-02	24	05.4		3 809
1990	SZ10	1990	09	24.10349	23	35	55.19	-02	24	05.8		3 809
1990	SZ10	1990	09	24.11597	23	35	54.44	-02	24	06.5		3 809
1990	SG11	1990	09	27.20972	23	10	37.91	-02	49	54.6	17.5	3 809
1990	SG11	1990	09	27.22083	23	10	37.45	-02	49	58.9		3 809
1990	SG11	1990	09	27.23193	23	10	37.02	-02	50	02.8		3 809
1990	SG11	1990	09	28.27152	23	09	55.62	-02	56	30.0		3 809
1990	SG11	1990	09	28.28125	23	09	55.24	-02	56	33.8		3 809
1990	SG11	1990	09	28.29098	23	09	54.85	-02	56	37.5		3 809
1990	SH12*	1990	09	18.23541	23	44	54.64	-04	53	14.9	17.9	3 809
1990	SH12	1990	09	18.24930	23	44	54.28	-04	53	23.3		3 809
1990	SH12	1990	09	18.26318	23	44	53.94	-04	53	31.6		3 809
1990	SH12	1990	09	21.11771	23	43	37.98	-05	21	37.8		3 809
1990	SH12	1990	09	21.13089	23	43	37.63	-05	21	45.8		3 809
1990	SH12	1990	09	21.14410	23	43	37.27	-05	21	53.9		3 809
1990	SJ12*	1990	09	18.23541	23	45	04.45	-04	04	39.7	17.7	3 809
1990	SJ12	1990	09	18.24930	23	45	03.56	-04	04	40.6		3 809
1990	SJ12	1990	09	18.26318	23	45	02.67	-04	04	41.4		3 809
1990	SJ12	1990	09	21.11771	23	41	59.36	-04	07	31.8		3 809
1990	SJ12	1990	09	21.13089	23	41	58.52	-04	07	32.6		3 809
1990	SJ12	1990	09	21.14410	23	41	57.67	-04	07	33.6		3 809
1990	SJ12	1990	09	23.05695	23	39	54.62	-04	09	11.4		3 809
1990	SJ12	1990	09	23.06946	23	39	53.81	-04	09	12.1		3 809
1990	SJ12	1990	09	23.08194	23	39	52.98	-04	09	12.8		3 809
1990	SJ12	1990	09	24.05139	23	38	50.94	-04	09	57.9		3 809
1990	SJ12	1990	09	24.06390	23	38	50.14	-04	09	58.5		3 809
1990	SJ12	1990	09	24.07638	23	38	49.35	-04	09	59.0		3 809
1990	SK12*	1990	09	18.28125	23	27	19.20	-06	20	59.4	17.9	3 809
1990	SK12	1990	09	18.29513	23	27	18.38	-06	21	03.2		3 809
1990	SK12	1990	09	18.30902	23	27	17.54	-06	21	07.0		3 809
1990	SK12	1990	09	21.16147	23	24	28.93	-06	34	16.5		3 809
1990	SK12	1990	09	21.17465	23	24	28.14	-06	34	20.2		3 809
1990	SK12	1990	09	21.18784	23	24	27.37	-06	34	23.9		3 809
1990	SK12	1990	09	21.20590	23	24	26.29	-06	34	28.3		3 809
1990	SK12	1990	09	21.21909	23	24	25.52	-06	34	31.7		3 809
1990	SK12	1990	09	21.23230	23	24	24.74	-06	34	35.4		3 809
1990	SL12*	1990	09	18.28125	23	29	25.82	-06	43	26.3	17.6	3 809

1990	SL12	1990	09	18.29513	23	29	24.99	-06	43	27.7		3 809
1990	SL12	1990	09	18.30902	23	29	24.15	-06	43	29.1		3 809
1990	SL12	1990	09	21.16147	23	26	31.99	-06	48	15.6		3 809
1990	SL12	1990	09	21.17465	23	26	31.19	-06	48	16.9		3 809
1990	SL12	1990	09	21.18784	23	26	30.39	-06	48	18.3		3 809
1990	SM12*	1990	09	18.28125	23	29	44.56	-06	22	28.6	17.1	3 809
1990	SM12	1990	09	18.29513	23	29	43.96	-06	22	32.6		3 809
1990	SM12	1990	09	18.30902	23	29	43.37	-06	22	36.7		3 809
1990	SM12	1990	09	21.16147	23	27	41.66	-06	36	39.9		3 809
1990	SM12	1990	09	21.17465	23	27	41.11	-06	36	43.7		3 809
1990	SM12	1990	09	21.18784	23	27	40.54	-06	36	47.6		3 809
1990	SN12*	1990	09	18.28125	23	30	24.56	-05	58	56.7	17.8	3 809
1990	SN12	1990	09	18.29513	23	30	23.94	-05	59	00.3		3 809
1990	SN12	1990	09	18.30902	23	30	23.32	-05	59	03.8		3 809
1990	SN12	1990	09	21.16147	23	28	16.19	-06	11	12.1		3 809
1990	SN12	1990	09	21.17465	23	28	15.60	-06	11	15.5		3 809
1990	SN12	1990	09	21.18784	23	28	15.02	-06	11	18.9		3 809
1990	SN12	1990	09	23.17569	23	26	47.81	-06	19	25.7		3 809
1990	SN12	1990	09	23.18820	23	26	47.24	-06	19	28.8		3 809
1990	SN12	1990	09	23.20068	23	26	46.69	-06	19	31.9		3 809
1990	SO12*	1990	09	18.28125	23	31	32.19	-06	28	53.7	17.4	3 809
1990	SO12	1990	09	18.29513	23	31	31.64	-06	29	04.2		3 809
1990	SO12	1990	09	18.30902	23	31	31.10	-06	29	14.5		3 809
1990	SO12	1990	09	21.16147	23	29	39.50	-07	04	48.3		3 809
1990	SO12	1990	09	21.17465	23	29	38.97	-07	04	58.3		3 809
1990	SO12	1990	09	21.18784	23	29	38.45	-07	05	08.3		3 809
1990	SP12*	1990	09	18.28125	23	32	53.41	-06	51	19.4	17.6	3 809
1990	SP12	1990	09	18.29513	23	32	52.78	-06	51	28.2		3 809
1990	SP12	1990	09	18.30902	23	32	52.15	-06	51	37.0		3 809
1990	SP12	1990	09	21.16147	23	30	43.37	-07	21	39.2		3 809
1990	SP12	1990	09	21.17465	23	30	42.79	-07	21	47.5		3 809
1990	SP12	1990	09	21.18784	23	30	42.17	-07	21	55.9		3 809
1990	SQ12*	1990	09	18.33334	00	30	27.46	+01	45	16.9	17.8	3 809
1990	SQ12	1990	09	18.34723	00	30	26.65	+01	45	11.2		3 809
1990	SQ12	1990	09	18.36112	00	30	25.85	+01	45	05.6		3 809
1990	SQ12	1990	09	20.31876	00	28	31.65	+01	31	39.3		3 809
1990	SQ12	1990	09	20.34479	00	28	30.10	+01	31	28.5		3 809
1990	SQ12	1990	09	20.35867	00	28	29.30	+01	31	22.8		3 809
1990	SR12*	1990	09	21.11771	23	42	03.23	-03	45	15.0	17.7	3 809
1990	SR12	1990	09	21.13089	23	42	02.41	-03	45	12.5		3 809
1990	SR12	1990	09	21.14410	23	42	01.58	-03	45	10.3		3 809
1990	SR12	1990	09	23.05695	23	40	01.80	-03	39	35.6		3 809
1990	SR12	1990	09	23.06946	23	40	01.02	-03	39	33.4		3 809
1990	SR12	1990	09	23.08194	23	40	00.24	-03	39	31.4		3 809
1990	SR12	1990	09	23.13681	23	39	56.80	-03	39	21.6		3 809
1990	SR12	1990	09	23.14929	23	39	56.02	-03	39	19.4		3 809
1990	SR12	1990	09	23.16180	23	39	55.24	-03	39	17.2		3 809
1990	SR12	1990	09	24.05139	23	39	00.28	-03	36	40.9		3 809
1990	SR12	1990	09	24.06390	23	38	59.52	-03	36	38.8		3 809
1990	SR12	1990	09	24.07638	23	38	58.75	-03	36	36.6		3 809
1990	SS12*	1990	09	21.11771	23	45	08.31	-04	29	54.0	17.7	3 809
1990	SS12	1990	09	21.13089	23	45	07.46	-04	29	55.1		3 809
1990	SS12	1990	09	21.14410	23	45	06.64	-04	29	56.5		3 809
1990	SS12	1990	09	22.14063	23	44	04.60	-04	31	13.8		3 809
1990	SS12	1990	09	22.15381	23	44	03.78	-04	31	14.9		3 809
1990	SS12	1990	09	22.16702	23	44	02.95	-04	31	16.0		3 809
1990	SS12	1990	09	23.05695	23	43	08.09	-04	32	20.6		3 809
1990	SS12	1990	09	23.06946	23	43	07.32	-04	32	21.5		3 809
1990	SS12	1990	09	23.08194	23	43	06.57	-04	32	22.4		3 809

1990	ST12*	1990	09	21.11771	23	45	30.08	-05	42	06.3	17.2	3 809
1990	ST12	1990	09	21.13089	23	45	29.52	-05	42	09.6		3 809
1990	ST12	1990	09	21.14410	23	45	28.96	-05	42	13.3		3 809
1990	ST12	1990	09	22.14063	23	44	47.01	-05	46	48.9		3 809
1990	ST12	1990	09	22.15381	23	44	46.46	-05	46	52.6		3 809
1990	ST12	1990	09	22.16702	23	44	45.90	-05	46	56.4		3 809
1990	SU12*	1990	09	21.11771	23	46	32.16	-05	22	41.5	17.4	3 809
1990	SU12	1990	09	21.13089	23	46	31.58	-05	22	51.1		3 809
1990	SU12	1990	09	21.14410	23	46	31.03	-05	23	01.0		3 809
1990	SU12	1990	09	22.14063	23	45	49.26	-05	35	02.7		3 809
1990	SU12	1990	09	22.15381	23	45	48.70	-05	35	12.5		3 809
1990	SU12	1990	09	22.16702	23	45	48.12	-05	35	22.1		3 809
1990	SV12*	1990	09	21.11771	23	47	36.85	-05	01	11.1	17.2	3 809
1990	SV12	1990	09	21.13089	23	47	36.25	-05	01	14.4		3 809
1990	SV12	1990	09	21.14410	23	47	35.66	-05	01	17.8		3 809
1990	SV12	1990	09	22.14063	23	46	51.04	-05	05	37.5		3 809
1990	SV12	1990	09	22.15381	23	46	50.45	-05	05	41.0		3 809
1990	SV12	1990	09	22.16702	23	46	49.86	-05	05	44.8		3 809
1990	SW12*	1990	09	21.20590	23	22	22.32	-07	03	43.5	17.1	3 809
1990	SW12	1990	09	21.21909	23	22	21.63	-07	03	48.9		3 809
1990	SW12	1990	09	21.23230	23	22	20.94	-07	03	54.3		3 809
1990	SW12	1990	09	22.01285	23	21	40.30	-07	09	03.1		3 809
1990	SW12	1990	09	22.02603	23	21	39.62	-07	09	08.2		3 809
1990	SW12	1990	09	22.03925	23	21	38.93	-07	09	13.7		3 809
1990	SX12*	1990	09	21.20590	23	23	24.28	-06	20	16.4	17.5	3 809
1990	SX12	1990	09	21.21909	23	23	24.02	-06	20	24.0		3 809
1990	SX12	1990	09	21.23230	23	23	23.77	-06	20	31.6		3 809
1990	SX12	1990	09	22.01285	23	23	08.02	-06	27	43.1		3 809
1990	SX12	1990	09	22.02603	23	23	07.76	-06	27	50.6		3 809
1990	SX12	1990	09	22.03925	23	23	07.48	-06	27	58.0		3 809
1990	SY12*	1990	09	21.30243	00	35	32.37	+07	03	37.6	17.7	3 809
1990	SY12	1990	09	21.31561	00	35	31.58	+07	03	35.0		3 809
1990	SY12	1990	09	21.32883	00	35	30.78	+07	03	32.5		3 809
1990	SY12	1990	09	22.28229	00	34	33.82	+07	00	29.0		3 809
1990	SY12	1990	09	22.29547	00	34	33.01	+07	00	26.1		3 809
1990	SY12	1990	09	22.30869	00	34	32.22	+07	00	23.7		3 809
1990	SZ12*	1990	09	21.30243	00	36	06.41	+06	42	28.1	17.5	3 809
1990	SZ12	1990	09	21.31561	00	36	05.80	+06	42	21.6		3 809
1990	SZ12	1990	09	21.32883	00	36	05.17	+06	42	14.9		3 809
1990	SZ12	1990	09	22.28229	00	35	20.11	+06	34	14.9		3 809
1990	SZ12	1990	09	22.29547	00	35	19.48	+06	34	08.2		3 809
1990	SZ12	1990	09	22.30869	00	35	18.86	+06	34	01.9		3 809
1990	SA13*	1990	09	21.30243	00	36	16.88	+07	49	14.2	17.6	3 809
1990	SA13	1990	09	21.31561	00	36	16.32	+07	49	10.4		3 809
1990	SA13	1990	09	21.32883	00	36	15.75	+07	49	06.5		3 809
1990	SA13	1990	09	22.28229	00	35	35.89	+07	44	21.6		3 809
1990	SA13	1990	09	22.29547	00	35	35.32	+07	44	17.5		3 809
1990	SA13	1990	09	22.30869	00	35	34.78	+07	44	13.5		3 809
1990	SB13*	1990	09	22.05383	23	22	35.11	-03	43	09.1	17.1	3 809
1990	SB13	1990	09	22.06702	23	22	34.55	-03	43	13.0		3 809
1990	SB13	1990	09	22.08020	23	22	33.96	-03	43	16.9		3 809
1990	SB13	1990	09	23.01388	23	21	54.00	-03	47	59.5		3 809
1990	SB13	1990	09	23.02640	23	21	53.46	-03	48	03.4		3 809
1990	SB13	1990	09	23.03888	23	21	52.90	-03	48	07.2		3 809
1990	SB13	1990	09	24.00833	23	21	12.09	-03	52	54.0		3 809
1990	SB13	1990	09	24.02084	23	21	11.56	-03	52	57.6		3 809
1990	SB13	1990	09	24.03333	23	21	11.06	-03	53	01.3		3 809
1990	SB13	1990	09	25.20901	23	20	22.20	-03	58	40.9		3 809
1990	SB13	1990	09	25.22153	23	20	21.68	-03	58	44.8		3 809

1990	SB13	1990	09	25.23404	23	20	21.16	-03	58	48.4		3 809
1990	SC13*	1990	09	22.18506	23	40	38.31	-00	35	46.6	17.3	3 809
1990	SC13	1990	09	22.19827	23	40	37.71	-00	35	50.4		3 809
1990	SC13	1990	09	22.21146	23	40	37.10	-00	35	54.3		3 809
1990	SC13	1990	09	23.09583	23	39	56.19	-00	40	22.4		3 809
1990	SC13	1990	09	23.10834	23	39	55.61	-00	40	26.3		3 809
1990	SC13	1990	09	23.12082	23	39	55.04	-00	40	30.1		3 809
1990	SC13	1990	09	23.27362	23	39	47.99	-00	41	16.4		3 809
1990	SC13	1990	09	23.28610	23	39	47.40	-00	41	20.2		3 809
1990	SC13	1990	09	23.29862	23	39	46.83	-00	41	24.1		3 809
1990	SC13	1990	09	24.13055	23	39	08.43	-00	45	35.5		3 809
1990	SC13	1990	09	24.14307	23	39	07.85	-00	45	39.0		3 809
1990	SC13	1990	09	24.15555	23	39	07.30	-00	45	42.6		3 809
1990	SC13	1990	09	29.29376	23	35	15.74	-01	11	14.2		3 809
1990	SC13	1990	09	29.30347	23	35	15.30	-01	11	17.0		3 809
1990	SC13	1990	09	29.31320	23	35	14.86	-01	11	20.0		3 809
1990	SD13*	1990	09	22.18506	23	41	50.91	-01	29	50.0	17.5	3 809
1990	SD13	1990	09	22.19827	23	41	50.30	-01	29	53.9		3 809
1990	SD13	1990	09	22.21146	23	41	49.69	-01	29	57.5		3 809
1990	SD13	1990	09	23.09583	23	41	08.41	-01	34	04.1		3 809
1990	SD13	1990	09	23.10834	23	41	07.83	-01	34	07.9		3 809
1990	SD13	1990	09	23.12082	23	41	07.22	-01	34	11.4		3 809
1990	SD13	1990	09	24.09097	23	40	21.81	-01	38	40.1		3 809
1990	SD13	1990	09	24.10349	23	40	21.21	-01	38	43.6		3 809
1990	SD13	1990	09	24.11597	23	40	20.63	-01	38	47.0		3 809
1990	SD13	1990	09	24.13055	23	40	19.95	-01	38	51.0		3 809
1990	SD13	1990	09	24.14307	23	40	19.36	-01	38	54.6		3 809
1990	SD13	1990	09	24.15555	23	40	18.78	-01	38	58.1		3 809
1990	SE13*	1990	09	22.18506	23	44	43.22	-00	08	52.2	17.9	3 809
1990	SE13	1990	09	22.19827	23	44	42.64	-00	08	58.0		3 809
1990	SE13	1990	09	22.21146	23	44	42.06	-00	09	03.8		3 809
1990	SE13	1990	09	23.09583	23	44	03.25	-00	15	31.7		3 809
1990	SE13	1990	09	23.10834	23	44	02.71	-00	15	37.0		3 809
1990	SE13	1990	09	23.12082	23	44	02.15	-00	15	42.8		3 809
1990	SE13	1990	09	24.13055	23	43	17.93	-00	23	04.7		3 809
1990	SE13	1990	09	24.14307	23	43	17.38	-00	23	10.3		3 809
1990	SE13	1990	09	24.15555	23	43	16.84	-00	23	16.0		3 809
1990	SF13*	1990	09	22.18506	23	46	22.71	-00	27	38.9	17.5	3 809
1990	SF13	1990	09	22.19827	23	46	22.07	-00	27	42.9		3 809
1990	SF13	1990	09	22.21146	23	46	21.41	-00	27	46.7		3 809
1990	SF13	1990	09	23.09583	23	45	38.56	-00	32	29.5		3 809
1990	SF13	1990	09	23.10834	23	45	37.94	-00	32	33.5		3 809
1990	SF13	1990	09	23.12082	23	45	37.34	-00	32	37.8		3 809
1990	SF13	1990	09	24.13055	23	44	48.36	-00	37	58.1		3 809
1990	SF13	1990	09	24.14307	23	44	47.76	-00	38	02.3		3 809
1990	SF13	1990	09	24.15555	23	44	47.16	-00	38	06.3		3 809
1990	SF13	1990	09	29.29376	23	40	46.50	-01	04	37.5		3 809
1990	SF13	1990	09	29.30347	23	40	46.03	-01	04	40.4		3 809
1990	SF13	1990	09	29.31320	23	40	45.58	-01	04	43.4		3 809
1990	SG13*	1990	09	22.32883	01	38	31.12	+04	23	23.9	17.1	3 809
1990	SG13	1990	09	22.34201	01	38	30.54	+04	23	18.8		3 809
1990	SG13	1990	09	22.35519	01	38	29.95	+04	23	13.8		3 809
1990	SG13	1990	09	24.35556	01	37	01.83	+04	10	32.4		3 809
1990	SG13	1990	09	24.36804	01	37	01.26	+04	10	28.0		3 809
1990	SG13	1990	09	24.38055	01	37	00.71	+04	10	23.3		3 809
1990	SH13*	1990	09	23.01388	23	22	37.11	-02	40	30.9	17.6	3 809
1990	SH13	1990	09	23.02640	23	22	36.48	-02	40	35.6		3 809
1990	SH13	1990	09	23.03888	23	22	35.87	-02	40	40.1		3 809
1990	SH13	1990	09	24.00833	23	21	48.49	-02	46	39.0		3 809

1990	SH13	1990	09	24.02084	23	21	47.88	-02	46	43.5		3 809
1990	SH13	1990	09	24.03333	23	21	47.29	-02	46	47.9		3 809
1990	SH13	1990	09	25.20901	23	20	50.12	-02	54	00.0		3 809
1990	SH13	1990	09	25.22153	23	20	49.52	-02	54	04.3		3 809
1990	SH13	1990	09	25.23404	23	20	48.94	-02	54	08.7		3 809
1990	SJ13*	1990	09	23.05695	23	35	34.58	-03	36	39.5	17.3	3 809
1990	SJ13	1990	09	23.06946	23	35	33.92	-03	36	45.5		3 809
1990	SJ13	1990	09	23.08194	23	35	33.25	-03	36	51.1		3 809
1990	SJ13	1990	09	23.13681	23	35	30.32	-03	37	17.4		3 809
1990	SJ13	1990	09	23.14929	23	35	29.65	-03	37	23.4		3 809
1990	SJ13	1990	09	23.16180	23	35	28.98	-03	37	29.2		3 809
1990	SJ13	1990	09	24.05139	23	34	41.54	-03	44	29.0		3 809
1990	SJ13	1990	09	24.06390	23	34	40.88	-03	44	35.0		3 809
1990	SJ13	1990	09	24.07638	23	34	40.22	-03	44	41.1		3 809
1990	SK13*	1990	09	23.05695	23	37	48.50	-03	25	25.5	17.1	3 809
1990	SK13	1990	09	23.06946	23	37	47.97	-03	25	29.5		3 809
1990	SK13	1990	09	23.08194	23	37	47.45	-03	25	33.6		3 809
1990	SK13	1990	09	23.13681	23	37	45.14	-03	25	49.8		3 809
1990	SK13	1990	09	23.14929	23	37	44.62	-03	25	53.8		3 809
1990	SK13	1990	09	23.16180	23	37	44.09	-03	25	57.7		3 809
1990	SK13	1990	09	24.05139	23	37	06.57	-03	30	32.8		3 809
1990	SK13	1990	09	24.06390	23	37	06.04	-03	30	36.3		3 809
1990	SK13	1990	09	24.07638	23	37	05.52	-03	30	40.1		3 809
1990	SL13*	1990	09	23.05695	23	38	08.81	-02	53	19.5	17.5	3 809
1990	SL13	1990	09	23.06946	23	38	08.24	-02	53	25.0		3 809
1990	SL13	1990	09	23.08194	23	38	07.67	-02	53	30.5		3 809
1990	SL13	1990	09	23.13681	23	38	04.84	-02	53	53.8		3 809
1990	SL13	1990	09	23.14929	23	38	04.26	-02	53	59.7		3 809
1990	SL13	1990	09	23.16180	23	38	03.68	-02	54	05.6		3 809
1990	SL13	1990	09	24.09097	23	37	20.76	-03	01	08.2		3 809
1990	SL13	1990	09	24.10349	23	37	20.19	-03	01	13.9		3 809
1990	SL13	1990	09	24.11597	23	37	19.61	-03	01	19.5		3 809
1990	SM13*	1990	09	23.05695	23	41	15.79	-03	31	20.0	17.6	3 809
1990	SM13	1990	09	23.06946	23	41	15.18	-03	31	25.5		3 809
1990	SM13	1990	09	23.08194	23	41	14.59	-03	31	30.9		3 809
1990	SM13	1990	09	23.13681	23	41	11.91	-03	31	54.5		3 809
1990	SM13	1990	09	23.14929	23	41	11.30	-03	32	00.0		3 809
1990	SM13	1990	09	23.16180	23	41	10.70	-03	32	05.4		3 809
1990	SM13	1990	09	24.05139	23	40	27.29	-03	38	30.0		3 809
1990	SM13	1990	09	24.06390	23	40	26.69	-03	38	35.4		3 809
1990	SM13	1990	09	24.07638	23	40	26.08	-03	38	40.7		3 809
1990	SN13*	1990	09	23.09583	23	40	54.01	-01	30	28.4	18.1	3 809
1990	SN13	1990	09	23.10834	23	40	53.62	-01	30	34.0		3 809
1990	SN13	1990	09	23.12082	23	40	53.27	-01	30	39.8		3 809
1990	SN13	1990	09	24.13055	23	40	24.28	-01	38	43.2		3 809
1990	SN13	1990	09	24.14307	23	40	23.93	-01	38	49.0		3 809
1990	SN13	1990	09	24.15555	23	40	23.58	-01	38	55.0		3 809
1990	SO13*	1990	09	23.09583	23	41	43.48	-01	31	07.0	18.0	3 809
1990	SO13	1990	09	23.10834	23	41	42.80	-01	31	11.6		3 809
1990	SO13	1990	09	23.12082	23	41	42.14	-01	31	16.3		3 809
1990	SO13	1990	09	24.09097	23	40	50.27	-01	37	19.3		3 809
1990	SO13	1990	09	24.10349	23	40	49.60	-01	37	24.1		3 809
1990	SO13	1990	09	24.11597	23	40	48.94	-01	37	28.7		3 809
1990	SO13	1990	09	24.13055	23	40	48.16	-01	37	33.9		3 809
1990	SO13	1990	09	24.14307	23	40	47.50	-01	37	38.7		3 809
1990	SO13	1990	09	24.15555	23	40	46.85	-01	37	43.3		3 809
1990	SP13*	1990	09	23.09583	23	42	05.22	-01	25	59.0	18.0	3 809
1990	SP13	1990	09	23.10834	23	42	04.65	-01	26	04.0		3 809
1990	SP13	1990	09	23.12082	23	42	04.08	-01	26	09.0		3 809

1990	SP13	1990	09	24.13055	23	41	17.91	-01	32	47.3		3 809
1990	SP13	1990	09	24.14307	23	41	17.34	-01	32	52.3		3 809
1990	SP13	1990	09	24.15555	23	41	16.77	-01	32	57.4		3 809
1990	SQ13*	1990	09	23.09583	23	44	03.56	-01	19	16.9	18.0	3 809
1990	SQ13	1990	09	23.10834	23	44	03.04	-01	19	21.4		3 809
1990	SQ13	1990	09	23.12082	23	44	02.52	-01	19	25.8		3 809
1990	SQ13	1990	09	24.13055	23	43	21.90	-01	25	14.7		3 809
1990	SQ13	1990	09	24.14307	23	43	21.40	-01	25	19.0		3 809
1990	SQ13	1990	09	24.15555	23	43	20.92	-01	25	23.1		3 809
1990	SR13*	1990	09	23.13681	23	35	55.70	-02	15	08.3	17.5	3 809
1990	SR13	1990	09	23.14929	23	35	55.43	-02	15	18.9		3 809
1990	SR13	1990	09	23.16180	23	35	55.15	-02	15	29.0		3 809
1990	SR13	1990	09	24.09097	23	35	34.83	-02	28	27.9		3 809
1990	SR13	1990	09	24.10349	23	35	34.53	-02	28	38.3		3 809
1990	SR13	1990	09	24.11597	23	35	34.26	-02	28	48.9		3 809
1990	SS13*	1990	09	23.13681	23	35	59.74	-02	30	36.6	17.4	3 809
1990	SS13	1990	09	23.14929	23	35	59.16	-02	30	40.7		3 809
1990	SS13	1990	09	23.16180	23	35	58.57	-02	30	45.0		3 809
1990	SS13	1990	09	24.09097	23	35	16.19	-02	36	04.4		3 809
1990	SS13	1990	09	24.10349	23	35	15.63	-02	36	08.9		3 809
1990	SS13	1990	09	24.11597	23	35	15.05	-02	36	13.5		3 809
1990	ST13*	1990	09	23.13681	23	38	39.02	-02	24	42.4	18.1	3 809
1990	ST13	1990	09	23.14929	23	38	38.32	-02	24	44.5		3 809
1990	ST13	1990	09	23.16180	23	38	37.59	-02	24	46.6		3 809
1990	ST13	1990	09	24.09097	23	37	43.69	-02	27	03.7		3 809
1990	ST13	1990	09	24.10349	23	37	42.96	-02	27	05.5		3 809
1990	ST13	1990	09	24.11597	23	37	42.24	-02	27	07.4		3 809
1990	SU13*	1990	09	23.13681	23	41	33.14	-02	16	10.6	17.9	3 809
1990	SU13	1990	09	23.14929	23	41	32.55	-02	16	17.2		3 809
1990	SU13	1990	09	23.16180	23	41	31.95	-02	16	24.0		3 809
1990	SU13	1990	09	24.09097	23	40	47.81	-02	24	34.0		3 809
1990	SU13	1990	09	24.10349	23	40	47.22	-02	24	40.5		3 809
1990	SU13	1990	09	24.11597	23	40	46.62	-02	24	47.2		3 809
1990	SV13*	1990	09	23.23193	23	02	14.16	-08	31	50.4	17.6	3 809
1990	SV13	1990	09	23.24445	23	02	13.53	-08	31	52.6		3 809
1990	SV13	1990	09	23.25696	23	02	12.92	-08	31	54.7		3 809
1990	SV13	1990	09	24.17221	23	01	27.33	-08	34	18.5		3 809
1990	SV13	1990	09	24.18472	23	01	26.71	-08	34	20.5		3 809
1990	SV13	1990	09	24.19724	23	01	26.08	-08	34	22.5		3 809
1990	SW13*	1990	09	23.23193	23	04	41.02	-07	17	15.4	18.1	3 809
1990	SW13	1990	09	23.24445	23	04	40.57	-07	17	19.4		3 809
1990	SW13	1990	09	23.25696	23	04	40.11	-07	17	23.5		3 809
1990	SW13	1990	09	24.17221	23	04	06.71	-07	22	18.0		3 809
1990	SW13	1990	09	24.18472	23	04	06.23	-07	22	22.3		3 809
1990	SW13	1990	09	24.19724	23	04	05.77	-07	22	26.3		3 809
1990	SX13*	1990	09	23.23193	23	05	04.68	-08	41	57.2	17.8	3 809
1990	SX13	1990	09	23.24445	23	05	04.08	-08	42	00.9		3 809
1990	SX13	1990	09	23.25696	23	05	03.47	-08	42	04.8		3 809
1990	SX13	1990	09	24.17221	23	04	18.94	-08	46	50.5		3 809
1990	SX13	1990	09	24.18472	23	04	18.32	-08	46	54.3		3 809
1990	SX13	1990	09	24.19724	23	04	17.70	-08	46	58.2		3 809
1990	SY13*	1990	09	23.23193	23	07	10.73	-07	09	18.1	17.9	3 809
1990	SY13	1990	09	23.24445	23	07	10.15	-07	09	23.7		3 809
1990	SY13	1990	09	23.25696	23	07	09.57	-07	09	29.3		3 809
1990	SY13	1990	09	24.17221	23	06	27.73	-07	16	23.9		3 809
1990	SY13	1990	09	24.18472	23	06	27.17	-07	16	29.5		3 809
1990	SY13	1990	09	24.19724	23	06	26.59	-07	16	35.2		3 809
1990	SZ13*	1990	09	23.23193	23	09	07.44	-08	40	59.1	17.9	3 809
1990	SZ13	1990	09	23.24445	23	09	06.89	-08	41	06.5		3 809

1990	SZ13	1990	09	23.25696	23	09	06.36	-08	41	14.0		3 809
1990	SZ13	1990	09	24.17221	23	08	26.39	-08	50	20.4		3 809
1990	SZ13	1990	09	24.18472	23	08	25.83	-08	50	28.1		3 809
1990	SZ13	1990	09	24.19724	23	08	25.28	-08	50	35.9		3 809
1990	SA14*	1990	09	23.27362	23	33	58.66	-01	07	13.1	17.1	3 809
1990	SA14	1990	09	23.28610	23	33	58.11	-01	07	18.4		3 809
1990	SA14	1990	09	23.29862	23	33	57.56	-01	07	23.5		3 809
1990	SA14	1990	09	24.09097	23	33	21.88	-01	13	02.1		3 809
1990	SA14	1990	09	24.10349	23	33	21.32	-01	13	07.6		3 809
1990	SA14	1990	09	24.11597	23	33	20.75	-01	13	12.7		3 809
1990	SA14	1990	09	24.26737	23	33	13.92	-01	14	17.9		3 809
1990	SA14	1990	09	24.27985	23	33	13.35	-01	14	23.2		3 809
1990	SA14	1990	09	24.29236	23	33	12.79	-01	14	28.5		3 809
1990	SA14	1990	09	25.25903	23	32	29.79	-01	21	16.0		3 809
1990	SA14	1990	09	25.27152	23	32	29.24	-01	21	21.2		3 809
1990	SA14	1990	09	25.28403	23	32	28.68	-01	21	26.5		3 809
1990	SA14	1990	09	27.25418	23	31	02.37	-01	34	57.3		3 809
1990	SA14	1990	09	27.26666	23	31	01.82	-01	35	02.4		3 809
1990	SA14	1990	09	27.27918	23	31	01.28	-01	35	07.5		3 809
1990	SB14*	1990	09	23.27362	23	36	09.74	-01	18	42.4	17.4	3 809
1990	SB14	1990	09	23.28610	23	36	09.17	-01	18	45.9		3 809
1990	SB14	1990	09	23.29862	23	36	08.59	-01	18	49.3		3 809
1990	SB14	1990	09	24.09097	23	35	32.14	-01	22	31.1		3 809
1990	SB14	1990	09	24.10349	23	35	31.55	-01	22	34.7		3 809
1990	SB14	1990	09	24.11597	23	35	30.97	-01	22	38.4		3 809
1990	SB14	1990	09	24.26737	23	35	24.02	-01	23	20.7		3 809
1990	SB14	1990	09	24.27985	23	35	23.44	-01	23	24.3		3 809
1990	SB14	1990	09	24.29236	23	35	22.87	-01	23	27.6		3 809
1990	SB14	1990	09	25.25903	23	34	38.64	-01	27	52.8		3 809
1990	SB14	1990	09	25.27152	23	34	38.08	-01	27	56.4		3 809
1990	SB14	1990	09	25.28403	23	34	37.53	-01	27	59.9		3 809
1990	SB14	1990	09	27.25418	23	33	08.94	-01	37	00.3		3 809
1990	SB14	1990	09	27.26666	23	33	08.26	-01	37	01.5		3 809
1990	SB14	1990	09	27.27918	23	33	07.58	-01	37	02.3		3 809
1990	SC14*	1990	09	23.27362	23	36	16.72	-00	13	41.8	17.9	3 809
1990	SC14	1990	09	23.28610	23	36	16.30	-00	13	48.5		3 809
1990	SC14	1990	09	23.29862	23	36	15.88	-00	13	55.5		3 809
1990	SC14	1990	09	24.26737	23	35	43.99	-00	22	55.5		3 809
1990	SC14	1990	09	24.27985	23	35	43.58	-00	23	02.6		3 809
1990	SC14	1990	09	24.29236	23	35	43.18	-00	23	09.5		3 809
1990	SC14	1990	09	25.25903	23	35	11.82	-00	32	08.0		3 809
1990	SC14	1990	09	25.27152	23	35	11.42	-00	32	14.9		3 809
1990	SC14	1990	09	25.28403	23	35	11.02	-00	32	21.8		3 809
1990	SD14*	1990	09	23.27362	23	36	22.55	-00	14	30.9	17.2	3 809
1990	SD14	1990	09	23.28610	23	36	21.95	-00	14	35.4		3 809
1990	SD14	1990	09	23.29862	23	36	21.36	-00	14	39.6		3 809
1990	SD14	1990	09	24.26737	23	35	35.65	-00	20	14.2		3 809
1990	SD14	1990	09	24.27985	23	35	35.05	-00	20	18.4		3 809
1990	SD14	1990	09	24.29236	23	35	34.44	-00	20	22.9		3 809
1990	SD14	1990	09	25.25903	23	34	49.23	-00	25	58.0		3 809
1990	SD14	1990	09	25.27152	23	34	48.65	-00	26	02.0		3 809
1990	SD14	1990	09	25.28403	23	34	48.09	-00	26	06.4		3 809
1990	SD14	1990	09	27.25418	23	33	17.28	-00	37	24.3		3 809
1990	SD14	1990	09	27.26666	23	33	16.71	-00	37	28.5		3 809
1990	SD14	1990	09	27.27918	23	33	16.14	-00	37	32.9		3 809
1990	SE14*	1990	09	23.27362	23	36	47.00	-01	27	59.5	17.3	3 809
1990	SE14	1990	09	23.28610	23	36	46.29	-01	28	02.0		3 809
1990	SE14	1990	09	23.29862	23	36	45.59	-01	28	04.6		3 809
1990	SE14	1990	09	24.09097	23	36	01.82	-01	30	44.8		3 809

1990	SE14	1990	09	24.10349	23	36	01.13	-01	30	47.3		3 809
1990	SE14	1990	09	24.11597	23	36	00.44	-01	30	49.9		3 809
1990	SE14	1990	09	24.26737	23	35	52.11	-01	31	20.3		3 809
1990	SE14	1990	09	24.27985	23	35	51.42	-01	31	22.9		3 809
1990	SE14	1990	09	24.29236	23	35	50.73	-01	31	25.6		3 809
1990	SE14	1990	09	25.25903	23	34	57.53	-01	34	35.3		3 809
1990	SE14	1990	09	25.27152	23	34	56.85	-01	34	37.7		3 809
1990	SE14	1990	09	25.28403	23	34	56.17	-01	34	40.1		3 809
1990	SF14*	1990	09	23.31457	00	01	48.13	+03	44	22.5	17.5	3 809
1990	SF14	1990	09	23.32709	00	01	47.55	+03	44	17.1		3 809
1990	SF14	1990	09	23.33957	00	01	46.97	+03	44	12.0		3 809
1990	SF14	1990	09	24.31284	00	01	01.46	+03	37	18.8		3 809
1990	SF14	1990	09	24.32535	00	01	00.88	+03	37	13.5		3 809
1990	SF14	1990	09	24.33820	00	01	00.27	+03	37	07.8		3 809
1990	SG14*	1990	09	23.31457	00	05	44.88	+02	02	18.8	17.7	3 809
1990	SG14	1990	09	23.32709	00	05	44.15	+02	02	15.6		3 809
1990	SG14	1990	09	23.33957	00	05	43.42	+02	02	12.8		3 809
1990	SG14	1990	09	24.31284	00	04	46.82	+01	58	18.1		3 809
1990	SG14	1990	09	24.32535	00	04	46.10	+01	58	15.2		3 809
1990	SG14	1990	09	24.33820	00	04	45.34	+01	58	11.8		3 809
1990	SH14*	1990	09	24.00833	23	19	27.89	-03	52	34.5	17.5	3 809
1990	SH14	1990	09	24.02084	23	19	27.46	-03	52	41.3		3 809
1990	SH14	1990	09	24.03333	23	19	27.02	-03	52	48.3		3 809
1990	SH14	1990	09	25.20901	23	18	45.09	-04	03	43.4		3 809
1990	SH14	1990	09	25.22153	23	18	44.65	-04	03	50.5		3 809
1990	SH14	1990	09	25.23404	23	18	44.20	-04	03	57.8		3 809
1990	SJ14*	1990	09	24.00833	23	19	51.22	-03	56	16.2	17.4	3 809
1990	SJ14	1990	09	24.02084	23	19	50.81	-03	56	24.2		3 809
1990	SJ14	1990	09	24.03333	23	19	50.38	-03	56	32.3		3 809
1990	SJ14	1990	09	25.20901	23	19	11.38	-04	09	23.1		3 809
1990	SJ14	1990	09	25.22153	23	19	10.96	-04	09	31.3		3 809
1990	SJ14	1990	09	25.23404	23	19	10.53	-04	09	39.4		3 809
1990	SK14*	1990	09	24.09097	23	38	02.86	-02	39	04.5		3 809
1990	SK14	1990	09	24.10349	23	38	02.25	-02	39	07.2		3 809
1990	SK14	1990	09	24.11597	23	38	01.62	-02	39	10.2		3 809
1990	SK14	1990	09	30.31946	23	33	31.68	-02	59	42.1		3 809
1990	SK14	1990	09	30.32916	23	33	31.26	-02	59	44.0		3 809
1990	SK14	1990	09	30.33890	23	33	30.84	-02	59	45.9		3 809
1990	SL14*	1990	09	24.22501	23	19	33.55	-05	36	42.5	17.3	3 809
1990	SL14	1990	09	24.23819	23	19	33.00	-05	36	48.0		3 809
1990	SL14	1990	09	24.25140	23	19	32.45	-05	36	53.3		3 809
1990	SL14	1990	09	25.12848	23	18	55.64	-05	42	57.9		3 809
1990	SL14	1990	09	25.14096	23	18	55.09	-05	43	03.3		3 809
1990	SL14	1990	09	25.15347	23	18	54.54	-05	43	08.7		3 809
1990	SM14*	1990	09	24.35556	01	33	10.44	+02	54	50.4	16.6	3 809
1990	SM14	1990	09	24.36804	01	33	09.95	+02	54	44.7		3 809
1990	SM14	1990	09	24.38055	01	33	09.47	+02	54	39.1		3 809
1990	SM14	1990	09	25.30139	01	32	33.87	+02	47	52.9		3 809
1990	SM14	1990	09	25.31390	01	32	33.40	+02	47	47.6		3 809
1990	SM14	1990	09	25.32638	01	32	32.91	+02	47	42.3		3 809
1990	SM14	1990	09	26.31457	01	31	53.11	+02	40	27.2		3 809
1990	SM14	1990	09	26.32709	01	31	52.61	+02	40	21.7		3 809
1990	SM14	1990	09	26.33957	01	31	52.11	+02	40	16.2		3 809
1990	SM14	1990	09	29.32846	01	29	43.94	+02	17	56.4		3 809
1990	SM14	1990	09	29.33820	01	29	43.52	+02	17	52.0		3 809
1990	SM14	1990	09	29.34793	01	29	43.11	+02	17	47.5		3 809
1990	SN14*	1990	09	25.08612	22	59	59.23	-07	46	05.9	17.7	3 809
1990	SN14	1990	09	25.09860	22	59	58.67	-07	46	07.3		3 809
1990	SN14	1990	09	25.11112	22	59	58.12	-07	46	08.7		3 809

1990	SN14	1990	09	26.23682	22	59	09.65	-07	48	17.0		3 809
1990	SN14	1990	09	26.24652	22	59	09.24	-07	48	18.0		3 809
1990	SN14	1990	09	26.25626	22	59	08.81	-07	48	19.0		3 809
1990	SO14*	1990	09	25.16876	23	24	43.90	-01	26	37.5	17.2	3 809
1990	SO14	1990	09	25.18124	23	24	43.34	-01	26	40.2		3 809
1990	SO14	1990	09	25.19376	23	24	42.79	-01	26	42.1		3 809
1990	SO14	1990	09	26.27084	23	23	55.12	-01	30	49.3		3 809
1990	SO14	1990	09	26.28055	23	23	54.69	-01	30	51.6		3 809
1990	SO14	1990	09	26.29028	23	23	54.24	-01	30	53.5		3 809
1990	SP14*	1990	09	25.16876	23	25	52.90	-00	10	40.3	17.8	3 809
1990	SP14	1990	09	25.18124	23	25	52.42	-00	10	49.3		3 809
1990	SP14	1990	09	25.19376	23	25	51.94	-00	10	58.4		3 809
1990	SP14	1990	09	26.27084	23	25	10.08	-00	23	57.0		3 809
1990	SP14	1990	09	26.28055	23	25	09.71	-00	24	04.2		3 809
1990	SP14	1990	09	26.29028	23	25	09.30	-00	24	11.1		3 809
1990	SQ14*	1990	09	25.16876	23	26	22.00	-00	52	15.1	17.9	3 809
1990	SQ14	1990	09	25.18124	23	26	20.79	-00	52	07.8		3 809
1990	SQ14	1990	09	25.19376	23	26	19.58	-00	52	00.6		3 809
1990	SQ14	1990	09	26.27084	23	24	36.05	-00	41	52.4		3 809
1990	SQ14	1990	09	26.28055	23	24	35.12	-00	41	46.7		3 809
1990	SQ14	1990	09	26.29028	23	24	34.20	-00	41	40.9		3 809
1990	SR14*	1990	09	25.16876	23	27	04.80	-01	22	59.8	17.5	3 809
1990	SR14	1990	09	25.18124	23	27	04.13	-01	23	02.6		3 809
1990	SR14	1990	09	25.19376	23	27	03.46	-01	23	05.7		3 809
1990	SR14	1990	09	26.27084	23	26	06.77	-01	27	25.0		3 809
1990	SR14	1990	09	26.28055	23	26	06.26	-01	27	27.4		3 809
1990	SR14	1990	09	26.29028	23	26	05.75	-01	27	29.8		3 809
1990	SS14*	1990	09	25.30139	01	33	55.60	+02	21	05.9	18.0	3 809
1990	SS14	1990	09	25.31390	01	33	54.98	+02	21	04.7		3 809
1990	SS14	1990	09	25.32638	01	33	54.35	+02	21	03.5		3 809
1990	SS14	1990	09	26.31457	01	33	04.63	+02	19	29.0		3 809
1990	SS14	1990	09	26.32709	01	33	03.99	+02	19	28.1		3 809
1990	SS14	1990	09	26.33957	01	33	03.38	+02	19	27.0		3 809
1990	ST14*	1990	09	25.30139	01	35	37.48	+01	32	35.9	17.8	3 809
1990	ST14	1990	09	25.31390	01	35	37.01	+01	32	34.9		3 809
1990	ST14	1990	09	25.32638	01	35	36.51	+01	32	33.8		3 809
1990	ST14	1990	09	26.31457	01	34	58.38	+01	31	09.3		3 809
1990	ST14	1990	09	26.32709	01	34	57.89	+01	31	08.2		3 809
1990	ST14	1990	09	26.33957	01	34	57.42	+01	31	07.2		3 809
1990	ST14	1990	09	29.32846	01	32	53.27	+01	26	48.4		3 809
1990	ST14	1990	09	29.33820	01	32	52.87	+01	26	47.4		3 809
1990	ST14	1990	09	29.34793	01	32	52.47	+01	26	46.4		3 809
1990	SU14*	1990	09	25.34235	01	40	46.25	+09	21	50.8	17.9	3 809
1990	SU14	1990	09	25.35486	01	40	45.57	+09	21	53.0		3 809
1990	SU14	1990	09	25.36737	01	40	44.92	+09	21	55.2		3 809
1990	SU14	1990	09	26.35348	01	39	52.81	+09	24	49.6		3 809
1990	SU14	1990	09	26.36597	01	39	52.16	+09	24	51.7		3 809
1990	SU14	1990	09	26.37848	01	39	51.47	+09	24	54.0		3 809
1990	SU14	1990	09	28.34860	01	38	03.43	+09	30	26.8		3 809
1990	SU14	1990	09	28.36112	01	38	02.76	+09	30	29.0		3 809
1990	SU14	1990	09	28.37360	01	38	02.08	+09	30	31.3		3 809
1990	SV14*	1990	09	30.35486	01	26	06.23	-03	09	14.3	17.4	3 809
1990	SV14	1990	09	30.36459	01	26	05.66	-03	09	14.7		3 809
1990	SV14	1990	09	30.37430	01	26	05.10	-03	09	15.1		3 809
1990	SV14	1990	10	01.35138	01	25	09.49	-03	09	48.8		3 809
1990	SV14	1990	10	01.36389	01	25	08.81	-03	09	49.4		3 809
1990	SV14	1990	10	01.37640	01	25	08.07	-03	09	49.9		3 809
1990	TM1	1990	10	19.23819	02	45	57.39	+08	26	33.5		4 809
1990	TM1	1990	10	19.26458	02	45	56.19	+08	26	29.5		4 809

1990	TM1	1990	10	24.25417	02	42	17.33	+08	12	14.5	17.9	4 809
1990	TM1	1990	10	24.26736	02	42	16.71	+08	12	11.4		4 809
1990	TM1	1990	10	24.28056	02	42	16.02	+08	12	09.3		4 809
1990	TH3	1990	10	19.23819	02	54	54.21	+09	19	13.4		4 809
1990	TH3	1990	10	19.26458	02	54	52.63	+09	19	18.5		4 809
1990	TJ3	1990	10	19.23819	02	55	51.77	+08	32	10.6		4 809
1990	TJ3	1990	10	19.26458	02	55	50.41	+08	32	05.9		4 809
1990	TJ3	1990	10	24.25417	02	51	29.09	+08	17	36.7	17.5	4 809
1990	TJ3	1990	10	24.26736	02	51	28.26	+08	17	34.5		4 809
1990	TJ3	1990	10	24.28056	02	51	27.46	+08	17	32.6		4 809
1990	TW8	1990	09	25.34235	01	43	46.31	+09	56	06.4	17.9	3 809
1990	TW8	1990	09	25.35486	01	43	45.71	+09	56	06.7		3 809
1990	TW8	1990	09	25.36737	01	43	45.11	+09	56	06.9		3 809
1990	TW8	1990	09	26.35348	01	42	56.72	+09	56	19.3		3 809
1990	TW8	1990	09	26.36597	01	42	56.10	+09	56	19.5		3 809
1990	TW8	1990	09	26.37848	01	42	55.50	+09	56	19.7		3 809
1990	TW8	1990	09	28.34860	01	41	13.85	+09	56	22.9		3 809
1990	TW8	1990	09	28.36112	01	41	13.20	+09	56	23.0		3 809
1990	TW8	1990	09	28.37360	01	41	12.55	+09	56	23.2		3 809
1990	TW8	1990	09	29.35971	01	40	19.38	+09	56	12.7		3 809
1990	TW8	1990	09	29.36945	01	40	18.85	+09	56	12.6		3 809
1990	TW8	1990	09	29.37918	01	40	18.33	+09	56	12.6		3 809
1990	TX8	1990	09	25.34235	01	41	38.65	+10	00	28.9	17.8	3 809
1990	TX8	1990	09	25.35486	01	41	38.22	+10	00	28.5		3 809
1990	TX8	1990	09	25.36737	01	41	37.81	+10	00	28.1		3 809
1990	TX8	1990	09	26.35348	01	41	04.87	+09	59	51.7		3 809
1990	TX8	1990	09	26.36597	01	41	04.46	+09	59	51.3		3 809
1990	TX8	1990	09	26.37848	01	41	04.05	+09	59	50.8		3 809
1990	TX8	1990	09	28.34860	01	39	53.51	+09	58	09.5		3 809
1990	TX8	1990	09	28.36112	01	39	53.08	+09	58	09.1		3 809
1990	TX8	1990	09	28.37360	01	39	52.66	+09	58	08.7		3 809
1990	TX8	1990	09	29.35971	01	39	15.13	+09	57	07.9		3 809
1990	TX8	1990	09	29.36945	01	39	14.76	+09	57	07.4		3 809
1990	TX8	1990	09	29.37918	01	39	14.39	+09	57	06.9		3 809
1990	UL1	1990	10	16.28472	03	19	56.38	+09	30	58.5		4 809
1990	UL1	1990	10	16.31111	03	19	55.36	+09	30	54.0		4 809
1990	UL1	1990	10	20.25764	03	17	38.04	+09	18	21.9		4 809
1990	UL1	1990	10	24.29722	03	14	46.34	+09	05	34.1	17.8	4 809
1990	UL1	1990	10	24.31042	03	14	45.62	+09	05	32.5		4 809
1990	UL1	1990	10	24.32361	03	14	44.95	+09	05	29.9		4 809
1990	UP1	1990	10	16.28472	03	13	24.71	+11	30	42.9		4 809
1990	UP1	1990	10	16.31111	03	13	23.59	+11	30	47.4		4 809
1990	UP1	1990	10	20.25764	03	10	29.48	+11	42	11.7		4 809
1990	UB2	1990	10	19.23819	02	48	09.17	+06	53	03.9		4 809
1990	UB2	1990	10	19.26458	02	48	07.41	+06	52	58.2		4 809
1990	UB2	1990	10	24.25417	02	42	48.37	+06	35	42.2	18.0	4 809
1990	UB2	1990	10	24.26736	02	42	47.44	+06	35	39.2		4 809
1990	UB2	1990	10	24.28056	02	42	46.49	+06	35	37.4		4 809
1990	UM2	1990	10	19.23819	02	52	41.46	+08	43	25.8		4 809
1990	UM2	1990	10	19.26458	02	52	40.09	+08	43	25.6		4 809
1990	UM2	1990	10	24.25417	02	48	30.40	+08	38	33.4	18.6	4 809
1990	UM2	1990	10	24.26736	02	48	29.67	+08	38	31.9		4 809
1990	UM2	1990	10	24.28056	02	48	28.98	+08	38	31.8		4 809
1990	UV2	1990	09	25.16876	23	27	18.18	-00	29	28.7	17.5	3 809
1990	UV2	1990	09	25.18124	23	27	17.55	-00	29	32.9		3 809
1990	UV2	1990	09	25.19376	23	27	16.91	-00	29	37.0		3 809
1990	UV2	1990	09	26.27084	23	26	22.13	-00	35	20.3		3 809
1990	UV2	1990	09	26.28055	23	26	21.64	-00	35	23.4		3 809
1990	UV2	1990	09	26.29028	23	26	21.15	-00	35	26.4		3 809

