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CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object		Date	UT	R. A. (2000)	Decl.	Reference	Mag.	N	Obs.
1988 RA		1989 03	11.02027	03 38 36.78	+50 11 19.7	MPC 14433			801
1988 VU7	*	1988 11	15.32698	05 26 22.13	+26 10 15.9	MPC 14879		1	808
1990 SF26		1990 09	22.88197	23 44 49.61	+01 19 44.7	MPC 19092	16.5		095
1990 SF26		1990 09	22.89586	23 44 48.90	+01 19 41.6	MPC 19092	16.5		095
(1)		1932 07	10.90299	19 34.68	-29 39.4	RI 670	8.0		078
(2)		1933 07	25.0	21 56.7	+13 13	RI 808	9.2		004
(3)		1937 03	27.83594	12 17 26.52	+03 00 24.1	RI 1613			073
(3)		1937 04	10.86351	12 07 07.24	+04 51 49.6	RI 1613			073
(7)		1934 03	24.9	11 18.0	-04 50	RI 953			073
(18)		1931 03	10.00869	12 06 33	+06 25.4	RI 434	10.4		006
(20)		1929 04	09.0014	13 56 23	-11 56.2	RI 197	9.4	2	999
(33)		1931 05	15.0229	16 56 07	-25 11.4	RI 443	12.0		006
(39)		1932 10	07.07	02 53.3	+02 46	RI 667			012
(42)		1932 04	08.57362	13 59.6	+00 42	RI 618	10.8		377
(65)		1932 08	04.87873	18 17.93	-19 28.7	RI 670	12.4		078
(68)		1932 09	28.12	02 44.4	+11 45	RI 667			012
(78)		1932 07	10.90299	19 31.26	-31 00.4	RI 670	12.0		078
(87)		1931 05	12.0451	15 58 14	-15 43.3	RI 440	11.5	3	006
(89)		1934 03	24.8	11 13.3	-13 38	RI 953			073
(100)		1933 06	19.91668	18 00.4	-16 57	RI 815	11.0		078
(110)		1929 04	09.0014	13 57 31	-06 51.0	RI 197	10.9	2	999
(114)		1931 03	14.92392	12 35 10.50	-01 05 07.7	RI 434	10.3		078
(114)		1931 03	14.94608	12 35 09.62	-01 04 57.1	RI 434			078
(127)		1934 04	16.0063	13 44 03	-09 26.1	RI 974	10.5		006
(144)		1931 05	12.0451	15 59 13	-18 03.3	RI 440	11.3	3	006

(151)	1933	10	13.89	00	11.3	-04	35	RI	871		012
(156)	1933	10	13.94	00	13.2	+13	13	RI	864		012
(172)	1932	02	04.00869	10	13.6	+13	24.2	RI	552	11.2	022
(180)	1932	02	25.9	09	50.0	+12	41	RI	566	12.5	990
(180)	1932	02	26.9	09	49.1	+12	45	RI	566	12.5	990
(182)	1932	08	04.87873	18	31.20	-23	23.2	RI	670	13	078
(204)	1932	11	29.87389	05	08.4	+13	56	RI	694	12.9 4	094
(218)	1928	09	13.49660	23	47 04	-02	29.7	RI	184		388
(219)	1933	02	25.88098	12	27.4	-09	33	RI	782	12.7	078
(227)	1933	09	18.03	00	39.7	+13	07	RI	838		012
(227)	1933	09	28.01	00	32.0	+12	40	RI	858		012
(231)	1933	11	22.05917	04	51.5	+29	36	RI	886	13.5	094
(245)	1932	09	26.87817	23	40.83	-10	35.0	RI	670	10.2	078
(263)	1932	02	04.9	08	09.2	+18	11	RI	549	13.6	990
(306)	1932	09	26.87817	23	25.68	-11	48.2	RI	670	10.0	078
(329)	1931	03	20.90546	13	07 59.20	-01	48 18.3	RI	434	12.0	078
(329)	1931	03	20.92762	13	07 58.26	-01	48 03.2	RI	434		078
(331)	1933	01	28.99	09	51.3	+21	19	RI	726	5	012
(335)	1934	04	10.9972	13	51 07	-03	37.8	RI	974	11.3	006
(365)	1928	09	23.02281	00	44.1	+04	29.7	RI	126		012
(369)	1932	07	04.94604	19	26.86	-26	23.0	RI	670	12.5	078
(369)	1932	07	10.90299	19	21.04	-27	05.4	RI	670	12.5	078
(387)	1932	09	26.92411	02	23.76	-13	21.6	RI	670	12	078
(409)	1932	10	30.0486	03	18.0	+23	10.0	RI	681	11.0	006
(424)	1932	09	25.90895	23	59.71	-13	57.7	RI	670	12.6	078
(424)	1932	09	26.87817	23	58.93	-14	02.6	RI	670	12.4	078
(443)	1929	04	09.0014	14	04 30	-08	28.5	RI	197	12.6 2	999
(451)	1931	11	09.00313	03	47 28	+05	06.9	RI	519	10.0	006
(471)	1934	03	15.9	12	53.3	+16	51	RI	949	11.0 3	020
(472)	1932	02	04.0000	10	51 11	+17	10.9	RI	582		006
(477)	1933	01	27.99	08	13.9	+27	43	RI	718		012
(483)	1933	02	18.98	08	32.1	+01	36	RI	733	3	012
(488)	1932	09	25.90895	23	49.75	-18	13.1	RI	670	12.3	078
(489)	1933	02	18.98	08	44.1	+07	55	RI	733	3	012
(540)	1933	03	22.97730	12	49.3	-08	10	RI	800	11.5	022
(541)	1932	07	04.94604	19	31.10	-18	34.6	RI	670	12.6	078
(554)	1933	11	18.06792	04	38.5	+26	39	RI	886	9.8	094
(614)	1931	05	18.87666	15	54.06	-16	27.8	RI	460	14.3	078
(615)	1932	12	23.90	03	48.4	+23	23	RI	704		012
(615)	1932	12	24.83	03	47.9	+23	21	RI	704		012
(620)	1932	08	04.92547	19	54.71	-33	09.1	RI	670	13.0	078
(635)	1933	02	18.98	08	38.4	+06	19	RI	733	3	012
(638)	1934	04	20.0007	14	27 50	-01	01.6	RI	974	12.5	006
(638)	1934	04	21.0014	14	27 01	-00	57.9	RI	974	12.5	006
(667)	1932	09	26.92411	02	43.73	-13	41.7	RI	670	13.8	078
(678)	1928	08	26.04528	00	02.4	+11	02	RI	115	11.5 3	094
(697)	1932	10	26.87	00	14.4	+00	53	RI	673	6	012
(706)	1928	08	26.04528	23	54.9	+10	25	RI	115	12.8 3	094
(736)	1928	08	19.11648	22	55 16.56	-09	52 53.9	RI	129		078
(736)	1928	08	25.96334	22	50.2	-10	55	RI	115	11 3	094
(737)	1932	06	21.8	17	50.5	-00	15	RI	632		073
(755)	1931	05	12.0451	15	27 56	-14	35.7	RI	440	12.6 3	006
(769)	1934	04	10.9972	13	36 31	-06	09.0	RI	974	12.6	006
(772)	1931	05	12.0451	16	01 46	-14	14.9	RI	440	11.7 3	006
(774)	1928	08	26.04528	23	38.0	+06	40	RI	115	12.2 3	094
(776)	1931	06	18.96443	17	35.89	-25	27.4	RI	462	11.3	078
(786)	1932	08	04.92547	20	06.84	-32	00.0	RI	670	13.0	078
(835)	1933	08	25.89	22	30.3	-06	54	RI	824		012

(840)	1928 12 05.45619	04 48 30	+27 27.8	RI	183	13.5			389
(868)	1932 09 26.87817	23 50.00	-10 34.9	RI	670	12.0			078
(914)	1931 10 15.43785	01 38.2	+43 52	RI	510	12.0			377
(945)	1934 02 08.9993	10 26 37	-05 12.5	RI	942	12.6			006
(947)	1928 08 25.96334	23 03.9	-18 43	RI	115	10.9		3	094
(1013)	1929 04 09.0014	13 46 32	-09 24.6	RI	197	12.7		2	999
(1015)	1932 07 04.94604	19 54.56	-18 27.3	RI	670	12.6			078
(1098)	1932 08 04.92547	20 17.43	-29 05.9	RI	670	13.6			078
(1196)	1932 09 26.92411	02 19.16	-18 50.4	RI	670	12.4			078
(1210)	1932 09 25.90895	23 50.34	-17 57.6	RI	670	13.3			078

Note 1: date corrected by +10 days. 2: date corrected by +1 day. 3: date corrected by -1 day. 4: originally given as (240). 5: originally given as (321). 6: originally given as (687).

* * * * *

DELETED OBSERVATIONS.

The following observations are to be deleted.

Object		Date	UT	R. A. (2000)	Decl.	Reference	Obs.
1976 WE1	*	1976 11	24.30384	06 58 00.62	+07 52 28.4	MPC 17484	805
1990 QQ18	*	1990 08	29.93125	00 04 01.61	+02 38 37.0	MPC 19088	095
1990 QQ18		1990 08	29.94792	00 04 00.78	+02 38 34.1	MPC 19088	095
1990 UR8	*	1990 10	24.25417	02 45 23.90	+06 51 31.0	MPC 18981	809
1990 UR8		1990 10	24.26736	02 45 23.28	+06 51 30.7	MPC 18981	809
1990 UR8		1990 10	24.28056	02 45 22.56	+06 51 28.3	MPC 18981	809
1990 UP9	*	1990 10	24.25417	03 02 47.98	+05 28 21.2	MPC 18983	809
1990 UP9		1990 10	24.26736	03 02 47.19	+05 28 22.7	MPC 18983	809
1990 UP9		1990 10	24.28056	03 02 46.43	+05 28 23.6	MPC 18983	809
1991 FA4	*	1991 03	22.29097	13 18 12.10	-08 07 40.7	MPC 19233	809
1991 FA4		1991 03	22.30347	13 18 11.62	-08 07 38.0	MPC 19233	809
1991 FA4		1991 03	22.31597	13 18 11.16	-08 07 35.6	MPC 19233	809
1991 FA4		1991 03	23.34618	13 17 31.48	-08 03 53.3	MPC 19233	809
1991 FA4		1991 03	23.35660	13 17 31.06	-08 03 51.1	MPC 19233	809
1991 FA4		1991 03	23.36701	13 17 30.66	-08 03 48.9	MPC 19233	809
1991 FA4		1991 03	24.38333	13 16 51.01	-08 00 06.1	MPC 19233	809
1991 FA4		1991 03	24.39166	13 16 50.68	-08 00 04.4	MPC 19233	809
1991 FA4		1991 03	24.40000	13 16 50.36	-08 00 02.7	MPC 19233	809
1991 FA4		1991 03	25.35556	13 16 12.19	-07 56 30.3	MPC 19233	809
1991 FA4		1991 03	25.36459	13 16 11.83	-07 56 28.4	MPC 19233	809
1991 FA4		1991 03	25.37361	13 16 11.46	-07 56 26.5	MPC 19233	809

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 20670.

Object		Date	UT	R. A. (2000)	Decl.	Old desig.	Mag.	Obs.
A915 UA	*	1915 10	17.00708	00 46 05.74	+00 14 45.4	A915 TG		024
1929 CK1	*	1929 02	08.92759	08 16.1	+24 58.9	725		012
1929 CK1		1929 02	11.90157	08 13.4	+25 00.9	725		012
1929 CK1		1929 02	13.98783	08 11.7	+25 01.5	725		012
1930 JD	*	1930 05	07.07	19 14.0	-27 12	384	14.2	081
1930 KV	*	1930 05	24.94081	17 00.01	-13 44.1	794	13.0	078
1930 SG1	*	1930 09	16.92128	23 24.68	-15 07.5	553	13.8	078

1932	EG1	*	1932	03	13.09	12	35.9	-14	20	916			012
1932	EH1	*	1932	03	14.86092	11	39.66	-02	03.1	1033		13.7	078
1932	PK	*	1932	08	01.94405	21	19.79	-14	03.6	744		13.5	078
1932	WQ	*	1932	11	29.87389	05	06.2	+15	17	870		13.7	094
1933	CA	*	1933	02	15.85320	04	16.6	+20	08	299		14.5	024
1933	DN	*	1933	02	18.98	08	48.0	+02	22	386			012
1933	FB2	*	1933	03	26.01	13	16.0	-08	52	658			012
1933	FC2	*	1933	03	25.01244	13	53 58	-15	46.7	645		14	029
1933	FC2		1933	03	25.06646	13	53 55	-15	46.6	645		14	029
1933	HO	*	1933	04	20.89862	08	35.7	+21	43	332		13.7	024
1933	QQ1	*	1933	08	17.96619	22	04.1	-15	23	981		13.7	094
1933	SR1	*	1933	09	27.94425	01	07.2	+04	34	1156		15.5	024
1933	WT	*	1933	11	21.9	03	31.0	+02	24	788		13.4	008
1933	WU	*	1933	11	21.9	03	32.6	+02	28	653		13.0	008
1934	JO	*	1934	05	05.85114	12	29.5	+05	55	483		11.9	078
1941	BB1	*	1941	01	19.81664	07	42 40.54	+39	53 36.2	1940	YG		062
1949	BU	*	1949	01	21.0	08	32.5	+21	14	1949	AB		020
1949	BU		1949	01	25.9	08	27.4	+21	44	1949	AB		020
1949	BU		1949	01	27.8	08	25.7	+21	56	1949	AB		020
1949	BU		1949	02	03.9	08	18.8	+22	35	1949	AB		020
1969	UX2	*	1969	10	16.89225	00	33 09.29	+06	34 40.3	1969	TY	17.0	095
1980	RO8	*	1980	09	03.67222	22	26 53.28	-02	41 18.4	1980	RF5		323
1986	VM9	*	1986	11	07.89201	01	18 29.56	+26	53 48.5	1986	VK9		511
1986	VM9		1986	11	07.90799	01	18 28.93	+26	53 47.2	1986	VK9		511
1988	BR5	*	1988	01	20.57187	04	42 27.49	+18	55 23.0	1987	YA		391
1988	BS5	*	1988	01	20.57187	04	42 29.13	+18	55 06.2	2624			391
1989	GQ8	*	1989	04	06.11389	12	32 11.56	-03	41 15.2	1989	GN6		809
1989	GQ8		1989	04	06.12431	12	32 11.11	-03	41 11.1	1989	GN6		809
1989	GQ8		1989	04	06.13472	12	32 10.61	-03	41 09.3	1989	GN6		809
1990	HF7	*	1990	04	30.70694	15	48 32.07	-20	34 08.2	1990	HT	17.0	372
1990	HF7		1990	04	30.72014	15	48 31.11	-20	34 05.9	1990	HT	17.0	372
1990	QN19	*	1990	08	30.92770	22	20 14.73	-07	26 48.7	1990	QZ17	15.8	095
1990	SJ29	*	1990	09	23.89652	00	07 15.93	+00	23 07.1	1990	RC17	16.5	095
1990	SK29	*	1990	09	23.89652	00	21 27.35	+06	09 10.2	1990	QC18	16.8	095
1990	SL29	*	1990	09	23.89652	23	57 38.02	+04	58 14.2	1990	RB17	16.5	095
1990	SM29	*	1990	09	30.31946	23	36 05.82	-02	43 06.0	1990	SK14		809
1990	SM29		1990	09	30.32916	23	36 05.40	-02	43 07.9	1990	SK14		809
1990	SM29		1990	09	30.33890	23	36 04.98	-02	43 09.8	1990	SK14		809
1990	UW13	*	1990	10	20.24444	03	08 31.74	+10	10 44.5	1990	UO3	18.5	809
1990	UW13		1990	10	20.25764	03	08 31.16	+10	10 39.8	1990	UO3		809
1990	UW13		1990	10	20.27083	03	08 30.66	+10	10 34.0	1990	UO3		809
1990	UX13	*	1990	10	16.81667	23	59 51.66	-03	43 02.2	1990	TW15	16.0	095
1990	UX13		1990	10	16.83681	23	59 50.86	-03	43 13.1	1990	TW15	16.0	095
1990	VW15	*	1990	11	13.71007	04	11 07.52	+11	22 29.3	1990	VZ1	18.5	372
1990	VW15		1990	11	13.71875	04	11 07.14	+11	22 25.1	1990	VZ1		372
1990	WT15	*	1990	11	22.16458	03	23 57.48	+14	01 31.6	1990	WH3		809
1990	WT15		1990	11	22.17500	03	23 56.72	+14	01 27.8	1990	WH3		809
1990	WT15		1990	11	22.18542	03	23 55.56	+14	01 20.6	1990	WH3		809
1990	WU15	*	1990	11	23.83368	03	15 23.73	+10	20 10.0	1990	WK14	16.3	095
1990	WU15		1990	11	23.84722	03	15 23.42	+10	20 08.3	1990	WK14	16.3	095
1990	WV15	*	1990	11	21.66354	04	10 45.25	+17	23 29.7	1990	WO2	17	372
1990	WV15		1990	11	21.67535	04	10 44.57	+17	23 27.2	1990	WO2		372
1991	NX7	*	1991	07	15.15938	20	02 46.78	-18	20 50.8	1991	NH7		809
1991	NX7		1991	07	15.16978	20	02 46.12	-18	20 53.5	1991	NH7		809
1991	NX7		1991	07	15.18021	20	02 45.46	-18	20 56.0	1991	NH7		809
1992	RO	*	1992	09	01.71858	22	18 50.05	-07	55 02.0	1992	QO	17.0	894
1992	RO		1992	09	01.72847	22	18 49.48	-07	55 04.5	1992	QO		894

IDENTIFICATIONS.

The following identifications with numbered minor planets, by G. V. Williams, continues the list on MPC 20062:

	Note			
A899 JA = (2957)		A908 ED = (3642)	A910 UB = (2341)	
A915 UA = (1941)		1929 CK1 = (302)	1929 UM = (3689)	
1930 JD = (333)		1930 KV = (1075)	1930 SG1 = (1185)	
1932 EG1 = (979)		1932 EH1 = (557)	1932 PK = (2249)	
1932 WQ = (1385)		1933 CA = (380)	1933 DN = (1306)	
1933 FB2 = (915)		1933 FC2 = (169)	1933 HO = (224)	
1933 WT = (653)		1933 WU = (788)	1934 JO = (196)	
1938 QH = (1572)		1939 YB = (1708)	1940 CN = (372)	
1940 ES = (1502)		1940 YG = (2797)	1942 JC = (1632)	
1946 WA = (1475)		1948 JL = (3121)	1949 BU = (3467)	
1950 OQ = (1481)	1	1951 RA2 = (1003)	1958 RE = (1611)	
1963 VK = (1483)		1969 UX2 = (4367)	1971 SK3 = (3457)	
1980 RO8 = (4437)		1984 WX4 = (3237)	1984 YP6 = (1014)	
1984 YQ6 = (1244)		1984 YR6 = (4641)	1984 YY6 = (1216)	
1988 BR5 = (2624)		1988 VU7 = (49)	1989 GQ8 = (2835)	
1989 WM6 = (3894)		1990 EM8 = (4515)	1990 EO10= (4843)	
1990 FO3 = (2741)		1990 HG4 = (56)	1990 HF7 = (4206)	
1990 SJ29= (4645)		1990 UX13= (4975)	1990 WV15= (3268)	
1991 NX7 = (4944)				

Note 1: the double designation 1950 NG1 = 1950 OG (MPC 1278) is invalid.

* * * * *

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

046 Klet. 0.63-m Maksutov reflector and 0.57-m f/5 reflector. Observers Z. Moravec, J. Ticha, M. Tichy and Z. Vavrova.
071 Rozhen. Observers V. G. Shkodrov and V. G. Ivanova.
083 Golosseevo (Kiev). 0.40-m f/5 astrograph. Observer Yu. V. Simonenko. From Kiev Komet. Tsirk.
168 Kourovskaya. 0.42-m f/1.85 camera. Observers G. S. Romashin, T. V. Slautina and S. M. Timirshin. From Kiev Komet. Tsirk.
372 Geisei. 0.60-m f/3.5 reflector. Observer T. Seki.
376 Uenohara. 0.30-m reflector + CCD. Observer N. Kawasato.
391 Sendai Observatory, Ayashi Station. 0.3-m telephoto lens. Observer M. Koishikawa.
402 Dynic Astronomical Observatory. 0.25-m f/3.4 Schmidt. Observer A. Sugie.
410 Sengamine. 0.20-m reflector + CCD. Observer K. Ito.
411 Oizumi. 0.16-m f/4.8 reflector + CCD. Observer T. Kobayashi.
413 Siding Spring. 1.0-m reflector + CCD. Observers R. H. McNaught and D. I. Steel.
494 Stakenbridge. Observer B. Manning.
540 Linz. 0.30-m f/5.2 Schmidt Cassegrain. Observers E. Meyer, E. Obermair and H. Raab.
557 Ondrejov. 0.18-m f/5.6 Maksutov + CCD. Observer P. Pravec.
587 Sormano. 0.21-m f/4.9 astrograph. Observers M. Cavagna and P. Sicoli.
589 Santa Lucia Stroncone. 0.50-m f/2.8 Ritchey-Chretien + CCD. Observers A. Vagnozzi, V. Risoldi and G. Bernabei.
595 Farra d'Isonzo. 0.4-m f/4.5 reflector. Observers W. Boschin, G. Lombardi, E. Pettarin and F. Piani.
596 Colleverde di Guidonia. 0.31-m f/2.8 Baker-Schmidt + CCD. Observer

V. S. Casulli.
657 Climenhaga Observatory, Victoria. 0.25-m Schmidt telescope. Observer J. B. Tatum.
675 Palomar. 0.46-m Schmidt. Observers E. F. Helin, K. J. Lawrence, J. Alu, S. Cohen, C. Brewer and P. Rose.
691 Kitt Peak. 0.91-m Spacewatch telescope. Observer J. V. Scotti.
693 University of Arizona, Catalina Station. 1.5-m reflector + CCD. Observers S. M. Larson and C. D. Slaughter.
695 Kitt Peak. Michigan-Dartmouth-M.I.T. 2.4-m reflector + CCD. Observers J. X. Luu and D. C. Jewitt.
801 Oak Ridge. 1.5-m reflector + CCD. Observers R. E. McCrosky and C.-Y. Shao.
809 European Southern Observatory. 1.0-m Schmidt. Observers G. Pizarro and O. Pizarro. Measured by E. W. Elst.
894 Otomo. 0.25-m f/3.4 reflector. Observer S. Otomo.
897 YGCO Chiyoda Station. 0.25-m f/3.4 Wright-Schmidt. Observer T. Kojima.
900 Kiryuu Observatory, Ohtsu. 0.26-m f/2.9 reflector + CCD. Observer Y. Ikari.

Object	Date	UT	R. A. (2000)	Decl.	Mag.	N	Obs.
		Periodic Comet Grigg-Skjellerup					
/1987 X	1992	09 06.38330	14 38 23.97	-01 13 47.3			413
/1987 X	1992	09 06.38571	14 38 24.54	-01 13 48.3			413
		Periodic Comet Schwassmann-Wachmann 2					
/1987 XIX	1991	09 12.322	21 36 10	-16 02.5	20.9 T		695
/1987 XIX	1991	09 12.330	21 36 10	-16 02.5			695
/1987 XIX	1991	09 14.141	21 35 13	-16 07.5	20.9 T		695
/1987 XIX	1991	09 14.339	21 35 06	-16 08.0			695
/1987 XIX	1991	09 15.111	21 34 43	-16 10.0	20.7 T		695
/1987 XIX	1991	09 15.318	21 34 36	-16 10.6			695
/1987 XIX	1992	09 24.35140	00 25 06.79	-02 03 43.8	17.9 T		691
/1987 XIX	1992	09 24.35917	00 25 06.47	-02 03 46.2	20.5 N	1	691
/1987 XIX	1992	09 24.36657	00 25 06.15	-02 03 48.7			691
/1987 XIX	1992	09 25.18185	00 24 31.43	-02 08 01.7	18 T		801
/1987 XIX	1992	09 25.19793	00 24 30.86	-02 08 07.2			801
/1987 XIX	1992	09 25.33619	00 24 24.79	-02 08 49.2			801
/1987 XIX	1992	09 25.34709	00 24 24.33	-02 08 53.0	18.0 T		691
/1987 XIX	1992	09 25.35079	00 24 23.91	-02 08 53.7			801
/1987 XIX	1992	09 25.36536	00 24 23.51	-02 08 57.8			691
/1987 XIX	1992	09 25.38383	00 24 22.64	-02 09 03.6			691
/1987 XIX	1992	09 30.14355	00 20 57.45	-02 33 25.4			801
/1987 XIX	1992	09 30.15671	00 20 56.90	-02 33 29.6			801
		Periodic Comet Tempel 2					
/1988 XIV	1992	02 23.31547	10 13 24.78	+19 32 11.2			691
/1988 XIV	1992	02 23.33735	10 13 23.75	+19 32 18.9	20.9 T		691
/1988 XIV	1992	02 23.35897	10 13 23.19	+19 32 17.6			691
		Comet Levy (1990 XX)					
/1990 XX	1990	08 12.83563	22 26 05.89	+21 09 57.5			083
/1990 XX	1990	08 17.94493	21 39 55.30	+14 10 49.7			083
/1990 XX	1990	08 17.99343	21 39 24.49	+14 05 41.3			083
/1990 XX	1990	08 23.00589	20 40 04.16	+03 19 47.3			083
/1990 XX	1990	08 28.79977	19 22 06.23	-11 39 27.3			083
/1990 XX	1990	08 29.81910	19 08 37.12	-14 06 16.4			083

Comet McNaught-Russell (1990 XXII)

/1990 XXII	1992 09 24.23632	21 59 35.80	-29 34 30.3	22.2 N	2	691
/1990 XXII	1992 09 24.24496	21 59 35.59	-29 34 32.7	19.1 T		691
/1990 XXII	1992 09 24.25374	21 59 35.40	-29 34 35.0			691

Periodic Comet Taylor

/1990 XXX	1991 01 13.95618	07 24 13.74	+23 52 36.7			071
/1990 XXX	1991 01 16.97914	07 22 07.42	+24 52 12.2			071
/1990 XXX	1991 01 17.00368	07 22 06.17	+24 52 39.8			071

Periodic Comet Van Biesbroeck

/1989h 1	1991 09 05.12847	21 06 21.96	-15 45 19.3			809
/1989h 1	1991 09 05.14167	21 06 21.82	-15 45 21.6			809
/1989h 1	1991 09 05.15486	21 06 21.60	-15 45 24.6			809
/1989h 1	1991 09 07.05556	21 05 59.40	-15 53 12.2			809
/1989h 1	1991 09 07.06875	21 05 59.20	-15 53 15.3			809

Comet Shoemaker-Levy (1991d)

/1991d	1992 06 26.89757	20 58 18.62	+41 38 48.8			540
/1991d	1992 06 26.91562	20 58 17.52	+41 38 40.7			540
/1991d	1992 07 03.89757	20 50 51.06	+40 37 38.2			540
/1991d	1992 07 03.90868	20 50 50.30	+40 37 31.0			540
/1991d	1992 07 03.91979	20 50 49.61	+40 37 24.9			540
/1991d	1992 07 24.88021	20 26 24.61	+35 45 35.8			540
/1991d	1992 07 24.89132	20 26 23.83	+35 45 23.0			540
/1991d	1992 07 24.90243	20 26 22.96	+35 45 11.1			540
/1991d	1992 07 24.91354	20 26 22.32	+35 45 00.1			540
/1991d	1992 07 30.89028	20 19 42.31	+33 53 12.5			540
/1991d	1992 07 30.90069	20 19 41.62	+33 52 59.4			540
/1991d	1992 07 30.91125	20 19 40.83	+33 52 48.0			540
/1991d	1992 08 16.90383	20 03 46.31	+27 45 15.4			589
/1991d	1992 08 16.91438	20 03 45.84	+27 45 01.4			589
/1991d	1992 08 16.92684	20 03 45.25	+27 44 43.0			589
/1991d	1992 08 16.93896	20 03 44.61	+27 44 26.5			589
/1991d	1992 08 17.83054	20 03 04.23	+27 23 50.0			589
/1991d	1992 08 17.84444	20 03 03.62	+27 23 29.9			589
/1991d	1992 08 17.85849	20 03 02.95	+27 23 10.1			589
/1991d	1992 08 17.88209	20 03 01.83	+27 22 37.9			589
/1991d	1992 08 18.85762	20 02 18.61	+26 59 57.6			589
/1991d	1992 08 18.86257	20 02 18.36	+26 59 50.2			589
/1991d	1992 08 18.86890	20 02 18.06	+26 59 41.5			589
/1991d	1992 08 19.90172	20 01 33.71	+26 35 35.9			589
/1991d	1992 08 19.91433	20 01 33.13	+26 35 18.5			589
/1991d	1992 08 19.93459	20 01 32.29	+26 34 49.9			589
/1991d	1992 08 27.84405	19 56 40.80	+23 28 41.6			046
/1991d	1992 08 27.85551	19 56 40.38	+23 28 24.1			046
/1991d	1992 08 30.88995	19 55 11.46	+22 17 05.2			046
/1991d	1992 08 31.83987	19 54 46.15	+21 54 46.4			589
/1991d	1992 09 02.83646	19 53 57.04	+21 08 07.2			595
/1991d	1992 09 02.91944	19 53 55.13	+21 06 10.6			595
/1991d	1992 09 19.79167	19 50 32.71	+14 50 50.1			540
/1991d	1992 09 19.81285	19 50 32.63	+14 50 23.1			540
/1991d	1992 09 26.85799	19 50 50.64	+12 28 02.7			540
/1991d	1992 09 26.87882	19 50 50.71	+12 27 38.1			540
/1991d	1992 10 02.56087	19 51 44.81	+10 40 27.9			900
/1991d	1992 10 02.57939	19 51 45.07	+10 40 07.3			900

Periodic Comet Kowal 1

/1991i	1992	04	25.29845	13 37 08.04	-10 02 40.4	17.1	T	691
/1991i	1992	04	25.32465	13 37 07.23	-10 02 37.1			691
/1991i	1992	04	25.34493	13 37 06.63	-10 02 34.1			691

Periodic Comet Hartley 2

/1991t	1991	11	06.01273	10 11 07.24	+02 16 11.4	9.2	T	168
/1991t	1991	11	06.95949	10 12 54.02	+01 59 15.5	9.0	T	168
/1991t	1991	11	06.96713	10 12 54.63	+01 59 05.4			168

Comet McNaught-Russell (1991v)

/1991v	1992	09	05.79882	08 10 32.89	-42 59 31.4		3	413
/1991v	1992	09	05.80196	08 10 33.04	-42 59 30.2		3	413

Comet Shoemaker-Levy (1991a1)

/1991a 1	1992	06	20.88924	02 54 32.50	+71 14 44.8			540
/1991a 1	1992	06	20.89618	02 54 36.70	+71 15 10.0			540
/1991a 1	1992	06	20.90313	02 54 41.12	+71 15 38.1			540
/1991a 1	1992	06	20.91007	02 54 45.58	+71 16 05.5			540
/1991a 1	1992	07	17.84965	11 35 42.16	+45 25 14.1			595
/1991a 1	1992	07	17.85660	11 35 43.64	+45 24 13.5			595
/1991a 1	1992	07	19.88368	11 42 16.02	+40 30 34.9			540
/1991a 1	1992	07	19.89063	11 42 17.22	+40 29 36.4			540
/1991a 1	1992	07	19.89757	11 42 18.38	+40 28 34.8			540
/1991a 1	1992	07	19.90451	11 42 19.60	+40 27 36.7			540
/1991a 1	1992	07	20.87396	11 44 57.84	+38 10 29.3			595
/1991a 1	1992	07	20.88090	11 44 58.97	+38 09 29.3			595
/1991a 1	1992	07	21.88715	11 47 26.76	+35 49 57.7			540
/1991a 1	1992	07	21.88958	11 47 27.09	+35 49 37.1			540
/1991a 1	1992	07	21.89201	11 47 27.46	+35 49 18.0			540
/1991a 1	1992	07	21.89792	11 47 28.23	+35 48 29.5			540
/1991a 1	1992	07	22.85938	11 49 35.57	+33 38 09.2			595
/1991a 1	1992	07	22.86701	11 49 36.50	+33 37 06.3			595

Comet Tanaka-Machholz (1992d)

/1992d	1992	06	18.88854	06 14 54.85	+62 08 52.5			540
/1992d	1992	06	18.89554	06 14 57.43	+62 08 43.8			540
/1992d	1992	06	20.93333	06 26 23.94	+61 27 21.4			540
/1992d	1992	06	30.90313	07 12 16.20	+57 51 19.5			540
/1992d	1992	06	30.91806	07 12 19.81	+57 50 58.4			540

Periodic Comet Shoemaker-Levy 8

/1992f	1992	09	05.44617	15 38 23.48	-15 23 18.9			413
/1992f	1992	09	05.45262	15 38 23.56	-15 23 19.8			413
/1992f	1992	09	05.45572	15 38 23.62	-15 23 20.7			413