1990	UW2	1990	10	16.28472	03	07	44.94	+10	15	54.2		4 809
1990	UW2	1990	10	16.31111	03	07	43.63	+10	15	50.5		4 809
1990	UW2	1990	10	20.25764	03	05	03.14	+10	06	25.8		4 809
1990	UW2	1990	10	24.29722	03	02	05.53	+09	56	39.1	19.3	4 809
1990	UW2	1990	10	24.31042	03	02	04.84	+09	56	37.6		4 809
1990	UW2	1990	10	24.32361	03	02	04.33	+09	56	35.2		4 809
1990	UN3	1990	10	16.28472	03	04	12.92	+07	45	21.0		4 809
1990	UN3	1990	10	16.31111	03	04	11.89	+07	45	10.4		4 809
1990	UN3	1990	10	19.23819	03	02	43.61	+07	23	57.9		4 809
1990	UN3	1990	10	19.26458	03	02	42.59	+07	23	46.5		4 809
1990	UN3	1990	10	20.25764	03	02	08.99	+07	16	37.0		4 809
1990	UN3	1990	10	24.29722	02	59	36.30	+06	47	37.4	18.5	4 809
1990	UN3	1990	10	24.31042	02	59	35.65	+06	47	30.9		4 809
1990	UN3	1990	10	24.32361	02	59	35.01	+06	47	25.8		4 809
1990	UO3	1990	10	16.28472	03	06	51.31	+10	28	51.3		4 809
1990	UO3	1990	10	16.31111	03	06	50.15	+10	28	45.9		4 809
1990	UO3	1990	10	20.25764	03	05	48.75	+09	59	13.7		4 809
1990	UP3	1990	10	16.28472	03	07	06.10	+09	03	42.5		4 809
1990	UP3	1990	10	16.31111	03	07	04.82	+09	03	36.4		4 809
1990	UP3	1990	10	19.23819	03	04	41.10	+08	52	51.7		4 809
1990	UP3	1990	10	19.26458	03	04	39.65	+08	52	45.9		4 809
1990	UP3	1990	10	20.25764	03	03	48.22	+08	49	03.4		4 809
1990	UP3	1990	10	24.29722	03	00	05.51	+08	34	03.9	18.7	4 809
1990	UP3	1990	10	24.31042	03	00	04.66	+08	34	00.9		4 809
1990	UP3	1990	10	24.32361	03	00	03.86	+08	33	58.1		4 809
1990	UQ3	1990	10	16.28472	03	07	07.64	+10	31	46.3		4 809
1990	UQ3	1990	10	16.31111	03	07	06.64	+10	31	33.2		4 809
1990	UQ3	1990	10	20.25764	03	04	18.45	+10	01	28.3		4 809
1990	UQ3	1990	10	24.29722	03	01	03.73	+09	30	17.2	18.5	4 809
1990	UQ3	1990	10	24.31042	03	01	02.95	+09	30	09.7		4 809
1990	UQ3	1990	10	24.32361	03	01	02.27	+09	30	03.1		4 809
1990	US3	1990	10	16.28472	03	07	44.57	+08	29	10.2		4 809
1990	US3	1990	10	16.31111	03	07	43.53	+08	29	06.3		4 809
1990	US3	1990	10	19.23819	03	05	49.60	+08	21	55.3		4 809
1990	US3	1990	10	19.26458	03	05	48.41	+08	21	52.5		4 809
1990	US3	1990	10	20.25764	03	05	07.93	+08	19	23.2		4 809
1990	US3	1990	10	24.29722	03	02	12.66	+08	09	36.8	18.6	4 809
1990	US3	1990	10	24.31042	03	02	12.00	+08	09	35.8		4 809
1990	US3	1990	10	24.32361	03	02	11.36	+08	09	32.0		4 809
1990	UU3	1990	10	16.28472	03	09	15.16	+08	18	30.1		4 809
1990	UU3	1990	10	16.31111	03	09	13.95	+08	18	16.5		4 809
1990	UU3	1990	10	20.25764	03	06	25.96	+07	46	35.3		4 809
1990	UU3	1990	10	24.29722	03	03	18.62	+07	14	10.9	18.7	4 809
1990	UU3	1990	10	24.31042	03	03	17.94	+07	14	04.2		4 809
1990	UU3	1990	10	24.32361	03	03	17.28	+07	13	58.3		4 809
1990	UV3	1990	10	16.28472	03	09	28.21	+09	11	42.7		4 809
1990	UV3	1990	10	16.31111	03	09	26.78	+09	11	47.6		4 809
1990	UV3	1990	10	20.25764	03	05	58.59	+09	23	32.2		4 809
1990	UV3	1990	10	24.29722	03	02	02.44	+09	36	00.6	18.5	4 809
1990	UV3	1990	10	24.31042	03	02	01.59	+09	36	03.1		4 809
1990	UV3	1990	10	24.32361	03	02	00.87	+09	36	04.7		4 809
1990	UW3	1990	10	16.28472	03	10	10.40	+11	42	50.0		4 809
1990	UW3	1990	10	16.31111	03	10	09.61	+11	42	43.1		4 809
1990	UW3	1990	10	20.25764	03	07	40.62	+11	25	46.0		4 809
1990	UW3	1990	10	24.29722	03	04	42.73	+11	07	36.9	19.0	4 809
1990	UW3	1990	10	24.31042	03	04	41.82	+11	07	31.1		4 809
1990	UW3	1990	10	24.32361	03	04	41.19	+11	07	26.0		4 809
1990	UX3	1990	10	16.28472	03	11	46.59	+11	32	46.3		4 809
1990	UX3	1990	10	16.31111	03	11	45.45	+11	32	33.2		4 809

1990	UX3	1990	10	20.25764	03	08	55.03	+10	56	21.0		4 809
1990	UY3	1990	10	16.28472	03	12	30.28	+09	41	14.1		4 809
1990	UY3	1990	10	16.31111	03	12	29.13	+09	41	14.3		4 809
1990	UY3	1990	10	20.25764	03	09	41.54	+09	40	08.0		4 809
1990	UY3	1990	10	24.29722	03	06	31.31	+09	39	06.7	17.7	4 809
1990	UY3	1990	10	24.31042	03	06	30.55	+09	39	06.3		4 809
1990	UY3	1990	10	24.32361	03	06	29.89	+09	39	05.6		4 809
1990	UZ3	1990	10	16.28472	03	13	08.14	+07	55	29.3		4 809
1990	UZ3	1990	10	16.31111	03	13	07.06	+07	55	19.6		4 809
1990	UZ3	1990	10	20.25764	03	10	30.47	+07	29	47.8		4 809
1990	UZ3	1990	10	24.29722	03	07	31.42	+07	03	25.1	18.4	4 809
1990	UZ3	1990	10	24.31042	03	07	30.69	+07	03	19.8		4 809
1990	UZ3	1990	10	24.32361	03	07	29.99	+07	03	15.1		4 809
1990	UA4	1990	10	16.28472	03	13	27.64	+09	01	25.4		4 809
1990	UA4	1990	10	16.31111	03	13	26.68	+09	01	07.9		4 809
1990	UA4	1990	10	20.25764	03	11	20.37	+08	19	30.0		4 809
1990	UA4	1990	10	24.29722	03	08	48.67	+07	35	55.4	18.5	4 809
1990	UA4	1990	10	24.31042	03	08	48.04	+07	35	45.5		4 809
1990	UA4	1990	10	24.32361	03	08	47.45	+07	35	37.2		4 809
1990	UB4	1990	10	16.28472	03	13	37.61	+08	41	07.7		4 809
1990	UB4	1990	10	16.31111	03	13	36.62	+08	40	53.7		4 809
1990	UB4	1990	10	20.25764	03	11	25.62	+08	07	46.1		4 809
1990	UB4	1990	10	24.29722	03	08	51.07	+07	33	25.4	18.6	4 809
1990	UB4	1990	10	24.31042	03	08	50.46	+07	33	18.2		4 809
1990	UB4	1990	10	24.32361	03	08	49.84	+07	33	11.7		4 809
1990	UC4	1990	10	16.28472	03	14	02.36	+09	19	30.7		4 809
1990	UC4	1990	10	16.31111	03	14	00.87	+09	19	21.6		4 809
1990	UC4	1990	10	20.25764	03	10	56.54	+08	43	08.0		4 809
1990	UE4	1990	10	16.28472	03	18	30.35	+08	40	33.6		4 809
1990	UE4	1990	10	16.31111	03	18	29.31	+08	40	26.6		4 809
1990	UE4	1990	10	20.25764	03	16	18.38	+08	24	24.5		4 809
1990	UE4	1990	10	24.29722	03	13	46.06	+08	07	54.0	18.6	4 809
1990	UE4	1990	10	24.31042	03	13	45.49	+08	07	51.7		4 809
1990	UE4	1990	10	24.32361	03	13	44.86	+08	07	48.4		4 809
1990	UG4	1990	10	16.28472	03	19	15.17	+08	51	10.2		4 809
1990	UG4	1990	10	16.31111	03	19	14.08	+08	50	56.1		4 809
1990	UG4	1990	10	20.25764	03	16	32.81	+08	17	51.5		4 809
1990	UG4	1990	10	24.29722	03	13	30.97	+07	43	48.7	18.7	4 809
1990	UG4	1990	10	24.31042	03	13	30.31	+07	43	41.0		4 809
1990	UG4	1990	10	24.32361	03	13	29.68	+07	43	34.4		4 809
1990	UH4	1990	10	16.28472	03	21	35.77	+08	35	06.8		4 809
1990	UH4	1990	10	16.31111	03	21	34.39	+08	35	14.2		4 809
1990	UH4	1990	10	20.25764	03	18	28.99	+08	53	03.5		4 809
1990	UH4	1990	10	24.29722	03	14	52.73	+09	12	08.5	18.3	4 809
1990	UH4	1990	10	24.31042	03	14	51.91	+09	12	12.5		4 809
1990	UH4	1990	10	24.32361	03	14	51.10	+09	12	16.5		4 809
1990	UJ4	1990	10	19.23819	02	44	59.23	+07	13	21.4		4 809
1990	UJ4	1990	10	19.26458	02	44	57.61	+07	13	17.5		4 809
1990	UJ4	1990	10	24.25417	02	40	01.53	+07	04	28.4	18.7	4 809
1990	UJ4	1990	10	24.26736	02	40	00.70	+07	04	26.7		4 809
1990	UJ4	1990	10	24.28056	02	39	59.86	+07	04	25.5		4 809
1990	UK4	1990	10	19.23819	02	46	31.91	+05	54	00.4		4 809
1990	UK4	1990	10	19.26458	02	46	30.82	+05	53	44.5		4 809
1990	UK4	1990	10	24.25417	02	43	15.75	+05	04	51.5	18.7	4 809
1990	UK4	1990	10	24.26736	02	43	15.17	+05	04	43.1		4 809
1990	UK4	1990	10	24.28056	02	43	14.52	+05	04	35.5		4 809
1990	UL4	1990	10	19.23819	02	45	38.96	+06	25	16.2		4 809
1990	UL4	1990	10	19.26458	02	45	37.35	+06	25	10.9		4 809
1990	UL4	1990	10	24.25417	02	40	48.13	+06	09	03.9	18.8	4 809

1990	UL4	1990	10	24.26736	02	40	47.34	+06	09	01.3		4 809
1990	UL4	1990	10	24.28056	02	40	46.46	+06	08	59.8		4 809
1990	UM4	1990	10	19.23819	02	47	47.25	+06	51	12.0		4 809
1990	UM4	1990	10	19.26458	02	47	45.64	+06	51	07.0		4 809
1990	UN4	1990	10	19.23819	02	46	53.24	+08	38	50.0		4 809
1990	UN4	1990	10	19.26458	02	46	51.84	+08	38	18.1		4 809
1990	UN4	1990	10	24.25417	02	42	34.99	+06	56	11.2	18.6	4 809
1990	UN4	1990	10	24.26736	02	42	34.34	+06	55	55.3		4 809
1990	UN4	1990	10	24.28056	02	42	33.52	+06	55	39.6		4 809
1990	UO4	1990	10	19.23819	02	47	49.22	+06	53	57.7		4 809
1990	UO4	1990	10	19.26458	02	47	47.97	+06	53	43.4		4 809
1990	UO4	1990	10	24.25417	02	44	02.86	+06	10	23.3	18.8	4 809
1990	UO4	1990	10	24.26736	02	44	02.20	+06	10	16.4		4 809
1990	UO4	1990	10	24.28056	02	44	01.49	+06	10	08.3		4 809
1990	UP4	1990	10	19.23819	02	48	04.40	+08	22	22.9		4 809
1990	UP4	1990	10	19.26458	02	48	03.29	+08	22	11.5		4 809
1990	UP4	1990	10	24.25417	02	44	26.16	+07	44	14.6	18.5	4 809
1990	UP4	1990	10	24.26736	02	44	25.56	+07	44	08.3		4 809
1990	UP4	1990	10	24.28056	02	44	24.90	+07	44	02.0		4 809
1990	UQ4	1990	10	19.23819	02	47	59.17	+08	12	04.0		4 809
1990	UQ4	1990	10	19.26458	02	47	57.81	+08	11	56.6		4 809
1990	UQ4	1990	10	24.25417	02	43	54.45	+07	47	00.5	18.8	4 809
1990	UQ4	1990	10	24.26736	02	43	53.58	+07	46	55.4		4 809
1990	UQ4	1990	10	24.28056	02	43	52.92	+07	46	50.8		4 809
1990	UR4	1990	10	19.23819	02	47	48.92	+08	16	43.8		4 809
1990	UR4	1990	10	19.26458	02	47	47.22	+08	16	38.5		4 809
1990	UR4	1990	10	24.25417	02	43	03.97	+08	00	15.1	19.2	4 809
1990	UR4	1990	10	24.26736	02	43	03.05	+08	00	11.6		4 809
1990	UR4	1990	10	24.28056	02	43	02.29	+08	00	08.2		4 809
1990	US4	1990	10	19.23819	02	47	55.92	+07	46	15.6		4 809
1990	US4	1990	10	19.26458	02	47	54.23	+07	46	11.3		4 809
1990	US4	1990	10	24.25417	02	42	43.54	+07	32	15.5	18.4	4 809
1990	US4	1990	10	24.26736	02	42	42.66	+07	32	12.2		4 809
1990	US4	1990	10	24.28056	02	42	41.84	+07	32	09.4		4 809
1990	UV4	1990	10	19.23819	02	50	22.29	+09	28	20.5		4 809
1990	UV4	1990	10	19.26458	02	50	20.82	+09	28	14.9		4 809
1990	UW4	1990	10	19.23819	02	48	38.72	+07	57	13.2		4 809
1990	UW4	1990	10	19.26458	02	48	36.18	+07	57	26.2		4 809
1990	UX4	1990	10	19.23819	02	51	57.93	+06	38	30.6		4 809
1990	UX4	1990	10	19.26458	02	51	56.56	+06	38	27.3		4 809
1990	UX4	1990	10	24.25417	02	47	45.23	+06	25	38.3	18.6	4 809
1990	UX4	1990	10	24.26736	02	47	44.54	+06	25	36.3		4 809
1990	UX4	1990	10	24.28056	02	47	43.82	+06	25	33.7		4 809
1990	UY4	1990	10	19.23819	02	54	23.30	+05	54	57.1		4 809
1990	UY4	1990	10	19.26458	02	54	21.84	+05	54	54.6		4 809
1990	UY4	1990	10	24.25417	02	49	53.32	+05	44	43.8	18.5	4 809
1990	UY4	1990	10	24.26736	02	49	52.50	+05	44	42.9		4 809
1990	UY4	1990	10	24.28056	02	49	51.69	+05	44	41.3		4 809
1990	UZ4	1990	10	19.23819	02	55	52.81	+06	41	03.0		4 809
1990	UZ4	1990	10	19.26458	02	55	51.50	+06	40	58.3		4 809
1990	UZ4	1990	10	24.25417	02	52	15.20	+06	28	37.1	18.6	4 809
1990	UZ4	1990	10	24.26736	02	52	14.57	+06	28	35.2		4 809
1990	UZ4	1990	10	24.28056	02	52	13.90	+06	28	33.3		4 809
1990	UA5	1990	10	19.23819	02	56	07.08	+05	33	11.7		4 809
1990	UA5	1990	10	19.26458	02	56	05.89	+05	32	58.1		4 809
1990	UB5	1990	10	19.23819	02	56	18.84	+06	06	31.5		4 809
1990	UB5	1990	10	19.26458	02	56	17.53	+06	06	24.9		4 809
1990	UB5	1990	10	24.25417	02	52	18.78	+05	44	35.4	19.1	4 809
1990	UB5	1990	10	24.26736	02	52	17.97	+05	44	31.2		4 809

1990	UB5	1990	10	24.28056	02	52	17.20	+05	44	28.2		4	809
1990	UC5	1990	10	19.23819	02	56	19.85	+06	22	08.1		4	809
1990	UC5	1990	10	19.26458	02	56	18.46	+06	22	00.7		4	809
1990	UC5	1990	10	24.25417	02	52	02.09	+05	55	13.9	18.7	4	809
1990	UC5	1990	10	24.26736	02	52	01.36	+05	55	08.8		4	809
1990	UC5	1990	10	24.28056	02	52	00.63	+05	55	04.1		4	809
1990	UD5	1990	10	19.23819	02	56	50.28	+08	25	39.4		4	809
1990	UD5	1990	10	19.26458	02	56	48.70	+08	25	35.9		4	809
1990	UE5	1990	10	19.23819	02	57	39.19	+05	56	11.2		4	809
1990	UE5	1990	10	19.26458	02	57	37.81	+05	55	34.1		4	809
1990	UE5	1990	10	24.25417	02	53	25.38	+03	55	58.1	18.7	4	809
1990	UE5	1990	10	24.26736	02	53	24.60	+03	55	38.8		4	809
1990	UE5	1990	10	24.28056	02	53	23.79	+03	55	20.2		4	809
1990	UG5	1990	10	19.23819	03	00	05.67	+08	39	07.8		4	809
1990	UG5	1990	10	19.26458	03	00	04.72	+08	38	56.6		4	809
1990	UG5	1990	10	24.25417	02	56	44.68	+07	58	47.0	19.7	4	809
1990	UG5	1990	10	24.26736	02	56	44.16	+07	58	40.4		4	809
1990	UG5	1990	10	24.28056	02	56	43.51	+07	58	32.6		4	809
1990	UG5	1990	10	24.29722	02	56	42.58	+07	58	26.5	19.6	4	809
1990	UG5	1990	10	24.31042	02	56	42.03	+07	58	21.4		4	809
1990	UG5	1990	10	24.32361	02	56	41.42	+07	58	14.8		4	809
1990	UH5	1990	10	19.23819	02	59	45.04	+09	06	57.2		4	809
1990	UH5	1990	10	19.26458	02	59	43.58	+09	06	49.4		4	809
1990	UH5	1990	10	20.24444	02	58	55.58	+09	01	27.8	18.5	4	809
1990	UH5	1990	10	20.25764	02	58	54.84	+09	01	24.8		4	809
1990	UH5	1990	10	20.27083	02	58	54.09	+09	01	19.4		4	809
1990	UH5	1990	10	24.29722	02	55	22.40	+08	39	26.2	18.5	4	809
1990	UH5	1990	10	24.31042	02	55	21.61	+08	39	21.5		4	809
1990	UH5	1990	10	24.32361	02	55	20.87	+08	39	16.9		4	809
1990	UJ5	1990	10	19.23819	03	00	33.77	+07	02	29.7		4	809
1990	UJ5	1990	10	19.26458	03	00	32.65	+07	02	19.0		4	809
1990	UJ5	1990	10	24.25417	02	57	10.27	+06	31	28.7	18.3	4	809
1990	UJ5	1990	10	24.26736	02	57	09.69	+06	31	23.6		4	809
1990	UJ5	1990	10	24.28056	02	57	09.04	+06	31	18.0		4	809
1990	UJ5	1990	10	24.29722	02	57	08.26	+06	31	13.0	18.7	4	809
1990	UJ5	1990	10	24.31042	02	57	07.59	+06	31	07.4		4	809
1990	UJ5	1990	10	24.32361	02	57	07.03	+06	31	02.1		4	809
1990	UK5	1990	10	19.23819	03	01	10.71	+05	28	30.2		4	809
1990	UK5	1990	10	19.26458	03	01	09.46	+05	28	23.1		4	809
1990	UK5	1990	10	24.25417	02	57	46.62	+05	08	32.8	18.6	4	809
1990	UK5	1990	10	24.26736	02	57	45.96	+05	08	29.5		4	809
1990	UK5	1990	10	24.28056	02	57	45.32	+05	08	25.9		4	809
1990	UL5	1990	10	19.23819	03	00	56.50	+07	38	59.3		4	809
1990	UL5	1990	10	19.26458	03	00	55.20	+07	38	50.6		4	809
1990	UL5	1990	10	20.24444	03	00	07.83	+07	32	37.0	19.8	4	809
1990	UL5	1990	10	20.25764	03	00	07.02	+07	32	30.0		4	809
1990	UL5	1990	10	20.27083	03	00	06.46	+07	32	25.7		4	809
1990	UL5	1990	10	24.25417	02	56	44.37	+07	07	05.4	19.1	4	809
1990	UL5	1990	10	24.26736	02	56	43.62	+07	07	00.3		4	809
1990	UL5	1990	10	24.28056	02	56	42.80	+07	06	53.5		4	809
1990	UL5	1990	10	24.29722	02	56	41.74	+07	06	48.3	18.8	4	809
1990	UL5	1990	10	24.31042	02	56	41.05	+07	06	44.9		4	809
1990	UL5	1990	10	24.32361	02	56	40.27	+07	06	38.0		4	809
1990	UM5	1990	10	19.23819	03	00	32.50	+06	52	40.2		4	809
1990	UM5	1990	10	19.26458	03	00	30.94	+06	52	43.6		4	809
1990	UM5	1990	10	24.25417	02	55	32.68	+07	02	26.3	18.3	4	809
1990	UM5	1990	10	24.26736	02	55	31.78	+07	02	27.9		4	809
1990	UM5	1990	10	24.28056	02	55	30.90	+07	02	29.9		4	809
1990	UM5	1990	10	24.29722	02	55	29.78	+07	02	33.2	18.5	4	809

1990	UM5	1990	10	24.31042	02	55	28.82	+07	02	34.6		4 809
1990	UM5	1990	10	24.32361	02	55	27.96	+07	02	35.5		4 809
1990	UN5	1990	10	19.23819	03	02	30.92	+06	00	13.6		4 809
1990	UN5	1990	10	19.26458	03	02	29.82	+06	00	09.1		4 809
1990	UN5	1990	10	24.25417	02	59	14.04	+05	45	08.3	18.7	4 809
1990	UN5	1990	10	24.26736	02	59	13.44	+05	45	05.0		4 809
1990	UN5	1990	10	24.28056	02	59	12.80	+05	45	02.8		4 809
1990	UO5	1990	10	19.23819	03	02	01.61	+06	00	16.9		4 809
1990	UO5	1990	10	19.26458	03	02	00.18	+06	00	17.2		4 809
1990	UO5	1990	10	24.25417	02	57	33.96	+05	59	45.0	18.4	4 809
1990	UO5	1990	10	24.26736	02	57	33.22	+05	59	44.4		4 809
1990	UO5	1990	10	24.28056	02	57	32.36	+05	59	45.0		4 809
1990	UP5	1990	10	19.23819	03	05	04.63	+05	47	21.3		4 809
1990	UP5	1990	10	19.26458	03	05	03.35	+05	47	16.3		4 809
1990	UQ5	1990	10	19.23819	03	05	02.99	+09	17	01.5		4 809
1990	UQ5	1990	10	19.26458	03	05	01.48	+09	16	58.5		4 809
1990	UQ5	1990	10	20.24444	03	04	14.15	+09	15	31.9	18.6	4 809
1990	UQ5	1990	10	20.25764	03	04	13.39	+09	15	30.8		4 809
1990	UQ5	1990	10	20.27083	03	04	12.84	+09	15	29.4		4 809
1990	UR5	1990	10	20.25764	03	04	27.37	+09	58	31.9		4 809
1990	VY6	1990	10	19.23819	02	49	49.36	+06	07	56.0		4 809
1990	VY6	1990	10	19.26458	02	49	47.75	+06	07	57.7		4 809
1990	VY6	1990	10	24.25417	02	44	51.62	+06	15	00.7	17.8	4 809
1990	VY6	1990	10	24.26736	02	44	50.78	+06	15	01.9		4 809
1990	VY6	1990	10	24.28056	02	44	49.91	+06	15	02.7		4 809
2098	P-L	1990	10	16.28472	03	21	04.39	+08	42	17.5		4 809
2098	P-L	1990	10	16.31111	03	21	03.46	+08	41	59.4		4 809
2098	P-L	1990	10	20.25764	03	18	50.37	+07	56	33.4		4 809
4577	P-L	1990	09	25.04721	22	58	05.30	-05	13	13.1	17.3	3 809
4577	P-L	1990	09	25.05972	22	58	04.81	-05	13	20.4		3 809
4577	P-L	1990	09	25.07224	22	58	04.31	-05	13	27.7		3 809
4577	P-L	1990	09	26.20624	22	57	18.91	-05	24	10.7		3 809
4577	P-L	1990	09	26.21597	22	57	18.52	-05	24	16.1		3 809
4577	P-L	1990	09	26.22571	22	57	18.12	-05	24	21.6		3 809
1053	T-2	1990	09	22.18506	23	46	44.98	-01	04	33.7	17.1	3 809
1053	T-2	1990	09	22.19827	23	46	44.31	-01	04	38.7		3 809
1053	T-2	1990	09	22.21146	23	46	43.65	-01	04	43.8		3 809
1053	T-2	1990	09	23.09583	23	45	59.58	-01	10	01.0		3 809
1053	T-2	1990	09	23.10834	23	45	58.95	-01	10	05.4		3 809
1053	T-2	1990	09	23.12082	23	45	58.34	-01	10	09.8		3 809
1053	T-2	1990	09	24.13055	23	45	07.87	-01	16	12.0		3 809
1053	T-2	1990	09	24.14307	23	45	07.24	-01	16	16.4		3 809
1053	T-2	1990	09	24.15555	23	45	06.62	-01	16	21.0		3 809
1053	T-2	1990	09	29.29376	23	40	53.79	-01	46	36.1		3 809
1053	T-2	1990	09	29.30347	23	40	53.31	-01	46	39.2		3 809
1053	T-2	1990	09	29.31320	23	40	52.83	-01	46	42.5		3 809
1306	T-2	1990	09	14.18542	23	10	18.46	-06	03	00.1	17.6	3 809
1306	T-2	1990	09	14.19931	23	10	17.86	-06	03	04.1		3 809
1306	T-2	1990	09	14.21320	23	10	17.24	-06	03	07.9		3 809
1306	T-2	1990	09	16.29443	23	08	45.73	-06	12	50.5		3 809
1306	T-2	1990	09	16.30695	23	08	45.17	-06	12	54.4		3 809
1306	T-2	1990	09	16.31946	23	08	44.62	-06	12	58.0		3 809
1306	T-2	1990	09	25.08612	23	02	36.63	-06	51	36.4	17.8	3 809
1306	T-2	1990	09	25.09860	23	02	36.16	-06	51	39.6		3 809
1306	T-2	1990	09	25.11112	23	02	35.67	-06	51	42.6		3 809
1306	T-2	1990	09	26.23682	23	01	51.31	-06	56	18.8		3 809
1306	T-2	1990	09	26.24652	23	01	50.92	-06	56	21.5		3 809
1306	T-2	1990	09	26.25626	23	01	50.51	-06	56	23.9		3 809
2160	T-2	1990	09	10.15312	22	40	30.94	-09	51	15.0	17.2	3 809

2160	T-2	1990	09	10.16771	22	40	30.29	-09	51	18.7		3 809
2160	T-2	1990	09	10.18230	22	40	29.64	-09	51	22.2		3 809
2160	T-2	1990	09	11.13298	22	39	47.28	-09	55	21.5		3 809
2160	T-2	1990	09	11.14757	22	39	46.63	-09	55	25.1		3 809
2160	T-2	1990	09	11.16216	22	39	45.97	-09	55	29.0		3 809
2160	T-2	1990	09	12.05902	22	39	06.38	-09	59	13.0		3 809
2160	T-2	1990	09	12.07153	22	39	05.82	-09	59	16.1		3 809
2160	T-2	1990	09	12.08403	22	39	05.28	-09	59	19.2		3 809
2160	T-2	1990	09	12.99757	22	38	25.07	-10	03	01.9		3 809
2160	T-2	1990	09	13.01215	22	38	24.43	-10	03	05.5		3 809
2160	T-2	1990	09	13.02673	22	38	23.80	-10	03	09.1		3 809
2160	T-2	1990	09	13.99860	22	37	41.68	-10	07	05.3		3 809
2160	T-2	1990	09	14.01251	22	37	41.08	-10	07	08.7		3 809
2160	T-2	1990	09	14.02640	22	37	40.46	-10	07	12.1		3 809
4069	T-2	1990	09	21.11771	23	47	18.36	-05	41	33.8	17.0	3 809
4069	T-2	1990	09	21.13089	23	47	17.76	-05	41	40.8		3 809
4069	T-2	1990	09	21.14410	23	47	17.16	-05	41	47.9		3 809
4069	T-2	1990	09	22.14063	23	46	32.63	-05	50	28.4		3 809
4069	T-2	1990	09	22.15381	23	46	32.04	-05	50	35.3		3 809
4069	T-2	1990	09	22.16702	23	46	31.46	-05	50	42.5		3 809
65		1990	09	21.03021	23	24	46.93	-05	21	57.8		3 809
65		1990	09	21.04340	23	24	46.42	-05	22	01.7		3 809
65		1990	09	21.05661	23	24	45.89	-05	22	05.5		3 809
65		1990	09	23.17569	23	23	23.51	-05	32	28.3		3 809
65		1990	09	23.18820	23	23	23.02	-05	32	32.2		3 809
65		1990	09	23.20068	23	23	22.53	-05	32	36.0		3 809
65		1990	09	24.22501	23	22	43.20	-05	37	30.4		3 809
65		1990	09	24.23819	23	22	42.67	-05	37	34.3		3 809
65		1990	09	24.25140	23	22	42.16	-05	37	38.5		3 809
65		1990	09	25.12848	23	22	08.99	-05	41	48.2		3 809
65		1990	09	25.14096	23	22	08.49	-05	41	52.2		3 809
65		1990	09	25.15347	23	22	07.99	-05	41	55.5		3 809
65		1990	09	26.10138	23	21	32.57	-05	46	22.8		3 809
65		1990	09	26.11112	23	21	32.24	-05	46	25.5		3 809
65		1990	09	26.12082	23	21	31.90	-05	46	28.1		3 809
65		1990	09	27.12256	23	20	54.72	-05	51	04.8		3 809
65		1990	09	27.12744	23	20	54.56	-05	51	06.2		3 809
65		1990	09	27.13229	23	20	54.38	-05	51	07.5		3 809
65		1990	09	28.05277	23	20	20.87	-05	55	19.6		3 809
65		1990	09	28.06250	23	20	20.52	-05	55	22.5		3 809
65		1990	09	28.07361	23	20	20.11	-05	55	25.1		3 809
114		1990	09	22.32883	01	37	48.10	+06	00	55.5		3 809
114		1990	09	22.34201	01	37	47.46	+06	00	50.9		3 809
114		1990	09	22.35519	01	37	46.81	+06	00	46.3		3 809
125		1990	09	11.23611	22	47	32.47	-06	54	31.7		3 809
125		1990	09	11.24583	22	47	32.03	-06	54	35.6		3 809
125		1990	09	11.25555	22	47	31.59	-06	54	39.6		3 809
125		1990	09	12.13681	22	46	51.81	-07	00	29.2		3 809
125		1990	09	12.14931	22	46	51.25	-07	00	34.1		3 809
125		1990	09	12.16180	22	46	50.67	-07	00	39.3		3 809
125		1990	09	27.16910	22	36	52.96	-08	30	27.7		3 809
125		1990	09	27.17395	22	36	52.81	-08	30	29.3		3 809
125		1990	09	27.17883	22	36	52.68	-08	30	30.9		3 809
125		1990	09	28.02014	22	36	25.76	-08	34	48.9		3 809
125		1990	09	28.02985	22	36	25.49	-08	34	51.6		3 809
125		1990	09	28.03958	22	36	25.21	-08	34	54.3		3 809
125		1990	09	29.03055	22	35	54.31	-08	39	50.5		3 809
125		1990	09	29.04028	22	35	54.05	-08	39	53.3		3 809
125		1990	09	29.04999	22	35	53.77	-08	39	55.6		3 809

126	1990	09	25.34235	01	41	25.04	+09	49	35.8	3 809
126	1990	09	25.35486	01	41	24.50	+09	49	34.5	3 809
126	1990	09	25.36737	01	41	23.99	+09	49	33.0	3 809
126	1990	09	26.35348	01	40	41.99	+09	47	12.7	3 809
126	1990	09	26.36597	01	40	41.38	+09	47	10.4	3 809
126	1990	09	26.37848	01	40	40.77	+09	47	07.8	3 809
126	1990	09	28.34860	01	39	12.77	+09	42	06.3	3 809
126	1990	09	28.36112	01	39	12.16	+09	42	04.1	3 809
126	1990	09	28.37360	01	39	11.55	+09	42	01.8	3 809
126	1990	09	29.35971	01	38	25.62	+09	39	19.6	3 809
126	1990	09	29.36945	01	38	25.14	+09	39	17.6	3 809
126	1990	09	29.37918	01	38	24.66	+09	39	16.1	3 809
243	1990	09	11.23611	22	49	30.65	-06	50	46.5	3 809
243	1990	09	11.24583	22	49	30.19	-06	50	49.4	3 809
243	1990	09	11.25555	22	49	29.73	-06	50	52.0	3 809
243	1990	09	12.13681	22	48	48.23	-06	54	48.2	3 809
243	1990	09	12.14931	22	48	47.63	-06	54	51.5	3 809
243	1990	09	12.16180	22	48	47.02	-06	54	54.9	3 809
243	1990	09	27.16910	22	38	04.25	-07	55	12.8	3 809
243	1990	09	27.17395	22	38	04.10	-07	55	13.9	3 809
243	1990	09	27.17883	22	38	03.94	-07	55	15.0	3 809
243	1990	09	28.02014	22	37	33.59	-07	58	05.9	3 809
243	1990	09	28.02985	22	37	33.29	-07	58	07.8	3 809
243	1990	09	28.03958	22	37	32.97	-07	58	09.4	3 809
243	1990	09	29.03055	22	36	57.87	-08	01	23.3	3 809
243	1990	09	29.04028	22	36	57.56	-08	01	25.1	3 809
243	1990	09	29.04999	22	36	57.25	-08	01	26.9	3 809
313	1990	09	21.25833	23	45	24.61	-01	40	06.1	3 809
313	1990	09	21.27084	23	45	23.98	-01	40	13.6	3 809
313	1990	09	21.28332	23	45	23.35	-01	40	21.4	3 809
313	1990	09	22.18506	23	44	37.60	-01	49	26.4	3 809
313	1990	09	22.19827	23	44	36.92	-01	49	34.6	3 809
313	1990	09	22.21146	23	44	36.27	-01	49	42.8	3 809
313	1990	09	23.09583	23	43	51.43	-01	58	38.2	3 809
313	1990	09	23.10834	23	43	50.80	-01	58	45.6	3 809
313	1990	09	23.12082	23	43	50.14	-01	58	53.4	3 809
388	1990	09	01.38091	23	58	53.26	-00	31	15.0	3 809
388	1990	09	01.38576	23	58	53.06	-00	31	15.6	3 809
388	1990	09	01.39063	23	58	52.86	-00	31	16.2	3 809
388	1990	09	21.25833	23	43	15.81	-01	25	45.5	3 809
388	1990	09	21.27084	23	43	15.19	-01	25	47.9	3 809
388	1990	09	21.28332	23	43	14.55	-01	25	50.3	3 809
388	1990	09	22.18506	23	42	30.05	-01	28	30.4	3 809
388	1990	09	22.19827	23	42	29.41	-01	28	32.7	3 809
388	1990	09	22.21146	23	42	28.76	-01	28	35.4	3 809
388	1990	09	23.09583	23	41	45.29	-01	31	13.0	3 809
388	1990	09	23.10834	23	41	44.69	-01	31	15.2	3 809
388	1990	09	23.12082	23	41	44.07	-01	31	17.7	3 809
388	1990	09	24.09097	23	40	56.42	-01	34	08.6	3 809
388	1990	09	24.10349	23	40	55.81	-01	34	10.8	3 809
388	1990	09	24.11597	23	40	55.19	-01	34	12.9	3 809
388	1990	09	24.13055	23	40	54.47	-01	34	15.4	3 809
388	1990	09	24.14307	23	40	53.83	-01	34	17.7	3 809
388	1990	09	24.15555	23	40	53.24	-01	34	19.9	3 809
388	1990	09	29.29376	23	36	46.64	-01	48	58.5	3 809
388	1990	09	29.30347	23	36	46.19	-01	49	00.1	3 809
388	1990	09	29.31320	23	36	45.75	-01	49	01.4	3 809
435	1990	09	13.27918	23	35	18.07	-04	40	57.7	3 809
435	1990	09	13.29306	23	35	17.36	-04	41	01.3	3 809

435	1990	09	13.30695	23	35	16.65	-04	41	05.0		3	809
435	1990	09	14.33820	23	34	22.44	-04	45	42.0		3	809
435	1990	09	14.35208	23	34	21.72	-04	45	45.7		3	809
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435	1990	09	15.28125	23	33	32.90	-04	49	50.7		3	809
435	1990	09	15.29376	23	33	32.27	-04	49	54.2		3	809
435	1990	09	15.30624	23	33	31.61	-04	49	57.3		3	809
435	1990	09	18.19168	23	31	00.10	-05	02	30.7		3	809
435	1990	09	18.20557	23	30	59.40	-05	02	34.2		3	809
435	1990	09	18.21945	23	30	58.66	-05	02	37.9		3	809
435	1990	09	21.03021	23	28	32.71	-05	14	25.8		3	809
435	1990	09	21.04340	23	28	32.04	-05	14	29.1		3	809
435	1990	09	21.05661	23	28	31.36	-05	14	32.7		3	809
435	1990	09	22.09549	23	27	37.82	-05	18	46.9		3	809
435	1990	09	22.10867	23	27	37.15	-05	18	49.9		3	809
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435	1990	09	23.17569	23	26	42.86	-05	23	04.1		3	809
435	1990	09	23.18820	23	26	42.22	-05	23	07.1		3	809
435	1990	09	23.20068	23	26	41.58	-05	23	10.0		3	809
435	1990	09	25.12848	23	25	05.77	-05	30	31.8		3	809
435	1990	09	25.14096	23	25	05.13	-05	30	34.7		3	809
435	1990	09	25.15347	23	25	04.50	-05	30	37.8		3	809
435	1990	09	26.10138	23	24	18.60	-05	34	07.5		3	809
435	1990	09	26.11112	23	24	18.19	-05	34	09.2		3	809
435	1990	09	26.12082	23	24	17.77	-05	34	11.0		3	809
551	1990	09	13.04376	22	42	04.19	-08	29	41.3		3	809
551	1990	09	13.05624	22	42	03.61	-08	29	44.6		3	809
551	1990	09	13.06876	22	42	03.01	-08	29	47.9		3	809
612	1990	10	16.28472	03	08	38.64	+08	54	42.7		4	809
612	1990	10	16.31111	03	08	37.57	+08	54	24.5		4	809
612	1990	10	20.25764	03	06	06.13	+08	10	34.6		4	809
612	1990	10	24.29722	03	03	17.40	+07	25	42.2	16.0	4	809
612	1990	10	24.31042	03	03	16.73	+07	25	33.5		4	809
612	1990	10	24.32361	03	03	16.17	+07	25	24.7		4	809
638	1990	10	19.23819	02	58	56.60	+06	32	32.1		4	809
638	1990	10	19.26458	02	58	55.31	+06	32	26.9		4	809
638	1990	10	24.25417	02	55	00.46	+06	13	48.5	16.8	4	809
638	1990	10	24.26736	02	54	59.67	+06	13	46.0		4	809
638	1990	10	24.28056	02	54	58.95	+06	13	41.6		4	809
689	1990	09	11.23611	22	49	57.92	-06	43	42.9		3	809
689	1990	09	11.24583	22	49	57.56	-06	43	49.1		3	809
689	1990	09	11.25555	22	49	57.19	-06	43	55.3		3	809
689	1990	09	12.13681	22	49	25.37	-06	53	10.0		3	809
689	1990	09	12.14931	22	49	24.88	-06	53	17.8		3	809
689	1990	09	12.16180	22	49	24.42	-06	53	25.6		3	809
744	1990	10	16.28472	03	15	52.70	+07	23	29.4		4	809
744	1990	10	16.31111	03	15	51.59	+07	23	21.2		4	809
744	1990	10	20.25764	03	13	32.80	+07	06	25.0		4	809
744	1990	10	24.29722	03	10	57.30	+06	49	07.2	17.0	4	809
744	1990	10	24.31042	03	10	56.66	+06	49	04.3		4	809
744	1990	10	24.32361	03	10	56.04	+06	49	00.8		4	809
767	1990	09	21.11771	23	47	12.95	-05	42	07.4		3	809
767	1990	09	21.13089	23	47	12.37	-05	42	10.9		3	809
767	1990	09	21.14410	23	47	11.79	-05	42	14.6		3	809
767	1990	09	22.14063	23	46	27.33	-05	46	43.0		3	809
767	1990	09	22.15381	23	46	26.74	-05	46	46.5		3	809
767	1990	09	22.16702	23	46	26.14	-05	46	50.3		3	809
946	1990	09	11.17882	22	50	56.89	-09	32	34.8		3	809
946	1990	09	11.19341	22	50	56.23	-09	32	38.6		3	809

946	1990	09	11.20799	22	50	55.60	-09	32	42.4		3 809
946	1990	09	12.09792	22	50	16.82	-09	36	32.5		3 809
946	1990	09	12.11041	22	50	16.26	-09	36	35.8		3 809
946	1990	09	12.12291	22	50	15.70	-09	36	39.1		3 809
962	1990	09	18.23541	23	43	51.58	-03	59	59.4		3 809
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962	1990	09	23.06946	23	40	12.46	-04	28	10.4		3 809
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1074	1990	09	16.27985	23	01	56.25	-07	14	43.5		3 809
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1074	1990	09	25.11112	22	55	41.34	-07	50	52.8		3 809
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1434	1990	09	18.06946	22	28	50.00	-12	16	42.9		3 809
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1513	1990	09	24.36804	01	33	16.38	+03	40	06.9		3 809
1513	1990	09	24.38055	01	33	15.88	+03	40	02.1		3 809
1542	1990	09	25.16876	23	27	16.25	-00	46	10.6		3 809
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1542	1990	09	26.29028	23	26	29.73	-00	52	22.1		3 809
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1614	1990	09	09.12500	22	35	44.08	-08	03	04.6		3	809
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1614	1990	09	11.11702	22	34	23.36	-08	18	38.3		3	809
1663	1990	10	16.28472	03	14	14.32	+09	50	03.9		4	809
1663	1990	10	16.31111	03	14	13.02	+09	50	01.0		4	809
1663	1990	10	20.25764	03	11	11.40	+09	43	21.5		4	809
1663	1990	10	24.29722	03	07	37.34	+09	36	33.5	15.0	4	809
1663	1990	10	24.31042	03	07	36.44	+09	36	32.1		4	809
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1772	1990	09	26.31457	01	35	12.96	+00	54	15.2		3	809
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1772	1990	09	29.32846	01	32	54.60	+00	38	42.2		3	809
1772	1990	09	29.33820	01	32	54.13	+00	38	39.3		3	809
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1988	1990	10	16.31111	03	08	09.55	+09	44	12.4		4	809
1988	1990	10	20.25764	03	04	53.80	+09	28	14.7		4	809
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2058	1990	09	14.26181	23	00	24.81	-10	19	53.8		3	809
2058	1990	09	14.27570	23	00	24.20	-10	19	57.7		3	809
2166	1990	09	13.27918	23	37	44.25	-03	59	01.2		3	809
2166	1990	09	13.29306	23	37	43.59	-03	59	09.2		3	809
2166	1990	09	13.30695	23	37	42.93	-03	59	17.4		3	809
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2166	1990	09	14.35208	23	36	52.49	-04	09	17.5		3	809
2166	1990	09	14.36597	23	36	51.81	-04	09	25.2		3	809
2166	1990	09	15.28125	23	36	07.89	-04	18	06.7		3	809

2166	1990	09	15.29376	23	36	07.30	-04	18	13.9		3	809
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2166	1990	09	18.19168	23	33	48.88	-04	45	27.2		3	809
2166	1990	09	18.20557	23	33	48.23	-04	45	34.9		3	809
2166	1990	09	18.21945	23	33	47.56	-04	45	42.2		3	809
2166	1990	09	21.03021	23	31	36.30	-05	11	19.7		3	809
2166	1990	09	21.04340	23	31	35.69	-05	11	26.6		3	809
2166	1990	09	21.05661	23	31	35.08	-05	11	33.7		3	809
2166	1990	09	22.09549	23	30	47.29	-05	20	46.9		3	809
2166	1990	09	22.10867	23	30	46.70	-05	20	53.7		3	809
2166	1990	09	22.12189	23	30	46.09	-05	21	00.9		3	809
2207	1990	10	16.28472	03	14	11.28	+10	11	20.9		4	809
2207	1990	10	16.31111	03	14	10.53	+10	11	16.4		4	809
2207	1990	10	20.25764	03	12	30.66	+10	00	23.2		4	809
2207	1990	10	24.29722	03	10	40.83	+09	49	07.7	17.5	4	809
2207	1990	10	24.31042	03	10	40.35	+09	49	05.5		4	809
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2250	1990	09	13.16251	22	59	35.63	-06	50	09.8		3	809
2250	1990	09	13.22708	22	59	32.86	-06	50	30.1		3	809
2250	1990	09	13.24097	22	59	32.25	-06	50	34.7		3	809
2250	1990	09	13.25485	22	59	31.65	-06	50	39.1		3	809
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2250	1990	09	16.25485	22	57	27.70	-07	05	29.0		3	809
2250	1990	09	16.26737	22	57	27.16	-07	05	32.9		3	809
2250	1990	09	16.27985	22	57	26.63	-07	05	36.8		3	809
2325	1990	09	12.99757	22	31	41.18	-10	22	39.4		3	809
2325	1990	09	13.01215	22	31	40.55	-10	22	43.7		3	809
2325	1990	09	13.02673	22	31	39.93	-10	22	48.1		3	809
2325	1990	09	13.99860	22	30	59.45	-10	27	14.9		3	809
2325	1990	09	14.01251	22	30	58.86	-10	27	18.9		3	809
2325	1990	09	14.02640	22	30	58.25	-10	27	22.7		3	809
2325	1990	09	15.04166	22	30	16.39	-10	32	00.7		3	809
2325	1990	09	15.05554	22	30	15.78	-10	32	04.6		3	809
2325	1990	09	15.06946	22	30	15.18	-10	32	08.6		3	809
2325	1990	09	16.20972	22	29	28.76	-10	37	12.3		3	809
2325	1990	09	16.22360	22	29	28.26	-10	37	15.7		3	809
2325	1990	09	16.23749	22	29	27.75	-10	37	19.0		3	809
2325	1990	09	18.04166	22	28	16.64	-10	45	08.3		3	809
2325	1990	09	18.05554	22	28	16.14	-10	45	11.6		3	809
2325	1990	09	18.06946	22	28	15.64	-10	45	14.8		3	809
2325	1990	09	26.17291	22	23	29.28	-11	16	16.5		3	809
2325	1990	09	26.18265	22	23	29.02	-11	16	18.2		3	809
2325	1990	09	26.19235	22	23	28.76	-11	16	19.9		3	809
2395	1990	09	13.13474	22	56	52.27	-07	10	21.2		3	809
2395	1990	09	13.14862	22	56	51.66	-07	10	24.8		3	809
2395	1990	09	13.16251	22	56	51.05	-07	10	28.8		3	809
2395	1990	09	14.14166	22	56	08.06	-07	14	52.6		3	809
2395	1990	09	14.15555	22	56	07.44	-07	14	56.3		3	809
2395	1990	09	14.16943	22	56	06.84	-07	15	00.2		3	809
2395	1990	09	15.13055	22	55	25.03	-07	19	19.4		3	809
2395	1990	09	15.14444	22	55	24.43	-07	19	23.2		3	809
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2422		1990	09	11.13298	22	39	43.21	-08	55	02.5		3 809
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2422		1990	09	13.01215	22	38	06.84	-09	09	29.0		3 809
2422		1990	09	13.02673	22	38	06.09	-09	09	36.6		3 809
2422		1990	09	13.99860	22	37	17.14	-09	16	54.6		3 809
2422		1990	09	14.01251	22	37	16.40	-09	17	02.0		3 809
2422		1990	09	14.02640	22	37	15.67	-09	17	09.3		3 809
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2559		1990	09	22.06702	23	26	56.88	-02	30	59.8		3 809
2559		1990	09	22.08020	23	26	56.16	-02	31	01.7		3 809
2559		1990	09	23.01388	23	26	05.01	-02	33	08.0		3 809
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2619		1990	09	25.20901	23	14	37.52	-03	55	39.3		3 809
2619		1990	09	25.22153	23	14	36.99	-03	55	43.4		3 809
2619		1990	09	25.23404	23	14	36.45	-03	55	46.9		3 809
2619		1990	09	27.20972	23	13	15.63	-04	05	07.9		3 809
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2656		1990	09	15.26459	23	01	59.61	-11	43	59.8		3 809
2718		1990	09	28.34860	01	37	11.81	+09	03	35.7		3 809
2718		1990	09	28.36112	01	37	11.26	+09	03	32.8		3 809
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2718		1990	09	29.35971	01	36	30.28	+08	59	55.0		3 809
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2718	1990	09	29.37918	01	36	29.44	+08	59	50.5		3 809
2796	1990	09	10.15312	22	38	52.22	-09	38	56.3		3 809
2796	1990	09	10.16771	22	38	51.57	-09	39	04.1		3 809
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2796	1990	09	11.13298	22	38	08.65	-09	47	57.3		3 809
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2796	1990	09	12.07153	22	37	27.40	-09	56	29.1		3 809
2796	1990	09	12.08403	22	37	26.84	-09	56	36.0		3 809
2796	1990	09	12.99757	22	36	46.97	-10	04	50.6		3 809
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2796	1990	09	13.02673	22	36	45.70	-10	05	06.7		3 809
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2796	1990	09	14.01251	22	36	03.41	-10	13	54.8		3 809
2796	1990	09	14.02640	22	36	02.80	-10	14	02.3		3 809
2796	1990	09	15.04166	22	35	19.72	-10	23	00.1		3 809
2796	1990	09	15.05554	22	35	19.08	-10	23	07.5		3 809
2796	1990	09	15.06946	22	35	18.46	-10	23	15.2		3 809
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2796	1990	09	26.17291	22	28	21.95	-11	52	23.4		3 809
2796	1990	09	26.18265	22	28	21.69	-11	52	27.1		3 809
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2796	1990	09	27.03647	22	27	54.98	-11	58	32.1		3 809
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2796	1990	09	27.04617	22	27	54.70	-11	58	35.7		3 809
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2923	1990	09	10.16771	22	38	30.14	-09	21	59.3		3 809
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2923	1990	09	11.13298	22	37	38.15	-09	26	07.8		3 809
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2923	1990	09	11.16216	22	37	36.61	-09	26	15.2		3 809
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2923	1990	09	12.07153	22	36	48.05	-09	30	03.9		3 809
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2954	1990	09	15.29376	23	34	06.59	-03	48	20.1		3 809
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2954	1990	09	18.19168	23	31	24.75	-04	10	13.7		3 809
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2954	1990	09	21.05661	23	28	46.81	-04	31	30.5		3 809
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2954	1990	09	22.10867	23	27	49.44	-04	39	10.9			3 809
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2954	1990	09	23.17569	23	26	51.68	-04	46	53.4			3 809
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2954	1990	09	23.20068	23	26	50.31	-04	47	04.5			3 809
2954	1990	09	25.12848	23	25	08.01	-05	00	42.2			3 809
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2954	1990	09	25.15347	23	25	06.66	-05	00	52.9			3 809
2990	1990	09	09.03889	22	18	43.66	-09	23	19.5			3 809
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2991	1990	10	20.25764	03	09	17.58	+10	06	33.8			4 809
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3117	1990	09	16.34168	00	34	54.11	-01	44	32.4			3 809
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3246	1990	10	19.26458	02	55	54.36	+05	05	06.8			4 809
3246	1990	10	24.25417	02	52	43.65	+04	20	06.4		18.2	4 809
3246	1990	10	24.26736	02	52	43.07	+04	19	58.3			4 809
3246	1990	10	24.28056	02	52	42.49	+04	19	51.5			4 809
3272	1990	09	25.30139	01	33	19.09	+02	26	17.1			3 809
3272	1990	09	25.31390	01	33	18.61	+02	26	12.9			3 809
3272	1990	09	25.32638	01	33	18.12	+02	26	09.3			3 809
3272	1990	09	26.31457	01	32	33.10	+02	20	38.7			3 809
3272	1990	09	26.32709	01	32	32.48	+02	20	34.3			3 809
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3272	1990	09	29.33820	01	30	07.40	+02	03	18.8			3 809
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3275	1990	09	25.30139	01	30	53.70	+01	55	41.4			3 809
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3275	1990	09	26.33957	01	29	57.00	+01	52	00.4			3 809
3275	1990	09	29.32846	01	27	08.00	+01	41	11.0			3 809
3275	1990	09	29.33820	01	27	07.42	+01	41	08.4			3 809

3275	1990	09	29.34793	01	27	06.84	+01	41	06.6		3 809
3283	1990	09	12.27777	22	51	59.23	-10	06	46.9		3 809
3283	1990	09	12.29028	22	51	58.49	-10	06	47.9		3 809
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3366	1990	09	24.26737	23	30	05.35	-01	50	19.6		3 809
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3366	1990	09	25.18124	23	29	29.54	-01	57	46.8		3 809
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3538	1990	09	26.10138	23	18	28.01	-05	03	29.1		3 809
3538	1990	09	26.11112	23	18	27.57	-05	03	33.1		3 809
3538	1990	09	26.12082	23	18	27.15	-05	03	37.0		3 809
3538	1990	09	27.12256	23	17	39.43	-05	10	56.0		3 809
3538	1990	09	27.12744	23	17	39.19	-05	10	58.0		3 809
3538	1990	09	27.13229	23	17	38.98	-05	10	59.9		3 809
3580	1990	09	22.18506	23	43	13.58	-01	00	45.6		3 809
3580	1990	09	22.19827	23	43	12.98	-01	00	49.3		3 809
3580	1990	09	22.21146	23	43	12.37	-01	00	52.6		3 809
3580	1990	09	23.09583	23	42	31.28	-01	04	44.7		3 809
3580	1990	09	23.10834	23	42	30.69	-01	04	47.9		3 809
3580	1990	09	23.12082	23	42	30.11	-01	04	51.1		3 809
3580	1990	09	24.13055	23	41	43.10	-01	09	13.6		3 809
3580	1990	09	24.14307	23	41	42.51	-01	09	16.7		3 809
3580	1990	09	24.15555	23	41	41.93	-01	09	19.7		3 809
3670	1990	10	19.23819	02	54	45.15	+07	01	22.3		4 809
3670	1990	10	19.26458	02	54	43.82	+07	01	16.6		4 809
3670	1990	10	24.25417	02	50	46.66	+06	41	55.6	17.8	4 809
3670	1990	10	24.26736	02	50	45.94	+06	41	51.9		4 809
3670	1990	10	24.28056	02	50	45.21	+06	41	49.0		4 809
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3842	1990	09	11.19341	22	48	16.09	-07	48	47.8		3 809
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3842	1990	09	13.06876	22	46	26.37	-07	56	13.3		3 809
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3842	1990	09	27.17395	22	34	03.40	-08	42	57.6		3 809
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3842	1990	09	29.03055	22	32	42.69	-08	47	31.2		3 809
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3842	1990	09	29.04999	22	32	41.85	-08	47	34.1		3 809
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4110	1990	09	21.27084	23	39	47.62	-01	06	56.0		3 809
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4110	1990	09	23.29862	23	38	19.16	-01	17	46.1		3 809
4110	1990	09	24.09097	23	37	44.87	-01	22	03.3		3 809
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4110	1990	09	24.11597	23	37	43.79	-01	22	11.4		3 809
4110	1990	09	24.26737	23	37	37.25	-01	23	00.4		3 809
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4167	1990	09	14.06042	22	51	53.13	-09	22	15.2		3 809
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4167	1990	09	15.09930	22	51	08.89	-09	33	52.4		3 809
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4171	1990	09	25.35486	01	45	45.12	+09	23	46.7		3 809
4171	1990	09	25.36737	01	45	44.58	+09	23	41.8		3 809
4171	1990	09	26.35348	01	45	02.32	+09	17	36.5		3 809
4171	1990	09	26.36597	01	45	01.79	+09	17	32.0		3 809
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4172	1990	09	23.02640	23	24	21.82	-02	20	14.3		3 809
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4333	1990	10	24.31042	02	59	37.69	+09	15	38.3		4 809
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4592	1990	09	13.24097	23	04	29.43	-06	42	27.2		3 809
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4592	1990	09	15.19098	23	03	04.49	-06	51	10.8		3 809
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4592	1990	09	16.25485	23	02	18.39	-06	55	52.6		3 809
4592	1990	09	16.26737	23	02	17.83	-06	55	55.9		3 809
4592	1990	09	16.27985	23	02	17.27	-06	55	59.6		3 809
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4592	1990	09	26.25626	22	55	34.95	-07	36	20.2		3 809
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4607	1990	09	21.31561	00	33	51.73	+07	34	59.5		3 809
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4619	1990	09	25.18124	23	27	55.63	-00	21	03.9		3 809
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4619	1990	09	26.27084	23	27	03.65	-00	26	52.3		3 809
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4619	1990	09	26.29028	23	27	02.72	-00	26	58.5		3 809
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4623	1990	09	14.04654	22	52	46.81	-08	08	07.8		3 809
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4624	1990	09	13.19168	23	04	35.87	-09	50	03.3		3 809
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4624	1990	09	14.24792	23	03	47.83	-09	55	05.8		3 809
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4624	1990	09	14.27570	23	03	46.57	-09	55	13.8		3 809
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4636	1990	09	26.20624	22	55	54.10	-04	36	16.1		3 809
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4636	1990	09	26.22571	22	55	53.47	-04	36	30.3		3 809
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4642	1990	09	11.20799	22	44	29.74	-08	21	49.5	3 809
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4654	1990	09	16.35416	00	36	03.66	-00	21	31.5	3 809
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4677	1990	09	18.33334	00	28	58.61	+03	00	10.4	17.2 3 809
4677	1990	09	18.34723	00	28	58.04	+03	00	06.9	3 809
4677	1990	09	18.36112	00	28	57.47	+03	00	03.3	3 809
4677	1990	09	20.31876	00	27	34.77	+02	51	30.5	3 809
4677	1990	09	20.34479	00	27	33.67	+02	51	23.5	3 809
4677	1990	09	20.35867	00	27	33.08	+02	51	19.9	3 809
4689	1990	10	16.28472	03	02	55.72	+08	43	19.7	4 809
4689	1990	10	16.31111	03	02	54.38	+08	43	13.2	4 809
4689	1990	10	19.23819	03	00	36.17	+08	30	48.4	4 809
4689	1990	10	19.26458	03	00	34.82	+08	30	42.5	4 809
4689	1990	10	20.25764	02	59	44.93	+08	26	26.5	4 809
4689	1990	10	24.25417	02	56	12.50	+08	09	14.6	18.2 4 809
4689	1990	10	24.26736	02	56	11.72	+08	09	12.1	4 809
4689	1990	10	24.28056	02	56	10.92	+08	09	09.2	4 809
4689	1990	10	24.29722	02	56	09.87	+08	09	06.0	18.0 4 809
4689	1990	10	24.31042	02	56	09.03	+08	09	02.3	4 809
4689	1990	10	24.32361	02	56	08.31	+08	08	58.7	4 809
4701	1990	09	14.29098	23	01	00.89	-12	13	20.2	16.5 3 809
4701	1990	09	14.30487	23	01	00.23	-12	13	24.5	3 809
4701	1990	09	14.31876	23	00	59.57	-12	13	29.0	3 809
4701	1990	09	15.23682	23	00	15.51	-12	18	28.4	3 809
4701	1990	09	15.25070	23	00	14.84	-12	18	33.0	3 809
4701	1990	09	15.26459	23	00	14.17	-12	18	37.2	3 809
4706	1990	10	19.23819	02	57	13.70	+07	03	44.5	4 809
4706	1990	10	19.26458	02	57	12.48	+07	03	28.4	4 809
4706	1990	10	24.25417	02	53	34.82	+06	13	28.3	17.8 4 809
4706	1990	10	24.26736	02	53	34.18	+06	13	20.5	4 809
4706	1990	10	24.28056	02	53	33.48	+06	13	13.0	4 809

871 Akou
K. Kawanishi, 2045-1, Kariya, Akou, Hyogo-Ken 678-02, Japan
0.20-m f/6.0 reflector
AGK3, SAO

1991 AQ	1991	01	26.56042	02	02	23.26	+55	06	24.3	13.0 871
1991 AQ	1991	01	26.56389	02	02	04.10	+55	05	16.6	13.0 871
1991 AQ	1991	01	27.52083	00	46	42.70	+48	11	26.9	13.0 871
1991 AQ	1991	01	27.52292	00	46	33.93	+48	10	31.7	13.0 871

875 Yorii
M. Arai, 2695, Tomita, Saitama, 369-12 Japan
Observers M. Arai, H. Mori
Measurer H. Mori
0.30-m f/3.8 reflector

1990	YE		1991	01	15.50660	06	37	07.50	+23	46	22.6	17	875
1990	YE		1991	01	15.53137	06	37	06.25	+23	46	25.4		875
1991	AJ		1991	01	15.56944	08	07	00.37	+22	00	18.3	16.5	875
1991	AJ		1991	01	15.58819	08	06	59.43	+22	00	26.2		875
1991	AK		1991	01	15.59757	08	16	08.23	+21	34	06.3	17	875
1991	AK		1991	01	15.61603	08	16	07.11	+21	34	07.3		875
1991	CG	*	1991	02	05.57431	09	39	15.04	+18	44	08.2	17	875
1991	CG		1991	02	05.59375	09	39	14.30	+18	44	18.7		875
1991	CG		1991	02	07.60706	09	37	40.30	+19	04	09.2	17	875
1991	CG		1991	02	07.62639	09	37	39.38	+19	04	20.7		875
1991	CH	*	1991	02	05.57431	09	39	29.83	+19	23	14.7	17.5	875
1991	CH		1991	02	05.59375	09	39	28.35	+19	23	14.8		875
1991	CH		1991	02	07.60706	09	37	09.62	+19	22	15.8	17.5	875
1991	CH		1991	02	07.62639	09	37	08.20	+19	22	15.8		875
1991	CK	*	1991	02	05.60417	09	55	06.92	+17	37	37.7	17.5	875
1991	CK		1991	02	05.62274	09	55	05.72	+17	37	42.6		875
1991	CK		1991	02	07.63611	09	52	54.53	+17	46	08.2	17.5	875
1991	CL	*	1991	02	05.60417	09	57	15.72	+18	16	46.9	16.5	875
1991	CL		1991	02	05.62274	09	57	14.89	+18	16	58.9		875
1991	CL		1991	02	07.63611	09	55	45.28	+18	40	16.5	16.5	875
1991	CL		1991	02	07.65347	09	55	44.49	+18	40	27.8		875
1991	CM	*	1991	02	05.60417	09	57	23.53	+19	11	09.4	17	875
1991	CM		1991	02	05.62274	09	57	22.71	+19	11	19.9		875
1991	CM		1991	02	07.63611	09	55	55.02	+19	29	10.0	17	875
1991	CM		1991	02	07.65347	09	55	54.25	+19	29	20.0		875
1991	CN	*	1991	02	05.60417	09	57	40.06	+17	29	00.6	17	875
1991	CN		1991	02	05.62274	09	57	38.90	+17	29	03.8		875
1991	CN		1991	02	07.63611	09	55	34.00	+17	36	46.2	17	875
1991	CN		1991	02	07.65347	09	55	32.92	+17	36	49.8		875

877 Okutama
S. Hayakawa, 1-31-33, Nagano, Gyoda-Shi, Saitama-Ken, 361 Japan
Observer T. Hioki
Measurer S. Hayakawa
0.30-m f/3.8 hyperboloid astrocamera
AGK3, SAOC, GSC

1973	AW3		1990	12	23.60174	02	56	22.92	+15	54	58.8	17.0	877
1973	AW3		1990	12	23.62951	02	56	22.40	+15	55	02.7		877
1976	YA		1990	12	10.71146	04	39	18.82	+15	55	21.1		877
1976	YA		1990	12	10.72569	04	39	18.29	+15	55	12.6		877
1990	XB1		1991	01	08.66042	08	22	35.63	+30	01	48.2	15.0	877
1990	XB1		1991	01	08.67674	08	22	34.80	+30	01	57.7		877
1990	XB1		1991	01	09.66389	08	21	46.70	+30	10	53.0		877
1990	XB1		1991	01	09.68819	08	21	45.38	+30	11	05.7		877
1990	YD		1991	01	13.61753	04	58	55.41	+12	36	30.0	15.0	877
1990	YD		1991	01	14.66042	04	58	45.14	+12	38	44.5	15.0	877
1990	YD		1991	01	14.69203	04	58	44.89	+12	38	46.5		877
1990	YL		1991	02	05.58299	08	11	27.40	+25	51	38.5	16.0	877
1990	YL		1991	02	05.60208	08	11	26.46	+25	51	41.9		877
1990	YL		1991	02	07.68171	08	09	47.63	+25	55	22.5		877
1990	YL		1991	02	07.70243	08	09	46.55	+25	55	23.8		877
1990	YR		1991	01	20.66944	06	21	27.79	+34	36	59.5	16.5	877
1990	YR		1991	01	20.69236	06	21	26.59	+34	36	56.0		877
1991	AN		1991	01	14.74201	07	53	04.46	+30	41	53.2		877
1991	AN		1991	01	14.76574	07	53	03.03	+30	41	56.3		877
1991	AN		1991	02	05.54306	07	28	59.05	+30	52	03.4		877
1991	AN		1991	02	05.56597	07	28	58.09	+30	52	00.9		877
1991	BJ	*	1991	01	17.60035	08	35	13.85	+25	49	27.3	16.5	877
1991	BJ		1991	01	17.62222	08	35	12.43	+25	49	33.2		877

1991	BJ		1991	01	20.51736	08	32	04.69	+26	04	54.2	877
1991	BJ		1991	01	20.53472	08	32	03.58	+26	05	01.0	877
1991	BJ		1991	01	25.79375	08	26	12.77	+26	30	37.6	16.0 877
1991	BJ		1991	02	05.58299	08	14	31.74	+27	11	22.0	877
1991	BJ		1991	02	05.60208	08	14	30.53	+27	11	24.8	877
1991	BJ		1991	02	07.68171	08	12	25.35	+27	17	05.5	877
1991	BJ		1991	02	07.70243	08	12	24.12	+27	17	08.9	877
1991	BK	*	1991	01	19.54763	07	31	21.55	+30	41	50.0	15.5 877
1991	BK		1991	01	19.58236	07	31	19.54	+30	41	59.3	877
1991	BK		1991	01	20.54942	07	30	28.87	+30	46	24.4	877
1991	BK		1991	01	20.56146	07	30	28.13	+30	46	27.1	877
1991	BK		1991	01	25.74062	07	26	11.21	+31	06	33.0	15.5 877
1991	BK		1991	01	25.75903	07	26	10.43	+31	06	37.9	877
1991	BK		1991	02	06.61782	07	19	05.11	+31	30	18.0	15.0 877
1991	BK		1991	02	06.69838	07	19	02.96	+31	30	20.2	877
1991	CJ	*	1991	02	05.58299	08	09	55.93	+26	16	33.1	17.0 F 877
1991	CJ		1991	02	05.60208	08	09	54.96	+26	16	47.5	877
1991	CJ		1991	02	07.68171	08	08	15.68	+26	35	45.0	877
1991	CJ		1991	02	07.70243	08	08	14.75	+26	35	56.5	877
1991	CO	*	1991	02	05.61644	09	34	36.60	+10	39	40.1	16.0 877
1991	CO		1991	02	05.63368	09	34	35.13	+10	39	45.3	877
1991	CO		1991	02	06.54618	09	33	35.06	+10	41	24.6	877
1991	CO		1991	02	06.56424	09	33	33.98	+10	41	24.5	877
4714			1991	01	17.60035	08	30	53.02	+27	31	19.2	16.5 877
4714			1991	01	17.62222	08	30	51.67	+27	31	21.4	877
4714			1991	01	20.51736	08	28	02.26	+27	34	52.7	877
4714			1991	01	20.53472	08	28	01.24	+27	34	55.9	877

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
AGK3

1990	XE		1991	01	18.52118	05	34	34.62	+17	35	43.3	16 881
1990	XE		1991	01	18.53299	05	34	34.27	+17	35	42.1	881
1991	CW	*	1991	02	08.55035	10	13	37.25	+15	25	43.5	16.5 881
1991	CW		1991	02	08.57396	10	13	35.75	+15	25	55.9	881
1991	CW		1991	02	12.54132	10	09	43.54	+15	59	31.5	16.5 881
1991	CW		1991	02	12.55313	10	09	42.82	+15	59	38.1	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
0.20-m f/4.0 hyperboloid astrocamera

1990	WW2		1991	01	06.46337	05	17	31.56	+23	21	47.0	16 885
1990	WW2		1991	01	17.46701	05	11	30.89	+24	41	34.7	16.5 885
1990	WW2		1991	01	17.51563	05	11	29.90	+24	41	53.7	885
1990	YH		1991	01	13.57431	07	38	47.07	+14	48	37.0	15.5 885
1990	YH		1991	01	13.59375	07	38	46.02	+14	48	43.6	885
1990	YJ		1991	01	13.58403	07	41	38.34	+12	53	40.3	15.5 885
1990	YJ		1991	01	13.60278	07	41	37.22	+12	53	46.6	885
1990	YJ		1991	01	15.51944	07	39	36.30	+13	02	57.2	15.5 885
1990	YJ		1991	01	15.53872	07	39	35.12	+13	03	03.8	885
1990	YJ		1991	01	20.57326	07	34	19.51	+13	29	05.5	15.5 885
1990	YJ		1991	01	20.59167	07	34	18.37	+13	29	12.0	885
1991	AR	*	1991	01	12.55278	07	40	19.28	+21	00	41.7	16 885
1991	AR		1991	01	12.56944	07	40	18.28	+21	00	47.5	885

1991 AR		1991 01 15.54705	07 37 06.95	+21 15 08.9			16		885
1991 AR		1991 01 15.55521	07 37 06.58	+21 15 08.5					885
1991 BC	*	1991 01 17.52431	08 51 01.34	+05 57 34.6			16.5		885
1991 BC		1991 01 17.53958	08 51 00.65	+05 57 33.2					885
1991 BC		1991 01 19.65035	08 49 20.89	+05 59 08.8			16		885
1991 BC		1991 01 19.65938	08 49 20.53	+05 59 08.7					885
1991 BE		1991 01 20.60208	07 53 37.19	+16 26 57.5			15.5		885
1991 BY	*	1991 01 25.70903	10 41 07.71	+12 06 56.9			16		885
1991 BY		1991 01 25.72569	10 41 06.90	+12 06 57.8					885
1991 BY		1991 01 26.74306	10 40 29.40	+12 07 10.4					885
1991 CY	*	1991 02 09.62778	10 20 38.96	-00 51 06.9			16.5		885
1991 CY		1991 02 09.65833	10 20 37.13	-00 51 08.9					885

886 Susono
T. Furuta, 17-2 Mitsuike, Kagiya, Tokai 477, Japan
Observers M. Akiyama, T. Furuta
Measurer T. Furuta
0.25-m f/4.2 Wright-Schmidt camera
AGK3

1971 TY2		1991 01 05.53229	07 47 32.8	+18 09 02			16.0		886
1971 TY2		1991 01 05.56181	07 47 31.1	+18 08 57					886
1971 TY2		1991 01 06.55035	07 46 33.55	+18 05 14.1					886
1971 TY2		1991 01 06.56146	07 46 33.0	+18 05 10					886
1975 BP1		1990 12 10.62483	05 57 03.02	+20 23 58.9			16.0		886
1975 BP1		1990 12 10.63819	05 57 02.33	+20 23 57.4					886
1991 AF1		1991 01 13.60990	08 56 35.3	+15 33 11			16.5		886
1991 AF1		1991 01 13.62083	08 56 34.6	+15 33 11					886
1991 AF1		1991 01 14.63247	08 55 44.6	+15 33 00					886
1991 CA		1991 02 04.58594	10 26 03.39	+08 43 44.9			15.5		886
1991 CA		1991 02 04.59948	10 26 02.86	+08 43 49.3					886
1991 CA		1991 02 05.61007	10 25 18.14	+08 48 13.6					886
1991 CA		1991 02 05.62083	10 25 17.83	+08 48 14.7					886
1991 CF	*	1991 02 08.57708	09 49 45.6	+06 44 10			16.0		886
1991 CF		1991 02 08.58837	09 49 45.0	+06 44 20					886
1991 CF		1991 02 09.55799	09 48 51.39	+06 52 16.0					886
1991 CF		1991 02 09.56875	09 48 50.77	+06 52 20.0					886

887 Ojima
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers T. Niijima, T. Urata
Measurer T. Urata
0.30-m f/5.8 reflector
AGK3, PPM

1987 GC		1991 02 12.58275	09 16 03.28	-01 40 42.0			17		887
1987 GC		1991 02 12.59028	09 16 02.87	-01 40 38.5					887
1990 WW2		1991 02 12.46481	05 13 54.04	+27 05 38.1			17.5		887
1990 WW2		1991 02 12.48356	05 13 54.57	+27 05 44.6					887
1990 WW2		1991 02 12.53738	05 13 56.10	+27 05 57.5					887

889 Karasuyama
T. Urata, 6-1, Muramatsubara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
Observers S. Inoda, T. Urata
Measurer T. Urata
0.31-m f/5.6 reflector
AGK3

1991 AB		1991 01 15.50833	08 21 39.25	+16 43 09.3			15.5		889
1991 AB		1991 01 15.52917	08 21 38.15	+16 43 18.7					889
1991 AB		1991 01 18.62292	08 18 43.07	+17 09 26.9			15		889
1991 AB		1991 01 18.64375	08 18 41.83	+17 09 37.8					889

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1991 AB     1991 01 20.64549  08 16 47.18  +17 26 38.2            15.5     889
1991 AB     1991 01 20.66493  08 16 46.05  +17 26 48.4                     889
1991 AK1  * 1991 01 15.55174  07 58 03.07  +17 27 22.0            16       889
1991 AK1    1991 01 15.57222  07 58 02.17  +17 27 23.5                     889
1991 AK1    1991 01 18.57847  07 55 16.69  +17 27 24.3            16.5     889
1991 AK1    1991 01 18.59931  07 55 15.7   +17 27 24                   G 889
1991 AK1    1991 01 20.60347  07 53 25.9   +17 27 35             16.5  I 889
1991 AK1    1991 01 20.62431  07 53 24.8   +17 27 33                   M 889
1991 AL1  * 1991 01 15.56181  07 58 04.16  +16 19 50.6            16       889
1991 AL1    1991 01 15.58264  07 58 02.77  +16 19 56.0                     889
1991 AL1    1991 01 18.58889  07 54 47.03  +16 33 53.4            16       889
1991 AM1  * 1991 01 15.56181  08 02 15.07  +16 12 41.0            16.5     889
1991 AM1    1991 01 15.58264  08 02 13.84  +16 12 40.9                     889
1991 AM1    1991 01 18.61250  07 59 30.68  +16 14 03.1            16.5     889
1991 AM1    1991 01 18.63333  07 59 29.63  +16 14 03.1                     889
1991 BD   * 1991 01 18.57847  07 56 10.47  +18 01 54.8            16       889
1991 BD     1991 01 18.59931  07 56 09.1   +18 01 55                   G 889
1991 BD     1991 01 20.60347  07 53 52.92  +18 02 19.4            16       889
1991 BD     1991 01 20.62431  07 53 51.58  +18 02 19.9                     889
1991 BE     1991 01 15.55174  08 00 41.89  +17 16 20.6            16       889
1991 BE     1991 01 15.57222  08 00 40.11  +17 16 08.8                     889
1991 BE   * 1991 01 18.61250  07 56 24.56  +16 46 24.8            15     t 889
1991 BE     1991 01 18.63333  07 56 22.65  +16 46 11.7                   t 889
1991 BE     1991 01 20.69826  07 53 28.83  +16 25 58.2            15.5     889
1991 BE     1991 01 20.71632  07 53 27.38  +16 25 50.1                     889
1991 BE     1991 02 08.54653  07 29 30.54  +13 26 26.5            16       889
1991 BE     1991 02 08.56944  07 29 29.00  +13 26 12.8                     889
1991 BF   * 1991 01 18.62292  08 18 45.85  +17 49 02.5            16       889
1991 BF     1991 01 18.64375  08 18 44.36  +17 49 03.1                     889
1991 BF     1991 01 20.64549  08 16 27.54  +17 51 09.0            16       889
1991 BF     1991 01 20.66493  08 16 26.28  +17 51 09.9                     889
1991 BO     1991 01 15.56181  08 02 44.66  +16 20 02.9            16.5     889
1991 BO     1991 01 15.58264  08 02 43.43  +16 20 05.5                     889
1991 BO   * 1991 01 18.61250  07 59 56.16  +16 27 12.5            16.5     889
1991 BO     1991 01 18.63333  07 59 54.93  +16 27 13.8                     889
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894 Kiyosato and Otomo
S. Miyasaka, 3-8-501, 4 Chome, Nagayama, Tama, Tokyo 206, Japan
Observers S. Miyasaka, S. Otomo, O. Muramatsu
Measurers S. Miyasaka, O. Muramatsu
0.25-m reflector

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1981 EA28   1991 01 13.52835  04 55 27.58  +34 42 45.9                     894
1981 EA28   1991 01 13.55402  04 55 26.53  +34 42 37.0                     894
1981 PK     1991 01 13.59763  06 26 08.97  +20 52 19.7                     894
1981 PK     1991 01 13.61857  06 26 07.65  +20 52 14.8                     894
1985 QH5    1990 12 23.65687  07 56 42.62  +17 31 01.7                     894
1985 QH5    1990 12 23.67733  07 56 41.71  +17 31 04.3                     894
1985 QH5    1991 01 13.69149  07 38 08.90  +18 22 49.7                     894
1985 QH5    1991 01 13.71203  07 38 07.61  +18 22 54.3                     894
1986 EE5    1991 01 13.56465  05 45 30.79  +21 52 55.0                     894
1986 EE5    1991 01 13.58718  05 45 29.82  +21 52 55.6                     894
1988 DA     1991 01 19.54253  05 22 08.30  +31 13 59.4                     894
1989 UY     1991 01 13.75524  09 37 56.74  -06 59 29.2                     894
1989 UY     1991 01 13.78209  09 37 55.96  -06 59 37.4                     894
1991 CP     1991 02 08.64653  10 30 09.0   +13 46 05                   W 894
1991 CP     1991 02 08.68108  10 30 07.13  +13 46 27.4                     894
1991 CX   * 1991 02 09.62292  10 29 06.86  +04 02 19.9            16.5     894
1991 CX     1991 02 09.65417  10 29 05.19  +04 02 28.8                     894
1991 CX     1991 02 11.69896  10 27 18.34  +04 11 39.9                     894
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1991	CX		1991	02	11.72674	10	27	16.70	+04	11	46.5	894
4690			1990	11	23.72608	06	26	39.65	+45	21	11.2	894
4690			1990	11	23.74954	06	26	38.35	+45	21	06.0	894
4690			1991	01	12.53959	05	18	29.61	+34	06	59.3	894
4690			1991	01	12.56151	05	18	28.63	+34	06	36.0	894

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Observers Y. Kushida, O. Muramatsu
Measurer O. Muramatsu
0.20-m f/4.0 reflector
AGK3

1991	AC		1991	01	15.52396	07	52	52.65	+24	41	49.4	16.5	896
1991	AC		1991	01	15.55590	07	52	50.72	+24	41	57.9	896
1991	AC		1991	01	22.66667	07	46	04.74	+25	02	05.8	896
1991	AD		1991	01	13.59618	07	54	40.76	+13	45	29.1	896
1991	AD		1991	01	22.65556	07	45	35.20	+13	49	39.7	896
1991	AD		1991	01	22.68472	07	45	33.45	+13	49	41.5	896
1991	AL		1991	01	13.63056	08	23	35.5	+21	43	09	P 896
1991	AL		1991	01	17.65694	08	19	44.2	+22	12	55	P 896
1991	AL		1991	01	17.68819	08	19	42.3	+22	13	11	p 896
1991	AL		1991	01	23.72917	08	13	42.57	+22	56	14.2	896
1991	AL		1991	01	23.75833	08	13	40.69	+22	56	25.4	896
1991	AQ		1991	01	23.61389	05	47	05.31	+54	37	24.3	896
1991	AQ		1991	01	23.62500	05	46	34.12	+54	39	18.4	896
1991	AW		1991	01	15.69722	09	02	04.92	+16	06	12.2	16.5	896
1991	AW		1991	01	15.73854	09	02	02.98	+16	06	40.2	896
1991	AW		1991	01	17.60729	09	00	38.9	+16	27	16	16.5 P 896
1991	AW		1991	01	17.64583	09	00	37.05	+16	27	40.9	896
1991	AA1	*	1991	01	10.72743	08	21	15.27	+23	35	55.1	17	896
1991	AA1		1991	01	10.76215	08	21	13.35	+23	36	04.7	896
1991	AA1		1991	01	14.67639	08	17	36.20	+23	54	37.7	17	896
1991	AA1		1991	01	15.53993	08	16	46.95	+23	58	39.7	17	896
1991	AA1		1991	01	23.71389	08	08	52.61	+24	34	43.5	896
1991	AB1	*	1991	01	13.71875	08	49	48.85	+16	04	05.4	16.5	896
1991	AB1		1991	01	13.75729	08	49	46.94	+16	04	20.3	896
1991	AB1		1991	01	15.58924	08	48	23.83	+16	15	33.5	16.5	896
1991	AB1		1991	01	15.62708	08	48	22.03	+16	15	47.1	896
1991	AB1		1991	01	20.52257	08	44	28.96	+16	46	35.1	896
1991	AB1		1991	01	20.55313	08	44	27.40	+16	46	46.5	896
1991	CP	*	1991	02	07.71806	10	30	49.67	+13	38	07.8	16	896
1991	CP		1991	02	07.75524	10	30	48.02	+13	38	27.3	896
1991	CE1	*	1991	02	12.75313	11	01	37.73	-01	03	59.4	17	896
1991	CE1		1991	02	12.78773	11	01	36.41	-01	03	53.3	896
1991	CE1		1991	02	13.68576	11	01	04.48	-01	00	47.5	W 896
1991	CE1		1991	02	13.72465	11	01	03.15	-01	00	42.0	W 896

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Observers H. Shiozawa, M. Kizawa
Measurer M. Kizawa
0.20-m f/4.0 hyperboloid astro-camera, 0.20-m f/4.9 reflector

1990	YM		1991	01	12.58177	08	42	10.2	+32	07	39	15.5 P 898
1990	YM		1991	01	12.60950	08	42	08.85	+32	08	24.0	898
1990	YM		1991	01	14.60366	08	40	44.65	+33	05	00.6	898
1990	YM		1991	01	14.62850	08	40	43.14	+33	05	41.0	898
1990	YM		1991	01	14.65076	08	40	42.55	+33	06	20.4	898
1991	AJ1	*	1991	01	12.58177	08	46	26.99	+29	10	43.4	16	898
1991	AJ1		1991	01	12.60950	08	46	25.39	+29	10	58.7	898

```
1991 AJ1   1991 01 17.55708  08 41 38.86  +29 55 39.3                    898
1991 AJ1   1991 01 17.58111  08 41 37.18  +29 55 52.7                    898
1991 AJ1   1991 01 19.64850  08 39 31.74  +30 13 49.1                    898
1991 AJ1   1991 01 19.66440  08 39 30.74  +30 13 56.8                    898
 573       1991 01 12.58177  08 42 07.05  +28 06 52.8           14       898
 573       1991 01 12.60950  08 42 05.58  +28 06 56.6                    898

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   E-46010 Valencia, Spain
Observers A. Lopez G., J. A. Lopez O., R. Lopez M.
0.25-m f/15 refractor
SAOC
   2       1988 07 06.89748  20 33 18.69  +18 08 03.4                    975
   2       1988 07 06.90164  20 33 18.56  +18 08 03.3                    975
   2       1988 07 06.90564  20 33 18.38  +18 08 02.9                    975
   2       1988 07 06.91032  20 33 18.23  +18 08 02.6                    975
   2       1988 07 06.91403  20 33 18.01  +18 08 02.2                    975
   2       1988 07 06.91759  20 33 17.88  +18 08 02.0                    975
   2       1988 07 06.92161  20 33 17.71  +18 08 02.0                    975
   2       1988 07 06.92523  20 33 17.59  +18 08 01.7                    975
   2       1988 07 06.92954  20 33 17.43  +18 08 02.2                    975
   2       1988 07 08.88843  20 31 57.61  +18 05 01.6                    975
   2       1988 07 08.89181  20 31 57.44  +18 05 01.1                    975
   2       1988 07 08.89525  20 31 57.31  +18 05 01.1                    975
   2       1988 07 08.89939  20 31 57.13  +18 05 01.1                    975
   2       1988 07 08.90260  20 31 57.03  +18 05 01.0                    975
   2       1988 07 08.90573  20 31 56.88  +18 05 00.5                    975
   2       1988 07 08.90923  20 31 56.72  +18 04 59.5                    975
   2       1988 07 08.91238  20 31 56.52  +18 04 59.7                    975
   2       1988 07 08.91554  20 31 56.42  +18 04 59.2                    975
   2       1988 07 13.88648  20 28 22.46  +17 53 03.8                    975
   2       1988 07 13.89015  20 28 22.43  +17 53 02.2                    975
   2       1988 07 13.89373  20 28 22.24  +17 53 01.3                    975
   2       1988 07 13.89804  20 28 22.04  +17 53 00.9                    975
   2       1988 07 13.90142  20 28 21.89  +17 53 00.0                    975
   2       1988 07 13.90442  20 28 21.82  +17 53 00.0                    975
   2       1988 07 13.90784  20 28 21.63  +17 52 59.3                    975
   2       1988 07 13.91067  20 28 21.51  +17 52 58.2                    975
   2       1988 07 13.91350  20 28 21.34  +17 52 57.8                    975
   2       1988 07 20.88778  20 23 01.10  +17 25 29.5                    975
   2       1988 07 20.89113  20 23 00.98  +17 25 28.7                    975
   2       1988 07 20.89442  20 23 00.80  +17 25 27.7                    975
   2       1988 07 20.89824  20 23 00.55  +17 25 26.8                    975
   2       1988 07 20.90165  20 23 00.41  +17 25 25.4                    975
   2       1988 07 20.90500  20 23 00.22  +17 25 24.6                    975
   2       1988 07 20.90934  20 23 00.08  +17 25 23.9                    975
   2       1988 07 20.91275  20 22 59.89  +17 25 22.9                    975
   2       1988 07 20.91604  20 22 59.75  +17 25 21.9                    975
   2       1988 09 18.85764  19 50 35.43  +07 19 45.9                    975
   2       1988 09 18.86134  19 50 35.38  +07 19 43.7                    975
   2       1988 09 18.86528  19 50 35.35  +07 19 40.9                    975
   2       1988 09 26.79653  19 50 55.03  +05 46 42.8                    975
   2       1988 09 26.80043  19 50 55.05  +05 46 39.5                    975
   2       1988 09 26.80520  19 50 54.97  +05 46 37.4                    975
   2       1988 09 26.80948  19 50 55.05  +05 46 34.2                    975
   2       1988 09 28.79178  19 51 11.73  +05 24 02.8                    975
   2       1988 09 28.79654  19 51 11.71  +05 23 59.1                    975
   2       1988 09 28.80345  19 51 11.84  +05 23 54.7                    975
```

2	1988 09 28.80753	19 51 11.91	+05 23 51.5			975
2	1988 09 28.81133	19 51 11.86	+05 23 49.1			975
2	1988 09 28.81600	19 51 12.01	+05 23 46.4			975
2	1988 09 28.82041	19 51 12.04	+05 23 44.3			975
2	1988 10 06.79141	19 53 05.72	+03 57 01.6			975
2	1988 10 06.79557	19 53 05.76	+03 56 59.6			975
2	1988 10 06.80041	19 53 05.84	+03 56 54.8			975
2	1988 10 06.80527	19 53 05.87	+03 56 52.7			975
2	1988 10 06.81007	19 53 06.04	+03 56 49.8			975
2	1988 10 06.81427	19 53 06.13	+03 56 46.5			975
2	1988 10 19.79110	19 58 40.63	+01 50 51.8			975
2	1988 10 19.79538	19 58 40.83	+01 50 50.1			975
2	1988 10 19.80106	19 58 41.09	+01 50 47.0			975
2	1988 10 19.80565	19 58 41.03	+01 50 45.3			975
2	1988 10 19.81025	19 58 41.32	+01 50 41.8			975
2	1988 10 19.81500	19 58 41.42	+01 50 39.2			975
2	1988 10 19.81940	19 58 41.55	+01 50 36.7			975
11	1988 05 17.86839	12 52 14.48	+01 50 21.7			975
11	1988 05 17.87271	12 52 14.58	+01 50 21.3			975
18	1988 09 20.89497	22 39 22.50	-15 27 31.0			975
18	1988 09 20.89821	22 39 22.43	-15 27 31.6			975
18	1988 09 20.90336	22 39 22.24	-15 27 36.2			975
18	1988 09 20.90677	22 39 22.08	-15 27 38.2			975
18	1988 10 06.82717	22 35 12.01	-17 42 07.4			975
18	1988 10 06.83064	22 35 12.06	-17 42 09.0			975
18	1988 10 06.83484	22 35 12.05	-17 42 09.7			975
18	1988 10 06.83822	22 35 12.07	-17 42 10.2			975
18	1988 10 19.83138	22 38 05.49	-18 23 22.7			975
18	1988 10 19.83549	22 38 05.56	-18 23 22.5			975
18	1988 10 19.83911	22 38 05.54	-18 23 22.5			975
18	1988 10 19.84246	22 38 05.75	-18 23 22.1			975
29	1988 03 08.86045	07 10 38.50	+28 42 23.0			975
29	1988 03 08.86453	07 10 38.59	+28 42 21.9			975
44	1988 03 08.84601	04 57 59.11	+20 48 18.3			975
44	1988 03 08.85041	04 57 59.75	+20 48 19.9			975

* * * * *

ORBITAL ELEMENTS.

Orbital elements have been computed by the following contributors:

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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 Shoemaker-Holt-Rodriquez (1989 V)
Epoch 1989 June 3.0 ET = JDE 2447680.5
T 1989 June 12.45956 ET Muraoka

		(1950.0)	P	Q
q 2.4743679				
z -0.0002292	Peri.	232.13695	+0.15891835	-0.40286578
+/-0.0000039	Node	114.55678	-0.24119040	+0.86945542
e 1.0005671	Incl.	97.69615	-0.95737775	-0.28591334

From 133 observations 1988 June 11-1990 Mar. 25, mean residual 1".20.

Periodic Comet Shoemaker-Levy 4 (1991f)
T 1990 July 30.13862 ET Marsden

		(1950.0)	P	Q
q 1.9560574				
n 0.12642845	Peri.	303.87925	-0.09083908	-0.99339752
a 3.9316319	Node	151.08886	+0.95482588	-0.10687006
e 0.5024821	Incl.	8.33347	+0.28294134	+0.04171529
P 7.80				

From 6 observations 1991 Feb. 9-16.

Comet McNaught-Russell (1991g)
T 1990 Oct. 14.42722 ET Green

		(1950.0)	P	Q
q 4.7702983				
	Peri.	320.38409	-0.81077228	-0.50364445
	Node	161.03373	+0.24297073	+0.17409323
e 1.0	Incl.	113.38578	-0.53255378	+0.84618781

From 8 observations 1991 Jan. 26-Feb. 15.

Comet Arai (1991b)
T 1990 Dec. 10.88292 ET Nakano

		(1950.0)	P	Q
q 1.4341190				
	Peri.	337.62921	-0.27567895	-0.43333728
	Node	114.82570	+0.96093627	-0.14703248
e 0.9903866	Incl.	70.97870	+0.02454783	+0.88915705

From 59 observations 1990 Dec. 23-1991 Feb. 13.

Periodic Comet Shoemaker-Levy 3 (1991e)

T 1991 Feb. 14.31231 ET				Marsden
q 2.6891565		(1950.0)	P	Q
n 0.13680474	Peri.	198.21290	-0.76261989	-0.64344079
a 3.7302271	Node	301.55436	+0.60269635	-0.66961111
e 0.2790904	Incl.	4.46191	+0.23487870	-0.37095135
P 7.20				

From 16 observations 1991 Feb. 7-17.