Comet Machholz (1992k)

/1992k	1992	07	09.04444	05 13 29.41	+32 06 13.5			540
/1992k	1992	07	09.05243	05 13 31.87	+32 05 53.5			540

Periodic Comet Giclas

/1992l	1992	09	28.48322	04 17 30.60	+09 30 04.8	19.7	N	691
/1992l	1992	09	28.49085	04 17 30.94	+09 30 04.7			691
/1992l	1992	09	28.49857	04 17 31.33	+09 30 04.2			691

Periodic Comet Wolf

/1992m	1992	09	25.40358	01 23 20.02	+16 06 10.0		4	691
/1992m	1992	09	25.42908	01 23 19.44	+16 05 45.4	20.7	N	691
/1992m	1992	09	25.46090	01 23 18.64	+16 05 15.4	17.7	T	691

Periodic Comet Daniel

/1992o	1992	09	29.47666	08	43	40.81	+26	14	35.3	20.1 N	5 691
/1992o	1992	09	29.48483	08	43	42.14	+26	14	35.6	16.3 T	691
/1992o	1992	09	29.49342	08	43	43.67	+26	14	36.0		691

Periodic Comet Brewington

/1992p	1992	09	03.79896	07	30	52.06	+36	38	39.2		894
/1992p	1992	09	04.80035	07	33	30.98	+36	35	49.2		894
/1992p	1992	09	06.12505	07	36	59.21	+36	31	56.6		587
/1992p	1992	09	06.14551	07	37	02.44	+36	31	53.5		587
/1992p	1992	09	06.15463	07	37	03.65	+36	31	51.3		587
/1992p	1992	09	25.74271	08	23	31.70	+35	17	16.4	16 T	6 372
/1992p	1992	09	25.75035	08	23	32.56	+35	17	14.4		6 372
/1992p	1992	09	26.77535	08	25	42.95	+35	12	50.6	16.5 T	372
/1992p	1992	09	26.77841	08	25	43.44	+35	12	51.0	14 T	897
/1992p	1992	09	26.78056	08	25	43.71	+35	12	50.1		372
/1992p	1992	09	26.79653	08	25	45.40	+35	12	43.6		894
/1992p	1992	09	26.79878	08	25	45.85	+35	12	46.2		897
/1992p	1992	09	26.80347	08	25	46.88	+35	12	42.7		894
/1992p	1992	09	26.81235	08	25	47.63	+35	12	41.5	15.8 T	410
/1992p	1992	09	26.81887	08	25	48.40	+35	12	40.1		410
/1992p	1992	09	26.82228	08	25	48.94	+35	12	39.2		410
/1992p	1992	10	02.75456	08	37	51.43	+34	47	00.0		900
/1992p	1992	10	02.76127	08	37	52.35	+34	46	57.1		900

Comet Helin-Lawrence (1992q)

/1992q	1992	09	03.78750	02	00	35.78	-15	11	08.5		894
/1992q	1992	09	04.78733	01	59	52.70	-15	43	57.0		894
/1992q	1992	09	06.54863	01	58	31.02	-16	42	36.6	7	413
/1992q	1992	09	06.55090	01	58	30.90	-16	42	41.2	7	413
/1992q	1992	09	06.55416	01	58	30.74	-16	42	47.9	7	413
/1992q	1992	09	06.55811	01	58	30.55	-16	42	55.8	7	413
/1992q	1992	09	22.37118	01	40	40.00	-26	18	37.6	14 T	675
/1992q	1992	09	22.39705	01	40	37.69	-26	19	38.9		675
/1992q	1992	09	24.41788	01	37	34.46	-27	36	40.2		675
/1992q	1992	09	26.39410	01	34	24.69	-28	52	03.5		675
/1992q	1992	09	26.61944	01	34	02.43	-29	00	38.7	14 T	372
/1992q	1992	09	26.63889	01	34	00.60	-29	01	21.8		372
/1992q	1992	09	27.70347	01	32	13.55	-29	41	51.6	14 T	372
/1992q	1992	09	27.71701	01	32	12.16	-29	42	20.8		372

Periodic Comet Ciffreo

/1992s	1992	09	04.69792	00	04	10.02	-23	53	14.6	19 T	8 372
/1992s	1992	09	05.68646	00	03	29.32	-23	58	23.5	19 T	8 372
/1992s	1992	09	24.27955	23	47	39.92	-24	51	11.0		691
/1992s	1992	09	24.29928	23	47	38.76	-24	51	11.4	20.6 N	691
/1992s	1992	09	24.32086	23	47	37.49	-24	51	11.0	18.0 T	9 691
/1992s	1992	09	25.24211	23	46	46.17	-24	50	57.5	18.1 T	691
/1992s	1992	09	25.25011	23	46	45.68	-24	50	57.6		691
/1992s	1992	09	25.25872	23	46	45.18	-24	50	56.8		691
/1992s	1992	09	25.65955	23	46	22.66	-24	50	46.0	18.3 T	A 372
/1992s	1992	09	26.57292	23	45	31.72	-24	50	04.3	18.0 T	A 372
/1992s	1992	09	26.60278	23	45	29.99	-24	50	05.2		A 372
/1992s	1992	09	27.55174	23	44	37.73	-24	48	58.2	18 T	376
/1992s	1992	09	27.57240	23	44	36.39	-24	48	59.0		376

Periodic Comet Swift-Tuttle

/1992t	1992	09	27.22465	11	50	34.71	+59	04	35.3		657
/1992t	1992	09	27.41424	11	51	45.90	+59	05	26.6	12.5 T	402

/1992t	1992	09	27.42326	11 51 49.22	+59 05 33.1					402
/1992t	1992	09	27.43368	11 51 53.49	+59 05 34.1					402
/1992t	1992	09	27.43403	11 51 53.52	+59 05 32.2	12.5	T			391
/1992t	1992	09	27.43715	11 51 54.19	+59 05 35.3					391
/1992t	1992	09	27.44792	11 51 58.70	+59 05 37.0					657
/1992t	1992	09	27.49897	11 52 19.39	+59 05 55.9	17.2	N			691
/1992t	1992	09	27.51008	11 52 23.39	+59 05 58.9					691
/1992t	1992	09	27.81703	11 54 19.65	+59 07 24.6	13	T			411
/1992t	1992	09	27.81736	11 54 20.00	+59 07 22.6	13	T	B		372
/1992t	1992	09	27.81801	11 54 19.86	+59 07 22.2					411
/1992t	1992	09	27.82016	11 54 20.95	+59 07 23.1					411
/1992t	1992	09	28.19375	11 56 43.32	+59 08 54.3					657
/1992t	1992	09	28.75429	12 00 21.06	+59 11 17.2			C		557
/1992t	1992	09	28.75656	12 00 22.03	+59 11 15.3			C		557
/1992t	1992	09	28.76642	12 00 25.76	+59 11 18.2	12	T	C		557
/1992t	1992	09	28.77015	12 00 27.15	+59 11 21.0			C		557
/1992t	1992	09	28.78681	12 00 33.83	+59 11 20.8					595
/1992t	1992	09	28.79410	12 00 36.66	+59 11 22.3					595
/1992t	1992	09	29.08809	12 02 32.96	+59 12 29.8					596
/1992t	1992	09	29.10289	12 02 39.03	+59 12 30.4					596
/1992t	1992	09	29.13758	12 02 52.78	+59 12 39.1					589
/1992t	1992	09	29.14222	12 02 54.51	+59 12 43.6					596
/1992t	1992	09	29.15063	12 02 58.14	+59 12 44.2					589
/1992t	1992	09	29.15337	12 02 58.80	+59 12 44.5					596
/1992t	1992	09	29.53802	12 05 32.52	+59 14 00.3					657
/1992t	1992	09	29.89070	12 07 53.66	+59 15 01.5					589
/1992t	1992	09	29.89478	12 07 55.48	+59 15 04.7					589
/1992t	1992	09	29.91407	12 08 03.00	+59 15 08.7					589
/1992t	1992	09	29.92656	12 08 07.46	+59 15 10.7					589
/1992t	1992	09	30.80584	12 14 08.86	+59 17 23.4					494
/1992t	1992	09	30.82265	12 14 16.07	+59 17 25.5					494
/1992t	1992	09	30.97994	12 15 21.17	+59 17 43.9					801
/1992t	1992	09	30.98190	12 15 21.96	+59 17 44.4					801
/1992t	1992	10	02.83438	12 28 36.80	+59 19 34.8	9	T			372
			Periodic Comet Vaisala 1							
/1992u	1992	09	26.47353	08 00 37.19	+14 16 31.1			D		691
/1992u	1992	09	26.48174	08 00 37.80	+14 16 29.7	21.7	T	D		691
/1992u	1992	09	26.49755	08 00 39.31	+14 16 25.1			D		691
/1992u	1992	09	27.47478	08 02 07.37	+14 12 42.6			D		691
/1992u	1992	09	27.48235	08 02 07.98	+14 12 41.0	21.6	T	D		691
/1992u	1992	09	27.48815	08 02 08.56	+14 12 37.9			D		691
			Periodic Comet Gehrels 3							
/1992v	1992	09	26.44826	05 25 12.80	+23 08 19.1	22.0	T	D		691
/1992v	1992	09	26.45819	05 25 12.99	+23 08 19.8			D		691
/1992v	1992	09	28.45122	05 26 02.94	+23 08 35.5			D		691
/1992v	1992	09	28.46007	05 26 03.06	+23 08 35.3			D		691
/1992v	1992	09	28.47270	05 26 03.43	+23 08 35.7	21.6	T	D		691
			Periodic Comet Slaughter-Burnham							
/1992w	1992	09	24.18228	20 46 17.20	-22 22 52.2	21.5	T	E		693
/1992w	1992	09	24.18751	20 46 17.19	-22 22 50.6			E		693
/1992w	1992	09	24.19206	20 46 17.18	-22 22 51.0			E		693
/1992w	1992	09	24.20947	20 46 16.94	-22 22 48.7			E		693
/1992w	1992	09	25.13324	20 46 09.48	-22 20 30.2			E		693
/1992w	1992	09	25.13939	20 46 09.44	-22 20 29.0			E		693
/1992w	1992	09	25.15280	20 46 09.31	-22 20 27.6			E		693
/1992w	1992	09	25.15962	20 46 09.28	-22 20 26.2			E		693

/1992w	1992 09 25.16830	20 46 09.16	-22 20 24.4			E	693
/1992w	1992 09 25.17709	20 46 09.11	-22 20 23.2			E	693

Periodic Comet Schaumasse

/1992x	1992 09 25.72674	04 25 43.71	+11 08 15.8	20	T	F	372
/1992x	1992 10 01.77188	04 30 07.34	+11 12 50.8	19.2	T	F	372
/1992x	1992 10 02.71563	04 30 45.00	+11 13 32.3	19.5	T	F	372
/1992x	1992 10 02.74583	04 30 46.13	+11 13 34.3			F	372

Note 1: 12" coma, 0′.58 tail in p.a. 254 . 2: 12" coma, 0′.68 tail in p.a. 1 . 3: faint image. 4: 12" coma, 0′.73 tail in p.a. 258 . 5: asymmetric coma 134" 93". 6: 15" coma, tail 1′ in p.a. 300 . 7: tail 2′ in p.a. 320 . 8: pre-recovery images. 9: 15" coma, tail 0′.36 in p.a. 261 . A: slightly diffuse with central condensation. B: very strong condensation, 5′ coma, similar in appearance to 1862 drawings. C: very asymmetric, fan-shaped coma with greatest excess in p.a. 210 from strong condensation. D: stellar appearance. E: 10" coma, hint of tail. F: slightly diffuse.

* * * * *

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. (2000)	Decl.	Mag.	N Obs.
010 Caussols							
E. W. Elst, Royal Observatory, B-1180 Brussels, Belgium							
Observers E. W. Elst, A. Maury, C. Pollas							
Measurer E. W. Elst							
0.9-m Schmidt telescope							
1978 PU2		1992 07 25.07750	21 29 52.36	-10 17 03.8	18.0		010
1978 PU2		1992 07 25.08792	21 29 51.96	-10 17 08.3			010
1978 PU2		1992 07 25.09833	21 29 51.59	-10 17 13.4			010
1978 PU2		1992 07 26.08472	21 29 16.47	-10 24 37.9			010
1978 PU2		1992 07 26.09514	21 29 16.04	-10 24 43.5			010
1978 PU2		1992 07 26.10556	21 29 15.66	-10 24 47.0			010
1989 YU5		1992 07 25.07750	21 21 39.47	-12 41 29.5	18.7		010
1989 YU5		1992 07 25.08792	21 21 39.01	-12 41 30.0			010
1989 YU5		1992 07 25.09833	21 21 38.48	-12 41 30.1			010
1989 YU5		1992 07 26.08472	21 20 53.60	-12 42 51.9			010
1989 YU5		1992 07 26.09514	21 20 53.07	-12 42 52.1			010
1989 YU5		1992 07 26.10556	21 20 52.58	-12 42 51.7			010
1992 OK1	*	1992 07 25.07750	21 19 38.54	-12 50 11.5	18.7		010
1992 OK1		1992 07 25.08792	21 19 38.18	-12 50 19.6			010
1992 OK1		1992 07 25.09833	21 19 37.76	-12 50 25.9			010
1992 OK1		1992 07 26.08472	21 18 59.52	-13 03 12.2			010
1992 OK1		1992 07 26.09514	21 18 58.92	-13 03 22.7			010
1992 OK1		1992 07 26.10556	21 18 58.16	-13 03 28.8			010
1992 OL1	*	1992 07 25.07750	21 19 40.67	-10 35 16.7	18.8		010
1992 OL1		1992 07 25.08792	21 19 40.08	-10 35 17.1			010
1992 OL1		1992 07 25.09833	21 19 39.58	-10 35 19.1			010
1992 OL1		1992 07 26.08472	21 18 52.32	-10 37 04.1			010
1992 OL1		1992 07 26.09514	21 18 51.72	-10 37 04.9			010
1992 OL1		1992 07 26.10556	21 18 51.22	-10 37 06.2			010
1992 OM1	*	1992 07 25.07750	21 22 58.38	-10 20 47.5	18.7		010
1992 OM1		1992 07 25.08792	21 22 57.85	-10 20 49.2			010
1992 OM1		1992 07 25.09833	21 22 57.32	-10 20 50.2			010
1992 OM1		1992 07 26.08472	21 22 11.87	-10 23 38.4			010
1992 OM1		1992 07 26.09514	21 22 11.33	-10 23 40.8			010
1992 OM1		1992 07 26.10556	21 22 10.82	-10 23 41.2			010
1992 ON1	*	1992 07 25.07750	21 24 37.64	-12 33 56.7	18.7		010
1992 ON1		1992 07 25.08792	21 24 37.07	-12 33 56.8			010
1992 ON1		1992 07 25.09833	21 24 36.46	-12 33 56.1			010
1992 ON1		1992 07 26.08472	21 23 43.00	-12 33 30.9			010
1992 ON1		1992 07 26.09514	21 23 42.45	-12 33 29.9			010
1992 ON1		1992 07 26.10556	21 23 41.88	-12 33 29.5			010
1992 OO1	*	1992 07 25.07750	21 27 32.18	-12 42 47.2	18.3		010
1992 OO1		1992 07 25.08792	21 27 31.67	-12 42 52.6			010
1992 OO1		1992 07 25.09833	21 27 31.25	-12 42 58.4			010
1992 OO1		1992 07 26.08472	21 26 48.58	-12 52 15.8			010
1992 OO1		1992 07 26.09514	21 26 48.07	-12 52 22.0			010
1992 OO1		1992 07 26.10556	21 26 47.55	-12 52 28.0			010
1992 PF		1992 07 25.07750	21 29 48.67	-10 28 00.3	18.5		010
1992 PF		1992 07 25.08792	21 29 48.31	-10 28 02.7			010
1992 PF		1992 07 25.09833	21 29 47.86	-10 28 05.5			010
1992 PF		1992 07 26.08472	21 29 13.18	-10 31 41.6			010
1992 PF		1992 07 26.09514	21 29 12.78	-10 31 44.0			010
1992 PF		1992 07 26.10556	21 29 12.29	-10 31 47.3			010
1992 PK		1992 07 25.07750	21 36 02.77	-12 00 52.0	18.7		010

1992 PK		1992 07 25.08792	21 36 02.31	-12 00 50.8				010
1992 PK		1992 07 25.09833	21 36 01.81	-12 00 49.1				010
1992 PK		1992 07 26.08472	21 35 17.29	-11 58 35.6				010
1992 PK		1992 07 26.09514	21 35 16.62	-11 58 34.3				010
1992 PK		1992 07 26.10556	21 35 16.10	-11 58 34.1				010
(1349)		1992 07 25.07750	21 38 18.31	-11 47 04.1	17.5			010
(1349)		1992 07 25.08792	21 38 17.78	-11 47 04.1				010
(1349)		1992 07 25.09833	21 38 17.26	-11 47 03.9				010
(1349)		1992 07 26.08472	21 37 30.70	-11 46 55.0				010
(1349)		1992 07 26.09514	21 37 30.19	-11 46 55.1				010
(1349)		1992 07 26.10556	21 37 29.61	-11 46 55.3				010
(1855)		1992 07 25.07750	21 20 33.12	-10 45 34.1	18.6			010
(1855)		1992 07 25.08792	21 20 32.48	-10 45 36.2				010
(1855)		1992 07 25.09833	21 20 31.90	-10 45 39.0				010
(1855)		1992 07 26.08472	21 19 38.52	-10 50 01.7				010
(1855)		1992 07 26.09514	21 19 37.91	-10 50 04.0				010
(1855)		1992 07 26.10556	21 19 37.31	-10 50 07.2				010
(2746)		1992 07 25.07750	21 29 15.16	-09 59 28.8	18.6			010
(2746)		1992 07 25.08792	21 29 14.57	-09 59 31.8				010
(2746)		1992 07 25.09833	21 29 13.98	-09 59 35.1				010
(2746)		1992 07 26.08472	21 28 23.81	-10 04 14.5				010
(2746)		1992 07 26.09514	21 28 23.04	-10 04 16.7				010
(2746)		1992 07 26.10556	21 28 22.38	-10 04 20.2				010
(3379)		1992 07 25.07750	21 28 17.90	-13 45 18.3	18.7			010
(3379)		1992 07 25.08792	21 28 17.37	-13 45 21.4				010
(3379)		1992 07 25.09833	21 28 16.92	-13 45 25.5				010
(3379)		1992 07 26.08472	21 27 27.59	-13 50 17.4				010
(3379)		1992 07 26.09514	21 27 27.00	-13 50 20.9				010
(3379)		1992 07 26.10556	21 27 26.53	-13 50 24.5				010
(4202)		1992 07 25.07750	21 26 54.34	-11 52 09.8	18.2			010
(4202)		1992 07 25.08792	21 26 53.90	-11 52 13.2				010
(4202)		1992 07 25.09833	21 26 53.51	-11 52 16.7				010
(4202)		1992 07 26.08472	21 26 15.15	-11 58 41.8				010
(4202)		1992 07 26.09514	21 26 14.75	-11 58 46.1				010
(4202)		1992 07 26.10556	21 26 14.28	-11 58 50.1				010

033 Tautenburg
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Observers F. Borngen, L. D. Schmadel
1.3-m Schmidt telescope
PPM

1989 AN6		1992 09 02.09167	00 28 24.70	-01 03 25.4				033
1989 AN6		1992 09 04.02708	00 27 23.38	-01 11 32.7	18.0			033
1989 AN6		1992 09 04.07014	00 27 21.95	-01 11 43.3				033
1989 AN6		1992 09 06.09236	00 26 13.55	-01 20 31.3				033
1989 AN6		1992 09 07.09097	00 25 38.38	-01 24 58.5				033
1990 TF4		1992 04 04.00069	13 40 31.82	-13 03 18.8	17.7			033
1990 TF4		1992 04 04.04931	13 40 29.08	-13 03 05.3			F	033
1990 TF4		1992 04 29.88889	13 17 12.56	-10 40 16.3				033
1990 TF4		1992 04 29.93056	13 17 10.59	-10 40 03.1	17.8			033
1990 TF4		1992 04 30.92222	13 16 25.74	-10 34 52.6				033
1992 HL4	*	1992 04 29.88889	13 17 22.74	-10 11 46.2				033
1992 HL4		1992 04 29.93056	13 17 20.24	-10 11 48.2	17.0			033
1992 HL4		1992 04 30.92222	13 16 24.35	-10 12 37.2				033
1992 RQ	*	1992 09 02.09167	00 24 06.06	-01 19 37.0				033
1992 RQ		1992 09 04.02708	00 23 13.58	-01 28 23.0	17.7			033

1992	RQ		1992	09	04.07014	00	23	12.40	-01 28 34.5	033
1992	RQ		1992	09	06.09236	00	22	12.73	-01 38 06.8	033
1992	RQ		1992	09	07.09097	00	21	41.58	-01 42 55.9	033
1992	RR	*	1992	09	02.09167	00	25	22.69	-00 18 54.6	033
1992	RR		1992	09	04.02708	00	23	56.79	-00 29 16.1 18.1	033
1992	RR		1992	09	04.07014	00	23	54.68	-00 29 30.1	033
1992	RR		1992	09	06.09236	00	22	19.37	-00 40 47.5	033
1992	RR		1992	09	07.09097	00	21	30.37	-00 46 28.7	033
1992	RS	*	1992	09	02.09167	00	27	20.75	+00 14 00.3	033
1992	RS		1992	09	04.02708	00	26	30.08	+00 08 26.7 17.9	033
1992	RS		1992	09	04.07014	00	26	28.74	+00 08 19.8	033
1992	RS		1992	09	06.09236	00	25	28.46	+00 01 54.6	033
1992	RS		1992	09	07.09097	00	24	56.23	-00 01 25.9	033
1992	RT	*	1992	09	02.09167	00	30	02.72	-00 32 17.4	033
1992	RT		1992	09	04.02708	00	29	00.48	-00 41 51.4 18.1	033
1992	RT		1992	09	04.07014	00	28	59.18	-00 42 05.1	033
1992	RT		1992	09	06.09236	00	27	49.54	-00 52 26.5	033
1992	RT		1992	09	07.09097	00	27	13.60	-00 57 40.9	033
1992	RU	*	1992	09	02.09167	00	33	34.98	+00 12 58.7	033
1992	RU		1992	09	04.02708	00	33	16.41	+00 00 25.3 17.8	033
1992	RU		1992	09	04.07014	00	33	15.93	+00 00 07.0	033
1992	RU		1992	09	06.09236	00	32	48.72	-00 13 48.6	033
1992	RU		1992	09	07.09097	00	32	32.48	-00 20 58.6	033
1992	RV	*	1992	09	02.09167	00	34	37.49	-01 57 46.6	033
1992	RV		1992	09	04.02708	00	33	25.48	-01 58 49.7 17.7	033
1992	RV		1992	09	04.07014	00	33	23.66	-01 58 52.6	033
1992	RV		1992	09	06.09236	00	32	02.26	-02 00 16.0	033
1992	RV		1992	09	07.09097	00	31	20.04	-02 01 01.9	033
1992	RW	*	1992	09	02.09167	00	34	42.54	+00 14 37.4	033
1992	RW		1992	09	04.02708	00	33	47.42	+00 10 21.0 17.9	033
1992	RW		1992	09	04.07014	00	33	45.98	+00 10 14.5	033
1992	RW		1992	09	06.09236	00	32	41.14	+00 05 16.8	033
1992	RW		1992	09	07.09097	00	32	06.60	+00 02 38.0	033
1992	RX	*	1992	09	04.02708	00	35	30.43	+00 29 23.7 18.1	033
1992	RX		1992	09	04.07014	00	35	28.32	+00 29 12.6	033
1992	RX		1992	09	06.09236	00	33	47.75	+00 21 09.0	033
1992	RX		1992	09	07.09097	00	32	56.13	+00 17 01.4	033
1992	RY	*	1992	09	04.04931	00	17	19.20	+01 59 08.9 18.2	033
1992	RY		1992	09	06.11389	00	15	49.82	+01 57 09.6	033
1992	RY		1992	09	07.06944	00	15	07.55	+01 56 09.7	033
1992	RY		1992	09	07.11111	00	15	05.59	+01 56 06.2	033
1992	RZ	*	1992	09	04.04931	00	20	40.07	+03 44 39.9 17.7	033
1992	RZ		1992	09	06.11389	00	19	21.76	+03 36 53.1	033
1992	RZ		1992	09	07.06944	00	18	44.45	+03 33 09.0	033
1992	RZ		1992	09	07.11111	00	18	42.76	+03 32 59.3	033
1992	RA1	*	1992	09	04.04931	00	21	26.34	+01 44 23.7 18.0	033
1992	RA1		1992	09	07.06944	00	19	05.54	+01 51 37.5	033
1992	RA1		1992	09	07.11111	00	19	03.18	+01 51 44.4	033
1992	RB1	*	1992	09	04.04931	00	26	53.64	+02 00 59.7 18.1	033
1992	RB1		1992	09	06.11389	00	25	39.64	+01 57 51.9	033
1992	RB1		1992	09	07.06944	00	25	03.54	+01 56 14.5	033
1992	RB1		1992	09	07.11111	00	25	01.70	+01 56 09.3	033
1992	RC1	*	1992	09	04.04931	00	28	30.75	+02 45 00.0 17.9	033
1992	RC1		1992	09	06.11389	00	27	21.73	+02 42 38.8	033
1992	RC1		1992	09	07.06944	00	26	47.74	+02 41 20.6	033
1992	RC1		1992	09	07.11111	00	26	46.08	+02 41 17.9	033
1992	RD1	*	1992	09	04.04931	00	29	22.59	+02 41 06.2 17.5	033
1992	RD1		1992	09	06.11389	00	27	49.64	+02 42 21.6	033

1992 RD1	1992 09 07.06944	00 27 05.23	+02 42 48.6					033
1992 RD1	1992 09 07.11111	00 27 03.17	+02 42 50.1					033
(1674)	1992 09 02.09167	00 31 20.94	-00 44 10.8					033
(1674)	1992 09 04.02708	00 30 20.51	-00 52 14.3	16.8				033
(1674)	1992 09 04.07014	00 30 19.12	-00 52 25.6					033
(1674)	1992 09 06.09236	00 29 12.04	-01 01 09.5					033
(1674)	1992 09 07.09097	00 28 37.62	-01 05 34.8					033
(2093)	1992 09 02.09167	00 27 08.42	-00 56 32.6					033
(2093)	1992 09 04.02708	00 25 51.58	-01 13 29.9	16.3				033
(2093)	1992 09 04.07014	00 25 49.76	-01 13 52.1					033
(2093)	1992 09 06.09236	00 24 23.89	-01 32 01.4					033
(2093)	1992 09 07.09097	00 23 39.65	-01 41 07.5					033
(2551)	1992 09 04.04931	00 26 11.74	+02 34 40.7	16.9				033
(2551)	1992 09 06.11389	00 25 04.09	+02 27 52.8					033
(2551)	1992 09 07.06944	00 24 31.48	+02 24 34.5					033
(2551)	1992 09 07.11111	00 24 29.92	+02 24 25.6					033
(2675)	1992 04 04.00069	13 37 21.67	-11 28 31.4	16.6				033
(2675)	1992 04 04.04931	13 37 18.76	-11 28 19.7				E	033
(2675)	1992 04 29.88889	13 11 24.36	-09 26 25.3					033
(2675)	1992 04 29.93056	13 11 22.10	-09 26 13.5	16.8				033
(2675)	1992 04 30.92222	13 10 30.14	-09 21 51.0					033
(3372)	1992 04 04.00069	13 46 46.86	-11 27 10.3	17.1			E	033
(3372)	1992 04 04.04931	13 46 44.51	-11 27 00.8				N	033
(3636)	1992 09 02.09167	00 29 22.90	-00 37 08.4					033
(3636)	1992 09 04.02708	00 28 00.16	-00 44 41.6	18.3				033
(3636)	1992 09 04.07014	00 27 58.21	-00 44 51.8					033
(3636)	1992 09 06.09236	00 26 25.89	-00 53 09.8					033
(3636)	1992 09 07.09097	00 25 38.31	-00 57 26.1					033
(3797)	1992 09 04.04931	00 27 58.60	+03 06 02.2	17.8				033
(3797)	1992 09 06.11389	00 26 50.92	+02 58 16.3					033
(3797)	1992 09 07.06944	00 26 18.51	+02 54 32.8					033
(3797)	1992 09 07.11111	00 26 17.06	+02 54 23.8					033
(3915)	1992 09 04.04931	00 19 32.19	+01 23 19.8	16.4				033
(3915)	1992 09 06.11389	00 18 20.44	+00 59 33.5					033
(3915)	1992 09 07.06944	00 17 45.85	+00 48 20.1					033
(3915)	1992 09 07.11111	00 17 44.16	+00 47 50.5					033
(4144)	1992 09 04.04931	00 21 10.31	+00 56 42.7	17.2				033
(4144)	1992 09 06.11389	00 20 04.30	+00 43 10.0					033
(4144)	1992 09 07.06944	00 19 32.84	+00 36 45.4					033
(4144)	1992 09 07.11111	00 19 31.27	+00 36 28.6					033
(4193)	1992 09 02.09167	00 27 38.69	+00 33 51.2					033
(4193)	1992 09 04.02708	00 26 42.60	+00 25 46.0	16.9				033
(4193)	1992 09 04.07014	00 26 41.26	+00 25 35.4					033
(4193)	1992 09 06.09236	00 25 37.93	+00 16 42.6					033
(4193)	1992 09 07.09097	00 25 05.12	+00 12 11.3					033
(4496)	1992 09 04.04931	00 27 44.44	+01 00 09.4	17.9				033
(4496)	1992 09 06.11389	00 26 31.48	+00 48 27.5					033
(4496)	1992 09 07.06944	00 25 56.84	+00 42 57.3					033
(4496)	1992 09 07.11111	00 25 55.12	+00 42 42.9					033
(4530)	1992 09 04.04931	00 26 41.33	+00 59 08.7	18.0				033
(4530)	1992 09 06.11389	00 25 31.85	+00 48 40.9					033
(4530)	1992 09 07.06944	00 24 58.92	+00 43 44.5					033
(4530)	1992 09 07.11111	00 24 57.39	+00 43 30.9					033
(5049)	1991 12 28.81458	04 13 45.08	+23 51 33.7	17.5				033

046 Klet
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Observers Z. Moravec, A. Mrkos, J. Ticha, M. Tichy, Z. Vavrova

Measurers Z. Moravec, A. Mrkos, M. Tichy, Z. Vavrova
0.63-m Maksutov reflector, 0.57-m f/5 reflector

1992 AC		1992 04 07.93979	12 16 02.42	+48 57 29.8				046
1992 AC		1992 04 07.94743	12 16 03.02	+48 57 19.2				046
1992 DX4	*	1992 02 24.93425	10 52 16.20	-01 49 56.3	16.8			046
1992 DX4		1992 02 24.94935	10 52 15.23	-01 49 51.2				046
1992 DX4		1992 02 26.91613	10 50 08.70	-01 40 16.9				046
1992 DX4		1992 02 26.93043	10 50 07.74	-01 40 13.8				046
1992 DY4	*	1992 02 24.97105	11 03 57.98	+12 52 01.9	16.8		E	046
1992 DY4		1992 02 24.98535	11 03 57.37	+12 52 07.1			E	046
1992 DY4		1992 02 28.94310	11 01 11.52	+13 15 59.9				046
1992 DZ4	*	1992 02 29.97123	11 09 48.13	+00 04 18.8	16.1			046
1992 DZ4		1992 02 29.98639	11 09 47.14	+00 04 16.9				046
1992 DZ4		1992 03 01.90282	11 08 42.37	+00 02 16.3			U	046
1992 EA3	*	1992 03 01.02053	11 13 15.05	+10 07 10.7	17.3			046
1992 EA3		1992 03 01.93760	11 12 34.08	+10 20 45.6			U	046
1992 EA3		1992 03 01.95178	11 12 33.40	+10 20 59.2				046
1992 EB3	*	1992 03 01.02053	11 22 43.26	+08 02 36.4	16.9			046
1992 EB3		1992 03 01.93760	11 21 50.13	+08 13 55.0			U	046
1992 EB3		1992 03 01.95178	11 21 49.22	+08 14 05.2				046
1992 PX4	*	1992 08 05.03314	22 15 11.69	-11 46 28.1	16.7			046
1992 PX4		1992 08 05.04794	22 15 10.65	-11 46 24.4				046
1992 PX4		1992 08 05.93848	22 14 23.77	-11 49 34.4				046
(108)		1992 08 05.03314	22 12 45.50	-13 52 09.9				046
(108)		1992 08 05.04794	22 12 44.93	-13 52 12.8				046
(108)		1992 08 05.93848	22 12 08.77	-13 54 57.2				046
(108)		1992 08 05.95347	22 12 08.15	-13 55 01.2				046
(301)		1992 05 24.95128	16 33 05.21	-14 01 42.2				046
(301)		1992 05 24.96552	16 33 04.56	-14 01 39.1				046
(355)		1992 08 05.03314	22 14 54.54	-14 17 36.5				046
(355)		1992 08 05.04794	22 14 54.08	-14 17 38.9				046
(355)		1992 08 05.93848	22 14 10.50	-14 20 50.2				046
(355)		1992 08 05.95347	22 14 09.69	-14 20 54.8				046
(430)		1992 07 28.88293	20 50 34.47	+02 37 06.7				046
(430)		1992 07 28.89722	20 50 33.72	+02 37 06.8				046
(457)		1992 07 28.88293	20 54 25.03	+01 15 47.4			I	046
(457)		1992 07 28.89722	20 54 24.39	+01 15 48.5				046
(1062)		1992 08 05.03314	22 18 27.12	-13 01 41.8			E	046
(1062)		1992 08 05.04794	22 18 26.54	-13 01 44.9			E	046
(1062)		1992 08 05.93848	22 17 48.81	-13 04 09.8				046
(1062)		1992 08 05.95347	22 17 48.20	-13 04 11.9				046
(1349)		1992 08 05.89485	21 28 18.63	-11 48 47.4				046
(1349)		1992 08 05.90909	21 28 17.98	-11 48 48.3				046
(1419)		1991 07 10.95737	20 18 28.04	-10 07 29.5	16.6			046
(1419)		1991 07 10.97132	20 18 27.18	-10 07 29.9				046
(1793)		1992 08 05.89485	21 29 33.45	-12 02 27.7				046
(1793)		1992 08 05.90909	21 29 32.74	-12 02 30.5				046
(3863)		1992 07 28.92106	21 09 49.63	-01 56 23.0				046
(3863)		1992 07 28.93530	21 09 48.96	-01 56 26.3				046
(5299)		1992 08 05.03314	22 10 47.44	-11 29 08.0				046
(5299)		1992 08 05.04794	22 10 46.89	-11 29 09.0				046