Comet Shoemaker-Levy (1991d)

T 1991 Dec. 30.61961 ET				Nakano
q 2.2675319		(1950.0)	P	Q
	Peri.	74.20617	-0.34347803	+0.74795424
	Node	144.41013	-0.38489948	-0.66374820
e 1.0	Incl.	77.40199	+0.85666518	+0.00166869

From 13 observations 1991 Jan. 13-Feb. 13.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1989 AS	12.1	890114	68.00	105.96	285.99	26.26	0.0563	2.7780	9	9		N
1989 YU9		891220	276.63	213.26	317.28	5.08	0.1526	2.2827	2	6	E	M
1990 QG1	14.0	900817	1.46	351.18	343.73	6.61	0.1361	2.3613	31	0		W
1990 QL1	13.0	900906	323.30	238.10	161.87	10.07	0.2104	3.1396	35	0		W
1990 QM1	13.0	900906	329.58	241.27	147.04	2.52	0.1788	3.1748	37	0		W
1990 QR1	13.5	900906	22.08	191.51	128.96	1.13	0.0687	2.7833	35	0		W
1990 QS1	13.0	900906	130.55	212.91	1.58	3.47	0.0076	2.6703	37	0		W
1990 QX1	14.5	900906	312.33	5.49	49.54	0.88	0.2130	2.3259	35	0		W
1990 QG2	12.0	900906	293.04	260.29	165.68	14.20	0.0952	3.1295	31	0		W
1990 QL2	13.5	900906	331.78	224.05	159.53	5.12	0.1296	2.2616	31	0		W
1990 QN2	14.0	900906	20.02	335.29	345.96	7.10	0.1380	2.3580	37	0		W
1990 QU2	15.5	900906	3.89	176.66	163.82	7.60	0.2474	2.2119	28	0		W
1990 QZ2	15.5	900817	342.73	11.53	352.53	2.13	0.2390	2.3449	30	0		W
1990 QB3	15.5	900817	313.81	240.25	159.16	3.86	0.1656	2.1943	30	0		W
1990 QC3	15.0	900906	329.23	227.50	162.19	3.47	0.1883	2.2998	37	0		W
1990 QZ3	15.0	900817	358.30	184.31	154.38	5.87	0.1481	2.3248	30	0		W
1990 QH4	15.5	900817	351.94	358.42	346.25	4.52	0.1896	2.2321	28	0		W
1990 QJ4	14.5	900817	38.84	123.96	155.56	2.45	0.1939	2.4130	26	0		W
1990 QK4	15.0	900817	343.74	203.11	156.70	2.67	0.2183	2.3883	26	0		W
1990 QL4	12.0	900817	149.70	197.86	349.66	10.59	0.0239	2.9972	22	0		W
1990 QO4	13.0	900817	32.97	305.92	353.80	9.52	0.0821	2.9959	26	0		W
1990 QP4	15.0	900817	13.60	329.21	347.23	2.46	0.1786	2.3750	30	0	D	W
1990 QE5	14.5	900817	18.95	311.25	359.64	6.68	0.1292	2.3620	26	0		W
1990 QF5	12.0	900817	85.31	254.70	351.74	15.00	0.0663	3.1950	26	0		W
1990 QH5	14.5	900817	353.87	317.79	25.55	3.65	0.0836	2.1825	21	0		W
1990 QJ5	14.5	900817	331.95	359.49	19.26	2.73	0.2094	2.3811	30	0	D	W
1990 QZ5	13.0	900906	311.04	244.90	159.32	12.93	0.1557	2.8604	37	0		W
1990 QA6	14.5	900817	334.95	18.13	349.97	4.21	0.1788	2.2782	33	0		W
1990 QB6	13.5	900906	25.62	318.33	358.37	12.37	0.2337	2.4021	48	0		W
1990 QC6	14.5	900817	307.20	316.35	92.05	0.69	0.1848	2.3311	29	0		W
1990 QJ6	14.0	900817	11.39	247.31	73.88	0.59	0.1956	3.0545	29	0		W
1990 QT6	15.0	900817	79.00	240.87	3.25	1.96	0.1399	2.4110	27	0		W
1990 QE7	14.0	900817	251.19	319.76	142.32	2.13	0.1189	2.5323	27	0		W
1990 QT7	12.5	900817	280.56	187.19	241.25	0.70	0.1160	3.2496	26	0		W
1990 QV7	15.5	900817	348.86	112.68	236.48	0.39	0.2013	2.4282	26	0		W
1990 QX7	13.0	900817	338.07	38.51	327.68	1.83	0.1787	3.2018	26	0		W
1990 QD8	13.5	900817	347.36	201.92	150.39	6.02	0.1550	3.1922	33	0		W
1990 QE9	13.5	900817	292.33	58.36	352.39	1.73	0.0587	2.8703	35	0		W
1990 QT9	14.0	900817	39.91	167.66	116.78	1.56	0.1317	2.2005	26	0		W
1990 QU9	12.5	900906	49.36	291.20	351.87	15.87	0.0992	3.1229	23	0		W

1990	QW9	14.0	900906	44.24	104.42	170.54	11.25	0.2834	2.5940	34	0		W
1990	RD	13.5	900906	337.11	203.66	176.36	7.88	0.2180	2.8712	12	0		W
1990	RF	12.0	900906	341.06	192.71	174.13	16.62	0.0592	3.2162	41	0		W
1990	RS	14.5	900906	336.03	25.76	349.30	8.51	0.1595	2.2961	7	0		W
1990	RT	12.0	900906	211.84	329.65	162.64	14.81	0.0227	3.0337	5	0	E	W
1990	RU	15.0	900906	19.87	147.75	163.65	5.08	0.2224	2.2145	6	0		W
1990	RB1	13.5	900906	16.29	150.98	171.88	10.57	0.2223	3.1540	11	0	E	W
1990	RD1	12.5	900906	299.46	248.88	169.25	9.77	0.0726	3.1711	12	0		W
1990	RF1	12.5	900906	56.88	45.30	222.67	0.91	0.2342	3.1987	10	0		W
1990	RG1	15.5	900906	337.31	27.84	359.05	6.73	0.2698	2.2855	11	0		W
1990	RK1	13.5	900906	336.88	25.40	357.88	13.09	0.1928	2.6779	9	0		W
1990	RM1	14.0	900906	17.29	324.14	359.01	14.27	0.1998	2.7168	8	0		W
1990	RN1	14.0	900906	24.06	297.83	9.65	5.55	0.2697	2.6174	8	0		W
1990	RO1	12.5	900906	212.02	340.72	163.74	5.69	0.0764	2.7711	10	0		W
1990	RQ2	14.0	900906	320.43	69.98	343.93	5.24	0.2258	2.2997	15	0		W
1990	RR2	13.5	900906	352.25	171.98	193.12	6.53	0.1394	2.4481	14	0		W
1990	RT2	14.0	900906	350.80	12.86	356.11	11.70	0.1729	2.6812	13	0		W
1990	RA3	13.5	900906	257.14	233.43	228.05	1.30	0.0512	2.7219	10	0		W
1990	RB3	14.5	900906	346.47	193.63	179.16	21.61	0.2112	2.7965	10	0		W
1990	RF3	14.5	900906	2.70	348.07	357.83	14.53	0.2807	3.0757	10	0	E	W
1990	RG3	14.0	900906	345.75	187.61	183.95	1.37	0.1414	2.8366	15	3		W
1990	RH3	13.0	900906	14.37	158.23	176.28	9.48	0.1253	2.9732	15	0		W
1990	RJ3	14.5	900906	50.07	303.85	351.95	6.94	0.0676	2.2696	10	0		W
1990	RM3	14.5	900906	66.40	276.83	354.09	5.96	0.1366	2.2255	15	0		W
1990	RA5	13.5	900906	60.75	90.34	183.28	13.03	0.1538	2.5603	10	0		W
1990	RV5	14.5	900906	16.95	330.34	344.99	4.38	0.1122	2.2874	6	0		W
1990	RW5	14.0	900906	39.78	128.89	152.81	2.49	0.1765	2.4339	7	0		W
1990	RX5	11.5	900906	141.72	143.13	41.05	0.43	0.1441	3.1646	7	0	E	W
1990	RY5	12.5	900906	189.13	159.24	350.06	5.03	0.2403	2.4651	7	0		W
1990	RZ5	12.5	900906	303.26	59.24	344.88	4.38	0.1089	2.7934	7	0		W
1990	RB6	13.5	900906	109.36	230.15	349.74	6.52	0.0671	2.3745	20	0		W
1990	RC6	14.0	900906	306.35	254.46	152.22	9.54	0.1567	2.5014	7	0		W
1990	RD6	13.5	900906	21.10	324.35	343.00	12.15	0.1668	2.6246	7	0		W
1990	RE6	12.0	900906	88.71	55.44	159.46	4.47	0.3005	2.4750	9	0	E	W
1990	RF6	12.5	900906	22.80	150.47	163.10	6.76	0.0004	2.8464	2	9	E	W
1990	RG6	15.0	900906	22.04	144.12	162.94	3.01	0.1682	2.2541	2	9	E	W
1990	RJ6	13.0	900906	3.52	168.83	166.10	5.24	0.1494	2.9878	2	8	E	W
1990	RO6	13.0	900906	0.71	343.13	356.93	1.51	0.1032	2.9157	3	0	D	W
1990	RQ6	12.0	900906	249.30	320.87	154.14	1.79	0.2400	3.1918	2	9	E	M
1990	RS6	15.0	900906	59.12	276.62	350.22	4.27	0.1546	2.3101	3	9		W
1990	RT6	14.0	900906	344.85	219.00	151.57	0.63	0.2863	3.0026	3	0	E	W
1990	RX6	13.5	900906	5.55	159.62	177.16	1.99	0.1051	2.6977	5	0		W
1990	RZ6	12.5	900906	310.79	252.66	162.89	1.17	0.2209	3.4075	3	0	E	W
1990	RA7	13.5	900906	180.45	0.16	163.60	9.18	0.0971	2.2751	3	0	E	W
1990	RB7	14.5	900906	356.50	195.91	152.31	5.54	0.1431	2.6234	2	9	E	W
1990	RC7	14.5	900906	25.58	147.69	149.19	4.76	0.2936	2.9142	2	9	E	M
1990	RL7	13.5	900906	97.65	231.58	353.34	4.13	0.2067	2.3466	3	0	E	W
1990	RM7	12.5	900906	278.90	39.88	28.73	1.59	0.0223	3.1149	2	9	E	W
1990	RN7	15.5	900906	337.33	24.68	356.49	8.43	0.1830	2.3943	8	0		W
1990	RO7		900906	356.86	191.44	161.67	3.36	0.0353	2.5592	10	0		W
1990	RP7	15.0	900906	358.89	223.32	127.41	0.97	0.4149	3.1552	9	0		W
1990	RQ7	14.5	900906	309.49	337.43	71.92	0.79	0.0978	2.3194	10	0		W
1990	RR7	14.0	900906	63.90	108.58	163.87	6.70	0.1302	2.5544	9	0		W
1990	RV7	14.5	900906	356.81	173.79	174.40	3.80	0.1201	2.5545	2	9	E	W
1990	RW7	13.0	900817	325.85	223.14	164.36	3.60	0.1754	3.1705	27	0		W
1990	RY7	14.0	900906	332.56	31.86	356.72	4.03	0.2312	2.9862	2	9	E	W
1990	RZ7	15.5	900906	19.14	271.31	46.15	0.65	0.1768	2.3267	2	9	E	W
1990	RA8	15.0	900906	339.75	10.11	6.54	2.54	0.2194	2.4343	2	9		W
1990	RQ8	13.0	900906	15.91	319.38	7.49	1.34	0.1753	3.1353	9	0		W

1990	RR8	14.5	900906	83.31	237.94	12.74	3.00	0.1355	2.2938	8	0		W
1990	RT8	15.0	900906	24.24	159.04	152.60	2.89	0.2193	2.4148	7	9		W
1990	RU8	15.0	900906	39.71	140.74	152.85	2.67	0.1913	2.3864	9	0		W
1990	SL2	13.5	900906	25.78	250.79	73.44	6.36	0.2038	2.3242	14	0		W
1990	SJ5	15.5	900906	0.25	339.65	15.07	7.96	0.2467	2.5444	10	9		W
1990	SP5	15.5	900906	34.68	245.78	57.51	2.36	0.2231	2.3559	10	0		W
1990	SE6	15.0	900906	334.69	227.99	161.24	7.61	0.1106	2.3590	10	0		W
1990	SP6	15.5	900906	359.04	195.77	161.36	6.12	0.1931	2.2685	10	0		W
1990	SZ10	15.0	900906	13.52	334.30	356.14	6.72	0.1772	2.3676	6	0		W
1990	SG11	14.0	900906	35.80	91.20	204.11	2.52	0.2006	2.4794	12	0		W
1990	SJ12	15.0	900906	320.24	40.62	3.29	7.72	0.1605	2.3329	6	0	E	W
1990	SN12	14.0	900906	353.53	299.68	59.12	1.65	0.2005	3.0650	5	9	E	W
1990	SR12	14.0	900906	356.24	358.64	358.51	18.66	0.2104	3.1654	3	9	E	W
1990	SS12	15.0	900906	353.74	350.57	7.96	6.39	0.1255	2.2885	2	9	E	W
1990	SB13	15.0	900906	14.43	130.33	193.09	0.41	0.2413	2.3845	3	0	E	W
1990	SC13	13.0	900926	347.22	105.11	266.21	0.88	0.0479	2.9185	7	0		W
1990	SD13	15.0	900906	347.44	37.26	333.80	0.55	0.2297	2.5845	2	0	E	W
1990	SE13	13.5	900906	55.14	86.77	184.85	6.55	0.2447	3.0161	2	3	E	M
1990	SF13	14.5	900926	24.25	53.21	269.39	0.50	0.1976	2.6226	7	0		W
1990	SH13	15.0	900906	353.85	148.69	207.82	1.14	0.1304	2.2915	2	9	E	W
1990	SA14	14.5	900906	62.22	76.68	186.37	5.31	0.2351	2.8519	4	0	E	M
1990	SB14	13.5	900906	353.23	45.48	315.20	1.06	0.1417	2.9096	4	0	E	W
1990	SC14	15.5	900906	355.77	171.46	186.79	6.23	0.2997	2.8488	2	9	E	W
1990	SD14	14.5	900906	333.76	160.62	233.28	1.27	0.2503	2.5443	4	0	E	W
1990	SE14	14.0	900906	314.34	58.45	349.74	4.73	0.1211	2.5527	2	9	E	W
1990	SM14	13.5	900926	25.90	194.23	142.76	4.40	0.1594	2.3500	5	0	E	W
1990	ST14	15.0	900926	3.74	311.97	53.65	5.96	0.2524	2.6152	4	9	E	W
1990	SU14	14.0	900926	27.61	315.07	18.28	13.72	0.2178	2.7604	3	9		M
1990	TW8	14.5	900926	31.98	309.97	18.17	5.83	0.1929	2.2757	21	0		W
1990	TX8	14.5	900926	0.47	354.74	19.38	3.21	0.2479	2.6718	21	0		W
1990	TO14	14.5	901016	41.48	121.55	212.16	20.26	0.1071	1.9443	3	8	E	M
1990	UL1	15.0	901016	5.49	280.55	106.63	4.47	0.1827	2.2632	12	0		M
1990	UV2	15.0	900926	339.49	103.71	283.31	1.36	0.1795	2.2333	22	0		W
1990	UW2	14.0	901016	76.03	226.60	82.62	7.22	0.1225	3.1723	8	6	E	M
1990	UN3	16.0	901016	2.51	232.80	156.03	5.18	0.2296	2.3447	8	0		M
1990	UP3	14.5	901016	204.66	100.07	93.93	5.80	0.0503	2.2438	8	0		M
1990	UQ3	15.5	901016	34.78	169.71	176.86	5.80	0.1764	2.3394	8	9		M
1990	US3	14.0	901016	25.77	270.30	90.89	7.21	0.1752	3.2100	8	0		M
1990	UU3	14.0	901016	84.34	105.64	188.00	11.63	0.1805	2.6520	8	9		M
1990	UV3	14.5	901016	340.93	6.91	53.37	17.09	0.1150	2.6459	8	9		M
1990	UW3	15.5	901016	327.08	309.34	131.16	3.23	0.1547	2.3991	8	9		M
1990	UY3	12.0	901016	24.08	291.64	68.04	9.95	0.2257	3.1194	28	0		M
1990	UZ3	14.0	901016	254.04	348.45	165.94	7.86	0.0919	2.5537	8	9		M
1990	UA4	14.5	901016	319.32	259.27	193.48	12.50	0.1646	2.5784	8	9		M
1990	UB4	14.5	901016	343.20	235.15	184.68	9.96	0.1288	2.7211	8	9		M
1990	UE4	14.0	901016	352.28	278.27	131.87	6.12	0.1485	3.1616	8	9		M
1990	UG4	14.0	901016	107.18	82.69	194.05	13.73	0.1649	2.5846	8	9		M
1990	UH4	13.5	901016	357.33	345.05	56.28	17.45	0.2090	2.8279	29	0		M
1990	UJ4	12.5	901016	115.03	202.68	63.76	10.84	0.1287	2.4588	10	0		M
1990	UK4	15.5	901016	10.31	194.11	181.99	10.15	0.2335	2.8154	8	9		M
1990	UL4	13.5	901016	1.54	307.55	83.86	6.88	0.0026	2.2928	10	0		M
1990	UN4	15.5	901016	42.50	117.62	204.37	21.74	0.2860	2.3703	8	9		M
1990	UO4	14.0	901016	54.60	133.81	187.97	11.96	0.1777	2.8167	8	9		M
1990	UP4	15.5	901016	4.35	216.29	169.79	5.51	0.1883	2.4487	8	9		M
1990	UQ4	16.0	901016	2.26	263.09	125.25	3.60	0.1691	2.2160	8	9		M
1990	US4	13.0	901016	80.03	216.04	75.56	7.19	0.1922	2.3245	10	0		M
1990	UX4	14.0	901016	43.59	260.31	83.27	8.01	0.0893	2.7573	8	9		M
1990	UY4	16.0	901016	21.72	268.38	89.76	5.97	0.2170	2.3172	8	9		M
1990	UZ4	14.0	901016	333.61	344.10	86.99	8.24	0.1445	3.1895	8	9		M

1990	UB5	15.5	901016	26.26	236.58	119.20	5.83	0.1907	2.6481	8	9		M
1990	UC5	15.0	901016	275.36	6.05	123.70	5.85	0.0903	2.3243	8	9		M
1990	UE5	15.5	901016	53.47	130.52	200.74	21.26	0.0877	1.9325	24	0	D	M
1990	UG5	15.5	901016	352.05	222.95	183.79	8.79	0.1368	2.7486	8	0		M
1990	UJ5	13.0	901016	65.85	149.59	174.85	9.51	0.0715	3.0609	8	0		M
1990	UK5	15.5	901016	350.67	295.82	113.08	6.01	0.2284	2.6119	8	9		M
1990	UL5	14.5	901016	143.04	87.84	160.09	6.78	0.0930	2.3895	8	0		M
1990	UM5	13.5	901016	15.39	325.98	53.95	21.34	0.0099	2.7140	8	0		M
1990	UN5	15.0	901016	357.35	294.69	105.11	6.68	0.2622	3.0772	8	9		M
1990	UO5	14.5	901016	326.87	9.10	67.69	11.94	0.1233	2.5576	8	9		M
1990	UQ5	15.5	901016	18.73	291.43	77.56	6.34	0.1607	2.4261	4	9	E	M
1990	XV	12.5	901215	45.22	102.15	294.48	11.85	0.1909	2.6329	21	7		N
1990	YC	13.5	910104	34.61	335.76	81.63	2.76	0.1614	2.2194	28	0		N
1990	YM	12.5	910124	349.59	38.33	103.23	24.37	0.2494	2.3906	51	0		N
1990	YP	14.5	910104	1.07	175.26	302.53	13.38	0.2700	2.7456	33	8		N
1990	YR	12.0	910104	42.63	11.45	29.14	7.34	0.1820	2.7858	28	9		W
1990	YW	13.0	901125	355.87	232.34	201.68	12.71	0.2348	3.1580	29	6		W
1990	YX	14.1	910104	2.17	92.65	6.51	5.23	0.1341	2.5409	20	6		N
1990	YY	11.2	910104	312.79	50.29	67.15	3.81	0.0974	5.3583	25	7		E
1991	AB	11.5	910124	57.79	272.63	127.74	11.81	0.2170	2.6889	13	0		U
1991	AF	14.5	910104	348.02	230.13	244.34	5.00	0.1116	2.2699	10	3		W
1991	AJ	12.0	910104	359.48	3.76	111.74	10.89	0.1600	3.2115	11	0		M
1991	AK	14.0	910104	25.20	87.73	342.93	1.36	0.2685	2.7435	6	8	E	W
1991	AL	13.1	910124	25.17	339.38	105.11	5.34	0.1951	2.4198	14	8		N
1991	AP	14.4	910104	38.98	75.72	339.93	3.62	0.2912	2.4596	12	6		N
1991	AW	12.3	910124	31.00	317.85	126.98	13.56	0.1663	2.6001	8	0		N
1991	AX	12.0	910104	16.34	80.73	2.94	7.62	0.1669	2.7304	2	6		M
1991	AB1	11.2	910124	63.35	268.70	130.47	10.41	0.2121	3.1294	7	9		N
1991	AH1	14.5	910124	333.01	256.31	266.41	1.17	0.1394	2.3974	29	0		W
1991	AK1	14.0	910124	12.16	186.95	270.02	3.68	0.2855	2.8009	5	5		U
1991	AP1	13.5	910124	44.63	68.92	329.22	1.66	0.2790	2.5286	10	6	E	N
1991	AS1	12.7	910124	32.97	118.19	317.33	29.76	0.2525	2.6145	9	5		N
1991	AE2	14.0	910104	15.64	267.78	149.58	14.13	0.1454	2.5650	28	6		W
1991	AF2	14.5	901215	1.32	246.95	184.35	12.23	0.1605	2.6210	76	7		W
1991	AH2	12.5	910104	80.60	213.23	120.63	19.12	0.1785	2.7569	28	5		W
1991	AK2	14.0	901215	357.42	220.64	216.31	20.92	0.0624	3.2115	53	4		W
1991	AL2	13.5	910104	325.28	294.90	194.35	12.43	0.1692	2.5182	28	5		W
1991	AN2	12.5	910104	98.52	172.20	146.87	17.72	0.1873	2.5511	28	5		W
1991	AQ2	14.0	910104	357.34	196.27	287.51	0.09	0.1252	2.5305	2	5	E	W
1991	AR2	15.0	910104	173.39	14.45	292.95	3.31	0.1424	2.1538	2	5	E	W
1991	AS2	15.0	910104	174.70	12.56	294.27	4.89	0.0893	2.2583	2	5	E	W
1991	AT2	13.5	910124	0.13	343.02	144.75	4.34	0.1670	3.1703	27	8		W
1991	AU2	15.5	910104	356.60	182.23	303.37	4.35	0.1327	2.5476	2	5	E	W
1991	AV2	14.0	910104	356.65	166.91	318.61	1.72	0.1326	2.5475	2	5	E	W
1991	AW2	13.5	910104	357.81	357.43	129.68	15.79	0.1218	3.0767	2	5	E	W
1991	AX2	14.0	910104	176.31	183.37	122.90	4.30	0.1300	2.1727	2	5	E	W
1991	AY2	14.0	910104	178.18	341.34	324.65	1.04	0.1335	2.3846	2	5	E	W
1991	AZ2	13.5	910104	357.83	189.51	296.98	4.91	0.1399	2.8507	2	5	E	W
1991	AA3	14.0	910104	176.49	351.27	315.92	4.17	0.1636	2.3226	2	5	E	W
1991	AB3	12.5	910104	255.70	67.13	181.85	0.90	0.1881	3.1554	4	5	E	W
1991	AC3	14.0	910124	248.77	119.33	135.46	4.51	0.1540	2.6458	26	5		W
1991	BD	14.0	910104	6.68	186.30	276.24	3.51	0.1406	2.1664	3	6	E	M
1991	BE	11.8	910124	315.74	245.27	293.33	27.91	0.1586	2.6246	24	0		N
1991	BK	13.0	910124	1.01	47.41	67.05	5.74	0.2854	2.6234	18	8		W
1991	BL	13.9	910124	332.64	276.69	251.13	7.54	0.2374	2.3725	4	8		N
1991	BP	13.5	910124	35.55	169.01	273.32	12.45	0.1247	2.6481	21	6		N
1991	BQ	14.7	910124	316.97	37.58	167.53	9.19	0.3403	2.3688	21	6		N
1991	BT	12.8	910124	26.26	237.99	215.52	5.69	0.1552	2.3803	4	7		N
1991	BV	12.1	910213	38.89	310.71	143.02	13.64	0.1124	2.6131	21	7		N

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1991 BW   12.3  910124   10.12  182.24 292.52 13.80  0.0838 2.7039  16 6   N
1991 BX   11.8  910124   14.00  221.66 247.11  4.28  0.1036 3.1424  16 6   N
1991 BZ   12.5  910104   54.19   99.09 290.35  8.16  0.2783 2.9295   6 0   M
1991 BA1  14.0  910104  330.33   12.13 131.89  4.58  0.0416 2.1634   2 4   M
1991 BK2  13.0  910104  349.50   46.13  81.41  2.39  0.2193 3.0460   2 6   M
1991 BM2  13.0  910104   22.59   48.58  22.08  0.49  0.2896 3.2197   4 5 E M
1991 CN   13.5  910124  279.81  237.79 355.57  4.85  0.1344 2.3450   4 7 E W
1991 CU        910124  319.21   34.28 143.14  7.05  0.1054 2.6043   3 4   W
   1990 QP4 = 1990 QY9 (G. V. Williams)
   1990 QJ5 = 1990 SM4 (S. Nakano, MPC 17178)
   1990 RO6 = 1990 RU5 (G. V. Williams)
   1990 UE5 = 1990 VF (B. G. Marsden)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (126) Velleda             Obs.  134    M 134.87304      Peri.  326.95282
H    9.27      G   0.15    Opp.   27    n   0.25864648   Node    22.97804
rms res.  0".86   (M-P)    1905-1990    e   0.1050359    Incl.    2.91772

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (127) Johanna             Obs.   62    M 289.13178      Peri.   94.26056
H    8.3       G   0.15    Opp.   24    n   0.21546931   Node    30.91658
rms res.  0".89   (M-P)    1922-1986    e   0.0639425    Incl.    8.25088

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (167) Urda                Obs.  119    M 359.56172      Peri.  130.80215
H    9.24      G   0.15    Opp.   23    n   0.20449027   Node   165.94144
rms res.  0".92   (M-P)    1905-1990    e   0.0370796    Incl.    2.21055

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (184) Dejopeja            Obs.  153    M 355.75937      Peri.  209.42920
H    8.31      G   0.15    Opp.   32    n   0.17385750   Node   332.04892
rms res.  0".97   (M-P)    1892-1989    e   0.0839452    Incl.    1.14300

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (202) Chryseis            Obs.  168    M 173.03789      Peri.  353.95574
H    7.42      G   0.15    Opp.   28    n   0.18262827   Node   136.62485
rms res.  0".85   (M-P)    1921-1990    e   0.0952388    Incl.    8.82423

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (220) Stephania           Obs.   50    M 185.21391      Peri.   78.22174
H   11.0       G   0.15    Opp.   15    n   0.27348531   Node   257.53407
rms res.  0".78   (M-P)    1950-1988    e   0.2561711    Incl.    7.58908

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (231) Vindobona           Obs.   58    M  34.33029      Peri.  268.58381
H    9.2       G   0.15    Opp.   22    n   0.19754863   Node   350.33376
rms res.  0".81   (M-P)    1902-1990    e   0.1564305    Incl.    5.09278

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (257) Silesia             Obs.  102    M 219.93790      Peri.   25.95451
H    9.47      G   0.15    Opp.   22    n   0.17958755   Node    34.45988
rms res.  0".88   (M-P)    1902-1990    e   0.1261084    Incl.    3.64392

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5                  Bowell
 (295) Theresia            Obs.   62    M 169.59338      Peri.  147.70776
H   10.19      G   0.15    Opp.   18    n   0.21107904   Node   275.89228
rms res.  0".90   (M-P)    1909-1990    e   0.1723226    Incl.    2.70736
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Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(303) Josephina Obs. 128 M 180.91724 Peri. 71.47947
H 8.7 G 0.15 Opp. 25 n 0.17904206 Node 343.67999
rms res. 0".89 (M-P) 1916-1988 e 0.0717940 Incl. 6.89118

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(312) Pierretta Obs. 46 M 292.01268 Peri. 261.10177
H 8.89 G 0.15 Opp. 19 n 0.21224544 Node 6.15689
rms res. 0".95 (M-P) 1906-1989 e 0.1588804 Incl. 9.02920

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(316) Goberta Obs. 116 M 183.69185 Peri. 316.18829
H 9.8 G 0.15 Opp. 29 n 0.17515210 Node 123.59646
rms res. 0".92 (M-P) 1891-1990 e 0.1521010 Incl. 2.34418

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(408) Fama Obs. 58 M 26.30584 Peri. 100.51437
H 9.5 G 0.15 Opp. 23 n 0.17444394 Node 298.08393
rms res. 0".93 (M-P) 1906-1988 e 0.1338398 Incl. 9.09025

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(411) Xanthe Obs. 21 M 207.81820 Peri. 180.04153
H 8.9 G 0.15 Opp. 15 n 0.19575386 Node 107.24406
rms res. 0".90 (M-P) 1896-1989 e 0.1126103 Incl. 15.32699

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(462) Eriphyla Obs. 64 M 281.39438 Peri. 250.09605
H 9.23 G 0.15 Opp. 23 n 0.20246574 Node 104.94039
rms res. 0".93 (M-P) 1909-1990 e 0.0880249 Incl. 3.19426

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(490) Veritas Obs. 63 M 252.69326 Peri. 200.94183
H 8.32 G 0.15 Opp. 26 n 0.17478983 Node 177.92013
rms res. 0".93 (M-P) 1910-1987 e 0.1004524 Incl. 9.26800

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(592) Bathseba Obs. 57 M 208.70757 Peri. 253.81429
H 9.3 G 0.15 Opp. 19 n 0.18782906 Node 167.90217
rms res. 0".87 (M-P) 1909-1990 e 0.1370966 Incl. 10.17774

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(607) Jenny Obs. 25 M 34.72985 Peri. 290.93859
H 9.5 G 0.15 Opp. 19 n 0.20454417 Node 284.89773
rms res. 0".98 (M-P) 1909-1988 e 0.0731216 Incl. 10.12104

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(614) Pia Obs. 39 M 60.41628 Peri. 209.55158
H 11.0 G 0.15 Opp. 16 n 0.22272634 Node 216.83352
rms res. 0".92 (M-P) 1906-1990 e 0.1088396 Incl. 7.01711

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(678) Fredegundis Obs. 42 M 85.32233 Peri. 119.92332
H 9.02 G 0.15 Opp. 16 n 0.23839591 Node 281.25804
rms res. 0".99 (M-P) 1913-1990 e 0.2155636 Incl. 6.08149

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(709) Fringilla Obs. 109 M 232.04345 Peri. 18.65407
H 9.04 G 0.15 Opp. 20 n 0.19824234 Node 324.06036
rms res. 0".80 (M-P) 1928-1988 e 0.1146661 Incl. 16.29954

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(713) Luscinia Obs. 37 M 160.16688 Peri. 129.32604
H 8.97 G 0.15 Opp. 18 n 0.15715860 Node 218.19470
rms res. 0".94 (M-P) 1914-1989 e 0.1688293 Incl. 10.16789

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(838) Seraphina Obs. 42 M 98.92026 Peri. 115.92362
H 10.09 G 0.15 Opp. 20 n 0.19969388 Node 239.94272
rms res. 0".95 (M-P) 1916-1990 e 0.1321525 Incl. 10.39529

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(844) Leontina Obs. 41 M 117.05340 Peri. 339.79261
H 9.4 G 0.15 Opp. 18 n 0.17245619 Node 348.55416
rms res. 0".97 (M-P) 1902-1987 e 0.0802095 Incl. 8.83984

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(912) Maritima Obs. 55 M 122.22227 Peri. 86.44648
H 8.4 G 0.15 Opp. 19 n 0.17880179 Node 34.20897
rms res. 0".90 (M-P) 1950-1988 e 0.1900068 Incl. 18.29669

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(969) Leocadia Obs. 44 M 68.52719 Peri. 89.74296
H 12.57 G 0.15 Opp. 11 n 0.25495973 Node 287.87259
rms res. 0".78 (M-P) 1938-1990 e 0.2026180 Incl. 2.30123

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1048) Feodosia Obs. 43 M 143.27150 Peri. 183.56209
H 9.75 G 0.15 Opp. 19 n 0.21858526 Node 52.40832
rms res. 0".77 (M-P) 1927-1987 e 0.1838022 Incl. 15.84490

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1095) Tulipa Obs. 32 M 198.08850 Peri. 4.96232
H 10.42 G 0.15 Opp. 14 n 0.18734656 Node 178.29947
rms res. 0".87 (M-P) 1926-1989 e 0.0213308 Incl. 10.02683

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1105) Fragaria Obs. 25 M 105.62522 Peri. 220.93349
H 10.09 G 0.15 Opp. 13 n 0.18858648 Node 116.84002
rms res. 0".81 (M-P) 1929-1990 e 0.1005228 Incl. 10.97108

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1109) Tata Obs. 70 M 269.70846 Peri. 348.81780
H 10.06 G 0.15 Opp. 21 n 0.17071939 Node 268.29463
rms res. 0".99 (M-P) 1929-1989 e 0.1133247 Incl. 4.15654

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1177) Gonnessia Obs. 66 M 308.01712 Peri. 207.83819
H 9.30 G 0.15 Opp. 22 n 0.16068255 Node 251.88017
rms res. 0".76 (M-P) 1930-1990 e 0.0204084 Incl. 15.09207

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1225) Ariane Obs. 74 M 254.70161 Peri. 100.24364
H 12.1 G 0.15 Opp. 12 n 0.29530321 Node 11.93883
rms res. 0".76 (M-P) 1930-1988 e 0.0744380 Incl. 3.07425

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1253) Frisia Obs. 79 M 224.99598 Peri. 357.23116
H 11.5 G 0.15 Opp. 10 n 0.17599125 Node 39.54968
rms res. 0".72 (M-P) 1931-1990 e 0.2174623 Incl. 1.34746

Epoch 1991 Dec.10.0 ET = JDE 2448600.5 Bowell
(1569) Evita Obs. 34 M 233.00198 Peri. 253.74288
H 11.1 G 0.15 Opp. 11 n 0.17626014 Node 99.19990
rms res. 1".06 (M-P) 1948-1983 e 0.1280751 Incl. 12.25042

Epoch 1991 Dec.10.0 ET = JDE 2448600.5 Bowell
(1572) Posnania Obs. 73 M 241.49463 Peri. 356.28043
H 10.0 G 0.15 Opp. 17 n 0.18031597 Node 5.56897
rms res. 0".97 (M-P) 1949-1985 e 0.2092844 Incl. 13.29270

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1635) Bohrmann Obs. 75 M 235.33777 Peri. 135.81008
H 11.1 G 0.15 Opp. 14 n 0.20441936 Node 183.98710
rms res. 0".86 (M-P) 1924-1989 e 0.0580050 Incl. 1.81556

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1638) Ruanda Obs. 53 M 116.52609 Peri. 85.00943
H 11.5 G 0.15 Opp. 17 n 0.21642002 Node 200.25677
rms res. 0".91 (M-P) 1935-1988 e 0.1893572 Incl. 0.28928

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1651) Behrens Obs. 35 M 149.50036 Peri. 338.62760
H 12.1 G 0.15 Opp. 15 n 0.30624308 Node 186.97729
rms res. 0".90 (M-P) 1936-1987 e 0.0662441 Incl. 5.07606

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1700) Zvezdara Obs. 47 M 27.81371 Peri. 14.56564
H 12.47 G 0.15 Opp. 10 n 0.27170382 Node 356.50038
rms res. 0".88 (M-P) 1940-1989 e 0.2243427 Incl. 4.51588

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1703) Barry Obs. 54 M 224.60987 Peri. 213.01066
H 12.4 G 0.15 Opp. 11 n 0.29892010 Node 111.81625
rms res. 0".88 (M-P) 1930-1990 e 0.1712260 Incl. 4.52112

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1823) Gliese Obs. 25 M 128.14230 Peri. 296.35766
H 12.9 G 0.15 Opp. 9 n 0.29678566 Node 309.62932
rms res. 0".99 (M-P) 1950-1990 e 0.1351440 Incl. 2.89102

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1854) Skvortsov Obs. 76 M 211.86363 Peri. 273.42508
H 12.3 G 0.15 Opp. 11 n 0.24347438 Node 188.93615
rms res. 0".84 (M-P) 1962-1990 e 0.1357359 Incl. 4.90841

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(1937) Locarno Obs. 32 M 89.25540 Peri. 225.70793
H 11.9 G 0.15 Opp. 9 n 0.26898061 Node 78.64661
rms res. 0".78 (M-P) 1936-1985 e 0.1578400 Incl. 12.47045

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2230) Yunnan Obs. 97 M 255.89381 Peri. 252.99069
H 12.3 G 0.15 Opp. 12 n 0.20397844 Node 153.50014
rms res. 1".08 (M-P) 1953-1990 e 0.0641323 Incl. 2.56395

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2241) 1979 WM Obs. 25 M 239.03311 Peri. 290.06762
H 8.64 G 0.15 Opp. 10 n 0.08228683 Node 267.25340
rms res. 0".71 (M-P) 1968-1990 e 0.0668370 Incl. 16.58300

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2254) Requiem	Obs. 21	M	346.79377	Peri.	23.77528
H 12.5 G 0.15	Opp. 8	n	0.27496686	Node	337.72664
rms res. 1".10 (M-P)	1916-1990	e	0.1498823	Incl.	5.04867
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2293) Guernica	Obs. 46	M	252.50776	Peri.	135.85909
H 10.9 G 0.15	Opp. 10	n	0.17760542	Node	23.44484
rms res. 0".84 (M-P)	1938-1990	e	0.1294997	Incl.	0.59178
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2431) Skovoroda	Obs. 54	M	47.14717	Peri.	338.43056
H 12.8 G 0.15	Opp. 6	n	0.22900315	Node	328.62135
rms res. 0".74 (M-P)	1948-1990	e	0.2802477	Incl.	2.96403
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2448) Sholokhov	Obs. 27	M	164.77025	Peri.	72.64832
H 10.4 G 0.15	Opp. 6	n	0.21121126	Node	130.76300
rms res. 0".89 (M-P)	1975-1990	e	0.1147640	Incl.	17.70701
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2507) Bobone	Obs. 33	M	249.05207	Peri.	98.22891
H 11.7 G 0.15	Opp. 11	n	0.21269695	Node	129.77165
rms res. 0".80 (M-P)	1932-1990	e	0.0842151	Incl.	10.32276
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2625) Jack London	Obs. 26	M	228.43028	Peri.	170.05541
H 13.1 G 0.15	Opp. 6	n	0.30271530	Node	128.29276
rms res. 0".99 (M-P)	1976-1990	e	0.1407622	Incl.	4.45999
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2665) 1938 DW1	Obs. 20	M	310.47234	Peri.	287.90934
H 13.2 G 0.15	Opp. 6	n	0.29242799	Node	275.49929
rms res. 0".82 (M-P)	1938-1990	e	0.0851541	Incl.	4.78796
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2720) Pyotr Pervyj	Obs. 18	M	152.26225	Peri.	235.98896
H 13.9 G 0.15	Opp. 5	n	0.27676289	Node	113.04321
rms res. 0".98 (M-P)	1965-1990	e	0.2028720	Incl.	3.29106
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2732) Witt	Obs. 21	M	226.39089	Peri.	275.18904
H 12.1 G 0.15	Opp. 8	n	0.21496477	Node	144.72503
rms res. 0".78 (M-P)	1926-1990	e	0.0258854	Incl.	6.49530
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2742) Gibson	Obs. 43	M	227.09345	Peri.	284.44489
H 12.1 G 0.15	Opp. 8	n	0.19865067	Node	122.43280
rms res. 0".78 (M-P)	1953-1990	e	0.0678921	Incl.	3.16219
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2769) Mendeleev	Obs. 15	M	332.65337	Peri.	51.34275
H 12.1 G 0.15	Opp. 6	n	0.17739687	Node	101.94947
rms res. 1".18 (M-P)	1953-1990	e	0.1329680	Incl.	2.52519
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Bowell	
(2883) Barabashov	Obs. 15	M	152.95635	Peri.	150.63802
H 13.3 G 0.15	Opp. 7	n	0.29283437	Node	48.09923
rms res. 0".91 (M-P)	1950-1990	e	0.0816156	Incl.	1.40818

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2926) Caldeira Obs. 68 M 115.83509 Peri. 35.12023
H 13.3 G 0.15 Opp. 6 n 0.28731619 Node 220.51183
rms res. 0".66 (M-P) 1942-1990 e 0.1188495 Incl. 3.48118

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2906) Caltech Obs. 24 M 296.97453 Peri. 296.18376
H 10.0 G 0.15 Opp. 7 n 0.17558322 Node 84.06112
rms res. 0".80 (M-P) 1957-1990 e 0.1184712 Incl. 30.73307

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2971) 1980 YL Obs. 17 M 106.01272 Peri. 352.38182
H 13.5 G 0.15 Opp. 6 n 0.29272269 Node 75.67370
rms res. 0".95 (M-P) 1963-1990 e 0.1174647 Incl. 6.99714

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(2991) 1982 HV Obs. 16 M 194.59322 Peri. 197.17097
H 13.5 G 0.15 Opp. 6 n 0.27573821 Node 96.20433
rms res. 0".99 (M-P) 1975-1990 e 0.2204852 Incl. 5.15557

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3061) Cook Obs. 28 M 282.70260 Peri. 245.64393
H 11.9 G 0.15 Opp. 5 n 0.18180030 Node 97.62815
rms res. 0".96 (M-P) 1933-1990 e 0.1966574 Incl. 3.26128

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3075) Bornmann Obs. 21 M 250.25320 Peri. 10.50983
H 13.9 G 0.15 Opp. 5 n 0.28758355 Node 334.08763
rms res. 0".86 (M-P) 1981-1991 e 0.1314724 Incl. 9.97348

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3095) Omarkhayyam Obs. 28 M 215.01279 Peri. 119.56528
H 11.3 G 0.15 Opp. 8 n 0.15059046 Node 293.00380
rms res. 0".76 (M-P) 1979-1990 e 0.0613845 Incl. 2.97932

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3126) Davydov Obs. 13 M 105.98616 Peri. 160.60260
H 11.5 G 0.15 Opp. 6 n 0.18893533 Node 206.09321
rms res. 0".78 (M-P) 1969-1990 e 0.1010466 Incl. 9.68150

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3204) Lindgren Obs. 28 M 86.25445 Peri. 299.09401
H 12.1 G 0.15 Opp. 4 n 0.17355694 Node 108.35388
rms res. 0".81 (M-P) 1978-1990 e 0.2665926 Incl. 2.06319

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3211) Louispharailda Obs. 31 M 228.25961 Peri. 83.05761
H 12.7 G 0.15 Opp. 5 n 0.21807999 Node 337.10001
rms res. 0".94 (M-P) 1931-1990 e 0.2514809 Incl. 10.48781

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3232) Brest Obs. 15 M 143.98867 Peri. 114.55997
H 11.8 G 0.15 Opp. 10 n 0.18765309 Node 192.03225
rms res. 0".95 (M-P) 1951-1990 e 0.0803415 Incl. 9.84799

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3246) 1976 GQ3 Obs. 16 M 289.92156 Peri. 346.34312
H 11.4 G 0.15 Opp. 5 n 0.17267704 Node 197.17805
rms res. 0".98 (M-P) 1971-1990 e 0.0357015 Incl. 21.73221

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3287) 1981 DK1 Obs. 20 M 245.76606 Peri. 95.28740
H 14.2 G 0.15 Opp. 4 n 0.27046748 Node 212.92440
rms res. 0".59 (M-P) 1981-1991 e 0.2978285 Incl. 12.08670

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3291) Dunlap Obs. 37 M 304.20162 Peri. 169.94146
H 12.4 G 0.15 Opp. 6 n 0.17633270 Node 150.85434
rms res. 0".62 (M-P) 1974-1990 e 0.0988227 Incl. 2.00189

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3295) Murakami Obs. 24 M 255.38168 Peri. 217.52137
H 12.7 G 0.15 Opp. 7 n 0.22285766 Node 167.95748
rms res. 0".75 (M-P) 1950-1990 e 0.2548632 Incl. 8.81556

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3337) 1971 UG1 Obs. 40 M 72.03296 Peri. 219.55400
H 12.5 G 0.15 Opp. 5 n 0.20549728 Node 178.66247
rms res. 0".64 (M-P) 1971-1990 e 0.0760704 Incl. 1.98327

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3428) Roberts Obs. 21 M 89.10565 Peri. 301.61237
H 12.0 G 0.15 Opp. 8 n 0.22644602 Node 230.76771
rms res. 0".78 (M-P) 1952-1990 e 0.1617493 Incl. 8.84669

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3583) Burdett Obs. 16 M 102.87000 Peri. 30.46257
H 13.3 G 0.15 Opp. 7 n 0.25968984 Node 33.00753
rms res. 1".07 (M-P) 1929-1990 e 0.1777294 Incl. 2.79937

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3762) 1976 QN1 Obs. 52 M 161.24272 Peri. 188.46417
H 13.4 G 0.15 Opp. 5 n 0.28725403 Node 163.31158
rms res. 0".77 (M-P) 1976-1990 e 0.0782548 Incl. 1.45912

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell
(3805) 1981 DK3 Obs. 19 M 323.95882 Peri. 63.77922
H 12.4 G 0.15 Opp. 4 n 0.22423541 Node 312.09629
rms res. 0".80 (M-P) 1978-1989 e 0.1901918 Incl. 11.81923

(4723)* 1937 TB = 1981 XS1 = 1985 RO
Discovered 1937 Oct. 11 by K. Reinmuth at Heidelberg.
Id. C. M. Bardwell (MPC 10164), E. Bowell
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell
M 133.96634 (1950.0) P Q
n 0.22481683 Peri. 356.01923 +0.93419359 -0.35605896
a 2.6786553 Node 24.87583 +0.32876775 +0.83472713
e 0.1953493 Incl. 3.06034 +0.13854275 +0.42006267
P 4.38 H 13.6 G 0.15
Residuals in seconds of arc

371011	024	0.6+	1.5+	850823	095	1.1+	1.6-	870225	801	0.5+	0.8+
371027	024	2.2+	2.0-	850914	688	0.6-	1.4+	901116	801	0.5-	0.6-
371028	024	0.2-	1.3-	850914	688	2.3-	1.2+	901116	801	0.2-	0.5-
371103	024	0.1-	1.0+	850915	095	0.7+	0.2+	910114	801	0.3+	0.1+
371107	024	2.2-	0.5-	850918	688	(2.7-	3.6+)	910114	801	0.1-	0.2-
811204	511	0.4+	0.9+	850918	688	(1.7-	4.3+)	910115	801	0.2-	0.2+
811204	511	0.0	0.3+	850920	095	0.5+	0.3-	910115	801	0.3-	0.1+

(4724)* 1961 BC = 1961 CE = 1982 HV1 = 1985 DO1 = 1986 VG5

Discovered 1961 Jan. 18 by C. Hoffmeister and J. Schubart at Tautenburg.

Id. O. Kippes (d, MPC 2808), T. Kobayashi (MPC 16020)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Schmadel

M	272.93442	(1950.0)	P	Q
n	0.29722199	Peri. 193.25189	+0.29632529	+0.94368881
a	2.2237302	Node 94.13522	-0.86222997	+0.33057397
e	0.1919329	Incl. 8.48200	-0.41079289	-0.01312564
P	3.32	H 13.1	G 0.15	

Residuals in seconds of arc

610118 033	0.0	0.3+	610217 033	0.9+	1.2+	861105 688	1.4+	0.4+
610118 033	0.2-	0.5+	610217 033	1.4+	0.5+	901213 801	0.1+	0.3-
610215 033	2.0-	0.7+	610217 033	1.5+	1.4-	901213 801	0.0	0.2-
610215 033	0.0	0.4+	610217 033	0.1+	0.3-	901215 801	0.5+	0.0
610215 033	1.4+	1.4+	610217 033	0.9-	3.3-	901215 801	0.3+	0.1+
610215 033	1.8+	1.0+	820428 688	0.6-	0.5+	910109 033	0.5-	0.1-
610215 033	1.0-	0.8-	820428 688	0.4-	0.0	910115 033	0.6-	0.4-
610215 033	0.3-	1.6+	850225 688	2.8+	0.0	910115 033	0.6-	0.1-
610215 033	1.5-	0.2+	850225 688	0.5-	0.7-	910116 033	0.7-	0.2-
610215 033	1.6-	1.6-	861105 688	0.7-	0.1+			

(4725)* 1975 YE = 1979 SN5 = 1979 UU2

Discovered 1975 Dec. 31 at El Leoncito.

Id. S. Nakano (MPC 11346), N. S. Chernykh (d, ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	120.05641	(1950.0)	P	Q
n	0.20169372	Peri. 253.97957	+0.18024637	-0.98332530
a	2.8796595	Node 185.80003	+0.96883014	+0.18172200
e	0.2345371	Incl. 13.81847	+0.16993944	+0.00696167
P	4.89	H 12.5	G 0.15	

Residuals in seconds of arc

751231 808	0.3+	0.5+	891003 071	1.2-	2.4-	891008 403	0.1+	2.4-	Y
751231 808	1.0-	0.5+	891003 809	0.5+	0.0	891008 403	0.1+	0.7+	Y
760103 808	0.1-	0.4+	891003 809	0.5+	0.3+	891009 403	0.6+	0.2+	
760103 808	0.1+	0.2+	891003 809	0.6+	0.1-	891028 807	(3.9+	0.5-)	
760106 808	0.1+	0.4+	891006 807	2.2+	0.3+	901214 801	0.9-	0.9-	
760106 808	1.0+	0.5+	891007 809	0.9-	0.7-	901214 801	0.6-	0.3-	
790923 095	0.5+	1.7+	891007 809	0.1-	0.3+	901220 801	0.7-	0.1-	
791016 095	1.3-	1.3+	891007 809	1.2-	0.1+	901220 801	0.6-	0.2-	
891002 071	(3.5-	1.9-)	891008 809	0.8-	0.1-	910114 801	0.1+	1.3-	
891002 807	2.0+	0.6+	891008 809	0.8-	0.0	910118 801	1.1+	0.0	
891003 071	0.0	0.4-	891008 809	0.8-	0.2+	910118 801	0.8+	0.1+	

(4726)* 1976 SV10 = 1976 UA3 = 1983 ER

Discovered 1976 Sept. 25 at the Agassiz Station of the Harvard College Observatory.

Id. B. G. Marsden (d, MPC 9065), S. Nakano (MPC 9753)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	208.46736	(1950.0)	P	Q
n	0.21766190	Peri. 6.50744	+0.50931340	+0.85996784
a	2.7370397	Node 294.11503	-0.79112506	+0.45301805
e	0.0721585	Incl. 2.03955	-0.33870487	+0.23501055
P	4.53	H 13.0	G 0.15	

Residuals in seconds of arc

760925 801	1.8+	0.2-	830310 688	0.4-	1.5-	851107 688	0.0	2.0-
761024 381	0.7-	1.5+	830310 688	0.4-	0.7-	851107 688	(2.9-	1.1-)
761024 381	0.7-	0.8-	830316 688	0.3-	1.1-	860113 801	0.6-	1.0+
761026 095	(3.4+	5.6+)	830316 688	1.0-	2.1-	870130 801	0.4-	1.8+

890902 511 0.1+ 1.3- 901112 675 1.5+ 0.2- 910114 801 0.3- 0.2+
890902 511 0.2+ 0.9- 901112 675 0.8- 2.0- 910118 801 0.3- 0.4+
890904 801 1.1- 1.0- 901114 675 0.4+ 1.0- 910118 801 0.2+ 0.5+
890904 511 0.1+ 0.4+ 901114 675 0.2+ 0.5-
890904 511 1.9+ 0.3- 910114 801 0.1+ 1.0+

(4727)* 1979 UD1 = 1984 SH4 = 1989 UU

Discovered 1979 Oct. 24 by F. Borngen and K. Kirsch at Tautenburg.