119 Abastumani
G. R. Kastel', Institute of Theoretical Astronomy, Naberezhnaya Kutuzova 10, St. Petersburg 191187, Russia
Observer R. I. Kiladze

(379)		1992 09 02.96076	01 46 09.45	+10 07 32.3	15			119
(379)		1992 09 04.90319	01 45 59.60	+10 04 47.9				119
(379)		1992 09 04.95806	01 45 59.14	+10 04 42.7				119

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

1989 US		1992 08 30.17118	22 09 28.52	-20 31 34.3					293
1989 US		1992 08 30.18299	22 09 27.86	-20 31 38.7					293
(3673)		1992 08 30.17118	22 10 06.76	-20 29 32.7					293
(3673)		1992 08 30.18299	22 10 05.96	-20 29 36.1					293

303 Merida
O. A. Naranjo, Dept. de Fisica, Universidad de los Andes,
Merida 5101, Venezuela
Observer O. A. Naranjo
1.0-m Schmidt

1985 QN		1992 01 11.26238	09 04 55.52	+16 44 42.0	17				303
1985 QN		1992 01 12.33333	09 04 07.38	+16 48 49.1					303
1992 AZ2	*	1992 01 11.26238	09 07 47.02	+16 00 04.9	17				303
1992 AZ2		1992 01 12.33333	09 06 58.56	+16 00 16.5					303
1992 AA3	*	1992 01 11.26238	08 51 58.01	+16 21 36.5	17				303
1992 AA3		1992 01 12.33333	08 50 59.29	+16 21 05.7					303
1992 AB3	*	1992 01 11.26238	08 54 01.54	+15 59 17.6	16				303
1992 AB3		1992 01 12.33333	08 53 11.01	+16 06 07.8					303
1992 AC3	*	1992 01 11.26238	08 55 18.16	+17 46 55.3	17				303
1992 AC3		1992 01 12.33333	08 54 33.30	+17 51 40.3					303
1992 AD3	*	1992 01 11.26238	08 58 45.24	+15 31 46.1	17				303
1992 AD3		1992 01 12.33333	08 57 51.83	+15 38 21.3	19				303
1992 AE3	*	1992 01 11.26238	08 59 15.47	+16 47 43.7	17				303
1992 AE3		1992 01 12.33333	08 58 12.87	+16 48 45.3					303
1992 AF3	*	1992 01 11.26238	09 04 23.87	+17 53 52.5	19				303
1992 AF3		1992 01 12.33333	09 03 39.87	+17 58 00.7					303
1992 AG3	*	1992 01 11.26238	09 04 41.79	+15 49 44.2	17				303
1992 AG3		1992 01 12.33333	09 03 50.49	+15 50 06.6					303
1992 AH3	*	1992 01 11.26238	09 04 52.55	+15 03 30.0	18				303
1992 AH3		1992 01 12.33333	09 04 04.97	+15 03 49.7					303
1992 AJ3	*	1992 01 11.26238	09 06 34.31	+15 10 03.2	17				303
1992 AJ3		1992 01 12.33333	09 05 52.93	+15 15 24.2					303
1992 AK3	*	1992 01 11.26238	09 07 44.43	+16 43 46.1	18				303
1992 AK3		1992 01 12.33333	09 06 46.59	+16 46 36.7	17				303
1992 AL3	*	1992 01 11.26238	09 08 15.12	+16 36 36.5	17			d	303
1992 AL3		1992 01 12.33333	09 07 52.41	+16 43 25.4				d	303
(406)		1992 01 11.26238	08 54 56.77	+18 39 19.1	15				303
(406)		1992 01 12.33333	08 54 05.23	+18 41 51.7					303
(1142)		1992 01 11.26238	09 06 08.21	+15 56 56.8	15				303
(1142)		1992 01 12.33333	09 05 26.63	+16 00 22.3					303
(1586)		1992 01 11.26238	09 02 59.03	+16 29 46.7	14				303
(1586)		1992 01 12.33333	09 02 12.85	+16 35 31.9					303
(2213)		1992 01 11.26238	08 53 53.23	+16 49 45.8	18				303
(2213)		1992 01 12.33333	08 52 49.99	+16 56 16.7	17				303
(2286)		1992 01 11.26238	09 05 27.57	+18 45 54.4	16				303
(2286)		1992 01 12.33333	09 04 28.74	+18 50 47.3					303
(2769)		1992 01 11.26238	09 07 19.70	+18 05 23.3	16				303
(2769)		1992 01 12.33333	09 06 38.88	+18 09 32.0					303
(4470)		1992 01 11.26238	09 07 23.58	+16 57 55.3	18				303
(4470)		1992 01 12.33333	09 06 40.91	+17 01 32.2					303
(4657)		1992 01 11.26238	08 59 56.72	+17 25 19.5	17				303
(4657)		1992 01 12.33333	08 59 09.28	+17 28 35.0					303
(4668)		1992 01 11.26238	08 55 00.71	+18 37 37.0	16				303
(4668)		1992 01 12.33333	08 54 08.06	+18 38 31.9					303

367 Yatsuka
S. Miyasaka, 3-8-501, 4 Chome, Nagayama, Tama, Tokyo 206, Japan
Observer H. Abe
Measurer S. Miyasaka
0.26-m reflector
PPM

1990 BU		1992 08 28.59444	22 33 21.90	-03 27 13.4			367
1990 BU		1992 08 28.61528	22 33 20.55	-03 27 10.5			367
1990 BU		1992 08 29.67986	22 32 13.00	-03 24 30.5			367
1990 BU		1992 08 29.70070	22 32 11.60	-03 24 26.9			367
(517)		1992 08 28.59444	22 35 37.44	-04 08 10.7			367
(517)		1992 08 28.61528	22 35 36.46	-04 08 14.3			367
(517)		1992 08 29.67986	22 34 47.08	-04 12 26.7			367
(517)		1992 08 29.70070	22 34 46.05	-04 12 30.7			367
(996)		1991 11 02.56458	00 23 10.06	+02 57 54.9			367
(996)		1991 11 02.57500	00 23 09.56	+02 57 53.6			367
(996)		1991 11 02.58542	00 23 09.36	+02 57 50.6			367
(1275)		1992 05 28.55278	16 04 24.00	-04 51 36.7			367
(1275)		1992 05 28.56319	16 04 23.49	-04 51 33.5			367
(1275)		1992 05 28.57361	16 04 22.94	-04 51 31.3			367
(1275)		1992 06 02.56111	16 00 13.06	-04 32 58.8			367
(1275)		1992 06 02.57153	16 00 12.55	-04 32 57.2			367
(1275)		1992 06 02.58194	16 00 12.01	-04 32 55.2			367
(1715)		1991 10 17.66806	01 29 19.40	+03 47 09.9			367
(1715)		1991 10 17.67847	01 29 18.78	+03 47 09.2			367
(1715)		1991 10 17.68889	01 29 18.08	+03 47 07.3			367
(2089)		1992 05 28.55278	16 02 45.64	-04 48 40.5			367
(2089)		1992 05 28.56319	16 02 45.03	-04 48 40.1			367
(2089)		1992 05 28.57361	16 02 44.38	-04 48 40.0			367
(2089)		1992 06 02.56111	15 57 57.43	-04 56 53.6			367
(2089)		1992 06 02.57153	15 57 56.76	-04 56 56.7			367
(2089)		1992 06 02.58194	15 57 56.20	-04 56 57.5			367
(2162)		1991 10 17.66806	01 32 12.02	+03 17 55.9			367
(2162)		1991 10 17.67847	01 32 11.38	+03 17 52.9			367
(2162)		1991 10 17.68889	01 32 10.79	+03 17 48.9			367
(3683)		1992 05 28.56319	16 06 32.41	-04 42 09.6			367
(3683)		1992 05 28.57361	16 06 31.85	-04 42 10.8			367

372 Geisei
T. Seki, Kamimachi 2-9-35, Kochi, Japan
0.60-m f/3.5 reflector
ACRS

1988 RK11		1992 09 04.64826	22 17 47.33	-07 44 19.7	18		372
1988 RK11		1992 09 05.65729	22 17 03.47	-07 54 23.8	17.5		372
1988 RK11		1992 09 05.66772	22 17 03.02	-07 54 28.1			372
1992 QL		1992 09 04.64826	22 17 37.47	-07 50 49.2	16.5		372
1992 QL		1992 09 05.65729	22 16 58.27	-07 57 40.2	16.5		372
1992 QL		1992 09 05.66772	22 16 57.80	-07 57 42.7			372
1992 RH	*	1992 09 04.64826	22 16 06.60	-08 11 15.2	17		372
1992 RH		1992 09 05.65729	22 15 11.78	-08 16 42.3	17		372
1992 RH		1992 09 05.66771	22 15 11.25	-08 16 43.5			372
1992 RJ	*	1992 09 04.64826	22 16 26.68	-07 29 42.1	17		372
1992 RJ		1992 09 05.65729	22 15 43.55	-07 38 42.8	17		372
1992 RJ		1992 09 05.66772	22 15 43.21	-07 38 47.0			372
1992 RK	*	1992 09 04.66355	00 04 27.18	-23 53 53.5	18		372
1992 RK		1992 09 04.68437	00 04 26.17	-23 54 03.5			372
1992 RK		1992 09 05.68646	00 03 23.71	-23 59 07.5	18		372
1992 RL	*	1992 09 04.66355	00 06 32.30	-23 44 47.3	17.5		372
1992 RL		1992 09 04.68437	00 06 31.23	-23 44 54.4			372

1992 RL		1992 09 05.68646	00 05 41.00	-23 51 30.2	18		372
1992 SN1		1992 09 26.65174	01 04 27.70	+06 23 58.3	16.5		372
1992 SN1		1992 09 26.66215	01 04 27.15	+06 24 01.3			372
1992 SN1		1992 10 01.71216	00 58 45.18	+06 47 44.4	16		372
1992 SN1		1992 10 01.72639	00 58 44.16	+06 47 46.7			372
1992 SQ1	*	1992 09 26.65174	01 04 16.51	+07 00 40.4	17.5		372
1992 SQ1		1992 09 26.66215	01 04 16.05	+07 00 36.5			372
1992 SQ1		1992 10 01.71216	01 00 39.85	+06 11 10.5	17		372
1992 SQ1		1992 10 01.72639	01 00 39.18	+06 11 04.7			372

385 Nihondaira Observatory Oohira station
T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
0.25-m f/3.4 hyperboloid astrocamera + CCD
GSC

1991 DM1		1992 09 30.52847	22 17 01.44	-11 39 41.7	16		385
1991 DM1		1992 09 30.53524	22 17 01.34	-11 39 45.3			385
1991 DM1		1992 09 30.54014	22 17 01.32	-11 39 48.6			385
1991 DM1		1992 09 30.54253	22 17 01.29	-11 39 49.5			385
1991 DM1		1992 09 30.54757	22 17 01.27	-11 39 51.5			385

399 Kushiro
H. Kaneda, Taiyo MS 2-H, 2 chome 2-15, Kawazoe 8 jo, Minami-ku,
Sapporo 005, Japan
Observer S. Ueda
Measurer H. Kaneda
0.25-m f/3.5 reflector
GSC

1979 SN4		1992 09 20.54995	22 34 13.96	-05 02 23.4	15.5		399
1979 SN4		1992 09 20.56465	22 34 13.50	-05 02 33.5			399
1987 RA1		1992 08 28.51435	22 56 23.94	-05 18 04.8	17		399
1987 RA1		1992 08 28.52917	22 56 23.16	-05 18 07.4			399
1987 RA1		1992 09 20.51477	22 39 03.96	-07 03 08.7	17		399
1987 RA1		1992 09 20.52912	22 39 03.39	-07 03 11.2			399
1987 VG1		1992 09 20.42753	22 45 56.01	+08 02 31.5	16.5		399
1987 VG1		1992 09 20.45875	22 45 54.71	+08 02 20.5			399
1989 AK1		1992 09 28.59346	00 03 12.45	+13 49 27.7	16		399
1989 AK1		1992 09 28.60839	00 03 11.56	+13 49 24.5			399
1989 SF		1992 09 20.54995	22 44 07.20	-05 01 54.3	16.5		399
1989 SF		1992 09 20.56465	22 44 06.38	-05 01 57.5			399
1989 SF		1992 09 28.46672	22 37 39.51	-05 27 10.8	16.3		399
1989 SF		1992 09 28.48131	22 37 38.84	-05 27 14.0			399
1989 ST14	*	1989 09 26.56875	00 33 51.92	+05 22 59.9	16.5		399
1989 ST14		1989 09 26.58403	00 33 51.05	+05 22 55.0			399
1989 ST14		1989 09 26.61146	00 33 49.76	+05 22 53.1			399
1989 WO7	*	1989 11 25.57847	04 12 36.35	+17 06 16.0	17		399
1989 WO7		1989 11 25.59340	04 12 35.39	+17 06 15.0			399
1989 WO7		1989 11 25.61007	04 12 33.92	+17 06 15.8			399
1989 WO7		1989 11 29.61076	04 07 57.05	+17 02 24.5	16.5		399
1989 WO7		1989 11 29.62778	04 07 56.04	+17 02 23.9			399
1989 WO7		1989 11 29.64236	04 07 54.87	+17 02 22.8			399
1989 WO7		1989 12 01.71262	04 05 32.65	+17 00 34.3	16.5		399
1989 WO7		1989 12 01.72708	04 05 31.62	+17 00 33.2			399
1989 WO7		1989 12 01.74352	04 05 30.43	+17 00 32.1			399
1990 DD		1992 09 28.59346	00 07 12.11	+15 03 03.4	15.7		399
1990 DD		1992 09 28.60839	00 07 11.13	+15 03 03.7			399
1990 UP11		1990 11 17.49479	03 19 43.93	+17 32 48.9	16		399
1990 UP11		1990 11 17.51007	03 19 43.03	+17 32 47.6			399
1990 UU13	*	1990 10 27.64855	02 04 52.52	+12 44 52.4	16.5		399
1990 UU13		1990 10 27.66383	02 04 51.65	+12 44 45.9			399

1990 UV13	*	1990 10 27.64855	02 10 46.12	+12 50 12.4	16.5			399
1990 UV13		1990 10 27.66383	02 10 45.28	+12 50 06.9				399
1990 VF4		1990 11 17.49479	03 27 39.40	+18 36 39.3	16.5			399
1990 VF4		1990 11 17.51007	03 27 38.51	+18 36 37.9				399
1990 WS15	*	1990 11 24.55909	03 25 43.60	+19 51 28.9	16.5			399
1990 WS15		1990 11 24.57465	03 25 42.82	+19 51 27.7				399
1991 CA		1992 08 26.54983	22 40 55.08	-07 33 33.3	16.5			399
1991 CA		1992 09 20.47588	22 18 56.67	-09 50 41.5	17			399
1991 CA		1992 09 20.49069	22 18 55.96	-09 50 44.9				399
1991 DM1		1992 09 20.47588	22 20 04.10	-10 07 51.7	14.5			399
1991 DM1		1992 09 20.49069	22 20 03.72	-10 08 02.4				399
1992 EL		1990 12 13.46528	04 21 20.60	+32 25 22.4	15.5			399
1992 EL		1990 12 13.48021	04 21 19.64	+32 25 16.6				399
1992 EL		1990 12 15.49028	04 19 32.99	+32 14 14.9	15.5			399
1992 EL		1990 12 15.50521	04 19 32.21	+32 14 10.1				399
1992 FS1		1992 05 02.53194	13 26 15.90	+04 49 09.4	16.5			399
1992 FS1		1992 05 02.55000	13 26 15.10	+04 49 10.0				399
1992 QH		1992 09 20.54995	22 41 44.06	-04 37 39.0	15.5			399
1992 QH		1992 09 20.56465	22 41 43.24	-04 37 40.1				399
1992 QH		1992 09 28.46672	22 35 29.72	-04 43 23.4	15.5			399
1992 QH		1992 09 28.48131	22 35 29.06	-04 43 24.2				399
1992 QM		1992 09 20.47588	22 12 38.93	-07 51 46.1	15.5			399
1992 QM		1992 09 20.49069	22 12 38.53	-07 51 46.6				399
1992 SC1		1992 09 28.66683	01 25 02.52	+00 57 55.9	16			399
1992 SC1		1992 09 28.68270	01 25 01.75	+00 57 47.7				399
1992 SO1	*	1992 09 20.54995	22 40 36.02	-02 45 07.0	16.5			399
1992 SO1		1992 09 20.56465	22 40 35.03	-02 45 05.2				399
1992 SO1		1992 09 28.46672	22 32 16.57	-02 01 19.8	17.3			399
1992 SO1		1992 09 28.48131	22 32 15.81	-02 01 13.2				399
1992 SP1		1992 08 26.54410	23 08 52.59	-04 31 34.4	17			399
1992 SP1		1992 08 26.56181	23 08 51.60	-04 31 32.7				399
1992 SP1		1992 08 26.57639	23 08 50.60	-04 31 31.9				399
1992 SP1	*	1992 09 20.54995	22 43 42.48	-03 14 30.3	17			399
1992 SP1		1992 09 20.56465	22 43 41.71	-03 14 28.0				399
1992 SP1		1992 09 28.46672	22 37 07.33	-02 50 22.8	17			399
1992 SP1		1992 09 28.48131	22 37 06.65	-02 50 19.1				399

400 Kitami
K. Watanabe, 3-8 Mason Hashimoto B-203, atsubetsu cyuo 3 jo 4 chome,
Atsubetsu-ku, Sapporo 004, Japan
Observer K. Endate, M. Yanai
Measurer K. Watanabe
0.25-m f/2.6 Schmidt, 0.20-m f/4.0 hyperboloid astrocamera
GSC

1935 SC		1992 09 21.52153	00 35 14.59	+06 55 51.9	16.5			400
1935 SC		1992 09 21.53715	00 35 13.60	+06 55 51.4				400
1935 SC		1992 09 23.48333	00 33 24.18	+06 55 23.8	16.5			400
1935 SC		1992 09 23.50069	00 33 23.26	+06 55 24.3				400
1992 SE	*	1992 09 21.52153	00 26 41.21	+03 50 35.3	16.5			400
1992 SE		1992 09 21.53715	00 26 40.64	+03 50 21.1				400
1992 SE		1992 09 23.48333	00 25 38.26	+03 20 39.6	16.5			400
1992 SE		1992 09 23.50069	00 25 37.81	+03 20 28.0				400
1992 SE		1992 09 28.50069	00 22 48.63	+02 01 57.2	16.5			400
1992 SE		1992 09 28.51528	00 22 48.02	+02 01 42.8				400
1992 SF	*	1992 09 21.52153	00 30 51.48	+03 19 40.5	16.5			400
1992 SF		1992 09 21.53715	00 30 50.53	+03 19 39.3				400
1992 SF		1992 09 23.48333	00 28 57.12	+03 19 29.8	16.5			400
1992 SF		1992 09 23.50069	00 28 56.14	+03 19 28.8				400

1992 SF		1992	09	28.50069	00	23	53.87	+03	18	07.3	16.0	400
1992 SF		1992	09	28.51528	00	23	52.90	+03	18	07.2		400
1992 SG	*	1992	09	21.52153	00	36	05.68	+07	07	48.6	16.5	400
1992 SG		1992	09	21.53715	00	36	04.40	+07	07	49.5		400
1992 SG		1992	09	23.48333	00	34	00.74	+07	09	11.5	16.5	400
1992 SG		1992	09	23.50069	00	33	59.73	+07	09	10.9		400
1992 SH	*	1992	09	21.52488	00	31	15.19	+04	54	14.5	16.5	400
1992 SH		1992	09	21.53646	00	31	14.56	+04	54	05.3		400
1992 SH		1992	09	23.48333	00	29	49.60	+04	33	08.2	16.5	400
1992 SH		1992	09	23.49792	00	29	48.78	+04	32	58.9		400
1992 SH		1992	09	28.50069	00	26	06.57	+03	38	30.7	16.5	400
1992 SH		1992	09	28.51528	00	26	05.80	+03	38	21.7		400
1992 SJ	*	1992	09	21.52488	00	33	31.00	+04	00	30.9	16.0	400
1992 SJ		1992	09	21.53646	00	33	30.11	+04	00	31.0		400
1992 SJ		1992	09	23.48333	00	31	34.71	+04	01	32.7	16.0	400
1992 SJ		1992	09	23.49792	00	31	33.60	+04	01	35.5		400
1992 SJ		1992	09	28.50069	00	26	32.09	+04	03	20.7	16.0	400
1992 SJ		1992	09	28.51528	00	26	31.23	+04	03	20.6		400
1992 SM	*	1992	09	21.56250	00	31	18.80	+08	47	32.2	16.0	400
1992 SM		1992	09	21.58229	00	31	18.07	+08	47	14.9		400
1992 SM		1992	09	23.45347	00	30	08.10	+08	19	07.1	16.0	400
1992 SM		1992	09	23.46806	00	30	07.10	+08	18	54.1		400
1992 SA1	*	1992	09	23.58299	00	54	43.82	+11	14	46.3	16.5	400
1992 SA1		1992	09	23.59688	00	54	43.10	+11	14	46.4		400
1992 SA1		1992	09	28.53542	00	50	31.06	+11	16	42.8	16.0	400
1992 SA1		1992	09	28.54931	00	50	30.32	+11	16	42.1		400
1992 SB1	*	1992	09	23.58299	00	55	56.52	+10	39	32.4	16.0	400
1992 SB1		1992	09	23.59688	00	55	55.71	+10	39	34.0		400
1992 SB1		1992	09	28.53542	00	51	12.92	+10	48	13.2	16.0	400
1992 SB1		1992	09	28.54931	00	51	12.06	+10	48	14.0		400
1992 SC1	*	1992	09	23.58472	01	28	11.07	+01	37	15.2	16.5	400
1992 SC1		1992	09	23.60278	01	28	10.32	+01	37	06.4		400
1992 SC1		1992	09	28.56250	01	25	07.01	+00	58	44.9	16.5	400
1992 SC1		1992	09	28.58264	01	25	06.20	+00	58	34.8		400
1992 SD1	*	1992	09	23.58472	01	35	21.71	-00	27	49.2	16.5	400
1992 SD1		1992	09	23.60278	01	35	20.80	-00	27	53.3		400
1992 SD1		1992	09	28.56250	01	31	08.55	-00	38	13.6	17	400
1992 SD1		1992	09	28.58264	01	31	07.55	-00	38	17.8		400
1992 SE1	*	1992	09	23.58472	01	37	56.08	-02	22	40.8	17	400
1992 SE1		1992	09	23.60278	01	37	55.14	-02	22	42.8		400
1992 SE1		1992	09	28.56250	01	33	32.37	-02	32	56.5	17	400
1992 SE1		1992	09	28.58264	01	33	31.36	-02	32	59.4		400
1992 SF1	*	1992	09	23.62500	00	46	27.79	-02	36	06.7	16.5	400
1992 SF1		1992	09	23.64375	00	46	26.67	-02	36	11.1		400
1992 SF1		1992	09	28.52361	00	41	56.70	-02	56	54.6	16.5	400
1992 SF1		1992	09	28.54236	00	41	55.69	-02	56	58.7		400
1992 SG1	*	1992	09	23.62500	00	50	51.55	-06	20	51.7	16.5	400
1992 SG1		1992	09	23.64375	00	50	50.66	-06	21	11.2		400
1992 SG1		1992	09	28.52361	00	47	49.63	-07	31	21.2	16.5	400
1992 SG1		1992	09	28.54236	00	47	48.96	-07	31	37.2		400
1992 SH1	*	1992	09	23.62500	00	54	18.23	-07	26	51.4	16.5	400
1992 SH1		1992	09	23.64375	00	54	17.32	-07	26	51.1		400
1992 SH1		1992	09	28.52361	00	50	20.90	-07	28	53.2	16.5	400
1992 SH1		1992	09	28.54236	00	50	19.96	-07	28	52.2		400
1992 SJ1	*	1992	09	23.62500	00	57	56.15	-06	12	31.8	16.5	400
1992 SJ1		1992	09	23.64375	00	57	55.44	-06	12	37.7		400
1992 SJ1		1992	09	28.52361	00	54	01.88	-06	37	43.6	16.5	400
1992 SJ1		1992	09	28.54236	00	54	01.04	-06	37	50.8		400

402 Dynic Astronomical Observatory
A. Sugie, Dynic Astronomical Observatory, Taga 270, Taga-Cho, Inukami-Gun, Shiga-Ken, 522-03, Japan
0.25-m f/3.4 Schmidt
PPM

1988 VR5		1992 09 26.65972	01 28 57.07	+19 27 21.8	16.5		402
1988 VR5		1992 09 26.67222	01 28 56.55	+19 27 13.5			402
1988 VR5		1992 09 27.64175	01 28 21.48	+19 18 23.0			402
1988 VR5		1992 09 27.65694	01 28 20.96	+19 18 13.0			402
1992 SL		1992 09 26.65972	01 40 47.45	+18 40 25.1	15.0		402
1992 SL		1992 09 26.67222	01 40 46.80	+18 41 22.4			402
1992 SL		1992 09 27.64175	01 40 19.34	+19 53 33.3			402
1992 SL		1992 09 27.65694	01 40 18.49	+19 54 40.2			402
1992 SN	*	1992 09 26.65972	01 32 16.34	+19 29 15.9	16.5		402
1992 SN		1992 09 26.67222	01 32 15.77	+19 29 16.1			402
1992 SN		1992 09 27.64175	01 31 35.55	+19 28 45.6			402
1992 SN		1992 09 27.65694	01 31 34.81	+19 28 46.0			402
1992 SO	*	1992 09 26.65972	01 35 54.49	+18 29 28.6	17.0		402
1992 SO		1992 09 26.67222	01 35 54.07	+18 29 25.5			402
1992 SO		1992 09 27.64175	01 35 11.03	+18 24 14.7			402
1992 SO		1992 09 27.65694	01 35 10.38	+18 24 10.4			402
1992 SP	*	1992 09 26.65972	01 37 13.55	+17 12 10.6	16.5		402
1992 SP		1992 09 26.67222	01 37 12.79	+17 12 08.8			402
1992 SP		1992 09 27.64175	01 36 22.59	+17 09 56.4			402
1992 SP		1992 09 27.65694	01 36 21.62	+17 09 54.9			402
1992 SQ	*	1992 09 26.65972	01 46 13.79	+17 14 11.3	17.0		402
1992 SQ		1992 09 26.67222	01 46 13.16	+17 14 11.5			402
1992 SQ		1992 09 27.64175	01 45 36.49	+17 11 37.2			402
1992 SQ		1992 09 27.65694	01 45 35.67	+17 11 35.6			402
1992 SR1	*	1992 09 26.68194	01 55 38.31	+23 17 38.2	17.0		402
1992 SR1		1992 09 26.69722	01 55 37.78	+23 17 38.3			402
1992 SR1		1992 09 27.66597	01 55 02.76	+23 18 02.2			402
1992 SR1		1992 09 27.68056	01 55 02.07	+23 18 00.1			402
1992 SS1	*	1992 09 26.68194	01 55 47.44	+23 05 35.8	16.5		402
1992 SS1		1992 09 26.69722	01 55 46.51	+23 05 39.7			402
1992 SS1		1992 09 27.66597	01 54 57.09	+23 11 08.1			402
1992 SS1		1992 09 27.68056	01 54 56.23	+23 11 12.0			402
1992 ST1	*	1992 09 26.68194	01 59 14.81	+23 23 36.8	16.5		402
1992 ST1		1992 09 26.69722	01 59 14.21	+23 23 38.5			402
1992 ST1		1992 09 27.66597	01 58 31.96	+23 23 03.1			402
1992 ST1		1992 09 27.68056	01 58 31.16	+23 23 03.8			402

410 Sengamine
K. Ito, 4-13-7, Sakuragaoka Higashi Mati, Nishi-ku, Kobe 651-22, Japan
0.20-m f/4.8 reflector + CCD
GSC

1992 HE		1992 09 26.70999	03 23 58.70	+08 49 56.3	14.6 V		410
1992 HE		1992 09 26.71481	03 23 57.88	+08 50 04.4			410
1992 HE		1992 09 26.71759	03 23 57.39	+08 50 10.3			410

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers M. Hartley, S. M. Hughes, C. Lidman, R. H. McNaught, A. Savage, D. I. Steel
Measurers R. H. McNaught, M. J. Drinkwater
Uppsala Southern Schmidt, U.K. Schmidt, 1.0-m reflector + CCD, 2.3-m reflector + CCD

1973	NA		1992	09	06.39644	15	23	30.73	-72	35	19.4	F 413
1973	NA		1992	09	06.39953	15	23	31.28	-72	35	20.3	F 413
1974	HS3	*	1974	04	28.59102	15	09	44.40	-29	26	27.6	17.5 V 413
1974	HS3		1974	04	28.63269	15	09	42.09	-29	26	24.7	413
1975	TK6		1992	09	17.40319	19	22	31.44	-37	01	27.3	16.5 V 413
1975	TK6		1992	09	18.41154	19	23	17.70	-36	57	58.0	413
1980	PB3		1992	09	06.64789	22	49	36.45	-38	05	28.4	413
1980	PB3		1992	09	06.65012	22	49	36.33	-38	05	28.6	413
1980	VO		1992	09	06.62286	22	06	32.13	-31	03	02.8	413
1980	VO		1992	09	06.62505	22	06	32.00	-31	03	02.5	413
1986	RA		1992	09	05.47461	16	52	08.53	+01	08	08.4	413
1986	RA		1992	09	05.47707	16	52	08.86	+01	08	05.2	413
1988	JA1		1992	09	05.76359	22	34	04.54	-33	20	47.0	413
1988	JA1		1992	09	05.76595	22	34	04.41	-33	20	48.5	413
1988	RA		1992	09	05.57317	20	48	36.08	-48	30	48.8	413
1988	RA		1992	09	05.57523	20	48	35.86	-48	30	48.1	413
1988	RJ13		1992	09	06.63288	22	34	33.14	-31	54	07.0	413
1988	RJ13		1992	09	06.63573	22	34	32.96	-31	54	06.8	413
1989	AH		1992	09	06.62734	23	26	06.15	-36	03	39.7	413
1989	AH		1992	09	06.62941	23	26	06.05	-36	03	40.4	413
1990	BV		1992	09	06.63904	22	45	26.27	-25	59	13.9	413
1990	BV		1992	09	06.64102	22	45	26.16	-25	59	14.9	413
1991	CD1		1992	09	05.78396	23	19	38.83	-26	47	59.6	413
1991	CD1		1992	09	05.79054	23	19	38.47	-26	48	04.0	413
1991	CM5		1987	10	30.68326	05	38	45.34	-12	13	10.4	413
1991	CM5		1987	10	30.74368	05	38	44.24	-12	13	33.8	413
1991	FF		1992	09	05.51432	17	43	27.43	-39	55	34.5	413
1991	JT		1992	09	05.66780	23	39	49.71	+12	43	09.3	413
1991	JT		1992	09	05.66970	23	39	49.61	+12	43	08.7	413
1991	JR2		1992	09	05.64491	22	40	14.88	-05	15	02.0	413
1991	JR2		1992	09	05.64743	22	40	14.76	-05	15	03.4	413
1992	FE		1985	04	17.68181	16	19	32.94	-38	28	09.4	413
1992	FE		1985	04	17.69917	16	19	30.97	-38	28	21.2	I 413
1992	FE		1985	04	17.73856	16	19	25.72	-38	28	50.7	413
1992	FE		1985	04	17.79065	16	19	18.75	-38	29	27.7	413
1992	HE		1992	09	05.69583	04	08	09.22	-01	49	43.2	413
1992	HE		1992	09	05.69785	04	08	09.05	-01	49	39.8	413
1992	HE		1992	09	06.67949	04	06	48.78	-01	21	26.1	413
1992	HE		1992	09	06.68203	04	06	48.56	-01	21	21.8	413
1992	HE		1992	09	06.75145	04	06	42.46	-01	19	21.7	413
1992	HE		1992	09	06.75334	04	06	42.29	-01	19	18.6	413
1992	HE		1992	09	07.80888	04	05	11.04	-00	48	44.5	413
1992	JE		1992	09	06.41492	17	41	32.14	-11	38	38.0	413
1992	JE		1992	09	06.41734	17	41	32.85	-11	38	39.7	413
1992	LR		1992	09	05.62082	22	17	53.14	+04	06	46.3	r 413
1992	LR		1992	09	05.62258	22	17	53.38	+04	06	45.4	r 413
1992	LR		1992	09	06.45760	22	19	58.75	+03	58	57.2	413
1992	LR		1992	09	06.46234	22	19	59.29	+03	58	54.8	413
1992	LR		1992	09	06.57176	22	20	13.05	+03	57	54.2	413
1992	LR		1992	09	06.57461	22	20	13.41	+03	57	52.6	413
1992	LR		1992	09	06.68708	22	20	27.66	+03	56	48.5	413
1992	LR		1992	09	06.69189	22	20	28.28	+03	56	45.7	413
1992	LR		1992	09	06.70032	22	20	29.40	+03	56	41.8	413
1992	LR		1992	09	06.70324	22	20	29.78	+03	56	40.2	413
1992	LR		1992	09	06.70549	22	20	30.08	+03	56	38.9	413
1992	LR		1992	09	06.70738	22	20	30.32	+03	56	37.8	413
1992	ME		1992	09	05.47997	16	54	03.82	-16	05	02.1	413
1992	ME		1992	09	05.48197	16	54	04.05	-16	05	04.1	413
1992	NA		1992	09	05.81058	02	50	51.66	+12	19	52.5	413

1992 NA	1992 09 05.81263	02 50 52.45	+12 20 14.6					413
1992 NA	1992 09 05.81469	02 50 53.23	+12 20 36.8					413
1992 NA	1992 09 06.72958	02 57 11.21	+15 02 22.2					413
1992 NA	1992 09 06.73139	02 57 11.89	+15 02 41.0					413
1992 NA	1992 09 07.81133	03 04 21.51	+18 05 09.6					413
1992 NA	1992 09 07.81310	03 04 22.15	+18 05 27.0					413
1992 NA	1992 09 07.81543	03 04 22.99	+18 05 49.4					413
1992 NJ	1992 09 05.56536	20 42 10.34	-48 23 21.9					413
1992 NJ	1992 09 05.56760	20 42 10.24	-48 23 20.9					413
1992 OB	1992 09 05.59845	21 07 31.20	-44 12 25.9					413
1992 OB	1992 09 05.60054	21 07 31.12	-44 12 25.0					413
1992 OC	1992 09 05.59244	21 04 50.15	-36 12 07.0					413
1992 OC	1992 09 05.59493	21 04 50.08	-36 12 04.2					413
1992 OE	1992 09 05.65678	22 50 03.97	+07 17 18.1					413
1992 OE	1992 09 05.65862	22 50 03.80	+07 17 19.1					413
1992 OF	1992 09 05.67663	00 57 44.71	-02 51 27.5					413
1992 OF	1992 09 05.67866	00 57 44.68	-02 51 27.7					413
1992 OF	1992 09 06.54348	00 57 38.15	-02 53 03.1					413
1992 OF	1992 09 06.54561	00 57 38.12	-02 53 03.4					413
1992 OK	1992 09 05.58650	21 02 52.45	-00 27 24.6					413
1992 OK	1992 09 05.58868	21 02 52.42	-00 27 25.2					413
1992 OM	1992 09 05.61628	22 13 58.58	+03 32 17.1					413
1992 OM	1992 09 05.61815	22 13 58.52	+03 32 18.2					413
1992 OM	1992 09 06.52046	22 13 39.49	+03 40 59.4					413
1992 OM	1992 09 06.52265	22 13 39.42	+03 41 00.8					413
1992 ON	1992 09 05.63374	22 16 38.12	-15 28 08.1					413
1992 ON	1992 09 05.63589	22 16 37.86	-15 28 05.5					413
1992 ON	1992 09 06.53120	22 14 52.88	-15 09 40.2					413
1992 ON	1992 09 06.53353	22 14 52.60	-15 09 37.3					413
1992 OO	1992 09 05.63918	22 17 59.81	-39 15 39.1					413
1992 OO	1992 09 05.64131	22 17 59.72	-39 15 41.0					413
1992 OW	1992 09 06.59914	20 58 46.00	-42 15 19.3					413
1992 OW	1992 09 06.60201	20 58 45.92	-42 15 17.9					413
1992 QA	1992 09 06.44029	19 13 54.27	-61 56 57.9					413
1992 QA	1992 09 06.44336	19 13 54.43	-61 56 55.1					413
1992 QA	1992 09 06.44637	19 13 54.62	-61 56 53.6					413
1992 QA	1992 09 06.44962	19 13 54.70	-61 56 50.6					413
1992 QB	1992 09 05.62747	19 27 35.43	-60 31 09.0					413
1992 QB	1992 09 05.62954	19 27 35.54	-60 31 07.3					413
1992 QB	1992 09 06.51287	19 28 36.09	-60 19 49.2					413
1992 QB	1992 09 06.51662	19 28 36.33	-60 19 45.8					413
1992 QC	1992 09 05.65028	00 21 01.16	-44 53 55.6					413
1992 QC	1992 09 05.65240	00 21 00.91	-44 53 53.9					413
1992 QC	1992 09 06.53743	00 19 25.73	-44 41 55.5					413
1992 QC	1992 09 06.53958	00 19 25.49	-44 41 53.8					413
1992 QN	1992 09 06.42800	22 16 49.24	-20 16 32.2					413
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1992 QN	1992 09 06.56388	22 16 27.94	-20 15 22.0					413
1992 QN	1992 09 06.56631	22 16 27.56	-20 15 20.4					413
1992 QN	1992 09 06.69468	22 16 07.60	-20 14 10.0					413
1992 QN	1992 09 06.69691	22 16 07.26	-20 14 08.8					413
1992 QN	1992 09 06.71288	22 16 04.81	-20 13 59.6					413
1992 QN	1992 09 06.71509	22 16 04.48	-20 13 58.7					413
1992 QN	1992 09 06.72118	22 16 03.54	-20 13 55.2					413
1992 QN	1992 09 06.72347	22 16 03.20	-20 13 53.9					413
1992 QB1	1992 09 21.42957	23 59 35.97	-00 01 23.9				u	413
1992 RB	1992 09 06.66800	00 35 00.69	-32 36 00.6					413
1992 RB	1992 09 06.67067	00 35 00.56	-32 36 04.0					413
1992 RD	1992 09 06.67346	00 47 47.59	-31 18 04.6					413

1992 RD		1992	09	06.67649	00	47	47.49	-31	18	07.8		413
1992 RE	*	1992	09	04.74368	03	03	27.40	-26	45	24.2	17.5 V	413
1992 RE		1992	09	04.78882	03	03	29.60	-26	46	08.1		413
1992 RE		1992	09	05.73389	03	04	16.15	-27	01	46.2		413
1992 RE		1992	09	05.73690	03	04	16.28	-27	01	49.0		413
1992 RE		1992	09	06.74535	03	05	03.40	-27	18	32.7		413
1992 RE		1992	09	06.74819	03	05	03.52	-27	18	35.5		413
1992 RE		1992	09	07.80463	03	05	50.13	-27	36	08.9		413
1992 RF	*	1992	09	04.76625	02	44	34.29	-23	45	07.9	18 V	413
1992 RF		1992	09	05.72278	02	44	34.86	-23	50	02.2		413
1992 RF		1992	09	05.72962	02	44	34.82	-23	50	04.1		413
1992 RF		1992	09	06.73949	02	44	33.26	-23	55	14.3		413
1992 RF		1992	09	06.74238	02	44	33.25	-23	55	15.0		413
1992 RF		1992	09	07.80685	02	44	29.13	-24	00	38.4		413
1992 RE1	*	1992	09	02.58329	00	35	37.87	-27	51	38.7	18 V	413
1992 RE1		1992	09	02.64579	00	35	35.59	-27	52	11.6		413
1992 RE1		1992	09	04.70326	00	34	19.98	-28	11	17.2		413
1992 RF1	*	1992	09	02.58329	00	43	42.50	-27	36	04.5	18.5 V	413
1992 RF1		1992	09	02.64579	00	43	41.08	-27	36	49.2		413
1992 RF1		1992	09	04.70326	00	42	56.80	-28	00	15.7		413
1992 RG1	*	1992	09	02.58329	00	50	37.41	-31	04	17.8	18 V V	413
1992 RG1		1992	09	02.64579	00	50	34.96	-31	04	40.2	F	413
1992 RG1		1992	09	04.70326	00	49	13.29	-31	16	36.7		413
1992 RH1	*	1992	09	02.58329	00	52	29.77	-32	07	24.1	18 V V	413
1992 RH1		1992	09	02.64579	00	52	26.91	-32	07	52.0	F	413
1992 RH1		1992	09	04.70326	00	50	54.20	-32	21	54.6		413
1992 RJ1	*	1992	09	02.58329	01	00	41.02	-26	46	40.4	17.5 V	413
1992 RJ1		1992	09	02.64579	01	00	37.12	-26	46	38.7		413
1992 RJ1		1992	09	04.70326	00	58	28.26	-26	45	04.8		413
1992 RK1	*	1992	09	02.64579	00	45	02.04	-28	16	28.2	18.5 V V	413
1992 RK1		1992	09	04.70326	00	43	28.04	-28	23	37.2		413
1992 RL1	*	1992	09	02.64579	00	49	28.37	-29	13	23.6	18.5 V F	413
1992 RL1		1992	09	04.70326	00	48	19.81	-29	29	27.8		413
1992 RM1	*	1992	09	02.64579	00	56	38.96	-26	48	50.9	16.5 V	413
1992 RM1		1992	09	04.70326	00	55	11.42	-26	55	42.1		413
1992 SA	*	1992	09	17.40319	19	20	44.08	-40	17	43.8	17.5 V	413
1992 SA		1992	09	18.41154	19	21	08.82	-40	10	39.1		413
1992 SB	*	1992	09	17.40319	19	21	19.21	-37	26	54.0	18 V	413
1992 SB		1992	09	18.41154	19	21	43.57	-37	19	07.4		413
1992 SC	*	1992	09	17.40319	19	22	07.81	-34	57	43.2	17.5 V	413
1992 SC		1992	09	18.41154	19	22	52.26	-34	56	53.4		413
1992 SD	*	1992	09	17.40319	19	23	14.48	-34	33	43.0	18 V	413
1992 SD		1992	09	18.41154	19	23	41.55	-34	28	28.6		413
(129)		1992	10	01.70498	03	02	07.94	+00	27	13.6		413
(878)		1992	09	06.64302	22	48	16.57	-06	43	57.4		413
(878)		1992	09	06.64499	22	48	16.48	-06	43	58.3		413
(1459)		1992	09	05.52404	17	47	05.40	-41	39	07.5		413
(1566)		1992	09	05.52860	18	47	37.44	-53	13	47.4		413
(1566)		1992	09	06.42236	18	45	10.01	-53	04	24.9		413
(1566)		1992	09	06.42521	18	45	09.60	-53	04	23.2		413
(1886)		1992	09	05.79322	23	27	16.55	-31	33	39.8		413
(1886)		1992	09	05.79554	23	27	16.42	-31	33	40.6		413
(1886)		1992	09	06.65245	23	26	30.08	-31	38	08.3		413
(1886)		1992	09	06.65438	23	26	29.96	-31	38	08.9		413
(2335)		1992	09	06.61733	21	35	21.84	-63	56	05.5		413
(2335)		1992	09	06.62010	21	35	21.54	-63	56	04.1		413
(2888)		1974	04	28.59102	15	09	21.06	-28	21	19.8	16 V	413
(2888)		1974	04	28.63269	15	09	18.22	-28	21	16.5		413

(4470)	1989 09 24.49207	22 27 02.09	-12 30 36.8			413
(4470)	1989 09 24.54416	22 27 00.53	-12 30 44.8			413
(5324)	1992 09 05.48388	16 56 07.66	-49 22 23.9			413
(5324)	1992 09 05.48546	16 56 08.37	-49 22 21.2			413
(5325)	1992 09 05.77093	22 56 58.60	-26 10 22.8			413
(5325)	1992 09 05.77336	22 56 58.47	-26 10 24.9			413
(5332)	1992 09 05.66115	23 10 28.40	-23 56 07.8			413
(5332)	1992 09 05.66326	23 10 28.26	-23 56 11.2			413

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

(107)	1991 09 05.97639	23 22 21.82	-02 31 30.7			511
(107)	1991 09 06.01458	23 22 20.40	-02 31 44.2		15.0	511
(133)	1991 09 07.95139	23 06 19.32	-00 20 59.5		15.0	511
(297)	1992 09 25.95139	00 13 14.54	+08 28 03.6			511
(297)	1992 09 26.95278	00 12 25.33	+08 25 14.9		15.0	511
(297)	1992 09 26.97361	00 12 24.24	+08 25 13.9			511
(439)	1992 09 25.95139	00 05 43.68	+10 17 43.2			511
(439)	1992 09 26.95278	00 05 04.22	+10 07 46.6		16.0	511
(439)	1992 09 26.97361	00 05 03.42	+10 07 36.1			511
(648)	1992 09 25.95139	00 05 51.40	+15 46 42.6		16.0	511
(760)	1992 09 25.95139	00 13 17.63	+11 54 01.6			511
(760)	1992 09 26.95278	00 12 32.06	+11 51 09.5		15.0	511
(760)	1992 09 26.97361	00 12 30.92	+11 51 08.7			511
(774)	1992 09 25.95139	23 56 15.21	+08 11 26.2			511
(774)	1992 09 26.95278	23 55 30.01	+08 05 20.5		16.0	511
(774)	1992 09 26.97361	23 55 29.00	+08 05 14.7			511
(1101)	1992 09 25.95139	23 53 51.30	+11 11 58.0			511
(1101)	1992 09 26.95278	23 53 13.13	+11 01 18.0		17.0	511
(1101)	1992 09 26.97361	23 53 12.40	+11 01 06.1			511
(1288)	1992 09 25.95139	00 03 50.50	+12 19 56.8			511
(1288)	1992 09 26.95278	00 03 00.51	+12 15 51.9		16.5	511
(1288)	1992 09 26.97361	00 02 59.32	+12 15 48.5			511
(2996)	1991 09 05.97639	23 23 14.57	-02 32 54.3			511
(2996)	1991 09 06.01458	23 23 12.55	-02 33 03.2		16.7	511
(3280)	1991 09 05.97639	23 22 26.66	-01 50 50.7			511
(3280)	1991 09 06.01458	23 22 24.53	-01 50 58.9		16.5	511
(3637)	1992 09 25.95139	00 01 07.89	+11 00 23.6			511
(3637)	1992 09 26.95278	00 00 22.05	+10 48 53.9		17.0	511
(3637)	1992 09 26.97361	00 00 21.05	+10 48 43.5			511
(3893)	1992 09 25.95139	23 50 03.24	+12 01 27.8			511
(3893)	1992 09 26.95278	23 49 27.86	+11 37 18.9		17.0	511
(3893)	1992 09 26.97361	23 49 26.93	+11 36 48.9			511
(3977)	1992 09 25.95139	00 07 56.12	+13 33 36.4			511
(3977)	1992 09 26.95278	00 07 10.27	+13 23 11.0		17.0	511
(3977)	1992 09 26.97361	00 07 09.07	+13 23 01.5			511

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

(4063)	1989 02 02.93750	09 11 12.20	+24 51 23.3		16.5	552
(4063)	1989 02 02.94931	09 11 11.83	+24 51 26.3			552

568 Mauna Kea Observatory
D. C. Jewitt, Institute for Astronomy, 2680 Woodlawn Drive,
Honolulu, HI 96822, U.S.A.
Observers D. C. Jewitt, J. X. Luu
2.2-m reflector + CCD
GSC

1992 QB1	*	1992 08 30.46089	00 01 12.79	+00 08 50.7	23.5 V		568
1992 QB1		1992 08 30.60338	00 01 12.19	+00 08 46.9			568
1992 QB1		1992 08 31.52568	00 01 08.37	+00 08 22.7			568
1992 QB1		1992 08 31.62503	00 01 07.95	+00 08 19.9			568
1992 QB1		1992 09 01.35969	00 01 04.90	+00 08 00.6			568
1992 QB1		1992 09 01.62746	00 01 03.76	+00 07 53.3			568
1992 QB1		1992 09 25.41875	23 59 17.85	-00 03 20.3			568
1992 QB1		1992 09 25.43201	23 59 17.80	-00 03 20.8			568
1992 QB1		1992 09 25.56401	23 59 17.16	-00 03 24.6			568

573 Eldagsen
W. Bonk, Nordstrasse 33, W-3257 Springe 3, Federal Republic of Germany
AGK3

(397)		1992 09 06.83943	23 55 16.88	+20 57 18.9			573
(397)		1992 09 06.84725	23 55 16.58	+20 57 16.2			573
(3674)		1992 09 06.85685	00 42 54.56	+50 18 01.7			573
(3674)		1992 09 06.86490	00 42 54.50	+50 18 15.8			573

587 Sormano
P. Sicoli, Via Valli 9, I-22040 Garbagnate Monastero (Como), Italy
0.5-m f/5.9 reflector, 0.21-m f/4.9 astrograph
Observers M. Cavagna, E. Colzani, P. Sicoli, A. Testa
PPM

1992 LR		1992 07 24.90417	18 13 10.65	+01 58 30.4			587
1992 LR		1992 07 24.91354	18 13 14.53	+01 58 44.9			587
1992 LR		1992 08 24.85208	21 40 31.89	+05 50 20.6			587
1992 LR		1992 08 24.85451	21 40 32.47	+05 50 20.4			587
1992 LR		1992 08 24.85660	21 40 32.97	+05 50 20.3			587
1992 LR		1992 08 24.88715	21 40 39.80	+05 50 05.5			587
(1622)		1992 03 03.88403	10 44 03.01	+13 12 26.6			587
(1622)		1992 03 03.90417	10 44 01.64	+13 12 30.9			587
(1622)		1992 03 29.83749	10 19 03.82	+13 49 06.0			587
(1622)		1992 03 29.86040	10 19 02.84	+13 49 05.3			587
(1622)		1992 04 27.88513	10 14 33.90	+12 13 08.7			587
(1622)		1992 04 27.89633	10 14 34.01	+12 13 05.2			587

589 Santa Lucia Stroncone
A. Vagnozzi, Via Santa Lucia 68, I-05039 Stroncone (Terni), Italy
Observers A. Vagnozzi, V. Risoldi, G. Bernabei
0.50-m f/2.8 Ritchey-Chretien + CCD
GSC

1955 QN		1992 08 06.85494	20 16 35.99	-08 38 03.4			589
1955 QN		1992 08 06.85917	20 16 35.73	-08 38 04.0			589
1955 QN		1992 08 06.87104	20 16 35.03	-08 38 05.4			589
1955 QN		1992 08 06.89049	20 16 33.85	-08 38 07.6			589
1955 QN		1992 08 06.89787	20 16 33.40	-08 38 08.7			589
1955 QN		1992 08 07.87785	20 15 36.84	-08 40 13.8			589
1955 QN		1992 08 07.88273	20 15 36.53	-08 40 14.4			589
1955 QN		1992 08 07.88920	20 15 36.14	-08 40 15.4			589
1955 QN		1992 08 07.89978	20 15 35.54	-08 40 17.1			589
1955 QN		1992 08 18.90087	20 06 14.17	-09 08 28.8			589
1955 QN		1992 08 18.90431	20 06 13.98	-09 08 29.1			589
1955 QN		1992 08 18.90730	20 06 13.85	-09 08 29.8			589

1955 QN	1992 08 18.91367	20 06 13.58	-09 08 30.5				589
1955 QN	1992 08 18.92274	20 06 13.14	-09 08 32.6				589
1987 VG1	1992 08 18.93192	23 08 53.76	+09 54 31.5				589
1987 VG1	1992 08 18.93848	23 08 53.50	+09 54 30.8				589
1987 VG1	1992 08 18.94442	23 08 53.28	+09 54 29.9				589
1988 JA1	1992 09 03.91730	22 35 43.33	-33 00 33.4				589
1988 JA1	1992 09 03.92450	22 35 42.90	-33 00 38.6				589
1988 JA1	1992 09 03.93283	22 35 42.47	-33 00 43.9				589
1988 JA1	1992 09 05.90178	22 33 57.85	-33 22 22.6			r	589
1988 JA1	1992 09 05.93794	22 33 55.83	-33 22 45.0			r	589
1988 JA1	1992 09 05.94269	22 33 55.69	-33 22 48.6			r	589
(4455)	1992 08 21.90936	21 43 15.62	+00 55 19.6				589
(4455)	1992 08 21.91502	21 43 15.32	+00 55 18.4				589
(4455)	1992 08 21.92299	21 43 14.93	+00 55 16.6				589
(4455)	1992 08 21.93237	21 43 14.49	+00 55 14.5				589
(4455)	1992 08 21.93855	21 43 14.24	+00 55 12.3				589
(4455)	1992 08 30.85507	21 36 41.20	+00 16 34.8				589
(4455)	1992 08 30.86080	21 36 40.95	+00 16 33.5				589
(4455)	1992 08 30.87632	21 36 40.28	+00 16 28.9				589
(4866)	1992 08 19.82535	19 03 33.57	-09 13 08.8				589
(4866)	1992 08 19.83839	19 03 33.26	-09 13 13.4				589
(4866)	1992 08 19.85472	19 03 33.04	-09 13 16.2				589
(4866)	1992 08 20.80653	19 03 18.48	-09 16 49.7				589
(4866)	1992 08 20.81597	19 03 18.20	-09 16 52.1				589
(4866)	1992 08 20.83323	19 03 18.00	-09 16 54.9				589
(4866)	1992 08 20.84887	19 03 17.78	-09 16 58.9				589
(4866)	1992 08 21.85173	19 03 03.76	-09 20 44.6				589
(4866)	1992 08 21.85993	19 03 03.68	-09 20 46.5				589
(4866)	1992 08 21.86570	19 03 03.58	-09 20 48.2				589
(5118)	1992 08 20.89427	20 08 18.43	+00 38 33.9				589
(5118)	1992 08 20.91264	20 08 17.87	+00 38 30.6				589
(5118)	1992 08 20.92105	20 08 17.61	+00 38 31.0				589
(5118)	1992 08 20.93667	20 08 17.10	+00 38 28.8				589
(5118)	1992 08 20.94424	20 08 16.85	+00 38 26.6				589
(5118)	1992 08 21.88042	20 07 49.43	+00 35 53.5				589
(5118)	1992 08 21.88896	20 07 49.16	+00 35 52.2				589
(5118)	1992 08 21.89533	20 07 48.96	+00 35 51.0				589
(5118)	1992 08 22.84745	20 07 22.47	+00 33 05.4				589
(5118)	1992 08 22.85521	20 07 22.26	+00 33 04.0				589
(5118)	1992 08 22.86271	20 07 22.02	+00 33 02.5				589
(5118)	1992 08 28.85497	20 05 13.47	+00 13 11.0				589
(5118)	1992 08 28.86976	20 05 13.24	+00 13 07.7				589
(5118)	1992 08 28.87882	20 05 13.07	+00 13 05.8				589
(5261)	1992 08 01.88400	20 21 16.74	+35 52 20.9				589
(5261)	1992 08 01.90825	20 21 14.55	+35 52 35.7				589
(5261)	1992 08 01.91965	20 21 13.46	+35 52 42.5				589
(5270)	1992 08 21.82421	19 02 29.35	-05 20 23.6				589
(5270)	1992 08 21.83253	19 02 29.29	-05 20 27.1				589
(5270)	1992 08 21.84160	19 02 29.25	-05 20 31.1				589
(5270)	1992 08 30.80367	19 03 05.00	-06 24 08.6				589
(5270)	1992 08 30.80840	19 03 05.04	-06 24 10.0				589
(5270)	1992 08 30.82769	19 03 05.24	-06 24 18.4				589

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

1992 LR	1992 07 30.86667	18 59 44.87	+04 15 16.4				595

1992 LR	1992 07 30.89097	18 59 55.82	+04 15 46.3		595
1992 LR	1992 08 17.83125	21 07 27.76	+06 30 07.7		595
1992 LR	1992 08 17.84514	21 07 32.36	+06 30 05.3		595
1992 LR	1992 08 18.83681	21 12 49.02	+06 26 26.3		595
1992 LR	1992 08 18.85347	21 12 53.87	+06 26 24.4		595
1992 LR	1992 08 19.87431	21 18 06.00	+06 21 49.7		595
1992 LR	1992 08 19.88125	21 18 07.97	+06 21 48.5		595
1992 LR	1992 08 21.82847	21 27 29.58	+06 11 08.3		595
1992 LR	1992 08 21.84375	21 27 33.32	+06 11 03.7		595
1992 OM	1992 08 27.83889	22 18 17.92	+01 44 59.1		595
1992 OM	1992 08 27.86389	22 18 16.99	+01 45 20.9		595
1992 OM	1992 08 28.90764	22 17 41.02	+02 00 17.2		595
1992 OM	1992 08 28.93264	22 17 39.91	+02 00 40.2		595
1992 OM	1992 08 28.94097	22 17 39.45	+02 00 46.4		595
1992 OM	1992 09 01.80694	22 15 38.57	+02 50 35.0		595
1992 OM	1992 09 01.85903	22 15 36.74	+02 51 11.3		595
1992 OM	1992 09 02.81250	22 15 10.14	+03 02 14.9		595
1992 OM	1992 09 02.84792	22 15 09.31	+03 02 38.0		595

596 Colleverde di Guidonia
V. S. Casulli, Via M. Rosa 1, I-00010 Colleverde di Guidonia (RM), Italy
0.31-m f/2.8 Baker-Schmidt + CCD
GSC

1935 SC	1992 09 20.87045	00 35 50.65	+06 55 57.8		596
1935 SC	1992 09 20.89135	00 35 49.28	+06 55 55.5		596
1935 SC	1992 09 20.90157	00 35 48.81	+06 55 57.0		596
1988 VL	1992 09 20.91261	00 36 54.18	+06 40 06.7		596
1988 VL	1992 09 20.92219	00 36 53.81	+06 40 01.6		596
1989 AO6	1992 09 21.81369	23 27 35.46	+05 31 45.2		596
1989 AO6	1992 09 21.83945	23 27 34.19	+05 31 37.0		596
1989 AO6	1992 09 21.85032	23 27 33.65	+05 31 33.7		596
1989 UU1	1992 09 07.83882	23 41 17.80	+10 16 53.6		596
1989 UU1	1992 09 07.85105	23 41 17.13	+10 16 52.8		596
1989 UU1	1992 09 07.86448	23 41 16.28	+10 16 48.9		596
1989 UU1	1992 09 07.88170	23 41 15.32	+10 16 45.0		596
1989 UU1	1992 09 08.82250	23 40 21.42	+10 13 33.8		596
1989 UU1	1992 09 08.83326	23 40 20.73	+10 13 32.0		596
1989 YS6	1992 09 26.94383	01 53 47.01	+00 58 30.7		596
1989 YS6	1992 09 26.95507	01 53 46.60	+00 58 27.3		596
1989 YS6	1992 09 26.96221	01 53 46.31	+00 58 24.4		596
1991 GD	1992 09 22.80443	00 25 17.01	+38 17 42.9		596
1991 GD	1992 09 22.81920	00 25 15.86	+38 17 37.9		596
1991 GD	1992 09 22.83899	00 25 14.63	+38 17 33.1		596
1992 NA	1992 09 20.00149	04 11 31.42	+41 12 10.2		596
1992 NA	1992 09 20.00820	04 11 33.13	+41 12 41.0		596
1992 NA	1992 09 20.01383	04 11 34.52	+41 13 06.1		596
1992 NA	1992 09 20.02037	04 11 36.13	+41 13 33.7		596
1992 NA	1992 09 20.02685	04 11 37.68	+41 14 03.1		596
(5301)	1992 09 20.80981	22 22 23.23	+05 07 53.6		596
(5301)	1992 09 20.82274	22 22 22.66	+05 07 50.7		596

597 Springe
N. Ehring, Detmoldstrasse 8, W-3000 Hannover 1, Federal Republic of Germany

(105)	1992 07 29.91806	21 34 51.93	+15 53 27.5		597
(105)	1992 07 29.93034	21 34 51.42	+15 53 22.7		597
(510)	1992 08 04.95383	22 15 41.64	+04 38 37.0		597
(510)	1992 08 04.96921	22 15 41.10	+04 38 32.8		597
(683)	1992 08 04.92891	22 26 30.20	+16 47 10.8		597

(683)	1992 08 04.94225	22 26 29.70	+16 47 12.7		597
(712)	1992 07 29.99564	21 27 56.82	+06 57 52.5		597
(712)	1992 07 30.00466	21 27 56.37	+06 57 52.6		597
(1458)	1992 08 05.95054	20 00 31.17	-01 25 51.5		597
(1458)	1992 08 05.95522	20 00 31.04	-01 25 54.1		597

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

1987 VG1	1992 08 28.35023	23 02 34.62	+09 39 27.8		657
1987 VG1	1992 08 28.35123	23 02 35.18	+09 39 29.5		657
1992 HE	1992 08 28.51414	04 16 57.47	-05 37 55.0		657
1992 HE	1992 08 28.51589	04 16 57.35	-05 37 52.4		657
1992 HE	1992 08 28.51726	04 16 57.27	-05 37 50.0		657
1992 LR	1992 07 24.33840	18 08 57.56	+01 43 59.2		657
1992 LR	1992 07 24.34010	18 08 58.29	+01 44 00.9		657
1992 OM	1992 08 28.32875	22 18 00.31	+01 52 04.6		657
1992 OM	1992 08 28.33106	22 18 00.19	+01 52 06.5		657
1992 OM	1992 08 28.33309	22 18 00.13	+01 52 08.6		657

670 Camarillo
J. E. Rogers, 4411 Rowland Avenue, Camarillo, CA 93010
0.25-m Schmidt-Cassegrain + CCD
GSC
Long. and Parallax 240.9558, 0.82775, +0.55922 (see MPC 19348)

1992 SL	1992 10 01.32692	01 38 10.83	+24 01 43.8		670
1992 SL	1992 10 01.33299	01 38 10.26	+24 02 08.3		670
1992 SL	1992 10 01.34081	01 38 09.92	+24 02 35.3		670
1992 SL	1992 10 01.34684	01 38 09.68	+24 02 56.5		670

675 Palomar
E. Helin, MS 183-501, Jet Propulsion Laboratory, Pasadena, CA 91109, U.S.A. (2)
C. Shoemaker, P.O. Box 984, Flagstaff, AZ 86002, U.S.A. (3)
C. J. van Houten, Sterrewacht Leiden, Postbus 9513, NL-2300 RA Leiden, The Netherlands (4)
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. (6)
9 = 3 + 6
Observers J. Alu (2, S), C. Brewer (2, S), S. Cohen (2, S), B. M. Cudnik (3, S), M. A. Dahm (3, S), T. Gehrels (4, L), E. Helin (2, S), H. E. Holt (3, S), K. Lawrence (2, S), G. J. Leonard (3, S), D. Moraru (2, S), C. M. Olmstead (3, S) P. Rose (2, S)
Measurers B. M. Cudnik (9), M. A. Dahm (9), K. Lawrence (2), D. Moraru (2), Rose (2), B. A. Skiff (9), C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)
1.2-m (L) and 0.46-m (S) Schmidt telescopes

1979 SN4	1992 08 22.33490	22 51 55.30	+00 45 09.3	16.0	3	675
1979 SN4	1992 08 22.37677	22 51 53.79	+00 44 42.4		3	675
1979 SN4	1992 08 24.33073	22 50 43.84	+00 23 56.4		3	675
1979 SN4	1992 08 24.36476	22 50 42.49	+00 23 34.5		3	675
1979 SN4	1992 08 28.35799	22 48 12.60	-00 21 06.7		3	675
1979 SN4	1992 08 28.39514	22 48 10.94	-00 21 32.3		3	675
1985 UQ	1949 11 21.24375	02 59 45.15	+11 52 53.6	17.5	6	675
1985 UQ	1949 11 21.26979	02 59 43.59	+11 52 50.6		6	675
1989 UO1	1992 08 06.35174	22 07 35.52	-03 23 04.5	16.5	9	675