Id. S. Nakano (MPC 15552)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Schmadel

M	182.34131	(1950.0)	P	Q
n	0.19977747	Peri. 228.54269	+0.99884242	-0.02523170
a	2.8980444	Node 132.85969	+0.03838232	+0.93123401
e	0.0932273	Incl. 3.20274	-0.02899328	+0.36354721
P	4.93	H 12.5	G 0.15	

Residuals in seconds of arc

790922 095 1.2- 1.6+ 891023 872 1.2+ 1.6+ Y 891102 872 (2.5- 5.2+)
790928 095 0.4- 1.1+ 891023 872 1.2- 1.5+ Y 891102 046 0.3- 1.7-
791016 095 0.9- 0.3+ 891025 046 1.0+ 0.1- 891102 046 0.9+ 0.2+
791024 033 3.5- 0.2+ 891025 046 2.6+ 0.6- 901219 033 0.3+ 0.1+
791024 033 0.3+ 0.1+ 891025 046 0.4- 1.4- 901223 033 0.6+ 0.2-
791024 033 2.8- 0.1- 891025 046 1.8+ 1.4- 901228 033 0.2- 0.5-
791024 033 1.5+ 1.4+ 891026 046 1.0+ 3.2- 910115 033 0.7+ 1.9+
791024 033 0.1+ 0.6+ 891026 046 1.5- 2.5- 910115 033 0.1- 0.1-
791025 033 (5.2+ 3.3+) 891029 872 0.7- 0.2+ 910115 033 0.1+ 0.6+
791111 095 0.8- 1.4- 891029 872 2.5- 1.7+ 910115 033 0.6- 0.0
840928 033 0.8+ 1.6+ 891102 872 (0.8- 4.5+) 910116 033 0.2- 0.5+
840928 033 0.3- 0.7+

(4728)* 1979 VG = 1979 SH10 = 1972 TK1 = 1986 TQ3

Discovered 1979 Nov. 11 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. H. Oishi (d, JAM 1989), C. M. Bardwell (MPC 11434)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	148.96702	(1950.0)	P	Q
n	0.28109823	Peri. 20.78507	+0.71356481	-0.69933968
a	2.3079726	Node 23.75238	+0.62719556	+0.61107159
e	0.1125362	Incl. 5.96022	+0.31217143	+0.37083085
P	3.51	H 13.7	G 0.15	

Residuals in seconds of arc

721007 095(10.1+ 4.0-) 861005 046 (3.9- 2.6+) 901214 801 0.1- 1.0+
790922 095 (0.9+ 4.9+) 861005 046 (5.6- 1.5+) 901214 801 0.0 0.8+
790928 095 0.4+ 0.9- 861009 046 1.0+ 0.3+ 901217 801 1.4- 0.1-
791016 095 2.2- 2.8+ 861009 046 2.4+ 0.4- 901217 801 0.2- 0.8+
791111 095 1.2+ 0.4+ 861010 046 1.5- 1.2- 910116 801 0.4+ 0.2-
791116 095 0.0 1.2- 861010 046 1.5- 1.4- 910116 801 0.3+ 0.2-
861003 095 0.3- 0.3+ 861128 801 0.1- 0.1+ 910118 801 1.4+ 0.8-
861004 046 (5.1+ 1.2+) 861201 801 0.5- 2.0+ 910118 801 0.3- 0.4-
861004 046 1.0+ 0.1+ 880318 801 0.3+ 0.5+

(4729)* 1980 RO2 = 1947 UB = 1950 NV = 1950 QM = 1965 BD = 1985 CQ1

Discovered 1980 Sept. 8 by L. V. Zhuravleva at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (MPC 10158), O. Kippes (d, MPC 1331)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	126.73781	(1950.0)	P	Q
n	0.29773609	Peri. 127.66407	+0.94487753	-0.32524615
a	2.2211696	Node 251.34420	+0.28646435	+0.87694270
e	0.1742404	Incl. 2.28052	+0.15857057	+0.35381697
P	3.31	H 13.1	G 0.15	

Residuals in seconds of arc

471018 012	0.5-	0.2+	850215 809	0.9+	0.6+	850222 809	0.5-	0.7-
500715 760	0.6-	1.4-	850215 809	0.8+	0.6+	850222 809	0.1-	0.7-
500715 760	1.1+	1.2-	850216 809	0.2-	0.6+	850222 809	0.2+	0.9-
500817 760	0.9+	1.7+	850216 809	0.4-	0.2+	850224 809	0.0	1.7-
500817 760	0.3+	1.0-	850216 809	0.5-	0.5+	850224 809	0.1+	1.7-
650126 330	1.0-	1.5-	850217 809	0.1+	0.6+	850224 809	0.2+	1.7-
800906 095	0.1-	1.1-	850217 809	0.2+	0.5+	850225 809	0.9+	0.1+
800908 095	0.7+	0.9+	850217 809	0.2+	0.4+	850225 809	0.9+	0.1+
801008 095	0.0	0.8+	850218 809	0.4-	0.1+	850225 809	1.1+	0.1+
801012 095	0.8-	1.7-	850218 809	0.1-	0.0	850226 809	0.2+	0.6-
850210 809	0.3-	0.6+	850218 809	0.0	0.2-	850226 809	0.1+	0.5-
850210 809	0.3-	0.6+	850219 809	0.7-	0.2+	850226 809	0.1-	0.6-
850210 809	0.1-	0.5+	850219 809	1.0-	0.2+	850227 809	0.7-	0.1+
850211 809	0.8-	0.6+	850219 809	1.1-	0.3+	850227 809	0.3-	0.0
850211 809	0.4-	0.5+	850220 809	0.5+	0.1+	860529 095	1.4-	1.8-
850211 809	0.5-	0.5+	850220 809	0.6+	0.0	901120 801	0.6+	0.3-
850213 809	0.0	0.5+	850220 809	0.7+	0.0	901120 801	0.7+	0.3-
850213 809	0.0	0.3+	850221 809	0.3+	1.2-	901220 801	0.0	0.8-
850213 809	0.4-	0.3+	850221 809	0.3+	1.1-	901220 801	0.1+	0.8-
850215 809	0.9+	0.8+	850221 809	0.1+	1.2-			

(4730)* 1980 XZ = 1932 BE = 1983 GR2 = 1983 JJ1

Discovered 1980 Dec. 7 at the Purple Mountain Observatory.
Id. H. Kaneda (MPC 16023), N. S. Chernykh (d, ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	144.03835	(1950.0)	P	Q
n	0.17889258	Peri. 200.33362	+0.18098176	+0.96186306
a	3.1194246	Node 80.53007	-0.87110037	+0.25358232
e	0.0565436	Incl. 12.00115	-0.45654108	-0.10254494
P	5.51	H 10.6	G 0.15	

Residuals in seconds of arc

320128 024	0.0	0.1-	801212 330	2.4+	0.6-	900820 801	0.0	0.1-
320128 022	(36.8-	7.2+)X	830411 095	1.4+	0.4-	900820 801	0.1+	0.5+
801130 095	1.6-	0.3-	830515 095	2.3-	1.2-	901017 801	0.1-	0.8-
801207 330	1.1+	0.7-	900816 801	0.2+	0.2+	901017 801	0.1-	0.8-
801210 095	1.6-	0.4+	900816 801	0.3+	0.1+			

(4731)* 1981 EE9

Discovered 1981 Mar. 1 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 Bardwell

M	63.94304	(1950.0)	P	Q
n	0.17828749	Peri. 140.53212	+0.46055911	-0.88203644
a	3.1264786	Node 281.83651	+0.78647630	+0.45746346
e	0.2714856	Incl. 5.83391	+0.41150982	+0.11286669
P	5.53	H 14.1	G 0.15	

Residuals in seconds of arc

791122 675	0.2+	0.4-	810202 413	0.1-	0.3+	810307 413	0.2+	0.2-
791124 675	0.3-	0.5-	810214 413	0.3+	0.3-	810311 413	(3.8-	1.2+)
791125 675	0.2+	0.2+	810301 413	0.7-	1.6+	810311 413	1.1+	1.0-
791126 675	0.3+	0.4+	810301 413	2.6+	0.5-	810315 413	1.2-	0.2+
791127 675	0.1+	0.3+	810307 413	0.4-	0.4-	810315 413	1.7+	0.9-

810406	413	2.2-	0.4+		810429	413	0.5-	2.0-		901121	801	0.2+	0.0
810406	413	0.2-	0.7-		860213	801	0.7+	1.5+		901121	801	0.1+	0.0
810412	413	0.9-	0.6+		901120	801	0.0	0.0		901214	801	0.1-	0.2-
810412	413	0.9-	0.7+		901120	801	0.0	0.0		901214	801	0.1-	0.3-

(4732)* 1981 JG = 1955 UO1 = 1972 TF4 = 1989 VE

Discovered 1981 May 3 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (MPC 15553)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	163.75120		(1950.0)	P	Q
n	0.17521922	Peri.	150.83654	+0.94166423	-0.26378051
a	3.1628715	Node	226.07220	+0.22391407	+0.95468835
e	0.0600627	Incl.	16.87086	+0.25125877	+0.13780423
P	5.62	H	11.3	G 0.15	

Residuals in seconds of arc

551025	760	0.2-	0.9-		810506	675	0.7+	0.6-		891104	403	1.0-	1.1+
551025	760	1.0-	0.1+		810511	675	0.2+	0.4-		891104	403	1.7-	0.1+
721005	095	2.8+	0.5-		891102	881	0.6+	0.6+		891121	095	1.5+	1.6-
810411	675	0.1-	0.2-		891102	881	0.9-	0.2-		891121	095	(3.7+	0.6-)
810411	675	1.6+	0.1-		891102	403	0.3-	1.6-		901220	801	0.5+	0.0
810503	688	0.3+	1.5-		891102	403	0.2+	0.6-		901220	801	0.2-	0.4-
810503	688	1.4-	0.6-		891104	881	(0.9+	3.3+)		910118	801	0.2+	0.3+
810505	675	1.6-	0.1-		891104	881	(2.0+	3.3+)		910118	801	0.1-	0.4+

(4733)* 1982 HB2

Discovered 1982 Apr. 19 at the Oak Ridge Observatory.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	6.50173		(1950.0)	P	Q
n	0.30511458	Peri.	157.50769	-0.93829958	+0.34131535
a	2.1852145	Node	42.57854	-0.32847600	-0.82928009
e	0.0735511	Incl.	4.71849	-0.10815458	-0.44249109
P	3.23	H	13.8	G 0.15	

Residuals in seconds of arc

820419	801	0.8+	0.9+		860829	809	1.7-	0.5+		860911	688	(2.9+	3.0+)
820420	801	0.1-	1.5+		860829	809	1.6-	0.5+		860911	688	1.8+	2.2+
820422	801	0.4+	1.4+		860901	809	1.0-	1.1+		901217	801	0.1-	0.4-
820423	801	(4.6+	0.7-)		860901	809	0.8-	0.9+		901217	801	1.2-	0.4+
820429	801	1.4-	1.2-		860901	809	0.7-	0.6+		901220	801	0.2-	1.0+
820519	801	1.9+	1.0+		860904	809	0.9-	1.3+		901220	801	0.2-	0.8+
820527	801	1.2+	0.1-		860904	809	0.7-	1.1+		910105	400	0.9-	1.1+
850321	688	1.1+	1.2+		860904	809	0.6-	0.9+		910105	400	0.6+	0.1-
850321	688	0.4+	0.8+		860908	809	1.3+	1.0-		910106	400	1.8+	1.0+
850525	801	2.5-	2.0+		860908	809	1.4+	1.1-		910106	400	0.6+	2.2+
860829	809	1.7-	0.5+		860908	809	1.4+	1.1-					

(4734)* 1982 UQ3 = 1986 WR

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

Id. D. W. E. Green (MPC 13594)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Schmadel

M	142.46258		(1950.0)	P	Q
n	0.26242962	Peri.	24.02265	+0.87627430	-0.48181050
a	2.4161700	Node	4.78179	+0.43923654	+0.79763010
e	0.1926828	Incl.	0.97302	+0.19802681	+0.36282898
P	3.76	H	14.0	G 0.15	

Residuals in seconds of arc

820727	413	1.7+	0.1-		820918	095	0.1+	1.4+		821019	033	1.0+	0.1+
820727	413	0.7-	0.2-		820926	095	1.1-	0.3-		821105	413	0.9+	0.1+
820916	095	2.5-	0.5+		821019	033	0.9+	0.4-		821105	413	0.3-	0.1-

861125	046	2.6+	0.5-	861128	046	1.4+	0.9-	901217 801 (0.5+ 0.5+)
861125	046	1.7-	0.4-	880420	413	0.7-	0.1-	910109 033 0.2+ 0.6+
861126	046	0.8-	0.6-	880420	413	0.6+	0.4-	910115 033 0.2+ 0.1+
861126	046	1.0-	0.1+	901125	033	0.6+	0.5+	910115 033 0.1- 0.7+
861128	046	(2.9+	3.3+)	901217	801	(0.6+	0.6+)	910116 033 0.6- 0.5+

(4735)* 1983 AN = 1987 EN

Discovered 1983 Jan. 9 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. E. Bowell (MPC 11843)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 167.00875		(1950.0)	P	Q
n 0.26419252	Peri.	350.52566	+0.19908484	-0.97185796
a 2.4054096	Node	87.91422	+0.90712334	+0.13413533
e 0.1182233	Incl.	7.23905	+0.37079977	+0.19364870
P 3.73	H	12.7	G 0.15	

Residuals in seconds of arc

821224	095	1.3+	0.8+	870303	688	0.1+	1.1+	891101 807 0.6+ 0.5+
830109	688	0.8+	1.5+	870303	688	0.6+	1.9+	901214 801 0.4+ 0.4+
830109	688	1.4+	0.3+	870426	801	0.0	0.7+	901214 801 0.2- 0.8-
830116	688	0.1+	1.4-	870502	801	0.2+	0.8+	901220 801 1.0+ 0.3+
830116	688	0.4-	0.7+	891003	807	0.6+	0.5-	901220 801 0.2+ 0.7+
830121	688	0.4-	0.3-	891023	894	1.1-	1.8-	910116 801 0.5- 1.1-
830215	688	1.1-	0.8-	891023	894	0.6+	1.4+	910116 801 0.5- 1.1-
830215	688	1.2-	0.3-	891028	801	1.3-	0.5+	910119 801 0.3- 0.3-
830309	688	0.5-	1.1-	891028	801	1.3-	0.5+	910119 801 0.2- 0.5-
830309	688	0.3-	0.4-	891030	807	1.6+	0.2+	

(4736)* 1983 AF2 = 1987 SG7

Discovered 1983 Jan. 13 by C. S. Shoemaker at Palomar.

Id. C. M. Bardwell (MPC 12570)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 147.82310		(1950.0)	P	Q
n 0.35987985	Peri.	106.31388	+0.50252529	-0.81558637
a 1.9574816	Node	309.91046	+0.57879425	+0.56383698
e 0.1397959	Incl.	21.96103	+0.64223480	+0.13002592
P 2.74	H	13.5	G 0.15	

Residuals in seconds of arc

830113	675	1.4+	0.3-	870926	675	0.0	1.1+	890403 474 0.3- 0.1+
830113	675	2.5+	0.4+	871018	675	1.1-	1.4+	890406 474 0.8+ 0.5+
830114	675	1.8-	0.3-	871020	675	0.3-	1.6+	890406 474 0.1- 0.8+
830114	675	0.9+	0.4+	871122	675	1.5-	1.3-	901123 894 0.2- 0.8+
830114	675	0.2-	0.9+	871123	675	0.3-	1.3-	901123 894 0.2+ 0.4-
830211	675	0.0	0.1-	871221	801	0.7+	0.1-	901216 894 0.4+ 0.3+
830215	675	1.2-	0.7+	890403	474	0.3+	0.9+	901216 894 0.4- 0.9-

(4737)* 1985 QO6 = 1985 SW1 = 1981 UN17 = 1988 ES

Discovered 1985 Aug. 24 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. N. S. Chernykh (d, MPC 14474), A. Lowe (k, ibid.), C. M. Bardwell (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 197.20371		(1950.0)	P	Q
n 0.22261134	Peri.	153.16637	+0.36386565	+0.92991413
a 2.6963185	Node	138.11183	-0.86829309	+0.35942067
e 0.0758630	Incl.	4.59534	-0.33714818	+0.07795187
P 4.43	H	12.7	G 0.15	

Residuals in seconds of arc

811024	095	2.0+	1.6-	850824	095	1.1+	0.1-	850920 095 1.8- 1.1+
811028	095	1.2-	2.1-	850919	095	0.2+	2.2+	880313 054 0.4+ 0.7+

880313 054 0.3+ 0.8+ 890802 675 (7.9- 6.9-) 901017 801 0.3+ 0.3+
890706 675 1.4- 1.3- 890802 675 0.1- 1.1- 901214 801 0.3- 1.0+
890706 675 0.4- 0.3- 890802 675 (4.0- 2.1-) 901214 801 0.7- 0.9+
890729 675 0.8+ 0.6- 890802 675 0.2+ 1.3+
890729 675 0.5+ 1.5+ 901017 801 0.0 0.5+

(4738)* 1985 RZ4 = 1976 SL7

Discovered 1985 Sept. 15 by D. B. Goldstein at Palomar.

Id. S. Nakano (MPC 11830), C. M. Bardwell (ibid.), E. Goffin (ibid.), W. Landgraf (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	193.78368	(1950.0)	P	Q	
n	0.22391316	Peri.	330.09737	+0.79635288	+0.60409898
a	2.6858575	Node	352.52312	-0.49955141	+0.62918425
e	0.1685838	Incl.	13.22722	-0.34098459	+0.48907219
P	4.40	H	12.4	G	0.15

Residuals in seconds of arc

760925 095 0.6- 1.4- 880412 413 0.6- 0.3+ 910116 801 0.1+ 0.2+
760928 095 0.1- 2.3+ 880412 413 0.6+ 0.2- 910116 801 0.2+ 0.4+
850915 675 1.0- 1.5- 901215 801 0.3- 0.8- 910118 801 0.1- 0.5+
850915 675 0.6- 2.0+ 901215 801 0.1- 0.1+ 910118 801 0.1+ 0.4+
851011 675 0.8+ 1.7- 901220 801 0.2+ 0.3-
851013 675 1.2+ 0.1+ 901220 801 0.1- 0.3+

(4739)* 1985 TH1 = 1958 VT = 1973 AH3 = 1976 UY2 = 1982 BF11

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

Id. T. A. Vinogradova (MPC 14194)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	73.52879	(1950.0)	P	Q	
n	0.21711098	Peri.	271.83384	+0.10460115	-0.99450554
a	2.7416680	Node	172.15831	+0.92411057	+0.09564821
e	0.0674662	Incl.	1.74873	+0.36752994	+0.04254590
P	4.54	H	12.8	G	0.15

Residuals in seconds of arc

581111 760 0.0 0.2+ 851015 688 1.0+ 1.2- 901120 801 0.2+ 0.8-
581111 760 0.4- 0.6- 851015 688 (3.5- 1.5-) 901120 801 0.3+ 0.1+
730102 095 0.4- 0.4- 851018 095 0.8- 0.8+ 901217 801 0.0 0.7+
761026 095 2.0+ 1.6- 851112 095 0.7- 0.8+ 901217 801 0.0 0.9+
820120 095 0.9+ 0.2+ 901114 675 0.5- 0.4+
850921 095 1.1- 1.4+ 901114 675 0.6- 0.5-

(4740)* 1985 UV4 = 1931 RO = 1958 TH = 1972 YO1 = 1989 RO1

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

Id. S. Nakano (MPC 15245)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	107.73117	(1950.0)	P	Q	
n	0.22065813	Peri.	261.37031	+0.14236394	-0.98981378
a	2.7122065	Node	180.44941	+0.95408403	+0.13751893
e	0.2129544	Incl.	8.01336	+0.26354540	+0.03684062
P	4.47	H	13.0	G	0.15

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

310915 024(0.04- 0.08-)X 851109 095 0.6+ 0.2+ 890905 511 0.9- 0.7+
581009 024 1.0+ 3.7- 851111 095 0.4- 0.1- 890906 511 0.1+ 0.8+
721230 095 0.2+ 2.3+ 851120 095 (4.0- 4.0+) 890906 511 0.7+ 1.1+
851022 095 0.6- 1.2+ 890905 511 0.9- 1.2+ 901220 801 0.3+ 0.1+

901220	801	0.4+	0.1+	910119	801	1.2-	0.2-	910213	391	1.6+	0.3+
910114	801	0.4-	0.5-	910119	801	1.2-	0.8-				
910114	801	0.1-	0.2-	910213	391	0.7+	0.8+				

(4741)* 1985 VP3 = 1973 UL3 = 1979 WD7 = 1981 AJ2 = 1987 BN = 1990 QU1

Discovered 1985 Nov. 10 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. H. Kaneda (MPC 17017)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	83.40299		(1950.0)	P	Q
n	0.17185398	Peri.	275.45775	+0.93635840	+0.35016815
a	3.2040281	Node	64.04664	-0.31014931	+0.85830385
e	0.1931325	Incl.	1.58072	-0.16443950	+0.37509568
P	5.74	H	12.1	G 0.15	

Residuals in seconds of arc

731029	095	(14.8+	2.8-)	870128	033	0.1+	0.2-	900826	809	0.1+	1.1+
731029	095	0.1+	2.2+	900820	809	1.3+	0.1+	900828	675	0.7-	0.4+
791117	095	1.1-	1.6-	900820	809	1.0+	0.3-	900828	675	0.8-	0.0
810108	381	(4.7+	0.3+)	900820	809	1.0+	0.3+	900830	400	1.8+	2.9-
810108	381	0.7+	0.3+	900822	675	1.0-	1.0+	900830	400	1.5+	2.7-
810108	381	1.8-	0.2+	900822	675	1.1-	0.8+	900914	675	1.7-	0.7-
851110	095	1.9+	0.2-	900825	675	1.0-	0.7-	900914	675	1.4-	0.4-
851120	095	0.1-	0.8-	900825	675	1.2-	0.4+	900919	675	1.2+	0.8+
870126	033	0.7+	1.0+	900826	809	0.5+	1.7+				
870127	033	0.5+	0.8+	900826	809	0.3+	1.4+				

(4742)* 1986 WG = 1984 KS

Discovered 1986 Nov. 26 at the Osservatorio S. Vittore.

Id. L. D. Schmadel (MPC 11729)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	79.32966		(1950.0)	P	Q
n	0.26336029	Peri.	253.91730	-0.65144274	-0.68125081
a	2.4104744	Node	241.69773	+0.75549974	-0.62284991
e	0.2649895	Incl.	22.28946	-0.06958813	-0.38464961
P	3.74	H	13.3	G 0.15	

Residuals in seconds of arc

840522	071	0.4-	0.2-	861201	552	0.1+	2.2+	880611	552	1.5+	1.4+
840522	071	(4.4-	2.6+)	861201	552	0.5-	0.7+	880611	552	0.1+	0.2-
840522	071	0.3+	0.5-	861202	552	0.0	1.7+	880619	552	0.3+	0.6-
840522	071	(4.1-	2.3+)	861202	552	0.3-	0.7+	880619	552	0.8-	1.9-
840522	071	0.1+	0.1+	861203	552	2.0-	0.7+	880620	552	(1.9-	8.3-)
861125	046	0.0	2.2-	861203	552	0.5-	0.1+	880706	552	(2.2-	1.7+)
861125	046	1.0+	1.1-	861204	046	(0.0	2.7-)	880706	552	0.9-	0.9+
861126	046	(2.8-	2.2-)	861204	552	0.6-	0.6-	901114	801	0.1+	0.7-
861126	046	0.3+	1.2+	861204	552	1.1+	1.0-	901121	801	1.0-	0.2-
861126	552	(3.8+	3.6+)	861204	046	(0.6-	2.6-)	901121	801	0.9-	0.2-
861126	552	(0.4+	2.5+)	861205	046	0.0	1.3-	901214	801	0.1-	0.0
861127	552	0.2-	0.1+	861205	046	1.6+	0.5-	901214	801	0.1-	0.0
861127	552	0.1-	0.4+	861205	552	(2.8+	0.7-)	901217	801	0.1-	0.1-
861128	046	0.1-	0.8+	861205	552	(4.7+	1.9-)	901217	801	0.1-	0.1+
861129	046	1.4+	1.3+	861207	046	0.6+	2.2-	901219	894	0.4+	0.2-
861129	552	1.2-	0.4+	861207	046	0.8+	0.8-	901219	894	1.3+	1.0+
861130	552	0.1+	0.6-	861222	552	0.4+	0.4-				
861130	552	2.0-	0.5-	861222	552	0.2+	0.2+				

(4743)* 1988 DA = 1978 GD4 = 1978 JG3 = 1986 SL

Discovered 1988 Feb. 16 by T. Fujii and K. Watanabe at Kitami.

Id. S. Nakano (MPC 12946), T. Kobayashi (ibid.)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	27.97746	(1950.0)	P	Q
n	0.28875654	Peri. 168.91276	-0.99444522	-0.10498651
a	2.2669825	Node 5.07894	+0.08889712	-0.87599505
e	0.0997995	Incl. 4.87209	+0.05635604	-0.47075525
P	3.41	H 13.3	G 0.15	

Residuals in seconds of arc

780411	095	1.0-	0.9-	880312	888	(0.7-	4.6-)	880511	413	1.5-	0.1+
780505	095	0.8+	0.6+	880312	888	(0.9-	5.0-)	901215	400	0.2-	0.5-
860930	046	1.0-	1.6-	880316	400	1.0+	0.3-	901215	400	0.2+	0.2+
860930	046	1.5+	0.8+	880316	400	1.0+	0.8-	901219	894	1.3+	0.4+
880216	400	0.5-	1.0-	880317	400	0.3-	1.0+	901219	894	1.9+	0.4-
880216	400	0.1+	0.5+	880317	400	1.8+	1.1-	901220	400	1.4-	1.5-
880216	400	1.2-	0.7-	880317	033	0.2-	0.6-	901220	400	0.5+	0.1+
880221	400	1.5-	1.0+	880318	033	1.0+	0.8-	910106	400	1.7-	1.1+
880221	400	0.4+	0.9+	880318	033	0.2+	0.3-	910106	400	1.2+	1.0+
880221	400	1.6-	0.4+	880321	400	0.2+	0.3+	910114	801	0.5-	0.2+
880308	888	(4.3-	7.0-)	880321	400	0.7-	0.0	910114	801	0.4-	0.2+
880308	888	(4.1-	7.0-)	880322	888	0.3+	0.7+	910116	801	0.6-	0.2+
880310	400	(6.5-	4.7+)	880322	888	1.7+	0.3+	910116	801	0.6-	0.3+
880310	400	(5.7-	5.7+)	880511	413	1.0-	0.4-	910119	894	0.2-	1.2-

(4744)* 1988 RF5 = 1979 QW8 = 1989 VC

Discovered 1988 Sept. 2 by H. Debehogne at the European Southern Observatory.

Id. H. Kaneda (MPC 15712)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	44.93426	(1950.0)	P	Q
n	0.21029352	Peri. 184.32136	-0.99053006	-0.13221428
a	2.8006067	Node 347.89138	+0.13065797	-0.82494884
e	0.1821872	Incl. 10.16162	+0.04217467	-0.54952598
P	4.69	H 10.9	G 0.15	

Residuals in seconds of arc

790820	095	0.5-	0.8+	880911	809	0.2+	0.2+	891119	399	(3.1+	1.0+)
880902	809	1.8-	0.9-	880911	809	0.1+	0.2+	891119	399	1.3-	0.8+
880902	809	1.6-	0.4+	880911	809	0.1+	0.1+	891203	399	0.5+	0.3-
880902	809	1.7-	1.9+	880914	809	1.2-	1.2+	891203	399	1.8-	0.8+
880905	809	0.8+	1.2-	880914	809	1.1-	1.1+	891203	399	1.0-	0.4-
880905	809	0.9+	1.3-	880914	809	1.2-	0.9+	901116	801	0.2-	0.3+
880905	809	1.0+	1.3-	891102	399	0.9+	0.6+	901116	801	0.3-	0.0
880907	809	1.0+	0.2-	891102	399	(2.8-	0.2+)	901214	801	0.0	0.1+
880907	809	0.9+	0.1+	891102	399	(3.4-	1.0-)	901214	801	0.1+	0.4+
880910	809	1.2+	0.3-	891103	399	0.1-	1.7-	901217	801	0.2+	0.5-
880910	809	1.2+	0.4-	891103	399	1.1+	0.3-	901217	801	0.2+	0.2+
880910	809	1.1+	0.5-	891103	399	1.8+	0.2-				

(4745)* 1989 NG1 = 1974 SY3 = 1979 RF1 = 1980 WY1 = 1990 VJ8

Discovered 1989 July 9 by H. E. Holt at Palomar.

Id. B. G. Marsden (MPC 15072), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	165.83364	(1950.0)	P	Q
n	0.18821177	Peri. 59.27353	+0.46082778	+0.87808650
a	3.0155847	Node 238.71053	-0.85705590	+0.40261620
e	0.0560618	Incl. 8.67203	-0.23041907	+0.25858131
P	5.24	H 11.9	G 0.15	

Residuals in seconds of arc

740922	095	0.9-	1.8+	801210	095	0.2+	0.7+	890709	675	1.6+	0.8+
790914	095	0.1+	1.2+	890707	675	0.6+	0.2+	890709	675	1.7+	0.1+
801130	095	0.2-	1.1-	890707	675	0.3+	1.0+	890729	675	0.8-	1.1-

890729 675 0.3- 1.0- 901019 877 1.4+ 0.3+ 901021 877 1.4- 0.1+
890801 675 1.4- 0.8- 901019 877 0.8- 1.5- 901112 877 0.2+ 0.3+
890801 675 1.2- 0.7- 901021 877 0.7+ 0.3- 901112 877 0.3+ 1.1-

(4746)* 1989 TP1 = 1972 VG1 = 1977 RO3 = 1983 TE2
Discovered 1989 Oct. 9 by A. Takahashi and K. Watanabe at Kitami.
Id. H. Kaneda (MPC 15566), T. Kobayashi (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	122.83230		(1950.0)	P	Q
n	0.16971042	Peri.	212.64662	+0.79284363	-0.60942372
a	3.2309511	Node	184.90183	+0.56233699	+0.73240733
e	0.1576841	Incl.	0.87533	+0.23489590	+0.30361527
P	5.81	H	11.8	G 0.15	

Residuals in seconds of arc
721109 095 0.1+ 1.9- 890929 809 1.3- 0.5- 891102 400 0.1- 0.6+
770912 095 1.4- 1.2+ 891001 809 0.5+ 0.6- 901214 801 0.2- 0.1-
770918 095 0.7+ 0.3- 891001 809 0.9+ 0.1- 901214 801 0.2- 0.3-
831005 688 (1.2- 3.2-) 891009 400 0.6+ 1.9- 901220 801 0.9- 0.3+
831009 688 0.2- 0.6- 891009 400 1.7+ 1.4- 901220 801 0.7- 0.0
831009 688 (5.8+ 0.4+) 891009 400 1.9+ 0.4- 910105 400 1.5+ 1.0+
831012 688 0.6+ 2.0- 891018 400 0.3+ 1.7+ 910105 400 0.7- 0.2-
831012 688 1.2+ 0.7- 891021 095 0.6- 1.0+ 910114 399 1.0+ 0.2-
890928 809 1.3- 1.3+ 891025 095 0.6- 2.3+ 910114 399 0.2+ 0.1-
890928 809 0.8- 1.1+ 891025 095 0.6+ 1.2- 910114 399 0.7- 0.5+
890928 809 0.9- 1.0+ 891030 807 0.1- 0.2+ 910114 399 0.5+ 0.0
890929 809 1.6- 0.4- 891101 807 0.6- 0.0
890929 809 1.1- 0.6- 891102 400 0.6- 1.4+

(4747)* 1989 WB = 1976 GK6 = 1978 PJ = 1978 SW
Discovered 1989 Nov. 19 by S. Ueda and H. Kaneda at Kushiro.
Id. H. Kaneda (MPC 15721), S. Nakano (d, ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	147.83518		(1950.0)	P	Q
n	0.18963568	Peri.	350.71705	+0.60058998	-0.77879261
a	3.0004704	Node	62.15395	+0.74605811	+0.46441961
e	0.1171779	Incl.	11.81447	+0.28755690	+0.42165922
P	5.20	H	11.5	G 0.15	

Residuals in seconds of arc
760402 095 1.9+ 2.2+ 891129 399 0.1- 0.7+ 891218 399 0.7- 2.2-
780809 805 0.7- 0.5+ 891129 399 0.0 0.4- 891218 399 1.0+ 0.1-
780811 805 1.2- 1.4- 891129 399 0.1+ 1.2+ 901214 801 0.5+ 0.1-
780927 095 0.3+ 2.4+ 891201 399 0.7- 0.1+ 901214 801 0.3+ 0.2+
891119 399 2.1+ 0.2+ 891201 399 0.7- 0.2- 901217 801 0.7- 0.8-
891119 399 1.2- 0.9- 891201 399 0.6+ 1.0+ 901217 801 0.5- 0.4-
891121 399 0.0 0.9+ 891206 399 0.5- 0.6+ 910208 399 1.2+ 0.7+
891121 399 0.6+ 0.2+ 891206 399 0.2+ 0.6+ 910208 399 1.3- 0.8+
891121 399 0.5- 0.2- 891218 399 0.2- 0.2-

(4748)* 1989 WV = 1972 AG = 1980 WK2
Discovered 1989 Nov. 20 by K. Suzuki and T. Urata at Toyota.
Id. S. Nakano (MPC 15723)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	311.99575		(1950.0)	P	Q
n	0.21692006	Peri.	185.39193	+0.00258180	+0.96009266
a	2.7432764	Node	84.97170	-0.90661783	+0.12025350
e	0.0547437	Incl.	16.30501	-0.42194485	-0.25250978
P	4.54	H	11.6	G 0.15	

Residuals in seconds of arc

720105	095	0.5-	3.5+	891127	881	(6.6-	1.6+)	891223	399	1.0+	1.4-
801130	095	0.6-	2.2-	891129	877	(5.0+	3.7-)	891223	399	(2.6-	0.3+)
801210	095	0.1-	0.3-	891129	877	(4.0+	3.5-)	901214	801	0.7+	0.1+
891120	881	(0.4-	3.0+)	891201	877	1.2+	1.1-	901214	801	0.8+	0.1+
891120	881	(0.9-	3.3+)	891201	877	1.9+	1.9-	901217	801	0.4+	0.2-
891121	881	1.6-	2.2+	891201	046	(5.8+	0.2-)	901217	801	0.4+	0.2-
891121	881	0.9-	1.7+	891201	046	(4.2+	0.4+)	910116	801	0.6-	0.4+
891125	881	1.2+	0.7+	891218	881	1.0-	1.6+	910116	801	0.6-	0.3+
891125	881	1.0+	0.8+	891218	881	0.4+	1.7-	910118	801	0.5-	0.3-
891127	881	2.3-	0.3-	891223	399	0.3+	1.4-	910118	801	0.4-	0.7-

(4749)* 1989 WE1 = 1976 HJ = 1978 TG

Discovered 1989 Nov. 22 by N. Kawasato at Uenohara.

Id. S. Nakano (MPC 15897)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	176.86371	(1950.0)	P	Q	
n	0.18904395	Peri.	288.41455	+0.91620270	-0.35465563
a	3.0067283	Node	92.69828	+0.40023856	+0.83262216
e	0.1070022	Incl.	10.76220	-0.01953732	+0.42539362
P	5.21	H	11.4	G 0.15	

Residuals in seconds of arc

760423	095	0.1+	0.3-	891201	399	1.7+	0.7+	891223	399	0.0	0.6-
781003	095	0.0	0.6-	891201	399	1.7-	0.4-	891223	399	(2.8+	1.2-)
891122	376	(3.6-	2.6-)	891201	399	(0.6+	2.6-)	891228	376	2.3-	1.4-
891122	376	(5.8-	0.3+)	891202	033	0.2+	1.1+	891228	376	2.1-	2.0-
891125	376	0.2-	1.2+	891203	033	(3.6+	0.5+)	901217	801	0.2+	0.2-
891125	376	1.2+	2.3+	891203	033	2.0+	0.4+	901217	801	0.1+	0.4-
891125	872	1.0+	0.9+	891204	376	1.2-	0.0	901220	801	0.4+	0.1-
891125	872	1.9-	2.2-	891204	376	0.9-	0.5+	901220	801	0.3+	0.0
891128	033	1.9-	1.1+	891206	399	1.6+	0.4-	910114	801	0.3-	0.1-
891129	033	(3.3+	0.3+)	891206	399	2.2+	0.4-	910114	801	0.4-	0.2+
891129	376	0.2+	0.9-	891206	399	0.8+	0.1+	910118	801	0.3-	0.3+
891129	376	0.3-	0.1+	891223	399	1.4+	0.2-	910118	801	0.2-	0.3+

(4750)* 1990 XC1 = 1972 GU = 1978 AL = 1980 VB2 = 1983 RB5 = 1986 PW = 1988 EZ2 = 1989 PH1

Discovered 1990 Dec. 15 by T. Fujii and K. Watanabe at Kitami.

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Marsden

M	134.53166	(1950.0)	P	Q	
n	0.30541130	Peri.	139.68730	+0.27069556	-0.95952178
a	2.1837989	Node	294.47896	+0.85974377	+0.27729079
e	0.0903734	Incl.	4.89939	+0.43308724	+0.04927241
P	3.23	H	13.7	G 0.15	

Residuals in seconds of arc

720412	095	2.2-	2.9-	860806	071	0.7+	0.4-	901215	400	0.2-	0.0
780110	330	1.2+	0.1+	860808	071	1.0+	0.7+	901225	400	0.2+	0.8+
801106	330	0.4-	0.6+	860809	071	1.9-	0.4-	901225	400	0.2+	0.8+
801110	330	0.6-	0.2+	860809	071	1.5-	0.5+	910115	017	0.5-	2.2+
830905	095	0.5+	1.1-	880313	675	0.8-	1.4-	910115	017	0.7+	3.0-
830907	095	2.2+	3.2-	890802	675	0.4+	0.1-	910115	017	(1.9+	5.3+)
830909	095	1.3+	1.9-	890802	675	1.1+	0.4+	910115	017	1.5+	0.8-
860806	071	0.9-	0.5+	901215	400	0.6+	0.8-	910116	017	2.7-	0.5+

(4751)* 1991 BG = 1954 SD1 = 1976 PH = 1982 SM5
Discovered 1991 Jan. 17 by B. G. W. Manning at Stakenbridge.
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	301.97275	(1950.0)	P	Q
n	0.17400652	Peri. 119.84726	-0.21044302	+0.97714220
a	3.1775498	Node 137.96997	-0.91169989	-0.18504391
e	0.1613579	Incl. 2.57796	-0.35286974	-0.10465122
P	5.66	H 12.0	G 0.15	

Residuals in seconds of arc

540927	760	1.3-	1.0-	821018	413	0.7+	0.5-	910116	033	0.8-	0.4+
540927	760	0.2+	1.4+	870927	413	1.8-	0.9-	910117	494	(2.4-	2.8-)
760801	095	1.5+	0.4+	881103	413	0.5-	0.4-	910121	494	0.7+	0.4+
760826	095	0.2+	0.3+	910115	033	0.4+	0.9+	910207	413	0.0	0.9-
820727	413	0.5+	0.7-	910115	033	0.6-	0.1+	910207	413	0.5+	0.5-
820916	095	0.0	0.8+	910115	033	0.4-	0.2+	910210	413	0.6+	1.0-
821018	413	0.0	0.4-	910115	033	0.3-	0.2-				

(4752)* 1309 T-2 = 1951 SN = 1957 UD1 = 1976 GE7 = 1979 VJ3 = 1979 YD2
Discovered 1973 Sept. 29 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.
Id. C. M. Bardwell (MPC 14964), N. S. Chernykh (d, ibid.), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	73.59802	(1950.0)	P	Q
n	0.18086375	Peri. 11.10200	+0.40492267	-0.91388660
a	3.0967183	Node 55.01797	+0.83611135	+0.35718887
e	0.1624454	Incl. 2.03791	+0.37007491	+0.19294399
P	5.45	H 12.2	G 0.15	

Residuals in seconds of arc

510925	839	0.4-	1.2+	730925	675	0.4-	0.2-	731005	675	0.2+	0.6+
571021	760	0.7-	0.3+	730925	675	0.9-	2.7+	760404	095	0.5-	1.1-
571021	760	0.2+	0.8+	730925	675	0.0	0.3+	791114	095	1.9+	1.6+
730919	675	0.2+	1.4-	730929	675	1.6+	0.3-	791223	095	2.3-	0.0
730919	675	0.3+	0.1+	730929	675	0.7+	1.1+	901112	675	0.2+	0.1+
730919	675	0.0	0.9-	730929	675	1.1+	1.6-	901112	675	1.1+	1.6-
730919	675	1.8-	0.6-	730929	675	0.4+	0.0	901114	675	0.4+	0.2-
730920	675	0.5-	0.1-	730930	675	0.4-	0.2-	901120	801	0.4+	0.2+
730920	675	(1.8+	3.1+)	730930	675	1.5+	0.5+	901120	801	0.5+	0.1+
730920	675	0.7+	0.0	730930	675	0.7+	0.3-	901123	403	2.9-	1.7-
730924	675	1.3-	1.3-	730930	675	0.2+	0.7+	901123	403	(4.2-	2.7-)
730924	675	(1.5+	3.1+)	731004	675	0.3-	0.6-	901207	403	0.4+	0.8-
730924	675	1.1+	0.1+	731004	675	0.6-	0.9-	901207	403	1.4-	0.4+ Y
730924	675	2.0-	1.1-	731004	675	0.4+	0.6-	901215	801	0.4+	0.2+
730924	675	(0.1+	3.3+)	731004	675	0.8+	0.0	901215	801	0.1+	0.2+
730924	675	0.1-	0.4-	731005	675	0.7-	1.0-	901218	801	0.6+	0.4+
730925	675	0.5-	2.1+	731005	675	2.7+	0.5+	901218	801	0.5+	0.3+
730925	675	0.7-	0.0	731005	675	1.3-	0.0				

(4753)* 4059 T-3 = 1985 RO4
Discovered 1977 Oct. 16 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.
Id. S. Nakano (MPC 12702), K. Hurukawa
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	297.60139	(1950.0)	P	Q
n	0.24249934	Peri. 190.06065	-0.35362788	+0.93315106
a	2.5468049	Node 59.25601	-0.85284687	-0.29327621
e	0.0671820	Incl. 4.31231	-0.38418685	-0.20788981
P	4.06	H 12.9	G 0.15	

Residuals in seconds of arc

771007	675	0.1-	1.3+		850914	809	0.7+	1.2+		891002	809	1.9-	0.6-
771007	675	(0.8+	3.0-)		850914	809	1.0+	1.5+		891002	809	1.2-	0.3-
771011	675	1.1+	0.3+		850914	809	1.2+	1.4+		891002	809	0.8-	0.4-
771011	675	1.2+	0.1-		850916	809	0.8+	0.5+		891003	809	1.0-	0.4+
771012	675	0.8-	1.3-		850916	809	0.9+	0.9+		891003	809	0.8-	0.3+
771012	675	1.2-	1.0-		850916	809	0.9+	1.1+		891003	809	0.7-	0.2+
771016	675	0.8-	0.5-		850918	809	1.0+	0.3+		891004	809	0.4-	0.8-
771016	675	2.1-	1.3+		850918	809	1.1+	0.3+		891004	809	0.2-	0.7-
771017	675	0.1-	0.7-		850918	809	1.1+	0.4+		891004	809	0.0	0.5-
771017	675	0.4-	0.3-		850919	809	(2.7+	0.9+)		901220	801	0.9-	0.5+
771021	675	0.5-	0.1-		850919	809	(2.7+	0.8+)		901220	801	1.1-	0.4+
771021	675	0.1-	0.6-		850919	809	(3.2+	0.8+)		910114	801	0.6+	0.2+
771022	675	0.5-	0.8-		850920	809	(3.0+	0.2+)		910114	801	0.8+	0.4-
771022	675	2.2+	1.1-		850920	809	(3.3+	0.2-)		910115	801	0.3+	0.2+
850911	809	(2.6+	1.1+)		850921	809	0.3+	0.5-		910115	801	0.5+	0.0
850911	809	(2.5+	1.2+)		850921	809	0.4+	0.5-					
850911	809	(2.7+	1.2+)		850921	809	0.2-	0.4-					

(4754)* 5010 T-3 = 1988 RH1

Discovered 1977 Oct. 16 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. C. M. Bardwell (MPC 14206)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	87.36846		(1950.0)		P		Q
n	0.08477332	Peri.	217.06654		+0.97287086		-0.21248743
a	5.1321176	Node	154.73774		+0.22746671		+0.95070733
e	0.0104910	Incl.	12.37997		-0.04220403		+0.22584211
P	11.63	H	10.0	G	0.15		

Residuals in seconds of arc

771011	675	0.3-	0.1+		771022	675	1.0-	2.7+		901120	413	0.9-	0.5-
771011	675	0.4+	0.4+		771022	675	0.4+	0.6-		901214	801	0.4-	0.0
771012	675	0.1-	0.8-		880910	675	0.9+	0.4-		901214	801	0.3+	0.2-
771012	675	0.2+	0.2-		880916	675	0.4-	0.4+		901215	801	0.2+	0.0
771016	675	0.0	0.1+		881010	675	0.7-	1.4-		901215	801	0.2+	0.1-
771016	675	0.1+	0.4-		881012	675	0.3+	0.2-		910114	801	0.3+	0.2+
771017	675	0.1-	0.6-		881105	675	0.7-	0.4+		910114	801	0.1-	1.1-
771017	675	0.3-	0.4-		881107	675	1.1+	0.7-		910118	801	0.4+	0.3+
771021	675	0.1-	0.2+		891003	807	0.0	0.0		910118	801	0.2+	0.3+
771021	675	0.2+	0.7+		891028	807	0.3-	1.3+					

1941 HA = 1959 RD = 1979 HX5 = 1991 CP

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	251.31855		(1950.0)		P		Q
n	0.23401589	Peri.	191.36945		+0.85732763		+0.48838290
a	2.6079894	Node	138.09272		-0.45110447		+0.86503787
e	0.1613010	Incl.	14.09854		-0.24798003		+0.11485484
P	4.21	H	11.0	G	0.15		

Residuals in seconds of arc

410416	062	0.9-	1.9-		410424	062	0.2-	1.6-		910207	896	0.4-	0.4+
410416	062	1.6+	0.9-		590905	760	0.5-	0.9-		910208	894	(5.1+	5.3-)Y
410419	062	2.4-	0.6+		590905	760	0.7+	0.1+		910208	894	1.2+	0.9-
410419	062	(0.7-	4.0-)		790428	095	0.5+	1.5+					
410421	062	1.3+	1.8+		910207	896	0.9-	0.1+					

1976 GK3 = 1990 RR4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 347.99180		(1950.0)	P	Q
n 0.17282676	Peri.	267.64354	-0.21371534	-0.97386865
a 3.1919939	Node	195.36490	+0.97120051	-0.20332877
e 0.1831892	Incl.	16.85975	+0.10533437	-0.10117936
P 5.70	H 11.6		G 0.15	

Residuals in seconds of arc

760401 095	0.1-	2.2+	760423 095	0.2-	0.1+	900920 675	0.5-	0.9+
760402 095	0.5-	2.6-	900915 675	0.2-	0.1-	900920 675	0.8+	0.9-
760404 095	0.7+	0.3+	900915 675	0.0	0.1+			

1978 QY1 = 1978 QL3 = 1990 WS3
Id. H. Oishi (d, JAM 1860), R. Nagata
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata

M 129.94279		(1950.0)	P	Q
n 0.25754644	Peri.	224.43700	+0.84472519	-0.53492587
a 2.4466153	Node	167.86801	+0.51092528	+0.79646389
e 0.1007488	Incl.	4.67703	+0.15935716	+0.28195672
P 3.83	H 13.9		G 0.15	

Residuals in seconds of arc

780826 414	2.4+	0.4+	901121 809	1.3+	0.1-	901122 809	0.9+	0.8-
780826 414	0.5-	0.6+	901121 809	1.5+	0.7+	901122 809	1.1+	0.0
780831 095	1.1+	0.4-	901121 809	0.6+	1.1+			
780905 095	1.0+	0.8+	901122 809	0.3+	0.4-			

1978 RY6 = 1979 WY2 = 1987 ED1 = 1990 SO11
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 357.26907		(1950.0)	P	Q
n 0.16965295	Peri.	116.81652	+0.02060117	-0.99673757
a 3.2316806	Node	331.67257	+0.84890676	+0.05867097
e 0.0687972	Incl.	9.46579	+0.52814099	-0.05542501
P 5.81	H 12.3		G 0.15	

Residuals in seconds of arc

780902 809	0.9-	0.1+	870301 809	1.3+	0.8+	870305 809	1.0-	0.2-
780902 809	1.3-	0.2+	870301 809	1.4+	0.7+	870305 809	0.9-	0.2-
780902 809	0.0	1.4+	870302 809	0.4+	0.3+	870305 809	0.8-	0.2-
780902 809	1.0-	0.1+	870302 809	0.5+	0.3+	870307 809	0.9-	0.6-
780906 809	0.5+	0.2+	870302 809	0.3+	0.1+	870307 809	0.8-	0.8-
780910 809	0.3+	2.1+	870303 809	0.7+	0.3-	870307 809	0.6-	0.8-
780910 809	0.4+	1.2-	870303 809	0.5+	0.3-	900916 675	0.1+	0.9-
780910 809	0.7+	0.0	870303 809	0.4+	0.5-	900916 675	0.2+	0.6-
780910 809	0.1+	0.9-	870304 809	0.6-	0.2+	900919 675	1.1+	1.2+
791116 095	0.3-	1.2+	870304 809	0.6-	0.2+	900919 675	0.1+	2.0-
870301 809	1.3+	0.9+	870304 809	0.5-	0.4+			

1978 VV9 = 1991 BE2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M 340.11799		(1950.0)	P	Q
n 0.17761488	Peri.	314.77530	-0.71483725	+0.69788870
a 3.1343731	Node	269.53780	-0.62840547	-0.66885545
e 0.1072157	Incl.	2.53690	-0.30678049	-0.25609326
P 5.55	H 12.5		G 0.15	

Residuals in seconds of arc

781105 675	0.3+	0.1+	781108 675	0.4-	0.3-	910121 511	0.4+	0.6+
781106 675	0.3+	0.0	781129 675	0.1-	0.3+	910121 511	0.7+	0.2+
781107 675	0.2-	0.5+	781130 675	0.2+	0.5-	910123 511	1.0-	0.8-

1979 QC2 = 1977 EC9 = 1980 WS2
Id. K. Hurukawa (MPC 10307), A. Lowe (ibid.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	76.42653	(1950.0)		P	Q
n	0.19439126	Peri.	255.96089	+0.55087726	-0.83447236
a	2.9513331	Node	160.59282	+0.78080671	+0.50947437
e	0.1001704	Incl.	2.37829	+0.29474587	+0.20998036
P	5.07	H	12.6	G 0.15	

Residuals in seconds of arc

770314	381	0.6-	0.6+	790823	809	0.1+	0.2-	801130	095	0.1+	0.9-
770314	381	0.0	0.8-	790823	809	0.1+	0.4+	801210	095	(5.2-	2.4-)
770315	381	0.1+	1.2-	790826	809	0.6-	0.2-	901111	400	1.2-	1.6-
770315	381	(7.9-	8.6+)	790826	809	0.2-	0.2-	901111	400	0.7+	0.3+
790822	809	0.4+	0.3+	790826	809	0.5-	0.3-	901113	400	(1.5+	6.0+)
790822	809	0.3+	0.5+	790830	809	0.8+	0.9-	901113	400	0.4+	1.6+
790822	809	0.2+	0.4+	790830	809	0.1-	1.3-				

1980 KK = 1990 SQ12
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	204.52081	(1950.0)		P	Q
n	0.31155974	Peri.	142.30948	+0.12964873	+0.99148158
a	2.1549730	Node	135.13592	-0.91393980	+0.12436784
e	0.1685649	Incl.	1.01285	-0.38458452	+0.03869009
P	3.16	H	15.0	G 0.15	

Residuals in seconds of arc

800522	809	0.9-	0.5+	800531	809	0.1+	0.5-	800604	809	1.1+	0.2+
800522	809	1.2-	0.1+	800531	809	0.8+	0.9-	800611	809	1.0-	0.7+
800522	809	1.0-	0.7+	800601	809	0.1-	0.5-	800611	809	0.6-	0.8+
800523	809	0.6+	0.1-	800601	809	0.1-	0.3-	800611	809	0.4-	0.4+
800523	809	0.1+	0.3-	800602	809	0.5-	0.2-	800612	809	0.3+	0.4+
800523	809	0.4-	0.2-	800603	809	0.0	0.8-	800612	809	0.3+	0.9+
800524	809	0.8-	0.2-	800603	809	0.4+	0.3-	800612	809	0.4+	0.7+
800524	809	0.6-	0.0	800603	809	0.2+	0.2-	900918	809	0.3-	0.4-
800525	809	0.7+	0.1-	800603	809	0.0	0.3+	900918	809	0.0	0.4-
800525	809	1.2+	0.0	800603	809	0.0	0.1-	900918	809	0.5+	0.3-
800526	809	0.2-	0.1-	800603	809	0.9+	0.5-	900920	809	0.7-	0.2+
800526	809	0.7+	0.0	800604	809	0.3-	0.2+	900920	809	0.0	0.3+
800531	809	0.1+	0.9-	800604	809	0.3+	0.4+	900920	809	0.7+	0.3+

1980 RV2 = 1990 VP7
Id. H. Kaneda, R. Nagata
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	155.25618	(1950.0)		P	Q
n	0.29945299	Peri.	11.41949	+0.98536814	+0.16959305
a	2.2126715	Node	338.79366	-0.15983000	+0.88487112
e	0.1876332	Incl.	2.68823	-0.05919461	+0.43386784
P	3.29	H	14.7	G 0.15	

Residuals in seconds of arc

800908	095	0.3+	0.4-	901111	675	0.6-	0.7-	901113	675	0.3+	0.1-
801008	095	0.3-	1.4+	901111	675	0.3-	0.1-				
801012	095	0.0	1.0-	901113	675	0.7+	0.7+				

1981 EN4 = 1987 KR1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	78.12291	(1950.0)		P	Q
n	0.18403934	Peri.	206.13211	-0.12947066	-0.97809233
a	3.0609925	Node	251.66593	+0.93715907	-0.06698503
e	0.0525184	Incl.	9.88834	+0.32399109	-0.19709997
P	5.36	H	13.6	G 0.15	

Residuals in seconds of arc

810202	413	1.4+	1.1-	810310	413	0.2+	0.2-	810409	413	1.2-	0.1-
810209	413	1.0+	0.5-	810312	413	1.0-	0.7+	810502	413	1.0-	1.2-
810302	413	0.8-	1.0+	810312	413	1.3+	0.1+	810503	413	0.0	0.6-
810302	413	1.4+	0.4+	810407	413	0.1-	0.4+	870530	413	0.5+	0.6+
810307	413	0.4-	0.6+	810407	413	0.0	0.1+	870530	413	0.3-	0.1+
810307	413	1.3+	0.4-	810408	413	0.6+	0.5-	910115	688	0.0	0.2+
810310	413	1.3-	0.6+	810409	413	1.4-	0.1-	910115	688	0.0	0.1+