1989	UO1		1992	08	06.39149	22	07	34.10	-03	23	14.8		9	675
1989	UO1		1992	08	07.34688	22	07	03.75	-03	27	17.6		9	675
1989	UO1		1992	08	07.38194	22	07	02.48	-03	27	26.8		9	675
1990	BJ		1992	08	29.18559	19	03	28.62	-11	38	13.7	17.0	2	675
1990	BJ		1992	08	29.20920	19	03	27.92	-11	38	05.4		2	675
1990	BJ		1992	08	31.15365	19	02	49.32	-11	25	39.0		2	675
1990	BJ		1992	08	31.17795	19	02	48.68	-11	25	28.1		2	675
1991	GN		1992	08	03.44792	03	14	10.88	+22	50	45.2		9	675
1991	GN		1992	08	03.47448	03	14	14.21	+22	50	41.8		9	675
1992	NA		1992	08	29.43056	01	56	41.34	-11	15	44.6		2	675
1992	NA		1992	08	29.44826	01	56	48.80	-11	12	27.5		2	675
1992	OT		1992	08	29.17274	18	16	41.82	-11	10	51.2	16.5	2	675
1992	OT		1992	08	29.19722	18	16	42.64	-11	11	06.0		2	675
1992	OY		1992	07	29.34688	20	19	54.27	-05	56	07.4		2	675
1992	OY		1992	07	29.36840	20	19	52.42	-05	55	58.6		2	675
1992	OJ1		1992	08	29.27569	21	16	40.40	-09	52	10.3	15.5	2	675
1992	OJ1		1992	08	29.29896	21	16	38.66	-09	51	58.9		2	675
1992	OJ1		1992	09	01.21615	21	13	07.82	-09	24	08.1		2	675
1992	OJ1		1992	09	01.23854	21	13	06.18	-09	23	55.7		2	675
1992	PA2		1992	08	29.27569	21	00	31.57	-12	47	40.1	16.5	2	675
1992	PA2		1992	08	29.29896	21	00	30.61	-12	47	39.7		2	675
1992	PA2		1992	09	01.21615	20	58	37.58	-12	42	09.7		2	675
1992	PA2		1992	09	01.23854	20	58	36.83	-12	42	10.5		2	675
1992	QN		1992	09	22.17257	21	48	52.55	-17	39	45.2	17.0	2	675
1992	QN		1992	09	22.19965	21	48	51.14	-17	39	30.7		2	675
1992	QS	*	1992	08	29.41753	23	23	05.18	-11	16	38.1	16.5	2	675
1992	QS		1992	08	29.44219	23	23	03.41	-11	16	30.2		2	675
1992	QS		1992	09	01.40260	23	19	34.70	-10	58	25.6		2	675
1992	QS		1992	09	01.42431	23	19	33.01	-10	58	20.2		2	675
1992	QT	*	1992	08	31.36215	23	09	16.43	-00	01	02.2	16.0	2	675
1992	QT		1992	09	01.39149	23	07	34.93	+00	08	49.4		2	675
1992	QT		1992	09	01.41372	23	07	32.65	+00	09	01.8		2	675
1992	QU	*	1992	08	31.36215	23	22	36.22	+05	14	36.1	16.0	2	675
1992	QU		1992	09	01.39149	23	21	54.52	+05	00	54.7		2	675
1992	QU		1992	09	01.41372	23	21	53.53	+05	00	37.0		2	675
1992	QW	*	1992	08	31.29306	21	58	29.08	-20	13	07.1	16.0	2	675
1992	QW		1992	09	01.25417	21	57	36.40	-20	11	12.0		2	675
1992	QW		1992	09	01.27587	21	57	34.91	-20	11	07.0		2	675
1992	QX	*	1992	08	29.38333	23	22	28.17	-07	05	57.8	16.0	2	675
1992	QX		1992	08	29.40625	23	22	27.36	-07	06	16.9		2	675
1992	QX		1992	09	01.39705	23	20	55.42	-07	45	21.0		2	675
1992	QX		1992	09	01.41892	23	20	54.65	-07	45	39.0		2	675
1992	QY	*	1992	08	29.38333	23	23	47.14	-06	46	48.1	16.0	2	675
1992	QY		1992	08	29.40625	23	23	46.31	-06	47	05.5		2	675
1992	QY		1992	09	01.39705	23	22	02.15	-07	22	31.0		2	675
1992	QY		1992	09	01.41892	23	22	01.23	-07	22	46.6		2	675
1992	QZ	*	1992	08	29.38333	23	27	43.20	-06	45	19.5	16.0	2	675
1992	QZ		1992	08	29.40625	23	27	42.02	-06	45	31.2		2	675
1992	QZ		1992	09	01.39705	23	25	08.65	-07	10	32.3		2	675
1992	QZ		1992	09	01.41892	23	25	07.37	-07	10	43.9		2	675
1992	QA1	*	1992	08	29.38333	23	29	28.16	-07	39	29.3	17.0	2	675
1992	QA1		1992	08	29.40625	23	29	27.35	-07	39	49.7		2	675
1992	QA1		1992	09	01.39705	23	27	49.88	-08	24	50.4		2	675
1992	QA1		1992	09	01.41892	23	27	48.98	-08	25	09.6		2	675
1992	QC1	*	1992	08	29.27569	20	53	02.58	-09	42	05.0	16.5	2	675
1992	QC1		1992	08	29.29896	20	53	01.56	-09	42	11.9		2	675
1992	QC1		1992	09	01.21615	20	51	16.97	-09	55	49.6		2	675
1992	QC1		1992	09	01.23854	20	51	16.15	-09	55	54.9		2	675
1992	QD1	*	1992	08	26.42917	00	17	27.96	+09	38	38.1	16.6	3	675

1992 QD1		1992	08	26.46719	00	17	27.32	+09	38	47.7			3	675
1992 QD1		1992	08	27.45000	00	17	13.29	+09	42	55.1			3	675
1992 QD1		1992	08	27.48698	00	17	12.67	+09	43	03.5			3	675
1992 SK	*	1992	09	24.44948	01	38	28.55	+09	57	17.8		17	2	675
1992 SK		1992	09	24.47240	01	38	23.34	+09	57	34.9			2	675
1992 SK		1992	09	26.42882	01	31	48.22	+10	21	02.2			2	675
1992 SK		1992	09	26.44983	01	31	43.90	+10	21	15.3			2	675
1992 SL	*	1992	09	24.44132	01	41	38.08	+15	44	25.9		15.0	2	675
1992 SL		1992	09	24.46615	01	41	37.23	+15	46	30.3			2	675
1992 SL		1992	09	26.43403	01	40	51.75	+18	23	14.4			2	675
1992 SL		1992	09	26.45521	01	40	50.64	+18	24	51.0			2	675
1992 SR	*	1992	09	23.43420	03	21	19.05	+17	01	47.1		15.5	2	675
1992 SR		1992	09	23.45885	03	21	18.47	+17	02	12.3			2	675
1992 SR		1992	09	25.46458	03	20	47.52	+17	35	15.3			2	675
1992 SR		1992	09	25.49479	03	20	46.89	+17	35	37.8			2	675
1992 SS	*	1992	09	23.38351	00	59	54.47	+15	02	22.0		16	2	675
1992 SS		1992	09	23.40556	00	59	53.42	+15	01	57.3			2	675
1992 SS		1992	09	26.41806	00	57	35.25	+14	03	43.8			2	675
1992 SS		1992	09	26.43924	00	57	34.15	+14	03	18.5			2	675
1992 ST	*	1992	09	23.42292	01	35	22.05	+01	52	06.5		15.5	2	675
1992 ST		1992	09	23.44757	01	35	21.41	+01	52	15.4			2	675
1992 ST		1992	09	24.42865	01	34	59.55	+01	58	14.4			2	675
1992 ST		1992	09	24.45347	01	34	58.72	+01	58	23.1			2	675
1992 ST		1992	09	25.42309	01	34	34.98	+02	04	24.5			2	675
1992 ST		1992	09	25.44618	01	34	34.20	+02	04	32.7			2	675
1992 SU	*	1992	09	23.42292	01	47	57.29	+01	16	51.6		15	2	675
1992 SU		1992	09	23.44757	01	47	56.62	+01	16	33.0			2	675
1992 SU		1992	09	25.42309	01	47	10.99	+00	51	36.2			2	675
1992 SU		1992	09	25.44618	01	47	10.39	+00	51	17.5			2	675
1992 SV	*	1992	09	23.42292	01	50	46.39	+02	32	11.0		16	2	675
1992 SV		1992	09	23.44757	01	50	45.61	+02	31	51.5			2	675
1992 SV		1992	09	25.42309	01	49	52.52	+02	05	19.3			2	675
1992 SV		1992	09	25.44618	01	49	51.66	+02	04	59.3			2	675
1992 SK1	*	1992	09	24.48924	02	24	44.11	+23	16	28.7		16.5	2	675
1992 SK1		1992	09	24.51059	02	24	43.51	+23	16	39.7			2	675
1992 SK1		1992	09	26.46753	02	23	35.46	+23	32	44.1			2	675
1992 SK1		1992	09	26.49236	02	23	34.52	+23	32	56.5			2	675
1992 SL1	*	1992	09	24.48924	02	25	09.76	+26	28	10.6		16	2	675
1992 SL1		1992	09	24.51059	02	25	08.71	+26	28	36.0			2	675
1992 SL1		1992	09	26.49236	02	23	20.79	+27	05	17.0			2	675
1992 SM1	*	1992	09	23.39462	01	05	40.60	+06	57	14.4		16	2	675
1992 SM1		1992	09	23.41667	01	05	39.14	+06	57	22.8			2	675
1992 SM1		1992	09	24.39410	01	04	35.74	+07	03	58.6			2	675
1992 SM1		1992	09	24.41146	01	04	34.46	+07	04	04.0			2	675
1992 SN1	*	1992	09	23.39462	01	07	54.62	+06	07	59.3		15.5	2	675
1992 SN1		1992	09	23.41667	01	07	53.14	+06	08	02.6			2	675
1992 SN1		1992	09	24.39410	01	06	52.75	+06	12	54.7			2	675
1992 SN1		1992	09	24.41146	01	06	51.49	+06	12	58.8			2	675
6382 P-L	*	1960	09	24.33613	23	54	18.78	+04	18	58.1		17.1	4	675
6382 P-L		1960	09	25.32502	23	53	20.59	+04	17	24.3			4	675
6382 P-L		1960	09	26.27573	23	52	25.11	+04	15	51.4			4	675
(4179)		1992	08	29.19149	19	06	21.54	-22	51	44.9		15.0	2	675
(4179)		1992	08	29.21493	19	06	19.02	-22	51	47.4			2	675
(4179)		1992	09	01.15313	19	01	49.91	-23	01	08.3			2	675
(4179)		1992	09	01.17569	19	01	47.79	-23	01	12.8			2	675
(4241)		1971	03	26.29653	12	23	43.29	-03	55	21.6			4	675
(4241)		1971	03	26.33611	12	23	41.32	-03	55	09.4			4	675
(4784)		1971	04	16.22812	12	29	44.09	-06	04	19.5		18.0	4	675
(4784)		1971	04	16.30139	12	29	40.75	-06	04	04.1			4	675

(4784)		1971 05 14.19427	12 17 16.85	-05 03 54.6		18.0		4	675
(4784)		1971 05 14.24549	12 17 16.42	-05 03 54.4				4	675
(4784)		1971 05 16.27535	12 17 09.29	-05 03 38.5		18.0		4	675
(4914)		1992 08 26.42274	00 17 47.61	+23 13 56.2		16.0		3	675
(4914)		1992 08 26.44219	00 17 47.07	+23 14 00.3				3	675
(4914)		1992 08 26.46111	00 17 46.62	+23 14 03.2				3	675
(4914)		1992 08 26.48108	00 17 46.20	+23 14 07.0				3	675

691 Kitt Peak, Steward Observatory
T. Gehrels, Space Sciences Building, University of Arizona,
Tucson, AZ 85721, U.S.A.
Observers T. Gehrels, D. L. Rabinowitz, J. V. Scotti
0.91-m SPACEWATCH telescope
GSC

1990 UB2		1992 02 23.21982	10 01 22.60	+19 58 06.9		18.6	V	691
1990 UB2		1992 02 23.25157	10 01 20.47	+19 58 19.2				691
1990 UB2		1992 02 23.27717	10 01 18.80	+19 58 29.0				691
1992 GF2		1992 05 01.15901	13 25 59.51	-08 37 41.1				691
1992 GF2		1992 05 01.17930	13 25 58.26	-08 37 35.7		18.8	V	691
1992 GF2		1992 05 01.19985	13 25 57.01	-08 37 30.4				691
1992 GU2		1992 04 30.22515	13 38 47.40	-10 24 56.8				691
1992 GU2		1992 04 30.24717	13 38 46.16	-10 24 52.8				691
1992 GU2		1992 04 30.26762	13 38 45.22	-10 24 53.5		18.2	V	691
1992 GE5		1992 05 07.22306	13 55 32.11	-10 47 14.5				691
1992 GE5		1992 05 07.24760	13 55 30.97	-10 47 08.0		18.5	V	691
1992 GE5		1992 05 07.27204	13 55 29.77	-10 47 04.8				691
1992 HZ3		1992 04 30.21873	13 29 08.64	-10 43 00.3				691
1992 HZ3		1992 04 30.24076	13 29 07.55	-10 42 55.6		17.6	V	691
1992 HZ3		1992 04 30.26121	13 29 06.54	-10 42 51.3				691
1992 HG4		1992 04 30.22763	13 42 22.26	-10 43 21.0				691
1992 HG4		1992 04 30.24965	13 42 20.95	-10 43 13.2		17.0	V	691
1992 HG4		1992 04 30.27010	13 42 19.75	-10 43 05.7				691
1992 HH4	*	1992 04 24.25559	14 04 48.70	-13 22 28.0		18.9	V	691
1992 HH4		1992 04 24.27617	14 04 47.24	-13 22 34.1				691
1992 HH4		1992 04 24.29690	14 04 45.79	-13 22 39.8				691
1992 HJ4		1992 05 01.16013	13 27 36.81	-08 52 01.0				691
1992 HJ4		1992 05 01.18043	13 27 35.91	-08 51 56.9		19.1	V	691
1992 HJ4		1992 05 01.20098	13 27 34.98	-08 51 51.8				691
1992 HK4		1992 05 07.22006	13 50 38.80	-10 50 23.2		18.0	V	691
1992 HK4		1992 05 07.24461	13 50 37.58	-10 50 17.9				691
1992 HK4		1992 05 07.26906	13 50 36.48	-10 50 14.2				691
1992 SW	*	1992 09 27.19991	22 54 21.07	-10 15 11.8		20.4	V	691
1992 SW		1992 09 27.21819	22 54 19.37	-10 14 43.0		20.7	V	691
1992 SW		1992 09 27.23652	22 54 17.67	-10 14 14.9		20.5	V	691
1992 SW		1992 09 28.27575	22 52 49.48	-09 47 21.8		20.1	V	691
1992 SW		1992 09 28.29757	22 52 47.52	-09 46 48.0		20.5	V	691
1992 SW		1992 09 28.30831	22 52 46.54	-09 46 32.1		20.7	V	691
1992 SW		1992 09 29.28057	22 51 28.35	-09 21 35.3		20.4	V	691
1992 SW		1992 09 29.28843	22 51 27.66	-09 21 23.8		20.3	V	691
1992 SW		1992 10 01.12707	22 49 10.52	-08 34 52.3		20.4	V	691
1992 SW		1992 10 01.13706	22 49 09.72	-08 34 38.1		20.4	V	691
1992 SW		1992 10 01.14636	22 49 09.01	-08 34 23.0		20.6	V	691
1992 SX	*	1992 09 27.20157	22 56 44.51	-10 05 48.5		21.1	V	691
1992 SX		1992 09 27.21985	22 56 43.73	-10 05 34.0		21.1	V	691
1992 SX		1992 09 27.23820	22 56 42.93	-10 05 19.0		20.6	V	691
1992 SX		1992 09 28.27798	22 56 03.38	-09 51 33.3		20.4	V	691
1992 SX		1992 09 28.29982	22 56 02.43	-09 51 15.3		20.9	V	691
1992 SX		1992 09 28.31056	22 56 01.89	-09 51 06.9		20.9	V	691
1992 SX		1992 09 29.30467	22 55 26.72	-09 37 46.8		21.1	V	691

1992 SX		1992	09	29.31243	22	55	26.43	-09 37 40.7	20.8 V	691
1992 SX		1992	09	29.31996	22	55	26.13	-09 37 34.8	21.0 V	691
1992 SX		1992	10	01.15624	22	54	28.34	-09 12 32.2	21.1 V	691
1992 SX		1992	10	01.16602	22	54	27.95	-09 12 23.4	20.7 V	691
1992 SX		1992	10	01.17710	22	54	27.59	-09 12 14.9	21.6 V	691
1992 SY	*	1992	09	27.32862	00	19	06.48	+01 36 20.7	20.0 V	691
1992 SY		1992	09	27.34651	00	19	04.83	+01 36 15.4	20.0 V	691
1992 SY		1992	09	27.36566	00	19	03.14	+01 36 10.8	19.9 V	691
1992 SY		1992	09	28.18434	00	17	49.50	+01 32 26.2	20.0 V	691
1992 SY		1992	09	28.19229	00	17	48.79	+01 32 23.8	20.0 V	691
1992 SY		1992	09	28.19967	00	17	48.02	+01 32 21.5	20.0 V	691
1992 SY		1992	09	28.40183	00	17	29.03	+01 31 26.0	20.0 V	691
1992 SY		1992	09	28.40925	00	17	28.34	+01 31 24.1	20.0 V	691
1992 SY		1992	09	28.41685	00	17	27.65	+01 31 21.8	20.0 V	691
1992 SY		1992	09	29.36449	00	16	00.90	+01 26 59.1	20.2 V	691
1992 SY		1992	09	29.37175	00	16	00.19	+01 26 57.0	20.1 V	691
1992 SY		1992	09	29.37944	00	15	59.44	+01 26 54.6	20.2 V	691
1992 SY		1992	10	02.30980	00	11	26.08	+01 13 11.8	19.4 V	691
1992 SY		1992	10	02.33859	00	11	23.21	+01 13 02.1	20.2 V	691
1992 SY		1992	10	02.36732	00	11	20.42	+01 12 53.9	20.0 V	691
1992 SZ	*	1992	09	28.12020	23	11	23.81	-07 55 29.9	19.0 V	691
1992 SZ		1992	09	28.14085	23	11	24.09	-07 54 38.8	18.9 V	691
1992 SZ		1992	09	28.16060	23	11	24.35	-07 53 50.3	18.9 V	691
1992 SZ		1992	09	29.18332	23	11	47.01	-07 12 17.4	18.7 V	691
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1992 SZ		1992	09	29.34240	23	11	49.06	-07 05 56.0	18.7 V	691
1992 SZ		1992	09	29.35018	23	11	49.20	-07 05 38.0	18.6 V	691
1992 SZ		1992	09	29.35764	23	11	49.27	-07 05 19.6	18.7 V	691
1992 SZ		1992	09	30.35446	23	12	13.21	-06 26 11.2	19.1 V	691
1992 SZ		1992	09	30.36273	23	12	13.37	-06 25 51.8	19.2 V	691
1992 SZ		1992	10	03.16391	23	13	30.06	-04 41 55.9	18.4 V	691
1992 SZ		1992	10	03.17244	23	13	30.24	-04 41 37.9	18.5 V	691
1992 SZ		1992	10	03.18133	23	13	30.40	-04 41 19.0	18.5 V	691
1992 TA	*	1992	10	02.12237	23	00	40.92	+01 08 18.1	17.7 V	691
1992 TA		1992	10	02.14401	23	00	37.69	+01 08 46.8	17.7 V	691
1992 TA		1992	10	02.16570	23	00	34.48	+01 09 15.6	17.6 V	691
1992 TA		1992	10	03.10260	22	58	21.43	+01 29 52.3	17.9 V	691
1992 TA		1992	10	03.11055	22	58	20.29	+01 30 03.0	17.9 V	691
1992 TA		1992	10	03.11859	22	58	19.09	+01 30 13.4	17.8 V	691
1992 TB	*	1992	10	02.13893	23	24	34.94	+01 38 23.1	19.5 V	691
1992 TB		1992	10	02.16059	23	24	33.10	+01 37 47.4	19.1 V	691
1992 TB		1992	10	02.18229	23	24	31.28	+01 37 11.8	19.3 V	691
1992 TB		1992	10	03.13313	23	23	15.38	+01 11 25.1	19.3 V	691
1992 TB		1992	10	03.14125	23	23	14.72	+01 11 11.6	19.4 V	691
1992 TB		1992	10	03.15181	23	23	13.89	+01 10 54.4	19.2 V	691
3226 T-3		1992	04	24.25709	14	06	59.27	-13 22 49.4		691
3226 T-3		1992	04	24.27768	14	06	57.98	-13 22 48.2	18.0 V	691
3226 T-3		1992	04	24.29841	14	06	56.68	-13 22 46.7		691
(1688)		1991	12	28.14268	04	51	54.88	+18 14 48.1		691
(1688)		1991	12	28.16411	04	51	53.81	+18 14 44.0	18.1 V	691
(1688)		1991	12	28.18562	04	51	52.95	+18 14 39.1		691
(3414)		1992	01	02.08860	01	00	21.21	+08 58 34.7	18.3 V	691
(3414)		1992	01	02.10894	01	00	22.50	+08 58 44.8		691
(3414)		1992	01	02.12988	01	00	23.72	+08 58 54.7		691
(3575)		1992	01	01.15042	03	52	56.69	+20 23 01.6		691
(3575)		1992	01	01.16946	03	52	56.05	+20 23 02.0	17.9 V	691
(3575)		1992	01	01.18746	03	52	55.45	+20 23 02.5		691
(4340)		1991	12	29.19338	04	32	59.04	+20 00 50.5		691

(4340)	1991 12 29.21503	04 32 57.74	+20 00 56.7	18.1 V			691
(4340)	1991 12 29.23663	04 32 56.43	+20 01 02.4				691

711 McDonald Observatory
A. L. Whipple, Astronomy Department, University of Texas, Austin, TX 78712
Observers P. J. Shelus, A. L. Whipple
Measurers A. Davila, R. Whited
2.1-m Struve reflector
Lick Gaspra catalog

(619)	1981 07 22.18692	17 18 58.38	-02 19 37.8			711
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(619)	1983 02 03.10382	03 01 51.43	+03 23 52.1			711
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(619)	1990 11 25.24995	02 48 52.08	+00 21 31.8		S	711
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(619)	1990 11 27.21837	02 47 32.67	+00 12 28.5		g	711
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(619)	1992 02 12.35240	10 57 03.50	-04 32 43.8			711
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(619)	1992 04 21.19207	10 20 01.96	+05 16 51.7		w	711
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(619)	1992 04 23.16745	10 20 17.60	+05 26 58.8			711
(4179)	1991 04 16.36256	16 00 49.28	-20 02 38.2			711
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(4179)	1992 07 08.26715	20 34 25.97	-18 30 21.0			711
(4179)	1992 07 09.30097	20 33 31.65	-18 33 54.1			711
(4179)	1992 07 29.25708	20 06 14.80	-20 12 12.8			711
(4179)	1992 07 30.23366	20 04 28.30	-20 18 02.2			711
(4179)	1992 07 31.21719	20 02 39.01	-20 23 56.5		S	711

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1.5-m reflector + CCD
GSC

1974 SF	1992 08 25.14115	20 26 01.21	-11 30 10.8			801
1974 SF	1992 08 25.15797	20 26 00.56	-11 30 18.5			801
1974 SF	1992 08 27.09509	20 25 03.87	-11 43 06.8			801
1974 SF	1992 08 27.11339	20 25 03.33	-11 43 14.0			801
1975 AN	1992 08 26.24014	22 44 06.85	+37 42 23.2			801
1975 AN	1992 08 26.25353	22 44 05.96	+37 42 36.4			801
1975 AN	1992 09 01.22667	22 37 27.30	+39 10 55.2			801
1975 AN	1992 09 01.24058	22 37 26.31	+39 11 06.4			801
1978 SV7	1992 08 24.17414	22 19 20.18	-12 48 32.2			801
1978 SV7	1992 08 24.18840	22 19 19.40	-12 48 34.2			801
1978 SV7	1992 08 30.20372	22 13 58.77	-13 01 47.2			801
1978 SV7	1992 08 30.21650	22 13 58.06	-13 01 49.2			801
1981 EY8	1992 08 25.18230	21 12 04.86	-12 20 40.2			801
1981 EY8	1992 08 25.19876	21 12 04.02	-12 20 40.3			801
1981 EY8	1992 09 01.13247	21 06 33.47	-12 25 05.6			801
1981 EY8	1992 09 01.15061	21 06 32.63	-12 25 06.0			801
1984 SZ1	1992 08 03.25767	22 52 20.96	-05 17 36.9			801

1984 SZ1	1992 08 03.27817	22 52 20.34	-05 17 38.3				801
1984 SZ1	1992 08 24.20437	22 37 31.51	-06 03 44.7				801
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1984 SZ1	1992 09 01.21395	22 30 18.54	-06 32 04.2				801
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1992 SL	1992 09 30.16514	01 38 55.34	+22 47 46.4				801
1992 SL	1992 09 30.16876	01 38 55.12	+22 48 00.7				801
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(5337)	1992 08 30.21200	22 20 36.40	-00 29 45.5				801
(5337)	1992 08 30.22931	22 20 35.63	-00 29 50.4				801

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Measurers E. W. Elst, O. Hainaut
1.0-m Schmidt, 3.6-m New Technology Telescope
GSC

1974 FO	1990 08 24.19167	22 51 48.43	-10 30 05.1		4		809
1974 FO	1990 08 24.20486	22 51 47.54	-10 30 07.7		4		809
1974 FO	1990 08 24.21806	22 51 46.78	-10 30 09.6		4		809
1975 VR5	1991 09 07.10069	21 38 16.97	-17 09 09.5		4		809
1975 VR5	1991 09 07.11389	21 38 16.29	-17 09 15.7		4		809
1975 VR5	1991 09 07.12708	21 38 15.64	-17 09 20.4		4		809
1981 EE1	1990 08 24.19167	23 01 03.33	-07 27 15.4	19.0	4		809
1981 EE1	1990 08 24.20486	23 01 02.59	-07 27 19.3		4		809
1981 EE1	1990 08 24.21806	23 01 02.06	-07 27 25.8		4		809
1981 ED19	1991 09 05.12847	21 05 18.61	-15 10 25.5		4		809
1981 ED19	1991 09 05.14167	21 05 18.10	-15 10 28.6		4		809
1981 ED19	1991 09 05.15486	21 05 17.68	-15 10 31.0		4		809
1981 ED19	1991 09 07.05556	21 04 19.18	-15 17 18.3		4		809
1981 ED19	1991 09 07.06875	21 04 18.69	-15 17 21.0		4		809
1981 SY1	1991 09 05.12847	20 49 49.91	-16 54 08.2		4		809
1981 SY1	1991 09 05.14167	20 49 49.52	-16 54 07.5		4		809
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1984 DE1	1992 04 23.14514	13 44 12.61	-13 16 15.8		4		809
1984 DE1	1992 04 23.15833	13 44 11.98	-13 16 12.4		4		809
1984 DE1	1992 04 23.17153	13 44 11.49	-13 16 09.5		4		809
1984 DE1	1992 04 25.08889	13 42 54.70	-13 09 17.8	18.5	4		809
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1986	QS3	1991	09	07.10069	21 31 54.77	-16 51 34.2		4	809
1986	QS3	1991	09	07.11389	21 31 54.17	-16 51 40.6		4	809
1986	QS3	1991	09	07.12708	21 31 53.77	-16 51 44.6		4	809
1986	TR3	1991	09	07.10069	21 25 46.55	-15 51 26.8		4	809
1986	TR3	1991	09	07.11389	21 25 46.01	-15 51 29.3		4	809
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1986	TB5	1991	09	05.12847	21 06 35.92	-19 06 02.6		4	809
1986	TB5	1991	09	05.14167	21 06 35.43	-19 06 03.6		4	809
1986	TB5	1991	09	05.15486	21 06 34.97	-19 06 05.6		4	809
1986	TB5	1991	09	07.05556	21 05 41.33	-19 08 35.3		4	809
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1987	RA3	1991	09	07.10069	21 31 12.99	-16 31 00.6		4	809
1987	RA3	1991	09	07.11389	21 31 12.51	-16 31 04.9		4	809
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1988	DJ2	1990	08	24.19167	22 48 24.69	-07 12 02.6		4	809
1988	DJ2	1990	08	24.20486	22 48 23.99	-07 12 05.4		4	809
1988	DJ2	1990	08	24.21806	22 48 23.32	-07 12 08.6		4	809
1989	EH6	1991	08	07.14722	22 35 56.40	-10 42 07.3	19.0	4	809
1989	EH6	1991	08	07.16042	22 35 55.92	-10 42 12.4		4	809
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1990	QB4	1990	08	24.19167	22 53 58.45	-07 08 29.8		4	809
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1990	QB4	1990	08	24.21806	22 53 57.32	-07 08 39.3		4	809
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1990	QF4	1990	08	24.20486	22 59 41.70	-08 05 36.6		4	809
1990	QF4	1990	08	24.21806	22 59 41.03	-08 05 43.2		4	809
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1990	QO5	1990	08	24.20486	22 50 57.76	-10 47 08.8		4	809
1990	QO5	1990	08	24.21806	22 50 56.98	-10 47 13.2		4	809
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1990	QA6	1990	08	24.20486	22 54 31.08	-09 25 03.7		4	809
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1990 QX7	1990 08 24.19167	22 48 34.70	-07 05 49.9	18.6	4	809
1990 QX7	1990 08 24.20486	22 48 34.02	-07 05 52.7		4	809
1990 QX7	1990 08 24.21806	22 48 33.48	-07 05 54.9		4	809
1990 QA8	1990 08 24.19167	22 49 43.62	-08 19 52.1		4	809
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1990 QB8	1990 08 24.21806	22 48 59.08	-08 39 38.9		4	809
1990 QC8	1990 08 24.19167	22 48 32.90	-10 03 24.3		4	809
1990 QC8	1990 08 24.20486	22 48 32.21	-10 03 28.3		4	809
1990 QC8	1990 08 24.21806	22 48 31.41	-10 03 35.6		4	809
1990 QD8	1990 08 24.19167	22 51 29.79	-08 23 33.0		4	809
1990 QD8	1990 08 24.20486	22 51 29.21	-08 23 38.6		4	809
1990 QD8	1990 08 24.21806	22 51 28.66	-08 23 44.0		4	809
1990 QE8	1990 08 24.19167	22 50 43.80	-10 31 22.0		4	809
1990 QE8	1990 08 24.20486	22 50 43.08	-10 31 26.9		4	809
1990 QE8	1990 08 24.21806	22 50 42.60	-10 31 31.7		4	809
1990 QF8	1990 08 24.19167	22 50 11.39	-11 08 15.6		4	809
1990 QF8	1990 08 24.20486	22 50 10.66	-11 08 21.4		4	809
1990 QF8	1990 08 24.21806	22 50 09.99	-11 08 26.0		4	809
1990 QH8	1990 08 24.19167	22 50 10.85	-09 54 08.2		4	809
1990 QH8	1990 08 24.20486	22 50 10.07	-09 54 13.7		4	809
1990 QH8	1990 08 24.21806	22 50 09.24	-09 54 18.5		4	809
1990 QK8	1990 08 24.19167	22 51 24.34	-09 20 26.1		4	809
1990 QK8	1990 08 24.20486	22 51 23.73	-09 20 29.8		4	809
1990 QK8	1990 08 24.21806	22 51 23.12	-09 20 33.8		4	809
1990 QN8	1990 08 24.19167	22 51 24.18	-08 44 54.4		4	809
1990 QN8	1990 08 24.20486	22 51 23.49	-08 44 55.7		4	809
1990 QN8	1990 08 24.21806	22 51 22.79	-08 44 57.8		4	809
1990 QO8	1990 08 24.19167	22 50 11.47	-09 22 01.7		4	809
1990 QO8	1990 08 24.20486	22 50 10.68	-09 22 02.2		4	809
1990 QO8	1990 08 24.21806	22 50 09.79	-09 22 03.2		4	809
1990 QP8	1990 08 24.19167	22 51 41.49	-07 12 55.5		4	809
1990 QP8	1990 08 24.20486	22 51 40.90	-07 12 59.6		4	809
1990 QP8	1990 08 24.21806	22 51 40.20	-07 13 02.4		4	809
1990 QQ8	1990 08 24.19167	22 53 11.71	-10 45 46.4		4	809
1990 QQ8	1990 08 24.20486	22 53 11.09	-10 45 49.6		4	809
1990 QQ8	1990 08 24.21806	22 53 10.44	-10 45 53.6		4	809
1990 QR8	1990 08 24.19167	22 54 49.07	-10 49 09.5		4	809
1990 QR8	1990 08 24.20486	22 54 48.39	-10 49 14.9		4	809
1990 QR8	1990 08 24.21806	22 54 47.82	-10 49 21.6		4	809
1990 QT8	1990 08 24.19167	22 53 57.51	-08 56 51.2		4	809
1990 QT8	1990 08 24.20486	22 53 56.75	-08 56 57.7		4	809
1990 QT8	1990 08 24.21806	22 53 56.06	-08 57 05.6		4	809
1990 QU8	1990 08 24.19167	22 54 57.17	-09 37 00.7		4	809