1981 EL5 = 1987 KL2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	93.43345	(1950.0)	P	Q	
n	0.18561893	Peri.	198.07965	+0.10875487	-0.98200809
a	3.0436021	Node	245.91192	+0.93160404	+0.15486708
e	0.0973445	Incl.	9.73569	+0.34682313	-0.10805692
P	5.31	H	14.0	G 0.15	

Residuals in seconds of arc

810209	413	1.1-	0.2+	810312	413	0.7+	0.2-	810502	413	0.1+	0.9-
810209	413	0.8+	0.1-	810407	413	1.3-	1.0+	810503	413	1.4+	1.4-
810302	413	1.5+	0.5+	810407	413	2.1+	1.0-	870530	413	0.1+	0.1-
810307	413	1.7-	1.4+	810408	413	0.9-	1.1+	870530	413	0.1-	0.2-
810307	413	0.1+	0.2+	810408	413	1.3+	0.1-	910115	688	0.3-	0.2-
810310	413	2.3-	0.5+	810409	413	0.7-	0.5+	910115	688	0.1+	0.3-
810310	413	0.6-	0.7-	810409	413	0.7+	0.6-				

1981 EY9 = 1991 CV

Id. R. H. McNaught

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	100.65985	(1950.0)	P	Q	
n	0.28893910	Peri.	176.63325	-0.41967277	-0.90589992
a	2.2660275	Node	298.17391	+0.83122364	-0.35845939
e	0.1426084	Incl.	3.69084	+0.36461216	-0.22550432
P	3.41	H	15.5	G 0.15	

Residuals in seconds of arc

810209	413	0.3-	0.3+	810315	413	1.8+	0.3-	810410	413	0.1-	0.7+
810213	413	1.3+	0.4+	810405	413	0.5-	1.0+	810410	413	2.2-	0.1+
810301	413	1.5-	0.9+	810405	413	0.4-	0.4+	810412	413	1.1-	0.1+
810307	413	0.3+	0.7+	810406	413	0.5-	0.2-	810412	413	0.7-	0.4+
810307	413	0.4+	1.1+	810406	413	1.3+	1.1-	810429	413	0.2+	2.0-
810311	413	1.5+	0.7-	810407	413	0.5-	0.3+	910209	413	0.0	0.1-
810315	413	0.8-	0.5-	810407	413	1.8+	1.2-	910210	413	0.3-	0.9-

1981 ER17

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bowell

M	103.47730	(1950.0)	P	Q	
n	0.17895846	Peri.	191.82956	+0.77626619	-0.62923363
a	3.1186590	Node	207.28051	+0.58497874	+0.74170418
e	0.1625020	Incl.	4.80793	+0.23496952	+0.23224975
P	5.51	H	13.0	G 0.15	

Residuals in seconds of arc

780901	675	0.3+	0.3-	810307	413	1.4+	1.3-	810411	413	(2.5-	1.2+)
780902	675	0.0	0.5-	810311	413	0.1-	1.2+	810411	413	0.2+	0.5-
810209	413	(2.3-	2.2+)	810311	413	0.4+	0.4-	810430	413	0.9-	0.1+
810302	413	0.7-	0.0	810316	413	(2.3+	0.0)	810502	413	1.6-	1.3-
810302	413	(2.1+	1.7-)	810329	413	1.1-	1.4+	901217	801	0.0	0.0
810303	413	0.6-	0.9+	810329	413	0.1-	0.1-	901217	801	0.0	0.1+
810303	413	1.6+	0.8-	810408	413	(2.3-	2.0+)	901220	801	0.0	0.0
810307	413	0.1+	0.5+	810408	413	0.7+	0.8-	901220	801	0.0	0.5-

1981 EG21 = 1990 SW13
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 25.95924 (1950.0) P Q
n 0.15798583 Peri. 240.29633 +0.75241092 -0.65779370
a 3.3888885 Node 160.76753 +0.63466371 +0.70998214
e 0.0914495 Incl. 5.99922 +0.17629457 +0.25146134
P 6.24 H 13.0 G 0.15
Residuals in seconds of arc

810202	413	0.1-	0.8-		810316	413	(4.4+ | 2.4-)	900923	809	0.9+	0.6-
810213	413	1.4-	0.6-		810329	413	0.4+	1.1-	900923	809	1.1+	0.7-
810302	413	(6.1- | 2.8+)		810329	413	0.2-	0.3+	900924	809	0.6-	0.2+
810302	413	0.2+	0.8-		810411	413	0.8-	1.1+	900924	809	0.7-	0.1-
810307	413	(2.4- | 0.0)		810426	413	1.6+	0.7-	900924	809	0.5-	0.1-
810307	413	0.4+	1.3-		810502	413	0.7+	0.4+				
810311	413	1.4-	1.4+		900923	809	0.5+	0.7-				

1982 YQ = 1977 VD1 = 1990 WL3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 326.93634 (1950.0) P Q
n 0.23610432 Peri. 110.80055 -0.91649668 +0.31581299
a 2.5925875 Node 88.26748 -0.39188718 -0.83208563
e 0.0949490 Incl. 14.22112 +0.08036336 -0.45595577
P 4.17 H 12.8 G 0.15
Residuals in seconds of arc

771111	805	0.9-	1.0+		830106	095	(21.8+ | 39.9+)	901119	809	1.2+	0.2-
771112	805	0.2+	0.6+		830202	095	1.5-	1.6-	901122	809	0.7+	0.7-
821222	511	2.2+	0.2+		901117	809	0.9-	0.1+	901122	809	0.1+	0.0
821222	095	1.5-	1.1+		901119	809	0.4-	1.0-	901122	809	0.2+	0.0
821223	511	0.9+	1.9+		901119	809	0.3+	0.9-				

1983 QH1 = 1959 RP = 1990 RM4
Id. H. Kaneda, R. Nagata
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 147.72549 (1950.0) P Q
n 0.28667493 Peri. 174.01097 +0.85857174 +0.51180946
a 2.2779433 Node 155.13306 -0.47328497 +0.81377849
e 0.1877044 Incl. 4.10387 -0.19711899 +0.27534641
P 3.44 H 13.8 G 0.15
Residuals in seconds of arc

590901	024	0.4-	1.2+		830904	095	0.1-	1.0-	900914	675	0.3+	0.2+
830816	095	0.1-	0.8-		830906	095	0.4+	1.3+	900918	675	0.1+	0.5-
830902	095	(1.1- | 5.8-)		900914	675	0.2-	0.4-	900918	675	0.0	0.1-

1983 WN = 1976 YL7 = 1990 VO7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 134.03548 (1950.0) P Q
n 0.27665113 Peri. 110.73027 +0.98773218 -0.02929716
a 2.3326401 Node 251.20240 -0.02569973 +0.93835182
e 0.2480476 Incl. 9.32455 +0.15402810 +0.34443801
P 3.56 H 14.3 G 0.15
Residuals in seconds of arc

761220	095	0.1+	0.5+		831201	688	1.7+	1.3-	901111	675	0.5+	0.7+
831128	688	1.3+	0.1+		831201	688	(3.5- | 0.6-)	901111	675	0.3-	0.2+
831128	688	1.2+	0.5+		831206	688	0.1-	0.3-	901113	675	0.0	0.6-
831129	688	2.7-	1.0-		831206	688	1.1-	0.6-	901113	675	0.3-	0.1+
831129	688	2.5-	1.2-		831209	688	1.3+	0.8+				
831201	688	0.7+	2.0+		831209	688	(3.6- | 4.5-)				

1984 EX = 1990 RA6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 233.23548 (1950.0) P Q
n 0.21572150 Peri. 205.45207 -0.97755013 +0.20975178
a 2.7534283 Node 346.60996 -0.17551812 -0.86314603
e 0.1298164 Incl. 4.95408 -0.11657246 -0.45932900
P 4.57 H 12.5 G 0.15
Residuals in seconds of arc

840226	809	0.2-	0.5-	840304	809	0.5-	0.5+	840310	809	0.5-	0.1+
840226	809	0.2-	0.4-	840304	809	0.3-	0.5+	840310	809	0.9-	0.2+
840226	809	0.1-	0.2-	840304	809	0.1-	0.4+	840311	809	0.0	0.6+
840227	809	0.0	0.6-	840305	809	0.1-	0.1-	840311	809	0.3+	0.5+
840227	809	0.2+	0.4-	840305	809	0.3+	0.0	840311	809	0.4+	0.3+
840227	809	0.3+	0.3-	840305	809	1.0+	0.1-	840403	688	0.8+	0.0
840228	809	0.2+	0.0	840305	809	0.0	0.1-	840403	688	1.8+	0.9-
840228	809	0.3+	0.0	840305	809	0.0	0.5-	900827	675	0.3+	1.4-
840228	809	0.5+	0.1-	840305	809	0.2-	0.0	900827	675	(1.1+	3.0-)
840301	809	1.3-	0.0	840306	809	0.7+	0.4-	900908	809	0.3-	0.3-
840301	809	0.9-	0.1+	840306	809	0.7+	0.4-	900909	809	0.1+	0.2-
840301	809	0.5-	0.2+	840306	809	0.8+	0.3-	900909	809	0.5+	0.0
840301	809	0.8+	0.5+	840306	809	0.1-	0.5-	900909	809	0.8+	0.6+
840301	809	1.1+	0.5+	840306	809	0.3-	0.4-	900910	809	0.9+	0.6+
840301	809	1.5+	0.4+	840306	688	2.4+	0.3-	900910	809	1.2+	0.6+
840303	809	1.2-	0.2+	840306	809	0.1+	0.5-	900912	809	0.7-	0.3+
840303	809	1.1-	0.1+	840306	688	1.1+	0.4-	900912	809	0.6-	0.3+
840303	809	1.0-	0.1+	840308	809	0.5-	0.1+	900912	809	0.4-	0.3+
840303	809	0.7-	0.1+	840308	809	0.3-	0.1+	900914	809	0.4-	0.1+
840303	809	0.5-	0.0	840308	809	0.1-	0.0	900915	809	0.5-	0.0
840303	809	0.6-	0.0	840309	809	0.8-	0.5+	900915	809	0.4-	0.1-
840304	809	0.2+	0.9-	840309	809	0.7-	0.6+	900915	809	0.2-	0.4-
840304	809	0.3-	0.4-	840309	809	0.6-	0.6+	900916	809	0.1-	0.3-
840304	809	0.7-	0.2+	840310	809	0.5-	0.6+	900916	809	0.1-	0.5-

1986 JC = 1986 LD = 1990 SJ10
Id. S. Singer-Brewster (d, MPC 10936), H. Kaneda
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 173.31051 (1950.0) P Q
n 0.27555969 Peri. 176.29040 +0.13173703 +0.98106635
a 2.3387955 Node 101.24096 -0.91312669 +0.17583748
e 0.2419078 Incl. 8.32235 -0.38580435 -0.08117879
P 3.58 H 14.0 G 0.15
Residuals in seconds of arc

860502	675	0.3+	1.0+	860608	675	(25.8-	4.0+)	900919	675	0.0	0.3+
860503	675	0.0	0.6-	860608	675	(26.6-	5.8+)	900920	675	0.2+	0.3-
860503	675	0.3-	0.5-	900917	675	0.4+	0.3+	900920	675	(2.0-	2.9+)
860603	675	1.3+	0.1-	900917	675	0.1+	0.1+				
860603	675	1.3-	0.1+	900919	675	0.7-	0.4-				

1986 QR1 = 1990 SG14
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 184.44525 (1950.0) P Q
n 0.26052286 Peri. 290.40043 +0.19995190 +0.97973581
a 2.4279449 Node 351.10939 -0.86830582 +0.17165085
e 0.0937772 Incl. 4.34325 -0.45394299 +0.10321695
P 3.78 H 14.0 G 0.15
Residuals in seconds of arc

860827	809	0.1-	0.8+	860828	809	0.6-	0.7+	860830	809	1.0-	0.1-
860827	809	0.2+	0.7+	860828	809	0.5-	0.8+	860830	809	1.0-	0.3-
860827	809	0.5+	0.7+	860828	809	0.4-	0.5+	860830	809	0.9-	0.3-

860901	809	1.3-	0.8-	860904	809	0.2+	0.6-	900923	809	0.1+	0.5+
860901	809	0.9-	0.8-	860905	809	1.6+	0.1+	900923	809	0.3+	0.7+
860901	809	0.6-	0.9-	860905	809	1.9+	0.0	900924	809	0.5-	0.4-
860904	809	0.6+	0.4-	860905	809	1.9+	0.1-	900924	809	0.1-	0.3-
860904	809	0.4+	0.4-	900923	809	0.2-	0.6+	900924	809	0.0	0.6-

1987 DF

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	49.77953	(1950.0)	P	Q	
n	0.27203054	Peri. 88.59635	-0.34632806	+0.92797433	
a	2.3589801	Node 159.41954	-0.93790805	-0.34557817	
e	0.2230697	Incl. 23.03561	+0.01963060	-0.13942513	
P	3.62	H 13.0	G 0.15		

Residuals in seconds of arc

870223	809	0.2+	0.2+	870301	809	0.1-	0.2-	870307	809	0.5+	0.0
870223	809	0.3+	0.1+	870301	809	0.0	0.0	870307	809	0.6+	0.3+
870223	809	0.6+	0.0	870302	809	0.2-	0.1+	870307	809	0.5+	0.2-
870223	675	1.1-	2.3+	870302	809	0.1+	0.5+	870307	809	0.6+	0.1+
870223	675	0.9-	0.7+	870302	809	0.1+	0.2+	870307	809	0.4+	0.2-
870224	809	0.2+	0.1-	870303	809	0.4+	0.0	870308	809	0.4-	0.6-
870224	809	0.2+	0.3-	870303	809	0.7+	0.1-	870308	809	0.5-	0.4-
870224	809	0.5+	0.4-	870303	809	0.6+	0.2-	870308	809	0.5-	0.3-
870225	809	0.3-	0.1+	870303	688	0.4+	0.7+	870309	809	0.3-	0.4-
870225	809	0.2-	0.0	870303	688	1.9+	2.3-	870309	809	0.2-	0.5-
870225	809	0.2-	0.1-	870304	809	0.3+	0.7-	870309	809	0.1-	0.6-
870226	809	0.3-	0.1+	870304	809	0.5+	0.1-	870311	809	1.1-	0.0
870226	809	0.0	0.4+	870304	809	0.3+	0.1-	870311	809	0.9-	0.0
870226	809	0.3+	0.7+	870305	809	0.3+	0.4-	870311	809	0.8-	0.1-
870227	809	0.3+	0.0	870305	809	0.6+	0.1-	870421	675	1.5-	2.3+
870227	809	0.2+	0.0	870305	809	0.5+	0.2-	870422	675	0.7-	1.4+
870227	809	0.3+	0.2-	870305	809	0.4+	0.1-	870423	675	0.8-	0.8+
870227	675	1.7-	1.2+	870305	809	0.5+	0.3-	870530	675	1.2-	1.7+
870227	675	1.9-	0.1+	870305	809	0.7+	0.6-	870530	675	1.5-	1.0-
870228	809	0.5-	0.1+	870306	809	0.5+	0.1+	881007	801	0.2-	0.2+
870228	809	0.1-	0.2+	870306	809	0.5+	0.0	910114	801	0.2+	1.4-
870228	809	0.1+	0.2-	870306	809	0.4+	0.0	910114	801	0.3-	1.7-
870301	809	0.3-	0.1-	870307	809	0.5+	0.4-				

1987 DN6 = 1991 BN2

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

M	82.35583	(1950.0)	P	Q	
n	0.23167547	Peri. 179.11636	-0.28126954	-0.95878335	
a	2.6255294	Node 287.21885	+0.88014002	-0.24101972	
e	0.1731196	Incl. 2.41648	+0.38241469	-0.15047918	
P	4.25	H 14.0	G 0.15		

Residuals in seconds of arc

870223	809	1.7-	0.2-	870227	809	0.9+	0.7-	870304	809	0.1+	0.1+
870223	809	1.6-	0.2-	870227	809	1.0+	0.8-	870305	809	0.9-	0.5+
870223	809	1.0-	0.5-	870228	809	0.2+	0.0	870305	809	0.7-	0.6+
870224	809	1.0-	0.3+	870228	809	0.4+	0.1+	870305	809	0.7-	0.7+
870224	809	0.6-	0.0	870228	809	0.5+	0.1+	910117	046	2.3-	0.6-
870224	809	0.4-	0.0	870301	809	0.9+	0.3+	910117	046	0.1+	0.6+
870225	809	0.1-	0.4-	870301	809	1.0+	0.0	910118	511	2.6-	1.3+
870225	809	0.2-	0.5-	870301	809	1.1+	0.1+	910118	046	3.0+	0.7+
870225	809	0.0	0.6-	870303	809	0.3-	0.6+	910118	046	0.4-	1.4+
870226	809	0.3+	0.1-	870303	809	0.3-	0.5+	910119	046	1.9+	1.5-
870226	809	0.5+	0.1-	870303	809	0.4+	0.5+	910119	046	0.3+	1.8-
870226	809	0.8+	0.0	870304	809	0.2+	0.1+				
870227	809	0.8+	0.6-	870304	809	0.4+	0.0				

1988 BT3 = 1990 UT4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Nagata	
M 86.01078		(1950.0)	P		Q
n 0.28202571	Peri.	281.78949	+0.27640576		-0.95997058
a 2.3029097	Node	152.03640	+0.91507273		+0.24847303
e 0.1196664	Incl.	5.54958	+0.29366945		+0.12929672
P 3.49	H	14.5	G	0.15	

Residuals in seconds of arc

880118 809	0.6-	0.3+	880121 809	0.3-	0.1+	880128 809	0.1-	0.6-
880118 809	0.6-	0.4+	880121 809	0.2+	0.1+	880128 809	0.2-	0.2-
880118 809	0.4-	0.5+	880124 809	0.9+	0.3+	880130 809	2.6-	1.3+
880119 809	0.2-	0.4-	880124 809	0.9+	0.0	901016 809	0.7+	1.1+
880119 809	0.2+	0.4+	880124 809	1.0+	0.4-	901016 809	0.1+	0.5-
880120 809	0.4-	0.3-	880126 809	1.0+	0.6-	901016 809	0.1-	0.8+
880120 809	0.2+	0.3-	880126 809	1.0+	0.6-	901019 809	0.7-	1.4-

1988 BY3 = 1978 RC15 = 1990 SY13

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Williams	
M 10.38655		(1950.0)	P		Q
n 0.24703330	Peri.	298.33081	-0.20813827		-0.97749322
a 2.5155467	Node	163.57400	+0.93458419		-0.20913799
e 0.1116361	Incl.	6.99364	+0.28849757		-0.02771836
P 3.99	H	13.5	G	0.15	

Residuals in seconds of arc

780906 809	0.4-	1.4+	880121 809	0.2-	0.3+	880129 809	0.3+	0.3+
880119 809	0.5-	1.2-	880121 809	0.3+	0.1-	900923 809	0.7-	0.1+
880119 809	0.2-	1.4-	880123 809	0.2+	0.9+	900923 809	0.4-	0.2+
880119 809	0.3+	1.4-	880123 809	0.1+	1.1+	900923 809	0.1-	0.2+
880119 809	0.2-	1.1-	880125 809	0.4+	0.5+	900924 809	0.1+	0.4-
880119 809	0.1-	0.9-	880125 809	0.8+	0.8+	900924 809	0.6+	0.4-
880119 809	0.2-	0.6-	880127 809	0.1-	1.2+	900924 809	0.8+	0.5-
880120 809	0.6-	0.1+	880127 809	0.3+	1.1+			
880120 809	0.3-	0.4+	880129 809	0.1-	0.4+			

1988 CF3 = 1979 QK7 = 1983 VG5 = 1990 TR9

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Kaneda	
M 129.13821		(1950.0)	P		Q
n 0.27445360	Peri.	27.90614	+0.99946477		-0.02062859
a 2.3450751	Node	333.23959	+0.00723390		+0.89627454
e 0.1946778	Incl.	3.23257	+0.03190374		+0.44301965
P 3.59	H	14.1	G	0.15	

Residuals in seconds of arc

790820 095	0.7-	1.9+	880221 809	0.3+	0.1+	901011 033	0.2-	0.8-
831108 381	0.1-	1.0+	880223 809	1.7+	0.5+	901011 033	0.3+	0.0
880211 809	4.4-	1.0-	880223 809	1.5+	1.4+	901012 033	0.3+	0.3-
880221 809	0.9+	0.5-	880223 809	0.1+	2.1+	901013 033	0.4+	0.3-
880221 809	0.5+	0.9-	901010 033	0.1-	0.4+	901014 033	0.1-	0.2-

1988 CV3 = 1990 RZ4

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5				Kaneda	
M 106.76277		(1950.0)	P		Q
n 0.21552599	Peri.	150.04931	+0.93255472		+0.35901128
a 2.7550931	Node	189.15733	-0.36010217		+0.91740564
e 0.2006383	Incl.	13.85613	-0.02584820		+0.17169098
P 4.57	H	12.6	G	0.15	

Residuals in seconds of arc

880213 809	0.6+	0.1+	880216 809	0.5+	1.1+	880216 809	0.3+	0.5+
880215 809	0.7-	1.8-	880216 809	0.1+	1.2+	880221 809	0.4-	0.8-

880221 809 0.2- 0.5- 880223 809 0.1- 0.5+ 900915 675 0.0 0.2-
880221 809 0.6- 0.6- 880223 809 0.6+ 0.0 900920 675 0.3+ 0.1-
880223 809 0.3+ 0.3+ 900915 675 0.2- 0.0 900920 675 0.2+ 0.3+

1988 DO1 = 1988 FM2 = 1991 AD1
Id. H. Kaneda (d, MPC 17600), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 337.90147 (1950.0) P Q
n 0.29043520 Peri. 118.71374 -0.51645879 +0.85137068
a 2.2582389 Node 119.90439 -0.81794990 -0.45872639
e 0.1112677 Incl. 6.08300 -0.25343298 -0.25443675
P 3.39 H 12.5 G 0.15
Residuals in seconds of arc
880221 400 0.3+ 1.4- 880310 400 (0.6- 4.7-) 910113 675 0.0 0.3-
880221 400 0.9+ 1.0+ 880310 400 2.8- 0.1- 910113 675 0.1+ 1.0-
880221 400 0.5+ 0.4- 880321 400 0.9+ 1.0+ 910114 675 0.1+ 1.1+
880310 400 (4.1- 0.9-) 880321 400 0.3+ 0.3- 910114 675 0.2- 0.3+

1988 DJ2 = 1983 VY2 = 1990 QZ7 = 1990 RH6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano
M 103.69460 (1950.0) P Q
n 0.27065931 Peri. 46.56654 +0.97171053 -0.23587006
a 2.3669408 Node 327.07101 +0.20979880 +0.88540458
e 0.2305611 Incl. 1.26475 +0.10845788 +0.40052970
P 3.64 H 15.1 G 0.15
Residuals in seconds of arc
831108 381 0.4- 0.3- 880221 809 1.4- 0.6+ 900909 809 0.2+ 1.4-
831108 381 0.5+ 0.1- 880223 809 0.1+ 0.0 900909 809 0.6+ 1.7-
880216 809 1.2+ 0.5- 880223 809 0.1- 0.4+ 900910 809 0.2- 0.3-
880216 809 1.0+ 0.3- 880223 809 0.8- 0.0 900910 809 0.2+ 0.2-
880216 809 0.3- 1.6+ 900816 809 0.2+ 1.1+ 900910 809 0.6+ 0.0
880217 809 0.3+ 0.5+ 900816 809 0.5- 0.6+ 900911 809 0.6- 1.1+
880217 809 0.5- 0.1- 900816 809 0.7- 1.0+ 900911 809 0.1- 1.1+
880217 809 0.8- 0.3+ 900818 809 0.0 0.5- 900911 809 0.8+ 0.8+
880221 809 1.5+ 0.2- 900818 809 0.2- 0.2+ 900913 675 0.5- 0.1-
880221 809 0.2+ 0.2+ 900818 809 0.7- 0.7+ 900913 675 0.1- 0.9-

1988 EJ1 = 1978 EF7 = 1985 JJ1 = 1986 TQ12
Id. E. Helin (1991 obs.), B. G. Marsden
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 48.49915 (1950.0) P Q
n 0.29832199 Peri. 305.29559 -0.98367546 -0.17274200
a 2.2182649 Node 224.81782 +0.17939401 -0.91929597
e 0.0854797 Incl. 4.10251 +0.01415563 -0.35363133
P 3.30 H 14.0 G 0.15
Residuals in seconds of arc
780305 095 0.1+ 0.2+ 880312 675 0.9+ 0.4+ 910111 675 0.1+ 0.3-
850511 675 0.7- 1.7- 880315 675 0.4+ 1.6- 910111 675 0.3- 0.0
850515 675(42.8- 27.0-) 880410 675 1.9- 0.4- 910115 675 0.2- 0.2-
861005 095 1.7+ 4.2- 880410 675 0.1- 1.2- 910115 675 0.0 0.2-

1988 EA2 = 1991 AL1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Urata
M 38.39074 (1950.0) P Q
n 0.29052519 Peri. 23.84768 -0.99965383 -0.00211575
a 2.2577770 Node 155.98677 -0.00701149 -0.93929129
e 0.0633396 Incl. 3.69484 +0.02535847 -0.34311425
P 3.39 H 13.5 G 0.15

Residuals in seconds of arc

880313 054	0.8-	0.4+	880413 054	0.0	0.1-	910115 889	0.0	0.5-
880314 054	0.5+	0.2+	880414 054	0.4-	0.1+	910118 889	0.2+	0.6+
880409 054	0.7+	0.7-	910115 889	0.1-	0.1-			

1988 KF = 1979 HF6 = 1991 AA2
Id. P. Rose (k), B. G. Marsden
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M 318.08963		(1950.0)	P	Q
n 0.22560451	Peri.	112.64798	-0.82940211	+0.52215954
a 2.6724222	Node	99.35310	-0.55727421	-0.74835887
e 0.0167310	Incl.	11.61152	-0.03921226	-0.40903351
P 4.37	H	12.5	G 0.15	

Residuals in seconds of arc

790428 095	0.5+	1.1+	880615 675	0.4+	0.3-	910111 675	0.5-	0.8-
880519 675	0.0	0.6-	880615 675	0.5-	1.1-	910113 675	1.0+	0.5+
880521 675	0.6-	0.1+	910111 675	0.6+	1.7-	910113 675	0.7-	0.9+

1988 PB1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M 9.92821		(1950.0)	P	Q
n 0.08296275	Peri.	164.92800	+0.38655162	-0.81523312
a 5.2065169	Node	260.71956	+0.79446711	+0.53182225
e 0.0467536	Incl.	25.91041	+0.46840139	-0.22925980
P 11.88	H	10.0	G 0.15	

Residuals in seconds of arc

880813 675	1.2+	0.4-	881009 675	1.1+	0.7+	901113 675	0.9-	0.7-
880814 675	0.4-	0.7+	881104 675	0.4-	0.5-	901215 801	0.2+	0.6+
880911 675	0.8-	0.8+	881106 675	0.7-	0.2+	901215 801	0.1+	0.5+
880913 675	0.6-	1.2-	901020 675	0.2+	0.4+			
881007 675	0.5+	0.1-	901022 675	0.3+	0.5+			

1988 PK1 = 1932 YN = 1976 FE = 1991 BC
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Urata

M 273.59241		(1950.0)	P	Q
n 0.18966740	Peri.	30.54917	+0.17755213	+0.97234778
a 3.0001419	Node	250.04294	-0.93235819	+0.11687118
e 0.0661549	Incl.	9.28813	-0.31493403	+0.20219032
P 5.20	H	11.0	G 0.15	

Residuals in seconds of arc

321223 024	0.2+	0.2+	880815 511	0.7+	2.0-	910117 885	1.5-	1.2+
760331 095	2.4-	4.1-	880911 511	1.6-	1.2-	910117 885	0.9-	0.8-
880813 511	1.3+	0.2+	880911 511	1.2-	0.8-	910119 885	0.0	2.4-
880813 511	0.7+	0.3+	880914 511	2.3+	2.1-	910119 885	1.2+	3.0-
880815 511	0.3-	1.4-	880914 511	1.3+	0.7-			

1988 TQ4 = 1988 VE11 = 1937 VF = 1974 TN1 = 1979 XQ1 = 1990 DR3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Oishi

M 254.89418		(1950.0)	P	Q
n 0.21268175	Peri.	257.08701	+0.90718714	-0.42031637
a 2.7796072	Node	127.76447	+0.39453801	+0.83453885
e 0.0826881	Incl.	1.34758	+0.14612067	+0.35620086
P 4.63	H	12.5	G 0.15	

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

371103 024(0.04+	0.04-)X		881010 888	0.6-	1.0+	900225 809	0.8+	0.3-
741012 808	0.6-	0.5+	881108 399	0.5-	1.3-	900225 809	1.0+	0.4-
741012 808	0.8+	0.7-	881108 399	1.1+	1.6-	900226 809	1.2-	0.3-
791214 095	0.4-	2.3+	881108 399	0.8+	0.6-	900226 809	0.8-	0.0
881010 888	0.1-	0.8+	900225 809	0.3+	0.4-	900226 809	0.4-	0.3+

1989 NE = 1952 UA
Id. R. H. McNaught (1991 obs.), E. F. Helin (1990 obs.), G. V. Williams
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	213.68709	(1950.0)		P	Q
n	0.23658376	Peri.	150.09536	+0.34520842	+0.92138685
a	2.5890838	Node	139.34189	-0.90622529	+0.37671976
e	0.1586428	Incl.	15.90421	-0.24410423	-0.09554312
P	4.17	H	12.5	G 0.15	

Residuals in seconds of arc

521021	760	0.8+	1.1-	890724	403	0.3+	1.7-	890731	675	0.2+	1.6-
521021	760	0.6-	0.4+	890725	403	1.2+	0.5+	890731	675	0.2-	0.7-
890701	675	0.4-	0.9-	890725	403	1.2-	0.4+	901118	675	1.5-	1.0+
890701	675	0.9-	0.4-	890728	403	1.0+	1.3+	901118	675	0.1-	0.4-
890703	675	0.0	0.2+	890728	403	1.6+	0.2-	910107	413	0.9+	0.2-
890703	675	0.5+	0.0	890729	675	0.1-	2.6+	910108	413	0.7-	0.4+
890724	403	1.6-	0.7+	890729	675	0.5-	0.2+	910112	413	1.4+	0.2-

1989 NX
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Bardwell

M	235.71162	(1950.0)		P	Q
n	0.28341846	Peri.	185.07266	+0.74179192	+0.58519652
a	2.2953590	Node	133.40447	-0.59831196	+0.79811774
e	0.2441178	Incl.	26.79816	-0.30293160	-0.14336353
P	3.48	H	13.0	G 0.15	

Residuals in seconds of arc

890707	675	1.9-	1.1+	890801	675	0.7-	0.2+	890830	413	0.2-	0.2+
890708	675	0.3-	1.9-	890809	675	2.0+	0.3-	890920	413	0.8+	0.6+
890708	675	0.6-	0.4-	890809	675	1.9+	0.1+	890920	413	0.7+	0.4+
890729	675	0.4-	0.1+	890811	675	0.7+	0.1+	910116	801	0.1+	2.3-
890729	675	1.0-	0.3-	890811	675	1.0-	1.6-	910116	801	0.2+	0.4-
890801	675	0.3-	0.0	890830	413	0.2+	0.7-	910118	801	0.9+	1.6-

1989 RS = 1983 TT2 = 1990 YV
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	130.41761	(1950.0)		P	Q
n	0.15662170	Peri.	162.96746	+0.98046148	+0.19530718
a	3.4085377	Node	185.92084	-0.19631202	+0.96389448
e	0.0676038	Incl.	13.14587	-0.01252506	+0.18100424
P	6.29	H	11.4	G 0.15	

Residuals in seconds of arc

831004	688	0.8-	1.3-	890928	809	0.2-	1.8-	891001	809	0.0	1.1+
831004	688	0.6+	2.1+	890928	809	0.1+	2.1-	891001	809	0.1+	1.0+
890903	511	0.2-	0.6-	890928	809	0.4+	2.0-	891001	809	0.2+	1.1+
890903	511	(3.8-	1.5+)	890929	809	0.2+	0.2-	901218	675	0.5+	0.8+
890904	511	2.0-	0.0	890929	809	0.6+	0.4-	901218	675	1.8-	0.1-
890904	511	0.5-	0.2+	890929	809	1.0+	0.5-	901219	675	0.2-	0.4-
890905	511	0.2-	1.0+	890930	809	0.2+	0.7+	901219	675	1.5+	0.6-
890907	511	(0.7+	4.4-)	890930	809	0.3+	0.7+				
890907	511	(0.1+	6.5-)	890930	809	0.3+	0.9+				

1989 TT2 = 1991 BR1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden

M	160.71203	(1950.0)		P	Q
n	0.17786270	Peri.	233.85672	+0.99584619	+0.01585800
a	3.1314609	Node	125.06817	+0.01542195	+0.94111184
e	0.1612299	Incl.	6.28913	-0.08973589	+0.33772330
P	5.54	H	12.5	G 0.15	

Residuals in seconds of arc

891003	807	0.3+	0.4+	891030	807	0.3+	0.1-	910118	511	0.3-	0.2-
891006	807	0.4-	0.5-	891101	807	0.3-	0.2+	910118	511	0.3+	0.2+

1989 VW = 1980 TP1
Id. S. Nakano
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Bardwell

M	68.54088	(1950.0)		P	Q
n	0.12279523	Peri.	43.65290	-0.01177510	-0.99664523
a	4.0088141	Node	47.19913	+0.88438845	-0.04817643
e	0.1524231	Incl.	6.33751	+0.46660306	+0.06616133
P	8.03	H	11.5	G 0.15	

Residuals in seconds of arc

801005	809	0.2-	0.1+	891125	888	1.2+	0.8-	891220	888	0.2-	0.7-
891104	888	0.2-	0.9-	891125	888	0.1+	0.5-	891229	801	0.9+	0.6-
891104	888	0.3-	1.0-	891202	888	0.3+	1.1-	891229	801	0.7+	0.4-
891119	888	0.8-	1.8-	891202	888	0.6+	1.2-	910114	801	0.1-	0.6-
891119	888	1.0-	0.3-	891203	888	0.2-	0.6+	910114	801	0.2-	0.4-
891120	888	0.6+	0.4+	891203	888	1.5-	0.8+	910118	801	0.0	0.4-
891120	888	0.4+	0.7+	891220	888	0.1+	0.7-	910118	801	0.2-	0.5-

1990 QS2 = 1983 HQ1 = 1985 SB4 = 1986 WC7
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata

M	290.81761	(1950.0)		P	Q
n	0.19955805	Peri.	11.82912	-0.90405818	-0.42649885
a	2.9001684	Node	142.88533	+0.38825574	-0.84676875
e	0.0117430	Incl.	2.64865	+0.17870727	-0.31793303
P	4.94	H	12.5	G 0.15	

Residuals in seconds of arc

830416	033	0.4-	0.3-	861128	010	1.4-	0.1-	900914	675	0.1-	1.0-
830416	033	0.2+	0.3-	900824	675	0.1+	0.1-	900914	675	0.2+	0.3-
850920	095	0.5-	1.3+	900824	675	0.3+	0.2-	900918	675	0.3-	0.3+
861128	010	0.9+	0.6+	900829	675(15.3-		26.6-)	900918	675	0.5+	0.4-
861128	010	0.5+	0.5-	900829	675(33.3-		24.2-)				

1990 RW = 1982 PW = 1982 QJ
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	69.39636	(1950.0)		P	Q
n	0.12405744	Peri.	335.09931	+0.84139956	+0.54040532
a	3.9815683	Node	352.18744	-0.49205288	+0.76381400
e	0.1457968	Incl.	1.25536	-0.22345187	+0.35291680
P	7.94	H	11.5	G 0.15	

Residuals in seconds of arc

820814	095	0.2-	1.1+	900826	809	0.8-	0.1+	900914	675	0.3-	1.2-
820819	046	0.9-	1.3-	900913	809	1.5-	0.1+	900914	675	0.1+	1.2-
820819	046	2.0+	0.5+	900913	809	1.0-	0.1+	900915	809	0.1+	0.2-
820822	046	0.3+	0.1+	900913	809	0.7-	0.1+	900915	809	0.3+	0.3-
820822	046	1.2-	0.4-	900913	809	0.9+	0.0	900915	809	0.5+	0.3-
820826	046(80.6-		28.8-)	900913	809	1.2+	0.0	900916	809	0.2-	0.7+
900823	675	0.3-	0.1+	900913	809	1.5+	0.1+	900916	809	0.2-	0.7+
900823	675	0.3+	1.1-	900914	809	0.1+	0.8+	900916	809	0.4-	0.5+
900826	809	0.7+	0.7+	900914	809	0.2+	0.8+	900918	675	1.0-	0.0
900826	809	0.3-	0.1+	900914	809	0.6+	1.0+	900918	675	0.1-	1.5-

1990 RV2 = 1933 SE = 1955 SM = 1981 RA1 = 1984 HG = 1986 UR4 = 1988 FQ3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Oishi

M	33.15943	(1950.0)	P	Q
n	0.22501655	Peri. 217.77457	+0.28378154	-0.95506780
a	2.6770701	Node 215.96836	+0.91139376	+0.29637135
e	0.0812059	Incl. 8.37229	+0.29804270	+0.00308550
P	4.38	H 12.6	G 0.15	

Residuals in seconds of arc

330921	012	0.5+	0.5-	840419	046	0.1-	2.3-	
550917	760	1.0-	0.6+	861031	511	1.0+	0.0	
550917	760	0.1+	0.7+	861103	511	(2.1-	2.9-)	
810902	033	0.2-	0.4+	861103	511	0.5-	0.8-	
810902	033	0.3-	0.4+	880320	808	0.5-	2.0-	
840419	046	(3.0-	3.3-)	880320	808	0.4-	0.7+	
900915	675	0.3-	1.7-					
900915	675	0.2-	1.2-					
900918	675	0.1+	0.2+					
900918	675	0.8+	0.2-					
900920	675	0.5+	1.0-					
900920	675	0.3+	0.3-					

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

M	225.10789	(1950.0)	P	Q
n	0.62501396	Peri. 47.96659	-0.04147188	-0.98526426
a	1.3548033	Node 45.24785	+0.83366048	-0.12566352
e	0.3871992	Incl. 13.51258	+0.55071798	+0.11603025
P	1.58	H 17.0	G 0.15	

From 12 observations 1990 Aug. 18-1991 Jan. 19, mean residual 0".5.

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

M	138.03061	(1950.0)	P	Q
n	0.44339419	Peri. 115.76486	-0.42645978	-0.90450084
a	1.7032408	Node 359.44698	+0.66410026	-0.31070374
e	0.4750429	Incl. 19.40092	+0.61408704	-0.29213253
P	2.22	H 19.0	G 0.15	

From 24 observations 1990 Sept. 25-Nov. 14, mean residual 0".5.

1990 SF11 = 1986 OO
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Ichikawa

M	357.37468	(1950.0)	P	Q
n	0.25620127	Peri. 162.00404	-0.35047070	-0.93622150
a	2.4551766	Node 308.50410	+0.85516274	-0.30870360
e	0.0274003	Incl. 1.88070	+0.38192536	-0.16790293
P	3.85	H 13.2	G 0.15	

Residuals in seconds of arc

860727	413	1.1-	0.7+	900914	675	0.7-	0.1-	
860727	413	0.2+	1.1+	900914	675	0.6-	0.4+	
860801	413	1.0-	1.5-	900916	675	0.4-	0.3+	
860801	413	1.9+	0.5-	900916	675	0.8+	0.3+	
900919	675	0.0	1.7-					
900919	675	1.0+	0.9+					

1990 TL4 = 1943 TE = 1971 OR1 = 1988 DF5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	125.74988	(1950.0)	P	Q
n	0.21011652	Peri. 51.45327	+0.84780307	+0.51157350
a	2.8021793	Node 277.36611	-0.51975039	+0.74924114
e	0.1714527	Incl. 8.09910	-0.10530663	+0.42063079
P	4.69	H 11.0	G 0.15	

Residuals in seconds of arc

431005	062	0.9-	1.5-	901014	675	0.0	0.2+	
431005	062	0.8+	1.5+	901014	675	0.6-	0.0	
710729	095	0.8+	1.2-	901016	675	0.0	0.2+	
880217	809	0.5-	0.7-	901016	675	0.2+	0.1+	
880217	809	0.2-	0.5-	901118	675	0.4-	0.5-	
901118	675	0.2-	0.1+					
901119	675	(0.8-	2.8-)					
910113	675	0.5+	0.1+					
910113	675	0.9+	0.2-					

1990 UG2 = 1964 WC = 1979 RF
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 75.88160 (1950.0) P Q
n 0.18736989 Peri. 289.80775 +0.76160830 -0.62160666
a 3.0246109 Node 109.07144 +0.64306585 +0.68999138
e 0.1069479 Incl. 11.17622 +0.08011936 +0.37083293
P 5.26 H 12.0 G 0.15
Residuals in seconds of arc

641129	760	0.4-	2.0-	901020	413	(3.1+	3.3+)	901109	413	0.5+	1.7+
641129	760	1.4+	1.4-	901022	413	3.0-	1.3-	901215	675	1.5+	0.7+
790901	095	0.4+	1.4-	901022	413	(4.4+	1.9+)	901215	675	0.3+	0.9-
890830	413	0.0	0.8-	901108	413	1.2-	1.3+	901218	675	0.6-	0.3-
901020	413	0.2-	1.0+	901109	413	0.4+	0.9+	901218	675	1.3+	0.4+

1990 UR4 = 1982 OS
Id. B. G. Marsden; 1982 OS = 1990 OT1 (MPC 17014) is invalid
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 1.64582 (1950.0) P Q
n 0.27918977 Peri. 76.61060 -0.91329646 -0.39256249
a 2.3184830 Node 80.18881 +0.31785808 -0.85361572
e 0.0723240 Incl. 6.32492 +0.25466806 -0.34239581
P 3.53 H 15.0 G 0.15
Residuals in seconds of arc

820722	474	1.2-	0.1+	820726	474	1.1-	0.5-	901019	809	2.0-	0.7-
820722	474	0.5-	0.1+	901016	809	0.3-	0.9+	901024	809	2.2+	0.3+
820724	474	1.0+	0.8+	901016	809	1.7-	0.9+	901024	809	0.6+	0.6-
820724	474	3.7+	1.0+	901016	809	1.7-	1.2+	901024	809	1.3+	1.4-
820726	474	0.8-	1.2-	901019	809	1.1+	0.6-				
820726	474	1.2-	0.3-	901019	809	0.5+	0.0				

1990 VB
Epoch 1990 Dec. 15.0 ET = JDE 2448240.5 Bowell
M 18.52873 (1950.0) P Q
n 0.25784736 Peri. 101.13606 +0.96712661 +0.07792638
a 2.4447113 Node 254.73704 -0.15639669 +0.93284760
e 0.5272019 Incl. 14.53145 +0.20051483 +0.35174256
P 3.82 H 16.5 G 0.15
From 16 observations 1990 Nov. 8-1991 Jan. 15, mean residual 0".55.

1990 VG1 = 1991 AH
Id. R. H. McNaught
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 138.50849 (1950.0) P Q
n 0.25746789 Peri. 201.35648 +0.97806689 -0.19253667
a 2.4471129 Node 168.81963 +0.19268045 +0.98124366
e 0.2013147 Incl. 24.19427 -0.07911641 +0.00951418
P 3.83 H 13.0 G 0.15
From 11 observations 1990 Nov. 12-1991 Feb. 5, mean residual 0".61.

1990 VH7
Id. C. S. Shoemaker (1989 obs.)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 74.66297 (1950.0) P Q
n 0.08175844 Peri. 89.78361 +0.96996646 -0.12963701
a 5.2575205 Node 277.66029 +0.03356666 +0.90938284
e 0.0900334 Incl. 11.98567 +0.24091151 +0.39524308
P 12.06 H 10.0 G 0.15

Residuals in seconds of arc

890928	675	0.6+	0.8-	891104	675	0.1+	1.5-	901114 675 1.0- 0.7+
890929	675	0.8-	0.6-	901025	675	0.3+	0.4-	901116 675 0.5+ 0.2+
890930	675	0.2-	1.8+	901025	675	0.2+	0.5+	
891103	675	0.3+	1.1+	901113	675	0.0	0.9-	

1990 WW2

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Urata

M	93.98181	(1950.0)	P	Q
n	0.18347710	Peri. 283.53583	+0.93496042	-0.22927271
a	3.0672427	Node 90.23340	+0.32294422	+0.86589444
e	0.4481858	Incl. 15.70656	-0.14681978	+0.44459065
P	5.37	H 12.3	G 0.15	

From 32 observations 1990 Nov. 18-1991 Feb. 12, mean residual 0".89.

1990 XJ

Epoch 1990 Dec. 15.0 ET = JDE 2448240.5 Bardwell

M	50.98421	(1950.0)	P	Q
n	0.50326947	Peri. 97.40095	+0.81684108	+0.16637711
a	1.5653171	Node 254.32324	-0.31393478	+0.93150854
e	0.2189503	Incl. 35.00790	+0.48395826	+0.32343547
P	1.96	H 14.0	G 0.15	

From 21 observations 1990 Dec. 15-1991 Jan. 20.