1990	QU8	1990	08	24.20486	22	54	56.53	-09	37	05.4	4	809
1990	QU8	1990	08	24.21806	22	54	56.09	-09	37	09.1	4	809
1990	QX8	1990	08	24.19167	22	55	28.92	-09	13	57.8	4	809
1990	QX8	1990	08	24.20486	22	55	28.22	-09	14	01.3	4	809
1990	QX8	1990	08	24.21806	22	55	27.57	-09	14	04.9	4	809
1990	QY8	1990	08	24.19167	22	56	46.96	-10	19	51.9	4	809
1990	QY8	1990	08	24.20486	22	56	46.35	-10	19	57.7	4	809
1990	QY8	1990	08	24.21806	22	56	45.69	-10	20	01.9	4	809
1990	QZ8	1990	08	24.19167	22	57	43.56	-09	41	00.3	4	809
1990	QZ8	1990	08	24.20486	22	57	42.78	-09	41	05.9	4	809
1990	QZ8	1990	08	24.21806	22	57	42.09	-09	41	11.9	4	809
1990	QA9	1990	08	24.19167	22	59	23.56	-10	38	28.5	4	809
1990	QA9	1990	08	24.20486	22	59	22.96	-10	38	31.7	4	809
1990	QA9	1990	08	24.21806	22	59	22.38	-10	38	35.5	4	809
1990	QB9	1990	08	24.19167	23	00	03.08	-09	02	15.2	4	809
1990	QB9	1990	08	24.20486	23	00	02.44	-09	02	24.1	4	809
1990	QB9	1990	08	24.21806	23	00	01.85	-09	02	32.3	4	809
1990	QE9	1990	08	24.19167	22	59	40.44	-07	09	01.5	4	809
1990	QE9	1990	08	24.20486	22	59	39.80	-07	09	04.4	4	809
1990	QE9	1990	08	24.21806	22	59	39.15	-07	09	08.1	4	809
1990	QF9	1990	08	24.19167	23	00	16.96	-10	11	07.8	4	809
1990	QF9	1990	08	24.20486	23	00	16.28	-10	11	16.5	4	809
1990	QF9	1990	08	24.21806	23	00	15.72	-10	11	23.9	4	809
1990	QG9	1990	08	24.19167	23	00	27.89	-09	27	52.9	4	809
1990	QG9	1990	08	24.20486	23	00	27.29	-09	27	57.1	4	809
1990	QG9	1990	08	24.21806	23	00	26.65	-09	28	00.4	4	809
1990	QH9	1990	08	24.19167	23	01	16.16	-10	50	08.9	4	809
1990	QH9	1990	08	24.20486	23	01	15.54	-10	50	14.9	4	809
1990	QH9	1990	08	24.21806	23	01	14.94	-10	50	20.2	4	809
1990	QJ9	1990	08	24.19167	23	01	01.38	-10	48	46.8	4	809
1990	QJ9	1990	08	24.20486	23	01	00.69	-10	48	50.1	4	809
1990	QJ9	1990	08	24.21806	23	01	00.08	-10	48	54.2	4	809
1990	QK9	1990	08	24.19167	23	01	57.70	-10	43	45.4	4	809
1990	QK9	1990	08	24.20486	23	01	57.14	-10	43	54.1	4	809
1990	QK9	1990	08	24.21806	23	01	56.52	-10	44	02.0	4	809
1990	QL9	1990	08	24.19167	23	01	57.98	-10	32	41.4	4	809
1990	QL9	1990	08	24.20486	23	01	57.29	-10	32	45.6	4	809
1990	QL9	1990	08	24.21806	23	01	56.62	-10	32	50.2	4	809
1990	QM9	1990	08	24.19167	23	01	35.43	-10	49	30.0	4	809
1990	QM9	1990	08	24.20486	23	01	34.70	-10	49	33.2	4	809
1990	QM9	1990	08	24.21806	23	01	34.04	-10	49	36.9	4	809
1990	QN9	1990	08	24.19167	23	01	42.13	-10	06	32.7	4	809
1990	QN9	1990	08	24.20486	23	01	41.40	-10	06	38.6	4	809
1990	QN9	1990	08	24.21806	23	01	40.75	-10	06	44.1	4	809
1990	QO9	1990	08	24.19167	23	01	43.59	-07	22	03.0	4	809
1990	QO9	1990	08	24.20486	23	01	42.85	-07	22	05.0	4	809
1990	QO9	1990	08	24.21806	23	01	42.20	-07	22	04.1	4	809
1990	QH10	1990	08	24.19167	22	47	42.53	-07	51	16.0	4	809
1990	QH10	1990	08	24.20486	22	47	41.60	-07	51	15.5	4	809
1990	QH10	1990	08	24.21806	22	47	40.80	-07	51	16.5	4	809
1990	QJ10	1990	08	24.19167	22	50	06.18	-09	18	14.7	4	809
1990	QJ10	1990	08	24.20486	22	50	05.60	-09	18	17.2	4	809
1990	QJ10	1990	08	24.21806	22	50	05.05	-09	18	20.8	4	809
1990	QP14	1990	08	24.19167	22	42	46.62	-10	09	24.6	4	809
1990	QP14	1990	08	24.20486	22	42	45.86	-10	09	27.3	4	809
1990	QP14	1990	08	24.21806	22	42	44.98	-10	09	29.0	4	809
1990	QS14	1990	08	24.19167	22	43	06.29	-10	34	44.8	4	809
1990	QS14	1990	08	24.20486	22	43	05.64	-10	34	51.2	4	809
1990	QS14	1990	08	24.21806	22	43	05.13	-10	34	56.2	4	809

1990 QT14	1990 08 24.19167	22 43 07.89	-07 35 34.2		4	809
1990 QT14	1990 08 24.20486	22 43 07.18	-07 35 37.3		4	809
1990 QT14	1990 08 24.21806	22 43 06.45	-07 35 41.5		4	809
1990 QU14	1990 08 24.19167	22 43 25.40	-10 19 05.5		4	809
1990 QU14	1990 08 24.20486	22 43 24.79	-10 19 09.1		4	809
1990 QU14	1990 08 24.21806	22 43 24.25	-10 19 14.6		4	809
1990 QV14	1990 08 24.19167	22 43 13.43	-09 35 23.6		4	809
1990 QV14	1990 08 24.20486	22 43 13.11	-09 35 34.7		4	809
1990 QV14	1990 08 24.21806	22 43 12.72	-09 35 45.9		4	809
1990 QW14	1990 08 24.19167	22 44 05.41	-10 38 47.4		4	809
1990 QW14	1990 08 24.20486	22 44 04.81	-10 38 51.2		4	809
1990 QW14	1990 08 24.21806	22 44 04.25	-10 38 53.5		4	809
1990 QX14	1990 08 24.19167	22 44 37.27	-09 23 40.7		4	809
1990 QX14	1990 08 24.20486	22 44 36.62	-09 23 47.4		4	809
1990 QX14	1990 08 24.21806	22 44 36.00	-09 23 54.6		4	809
1990 QB15	1990 08 24.19167	22 47 25.98	-09 26 25.9		4	809
1990 QB15	1990 08 24.20486	22 47 25.22	-09 26 35.1		4	809
1990 QB15	1990 08 24.21806	22 47 24.40	-09 26 41.7		4	809
1990 QC15	1990 08 24.19167	22 47 12.54	-06 46 27.7		4	809
1990 QC15	1990 08 24.20486	22 47 11.96	-06 46 37.0		4	809
1990 QC15	1990 08 24.21806	22 47 11.44	-06 46 45.3		4	809
1990 QF15	1990 08 24.19167	22 48 26.37	-10 04 09.5		4	809
1990 QF15	1990 08 24.20486	22 48 25.56	-10 04 07.3		4	809
1990 QF15	1990 08 24.21806	22 48 24.60	-10 04 01.3		4	809
1990 QJ15	1990 08 24.19167	22 48 40.31	-09 37 58.3		4	809
1990 QJ15	1990 08 24.20486	22 48 40.09	-09 38 08.5		4	809
1990 QJ15	1990 08 24.21806	22 48 39.92	-09 38 17.2		4	809
1990 QK15	1990 08 24.19167	22 50 06.81	-07 34 28.1		4	809
1990 QK15	1990 08 24.20486	22 50 06.22	-07 34 34.9		4	809
1990 QK15	1990 08 24.21806	22 50 05.69	-07 34 38.9		4	809
1990 QL15	1990 08 24.19167	22 50 02.13	-06 57 32.3		4	809
1990 QL15	1990 08 24.20486	22 50 01.53	-06 57 36.9		4	809
1990 QL15	1990 08 24.21806	22 50 00.97	-06 57 42.2		4	809
1990 QS15	1990 08 24.19167	22 51 51.30	-09 02 56.8		4	809
1990 QS15	1990 08 24.20486	22 51 50.71	-09 03 05.2		4	809
1990 QS15	1990 08 24.21806	22 51 50.17	-09 03 13.2		4	809
1990 QU15	1990 08 24.19167	22 53 01.31	-09 26 55.9		4	809
1990 QU15	1990 08 24.20486	22 53 00.75	-09 27 02.1		4	809
1990 QU15	1990 08 24.21806	22 53 00.18	-09 27 08.0		4	809
1990 QV15	1990 08 24.19167	22 53 39.87	-07 28 12.9		4	809
1990 QV15	1990 08 24.20486	22 53 39.41	-07 28 25.0		4	809
1990 QV15	1990 08 24.21806	22 53 38.97	-07 28 37.8		4	809
1990 QX15	1990 08 24.19167	22 54 51.17	-10 55 01.4		4	809
1990 QX15	1990 08 24.20486	22 54 50.53	-10 55 07.1		4	809
1990 QX15	1990 08 24.21806	22 54 49.84	-10 55 12.9		4	809
1990 QZ15	1990 08 24.19167	22 55 17.94	-09 29 43.9		4	809
1990 QZ15	1990 08 24.20486	22 55 17.42	-09 29 54.6		4	809
1990 QZ15	1990 08 24.21806	22 55 16.93	-09 30 06.6		4	809
1990 QJ16	1990 08 24.19167	22 59 00.02	-10 32 54.5		4	809
1990 QJ16	1990 08 24.20486	22 58 59.24	-10 33 00.1		4	809
1990 QJ16	1990 08 24.21806	22 58 58.47	-10 33 04.7		4	809
1990 QK16	1990 08 24.19167	22 59 56.01	-10 06 07.8		4	809
1990 QK16	1990 08 24.20486	22 59 55.24	-10 06 16.5		4	809
1990 QK16	1990 08 24.21806	22 59 54.70	-10 06 25.0		4	809
1990 QM16	1990 08 24.19167	23 02 39.60	-10 09 11.8		4	809
1990 QM16	1990 08 24.20486	23 02 38.92	-10 09 14.4		4	809
1990 QM16	1990 08 24.21806	23 02 38.28	-10 09 16.8		4	809
1990 QN16	1990 08 24.19167	23 02 56.25	-10 14 50.2		4	809
1990 QN16	1990 08 24.20486	23 02 55.55	-10 14 54.4		4	809

1990	QN16		1990	08	24.21806	23	02	54.92	-10 15 00.3		4 809
1990	QP16		1990	08	24.19167	23	03	30.69	-10 27 25.6		4 809
1990	QP16		1990	08	24.20486	23	03	30.09	-10 27 31.3		4 809
1990	QP16		1990	08	24.21806	23	03	29.38	-10 27 37.5		4 809
1990	QD19	*	1990	08	24.19167	22	44	00.68	-07 58 28.2	19.0	4 809
1990	QD19		1990	08	24.20486	22	43	59.82	-07 58 31.1		4 809
1990	QD19		1990	08	24.21806	22	43	59.22	-07 58 33.4		4 809
1990	QE19	*	1990	08	24.19167	22	44	58.81	-08 10 52.4		4 809
1990	QE19		1990	08	24.20486	22	44	58.15	-08 10 57.7		4 809
1990	QE19		1990	08	24.21806	22	44	57.53	-08 11 03.4		4 809
1990	QF19	*	1990	08	24.19167	22	48	40.80	-11 08 40.7		4 809
1990	QF19		1990	08	24.20486	22	48	40.26	-11 08 47.6		4 809
1990	QF19		1990	08	24.21806	22	48	39.68	-11 08 55.0		4 809
1990	QG19	*	1990	08	24.19167	22	50	29.50	-10 44 24.6	19.0	4 809
1990	QG19		1990	08	24.20486	22	50	28.95	-10 44 28.7		4 809
1990	QG19		1990	08	24.21806	22	50	28.35	-10 44 31.7		4 809
1990	QH19	*	1990	08	24.19167	22	50	48.34	-09 13 41.3	18.7	4 809
1990	QH19		1990	08	24.20486	22	50	47.55	-09 13 45.3		4 809
1990	QH19		1990	08	24.21806	22	50	46.86	-09 13 49.4		4 809
1990	QJ19	*	1990	08	24.19167	22	57	20.85	-08 42 27.4	18.8	4 809
1990	QJ19		1990	08	24.20486	22	57	20.34	-08 42 31.3		4 809
1990	QJ19		1990	08	24.21806	22	57	19.70	-08 42 36.5		4 809
1990	QK19	*	1990	08	24.19167	23	00	56.96	-10 06 24.5		4 809
1990	QK19		1990	08	24.20486	23	00	56.49	-10 06 28.0		4 809
1990	QK19		1990	08	24.21806	23	00	56.00	-10 06 32.6		4 809
1990	QL19	*	1990	08	24.19167	23	03	40.79	-10 54 01.4	18.8	4 809
1990	QL19		1990	08	24.20486	23	03	40.27	-10 54 08.6		4 809
1990	QL19		1990	08	24.21806	23	03	39.66	-10 54 17.3		4 809
1990	QM19	*	1990	08	24.19167	23	03	42.94	-10 51 09.1	18.9	4 809
1990	QM19		1990	08	24.20486	23	03	42.15	-10 51 11.3		4 809
1990	QM19		1990	08	24.21806	23	03	41.37	-10 51 13.3		4 809
1990	RO6		1990	08	24.19167	22	59	34.11	-07 19 23.0		4 809
1990	RO6		1990	08	24.20486	22	59	33.50	-07 19 26.9		4 809
1990	RO6		1990	08	24.21806	22	59	32.84	-07 19 29.4		4 809
1991	NH1		1991	09	07.10069	21	20	41.96	-16 43 16.4		4 809
1991	NH1		1991	09	07.11389	21	20	41.37	-16 43 18.5		4 809
1991	NH1		1991	09	07.12708	21	20	40.91	-16 43 20.6		4 809
1991	NK1		1991	09	07.10069	21	26	02.32	-19 40 15.2		4 809
1991	NK1		1991	09	07.11389	21	26	01.73	-19 40 19.2		4 809
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1991	NL1		1991	09	07.10069	21	24	59.18	-18 20 47.0		4 809
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1991	NL1		1991	09	07.12708	21	24	58.18	-18 20 51.9		4 809
1991	OG1		1991	08	05.08056	20	17	05.69	-21 30 23.5	18.3	4 809
1991	OG1		1991	08	05.09375	20	17	04.96	-21 30 29.9		4 809
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1991	OH1		1991	08	05.08056	20	18	21.63	-21 22 03.9	18.6	4 809
1991	OH1		1991	08	05.09375	20	18	20.91	-21 22 07.2		4 809
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1991	OJ1		1991	08	05.08056	20	19	53.05	-19 42 19.0	18.5	4 809
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1991	OK1		1991	08	05.08056	20	19	42.33	-19 37 21.2	18.4	4 809
1991	OK1		1991	08	05.09375	20	19	41.59	-19 37 21.8		4 809
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1991	OL1		1991	08	05.08056	20	21	51.45	-20 26 33.1	18.5	4 809
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1991	OM1		1991	08	05.08056	20	21	49.56	-18 47 00.8	18.0	4 809

1991 OM1	1991 08 05.09375	20 21 48.75	-18 47 02.5			4	809
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1991 ON1	1991 08 05.08056	20 22 35.77	-19 39 41.9	18.6		4	809
1991 ON1	1991 08 05.09375	20 22 34.98	-19 39 41.5			4	809
1991 ON1	1991 08 05.10694	20 22 34.18	-19 39 42.1			4	809
1991 PB	1991 09 05.12847	20 53 14.53	-17 18 05.7			4	809
1991 PB	1991 09 05.14167	20 53 14.36	-17 18 07.8			4	809
1991 PB	1991 09 05.15486	20 53 14.11	-17 18 10.6			4	809
1991 PB	1991 09 07.05556	20 53 01.65	-17 24 33.4			4	809
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1991 PE	1991 09 07.10069	21 25 47.65	-17 26 07.3			4	809
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1991 PE	1991 09 07.12708	21 25 46.76	-17 26 13.2			4	809
1991 PJ	1991 09 07.10069	21 34 53.75	-20 00 52.9			4	809
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1991 PQ1	1991 09 05.12847	21 05 46.56	-16 18 24.5			4	809
1991 PQ1	1991 09 05.14167	21 05 46.10	-16 18 27.3			4	809
1991 PQ1	1991 09 05.15486	21 05 45.64	-16 18 30.0			4	809
1991 PQ1	1991 09 07.05556	21 04 47.44	-16 24 50.7			4	809
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1991 PM4	1991 09 05.12847	20 46 48.32	-16 25 38.0			4	809
1991 PM4	1991 09 05.14167	20 46 48.04	-16 25 37.3			4	809
1991 PM4	1991 09 05.15486	20 46 47.82	-16 25 36.7			4	809
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1991 PM4	1991 09 07.06875	20 46 05.82	-16 22 48.9			4	809
1991 PO4	1991 09 05.12847	20 51 08.18	-16 52 33.1			4	809
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1991 PO4	1991 09 05.15486	20 51 07.41	-16 52 36.7			4	809
1991 PO4	1991 09 07.05556	20 50 13.35	-16 57 56.5			4	809
1991 PO4	1991 09 07.06875	20 50 12.92	-16 57 58.4			4	809
1991 PT4	1991 09 05.12847	20 53 48.31	-15 57 22.6			4	809
1991 PT4	1991 09 05.14167	20 53 47.98	-15 57 23.0			4	809
1991 PT4	1991 09 05.15486	20 53 47.65	-15 57 25.3			4	809
1991 PT4	1991 09 07.05556	20 52 59.38	-16 01 28.6			4	809
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1991 PX4	1991 09 05.12847	20 55 12.33	-16 37 28.3			4	809
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1991 PX4	1991 09 07.05556	20 54 23.26	-16 42 10.7			4	809
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1991 PE5	1991 09 05.12847	20 55 32.88	-15 33 02.8			4	809
1991 PE5	1991 09 05.14167	20 55 32.35	-15 33 04.4			4	809
1991 PE5	1991 09 05.15486	20 55 31.87	-15 33 06.7			4	809
1991 PE5	1991 09 07.05556	20 54 33.05	-15 37 46.2			4	809
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1991 PF5	1991 09 05.12847	20 50 24.30	-15 53 20.0			4	809
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1991 PF5	1991 09 07.05556	20 49 27.58	-15 53 04.6			4	809
1991 PF5	1991 09 07.06875	20 49 27.22	-15 53 04.4			4	809
1991 PJ5	1991 09 05.12847	20 52 03.13	-16 27 37.9			4	809
1991 PJ5	1991 09 05.14167	20 52 02.57	-16 27 39.2			4	809
1991 PJ5	1991 09 05.15486	20 52 02.05	-16 27 40.9			4	809
1991 PJ5	1991 09 07.05556	20 50 48.97	-16 32 16.1			4	809
1991 PJ5	1991 09 07.06875	20 50 48.39	-16 32 18.0			4	809
1991 PL5	1991 09 05.12847	20 57 45.51	-16 10 48.9			4	809
1991 PL5	1991 09 05.14167	20 57 45.25	-16 10 50.3			4	809
1991 PL5	1991 09 05.15486	20 57 44.88	-16 10 49.4			4	809

1991	PL5	1991	09	07.05556	20	57	04.41	-16	12	48.2	4	809
1991	PL5	1991	09	07.06875	20	57	03.94	-16	12	48.2	4	809
1991	PO5	1991	09	05.12847	20	59	54.05	-16	10	21.7	4	809
1991	PO5	1991	09	05.14167	20	59	53.53	-16	10	24.6	4	809
1991	PO5	1991	09	05.15486	20	59	53.09	-16	10	26.5	4	809
1991	PO5	1991	09	07.05556	20	58	56.48	-16	14	39.7	4	809
1991	PO5	1991	09	07.06875	20	58	56.08	-16	14	41.4	4	809
1991	PQ5	1991	09	05.12847	21	00	57.64	-18	00	27.9	4	809
1991	PQ5	1991	09	05.14167	21	00	57.27	-18	00	32.4	4	809
1991	PQ5	1991	09	05.15486	21	00	56.95	-18	00	36.4	4	809
1991	PQ5	1991	09	07.05556	21	00	17.39	-18	12	20.5	4	809
1991	PQ5	1991	09	07.06875	21	00	17.06	-18	12	25.3	4	809
1991	PV5	1991	09	07.10069	21	31	47.84	-17	57	16.6	4	809
1991	PV5	1991	09	07.11389	21	31	47.33	-17	57	21.0	4	809
1991	PV5	1991	09	07.12708	21	31	46.95	-17	57	26.6	4	809
1991	PX5	1991	09	07.10069	21	22	05.29	-17	33	58.1	4	809
1991	PX5	1991	09	07.11389	21	22	04.71	-17	33	57.9	4	809
1991	PX5	1991	09	07.12708	21	22	04.28	-17	33	57.9	4	809
1991	PY5	1991	09	07.10069	21	31	12.68	-18	15	18.1	4	809
1991	PY5	1991	09	07.11389	21	31	12.17	-18	15	27.1	4	809
1991	PY5	1991	09	07.12708	21	31	11.74	-18	15	33.7	4	809
1991	PS6	1991	09	07.10069	21	34	22.20	-18	14	12.6	4	809
1991	PS6	1991	09	07.11389	21	34	21.64	-18	14	14.8	4	809
1991	PS6	1991	09	07.12708	21	34	21.06	-18	14	19.2	4	809
1991	PA7	1991	09	07.10069	21	33	48.97	-15	38	12.2	4	809
1991	PA7	1991	09	07.11389	21	33	48.33	-15	38	15.0	4	809
1991	PA7	1991	09	07.12708	21	33	47.77	-15	38	17.0	4	809
1991	PC7	1991	09	07.10069	21	37	33.63	-18	10	16.1	4	809
1991	PC7	1991	09	07.11389	21	37	32.97	-18	10	19.4	4	809
1991	PC7	1991	09	07.12708	21	37	32.47	-18	10	22.1	4	809
1991	PE7	1991	09	07.10069	21	29	08.32	-15	30	14.9	4	809
1991	PE7	1991	09	07.11389	21	29	07.53	-15	30	13.3	4	809
1991	PE7	1991	09	07.12708	21	29	06.80	-15	30	10.9	4	809
1991	PG7	1991	09	07.10069	21	40	53.60	-17	57	57.7	4	809
1991	PG7	1991	09	07.11389	21	40	53.03	-17	57	59.0	4	809
1991	PG7	1991	09	07.12708	21	40	52.52	-17	58	00.2	4	809
1991	PJ7	1991	09	07.10069	21	32	09.33	-15	45	33.5	4	809
1991	PJ7	1991	09	07.11389	21	32	08.57	-15	45	32.7	4	809
1991	PJ7	1991	09	07.12708	21	32	07.84	-15	45	32.7	4	809
1991	PN7	1991	09	07.10069	21	38	32.25	-18	32	55.4	4	809
1991	PN7	1991	09	07.11389	21	38	31.66	-18	32	59.0	4	809
1991	PN7	1991	09	07.12708	21	38	31.02	-18	33	01.2	4	809
1991	PT7	1991	09	07.10069	21	39	04.57	-16	45	17.3	4	809
1991	PT7	1991	09	07.11389	21	39	03.96	-16	45	19.0	4	809
1991	PT7	1991	09	07.12708	21	39	03.44	-16	45	21.0	4	809
1991	PY7	1991	09	07.10069	21	38	33.63	-17	27	48.2	4	809
1991	PY7	1991	09	07.11389	21	38	32.97	-17	27	51.5	4	809
1991	PY7	1991	09	07.12708	21	38	32.27	-17	27	55.0	4	809
1991	PN8	1991	09	07.05556	21	01	16.33	-15	18	00.6	4	809
1991	PN8	1991	09	07.06875	21	01	15.80	-15	18	03.4	4	809
1991	PO8	1991	09	07.05556	21	01	54.14	-18	02	12.5	4	809
1991	PO8	1991	09	07.06875	21	01	53.72	-18	02	10.6	4	809
1991	PH9	1991	09	05.12847	20	53	52.37	-17	52	06.5	4	809
1991	PH9	1991	09	05.14167	20	53	51.79	-17	51	59.7	4	809
1991	PH9	1991	09	05.15486	20	53	51.24	-17	51	53.5	4	809
1991	PH9	1991	09	07.05556	20	52	35.99	-17	38	21.8	4	809
1991	PH9	1991	09	07.06875	20	52	35.46	-17	38	16.6	4	809
1991	PP9	1991	09	07.05556	20	50	21.32	-19	04	53.6	4	809
1991	PP9	1991	09	07.06875	20	50	20.93	-19	04	52.9	4	809

1991 PW9	1991 09 05.12847	20 52 13.63	-14 34 47.6		4	809
1991 PW9	1991 09 05.14167	20 52 13.33	-14 34 52.8		4	809
1991 PW9	1991 09 05.15486	20 52 13.01	-14 34 57.6		4	809
1991 PW9	1991 09 07.05556	20 51 26.63	-14 45 23.7		4	809
1991 PW9	1991 09 07.06875	20 51 26.38	-14 45 27.3		4	809
1991 PL10	1991 09 07.10069	21 25 18.23	-19 05 12.2		4	809
1991 PL10	1991 09 07.11389	21 25 17.78	-19 05 18.4		4	809
1991 PL10	1991 09 07.12708	21 25 17.32	-19 05 24.1		4	809
1991 PO12	1991 09 07.10069	21 28 08.44	-15 41 28.2		4	809
1991 PO12	1991 09 07.11389	21 28 07.79	-15 41 34.1		4	809
1991 PO12	1991 09 07.12708	21 28 07.21	-15 41 39.7		4	809
1991 PQ12	1991 08 07.14722	22 30 29.01	-08 38 36.7	19.0	4	809
1991 PQ12	1991 08 07.16042	22 30 28.51	-08 38 41.6		4	809
1991 PQ12	1991 08 07.17361	22 30 27.90	-08 38 46.8		4	809
1991 PR12	1991 08 07.14722	22 30 49.76	-08 39 48.4	18.8	4	809
1991 PR12	1991 08 07.16042	22 30 49.27	-08 39 52.1		4	809
1991 PR12	1991 08 07.17361	22 30 48.73	-08 39 55.7		4	809
1991 PS12	1991 08 07.14722	22 33 16.95	-07 22 21.4	18.6	4	809
1991 PS12	1991 08 07.16042	22 33 16.43	-07 22 28.0		4	809
1991 PS12	1991 08 07.17361	22 33 15.91	-07 22 35.0		4	809
1991 PT12	1991 08 07.14722	22 33 36.46	-10 35 30.3	19.5	4	809
1991 PT12	1991 08 07.16042	22 33 35.89	-10 35 33.7		4	809
1991 PT12	1991 08 07.17361	22 33 35.36	-10 35 37.7		4	809
1991 PO14	1991 09 07.10069	21 28 46.74	-19 27 44.7		4	809
1991 PO14	1991 09 07.11389	21 28 46.04	-19 27 45.1		4	809
1991 PO14	1991 09 07.12708	21 28 45.41	-19 27 45.4		4	809
1991 PT14	1991 09 07.10069	21 32 30.09	-15 16 23.3		4	809
1991 PT14	1991 09 07.11389	21 32 29.65	-15 16 28.1		4	809
1991 PT14	1991 09 07.12708	21 32 28.98	-15 16 31.9		4	809
1991 PL15	1991 09 07.10069	21 29 44.12	-18 26 21.4	19.0	4	809
1991 PL15	1991 09 07.11389	21 29 43.58	-18 26 25.3		4	809
1991 PL15	1991 09 07.12708	21 29 43.08	-18 26 30.3		4	809
1991 PE16	1991 08 07.14722	22 24 38.68	-11 24 58.9	19.6	4	809
1991 PE16	1991 08 07.16042	22 24 38.05	-11 25 06.0		4	809
1991 PE16	1991 08 07.17361	22 24 37.41	-11 25 12.7		4	809
1991 PW16	1991 09 07.10069	21 35 11.31	-15 59 30.7		4	809
1991 PW16	1991 09 07.11389	21 35 10.69	-15 59 35.7		4	809
1991 PW16	1991 09 07.12708	21 35 10.27	-15 59 39.6		4	809
1991 PY18	1991 08 07.14722	22 25 39.43	-09 46 21.7	19.2	4	809
1991 PY18	1991 08 07.16042	22 25 38.75	-09 46 22.9		4	809
1991 PY18	1991 08 07.17361	22 25 38.14	-09 46 23.6		4	809
1991 RV11	1991 09 05.12847	20 47 02.49	-15 19 00.9		4	809
1991 RV11	1991 09 05.14167	20 47 02.29	-15 19 03.8		4	809
1991 RV11	1991 09 05.15486	20 47 02.09	-15 19 07.0		4	809
1991 RV11	1991 09 07.05556	20 46 38.52	-15 27 22.8		4	809
1991 RV11	1991 09 07.06875	20 46 38.32	-15 27 25.5		4	809
1991 RW11	1991 09 05.12847	20 50 11.92	-18 39 02.0		4	809
1991 RW11	1991 09 05.14167	20 50 11.38	-18 39 07.1		4	809
1991 RW11	1991 09 05.15486	20 50 10.83	-18 39 12.0		4	809
1991 RW11	1991 09 07.05556	20 49 07.00	-18 49 40.4		4	809
1991 RW11	1991 09 07.06875	20 49 06.52	-18 49 44.5		4	809
1991 RX11	1991 09 05.12847	20 53 20.97	-19 08 09.1		4	809
1991 RX11	1991 09 05.14167	20 53 20.52	-19 08 08.5		4	809
1991 RX11	1991 09 05.15486	20 53 20.16	-19 08 07.5		4	809
1991 RX11	1991 09 07.05556	20 52 13.54	-19 06 05.1		4	809
1991 RX11	1991 09 07.06875	20 52 13.09	-19 06 04.2		4	809
1991 RY11	1991 09 07.05556	20 55 12.83	-19 34 39.5		4	809
1991 RY11	1991 09 07.06875	20 55 12.44	-19 34 42.0		4	809
1991 RZ11	1991 09 05.12847	20 57 29.20	-18 40 29.4		4	809

1991 RZ11		1991 09 05.14167	20 57 28.72	-18 40 29.0			4	809
1991 RZ11		1991 09 05.15486	20 57 28.24	-18 40 30.0			4	809
1991 RZ11		1991 09 07.05556	20 56 38.33	-18 42 36.1			4	809
1991 RZ11		1991 09 07.06875	20 56 37.95	-18 42 37.5			4	809
1991 RA12		1991 09 05.12847	21 01 51.24	-14 36 58.0			4	809
1991 RA12		1991 09 05.14167	21 01 50.65	-14 36 59.2			4	809
1991 RA12		1991 09 05.15486	21 01 50.28	-14 37 01.9			4	809
1991 RA12		1991 09 07.05556	21 00 31.16	-14 41 38.4			4	809
1991 RA12		1991 09 07.06875	21 00 30.66	-14 41 39.4			4	809
1991 RB12		1991 09 05.12847	21 02 38.51	-15 29 33.1			4	809
1991 RB12		1991 09 05.14167	21 02 37.93	-15 29 31.7			4	809
1991 RB12		1991 09 05.15486	21 02 37.41	-15 29 30.6			4	809
1991 RB12		1991 09 07.05556	21 01 15.91	-15 26 26.9			4	809
1991 RB12		1991 09 07.06875	21 01 15.29	-15 26 25.3			4	809
1991 RD12		1991 09 05.12847	21 03 09.55	-18 14 44.3			4	809
1991 RD12		1991 09 05.14167	21 03 09.06	-18 14 48.3			4	809
1991 RD12		1991 09 05.15486	21 03 08.58	-18 14 51.5			4	809
1991 RD12		1991 09 07.05556	21 02 04.41	-18 20 56.6			4	809
1991 RD12		1991 09 07.06875	21 02 03.81	-18 21 00.1			4	809
1991 RJ12		1991 09 07.10069	21 25 15.32	-16 31 42.3			4	809
1991 RJ12		1991 09 07.11389	21 25 14.68	-16 31 47.3			4	809
1991 RJ12		1991 09 07.12708	21 25 14.31	-16 31 50.9			4	809
1991 RP12		1991 09 07.10069	21 31 49.18	-18 06 10.9			4	809
1991 RP12		1991 09 07.11389	21 31 48.55	-18 06 08.2			4	809
1991 RP12		1991 09 07.12708	21 31 47.86	-18 06 06.0			4	809
1991 RR12		1991 09 07.10069	21 34 38.72	-19 44 26.8			4	809
1991 RR12		1991 09 07.11389	21 34 37.99	-19 44 29.1			4	809
1991 RR12		1991 09 07.12708	21 34 37.23	-19 44 30.5			4	809
1991 RU12		1991 09 07.10069	21 41 21.55	-16 34 30.8			4	809
1991 RU12		1991 09 07.11389	21 41 21.10	-16 34 35.3			4	809
1991 RU12		1991 09 07.12708	21 41 20.71	-16 34 40.3			4	809
1991 XQ2	*	1991 12 07.28750	06 46 30.83	+11 50 02.2		18.2	4	809
1991 XQ2		1991 12 07.30000	06 46 30.11	+11 50 02.0			4	809
1991 XQ2		1991 12 07.31250	06 46 29.46	+11 50 01.9			4	809
1991 XQ2		1991 12 09.27500	06 44 59.76	+11 50 27.2			4	809
1991 XQ2		1991 12 09.28819	06 44 59.06	+11 50 27.1			4	809
1991 XQ2		1991 12 09.30139	06 44 58.41	+11 50 27.6			4	809
1991 XR2	*	1991 12 07.28750	06 47 24.33	+12 10 50.0		18.5	4	809
1991 XR2		1991 12 07.30000	06 47 23.67	+12 10 48.0			4	809
1991 XR2		1991 12 07.31250	06 47 23.02	+12 10 46.4			4	809
1991 XR2		1991 12 09.27500	06 45 54.68	+12 06 11.3			4	809
1991 XR2		1991 12 09.28819	06 45 54.01	+12 06 09.9			4	809
1991 XR2		1991 12 09.30139	06 45 53.33	+12 06 07.9			4	809
1991 XS2	*	1991 12 07.28750	06 48 36.61	+11 39 55.8		18.6	4	809
1991 XS2		1991 12 07.30000	06 48 36.01	+11 39 56.6			4	809
1991 XS2		1991 12 07.31250	06 48 35.49	+11 39 56.4			4	809
1991 XS2		1991 12 09.27500	06 46 28.74	+11 38 24.4			4	809
1991 XS2		1991 12 09.28819	06 46 28.02	+11 38 24.6			4	809
1991 XS2		1991 12 09.30139	06 46 27.49	+11 38 24.5			4	809
1991 XT2	*	1991 12 07.28750	06 51 02.51	+11 33 39.2		18.5	4	809
1991 XT2		1991 12 07.30000	06 51 02.14	+11 33 40.8			4	809
1991 XT2		1991 12 07.31250	06 51 01.80	+11 33 41.2			4	809
1991 XT2		1991 12 09.27500	06 50 08.09	+11 36 10.5			4	809
1991 XT2		1991 12 09.28819	06 50 07.73	+11 36 11.8			4	809
1991 XT2		1991 12 09.30139	06 50 07.34	+11 36 12.9			4	809
1991 XU2	*	1991 12 07.28750	06 51 51.94	+09 41 36.6		18.6	4	809
1991 XU2		1991 12 07.30000	06 51 51.24	+09 41 32.0			4	809
1991 XU2		1991 12 07.31250	06 51 50.60	+09 41 27.6			4	809
1991 XU2		1991 12 09.27500	06 50 26.42	+09 27 58.8			4	809

1991 XU2		1991	12	09.28819	06	50	25.99	+09	27	55.6	4 809
1991 XU2		1991	12	09.30139	06	50	25.67	+09	27	51.5	4 809
1991 XV2	*	1991	12	07.28750	06	52	00.11	+12	07	37.0	18.5 4 809
1991 XV2		1991	12	07.30000	06	51	59.59	+12	07	33.7	4 809
1991 XV2		1991	12	07.31250	06	51	58.98	+12	07	29.9	4 809
1991 XV2		1991	12	09.27500	06	50	47.09	+11	58	51.1	4 809
1991 XV2		1991	12	09.28819	06	50	46.45	+11	58	47.4	4 809
1991 XV2		1991	12	09.30139	06	50	45.93	+11	58	42.2	4 809
1991 XW2	*	1991	12	07.28750	06	52	42.62	+07	41	53.4	18.2 4 809
1991 XW2		1991	12	07.30000	06	52	41.91	+07	41	54.3	4 809
1991 XW2		1991	12	07.31250	06	52	41.27	+07	41	55.6	4 809
1991 XW2		1991	12	09.27500	06	51	11.45	+07	45	19.5	4 809
1991 XW2		1991	12	09.28819	06	51	10.76	+07	45	21.7	4 809
1991 XW2		1991	12	09.30139	06	51	10.12	+07	45	21.8	4 809
1991 XX2	*	1991	12	07.28750	06	56	07.29	+10	31	35.7	18.8 4 809
1991 XX2		1991	12	07.30000	06	56	06.73	+10	31	35.6	4 809
1991 XX2		1991	12	07.31250	06	56	06.28	+10	31	36.2	4 809
1991 XX2		1991	12	09.27500	06	54	56.22	+10	31	14.5	4 809
1991 XX2		1991	12	09.28819	06	54	55.69	+10	31	15.1	4 809
1991 XX2		1991	12	09.30139	06	54	55.14	+10	31	15.9	4 809
1991 XZ2	*	1991	12	07.28750	06	57	44.60	+08	32	14.9	18.5 4 809
1991 XZ2		1991	12	07.30000	06	57	43.94	+08	32	13.3	4 809
1991 XZ2		1991	12	07.31250	06	57	43.34	+08	32	12.2	4 809
1991 XZ2		1991	12	09.27500	06	56	20.38	+08	27	46.2	4 809
1991 XZ2		1991	12	09.28819	06	56	19.65	+08	27	44.1	4 809
1991 XZ2		1991	12	09.30139	06	56	19.09	+08	27	40.9	4 809
1991 XB3	*	1991	12	07.28750	07	03	01.72	+10	52	08.6	18.7 4 809
1991 XB3		1991	12	07.30000	07	03	01.20	+10	52	02.9	4 809
1991 XB3		1991	12	07.31250	07	03	00.60	+10	51	57.1	4 809
1991 XB3		1991	12	09.27500	07	01	37.65	+10	38	16.9	4 809
1991 XB3		1991	12	09.28819	07	01	36.94	+10	38	10.6	4 809
1991 XB3		1991	12	09.30139	07	01	36.27	+10	38	05.5	4 809
1991 XC3	*	1991	12	01.27222	07	13	24.88	+11	52	11.2	18.6 4 809
1991 XC3		1991	12	01.28542	07	13	24.47	+11	52	08.5	4 809
1991 XC3		1991	12	01.29861	07	13	24.02	+11	52	06.8	4 809
1991 XC3		1991	12	09.31597	07	08	27.31	+11	37	24.4	4 809
1991 XC3		1991	12	09.32917	07	08	26.67	+11	37	23.5	4 809
1991 XC3		1991	12	09.34236	07	08	26.03	+11	37	22.4	4 809
1991 XD3	*	1991	12	01.27222	07	21	00.53	+12	31	09.9	18.6 4 809
1991 XD3		1991	12	01.28542	07	21	00.07	+12	31	09.9	4 809
1991 XD3		1991	12	01.29861	07	20	59.69	+12	31	08.8	4 809
1991 XD3		1991	12	09.31597	07	16	37.03	+12	21	46.0	4 809
1991 XD3		1991	12	09.32917	07	16	36.50	+12	21	44.8	4 809
1991 XD3		1991	12	09.34236	07	16	35.90	+12	21	44.7	4 809
1991 XE3	*	1991	12	01.27222	07	22	52.68	+08	06	02.9	18.5 4 809
1991 XE3		1991	12	01.28542	07	22	52.26	+08	06	04.4	4 809
1991 XE3		1991	12	01.29861	07	22	51.81	+08	06	03.6	4 809
1991 XE3		1991	12	09.31597	07	18	51.58	+08	15	51.3	4 809
1991 XE3		1991	12	09.32917	07	18	50.99	+08	15	52.5	4 809
1991 XE3		1991	12	09.34236	07	18	50.44	+08	15	54.4	4 809
1992 GF2		1992	04	25.08889	13	31	55.08	-09	05	26.7	18.6 4 809
1992 GF2		1992	04	25.10208	13	31	54.30	-09	05	22.9	4 809
1992 GF2		1992	04	25.11528	13	31	53.39	-09	05	20.0	4 809
1992 GU2		1992	04	25.08889	13	43	10.24	-10	32	01.2	18.6 4 809
1992 GU2		1992	04	25.10208	13	43	09.50	-10	31	59.1	4 809
1992 GU2		1992	04	25.11528	13	43	08.72	-10	31	58.3	4 809
1992 GE5	*	1992	04	06.26806	14	19	59.20	-12	31	54.5	19.0 4 809
1992 GE5		1992	04	06.28125	14	19	58.62	-12	31	52.0	4 809
1992 GE5		1992	04	06.29444	14	19	57.98	-12	31	50.9	4 809

1992 GE5		1992 04 25.13403	14 05 12.28	-11 28 30.5	18.7	4	809
1992 GE5		1992 04 25.14722	14 05 11.55	-11 28 28.3		4	809
1992 GE5		1992 04 25.16042	14 05 10.68	-11 28 25.2		4	809
1992 HH4		1992 04 25.13403	14 03 49.58	-13 26 26.5	19.2	4	809
1992 HH4		1992 04 25.14722	14 03 48.67	-13 26 31.0		4	809
1992 HH4		1992 04 25.16042	14 03 47.72	-13 26 34.3		4	809
1992 HJ4	*	1992 04 25.08889	13 31 54.92	-09 13 59.6	18.7	4	809
1992 HJ4		1992 04 25.10208	13 31 54.34	-09 13 56.5		4	809
1992 HJ4		1992 04 25.11528	13 31 53.75	-09 13 54.2		4	809
1992 HK4	*	1992 04 25.13403	14 01 18.22	-11 31 56.8	18.6	4	809
1992 HK4		1992 04 25.14722	14 01 17.40	-11 31 54.0		4	809
1992 HK4		1992 04 25.16042	14 01 16.61	-11 31 51.3		4	809
1992 QB1		1992 09 27.10789	23 59 10.07	-00 04 09.6		5	809
1992 QB1		1992 09 27.27997	23 59 09.26	-00 04 14.7		5	809
4004 P-L		1990 08 24.19167	22 50 35.26	-08 15 33.5		4	809
4004 P-L		1990 08 24.20486	22 50 34.64	-08 15 34.4		4	809
4004 P-L		1990 08 24.21806	22 50 34.11	-08 15 34.9		4	809
6607 P-L		1990 08 24.19167	22 43 54.30	-10 29 05.2		4	809
6607 P-L		1990 08 24.20486	22 43 53.54	-10 29 09.8		4	809
6607 P-L		1990 08 24.21806	22 43 52.86	-10 29 15.7		4	809
3201 T-2		1991 09 05.12847	20 48 57.63	-19 09 57.0		4	809
3201 T-2		1991 09 05.14167	20 48 57.24	-19 09 59.5		4	809
3201 T-2		1991 09 05.15486	20 48 56.87	-19 10 01.3		4	809
3201 T-2		1991 09 07.05556	20 48 10.86	-19 15 51.9		4	809
3201 T-2		1991 09 07.06875	20 48 10.37	-19 15 53.6		4	809
3365 T-2		1990 08 24.19167	22 51 22.06	-10 57 57.0		4	809
3365 T-2		1990 08 24.20486	22 51 21.45	-10 58 00.5		4	809
3365 T-2		1990 08 24.21806	22 51 20.87	-10 58 03.4		4	809
1194 T-3		1991 08 05.08056	20 17 03.20	-20 52 26.1	18.2	4	809
1194 T-3		1991 08 05.09375	20 17 02.30	-20 52 25.4		4	809
1194 T-3		1991 08 05.10694	20 17 01.52	-20 52 24.3		4	809
(52)		1991 09 05.12847	20 51 46.24	-19 26 19.4		4	809
(52)		1991 09 05.14167	20 51 45.69	-19 26 22.0		4	809
(52)		1991 09 05.15486	20 51 45.27	-19 26 24.0		4	809
(52)		1991 09 07.05556	20 50 49.48	-19 32 37.1		4	809
(52)		1991 09 07.06875	20 50 48.91	-19 32 40.0		4	809
(111)		1991 08 05.08056	20 26 32.58	-19 02 26.0	13.0	4	809
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(140)		1991 09 07.10069	21 28 37.61	-18 56 09.5		4	809
(140)		1991 09 07.11389	21 28 37.07	-18 56 12.4		4	809
(140)		1991 09 07.12708	21 28 36.69	-18 56 14.7		4	809
(287)		1991 12 07.28750	06 47 22.78	+10 16 19.0	11.0	4	809
(287)		1991 12 07.30000	06 47 22.00	+10 16 20.0		4	809
(287)		1991 12 07.31250	06 47 21.37	+10 16 20.9		4	809
(287)		1991 12 09.27500	06 45 48.96	+10 18 04.5		4	809
(287)		1991 12 09.28819	06 45 48.18	+10 18 05.3		4	809
(287)		1991 12 09.30139	06 45 47.44	+10 18 06.0		4	809
(551)		1990 08 24.19167	22 59 54.79	-06 43 06.2		4	809
(551)		1990 08 24.20486	22 59 54.17	-06 43 10.0		4	809
(551)		1990 08 24.21806	22 59 53.55	-06 43 12.7		4	809
(565)		1991 12 01.27222	07 22 41.35	+09 11 22.5	15.0	4	809
(565)		1991 12 01.28542	07 22 41.07	+09 11 16.7		4	809
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(565)		1991 12 09.31597	07 19 11.38	+08 14 04.2		4	809
(565)		1991 12 09.32917	07 19 10.75	+08 13 58.5		4	809
(565)		1991 12 09.34236	07 19 10.23	+08 13 53.8		4	809

(979)	1991	12	01.27222	07 17 34.78	+12 35 28.2	16.0	4	809
(979)	1991	12	01.28542	07 17 34.30	+12 35 25.6		4	809
(979)	1991	12	01.29861	07 17 33.91	+12 35 24.4		4	809
(979)	1991	12	09.31597	07 13 11.41	+12 16 03.1		4	809
(979)	1991	12	09.32917	07 13 10.76	+12 16 01.5		4	809
(979)	1991	12	09.34236	07 13 10.29	+12 16 00.5		4	809
(1128)	1991	08	07.14722	22 33 11.11	-10 49 42.0	17.5	4	809
(1128)	1991	08	07.16042	22 33 10.58	-10 49 46.4		4	809
(1128)	1991	08	07.17361	22 33 09.97	-10 49 50.2		4	809
(1274)	1991	09	05.12847	21 02 55.66	-17 06 29.9		4	809
(1274)	1991	09	05.14167	21 02 55.08	-17 06 30.3		4	809
(1274)	1991	09	05.15486	21 02 54.46	-17 06 30.2		4	809
(1274)	1991	09	07.05556	21 01 40.95	-17 07 25.6		4	809
(1274)	1991	09	07.06875	21 01 40.38	-17 07 25.5		4	809
(1289)	1991	08	07.14722	22 23 23.31	-08 05 58.8	17.8	4	809
(1289)	1991	08	07.16042	22 23 22.72	-08 06 03.1		4	809
(1289)	1991	08	07.17361	22 23 22.13	-08 06 07.0		4	809
(1290)	1991	08	05.08056	20 13 34.21	-20 12 14.8	18.0	4	809
(1290)	1991	08	05.09375	20 13 33.32	-20 12 15.7		4	809
(1290)	1991	08	05.10694	20 13 32.42	-20 12 15.5		4	809
(1434)	1990	08	24.19167	22 48 12.72	-08 49 36.1		4	809
(1434)	1990	08	24.20486	22 48 12.18	-08 49 42.8		4	809
(1434)	1990	08	24.21806	22 48 11.54	-08 49 49.1		4	809
(1476)	1991	09	05.12847	20 47 42.84	-18 52 40.2		4	809
(1476)	1991	09	05.14167	20 47 42.46	-18 52 36.4		4	809
(1476)	1991	09	05.15486	20 47 42.14	-18 52 31.5		4	809
(1476)	1991	09	07.05556	20 47 04.75	-18 43 17.2		4	809
(1476)	1991	09	07.06875	20 47 04.40	-18 43 13.3		4	809
(1492)	1990	08	24.19167	22 56 09.53	-10 34 11.3		4	809
(1492)	1990	08	24.20486	22 56 08.77	-10 34 18.3		4	809
(1492)	1990	08	24.21806	22 56 07.98	-10 34 25.8		4	809
(1719)	1991	09	05.12847	20 46 12.74	-18 19 20.6		4	809
(1719)	1991	09	05.14167	20 46 12.13	-18 19 16.3		4	809
(1719)	1991	09	05.15486	20 46 11.53	-18 19 11.9		4	809
(1719)	1991	09	07.05556	20 44 54.34	-18 09 08.1		4	809
(1719)	1991	09	07.06875	20 44 53.80	-18 09 04.4		4	809
(1764)	1990	08	24.19167	23 00 25.14	-06 47 46.5		4	809
(1764)	1990	08	24.20486	23 00 24.49	-06 47 51.3		4	809
(1764)	1990	08	24.21806	23 00 23.97	-06 47 54.2		4	809
(1815)	1991	08	07.14722	22 28 09.36	-12 02 21.8	18.6	4	809
(1815)	1991	08	07.16042	22 28 08.80	-12 02 26.8		4	809
(1815)	1991	08	07.17361	22 28 08.28	-12 02 30.5		4	809
(2187)	1991	09	07.10069	21 30 26.49	-19 52 20.2		4	809
(2187)	1991	09	07.11389	21 30 25.94	-19 52 28.5		4	809
(2187)	1991	09	07.12708	21 30 25.51	-19 52 35.4		4	809
(2246)	1991	09	05.12847	20 49 53.03	-15 04 37.1		4	809
(2246)	1991	09	05.14167	20 49 52.65	-15 04 39.4		4	809
(2246)	1991	09	05.15486	20 49 52.33	-15 04 42.1		4	809
(2246)	1991	09	07.05556	20 49 06.44	-15 10 21.8		4	809
(2246)	1991	09	07.06875	20 49 06.04	-15 10 24.2		4	809
(2325)	1990	08	24.19167	22 48 43.99	-08 28 07.2		4	809
(2325)	1990	08	24.20486	22 48 43.41	-08 28 10.9		4	809
(2325)	1990	08	24.21806	22 48 42.81	-08 28 14.6		4	809
(2381)	1991	08	07.14722	22 37 19.12	-07 57 23.0	18.4	4	809
(2381)	1991	08	07.16042	22 37 18.66	-07 57 30.5		4	809
(2381)	1991	08	07.17361	22 37 18.19	-07 57 37.6		4	809
(2496)	1991	09	05.12847	20 47 46.43	-17 19 59.0		4	809
(2496)	1991	09	05.14167	20 47 45.92	-17 20 00.8		4	809
(2496)	1991	09	05.15486	20 47 45.52	-17 20 01.5		4	809

(2496)	1991	09	07.05556	20 46 44.46	-17 25 16.9		4	809
(2496)	1991	09	07.06875	20 46 44.00	-17 25 18.3		4	809
(2516)	1991	09	07.10069	21 25 18.07	-16 00 25.6		4	809
(2516)	1991	09	07.11389	21 25 17.34	-16 00 28.7		4	809
(2516)	1991	09	07.12708	21 25 16.69	-16 00 32.2		4	809
(2634)	1991	08	05.08056	20 16 55.90	-18 13 32.2	18.0	4	809
(2634)	1991	08	05.09375	20 16 55.27	-18 13 35.2		4	809
(2634)	1991	08	05.10694	20 16 54.66	-18 13 38.2		4	809
(2796)	1990	08	24.19167	22 54 23.47	-06 41 09.3		4	809
(2796)	1990	08	24.20486	22 54 22.84	-06 41 17.6		4	809
(2796)	1990	08	24.21806	22 54 22.25	-06 41 24.5		4	809
(2859)	1991	09	05.12847	21 02 11.52	-14 47 49.8		4	809
(2859)	1991	09	05.14167	21 02 11.04	-14 47 52.4		4	809
(2859)	1991	09	05.15486	21 02 10.57	-14 47 55.2		4	809
(2859)	1991	09	07.05556	21 00 57.15	-14 56 45.0		4	809
(2859)	1991	09	07.06875	21 00 56.60	-14 56 48.5		4	809
(2923)	1990	08	24.19167	22 56 37.81	-07 48 59.9		4	809
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(2923)	1990	08	24.21806	22 56 36.32	-07 49 07.6		4	809
(3027)	1991	09	05.12847	20 50 13.58	-14 56 41.0		4	809
(3027)	1991	09	05.14167	20 50 13.21	-14 56 43.6		4	809
(3027)	1991	09	05.15486	20 50 12.86	-14 56 45.8		4	809
(3027)	1991	09	07.05556	20 49 33.15	-15 02 34.8		4	809
(3027)	1991	09	07.06875	20 49 32.79	-15 02 37.8		4	809
(3162)	1991	12	01.27222	07 21 55.76	+07 55 09.7	16.0	4	809
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(3162)	1991	12	01.29861	07 21 55.12	+07 55 12.7		4	809
(3162)	1991	12	09.31597	07 18 35.15	+08 16 39.7		4	809
(3162)	1991	12	09.32917	07 18 34.63	+08 16 42.7		4	809
(3162)	1991	12	09.34236	07 18 34.14	+08 16 45.8		4	809
(3231)	1991	09	05.12847	21 04 25.66	-16 27 56.7		4	809
(3231)	1991	09	05.14167	21 04 25.05	-16 27 56.1		4	809
(3231)	1991	09	05.15486	21 04 24.40	-16 27 55.0		4	809
(3231)	1991	09	07.05556	21 03 08.81	-16 26 31.0		4	809
(3231)	1991	09	07.06875	21 03 08.28	-16 26 30.4		4	809
(3232)	1991	12	07.28750	06 57 32.29	+09 14 37.4	18.0	4	809
(3232)	1991	12	07.30000	06 57 31.64	+09 14 35.7		4	809
(3232)	1991	12	07.31250	06 57 31.12	+09 14 34.9		4	809
(3232)	1991	12	09.27500	06 56 15.99	+09 11 20.5		4	809
(3232)	1991	12	09.28819	06 56 15.40	+09 11 20.9		4	809
(3232)	1991	12	09.30139	06 56 14.82	+09 11 19.5		4	809
(3323)	1991	08	07.14722	22 27 27.18	-10 45 44.1	18.6	4	809
(3323)	1991	08	07.16042	22 27 26.54	-10 45 48.3		4	809
(3323)	1991	08	07.17361	22 27 25.91	-10 45 52.6		4	809
(3516)	1991	08	07.14722	22 27 48.44	-08 39 44.7	18.7	4	809
(3516)	1991	08	07.16042	22 27 47.88	-08 39 49.5		4	809
(3516)	1991	08	07.17361	22 27 47.30	-08 39 53.2		4	809
(3539)	1991	12	07.28750	06 59 46.50	+08 43 42.8	18.5	4	809
(3539)	1991	12	07.30000	06 59 45.86	+08 43 44.0		4	809
(3539)	1991	12	07.31250	06 59 45.34	+08 43 44.7		4	809
(3539)	1991	12	09.27500	06 58 24.19	+08 45 10.5		4	809
(3539)	1991	12	09.28819	06 58 23.49	+08 45 11.9		4	809
(3539)	1991	12	09.30139	06 58 22.89	+08 45 13.0		4	809
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(3656)	1991	09	05.12847	20 52 52.76	-17 15 22.1		4	809
(3656)	1991	09	05.14167	20 52 52.33	-17 15 23.1		4	809
(3656)	1991	09	05.15486	20 52 51.93	-17 15 24.2		4	809

(3656)	1991	09	07.05556	20 52 03.91	-17 17 52.4		4	809
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(3676)	1991	09	07.10069	21 28 44.86	-17 41 33.5		4	809
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(3676)	1991	09	07.12708	21 28 43.48	-17 41 36.3		4	809
(3843)	1991	09	07.10069	21 28 36.88	-19 47 40.2		4	809
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(4491)	1991	09	05.12847	20 59 01.39	-15 40 11.1		4	809
(4491)	1991	09	05.14167	20 59 00.78	-15 40 12.4		4	809
(4491)	1991	09	05.15486	20 59 00.26	-15 40 12.1		4	809
(4491)	1991	09	07.05556	20 57 48.70	-15 41 54.3		4	809
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(4494)	1991	09	05.12847	20 53 48.51	-15 36 34.1		4	809
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(4754)	1991	12	09.34236	07 08 53.12	+10 19 51.9		4	809
(4778)	1992	04	06.26806	14 23 04.63	-14 05 21.6	19.2	4	809
(4778)	1992	04	06.28125	14 23 04.11	-14 05 19.9		4	809
(4778)	1992	04	06.29444	14 23 03.62	-14 05 17.6		4	809
(4784)	1990	08	24.19167	22 54 35.30	-08 05 53.5		4	809
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(4784)	1990	08	24.21806	22 54 33.89	-08 05 58.9		4	809
(4916)	1991	09	05.12847	20 51 21.40	-15 26 26.6		4	809
(4916)	1991	09	05.14167	20 51 20.98	-15 26 30.4		4	809
(4916)	1991	09	05.15486	20 51 20.58	-15 26 34.5		4	809
(4916)	1991	09	07.05556	20 50 27.41	-15 36 44.0		4	809
(4916)	1991	09	07.06875	20 50 27.00	-15 36 47.9		4	809
(4940)	1991	08	05.08056	20 11 04.70	-20 22 26.2	18.3	4	809
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(4960)	1991	09	05.12847	20 57 01.62	-17 46 20.1		4	809
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(4960)	1991	09	07.05556	20 56 01.95	-17 50 46.7		4	809
(4960)	1991	09	07.06875	20 56 01.52	-17 50 47.9		4	809
(5075)	1991	09	05.12847	20 59 43.66	-15 10 31.3		4	809
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(5097)	1991	09	07.05556	21 02 16.15	-19 47 54.8		4	809
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(5151)	1990	08	24.21806	22 55 42.14	-08 20 58.5		4	809

(5184)		1990 08 24.19167	22 46 16.57	-07 17 33.9			4	809
(5184)		1990 08 24.20486	22 46 15.77	-07 17 37.0			4	809
(5184)		1990 08 24.21806	22 46 14.85	-07 17 39.9			4	809

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
GSC

1991 DM1		1992 08 30.54097	22 32 36.38	-05 59 13.4		15.3		885
1991 DM1		1992 08 30.54722	22 32 36.16	-05 59 19.1				885
1991 DM1		1992 09 01.65208	22 31 07.40	-06 26 06.8		15.5		885
1991 DM1		1992 09 01.65694	22 31 07.17	-06 26 10.3				885
1991 DM1		1992 09 01.66250	22 31 06.94	-06 26 14.4				885

894 Otomo
S. Otomo, Kiyosato 3545-3902, Takane-cho, Kitakoma-gun, Yamanashi-ken, 407-03, Japan
0.25-m f/3.4 reflector
PPM

1980 FO1		1992 09 03.62257	23 26 24.40	-02 27 51.3		17.0		894
1980 FO1		1992 09 03.63646	23 26 23.78	-02 27 54.4				894
1980 FO1		1992 09 05.70708	23 24 48.64	-02 37 06.9		17.0		894
1980 FO1		1992 09 05.72118	23 24 47.88	-02 37 08.3				894
1981 EY30		1992 09 04.66875	23 55 01.32	-02 22 42.5		16.3		894
1981 EY30		1992 09 04.69375	23 55 00.46	-02 22 56.4				894
1982 PC		1992 09 03.65729	23 46 09.71	-02 51 44.4		16.5		894
1982 PC		1992 09 03.66910	23 46 09.18	-02 51 50.2				894
1982 PC		1992 09 04.65626	23 45 26.38	-03 00 44.1				894
1982 PC		1992 09 04.68125	23 45 25.33	-03 00 53.2				894
1991 FM		1992 09 03.62257	23 27 33.36	-02 32 31.6		17.0		894
1991 FM		1992 09 03.63646	23 27 32.42	-02 32 36.7				894
1991 FM		1992 09 04.64340	23 26 32.37	-02 37 21.7				894
1991 FM		1992 09 05.70708	23 25 28.15	-02 42 25.3		17.0		894
1991 FM		1992 09 05.72118	23 25 27.37	-02 42 27.9				894
1991 HG		1992 08 31.73993	00 13 44.80	-03 05 38.8		17.0		894
1991 HG		1992 08 31.75451	00 13 44.14	-03 05 42.9				894
1991 HG		1992 09 27.68203	23 49 32.06	-05 08 28.0				894
1991 HG		1992 09 27.69514	23 49 31.31	-05 08 33.3				894
1992 QK		1992 09 03.54029	22 19 04.07	+00 02 33.1		16.5		894
1992 QK		1992 09 03.55347	22 19 03.30	+00 02 31.7				894
1992 QL		1992 09 03.56701	22 18 20.87	-07 43 22.4		16.5		894
1992 QL		1992 09 03.58090	22 18 20.20	-07 43 28.4				894
1992 QM		1992 09 03.56701	22 23 52.02	-07 30 10.1		15.5		894
1992 QM		1992 09 03.58090	22 23 51.33	-07 30 11.3				894
1992 QM		1992 09 27.66840	22 09 54.94	-07 54 18.2		16.5		894
1992 RG	*	1992 09 03.62257	23 33 47.42	-03 45 26.3		16.3		894
1992 RG		1992 09 03.63646	23 33 47.05	-03 45 37.6				894
1992 RG		1992 09 04.63090	23 33 18.64	-03 57 12.9		16.0		894
1992 RG		1992 09 04.64340	23 33 18.35	-03 57 22.3				894
1992 RG		1992 09 05.70708	23 32 47.05	-04 09 50.4		16.0		894
1992 RG		1992 09 05.72118	23 32 46.68	-04 10 02.1				894
1992 RH		1992 09 03.56701	22 17 06.75	-08 05 15.2		17.2		894
1992 RH		1992 09 03.58090	22 17 06.00	-08 05 20.4				894
1992 RJ		1992 09 01.71858	22 18 33.41	-07 03 17.8		16.5		894
1992 RJ		1992 09 01.72847	22 18 32.85	-07 03 21.4				894
1992 RJ		1992 09 03.56701	22 17 13.16	-07 19 57.2		16.8		894
1992 RJ		1992 09 03.58090	22 17 12.57	-07 20 04.1				894

1992 RM	*	1992 09 04.66875	00 02 57.41	-01 19 23.3	16.8		894
1992 RM		1992 09 04.69375	00 02 56.45	-01 19 26.8			894
1992 RM		1992 09 05.76215	00 02 10.21	-01 21 40.0	16.7		894
1992 RM		1992 09 05.77500	00 02 09.58	-01 21 40.9			894
1992 RM		1992 09 26.71881	23 44 14.78	-02 17 00.8	16.3		894
1992 RM		1992 09 26.73056	23 44 14.09	-02 17 02.7			894
1992 RM		1992 10 02.71389	23 39 25.07	-02 29 54.9	16.5		894
1992 RN	*	1992 09 04.73578	23 45 31.17	+01 59 37.1	16.7		894
1992 RN		1992 09 04.74896	23 45 30.25	+01 59 38.0			894
1992 RN		1992 09 05.73524	23 44 26.62	+01 58 48.7	16.8		894
1992 RN		1992 09 05.74828	23 44 25.90	+01 58 47.1			894
1992 RN		1992 09 27.64132	23 21 07.29	+01 21 41.3	16.7		894
1992 RN		1992 09 27.65451	23 21 06.40	+01 21 37.9			894
1992 RP		1992 08 31.57396	22 28 28.07	-00 26 39.0	17.2		894
1992 RP		1992 08 31.58785	22 28 27.44	-00 26 41.7			894
1992 RP	*	1992 09 03.54029	22 25 58.64	-00 32 34.8	17.0		894
1992 RP		1992 09 03.55347	22 25 57.93	-00 32 36.7			894
7063 P-L		1992 08 31.57396	22 26 05.33	+00 07 42.3	16.5		894
7063 P-L		1992 08 31.58785	22 26 04.65	+00 07 39.3			894
7063 P-L		1992 09 03.54029	22 23 46.32	-00 09 37.8	16.6		894
7063 P-L		1992 09 03.55347	22 23 45.74	-00 09 41.9			894
(2209)		1992 09 03.65729	23 46 37.75	-02 55 07.9			894
(2209)		1992 09 03.66910	23 46 37.26	-02 55 12.3			894
(2209)		1992 09 04.65626	23 45 55.72	-03 00 47.7			894
(2209)		1992 09 04.68125	23 45 54.58	-03 00 55.3			894
(3181)		1992 09 27.64132	23 21 48.81	+01 01 08.8			894
(3181)		1992 09 27.65451	23 21 48.19	+01 01 03.3			894
(5334)		1992 09 03.56701	22 20 33.18	-07 06 24.4	17.0		894
(5334)		1992 09 03.58090	22 20 32.49	-07 06 31.0			894

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O. Muramatsu, 119-1, 2-8 Sakurazutsumi, Musashino, Tokyo 180, Japan
Observers Y. Kushida, O. Muramatsu
Measurer O. Muramatsu
0.25-m f/4.0 reflector
PPM

1989 YN		1990 01 25.60660	06 58 52.13	+18 17 19.7			896

900 Kiryuu Observatory, Ohtsu
Y. Ikari, Katsube 626, Moriyama, Shiga-Ken, 524 Japan
0.26-m f/2.9 reflector + CCD
GSC

1992 SL		1992 10 02.69547	01 37 13.71	+25 23 22.7			900
1992 SL		1992 10 02.70492	01 37 13.08	+25 23 54.5	14.5	V	900

* * * * *

ORBITAL ELEMENTS.