1990 XP = 1991 AG = 1983 TM2

Id. R. H. McNaught (1982, 1985 obs.), G. V. Williams

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	142.00450	(1950.0)	P	Q
n	0.29779013	Peri. 219.48342	+0.67275514	-0.73976568
a	2.2209009	Node 188.26179	+0.69835528	+0.64034169
e	0.1399911	Incl. 4.84448	+0.24433672	+0.20666219
P	3.31	H 13.5	G 0.15	

Residuals in seconds of arc

820422	413	0.0	0.6-	901214	885	0.1+	0.6-	910108 413 0.1- 0.1+
820422	413	0.0	1.0-	901216	885	1.7+	1.0+	910117 413 0.9+ 1.1-
831004	688	0.6+	1.5-	901216	885	2.0+	1.5-	910207 413 0.1+ 0.3-
831004	688	0.1-	0.1-	910105	885	1.6-	0.9+	910209 413 0.5+ 0.1-
850512	413	0.5-	0.7-	910105	885	0.6-	0.9-	
901214	885	0.4-	1.0+	910107	413	2.4-	0.7+	

1990 YB = 1974 RZ = 1977 DD10 = 1979 RP = 1979 SK4 = 1985 XN2 = 1989 UE9

Id. S. Nakano, N. S. Chernykh (d)

Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	219.33542	(1950.0)	P	Q
n	0.20225034	Peri. 184.34931	+0.78092134	+0.62370857
a	2.8743735	Node 137.00156	-0.57154756	+0.73540085
e	0.0605097	Incl. 2.84959	-0.25198265	+0.26490227
P	4.87	H 12.6	G 0.15	

Residuals in seconds of arc

740911	095	6.7-	2.2+	851214	675	1.3+	1.5+	901221 372 0.3- 1.1-
770219	381	0.2+	1.4+	891030	095	(14.9+	2.7+)	901221 372 0.4+ 0.7+
770219	381	2.5+	0.0	891030	095	(14.1+	2.0+)	901227 372 (4.0+ 2.1-)
790902	095	2.5+	0.7-	901216	372	0.9-	1.0-	901227 372 0.5+ 0.1-
790924	095	1.0+	2.4+	901216	372	1.1-	1.8+	910121 372 2.3- 0.8-
790924	095	3.5+	2.1-	901219	372	0.5-	0.8-	910121 372 (0.2- 3.8+)
851214	675	0.9-	1.0+	901219	372	0.9+	0.6-	

1990 YE = 1975 EK4 = 1979 YN7 = 1980 BY3
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata

M 59.97548	(1950.0)		P	Q
n 0.17907734	Peri.	9.68105	-0.22090817	-0.97472353
a 3.1172787	Node	93.08684	+0.89252040	-0.21583577
e 0.1708027	Incl.	1.91515	+0.39320085	-0.05769714
P 5.50	H 12.8		G 0.15	

Residuals in seconds of arc

750315 095	0.1+	0.1+	901219 875	0.2+	0.3+	910107 875	0.2-	0.5+
791223 095	0.3-	0.4-	901221 875	0.1-	1.5+	910115 875	0.1+	0.8-
800122 095	0.3+	0.2-	901221 875	1.4+	1.2+	910115 875	0.2+	0.3-
901219 875	1.2-	2.0-	910107 875	0.1-	0.2+			

1990 YH = 1986 CE1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Urata

M 75.27996	(1950.0)		P	Q
n 0.18755146	Peri.	321.96573	-0.14305444	-0.98041244
a 3.0226645	Node	135.78597	+0.94893672	-0.17472978
e 0.0676280	Incl.	11.19408	+0.28116637	+0.09088980
P 5.26	H 11.5		G 0.15	

Residuals in seconds of arc

860207 054	1.1+	2.8-	901222 885	2.7+	1.6-	910106 885	0.0	2.5+
860208 054	0.4-	0.9+	901223 885	2.1-	1.5+	910113 885	1.0+	1.4-
860211 054	0.7-	1.8+	901223 885	0.6-	2.8+	910113 885	0.8+	1.4-
901222 885	0.2+	3.9-	910106 885	2.0-	1.7+			

1990 YJ = 1953 UP = 1963 WC = 1968 DO = 1968 FA = 1976 SD1 = 1981 AX
= 1986 RZ6 = 1989 OZ
Id. T. Urata; 2200 T-2 = 1968 DO (MPC 15571) is invalid, and 2200 T-2 = 1985 YH2 is therefore suspect
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Urata

M 109.55584	(1950.0)		P	Q
n 0.29604287	Peri.	290.46088	-0.16178691	-0.98666594
a 2.2296309	Node	168.80548	+0.93602718	-0.15913280
e 0.0973549	Incl.	5.24801	+0.31253498	-0.03416259
P 3.33	H 13.2		G 0.15	

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

531018 760	1.0+	3.1-	810108 046	(12.8-	28.0-)	901223 885	0.4+	1.4-
531018 760	0.6-	1.0-	810109 688	1.8+	0.7-	910113 885	2.2-	0.1+
631119 760	(0.02-	0.05-)X	810109 688	2.8+	2.3-	910113 885	0.4-	1.1+
680227 095	3.7-	4.4-	860906 095	0.7-	2.7+	910115 885	0.2+	0.6-
680325 095	0.9+	0.3-	890729 675	0.9+	2.4-	910115 885	1.5+	0.2+
680325 020	(6.2+	70.6-)	890729 675	1.5+	3.5-	910120 885	0.5-	0.5+
680325 020	(3.6+	62.1-)	901222 885	0.5+	0.3+	910120 885	0.2+	1.0+
760924 095	0.6-	1.4-	901222 885	1.6-	0.7+			
810108 046	(12.5-	36.8-)	901223 885	1.8-	0.2+			

1990 YK = 1971 DP1 = 1981 CE1 = 1988 GP
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 81.83525	(1950.0)		P	Q
n 0.29304915	Peri.	322.08170	-0.69261226	-0.72128717
a 2.2447901	Node	171.74992	+0.67116989	-0.64736699
e 0.1565615	Incl.	2.29683	+0.26423331	-0.24629412
P 3.36	H 14.0		G 0.15	

Residuals in seconds of arc

710218 095	2.1+	4.3+	810209 049	1.0-	0.4+	880411 046	1.4+	1.3-
710223 095	(5.3+	4.5+)	810209 049	0.1+	1.4-	880411 046	0.5-	1.4-
810209 049	1.2-	1.0-	880410 046	1.4+	1.2-	880415 046	0.8-	2.3+
810209 049	0.3+	0.9-	880410 046	2.3-	0.5-	880415 046	(5.6-	8.0+)

901219	399	0.8+	0.8-	901223	399	1.1-	0.9+	910203	399	0.1-	0.6+
901219	399	0.8-	1.4-	901224	399	1.0+	0.0	910203	399	1.4+	0.3+
901223	399	2.0-	0.0	901224	399	1.2+	0.2-				

1990 YL = 1978 TV3 = 1980 BB5 = 1984 WP
Id. H. Kaneda, R. Nagata
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	81.28471	(1950.0)		P	Q
n	0.17868773	Peri.	40.66932	+0.04645737	-0.99781437
a	3.1218083	Node	46.72465	+0.89889789	+0.02124137
e	0.1844938	Incl.	3.70060	+0.43568830	+0.06257227
P	5.52	H	11.9	G 0.15	

Residuals in seconds of arc

781004	095	0.1+	0.1+	901223	399	0.8+	0.3+	910204	399	0.9-	1.0-
800122	095	2.2+	0.9+	901223	399	1.9+	0.8-	910204	399	0.9-	0.6-
800123	095	1.9-	0.2+	901224	399	0.2+	0.5+	910205	877	0.9-	0.5-
841118	688	1.1+	0.8-	901224	399	0.0	0.3-	910205	877	0.6-	0.8+
841118	688	0.6-	0.4+	901224	399	0.5+	1.4-	910207	877	0.0	0.4+
841124	688	0.5+	0.0	910203	399	0.0	0.1-	910207	877	1.2-	0.2-
841124	688	1.1-	0.1+	910203	399	0.3+	0.2+				
901223	399	1.1+	1.6+	910204	399	0.2-	0.1-				

1991 AA = A909 TE = 1972 TU1 = 1976 JW3 = 1984 WV3 = 1989 TH14
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M	141.46478	(1950.0)		P	Q
n	0.17086648	Peri.	321.22378	+0.99304559	+0.10624118
a	3.2163612	Node	32.78451	-0.07029761	+0.88072134
e	0.1306703	Incl.	5.37551	-0.09443889	+0.46156553
P	5.77	H	11.5	G 0.15	

Residuals in seconds of arc

091005	000	1.0+	1.3-	841128	010	1.9+	1.0+	891004	809	0.1-	0.4+
091005	000	0.4+	1.2-	891002	809	1.6-	1.1+	910105	400	0.6-	0.8-
091006	000	1.6+	1.6-	891002	809	1.1-	1.2+	910105	400	0.5+	1.7-
091006	000	1.1+	2.2-	891002	809	0.7-	1.2+	910106	400	0.4-	1.0-
091008	000	(24.6-	20.2-)	891003	809	0.4+	0.6+	910106	400	0.8+	0.4+
721006	095	0.5-	0.6-	891003	809	0.6+	0.5+	910114	400	1.6+	0.6+
721007	095	2.2-	0.6-	891003	809	0.8+	0.5+	910114	400	0.6-	0.0
760503	809	2.1-	0.5+	891004	809	0.1-	0.4+				
841127	010	1.0-	1.8+	891004	809	0.1-	0.5+				

1991 AC = 1989 SA4
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	61.19968	(1950.0)		P	Q
n	0.20103162	Peri.	62.64050	-0.50023930	-0.86485084
a	2.8859788	Node	57.43792	+0.77558369	-0.46928091
e	0.0141070	Incl.	2.88037	+0.38500725	-0.17834926
P	4.90	H	12.6	G 0.15	

Residuals in seconds of arc

890926	809	0.5-	1.3-	891003	809	(8.1+	1.8-)	910109	896	0.4-	0.7+
890926	809	0.5-	0.9-	891003	809	(7.9+	1.9-)	910115	896	1.2+	1.3-
890926	809	0.1-	1.0-	891003	809	(7.3+	1.4-)	910115	896	0.4+	1.2+
890928	809	0.3+	0.7+	910108	896	1.1+	0.6+	910122	896	0.9-	0.3+
890928	809	0.2-	1.4+	910108	896	0.8-	0.0				
890928	809	0.9+	1.1+	910109	896	0.7-	1.7-				

1991 AD = 1954 WT = 1981 YE1 = 1982 BN12 = 1985 UB1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M 142.53162		(1950.0)	P	Q
n 0.22221581	Peri.	125.81462	+0.88260598	-0.45131257
a 2.6995171	Node	261.34446	+0.37681636	+0.84656099
e 0.1742945	Incl.	7.65082	+0.28109804	+0.28222589
P 4.44	H 12.3	G 0.15		

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

541118	210(0.04+	0.01+)X	851024	046	0.1-	0.3+	910113	896 (5.1+ 1.3+)
811230	704	1.4+ 2.5-	910108	896	1.7-	1.5+	910122	896 1.4+ 1.7-
811231	704	1.9- 0.5+	910108	896	0.7-	0.6+	910122	896 1.6+ 1.1-
820101	704(29.7+	27.5+)	910109	896	1.4-	1.6+		
820123	095	0.1+ 0.5+	910109	896	1.4+	0.6+		

1991 AE = 1979 MK9 = 1987 EO = 1987 HF = 1987 KK5 = 1988 OA = 1989 UZ2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda

M 289.93843		(1950.0)	P	Q
n 0.22400905	Peri.	150.87561	+0.11325695	+0.97320785
a 2.6850910	Node	124.93205	-0.95226038	+0.16378967
e 0.1489066	Incl.	14.12703	-0.28350139	-0.16136734
P 4.40	H 11.3	G 0.15		

Residuals in seconds of arc

790627	095	1.0+ 0.4+	891030	402	0.3+	0.5-	910114	399 0.6- 0.2+
870303	688	0.6- 0.3-	891030	402	2.5-	0.6+	910114	399 (3.1+ 0.1-)
870303	688	1.8- 0.4+	891102	402	0.6-	0.0	910114	399 1.4+ 0.9-
870428	675(35.3+	12.2+)	891102	402	1.2+	0.5-	910114	399 0.8+ 0.3+
870428	675(15.1-	2.3-)	910105	400	0.7+	0.7-	910123	399 1.1+ 1.4+
870430	675(11.9-	1.4+)	910105	400	0.4-	0.9-	910123	399 1.0- 0.3-
870430	675(12.1-	0.9+)	910109	399	1.6+	0.3-	910123	399 1.3+ 1.6-
870530	675	0.7- 1.0+	910109	399	0.8+	1.4+	910123	399 (3.5+ 2.0-)
870530	675	1.7- 0.1+	910109	399	2.4-	0.6-	910208	399 0.4- 1.1+
880718	675	0.1+ 1.5-	910114	399	1.8+	0.7-	910208	399 0.5+ 0.2-
880719	675	0.4- 1.6-	910114	399	0.7-	1.3-		

1991 AM
Epoch 1991 Jan. 24.0 ET = JDE 2448280.5 Marsden

M 326.34450		(1950.0)	P	Q
n 0.47298353	Peri.	153.93104	+0.19326384	+0.89192474
a 1.6314435	Node	124.44126	-0.96434688	+0.24945482
e 0.6875774	Incl.	29.71555	-0.18078768	-0.37715057
P 2.08	H 16.5	G 0.15		

From 20 observations 1991 Jan. 14-Feb. 5.

1991 AN = 1928 TE = 1980 TC15 = 1983 RB9
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata

M 147.99051		(1950.0)	P	Q
n 0.30395282	Peri.	27.76187	+0.63602972	-0.77095839
a 2.1907791	Node	22.79043	+0.69122523	+0.55019400
e 0.1597791	Incl.	4.88785	+0.34303627	+0.32079546
P 3.24	H 13.9	G 0.15		

Residuals in seconds of arc

281015	024	0.7- 1.3+	910109	877	1.5+	0.3-	910114	877 5.2- 0.8+
801015	095	0.1+ 0.6+	910109	877	0.1-	1.0+	910114	877 0.3+ 0.3+
801017	095	0.3+ 3.2-	910113	877	1.7-	0.1+	910205	877 0.9- 0.4+
830911	095	0.9- 1.0+	910113	877	1.9+	0.4-	910205	877 2.0+ 0.2+

1991 AQ
Epoch 1991 Jan. 4.0 ET = JDE 2448260.5 Marsden

M	338.87108	(1950.0)	P	Q
n	0.31082146	Peri. 239.68127	-0.74621681	+0.66548131
a	2.1583840	Node 342.01946	-0.59003493	-0.67312574
e	0.7688382	Incl. 3.19010	-0.30825194	-0.32254668
P	3.17	H 17.5	G 0.15	

From 36 observations 1991 Jan. 14-27.

1991 AA1 = 1979 MT = 1980 TP10
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano

M	150.83500	(1950.0)	P	Q
n	0.21485795	Peri. 302.77640	+0.88114503	-0.46539160
a	2.7608010	Node 85.08246	+0.45702787	+0.79287662
e	0.0922181	Incl. 4.81505	+0.12128049	+0.39339207
P	4.59	H 13.0	G 0.15	

Residuals in seconds of arc

790622	805	0.3- 0.4+	801008	095	0.1+ 0.3-	910114	896	0.1- 0.9-
790622	805	1.5+ 0.7-	910110	896	0.6- 0.1+	910115	896	(5.1- 0.1-)
790625	805	1.2- 0.4-	910110	896	0.3- 0.1-	910123	896	0.9+ 0.3+

1991 AF1 = 1934 CE1 = 1958 VF = 1981 EM49
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Williams

M	86.77199	(1950.0)	P	Q
n	0.19041927	Peri. 159.12662	-0.13900730	-0.97980824
a	2.9922393	Node 298.61970	+0.88374327	-0.05725550
e	0.0748632	Incl. 9.42251	+0.44684986	-0.19156621
P	5.18	H 12.0	G 0.15	

Residuals in seconds of arc

340209	024	2.7+ 2.7+	910113	494	0.8+ 0.9+	910115	033	0.4- 0.7-
340214	024	0.4- 2.8+	910114	399	0.2- 0.5-	910116	033	0.6- 0.1-
581111	760	0.1- 0.4+	910114	886	(2.8- 0.4-)Y	910207	413	0.2+ 0.2-
581111	760	0.2- 0.4+	910114	399	0.5+ 1.2-	910207	413	0.8- 0.1-
810308	095	0.7+ 0.8+	910114	399	1.7- 1.6-	910209	413	0.5- 0.8-
910112	494	0.5- 1.4+	910115	033	0.4+ 0.5-	910210	413	0.2- 1.2-
910113	494	0.0 0.4+	910115	033	0.3+ 1.0-	910210	413	0.0 0.4-
910113	886	(1.6- 0.5-)Y	910115	033	0.6+ 0.5-			
910113	886	(3.7- 0.4-)Y	910115	494	0.9- 0.2+			

1991 AJ1 = 1952 RG = 1972 LA = 1976 KL = 1983 AB2 = 1988 JL2 = 1988 JX2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Urata

M	190.44534	(1950.0)	P	Q
n	0.23971478	Peri. 261.06964	+0.96093411	+0.07482599
a	2.5664947	Node 94.31562	+0.02874334	+0.93057835
e	0.1554040	Incl. 15.49941	-0.27528067	+0.35836436
P	4.11	H 11.5	G 0.15	

Residuals in seconds of arc

520909	078	0.4+ 3.1- Y	830122	688	0.5- 0.5+	910112	898	0.5+ 0.0
720607	095	2.6+ 1.1-	880505	399	2.1- 0.7-	910112	898	0.3+ 0.2-
760525	095	0.4- 1.0+	880505	399	1.1+ 0.8-	910117	898	0.4+ 0.6+
830112	688	0.5- 0.0	880505	399	0.9+ 0.4-	910117	898	2.2- 1.2+
830112	688	0.7+ 0.5-	880515	688	1.9- 0.9+	910119	898	0.4+ 0.3-
830122	688	0.4+ 3.4-	880515	688	0.8- 0.0	910119	898	0.5+ 0.7-

1991 AG2 = 1981 VE1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 98.19715 (1950.0) P Q
n 0.21973902 Peri. 243.07957 +0.79141915 -0.60047705
a 2.7197642 Node 153.34502 +0.61103173 +0.77186635
e 0.2992022 Incl. 14.77145 +0.01720334 +0.20892498
P 4.49 H 14.0 G 0.15
Residuals in seconds of arc

811102	688	0.7-	0.9+	901123	413	0.4+	0.5+	910117	413	0.2+	0.2-
811102	688	0.1+	0.6+	910107	413	0.7-	0.2-	910117	413	0.8+	0.0
811124	688	1.1+	1.3-	910108	413	0.3-	0.1-	910204	413	0.4+	0.8+
811124	688	0.4-	1.0-	910112	413	0.2-	1.1+	910204	413	0.8-	0.8-

1991 AO2 = 1955 XS = 1971 KD = 1972 TM = 1985 QC2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 111.54916 (1950.0) P Q
n 0.22509112 Peri. 216.60208 +0.85442261 -0.51920580
a 2.6764788 Node 174.56570 +0.51222871 +0.83538264
e 0.1927149 Incl. 11.99442 +0.08708481 +0.18044718
P 4.38 H 12.5 G 0.15
Residuals in seconds of arc

551213	760	1.4-	0.0	850816	675	(4.5-	1.2+)	910107	413	1.1-	0.0
551213	760	0.4+	0.6-	850816	675	2.3-	2.1+	910108	413	0.6+	0.4-
710522	095	0.4-	0.8-	850817	675	0.6-	0.1-	910117	413	0.2+	0.3+
721004	095	3.3+	1.7-	850817	675	(3.0+	2.7+)	910202	413	1.0+	0.5+
840718	413	0.3+	0.6-	850820	675	0.2-	1.0-				
840718	413	0.8+	0.4-	850820	675	0.1+	0.7+				

1991 BA
Epoch 1991 Jan. 4.0 ET = JDE 2448260.5 Marsden
M 343.25348 (1950.0) P Q
n 0.29348167 Peri. 70.58218 -0.98740637 +0.15531145
a 2.2425840 Node 118.34274 -0.15493125 -0.91077062
e 0.6821577 Incl. 1.96097 -0.03201517 -0.38259016
P 3.36 H 28.5 G 0.15
From 7 observations 1991 Jan. 18.

1991 BB
Epoch 1991 Jan. 4.0 ET = JDE 2448260.5 Marsden
M 238.60994 (1950.0) P Q
n 0.76342632 Peri. 322.89872 -0.10174292 +0.81799991
a 1.1856540 Node 294.34887 -0.69625263 -0.46503680
e 0.2725163 Incl. 38.42014 -0.71054954 +0.33855120
P 1.29 H 16.0 G 0.15
From 8 observations 1991 Jan. 12-28.

1991 BJ = 1975 VU3 = 1975 VY9 = 1979 YV9 = 1986 WF1
Id. R. Nagata, O. Kippes (d, MPC 6840)
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata
M 150.30149 (1950.0) P Q
n 0.27370812 Peri. 357.51550 +0.54246917 -0.83727471
a 2.3493313 Node 59.62455 +0.77208036 +0.46474267
e 0.0304987 Incl. 4.55695 +0.33108777 +0.28807172
P 3.60 H 13.2 G 0.15
Residuals in seconds of arc

751102	095	2.3+	1.6-	751109	381	0.9-	0.6+	861125	046	0.2+	0.9+
751109	381	1.6-	1.2+	791225	095	0.1+	2.8-	861125	046	0.4-	0.5+

910117 877 0.5+ 1.0+ 910120 877 0.5+ 0.9+ 910205 877 0.5- 0.3+
910117 877 0.9+ 0.3- 910125 877 1.0+ 2.6- 910207 877 1.2- 0.7+
910120 877 0.3- 0.4- 910205 877 0.6- 0.9+ 910207 877 0.8- 1.2+

1991 BN
Epoch 1991 Jan. 24.0 ET = JDE 2448280.5 Marsden
M 92.86132 (1950.0) P Q
n 0.56869731 Peri. 80.41928 +0.97974782 +0.19102507
a 1.4428303 Node 268.55058 -0.19904691 +0.89651921
e 0.3978784 Incl. 3.44265 -0.02178370 +0.39970331
P 1.73 H 20.0 G 0.15
From 16 observations 1991 Jan. 19-Feb. 5.

1991 BR = 1975 EQ5 = 1980 PB
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nakano
M 8.87747 (1950.0) P Q
n 0.24088096 Peri. 42.83540 -0.77827881 +0.62785433
a 2.5581994 Node 176.02492 -0.60548112 -0.74659297
e 0.2071918 Incl. 7.46118 -0.16635714 -0.21999517
P 4.09 H 13.5 G 0.15
Residuals in seconds of arc
750315 095 0.9+ 3.3+ 910119 402 1.6- 0.1- 910123 402 0.5- 1.4+
750317 095 0.9- 3.4- 910119 402 0.2+ 0.8+ 910209 402 1.7+ 1.4-
800813 801 0.2+ 0.7- 910123 402 (4.4- 0.3+) 910209 402 0.1+ 1.2-

1991 BA2 = 1955 MQ = 1963 MA = 1980 TF6 = 1983 FB = 1985 YV1
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 7.69433 (1950.0) P Q
n 0.24177871 Peri. 355.65952 -0.44694371 +0.88935357
a 2.5518629 Node 247.76832 -0.81753669 -0.44982441
e 0.2215502 Incl. 5.97726 -0.36314609 -0.08190374
P 4.08 H 12.1 G 0.15
Residuals in seconds of arc
550623 076 0.1- 1.6- 830410 688 1.3- 0.1+ 910123 399 0.1+ 1.0+
630624 760(31.1+ 13.9-)X 830410 688 1.1+ 1.5- 910204 399 0.5- 1.1-
801008 095 0.0 1.0+ 851217 010 (7.3+ 11.5-) 910204 399 0.4- 0.2+
801012 095 (0.7- 8.0-) 851217 010 (8.9+ 10.3-) 910214 399 0.9- 0.8-
830316 688 1.4+ 0.4+ 851219 010 0.4+ 1.6- 910214 399 0.9- 0.3-
830316 688 1.1+ 1.7+ 910123 399 0.1- 0.4+

1991 CA = 1942 GR = 1956 FA = 1956 GO = 1963 FG = 1977 DA5 = 1977 FU1
= 1978 RV3 = 1979 YX5 = 1986 WR6 = 1989 SC11
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Kaneda
M 42.74135 (1950.0) P Q
n 0.28046815 Peri. 12.24701 -0.90874870 +0.41733444
a 2.3114279 Node 192.42052 -0.38397140 -0.83867862
e 0.1672337 Incl. 0.74209 -0.16352907 -0.34992877
P 3.51 H 12.9 G 0.15
Residuals in seconds of arc (or two decimals in units of degrees)
420410 078(36.3- 52.9+)X 780903 095 1.0- 0.5- 890929 809 0.4+ 1.1+
420421 078(0.03- 0.01-)X 791218 095 (0.7+ 5.0+) 890930 809 0.5- 0.6+
560317 839 2.1- 0.9+ 861128 010 0.0 1.9- 890930 809 0.2+ 0.5+
560411 839 2.2- 1.1- 861128 010 0.3+ 0.7- 890930 809 0.7+ 0.5+
630328 760 2.2+ 0.1+ 861128 010 1.2- 2.1- 910203 399 0.2+ 0.6+
630328 760 2.8+ 0.6- 890928 809 0.3- 0.5+ 910203 399 0.7+ 0.8+
770218 381 0.5+ 1.1+ 890928 809 0.0 0.5+ 910204 399 0.6- 0.0
770219 381 0.3- 0.7+ 890928 809 0.3+ 0.6+ 910204 399 1.1- 0.4-
770219 381 0.5+ 0.1+ 890929 809 0.3- 0.9+ 910214 399 0.1+ 0.8-
770326 095 0.3- 0.8+ 890929 809 0.1+ 1.0+ 910214 399 0.8+ 0.9+

1991 CQ
Epoch 1991 Jan. 24.0 ET = JDE 2448280.5 Marsden

M	2.81070	(1950.0)	P	Q
n	0.29268080	Peri. 293.66040	-0.33319113	-0.94215385
a	2.2466731	Node 175.32364	+0.94209387	-0.33111343
e	0.4251903	Incl. 26.56986	-0.03798431	+0.05205779
P	3.37	H 17.0	G 0.15	

From 8 observations 1991 Feb. 10-14.

1991 CS
Epoch 1991 Jan. 24.0 ET = JDE 2448280.5 Williams

M	56.11476	(1950.0)	P	Q
n	0.82481150	Peri. 249.95015	+0.61522473	-0.74950362
a	1.1260722	Node 156.20599	+0.72693134	+0.65931701
e	0.1651878	Incl. 37.28888	-0.30507271	+0.05954327
P	1.19	H 17.5	G 0.15	

From 8 observations 1991 Jan. 19-Feb. 15.

1991 CA1
Epoch 1991 Feb. 13.0 ET = JDE 2448300.5 Marsden

M	357.90092	(1950.0)	P	Q
n	0.49879515	Peri. 28.29203	-0.80705661	-0.53831640
a	1.5746640	Node 117.09742	+0.47719915	-0.83663952
e	0.0329331	Incl. 15.81665	+0.34776516	-0.10124113
P	1.98	H 15.5	G 0.15	

From 7 observations 1991 Feb. 14-17.

1991 CB1
Epoch 1991 Feb. 13.0 ET = JDE 2448300.5 Marsden

M	263.98601	(1950.0)	P	Q
n	0.41656148	Peri. 326.60083	+0.19492694	+0.97540985
a	1.7756198	Node 314.40041	-0.86536635	+0.12167284
e	0.4444591	Incl. 8.27706	-0.46167583	+0.18376981
P	2.37	H 19.0	G 0.15	

From 8 observations 1991 Feb. 15-17.

2577 P-L = 1990 RY6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams

M	169.26601	(1950.0)	P	Q
n	0.26138538	Peri. 293.93220	+0.20860064	+0.97799899
a	2.4226008	Node 348.10767	-0.89380006	+0.18983660
e	0.1308560	Incl. 0.53874	-0.39699775	+0.08648726
P	3.77	H 15.0	G 0.15	

Residuals in seconds of arc

600924	675	0.4-	0.2-	601026	675	0.8-	1.0+	900913	809	0.2+	0.1+
600926	675	0.1-	1.8-	900820	809	0.4-	0.4+	900913	809	0.8+	0.2+
600928	675	1.2+	1.1+	900820	809	0.8-	0.5+	900914	809	0.3-	0.2+
600929	675	0.9+	1.2+	900820	809	0.4-	1.5+	900914	809	0.3+	0.2+
601017	675	0.3-	1.0+	900826	809	0.4+	0.8-	900914	809	0.8+	0.1+
601017	675	0.2-	1.3-	900826	809	0.0	0.5-	900915	809	0.6-	0.8-
601022	675	0.4-	0.3-	900826	809	0.2-	0.2-	900915	809	0.1-	0.8-
601025	675	0.1-	0.4-	900913	809	0.2-	0.3+	900915	809	0.5+	0.7-

3045 P-L = 1990 RM2
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Nagata
M 135.38984 (1950.0) P Q
n 0.22917300 Peri. 336.72794 +0.63289904 +0.76736488
a 2.6446025 Node 332.20109 -0.67110609 +0.47745025
e 0.1613349 Incl. 12.74759 -0.38607696 +0.42800981
P 4.30 H 13.4 G 0.15
Residuals in seconds of arc

600924 675	0.5-	0.4+	600927 675	0.3-	0.6+	601017 675	0.5-	0.0
600924 675	0.4+	0.0	600927 675	0.0	0.6-	601024 675	0.0	0.0
600925 675	0.9-	0.3-	600928 675	0.4+	0.2+	900915 675	0.5+	0.1+
600925 675	0.0	0.6-	600928 675	0.1-	0.1-	900915 675	0.4+	1.2+
600925 675	1.1-	0.0	600928 675	0.2-	0.6+	900916 675	0.2+	0.8-
600926 675	0.8+	0.7+	600929 675	0.6-	1.2-	900916 675	0.3-	0.4-
600926 675	1.3+	0.0	600929 675	0.1-	0.9+	900919 675	0.0	0.2-
600926 675	0.4+	0.9-	601017 675	0.6+	0.1-	900919 675	0.3-	0.5+

4545 P-L = 1990 RK6
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 140.62132 (1950.0) P Q
n 0.19508040 Peri. 83.44781 +0.20860829 +0.97796893
a 2.9443784 Node 198.59841 -0.90653036 +0.19040207
e 0.0308183 Incl. 1.38408 -0.36699495 +0.08557930
P 5.05 H 13.0 G 0.15
Residuals in seconds of arc

600924 675	0.2-	0.3+	601022 675	0.3+	0.4+	900910 809	0.9+	0.0
600926 675	0.3-	0.5-	601024 675	0.3+	0.7-	900910 809	0.4-	0.0
600927 675	0.4+	0.1+	601026 675	0.2-	0.2+	900911 809	0.6-	0.0
600928 675	0.1+	0.1-	900910 809	0.3+	0.2-	900911 809	0.8-	0.0
601017 675	0.5-	0.2+	900910 809	0.6+	0.2+			

3013 T-2 = 1990 RH8
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 Williams
M 40.41718 (1950.0) P Q
n 0.23102279 Peri. 261.58621 +0.45640462 -0.88942918
a 2.6304669 Node 161.19800 +0.84351505 +0.42367275
e 0.0679009 Incl. 4.39697 +0.28315575 +0.17151424
P 4.27 H 14.0 G 0.15
Residuals in seconds of arc

730919 675	1.3-	1.3+	731005 675	0.1-	0.5-	900922 809	0.4-	0.4-
730919 675	0.8-	1.3+	731005 675	1.2+	1.0+	900922 809	0.1-	0.5-
730920 675	0.8+	0.1+	900914 809	0.5+	0.6-	900923 809	0.8+	0.2-
730924 675	0.2-	0.3-	900914 809	0.7+	0.5-	900923 809	1.0+	0.2-
730924 675	0.3+	1.6-	900914 809	0.9+	0.5-	900923 809	1.4+	0.3-
730925 675	1.4+	0.5-	900915 809	0.7-	0.4-	900924 809	1.2-	1.2+
730925 675	0.6-	0.5-	900915 809	0.4-	0.3-	900924 809	0.8-	0.8+
730929 675	0.6-	0.6+	900915 809	0.1-	0.5-	900924 809	0.5-	0.5+
730930 675	0.8-	0.0	900921 809	0.4+	0.8+	900925 809	1.1-	0.0
730930 675	1.1-	0.1-	900921 809	0.6+	0.7+	900925 809	0.7-	0.0
731004 675	1.1+	0.3-	900921 809	0.9+	0.6+	900925 809	0.4-	0.1-
731004 675	0.7+	0.5-	900922 809	0.8-	0.2-			

4354 T-3 = 1990 UH5
Epoch 1991 Dec. 10.0 ET = JDE 2448600.5 (J-P) Marsden
M 137.84634 (1950.0) P Q
n 0.30538073 Peri. 251.05322 +0.91776663 -0.39369225
a 2.1839490 Node 132.09421 +0.38561425 +0.85215232
e 0.0719257 Incl. 4.02347 +0.09490027 +0.34473591
P 3.23 H 15.0 G 0.15

Residuals in seconds of arc

771016	675	0.8+	0.3+	771022	675	0.8+	2.5+	901020	809	0.7+	1.3-
771016	675	0.6+	0.3-	901016	809	0.5-	0.7+	901020	809	0.1+	0.0
771017	675	0.7-	2.4-	901016	809	0.6-	0.3-	901020	809	0.7-	1.1-
771017	675	0.2+	1.2-	901016	809	1.0-	0.1+	901024	809	0.1-	0.2-
771021	675	0.5+	0.2+	901019	809	1.7+	0.7+	901024	809	0.5-	0.6-
771021	675	0.5-	0.7+	901019	809	0.8+	1.1+	901024	809	0.2-	0.8-
771022	675	1.7-	0.5+	901019	809	0.2+	1.5+				

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EPHEMERIDES.

1990 SS a,e,i = 1.70, 0.48, 19 Elements MPC 17826

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991	02 13	23 12.31	+48 38.4	0.303	0.905	65.6	96.7	19.7
1991	02 18	23 24.14	+52 16.8					
1991	02 23	23 41.91	+56 36.7	0.226	0.932	69.0	97.9	19.1
1991	02 28	00 12.95	+61 57.7					
1991	03 05	01 20.18	+68 20.5	0.154	0.974	78.9	92.2	18.1
1991	03 10	04 07.4	+72 04.6					
1991	03 15	07 21.13	+61 08.3	0.105	1.026	104.8	69.5	16.6
1991	03 20	08 44.93	+38 50.1					
1991	03 25	09 22.25	+18 16.3	0.124	1.087	133.9	41.4	16.3
1991	03 30	09 43.42	+04 17.6					
1991	04 04	09 57.78	-04 33.4	0.197	1.153	137.5	35.9	17.2
1991	04 09	10 08.85	-10 17.1					
1991	04 14	10 18.25	-14 09.3	0.289	1.222	134.0	36.2	18.2
1991	04 19	10 26.79	-16 52.6					
1991	04 24	10 34.93	-18 52.0	0.392	1.293	129.9	36.7	19.0
1991	04 29	10 42.87	-20 22.0					
1991	05 04	10 50.75	-21 31.9	0.503	1.364	125.6	37.0	19.7

1990 SQ a,e,i = 2.00, 0.45, 17 Elements MPC 17449

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991	02 13	04 31.02	+53 46.1	0.683	1.366	108.3	43.3	14.0
1991	02 23	05 21.30	+50 01.5					
1991	03 05	06 02.27	+45 59.1	0.865	1.483	105.8	40.1	14.6
1991	03 15	06 36.40	+41 59.6					
1991	03 25	07 05.76	+38 12.7	1.100	1.604	99.7	37.8	15.3
1991	04 04	07 31.74	+34 41.3					
1991	04 14	07 55.29	+31 25.1	1.374	1.725	91.7	35.5	15.8
1991	04 24	08 17.07	+28 22.0					
1991	05 04	08 37.49	+25 30.1	1.676	1.844	82.8	32.8	16.3
1991	05 14	08 56.87	+22 47.2					
1991	05 24	09 15.41	+20 11.5	1.990	1.958	73.4	29.7	16.7
1991	06 03	09 33.27	+17 41.7					
1991	06 13	09 50.57	+15 16.4	2.304	2.066	63.7	26.1	17.1

1991 BB a,e,i = 1.19, 0.27, 38 Elements MPC 17833

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991	02 13	06 22.48	-19 14.5	0.445	1.274	120.8	41.7	16.4
1991	02 23	05 53.97	-23 28.4					
1991	03 05	05 36.58	-26 06.7	0.573	1.192	95.6	55.9	17.2
1991	03 15	05 27.15	-27 57.0					
1991	03 25	05 23.03	-29 27.3	0.678	1.104	80.0	62.8	17.6
1991	04 04	05 22.10	-30 52.0					

1991 04 14	05 22.83	-32 16.8	0.722	1.016	70.0	68.1	17.7
1991 04 24	05 23.99	-33 42.8					
1991 05 04	05 24.37	-35 05.5	0.686	0.937	63.9	75.0	17.7

1991 CQ a,e,i = 2.25, 0.43, 27 Elements MPC 17835

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 02 13	06 56.84	-29 53.0	0.510	1.324	120.9	39.8	17.7
1991 02 23	07 14.60	-21 06.5					
1991 03 05	07 35.27	-11 50.4	0.537	1.379	126.2	35.5	17.8
1991 03 15	07 57.93	-03 08.9					
1991 03 25	08 21.82	+04 09.2	0.653	1.455	122.2	35.4	18.3
1991 04 04	08 46.17	+09 44.8					
1991 04 14	09 10.40	+13 43.0	0.849	1.545	112.9	36.7	19.1
1991 04 24	09 34.19	+16 18.7					
1991 05 04	09 57.28	+17 49.1	1.097	1.646	102.8	36.7	19.8

1991 CS a,e,i = 1.13, 0.17, 37 Elements MPC 17835

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 02 13	07 10.83	-43 31.9	0.234	1.100	113.1	55.6	16.6
1991 02 23	07 19.83	-14 52.0					
1991 03 05	07 33.55	+14 45.7	0.234	1.153	129.1	41.9	16.3
1991 03 15	07 51.33	+33 26.1					
1991 03 25	08 12.55	+43 22.8	0.409	1.202	110.4	51.0	17.8
1991 04 04	08 36.31	+48 39.5					
1991 04 14	09 01.71	+51 22.9	0.616	1.244	97.5	53.0	18.9
1991 04 24	09 28.14	+52 33.2					
1991 05 04	09 54.95	+52 41.8	0.810	1.277	88.5	52.1	19.5

Periodic Comet Shoemaker-Levy 3 (1991e) Elements MPC 17792

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 02 13	09 15.81	+13 38.2	1.706	2.689	173.6	2.3	17.0
1991 02 23	09 08.60	+13 54.6					
1991 03 05	09 02.86	+14 06.7	1.783	2.691	150.6	10.4	17.1
1991 03 15	08 59.24	+14 12.4					
1991 03 25	08 58.09	+14 10.2	1.951	2.698	129.6	16.6	17.3
1991 04 04	08 59.48	+13 59.5					
1991 04 14	09 03.25	+13 40.2	2.179	2.709	111.2	20.2	17.5
1991 04 24	09 09.17	+13 12.3					
1991 05 04	09 16.93	+12 36.0	2.440	2.724	95.3	21.6	17.8

Comet Shoemaker-Levy (1991d) Elements MPC 17992

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 02 13	09 21.29	+02 21.0	3.133	4.102	167.5	3.0	15.1
1991 02 23	09 12.39	+04 46.8					
1991 03 05	09 03.81	+07 19.9	3.042	3.942	151.5	6.9	14.9
1991 03 15	08 56.14	+09 53.4					
1991 03 25	08 49.90	+12 21.4	3.087	3.783	128.0	12.0	14.7
1991 04 04	08 45.44	+14 39.4					
1991 04 14	08 42.94	+16 44.8	3.223	3.626	105.7	15.4	14.6
1991 04 24	08 42.48	+18 36.7					
1991 05 04	08 44.00	+20 15.3	3.400	3.471	85.6	16.8	14.6

1991 CA1 a,e,i = 1.57, 0.03, 16 Elements MPC 17835

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 02 13	10 00.28	+32 40.0	0.556	1.523	160.7	12.4	15.9
1991 02 23	09 49.09	+36 42.9					
1991 03 05	09 39.50	+39 26.2	0.611	1.523	142.6	23.3	16.4
1991 03 15	09 33.96	+40 49.6					
1991 03 25	09 33.75	+41 05.2	0.721	1.525	124.5	32.6	17.1

1991 04 04	09 38.81	+40 29.1						
1991 04 14	09 48.30	+39 13.8	0.856	1.529	110.5	37.9	17.6	
1991 04 24	10 01.29	+37 27.8						
1991 05 04	10 16.81	+35 17.7	1.001	1.534	99.6	40.4	18.0	

Comet McNaught-Russell (1991g) Elements MPC 17791

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 02 13		11 09.27	-22 50.0	4.090	4.865	137.6	7.9	16.4
1991 02 23		10 59.67	-20 49.0					
1991 03 05		10 49.79	-18 29.6	3.982	4.898	154.9	4.9	16.4
1991 03 15		10 40.17	-15 56.2					
1991 03 25		10 31.32	-13 15.4	4.031	4.936	152.4	5.4	16.5
1991 04 04		10 23.65	-10 34.0					
1991 04 14		10 17.41	-07 58.4	4.233	4.978	133.6	8.4	16.6
1991 04 24		10 12.73	-05 33.4					
1991 05 04		10 09.61	-03 22.1	4.553	5.025	112.5	10.7	16.8

Periodic Comet Shoemaker-Levy 4 (1991f) Elements MPC 17791

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1991 02 13		12 08.22	+02 53.9	1.695	2.549	142.3	13.7	16.7
1991 02 23		12 03.62	+04 07.1					
1991 03 05		11 57.29	+05 27.8	1.675	2.646	165.4	5.4	16.8
1991 03 15		11 50.07	+06 48.0					
1991 03 25		11 42.93	+07 59.8	1.762	2.745	168.2	4.3	17.1
1991 04 04		11 36.77	+08 57.3					
1991 04 14		11 32.21	+09 37.1	1.956	2.846	146.3	11.3	17.5
1991 04 24		11 29.63	+09 58.3					
1991 05 04		11 29.12	+10 02.0	2.236	2.946	126.2	16.0	17.9

Periodic Comet Takamizawa (1984 VII) Elements MPC 13045

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		m2
1991 02 13		14 02.90	-00 39.2	1.810	2.387	-1.56	+8.1	20.6
1991 02 23		14 10.52	-00 10.5					
1991 03 05		14 16.23	+00 35.8	1.491	2.263	-1.93	+9.9	19.9
1991 03 15		14 19.65	+01 39.7					
1991 03 25		14 20.48	+02 58.9	1.232	2.142	-2.33	+11.8	19.3
1991 04 04		14 18.60	+04 28.1					
1991 04 14		14 14.18	+05 58.8	1.051	2.025	-2.67	+12.7	18.7
1991 04 24		14 07.85	+07 19.2					
1991 05 04		14 00.72	+08 16.4	0.956	1.915	-2.82	+11.8	18.2

1990 SP a,e,i = 1.35, 0.39, 14 Elements MPC 17826

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1991 02 13		16 13.67	+01 25.3	0.535	1.061	82.7	67.3	18.1
1991 02 23		16 21.45	-00 37.2					
1991 03 05		16 25.32	-02 31.4	0.525	1.185	98.0	56.0	18.0
1991 03 15		16 23.96	-04 21.6					
1991 03 25		16 15.88	-06 12.9	0.489	1.306	119.0	41.9	17.7
1991 04 04		16 00.15	-08 08.0					
1991 04 14		15 36.96	-10 04.0	0.468	1.420	147.5	22.3	17.2
1991 04 24		15 08.79	-11 52.2					
1991 05 04		14 40.36	-13 23.1	0.514	1.522	177.8	1.5	16.7
1991 05 14		14 16.19	-14 34.7					
1991 05 24		13 58.89	-15 33.6	0.650	1.613	151.1	17.6	18.0
1991 06 03		13 48.76	-16 28.2					
1991 06 13		13 44.84	-17 23.8	0.852	1.690	129.4	27.7	19.0
1991 06 23		13 45.96	-18 23.4					
1991 07 03		13 51.01	-19 27.6	1.092	1.754	112.5	32.4	19.8

Periodic Comet Kowal-Mrkos (1984 X) Elements MPC 13045

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		m2
1991	03 05	10 59.81	-02 17.1	1.828	2.812	-1.31	+8.4	21.8
1991	03 15	10 53.51	-01 34.1					
1991	03 25	10 47.84	-00 47.0	1.820	2.774	-1.34	+8.4	21.7
1991	04 04	10 43.57	-00 01.5					
1991	04 14	10 41.23	+00 37.3	1.912	2.741	-1.28	+7.8	21.8
1991	04 24	10 41.13	+01 05.7					
1991	05 04	10 43.35	+01 21.3	2.076	2.714	-1.17	+6.9	21.9

Periodic Comet Faye Elements MPC 13042

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	03 05	20 51.78	-10 26.5	3.625	2.828	31.6	10.6	21.3
1991	03 15	21 07.58	-09 14.5					
1991	03 25	21 23.39	-07 56.3	3.346	2.704	43.0	14.6	20.9
1991	04 04	21 39.18	-06 32.2					
1991	04 14	21 54.96	-05 02.8	3.034	2.579	54.2	18.4	20.5
1991	04 24	22 10.69	-03 28.8					
1991	05 04	22 26.38	-01 50.7	2.702	2.454	65.0	21.9	20.1
1991	05 14	22 42.01	-00 09.3					
1991	05 24	22 57.59	+01 34.4	2.363	2.329	75.7	24.9	19.5
1991	06 03	23 13.09	+03 19.5					
1991	06 13	23 28.52	+05 04.7	2.027	2.206	86.2	27.3	19.0
1991	06 23	23 43.82	+06 48.5					
1991	07 03	23 58.98	+08 29.2	1.705	2.086	96.8	28.9	18.4
1991	07 13	00 13.90	+10 04.5					
1991	07 23	00 28.46	+11 31.7	1.408	1.972	107.8	29.4	17.7
1991	08 02	00 42.53	+12 47.5					
1991	08 12	00 55.88	+13 47.8	1.143	1.866	119.8	28.1	17.0
1991	08 22	01 08.21	+14 27.6					
1991	09 01	01 19.20	+14 41.6	0.920	1.773	133.4	24.4	16.3
1991	09 11	01 28.45	+14 23.9					
1991	09 21	01 35.65	+13 29.6	0.750	1.695	149.7	17.4	15.7
1991	10 01	01 40.70	+11 57.5					
1991	10 11	01 43.76	+09 51.5	0.645	1.637	169.0	6.7	15.2
1991	10 21	01 45.56	+07 24.9					
1991	10 31	01 47.18	+04 57.7	0.617	1.602	168.7	7.0	15.0
1991	11 10	01 49.76	+02 51.6					
1991	11 20	01 54.33	+01 23.2	0.663	1.594	149.1	18.6	15.1
1991	11 30	02 01.43	+00 39.2					
1991	12 10	02 11.14	+00 38.2	0.772	1.612	132.8	26.6	15.5
1991	12 20	02 23.33	+01 13.7					
1991	12 30	02 37.61	+02 16.5	0.931	1.656	119.8	31.0	16.0
1992	01 09	02 53.62	+03 38.1					
1992	01 19	03 11.04	+05 10.6	1.132	1.722	108.8	32.7	16.6
1992	01 29	03 29.53	+06 47.1					
1992	02 08	03 48.86	+08 22.6	1.370	1.807	98.8	32.7	17.3
1992	02 18	04 08.83	+09 52.9					
1992	02 28	04 29.22	+11 15.0	1.639	1.905	89.3	31.3	17.9
1992	03 09	04 49.90	+12 27.0					
1992	03 19	05 10.74	+13 27.4	1.933	2.014	79.9	29.1	18.5
1992	03 29	05 31.59	+14 15.4					
1992	04 08	05 52.36	+14 50.8	2.244	2.131	70.5	26.3	19.0
1992	04 18	06 12.96	+15 13.7					
1992	04 28	06 33.28	+15 24.4	2.560	2.252	61.0	23.0	19.6
1992	05 08	06 53.28	+15 23.6					
1992	05 18	07 12.88	+15 11.9	2.873	2.376	51.3	19.4	20.0
1992	05 28	07 32.04	+14 50.2					
1992	06 07	07 50.73	+14 19.3	3.170	2.501	41.5	15.6	20.5

Periodic Comet Chernykh (1978 IV) Elements MPC 14592

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		m2
1991	03 25	21 41.78	-14 00.7	4.127	3.427	-0.56	-2.2	19.4
1991	04 04	21 54.72	-13 02.1					
1991	04 14	22 07.38	-12 02.7	3.823	3.324	-0.63	-2.7	19.1
1991	04 24	22 19.68	-11 03.6					
1991	05 04	22 31.55	-10 05.8	3.485	3.222	-0.71	-3.3	18.8
1991	05 14	22 42.92	-09 10.3					
1991	05 24	22 53.68	-08 18.4	3.129	3.121	-0.81	-4.0	18.4
1991	06 03	23 03.71	-07 31.4					
1991	06 13	23 12.89	-06 50.7	2.771	3.024	-0.94	-4.8	18.0
1991	06 23	23 21.03	-06 17.9					
1991	07 03	23 27.96	-05 54.7	2.426	2.929	-1.09	-5.8	17.6
1991	07 13	23 33.48	-05 42.7					
1991	07 23	23 37.35	-05 43.5	2.114	2.838	-1.28	-6.8	17.2
1991	08 02	23 39.42	-05 58.0					
1991	08 12	23 39.54	-06 26.6	1.858	2.753	-1.48	-7.9	16.7
1991	08 22	23 37.73	-07 08.0					
1991	09 01	23 34.22	-07 59.1	1.682	2.672	-1.65	-8.6	16.4
1991	09 11	23 29.44	-08 55.2					
1991	09 21	23 24.13	-09 49.7	1.605	2.599	-1.72	-8.6	16.2
1991	10 01	23 19.14	-10 36.0					
1991	10 11	23 15.31	-11 08.5	1.629	2.533	-1.66	-7.9	16.1
1991	10 21	23 13.36	-11 23.3					
1991	10 31	23 13.71	-11 18.9	1.736	2.476	-1.52	-7.1	16.1
1991	11 10	23 16.53	-10 55.5					
1991	11 20	23 21.82	-10 14.0	1.900	2.429	-1.38	-6.5	16.2
1991	11 30	23 29.36	-09 16.5					
1991	12 10	23 38.93	-08 04.8	2.096	2.394	-1.26	-6.3	16.4
1991	12 20	23 50.27	-06 40.9					
1991	12 30	00 03.10	-05 06.9	2.306	2.369	-1.17	-6.2	16.6
1992	01 09	00 17.21	-03 24.7					
1992	01 19	00 32.40	-01 36.1	2.518	2.358	-1.10	-6.1	16.7
1992	01 29	00 48.49	+00 16.8					
1992	02 08	01 05.36	+02 12.4	2.725	2.358	-1.05	-5.9	16.9

Periodic Comet Russell 3 (1989d) Elements MPC 14154

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1991	03 25	21 45.31	-02 15.9	3.865	3.125	36.8	11.0	19.9
1991	04 04	21 57.60	-00 44.0					
1991	04 14	22 09.09	+00 48.4	3.748	3.188	49.4	13.8	19.9
1991	04 24	22 19.70	+02 20.2					
1991	05 04	22 29.35	+03 50.6	3.588	3.251	62.7	16.0	19.9
1991	05 14	22 37.93	+05 18.6					
1991	05 24	22 45.33	+06 43.1	3.397	3.315	76.8	17.3	19.9
1991	06 03	22 51.42	+08 02.9					
1991	06 13	22 56.07	+09 16.6	3.189	3.379	91.9	17.5	19.8
1991	06 23	22 59.14	+10 22.6					
1991	07 03	23 00.53	+11 19.0	2.985	3.443	108.4	16.3	19.7
1991	07 13	23 00.14	+12 04.0					
1991	07 23	22 57.99	+12 35.3	2.810	3.507	126.2	13.5	19.7
1991	08 02	22 54.18	+12 51.1					
1991	08 12	22 48.95	+12 50.1	2.696	3.571	144.6	9.5	19.7
1991	08 22	22 42.72	+12 32.0					
1991	09 01	22 36.01	+11 58.1	2.673	3.634	159.3	5.6	19.7
1991	09 11	22 29.40	+11 11.3					
1991	09 21	22 23.50	+10 15.6	2.758	3.697	155.9	6.4	19.9
1991	10 01	22 18.77	+09 15.8					
1991	10 11	22 15.55	+08 16.7	2.948	3.759	138.9	10.1	20.1

1991 03 15	13 36.37	-17 03.6	4.505	5.344	144.3	6.2	17.9
- 3.39	-0.46	+ 16.9	+ 3.8	(4501)	16418	- 4.81	+0.01	+ 34.2	+ 1.6
1991 04 14	13 23.21	-15 42.9	4.355	5.352	173.2	1.3	17.5
1991 03 15	13 48.24	-04 16.2	1.918	2.799	146.1	11.4	17.9
- 5.71	-1.15	+ 46.7	+ 4.7	(4620)	17186	- 9.46	+0.04	+ 51.9	- 3.5
1991 04 14	13 23.28	-01 33.3	1.806	2.803	172.6	2.6	17.3
1991 03 15	13 49.83	-19 18.1	1.696	2.542	140.4	14.4	18.4
- 4.99	-1.40	- 5.1	+ 9.0	1985 SL3	14194	-10.30	-0.13	+ 48.0	+ 6.9
1991 04 14	13 24.56	-18 10.0	1.500	2.495	170.8	3.7	17.7
1991 03 15	13 54.08	-45 02.4	2.667	3.318	123.2	14.5	16.4
- 6.20	-1.39	- 78.5	+ 9.1	(4460)	16226	-11.76	-0.23	- 3.7	+14.7
1991 04 14	13 25.02	-47 16.1	2.437	3.284	141.7	10.9	16.0
1991 04 14	13 25.98	-08 20.0	1.425	2.428	179.4	0.3	16.9
-10.33	+0.04	+ 50.0	0.0	(4303)	15678	- 5.47	+1.35	+ 23.1	- 7.8
1991 05 14	12 59.87	-06 16.0	1.553	2.444	144.1	14.0	17.8
1991 04 14	13 26.79	+01 32.5	1.915	2.907	169.5	3.6	17.1
- 9.56	+0.08	+ 17.1	- 4.8	1989 WM3	15726	- 5.63	+1.07	- 20.4	- 6.7
1991 05 14	13 02.21	+01 31.0	2.097	2.951	141.0	12.5	17.7
1991 04 14	13 26.88	-27 07.9	3.100	4.065	161.8	4.4	16.4
- 7.06	-0.08	+ 23.2	+ 6.0	1977 PO1	16421	- 5.02	+0.70	+ 44.3	+ 0.6
1991 05 14	13 07.35	-25 16.9	3.106	4.004	148.8	7.5	16.5
1991 04 14	13 27.24	-11 38.1	2.157	3.159	177.2	0.9	16.4
- 7.20	-0.03	+ 67.2	+ 1.8	1988 VB3	15561	- 4.34	+0.88	+ 53.9	- 5.7
1991 05 14	13 08.26	-08 22.7	2.245	3.140	146.8	10.2	16.9
1991 04 14	13 27.82	-04 41.3	1.322	2.324	175.7	1.9	14.7
-10.75	+0.10	- 13.3	- 2.1	(4350)	15695	- 5.38	+1.42	- 36.5	- 4.9
1991 05 14	13 01.21	-05 50.8	1.487	2.381	144.2	14.4	15.6
1991 04 14	13 27.95	+27 16.3	1.209	2.103	143.8	16.4	17.2
-13.46	+0.46	- 34.4	-23.2	(4276)	15541	- 5.67	+1.72	-137.6	-10.0
1991 05 14	12 56.97	+22 33.4	1.412	2.170	126.4	22.0	17.8
1991 04 14	13 29.17	-21 14.9	2.228	3.215	167.6	3.8	15.6
- 7.67	-0.03	+ 51.5	+ 5.6	(4493)	16415	- 4.68	+0.91	+ 60.7	- 2.6
1991 05 14	13 08.92	-18 11.5	2.318	3.228	149.2	9.2	16.0
1991 04 14	13 29.98	-11 34.6	1.883	2.885	177.1	1.0	17.8
- 9.08	-0.02	+ 54.8	+ 1.7	1981 QE1	11740	- 5.51	+1.06	+ 40.5	- 5.8
1991 05 14	13 06.12	-08 57.6	2.005	2.902	146.5	11.1	18.4
1991 04 14	13 30.73	-08 25.9	1.460	2.463	178.5	0.6	16.4
-10.06	-0.12	+ 63.6	+ 0.8	(4359)	15862	- 5.95	+1.30	+ 37.4	- 8.4
1991 05 14	13 04.10	-05 37.4	1.538	2.434	144.8	13.9	17.2
1991 04 14	13 34.13	-25 21.4	1.331	2.310	163.4	7.1	16.5
-10.17	-0.15	+113.3	+13.4	1989 UK2	15718	- 5.47	+1.46	+136.7	- 6.0
1991 05 14	13 07.69	-18 30.2	1.367	2.292	148.9	13.2	16.7
1991 04 14	13 33.98	-10 39.6	2.233	3.235	177.2	0.9	17.4
- 7.58	-0.12	+ 42.7	+ 1.5	2023 P-L	15569	- 5.17	+0.84	+ 32.1	- 4.6
1991 05 14	13 13.10	-08 36.1	2.289	3.191	148.0	9.7	17.9

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1991 04 14    13 34.87   -08 40.7    1.586    2.588   177.6     0.9    16.2
-10.61  -0.10  -  4.1  + 0.4  1976 US1  16227  - 6.59  +1.25  - 16.3  - 4.1
1991 05 14    13 06.58   -09 03.0    1.704    2.608   146.6    12.3    17.0

1991 04 14    13 34.69   -07 35.1    1.986    2.988   177.3     0.9    17.2
- 7.83  -0.10  + 40.4  - 0.1  (4441)    16219  - 5.03  +0.93  + 20.7  - 5.9
1991 05 14    13 13.51   -05 52.9    2.076    2.975   147.0    10.7    17.8

1991 04 14    13 35.40   -13 57.4    1.828    2.828   174.4     2.0    17.8
- 9.51  -0.15  + 39.0  + 3.4  1977 RR6  12123  - 6.32  +1.08  + 35.2  - 4.4
1991 05 14    13 09.39   -11 51.6    1.897    2.806   148.1    11.0    18.2

1991 04 14    13 35.46   +07 39.2    2.818    3.790   163.2     4.4    17.5
- 7.70  -0.02  + 43.3  - 5.5  1990 BT1  16240  - 5.41  +0.71  +  2.1  - 7.3
1991 05 14    13 14.46   +08 50.6    2.992    3.813   139.0    10.0    17.9

1991 04 14    13 35.57   -20 59.2    4.321    5.305   167.7     2.3    17.1
- 5.23  -0.05  + 22.0  + 2.8  1989 CW1  16432  - 3.94  +0.44  + 29.3  - 0.5
1991 05 14    13 20.91   -19 36.1    4.398    5.312   152.1     5.1    17.3

1991 04 14    13 41.77   +41 47.0    1.012    1.820   129.1    25.3    17.4
-11.76  +0.06  -  7.5  -34.1  1948 AG   13169  - 4.41  +1.86  -171.8  -18.5
1991 05 14    13 14.23   +36 48.8    1.143    1.842   117.5    29.1    17.7

1991 04 14    13 39.74   +34 25.2    4.964    5.733   136.5     6.9    17.3
- 5.42  -0.04  + 16.3  - 7.5  1989 AL2  16583  - 4.09  +0.44  - 28.1  - 6.8
1991 05 14    13 24.60   +34 06.1    5.150    5.736   120.9     8.7    17.4

1991 04 14    13 40.05   -05 20.8    2.047    3.047   174.8     1.7    15.2
- 6.94  -0.15  + 74.2  - 0.6  1987 QD6  15415  - 4.63  +0.84  + 46.5  - 7.7
1991 05 14    13 20.88   -02 06.7    2.114    3.011   146.9    10.6    15.6

1991 04 14    13 41.31   -06 40.2    0.963    1.964   175.4     2.4    16.6
- 8.14  -0.38  + 69.8  + 0.1  2636 P-L  13607  - 4.09  +1.51  + 28.1  -12.1
1991 05 14    13 19.48   -03 51.0    0.996    1.926   147.4    16.4    17.2

1991 04 14    13 42.34   +00 44.9    1.574    2.566   169.4     4.1    16.4
- 9.23  -0.16  + 42.7  - 5.0  (4383)    15871  - 5.82  +1.13  -  4.6  - 9.2
1991 05 14    13 17.38   +01 49.6    1.686    2.573   144.0    13.4    17.0

1991 04 14    13 42.14   -15 59.1    1.594    2.591   171.8     3.2    16.9
- 9.23  -0.36  + 16.5  + 4.7  1978 RR   14186  - 6.54  +1.14  + 22.8  - 3.0
1991 05 14    13 15.72   -14 45.9    1.600    2.528   150.3    11.4    17.2

1991 04 14    13 43.59   +10 30.6    1.948    2.910   160.0     6.8    16.3
- 9.12  -0.04  + 27.7  - 9.1  1989 UL3  15719  - 5.82  +0.99  - 30.7  - 9.0
1991 05 14    13 19.29   +10 26.0    2.136    2.972   138.8    12.9    16.8

1991 04 14    13 43.06   -07 33.9    2.440    3.440   175.3     1.4    17.1
- 7.41  -0.09  + 38.9  - 0.3  (4361)    15863  - 5.17  +0.75  + 21.9  - 4.9
1991 05 14    13 22.64   -05 54.2    2.571    3.477   149.1     8.6    17.6

1991 04 14    13 44.54   -14 36.4    1.057    2.056   172.6     3.6    16.0
- 8.88  -0.50  + 76.5  + 7.3  1982 VM5  14188  - 5.35  +1.49  + 72.2  - 8.5
1991 05 14    13 19.53   -10 24.0    1.055    1.995   150.1    14.6    16.3

1991 04 14    13 43.36   -01 37.2    4.249    5.243   171.4     1.6    16.9
- 4.94  -0.06  + 23.7  - 1.5  1989 BL   14358  - 3.82  +0.40  +  7.8  - 3.6
1991 05 14    13 29.37   -00 46.1    4.382    5.266   147.9     5.9    17.2
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1991 04 14    13 46.36   -16 36.0    1.732    2.726   170.7     3.4    17.2
- 9.26  -0.22  + 46.9  + 4.8  1981 SM   17013  - 6.25  +1.08  + 48.5  - 4.2
1991 05 14    13 20.71   -13 56.3    1.811    2.741   151.3    10.2    17.6

1991 04 14    13 46.80   -28 59.7    1.763    2.724   159.3     7.5    15.9
- 9.08  -0.22  + 50.9  +10.9  1989 XD   15726  - 5.82  +1.14  + 84.7  - 0.5
1991 05 14    13 21.96   -25 15.1    1.825    2.759   152.0     9.9    16.2

1991 04 14    13 47.15   -09 47.0    1.121    2.122   174.5     2.6    15.6
- 8.51  -0.45  + 91.4  + 3.4  1985 RK6  14193  - 5.24  +1.37  + 64.7  -11.1
1991 05 14    13 23.15   -05 25.8    1.139    2.072   149.0    14.6    16.1

1991 04 14    13 48.03   -16 47.7    1.390    2.385   170.3     4.0    16.9
- 9.66  -0.39  + 38.3  + 6.1  1980 FH2  13301  - 6.54  +1.27  + 44.4  - 4.3
1991 05 14    13 20.67   -14 24.5    1.423    2.361   151.4    11.8    17.3

1991 04 14    13 47.81   -07 30.1    1.987    2.986   174.2     2.0    17.6
- 7.93  -0.23  + 40.3    0.0  3033 T-2  16243  - 5.71  +0.87  + 21.3  - 5.8
1991 05 14    13 25.34   -05 46.9    2.054    2.970   149.6     9.9    18.1

1991 04 14    13 48.52   -08 02.3    1.626    2.626   174.1     2.2    18.0
- 8.95  -0.32  + 71.5  + 1.0  1980 FY4  14781  - 6.35  +1.06  + 47.5  - 8.2
1991 05 14    13 23.02   -04 46.8    1.670    2.587   148.6    11.7    18.4

1991 04 14    13 48.20   -08 25.6    2.638    3.637   174.3     1.6    18.1
- 7.22  -0.19  + 38.5  + 0.5  1987 SV12 13586  - 5.64  +0.66  + 26.1  - 4.3
1991 05 14    13 27.35   -06 39.9    2.685    3.599   150.4     8.0    18.4

1991 04 14    13 50.56   -05 16.6    1.459    2.457   172.7     3.0    16.8
- 9.19  -0.25  + 63.1  - 1.6  1989 UO3  15568  - 5.94  +1.16  + 26.4  - 9.2
1991 05 14    13 25.28   -02 48.5    1.565    2.481   148.2    12.4    17.4

1991 04 14    13 48.35   +16 48.2    4.427    5.344   153.6     4.8    17.3
- 4.67  -0.08  + 39.8  - 5.2  1989 EO11 16433  - 3.70  +0.38  +  3.8  - 6.3
1991 05 14    13 34.94   +17 55.6    4.578    5.348   135.7     7.6    17.5

1991 04 14    13 51.26   -11 54.4    1.582    2.580   172.9     2.8    17.8
-10.19  -0.43  + 38.8  + 3.0  1975 TE   14011  - 7.71  +1.14  + 31.3  - 5.4
1991 05 14    13 21.53   -09 53.6    1.601    2.529   150.4    11.4    18.2

1991 04 14    13 52.87   -13 00.0    1.340    2.338   172.0     3.4    17.4
-10.44  -0.35  + 42.8  + 3.5  1989 TB1  15422  - 6.92  +1.32  + 33.7  - 6.1
1991 05 14    13 23.78   -10 47.4    1.423    2.359   151.2    11.9    17.9

1991 04 14    13 52.90   -08 09.2    2.470    3.467   173.1     2.0    17.4
- 7.30  -0.17  + 38.8    0.0  1990 BK   16239  - 5.47  +0.71  + 23.6  - 4.7
1991 05 14    13 32.14   -06 26.9    2.583    3.504   151.4     7.9    17.8

1991 04 14    13 56.06   +13 45.7    4.758    5.689   156.0     4.1    17.0
- 5.09  -0.10  + 17.0  - 4.3  1986 VG1  16873  - 4.26  +0.35  - 12.5  - 5.1
1991 05 14    13 41.21   +13 54.0    4.896    5.705   139.8     6.6    17.2

1991 04 14    13 57.21   -08 27.5    2.813    3.808   172.0     2.1    16.5
- 6.00  -0.25  + 48.4  + 0.8  (4446)    16221  - 5.04  +0.54  + 37.4  - 4.2
1991 05 14    13 39.20   -06 09.6    2.805    3.732   152.8     7.1    16.7

1991 04 14    14 01.59   -04 47.2    1.870    2.863   170.0     3.5    16.4
- 7.73  -0.29  + 54.4  - 1.5  2780 P-L  15423  - 5.75  +0.85  + 24.7  - 7.5
1991 05 14    13 39.27   -02 37.6    1.972    2.898   151.0     9.7    16.8
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1991 04 14    14 03.97   -14 04.6    1.383    2.376   169.2     4.6    17.4
- 9.56  -0.39  + 58.3  + 3.9  1987 BB2  12207  - 6.60  +1.19  + 48.7  - 6.5
1991 05 14    13 36.81   -11 04.9    1.483    2.434   154.3    10.4    17.9

1991 04 14    14 04.09   -13 55.3    1.060    2.054   169.2     5.2    16.1
-10.03  -0.64  +  6.3  + 4.4  1984 FU   15554  - 6.99  +1.45  +  6.9  - 4.2
1991 05 14    13 34.69   -13 19.5    1.116    2.074   154.5    12.1    16.5

1991 04 14    14 03.43   -16 38.2    1.503    2.492   167.9     4.8    16.3
- 9.47  -0.47  + 52.7  + 5.7  1989 WH1  15724  - 7.13  +1.12  + 56.3  - 4.7
1991 05 14    13 35.59   -13 35.3    1.548    2.499   154.7     9.9    16.6

1991 04 14    14 03.56   -18 04.2    1.486    2.473   166.9     5.3    16.2
- 8.27  -0.39  + 72.7  + 6.2  1989 UE4  15568  - 5.77  +1.07  + 74.2  - 5.6
1991 05 14    13 39.80   -14 02.0    1.563    2.519   155.8     9.4    16.5

1991 04 14    14 00.68   +18 17.7    4.761    5.661   151.4     4.9    17.0
- 5.27  -0.11  + 15.3  - 5.1  1989 AM2  14954  - 4.48  +0.35  - 18.3  - 5.6
1991 05 14    13 45.20   +18 14.3    4.905    5.684   136.8     7.0    17.2

1991 04 14    14 02.39   -24 18.4    2.545    3.514   162.2     5.0    15.6
- 7.37  -0.33  + 34.8  + 6.3  1987 SZ6  15415  - 6.20  +0.68  + 56.2  + 0.2
1991 05 14    13 40.18   -21 50.7    2.531    3.482   156.6     6.6    15.7

1991 04 14    14 03.83   -09 41.1    1.560    2.555   170.4     3.8    17.4
- 8.94  -0.58  + 59.0  + 2.5  1988 PM1  15889  - 7.48  +0.99  + 44.3  - 7.0
1991 05 14    13 36.29   -06 48.6    1.545    2.485   152.5    10.8    17.6

1991 04 14    14 04.86   -09 19.7    1.197    2.192   170.2     4.5    16.4
- 9.81  -0.70  + 16.1  + 1.1  1977 JD   10940  - 7.70  +1.28  -  0.8  - 6.3
1991 05 14    13 34.94   -08 42.9    1.211    2.161   153.0    12.3    16.7

1991 04 14    14 03.12   -07 06.4    2.264    3.257   170.4     2.9    17.1
- 7.21  -0.35  + 43.4  + 0.2  1987 RG   12448  - 6.09  +0.68  + 26.8  - 5.4
1991 05 14    13 41.28   -05 10.8    2.276    3.208   152.8     8.3    17.4

1991 04 14    14 06.60   -05 54.7    1.610    2.602   169.3     4.1    15.9
- 9.59  -0.43  + 42.4  - 0.9  (4289)    15546  - 7.41  +1.03  + 15.0  - 7.3
1991 05 14    13 38.42   -04 16.8    1.690    2.624   151.7    10.5    16.3

1991 04 14    14 05.14   -08 27.4    2.094    3.087   170.1     3.2    16.6
- 7.46  -0.36  + 45.0  + 0.6  (4389)    16009  - 6.14  +0.74  + 29.5  - 5.4
1991 05 14    13 42.71   -06 24.3    2.133    3.072   153.7     8.4    16.9

1991 04 14    14 03.82   +26 24.2    4.368    5.208   143.4     6.6    17.3
- 5.09  -0.15  + 29.9  - 7.0  1989 CH2  16583  - 4.32  +0.38  - 15.2  - 7.4
1991 05 14    13 48.74   +26 46.8    4.508    5.214   129.9     8.6    17.4

1991 04 14    14 04.39   +03 01.2    4.153    5.126   164.5     3.0    16.9
- 5.39  -0.16  + 12.5  - 2.5  1988 BW1  16429  - 4.74  +0.36  -  8.4  - 4.1
1991 05 14    13 48.24   +03 10.5    4.225    5.118   149.0     5.8    17.1

1991 04 14    14 09.95   -07 47.6    1.587    2.578   168.8     4.3    17.4
- 9.02  -0.61  + 67.3  + 1.5  1985 SE1  10390  - 7.81  +0.95  + 46.1  - 8.0
1991 05 14    13 41.83   -04 39.8    1.580    2.521   152.6    10.6    17.6

1991 04 14    14 09.45   -10 01.7    2.409    3.399   169.0     3.2    17.4
- 8.11  -0.38  + 26.4  + 1.1  1988 VB   13862  - 7.14  +0.66  + 18.3  - 3.7
1991 05 14    13 44.67   -08 45.8    2.431    3.375   155.2     7.2    17.6
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1991 04 14    14 09.10   -18 47.4    2.311    3.291   165.5     4.4    17.2
- 7.67  -0.44  + 18.7  + 4.5  1987 SS17 15249  - 6.86  +0.67  + 31.0  - 0.8
1991 05 14    13 45.26   -17 23.0    2.288    3.246   157.7     6.8    17.3

1991 04 14    14 11.48   -22 59.8    1.071    2.049   162.1     8.7    16.8
- 9.09  -1.06  + 30.2  +12.3  1981 EJ5   9683  - 8.20  +1.33  + 74.9    0.0
1991 05 14    13 41.10   -19 59.4    1.000    1.969   156.9    11.6    16.7

1991 04 14    14 14.25   -01 29.0    2.499    3.480   165.7     4.1    16.6
- 6.62  -0.34  + 59.1  - 1.9  1990 DR4  17210  - 5.83  +0.57  + 30.4  - 6.9
1991 05 14    13 53.91   +00 54.5    2.554    3.476   151.6     7.9    16.8

1991 04 14    14 16.44   -06 05.4    1.229    2.217   166.9     5.9    15.6
- 8.74  -0.91  + 43.2  + 0.2  (4428)    16214  - 8.24  +1.06  + 13.7  - 9.3
1991 05 14    13 47.32   -04 22.5    1.183    2.136   153.6    12.1    15.7

1991 04 14    14 18.65   -02 09.2    2.020    3.000   165.0     4.9    17.0
- 8.84  -0.58  + 15.6  - 2.4  (4327)    15687  - 8.38  +0.71  - 12.8  - 6.4
1991 05 14    13 50.44   -01 57.7    2.002    2.938   152.8     9.0    17.2

1991 04 14    14 18.27   -08 50.9    1.162    2.150   166.8     6.1    17.4
- 7.59  -0.78  + 56.9  + 1.6  3100 T-3  15260  - 6.44  +1.09  + 32.2  - 9.0
1991 05 14    13 53.76   -06 17.6    1.174    2.138   156.0    11.1    17.6

1991 04 14    14 20.57   -11 30.7    1.535    2.520   166.1     5.5    17.4
- 8.85  -0.70  + 55.3  + 3.1  1975 TM2  15874  - 7.99  +0.93  + 45.8  - 6.2
1991 05 14    13 52.30   -08 41.9    1.535    2.496   156.9     9.1    17.5

1991 04 14    14 19.46   -21 27.9    2.231    3.200   161.9     5.6    17.7
- 7.68  -0.41  + 67.2  + 6.0  1984 UT   16578  - 6.57  +0.71  + 79.6  - 2.3
1991 05 14    13 56.02   -17 32.3    2.275    3.245   160.3     6.0    17.8

1991 04 14    14 19.36   -10 44.5    0.960    1.949   166.5     6.9    16.3
- 7.03  -0.84  + 83.7  + 3.4  1977 EK1  12004  - 5.53  +1.21  + 56.5  -11.2
1991 05 14    13 56.72   -06 46.9    0.994    1.964   156.9    11.6    16.6

1991 04 14    14 20.50   +09 28.5    1.660    2.613   157.0     8.6    17.7
- 8.37  -0.67  + 87.5  - 7.4  1981 OH   13455  - 7.79  +0.82  + 15.0  -14.5
1991 05 14    13 53.50   +12 15.3    1.670    2.550   142.9    13.8    17.8

1991 04 14    14 22.07   -24 53.9    1.499    2.461   159.0     8.4    16.4
- 8.89  -0.75  + 33.5  +10.0  1989 XO   15898  - 7.82  +1.03  + 68.6  + 0.2
1991 05 14    13 53.74   -22 02.6    1.499    2.472   159.7     8.2    16.4

1991 04 14    14 34.95   +01 06.0    0.985    1.958   159.9    10.1    16.5
-15.13  -0.83  - 86.4  - 7.5  1984 FN   11630  -11.47  +1.73  -114.7  - 1.4
1991 05 14    13 50.33   -04 07.3    1.110    2.067   154.1    12.3    16.9

1991 04 14    14 22.71   -09 54.7    2.577    3.557   165.7     4.0    17.7
- 6.85  -0.43  + 37.5  + 1.1  1982 UV1  10758  - 6.53  +0.51  + 29.3  - 3.8
1991 05 14    14 00.93   -08 05.5    2.572    3.532   158.5     6.0    17.8

1991 04 14    14 22.72   -14 01.9    4.271    5.246   165.0     2.8    17.5
- 4.64  -0.24  + 24.2  + 1.4  4523 P-L  14206  - 4.50  +0.28  + 24.5  - 1.3
1991 05 14    14 08.06   -12 43.9    4.265    5.235   162.1     3.4    17.5

1991 04 14    14 28.94   -15 45.0    1.757    2.732   163.0     6.2    17.7
- 8.12  -0.60  + 43.4  + 4.1  1989 WG7  17209  - 7.34  +0.80  + 45.5  - 3.6
1991 05 14    14 03.16   -13 17.3    1.803    2.778   161.1     6.8    17.8
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1991 04 14    14 27.49   -16 44.4    2.581    3.552   162.9     4.8    18.2
- 7.19  -0.44  + 22.5  + 3.2  2558 P-L  12690  - 6.83  +0.54  + 28.6  - 1.4
1991 05 14    14 04.65   -15 19.4    2.602    3.577   162.0     5.0    18.3

1991 04 14    14 29.31   -23 31.1    2.306    3.261   158.8     6.4    17.8
- 8.16  -0.58  + 13.7  + 6.1  (4492)    16415  - 7.94  +0.63  + 37.8  + 1.1
1991 05 14    14 02.94   -22 04.5    2.289    3.264   161.8     5.6    17.7

1991 04 14    14 27.16   -12 11.9    2.311    3.288   164.4     4.7    17.0
- 6.76  -0.53  + 38.3  + 2.3  (4306)    15679  - 6.73  +0.53  + 35.2  - 3.4
1991 05 14    14 04.97   -10 11.3    2.273    3.242   160.4     6.0    17.0

1991 04 14    14 31.02   -10 28.0    1.250    2.230   163.7     7.3    18.4
- 8.47  -0.81  + 81.9  + 2.6  (4320)    15684  - 7.50  +1.03  + 58.7  - 9.4
1991 05 14    14 03.66   -06 35.0    1.298    2.268   158.2     9.5    18.6

1991 04 14    14 29.17   +03 23.2    0.938    1.911   159.8    10.4    16.4
- 7.00  -1.03  +234.4  - 4.0  1989 UN2  15719  - 6.54  +1.12  +122.2  -27.6
1991 05 14    14 04.87   +13 01.9    0.976    1.888   143.7    18.5    16.8

1991 04 14    14 29.69   -27 01.7    2.365    3.308   156.3     7.0    16.5
- 7.81  -0.58  +  9.1  + 7.1  (4453)    16223  - 7.65  +0.62  + 40.4  + 2.3
1991 05 14    14 04.30   -25 38.7    2.342    3.315   161.2     5.6    16.4

1991 04 14    14 28.31   -19 27.8    1.770    2.740   161.4     6.7    15.9
- 6.75  -0.67  + 32.2  + 5.9  4027 P-L  15903  - 6.59  +0.71  + 48.0  - 1.4
1991 05 14    14 05.76   -17 14.1    1.747    2.728   162.6     6.4    15.9

1991 04 14    14 32.28   -28 24.0    2.095    3.033   154.9     8.1    17.0
- 7.33  -0.70  + 18.0  + 8.5  1987 PL   15246  - 7.52  +0.64  + 56.8  + 3.0
1991 05 14    14 07.55   -26 21.8    2.028    3.004   161.7     6.1    16.8

1991 04 14    14 37.21   -18 42.9    1.312    2.280   160.0     8.7    18.1
- 8.40  -0.96  + 28.2  + 6.9  (4415)    16019  - 8.30  +0.96  + 45.2  - 2.2
1991 05 14    14 08.61   -16 36.2    1.315    2.301   163.2     7.3    18.0

1991 04 14    14 38.95   -21 00.1    1.715    2.673   158.5     7.9    17.9
- 9.19  -0.79  + 21.3  + 6.7  1978 SS7  15701  - 8.96  +0.83  + 43.2  - 0.3
1991 05 14    14 08.74   -19 10.5    1.732    2.715   163.4     6.1    17.8

1991 04 14    14 31.17   +04 44.9    4.196    5.143   158.6     4.1    16.5
- 4.96  -0.25  + 20.4  - 2.7  1989 CK1  16432  - 4.88  +0.27  -  2.8  - 4.6
1991 05 14    14 15.45   +05 14.8    4.256    5.168   151.7     5.3    16.6

1991 04 14    14 34.57   -14 45.9    1.967    2.937   162.0     6.0    16.2
- 6.68  -0.63  + 24.7  + 3.1  (4337)    15690  - 6.74  +0.60  + 27.0  - 2.5
1991 05 14    14 12.19   -13 17.9    1.962    2.944   163.2     5.7    16.2

1991 04 14    14 37.35   -14 08.2    1.790    2.759   161.5     6.6    18.4
- 8.47  -0.80  + 37.3  + 3.8  1974 QX1  17011  - 8.80  +0.69  + 39.8  - 3.3
1991 05 14    14 08.69   -11 59.3    1.752    2.731   161.9     6.6    18.3

1991 04 14    14 41.01   -08 04.5    1.829    2.797   161.2     6.6    17.5
- 8.53  -0.70  + 23.6  + 0.1  1989 WC2  15725  - 8.42  +0.70  +  8.0  - 5.0
1991 05 14    14 12.99   -07 07.6    1.866    2.839   160.4     6.8    17.6

1991 04 14    14 39.38   +01 39.2    1.773    2.732   158.7     7.7    18.0
- 7.37  -0.68  + 48.1  - 4.2  1989 YH7  16238  - 7.38  +0.66  +  2.8  - 9.6
1991 05 14    14 14.79   +03 05.4    1.809    2.750   153.4     9.5    18.1
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1991 04 14    14 38.58   -21 03.7    1.992    2.948   158.5     7.2    16.3
- 7.02  -0.72  +  8.0  + 5.4  1981 QT3  13589  - 7.47  +0.58  + 28.5  + 0.6
1991 05 14    14 14.44   -20 00.2    1.952    2.938   164.7     5.2    16.2

1991 04 14    14 40.66   -19 18.5    1.820    2.779   159.0     7.4    16.9
- 8.12  -0.74  -  9.4  + 4.8  (4386)    15872  - 8.12  +0.71  +  8.7  + 0.5
1991 05 14    14 13.64   -19 11.6    1.852    2.839   164.5     5.4    16.8

1991 04 14    14 46.10   -31 36.4    1.385    2.311   150.5    12.3    18.5
- 9.26  -1.43  - 42.1  +10.9  4206 P-L  16034  -11.55  +0.83  + 28.3  + 9.4
1991 05 14    14 10.68   -31 54.7    1.278    2.252   159.5     9.1    18.1

1991 04 14    14 42.25   -02 41.8    1.801    2.764   159.8     7.2    16.6
- 7.87  -0.82  + 30.9  - 1.9  1977 AL1  15551  - 8.62  +0.59  +  0.3  - 7.6
1991 05 14    14 14.91   -01 44.5    1.758    2.718   157.2     8.3    16.6

1991 04 14    14 42.86   -20 39.8    1.827    2.782   157.9     7.8    17.8
- 8.07  -0.85  + 26.5  + 6.4  (4304)    15679  - 8.76  +0.64  + 48.6    0.0
1991 05 14    14 14.85   -18 35.3    1.772    2.760   164.8     5.5    17.6

1991 04 14    14 44.03   -32 24.8    0.981    1.917   150.2    15.0    15.6
- 7.46  -1.70  - 83.1  +12.1  (4390)    16010  -10.17  +1.06  +  5.6  +13.4
1991 05 14    14 12.45   -34 23.7    0.898    1.874   158.1    11.6    15.2

1991 04 14    14 44.61   -16 54.7    1.411    2.375   159.1     8.7    16.4
- 6.66  -0.99  + 44.4  + 6.0  (4314)    15682  - 7.58  +0.71  + 55.2  - 3.2
1991 05 14    14 20.11   -14 08.3    1.369    2.360   165.3     6.2    16.2

1991 04 14    14 45.21   -13 29.9    2.153    3.114   159.8     6.4    17.6
- 6.60  -0.69  + 36.8  + 2.8  1987 QW1  12950  - 7.33  +0.46  + 37.2  - 2.9
1991 05 14    14 22.21   -11 28.3    2.102    3.088   164.7     5.0    17.5

1991 04 14    14 49.15   -22 24.8    1.723    2.669   155.7     8.9    18.3
- 8.31  -1.01  + 29.1  + 7.7  1985 TP3  11740  - 9.62  +0.63  + 59.8  + 1.0
1991 05 14    14 19.23   -19 59.2    1.637    2.629   165.8     5.4    18.1

1991 04 14    14 45.30   -11 41.7    1.973    2.935   160.1     6.7    17.3
- 6.74  -0.71  + 39.4  + 2.1  4053 T-2  15906  - 7.30  +0.53  + 33.5  - 4.1
1991 05 14    14 21.96   -09 41.0    1.957    2.940   163.7     5.5    17.2

1991 04 14    14 56.49   +27 59.9    1.266    2.113   137.0    18.9    18.1
-10.67  -1.21  + 67.2  -21.1  1989 QO   16434  -10.82  +1.10  - 77.7  -22.7
1991 05 14    14 19.98   +27 46.9    1.321    2.132   131.8    20.7    18.3

1991 04 14    14 52.96   -38 26.0    1.623    2.508   144.5    13.4    16.4
- 7.78  -1.33  - 55.3  +11.7  1977 RZ8  15875  -10.18  +0.68  + 23.9  +11.9
1991 05 14    14 22.31   -39 13.6    1.526    2.482   155.7     9.6    16.1

1991 04 14    14 51.24   -24 56.8    2.298    3.230   154.0     7.8    17.3
- 7.05  -0.77  + 30.5  + 6.9  1983 RY4  14190  - 8.20  +0.43  + 60.4  + 2.0
1991 05 14    14 26.16   -22 31.5    2.191    3.184   166.9     4.1    17.0

1991 04 14    14 54.74   -16 43.1    1.615    2.567   156.8     8.8    18.3
- 8.04  -1.06  + 44.4  + 5.7  (4370)    15866  - 9.65  +0.59  + 57.3  - 2.3
1991 05 14    14 25.13   -13 55.8    1.538    2.531   166.4     5.4    18.0

1991 04 14    14 52.39   -12 18.8    2.217    3.171   158.3     6.7    18.2
- 7.08  -0.73  + 34.6  + 2.3  1988 TQ   13860  - 8.12  +0.42  + 32.7  - 3.1
1991 05 14    14 27.47   -10 27.9    2.158    3.146   165.3     4.7    18.1
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1991 04 14    14 55.42   -15 31.7    2.176    3.124   157.0     7.2    16.7
- 7.07  -0.75  +  5.0  + 2.7  1988 UJ   16234  - 8.10  +0.43  + 11.0  - 1.0
1991 05 14    14 30.47   -15 01.0    2.145    3.140   167.9     3.9    16.5

1991 04 14    14 57.87   -13 37.2    1.578    2.531   156.8     9.0    18.0
- 7.70  -1.07  + 57.0  + 4.5  1982 SL1  13685  - 9.39  +0.57  + 58.7  - 4.5
1991 05 14    14 29.21   -10 27.0    1.512    2.504   165.6     5.7    17.8

1991 04 14    14 55.78   -21 17.3    1.864    2.805   154.9     8.7    16.2
- 6.69  -0.91  + 32.0  + 6.4  (4407)    16016  - 8.10  +0.48  + 55.1  + 0.3
1991 05 14    14 31.02   -18 55.4    1.791    2.789   168.6     4.1    15.9

1991 04 14    14 58.75   -10 18.1    1.692    2.643   156.9     8.6    17.3
- 8.08  -0.92  + 31.4  + 1.3  1989 WL   15722  - 9.06  +0.61  + 20.9  - 4.8
1991 05 14    14 30.23   -08 48.5    1.696    2.685   164.8     5.6    17.2

1991 04 14    14 55.01   -09 14.5    2.100    3.053   157.8     7.1    16.3
- 5.98  -0.72  + 39.1  + 0.9  1990 BJ2  16240  - 6.96  +0.41  + 27.5  - 4.7
1991 05 14    14 33.52   -07 24.2    2.079    3.065   164.5     5.1    16.1

1991 04 14    14 56.70   -13 03.9    1.905    2.856   157.1     7.8    17.7
- 6.45  -0.79  + 31.4  + 2.3  1978 VO8  10157  - 7.40  +0.48  + 28.7  - 3.4
1991 05 14    14 33.58   -11 23.4    1.904    2.898   167.1     4.5    17.6

1991 04 14    15 00.74   -16 47.2    1.499    2.447   155.4     9.8    16.4
- 7.04  -1.21  + 16.8  + 4.8  1965 SO   14182  - 9.70  +0.47  + 31.1  - 1.1
1991 05 14    14 32.52   -15 24.5    1.385    2.384   168.5     4.8    16.0

1991 04 14    14 57.43   -12 42.2    1.695    2.647   157.0     8.5    16.8
- 5.51  -0.97  + 65.5  + 4.5  1987 SJ5  15415  - 7.51  +0.39  + 67.0  - 4.6
1991 05 14    14 35.39   -09 06.6    1.582    2.574   166.0     5.4    16.4

1991 04 14    15 16.82   -40 38.3    1.014    1.894   139.8    20.0    16.3
-11.12  -2.58  -148.2  +14.9  1988 FJ   13171  -17.19  +1.11  - 13.2  +23.8
1991 05 14    14 27.49   -44 57.8    0.974    1.923   151.3    14.6    16.1

1991 04 14    15 00.64   -01 42.8    2.172    3.111   155.1     7.8    16.9
- 5.98  -0.71  + 58.1  - 1.7  1990 BC1  16032  - 7.07  +0.37  + 27.9  - 7.7
1991 05 14    14 39.08   +00 37.1    2.169    3.132   158.7     6.7    16.9

1991 04 14    15 05.43   -06 21.7    1.843    2.785   155.0     8.8    18.1
- 7.54  -0.88  + 53.6  - 0.1  1989 XB   15898  - 8.81  +0.49  + 31.5  - 6.9
1991 05 14    14 38.38   -04 01.5    1.842    2.823   162.6     6.1    18.1

1991 04 14    15 04.20   -12 47.6    2.034    2.975   155.4     8.1    16.9
- 6.23  -0.91  + 29.5  + 2.6  1987 QU10 15247  - 8.34  +0.29  + 30.1  - 2.7
1991 05 14    14 40.14   -11 08.5    1.911    2.908   168.2     4.1    16.5

1991 04 14    15 02.43   -15 06.4    1.402    2.352   155.4    10.2    16.1
- 4.52  -1.15  + 63.8  + 6.4  1986 JT   15711  - 7.21  +0.38  + 74.3  - 3.9
1991 05 14    14 42.00   -11 20.1    1.285    2.284   168.7     5.0    15.7

1991 04 14    15 11.43   -21 17.6    1.367    2.299   151.6    12.0    17.6
- 7.29  -1.48  +  3.0  + 6.7  1981 EC25 10541  -11.14  +0.41  + 35.9  + 2.5
1991 05 14    14 40.29   -20 11.7    1.239    2.242   170.7     4.2    17.0

1991 04 14    15 03.98   +01 56.7    1.505    2.442   153.1    10.7    16.6
- 4.70  -1.01  + 83.0  - 3.2  5193 T-3  16441  - 6.71  +0.40  + 30.2  -13.0
1991 05 14    14 44.26   +05 04.6    1.472    2.427   155.1    10.1    16.5
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1991 04 14    15 14.58   -27 53.6    1.393    2.305   148.0    13.3    16.3
- 7.34  -1.40  + 18.4  +10.5  1989 UU1  16699  -10.13  +0.59  + 70.6  + 4.5
1991 05 14    14 44.69   -25 28.9    1.333    2.333   169.3     4.6    15.9

1991 04 14    15 14.39   -13 36.0    1.878    2.808   152.8     9.4    16.2
- 7.45  -0.96  +  8.8  + 2.0  (4293)    15547  - 9.17  +0.43  +  9.7  - 2.0
1991 05 14    14 46.90   -13 00.9    1.872    2.874   170.7     3.3    16.0

1991 04 14    15 14.48   -16 19.2    2.342    3.263   152.3     8.2    17.4
- 5.62  -0.85  + 20.1  + 3.0  1981 QE3  15243  - 7.89  +0.17  + 28.4  - 0.8
1991 05 14    14 52.33   -14 59.5    2.207    3.212   172.8     2.3    17.0

1991 04 14    15 20.40   -17 55.1    1.710    2.630   150.6    10.8    17.4
- 6.88  -1.18  + 36.1  + 5.2  1989 YK   15899  - 9.80  +0.32  + 51.8  - 1.0
1991 05 14    14 52.60   -15 31.9    1.619    2.625   173.1     2.6    16.9

1991 04 14    15 18.75   -09 44.3    1.921    2.846   151.9     9.5    16.8
- 5.61  -1.00  + 70.6  + 2.8  1988 VL   14025  - 8.30  +0.20  + 63.6  - 5.4
1991 05 14    14 55.66   -06 07.7    1.809    2.802   166.6     4.8    16.4

1991 04 14    15 25.65   -27 19.3    1.478    2.377   146.1    13.6    17.4
- 6.16  -1.55  +  6.2  + 8.9  1942 RJ   11628  -11.18  +0.15  + 60.5  + 6.9
1991 05 14    14 56.50   -25 36.0    1.301    2.304   171.0     3.9    16.7

1991 04 14    15 26.14   -28 37.4    1.077    1.986   145.4    16.7    15.4
- 4.92  -1.83  - 18.1  +10.4  1982 RM1  13448  -10.30  +0.35  + 47.4  + 8.5
1991 05 14    14 59.29   -27 50.4    0.981    1.983   169.5     5.4    14.8

1991 04 14    15 20.28   -20 07.2    2.661    3.565   150.0     8.1    17.7
- 5.01  -0.77  + 33.2  + 4.1  1990 EJ2  16879  - 7.08  +0.13  + 48.4  + 0.4
1991 05 14    15 00.50   -17 58.0    2.531    3.539   175.6     1.3    17.1

1991 04 14    15 24.65   -12 03.2    2.413    3.322   150.4     8.6    17.5
- 5.84  -0.86  + 12.2  + 1.2  1988 XW1  14204  - 8.26  +0.13  +  9.8  - 2.1
1991 05 14    15 01.67   -11 24.1    2.306    3.309   171.9     2.5    17.1

1991 04 14    15 29.75   -18 57.5    1.426    2.338   148.2    13.1    17.8
- 6.25  -1.53  +  0.1  + 4.6  1972 RU3   8785  -11.18  +0.13  + 21.4  + 1.3
1991 05 14    15 00.54   -18 19.4    1.284    2.293   175.6     1.9    17.0

1991 04 14    15 30.14   -20 54.9    1.666    2.570   147.6    12.1    18.1
- 6.64  -1.35  +  9.6  + 5.4  1985 RU2  11420  -10.67  +0.18  + 35.3  + 1.9
1991 05 14    15 01.35   -19 41.3    1.540    2.549   175.6     1.7    17.5

1991 04 14    15 28.05   -09 10.3    2.036    2.945   149.6     9.9    18.0
- 6.24  -0.98  + 42.0  + 1.0  1982 BE1  10529  - 8.77  +0.21  + 30.9  - 4.7
1991 05 14    15 03.35   -07 10.5    1.978    2.974   168.2     4.0    17.7

1991 04 14    15 27.14   -18 58.8    1.729    2.638   148.8    11.4    17.0
- 5.28  -1.12  + 20.2  + 4.4  (4419)    16212  - 8.11  +0.26  + 34.7  - 0.3
1991 05 14    15 04.52   -17 27.5    1.687    2.696   176.5     1.3    16.5

1991 04 14    15 30.57   -22 37.8    1.853    2.748   146.9    11.5    17.2
- 6.40  -1.19  + 24.9  + 6.1  1989 YN   15899  - 9.67  +0.22  + 52.4  + 1.8
1991 05 14    15 03.89   -20 34.1    1.753    2.762   175.8     1.5    16.6

1991 04 14    15 32.81   -21 07.0    1.773    2.670   146.9    11.8    17.6
- 5.64  -1.29  + 16.9  + 5.5  1988 TD   13687  - 9.91  +0.05  + 42.9  + 2.0
1991 05 14    15 07.04   -19 31.2    1.604    2.614   176.9     1.2    16.8
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1991 04 14    15 34.31   -29 46.1    1.072    1.970   143.3    17.7    16.4
- 3.67  -1.92  - 43.0  + 8.8  1985 SJ3  14194  -10.50  +0.05  + 24.0  +11.2
1991 05 14    15 09.43   -30 19.6    0.943    1.943   167.8     6.3    15.7

1991 04 14    15 35.01   -15 48.9    1.636    2.540   147.6    12.2    18.7
- 5.21  -1.33  + 34.5  + 4.3  3105 T-3  15425  - 9.72  +0.02  + 46.0  - 1.4
1991 05 14    15 10.13   -13 37.7    1.476    2.484   174.9     2.1    18.0

1991 04 14    15 38.47   -23 18.7    1.836    2.719   145.0    12.2    16.6
- 6.02  -1.37  - 33.9  + 3.5  1975 TQ3  14184  -10.99  -0.07  -  7.8  + 4.4
1991 05 14    15 10.58   -24 23.0    1.656    2.663   173.6     2.4    16.0

1991 04 14    15 35.05   -17 19.3    2.099    2.993   147.3    10.4    17.2
- 5.25  -1.05  + 22.1  + 3.4  1988 TQ4  17823  - 8.53  +0.06  + 32.9  - 0.4
1991 05 14    15 12.33   -15 49.7    1.973    2.983   177.1     1.0    16.5

1991 04 14    15 28.95   +05 22.3    4.308    5.169   146.0     6.2    17.2
- 3.89  -0.44  + 34.7  - 2.4  1989 BQ   16234  - 5.10  +0.05  + 11.4  - 5.0
1991 05 14    15 14.56   +06 36.2    4.293    5.226   155.1     4.7    17.2

1991 04 14    15 34.97   -16 45.8    1.980    2.876   147.4    10.8    16.9
- 4.38  -1.05  + 22.3  + 3.2  1982 XQ1  12000  - 7.66  +0.07  + 30.8  - 0.9
1991 05 14    15 14.85   -15 18.7    1.872    2.882   176.9     1.1    16.3

1991 04 14    15 39.29   -25 11.0    1.185    2.083   144.2    16.4    17.7
- 3.84  -1.83  -  8.6  + 7.4  1985 PE1  10545  -11.24  -0.23  + 41.8  + 7.4
1991 05 14    15 13.74   -24 21.7    0.989    1.997   173.8     3.1    16.8

1991 04 14    15 38.45   -24 50.9    1.833    2.712   144.5    12.4    17.1
- 4.81  -1.27  + 40.4  + 7.8  1988 VH   14199  - 9.11   0.00  + 79.2  + 3.6
1991 05 14    15 15.24   -21 43.8    1.653    2.662   176.5     1.3    16.4

1991 04 14    15 40.90   -18 51.7    1.706    2.596   145.6    12.6    18.0
- 5.54  -1.35  + 30.5  + 5.2  (4445)    16220  -10.20  -0.01  + 51.0  + 0.5
1991 05 14    15 14.82   -16 40.9    1.546    2.556   178.1     0.7    17.1

1991 04 14    15 38.56   -20 46.3    2.153    3.034   145.7    10.7    17.8
- 4.99  -1.07  + 15.0  + 4.2  1978 TR2   8391  - 8.53  +0.01  + 34.0  + 1.4
1991 05 14    15 16.31   -19 27.6    2.003    3.013   178.7     0.4    17.0

1991 04 14    15 39.76   -20 30.0    2.575    3.449   145.5     9.5    17.4
- 5.27  -0.89  + 10.6  + 3.3  3107 T-3  13863  - 8.03  +0.05  + 25.2  + 1.0
1991 05 14    15 18.10   -19 32.0    2.469    3.480   178.8     0.4    16.8

1991 04 14    15 43.45   -17 30.3    1.961    2.843   145.3    11.6    18.4
- 5.78  -1.16  + 35.5  + 4.0  1985 UF5  15885  - 9.41  +0.07  + 47.3  - 0.8
1991 05 14    15 18.41   -15 17.4    1.856    2.866   177.0     1.1    17.8

1991 05 14    15 19.33   -17 53.0    1.943    2.954   179.6     0.1    16.3
- 7.92  +0.01  + 19.7  + 0.4  1985 JY   11426  - 4.46  +1.02  +  9.0  - 3.7
1991 06 13    14 58.91   -17 02.3    2.060    2.959   146.3    11.0    17.0

1991 05 14    15 22.42   -14 50.3    1.756    2.765   176.4     1.3    17.4
- 9.89  +0.04  + 29.1  - 1.0  (4476)    16409  - 5.75  +1.17  +  9.0  - 5.2
1991 06 13    14 56.89   -13 45.5    1.900    2.792   144.8    12.1    18.2

1991 05 14    15 22.58   -07 10.6    2.644    3.641   168.8     3.1    17.2
- 7.04  -0.01  + 47.0  - 3.3  1976 UH16 12784  - 4.64  +0.74  + 17.2  - 6.0
1991 06 13    15 03.70   -05 29.5    2.767    3.627   142.6     9.8    17.6
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1991 05 14	15 23.82	-07 29.1	1.246	2.247	169.1	4.9	15.6
- 9.38	-0.01	+ 21.4	- 6.5	1988 RG4	14951	- 4.54	+1.39	- 26.1	- 8.1
1991 06 13	15 00.37	-07 33.3	1.365	2.259	142.9	15.7	16.2
1991 05 14	15 24.85	-21 53.5	1.024	2.033	176.2	1.9	14.4
-10.72	-0.08	+ 4.3	+ 3.9	(4362)	16689	- 4.73	+1.74	+ 5.3	- 3.6
1991 06 13	14 58.35	-21 25.1	1.124	2.053	147.1	15.6	15.3
1991 05 14	15 24.70	-16 23.7	1.869	2.879	177.6	0.8	16.2
- 8.60	-0.08	+ 23.1	- 0.1	1980 BB	14014	- 5.30	+1.05	+ 9.1	- 4.3
1991 06 13	15 01.78	-15 27.5	1.955	2.857	146.5	11.3	16.8
1991 05 14	15 25.12	-38 19.2	2.271	3.238	159.9	6.1	17.2
-10.23	-0.13	+ 11.8	+ 9.0	(4471)	16407	- 6.77	+1.14	+ 48.9	+ 2.3
1991 06 13	14 57.27	-36 35.6	2.316	3.212	146.4	10.1	17.4
1991 05 14	15 25.41	-21 50.0	1.492	2.501	176.2	1.6	18.0
-10.16	+0.01	+ 23.2	+ 3.0	2257 T-2	14966	- 5.41	+1.34	+ 20.6	- 3.6
1991 06 13	14 59.62	-20 32.2	1.628	2.542	147.3	12.5	18.7
1991 05 14	15 25.84	-25 46.0	1.901	2.905	172.4	2.6	15.2
- 8.19	-0.07	+ 33.2	+ 4.3	(4449)	16222	- 4.79	+1.07	+ 39.8	- 2.3
1991 06 13	15 04.28	-23 44.3	1.982	2.899	148.8	10.4	15.7
1991 05 14	15 25.62	-04 41.8	1.224	2.219	166.3	6.2	17.1
- 9.73	-0.25	+ 53.1	- 7.3	1981 QE2	13855	- 5.67	+1.42	- 9.8	-11.7
1991 06 13	14 59.44	-03 28.7	1.255	2.140	140.6	17.5	17.5
1991 05 14	15 27.26	-11 59.4	1.659	2.665	173.4	2.5	18.0
- 9.74	-0.07	+ 42.0	- 2.4	1978 TP2	13600	- 5.94	+1.17	+ 12.0	- 6.8
1991 06 13	15 01.45	-10 30.2	1.763	2.656	144.5	12.8	18.5
1991 05 14	15 27.20	-28 47.8	2.014	3.013	169.3	3.6	16.8
- 9.26	-0.11	+ 21.2	+ 5.7	1978 SV7	17198	- 5.91	+1.09	+ 37.5	- 0.7
1991 06 13	15 02.24	-27 08.1	2.084	2.998	148.5	10.2	17.1
1991 05 14	15 28.37	-03 19.5	1.966	2.954	164.8	5.1	15.7
- 7.49	-0.04	+ 43.5	- 6.3	1985 DX2	16579	- 4.51	+0.92	- 2.6	- 8.0
1991 06 13	15 08.61	-02 15.0	2.096	2.962	141.8	12.2	16.2
1991 05 14	15 28.70	-11 01.0	2.026	3.031	172.3	2.5	16.2
- 9.23	-0.19	+ 21.8	- 2.2	1989 AU	14357	- 6.64	+0.96	- 2.2	- 5.4
1991 06 13	15 02.78	-10 25.7	2.061	2.949	144.8	11.5	16.5
1991 05 14	15 29.16	-16 53.0	2.056	3.065	177.2	0.9	16.1
- 8.27	-0.09	+ 34.0	+ 0.2	1973 UJ5	14184	- 5.36	+0.95	+ 20.9	- 4.3
1991 06 13	15 06.81	-15 22.3	2.146	3.052	147.6	10.3	16.7
1991 05 14	15 30.26	-12 03.4	1.432	2.438	173.2	2.8	16.0
- 9.43	-0.11	+ 28.2	- 2.8	(4387)	15872	- 5.38	+1.27	- 2.9	- 6.7
1991 06 13	15 05.51	-11 18.4	1.535	2.443	145.8	13.5	16.7
1991 05 14	15 30.35	-23 44.1	2.017	3.024	174.0	2.0	17.4
- 9.44	-0.12	+ 32.9	+ 3.6	1984 SZ1	16870	- 6.27	+1.05	+ 36.6	- 2.5
1991 06 13	15 04.63	-21 48.6	2.091	3.005	148.6	10.1	17.8
1991 05 14	15 31.24	-17 23.9	1.384	2.393	176.9	1.3	15.3
- 9.39	0.00	+ 82.2	- 0.1	1989 WZ	15723	- 4.79	+1.31	+ 52.5	- 8.5
1991 06 13	15 07.56	-13 46.3	1.520	2.436	147.2	13.1	16.1