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The name of the orbit computer is shown on the line giving T for a comet and Epoch for a displayed minor-planet orbit; for many of the minor planets (O-C) residuals are shown in full (in R.A. and Decl.); observations are identified by date and observatory code, X referring to an approximate and Y to a semiaccurate position. For displayed minor planets "Id." shows those involved in establishing the identifications (generally with the principal contributors first), "k" indicating key identifications and "d" (only) double (or multiple) designations; no identifier is shown if only the orbit computer is involved and the results were not previously published. J-P indicates that only the perturbations by the outer planets were considered, and a and n are then related by a gravitational constant augmented by the masses of the inner planets. For the one-opposition orbits, equinox 2000.0 is used, and the columns headed Arc and O show the time span in days covered by the observations and the number of observations utilized in the computation (0 = 10 or more). In the note column N, D means that there are double (or multiple) designations, E means that the value of the eccentricity was assumed, F means both; the double designations are listed at the end; the codes for the orbit computers (column C) are as listed above.

Comet McNaught-Russell (1990 XXII)
Epoch 1990 Nov. 5.0 TT = JDT 2448200.5

T 1990 Nov. 12.25672 TT				Marsden
q 6.9864214		(2000.0)	P	Q
z +0.0000952	Peri.	149.24248	+0.80892498	+0.33614968
+/-0.0000223	Node	150.11761	-0.48782533	-0.07411242
e 0.9993346	Incl.	104.50922	+0.32812623	-0.93888804

From 23 observations 1991 Sept. 3-1992 Sept. 24, mean residual 0".88.

Periodic Comet Brewington (1992p)

T 1992 June 7.01706 TT				Nakano
q 1.5909627		(2000.0)	P	Q
n 0.09627147	Peri.	47.24713	+0.84877602	-0.52140393
a 4.7148835	Node	343.54488	+0.34724165	+0.67495331
e 0.6625658	Incl.	18.06685	+0.39875119	+0.52208809

P 10.24
From 33 observations 1992 Aug. 28-Oct. 2.

Periodic Comet Swift-Tuttle (1992t)

T 1992 Dec. 12.33897 TT				Marsden
q 0.9586518		(2000.0)	P	Q
n 0.00730083	Peri.	152.96697	+0.79402237	+0.11492615
a 26.3160733	Node	139.42063	-0.57165259	-0.19279546
e 0.9635716	Incl.	113.41647	+0.20674086	-0.97448545

P 135.00
From 26 observations 1992 Sept.27-Oct. 2, approximate linkage to 1862.

Periodic Comet Ciffreo (1992s)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5

T 1993 Jan. 23.06492 TT				Marsden
q 1.7087650		(2000.0)	P	Q
n 0.13624106	Peri.	358.03351	+0.61847497	-0.76430862
a 3.7405090	Node	53.70922	+0.72401753	+0.46396627
e 0.5431731	Incl.	13.08936	+0.30542975	+0.44784778

P 7.23
From 62 observations 1985-1992, mean residual 0".9.

Comet Helin-Lawrence (1992q)
Epoch 1993 Apr. 3.0 TT = JDT 2449080.5
T 1993 Mar. 15.05115 TT Marsden
q 2.0400108 (2000.0) P Q
z +0.0169003 Peri. 268.79316 +0.09377159 -0.96564149
+/-0.0000000 Node 194.66959 +0.12826541 -0.22969682
e 0.9655233 Incl. 106.85128 -0.98729675 -0.12155605
From 28 observations 1992 Aug. 29-Sept. 27, mean residual 0".77.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1987 YA	14.5	871211	19.28	181.27	221.92	2.24	0.2671	2.2606	9	0		W
1989 WO7	13.0	891130	230.37	109.13	92.12	4.91	0.0793	2.2443	6	9		N
1990 OW2	13.9	900728	308.48	300.65	81.93	8.35	0.1344	2.3213	48	6	D	N
1990 QT1	15.4	900817	5.04	196.14	132.97	2.93	0.2242	2.4124	10	0	D	N
1990 QB2	14.2	900906	15.95	150.07	171.92	2.07	0.2178	2.3818	30	0	D	N
1990 QR2	12.3	900926	54.90	322.30	335.46	4.43	0.0630	2.7667	59	0	D	N
1990 QU3	14.1	900906	41.83	198.48	88.65	2.23	0.1246	2.2744	25	0	D	N
1990 QJ5	14.6	900906	337.36	359.43	19.93	2.74	0.2093	2.3796	37	0	D	N
1990 QB6	13.7	900926	30.91	318.33	359.07	12.38	0.2337	2.4024	48	0	D	N
1990 QR7	16.0	900817	338.65	359.73	2.33	2.05	0.1738	2.2316	10	0		W
1990 QS7	14.0	900817	263.71	83.15	4.12	1.59	0.1424	2.8842	10	0		W
1990 QU7	14.0	900817	256.22	306.55	147.52	2.23	0.1372	2.8995	10	0		W
1990 QB8	14.5	900817	227.24	325.68	151.64	7.18	0.1135	2.7549	10	0		W
1990 QF8	16.0	900817	311.65	290.05	106.37	2.32	0.1566	2.2502	10	0		W
1990 QH8	15.5	900817	300.88	311.77	106.95	1.57	0.2365	2.2352	10	0		W
1990 QK8	14.0	900817	57.80	147.05	122.51	2.18	0.0825	2.9989	10	0		W
1990 QN8	17.0	900817	11.15	322.55	350.98	2.15	0.2331	2.2750	10	0		W
1990 QO8	14.5	900817	274.94	91.68	341.90	11.58	0.1206	2.5179	10	0		W
1990 QP8	14.5	900817	278.79	98.53	335.67	0.75	0.1505	2.6027	10	0	E	W
1990 QQ8	14.5	900817	338.71	312.78	52.06	2.19	0.1643	3.1532	10	0		W
1990 QR8	16.0	900817	353.36	210.71	132.46	4.58	0.1846	2.5009	10	0		W
1990 QU8	15.0	900817	326.03	334.62	48.73	1.64	0.1773	3.0746	10	0		W
1990 QY8	14.0	900817	332.28	245.60	120.98	3.57	0.0478	2.9164	10	0		W
1990 QB9	16.0	900817	326.29	235.16	146.38	6.66	0.1794	2.2772	10	0		W
1990 QF9	14.5	900817	130.04	51.15	148.95	13.89	0.0893	2.8093	10	0		W
1990 QG9	14.5	900817	64.75	189.10	63.06	1.95	0.1831	3.2087	10	0		W
1990 QH9	15.0	900817	349.26	234.39	115.50	3.09	0.2010	2.3988	31	0		W
1990 QJ9	15.5	900817	30.53	232.78	54.37	2.56	0.2361	3.0308	10	0		W
1990 QK9	16.0	900817	35.94	149.55	137.61	6.57	0.1464	2.3361	10	0		W
1990 QL9	15.0	900817	43.53	231.80	53.87	2.62	0.0870	2.8885	10	0		W
1990 QM9	14.0	900817	36.63	280.70	14.37	4.41	0.0615	2.7460	31	0		W
1990 QN9	14.0	900817	254.00	324.28	129.37	4.35	0.1125	2.2663	31	0		W
1990 QO9	15.0	900817	309.97	59.99	341.92	13.73	0.1463	3.0476	10	0		W
1990 QE10	13.6	900817	339.10	10.41	355.05	5.64	0.0688	2.9572	31	0	D	N
1990 QH10	14.5	900817	201.19	159.85	337.34	15.88	0.0769	2.5973	10	9		W
1990 QW10	14.5	900906	39.11	281.82	4.58	4.73	0.1491	2.2381	24	6	D	N
1990 QR11	11.5	900906	37.01	56.92	234.15	10.42	0.0715	3.1538	17	5	D	N
1990 QX17	13.3	900906	352.82	97.27	251.16	1.33	0.2020	2.4749	18	6	D	N
1990 QZ17	12.4	900906	25.59	139.37	167.60	9.09	0.0839	2.6313	19	5	D	N
1990 QB19	13.8	900926	22.99	10.56	314.45	2.99	0.2649	2.5522	24	4	D	N
1990 RV	12.7	900906	236.91	358.30	120.49	2.70	0.1396	3.0736	23	7	D	N
1990 RP1	14.2	900926	6.42	348.71	0.47	2.64	0.1503	2.6894	10	9	D	N
1990 RF2	13.3	900926	66.57	41.71	232.69	1.74	0.1616	2.3799	53	0	D	N
1990 RY2	12.7	900926	9.39	65.92	279.25	2.33	0.2953	3.9332	9	6	D	N
1990 RV3	14.8	900926	11.57	353.02	347.33	4.04	0.2719	2.6175	10	5	D	N
1990 RW4	11.8	900906	50.04	344.74	303.45	4.20	0.1475	3.1670	21	6	D	N
1990 RD5	12.4	900906	297.71	180.06	241.65	4.21	0.0563	2.7382	21	6	D	N
1990 RL5	14.5	900906	314.37	77.38	355.40	4.34	0.2836	3.1960	9	4	D	M

1990	RN5	14.0	900926	343.46	24.09	3.40	12.55	0.1896	2.7214	9	4	D	N
1990	RP5	14.6	900926	44.36	304.52	359.18	4.77	0.1724	2.2465	9	4	D	N
1990	RS5	12.3	900926	240.17	135.67	0.47	13.53	0.1067	2.7337	9	4	D	N
1990	RO6	13.0	900817	32.08	302.79	356.17	1.70	0.0894	2.9228	28	0	D	W
1990	RA7	14.0	900906	101.90	57.07	164.34	9.40	0.2072	2.3002	27	0	D	N
1990	RH7	13.7	900906	330.82	308.48	78.75	2.30	0.1903	3.1346	25	9	D	N
1990	RX8	14.4	900926	354.41	111.03	247.35	4.96	0.1945	2.1984	10	8	D	N
1990	RU9	14.3	900906	17.72	154.40	150.61	11.02	0.1785	2.5656	33	6	D	N
1990	RM10	12.0	900906	9.92	174.02	148.15	17.77	0.0692	3.1597	23	6	D	N
1990	RF17	12.8	900926	317.61	228.74	193.15	13.78	0.1602	2.5923	30	7	D	N
1990	RP17	12.2	900926	230.11	229.64	284.49	5.58	0.1278	2.1611	38	3	D	N
1990	RR17	13.1	900926	33.33	52.32	270.73	4.27	0.2062	2.3141	38	3	D	N
1990	SP1	12.7	900926	80.21	292.43	351.86	15.47	0.0125	2.6700	6	7	F	N
1990	SQ1	13.4	900926	9.41	7.00	344.70	11.73	0.1972	2.6693	24	7	D	N
1990	SR1	14.1	900926	26.84	17.53	312.95	3.61	0.1305	2.3870	6	5	D	N
1990	SR2	14.8	900926	35.10	275.97	35.42	3.96	0.2500	2.1702	12	5	D	N
1990	ST2	14.7	900926	15.71	299.53	41.87	1.89	0.2563	2.2406	12	5	D	N
1990	SX2	11.8	900926	18.98	286.80	54.69	5.66	0.2125	3.2369	12	7	D	N
1990	SY2	12.2	900926	344.03	283.04	106.90	3.23	0.0681	2.8515	12	5	D	N
1990	SZ2	13.1	900926	350.23	4.56	19.88	14.74	0.1833	2.6177	36	8	D	N
1990	SG3	13.4	900926	26.56	202.08	130.79	4.05	0.1673	2.2583	5	6	D	N
1990	SM3	13.9	900926	16.15	297.15	51.22	3.86	0.1570	2.2412	5	6	F	N
1990	SF9	13.3	900926	22.85	292.86	34.73	5.63	0.1653	3.1301	30	8	D	N
1990	SL11	14.1	900926	6.07	24.70	328.47	4.17	0.1801	2.2198	20	8	D	N
1990	SP15	11.7	900926	331.22	190.39	194.70	14.58	0.0694	3.2457	5	6	D	N
1990	SX20	13.7	900926	330.94	216.90	191.47	9.80	0.1943	2.4422	7	5	D	N
1990	TS4	12.7	901016	25.90	258.47	103.53	9.79	0.0995	2.6708	11	6	D	N
1990	TT4	12.8	901016	358.68	233.54	163.71	10.84	0.2181	3.1561	31	9	D	N
1990	TD8	12.9	901016	16.01	212.24	158.84	0.69	0.2103	3.1808	38	7	D	N
1990	TN8	12.8	901016	16.73	165.88	187.15	3.98	0.2177	3.0230	31	7	D	N
1990	TG15	10.9	901016	63.85	322.26	337.41	12.28	0.2122	3.3337	23	6	D	N
1990	TX15	13.5	901016	354.87	208.47	169.52	3.56	0.1494	2.2951	23	8	D	N
1990	UR	14.5	901016	20.18	17.67	337.31	1.85	0.2535	2.3771	10	4	D	N
1990	UJ3	12.9	901105	36.28	141.25	215.68	13.53	0.1655	2.6548	18	6	D	N
1990	UO3	14.7	901016	257.09	49.33	99.15	4.57	0.0764	2.2729	8	9	D	N
1990	UJ8	13.7	901016	308.16	337.93	139.91	3.85	0.2458	2.9709	25	8	D	N
1990	UP11	12.4	901125	25.58	310.70	61.81	3.08	0.2566	3.0151	36	8	D	N
1990	VF4	12.8	901125	353.24	9.05	55.92	5.52	0.1066	2.7554	2	7	F	N
1990	VU4	16.0	901125	40.73	241.27	122.73	5.40	0.1844	2.3184	6	8	D	N
1990	VF8	13.1	901105	36.80	326.68	25.18	8.30	0.1813	2.7372	28	6	D	N
1990	VT8	13.8	901125	77.55	105.62	222.97	12.96	0.0878	2.5708	7	9	D	N
1990	VY8	13.5	901125	348.77	337.82	93.41	5.63	0.1505	2.2425	13	7	D	N
1990	VV11	13.3	901105	351.48	356.20	62.56	2.50	0.2640	3.1973	21	7	D	N
1990	VR14	13.3	901125	6.19	353.99	52.24	3.40	0.1538	2.2842	26	7	D	N
1990	WN5	12.1	901125	168.37	176.31	57.55	11.58	0.0660	3.0058	38	7	D	N
1990	WG6	16.5	901125	45.18	154.33	206.39	5.16	0.2108	2.3214	6	6	D	N
1990	WC9	12.3	901125	35.53	306.33	66.09	12.41	0.0637	3.0380	5	6	D	N
1991	OG1	12.5	910723	327.91	227.33	119.24	7.88	0.1645	2.6411	18	8		M
1991	OH1	13.0	910723	327.40	235.41	105.95	3.08	0.0874	2.8876	18	8		M
1991	OJ1	16.0	910723	3.09	347.14	309.47	3.33	0.2429	2.1995	18	8		M
1991	OL1	12.5	910723	320.72	246.73	113.48	2.75	0.1985	3.2027	18	8		M
1991	OM1	13.0	910723	22.90	332.31	296.10	1.58	0.2020	2.4144	18	0		M
1991	ON1	13.5	910723	291.74	86.74	307.57	8.24	0.1951	3.0074	18	9	E	M
1991	PB	14.0	910812	351.02	181.94	150.24	2.59	0.2472	2.3403	35	0		W
1991	PM4	14.5	910812	21.35	331.44	315.95	4.78	0.1522	2.2969	35	0		W
1991	PO4	12.5	910812	312.79	228.61	155.62	2.06	0.2085	3.1800	35	0		W
1991	PT4	13.5	910812	335.22	131.26	227.84	0.94	0.2628	3.3250	35	0		W
1991	PX4	14.0	910812	23.84	123.48	161.71	1.45	0.1414	3.1018	35	0		W
1991	PF5	15.0	910812	55.84	296.63	312.56	4.62	0.1180	2.2332	35	0		W

1991	PL5	15.5	910812	18.59	349.14	301.27	1.23	0.1865	2.4124	35	0		W
1991	PO5	13.5	910812	323.09	118.92	249.91	0.59	0.1733	3.1898	35	0		W
1991	PQ5	15.0	910812	9.45	163.07	142.54	6.66	0.1323	2.2755	35	0		W
1991	PV5	16.5	910812	354.22	197.21	133.25	4.08	0.2230	2.2519	32	0		W
1991	PX5	15.0	910812	35.73	294.66	342.89	4.96	0.1038	2.3427	32	0		W
1991	PA7	14.0	910812	17.01	311.37	346.90	2.26	0.1713	2.4179	32	0		W
1991	PC7	14.0	910812	355.10	228.43	100.53	3.23	0.0719	2.8749	32	0		W
1991	PE7	14.5	910812	52.15	294.05	330.79	14.64	0.0592	2.5566	32	0		W
1991	PG7	12.0	910812	298.19	63.64	345.69	9.13	0.2125	4.0209	32	0		W
1991	PN7	13.5	910812	257.50	15.47	54.13	2.82	0.0320	2.8306	32	0	D	W
1991	PT7	15.5	910812	33.02	264.74	10.90	2.21	0.1877	2.3978	32	0		W
1991	PY7	15.0	910812	267.02	342.71	84.84	1.94	0.0959	2.1776	32	0		W
1991	PN8	14.0	910812	314.43	212.03	175.47	1.96	0.2337	2.7667	46	0		W
1991	PH9	14.5	910812	332.22	38.37	326.71	13.17	0.2733	2.6656	23	0		W
1991	PP9	13.0	910812	265.63	104.63	328.67	6.97	0.2089	2.7742	33	0		W
1991	PW9	13.0	910812	2.66	160.33	153.01	9.95	0.0813	3.1608	33	0		W
1991	PL10	14.0	910812	27.45	147.26	135.29	8.90	0.1724	2.5858	30	0		W
1991	PO12	13.5	910812	283.57	272.87	145.92	5.09	0.1708	2.2673	33	0		W
1991	PT14	14.2	910812	127.36	50.16	141.86	2.82	0.0454	2.3728	32	0	D	W
1991	PL15	13.5	910812	0.74	191.91	129.03	6.74	0.1477	3.1170	30	0		W
1991	PE16	13.5	910723	293.00	262.30	135.70	4.73	0.0903	2.3911	4	7	E	M
1991	PY18	15.0	910812	344.17	27.09	323.57	3.62	0.2119	2.3994	36	7		M
1991	RV11	15.0	910901	351.52	174.49	164.78	4.12	0.2889	2.9276	3	0	E	W
1991	RW11	15.5	910901	289.23	272.20	139.68	5.69	0.1553	2.1648	3	0		W
1991	RX11	13.0	910901	151.48	197.86	323.24	15.67	0.1186	3.1996	3	0	E	W
1991	RY11	13.5	910901	107.45	68.52	126.64	5.64	0.1786	2.6954	3	8	E	W
1991	RZ11	14.0	910901	30.77	268.20	11.23	1.21	0.1655	2.9940	3	0	E	W
1991	RA12	14.0	910901	158.74	215.82	301.08	3.84	0.2187	2.3096	3	0	E	W
1991	RJ12	15.0	910901	46.32	115.16	140.32	4.05	0.2593	2.4114	3	9	E	W
1991	RP12	15.0	910901	20.77	315.78	344.68	7.49	0.1662	2.2598	3	9		W
1991	RR12	15.0	910901	297.94	19.87	25.41	3.40	0.1315	2.2335	3	9		W
1991	RU12	16.0	910901	31.87	136.91	141.69	5.81	0.2577	2.2813	3	9	E	W
1992	FK1	15.5	920408	15.09	238.14	274.21	22.16	0.2476	2.2818	59	6		W
1992	GF2	15.0	920408	238.49	300.66	36.50	2.15	0.1220	2.2085	27	0		W
1992	GU2	13.5	920408	72.93	97.58	30.78	10.48	0.0505	2.9720	26	0		W
1992	GE5	14.0	920408	258.59	268.54	50.24	2.68	0.0616	2.9284	31	9		W
1992	NJ	12.5	920717	259.41	24.80	27.03	22.81	0.0709	3.1951	66	0		W
1992	OB	14.0	920806	19.81	232.72	49.59	17.67	0.2016	3.0993	41	9		W
1992	OC	15.5	920806	8.62	292.05	3.03	15.86	0.3007	2.5836	41	9		W
1992	OE	13.5	920806	359.36	7.07	330.58	27.15	0.2043	2.7422	40	0		W
1992	OK	14.0	920806	344.49	103.33	248.49	7.44	0.3544	2.7550	38	0		W
1992	ON	16.5	920806	35.78	288.59	341.87	25.86	0.2032	1.9362	40	0		W
1992	OO	13.5	920806	3.69	195.11	122.93	25.78	0.1798	2.3431	40	0		W
1992	OW	15.0	920806	334.13	310.00	47.36	13.66	0.2763	2.6445	42	8		W
1992	OY	13.0	920717	353.60	27.19	283.04	16.33	0.0854	2.1888	3	8	E	W
1992	OJ1	13.0	920806	38.12	305.52	320.49	23.61	0.1804	2.2836	37	0		W
1992	PC	15.5	920806	332.02	158.11	196.87	4.77	0.2170	2.1990	33	0		W
1992	PF	15.0	920717	351.91	138.71	180.89	2.39	0.2045	2.2420	15	0		M
1992	PK	15.5	920717	325.32	59.29	301.11	5.50	0.2127	2.2081	15	0		M
1992	PA2	14.5	920806	338.36	42.66	307.27	5.63	0.2189	2.2571	28	0		W
1992	QA	14.5	920826	93.82	149.12	53.96	26.22	0.1108	1.8707	18	0		W
1992	QB	14.0	920826	7.32	243.16	55.90	24.11	0.2224	2.3626	18	0		W
1992	QC	14.5	920826	0.05	304.96	29.66	22.65	0.3364	2.3735	16	8		W
1992	QK	13.9	920826	354.27	59.09	284.83	5.99	0.1566	2.3581	9	6		N
1992	QL	14.4	920826	10.36	133.63	183.58	2.76	0.2300	2.3680	11	0		N
1992	QM	12.3	920826	20.94	333.91	322.96	4.82	0.2874	2.8661	33	0		N
1992	RB	15.5	920826	270.67	317.12	128.19	24.39	0.0809	1.9010	4	8		W
1992	RD	15.0	920826	51.51	146.15	131.15	27.05	0.2031	2.2716	4	8		W
1992	RE	15.0	920826	318.63	300.74	109.25	23.98	0.0889	1.8791	3	7		W

1992 RF	14.0	920826	358.14	294.79	71.35	27.74	0.2238	2.9692	3	6			W
1992 RG	14.3	920915	14.19	161.36	163.05	6.67	0.3010	2.4552	2	6			N
1992 RH	12.8	920826	108.21	312.22	250.92	1.49	0.2393	2.3452	4	7	F	N	
1992 RJ	12.6	920826	312.68	225.03	166.76	10.59	0.1098	2.7701	4	7	E	N	
1992 RM	14.4	921005	3.61	353.09	5.42	2.58	0.1953	2.2162	28	7			N
1992 RN	13.6	920915	52.15	298.25	338.40	8.27	0.2351	2.3532	23	6			N
1992 RQ	13.5	920826	1.78	230.73	118.31	2.58	0.2777	3.2388	5	5			M
1992 RR	14.5	920826	55.75	193.80	83.67	1.55	0.1732	2.2915	5	5			M
1992 RS	15.5	920826	4.16	284.21	57.22	1.28	0.2514	2.3863	5	5			M
1992 RT	13.5	920826	24.02	196.88	124.30	2.77	0.1645	2.9620	5	5			M
1992 RU	15.5	920826	350.24	215.11	150.23	3.75	0.2532	2.2919	5	5			M
1992 RV	13.5	920826	322.08	33.51	15.40	9.32	0.2016	2.7502	5	5	E	M	
1992 RW	15.0	920826	327.10	11.20	29.93	2.94	0.2096	2.4110	5	5			M
1992 RX	14.5	920826	59.15	242.36	25.69	3.55	0.2366	2.3298	3	4	E	M	
1992 RY	13.5	920826	200.58	161.62	357.94	15.93	0.0897	3.1669	3	4			M
1992 RZ	12.5	920826	73.08	345.10	286.66	1.00	0.1031	3.0393	3	4	E	M	
1992 RB1	15.0	920826	354.94	356.70	2.67	3.23	0.2008	2.5693	3	4			M
1992 RC1	14.0	920826	0.15	352.93	357.77	2.76	0.2301	2.5234	3	4			M
1992 RD1	13.0	920826	28.36	310.87	359.22	11.78	0.2363	3.1370	3	4			M
1992 SE	14.5	920915	336.29	215.52	184.95	11.25	0.2598	2.3957	7	6			N
1992 SF	14.5	920915	345.62	18.44	3.09	5.39	0.1893	2.1967	7	6			N
1992 SH	12.7	920915	46.75	108.37	188.85	11.83	0.1942	2.7012	7	6			N
1992 SJ	13.3	920915	21.76	319.79	2.88	8.26	0.2810	2.6676	7	6			N
1992 SW	19.0	920915	29.75	306.48	359.55	18.52	0.1895	1.7467	4	0			M
1992 SX	20.5	920915	350.23	4.95	3.88	8.51	0.3187	2.2067	4	0			M
1992 SN1	13.0	920915	353.68	4.65	11.68	14.83	0.2047	2.5945	8	8			W
1992 SP1	12.7	920915	0.95	5.42	339.84	19.10	0.2064	3.1764	33	7			N

1990 OW2 = 1990 RZ10 (S. Nakano)
1990 QT1 = 1990 QG7 (A. Lowe, MPC 17600)
1990 QB2 = 1990 SQ26 (S. Nakano)
1990 QR2 = 1990 RV8 (G. V. Williams, MPC 17943)
1990 QR2 = 1990 SF26 (S. Nakano)
1990 QU3 = 1990 QL18 (S. Nakano)
1990 QJ5 = 1990 SM4 = 1990 SM26 (S. Nakano, MPC 17178; unpublished)
1990 QB6 = 1990 SX27 (S. Nakano)
1990 QE10 = 1990 RY7 (S. Nakano)
1990 QW10 = 1990 QH18 (S. Nakano)
1990 QR11 = 1990 QP18 = 1990 RG12 (S. Nakano)
1990 QX17 = 1990 QD18 = 1990 RD11 (S. Nakano)
1990 QZ17 = 1990 QE18 = 1990 RE11 (S. Nakano)
1990 QB19 = 1990 SE20 = 1990 SM27 (S. Nakano)
1990 RV = 1990 QV16 (S. Nakano)
1990 RP1 = 1990 SK14 (S. Nakano)
1990 RF2 = 1990 QR18 = 1990 UH11 (S. Nakano)
1990 RY2 = 1990 SC27 (S. Nakano)
1990 RV3 = 1990 SZ27 (S. Nakano)
1990 RW4 = 1990 QU18 (S. Nakano)
1990 RD5 = 1990 QW18 (S. Nakano)
1990 RL5 = 1990 SD27 (S. Nakano)
1990 RN5 = 1990 SF27 (S. Nakano)
1990 RP5 = 1990 SQ27 (S. Nakano)
1990 RS5 = 1990 SU27 (S. Nakano)
1990 RO6 = 1990 RU5 (G. V. Williams, MPC 17796)
1990 RO6 = 1990 QD9 (S. Nakano, MPC 17943)
1990 RA7 = 1990 QV13 (S. Nakano)
1990 RH7 = 1990 QB14 (S. Nakano)
1990 RX8 = 1990 SB27 (S. Nakano)
1990 RU9 = 1990 PH (S. Nakano)
1990 RM10 = 1990 QM11 (S. Nakano)

1990 RF17 = 1990 SS1 (S. Nakano)
1990 RP17 = 1990 UY11 (S. Nakano)
1990 RR17 = 1990 UF12 (S. Nakano)
1990 SP1 = 1990 SN27 (S. Nakano)
1990 SQ1 = 1990 QC18 = 1990 RE17 (S. Nakano)
1990 SR1 = 1990 SO27 (S. Nakano)
1990 SR2 = 1990 SX28 (S. Nakano)
1990 ST2 = 1990 SY28 (S. Nakano)
1990 SX2 = 1990 SS26 = 1990 SC29 (S. Nakano)
1990 SY2 = 1990 SD29 (S. Nakano)
1990 SZ2 = 1990 ST26 = 1990 SB29 = 1990 UM12 (S. Nakano)
1990 SG3 = 1990 SU26 (S. Nakano)
1990 SM3 = 1990 SZ26 (S. Nakano)
1990 SF9 = 1990 UA7 (S. Nakano)
1990 SL11 = 1990 QT18 = 1990 RB17 (S. Nakano)
1990 SP15 = 1990 SR26 (S. Nakano)
1990 SX20 = 1990 SV25 = 1990 SW27 (S. Nakano)
1990 TS4 = 1990 UN11 (S. Nakano)
1990 TT4 = 1990 TY15 (S. Nakano)
1990 TD8 = 1990 WO9 (S. Nakano)
1990 TN8 = 1990 SX26 = 1990 UU12 (S. Nakano)
1990 TG15 = 1990 SU17 (S. Nakano)
1990 TX15 = 1990 SL27 = 1990 SV28 = 1990 TD15 (S. Nakano)
1990 TX15 = 1990 SV28 (N. S. Chernykh)
1990 UR = 1990 TQ15 (S. Nakano)
1990 UJ3 = 1990 VN9 (S. Nakano)
1990 UO3 = 1990 UD8 = 1990 UU9 (S. Nakano)
1990 UJ8 = 1990 UD10 = 1990 VQ9 (S. Nakano)
1990 UP11 = 1990 VV14 = 1990 WH14 (S. Nakano)
1990 VF4 = 1990 VD15 (S. Nakano)
1990 VU4 = 1990 VZ1 (S. Nakano)
1990 VF8 = 1990 UK11 (S. Nakano)
1990 VT8 = 1990 WH3 (S. Nakano)
1990 VY8 = 1990 VA15 = 1990 WK14 (S. Nakano)
1990 VV11 = 1990 UC13 (S. Nakano)
1990 VR14 = 1990 UL13 (S. Nakano, N. S. Chernykh)
1990 WN5 = 1990 UJ7 (S. Nakano)
1990 WG6 = 1990 WU4 (S. Nakano)
1990 WC9 = 1990 VT14 (S. Nakano)
1991 PN7 = 1991 RT12 (A. Lowe, MPC 19471)
1991 PT14 = 1991 RQ12 (S. Nakano, MPC 19822)
1992 RH = 1992 RO (S. Nakano)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(107) Camilla Obs. 309 M 320.80795 Peri. 296.75212
H 7.08 G 0.08 Opp. 56 n 0.15170564 Node 174.15047
rms res. 0".98 (M-C) 1868-1991 e 0.0839541 Incl. 9.92625

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(142) Polana Obs. 173 M 46.28471 Peri. 292.27752
H 10.27 G 0.15 Opp. 42 n 0.26219044 Node 291.47947
rms res. 0".95 (M-V) 1875-1990 e 0.1361894 Incl. 2.23961

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(144) Vibilia Obs. 235 M 341.64045 Peri. 293.26274
H 7.91 G 0.17 Opp. 54 n 0.22788009 Node 76.73008
rms res. 0".98 (M-C) 1875-1990 e 0.2344550 Incl. 4.81421

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(155) Scylla Obs. 50 M 182.43956 Peri. 45.99207
H 11.39 G 0.15 Opp. 12 n 0.21549881 Node 41.24831
rms res. 1".00 (M-C) 1875-1992 e 0.2766729 Incl. 11.39482

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(197) Arete Obs. 269 M 311.38925 Peri. 246.53663
H 9.18 G 0.15 Opp. 51 n 0.21740072 Node 81.88691
rms res. 0".93 (M-V) 1879-1992 e 0.1623606 Incl. 8.78933

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(354) Eleonora Obs. 1265 M 113.70769 Peri. 4.93439
H 6.44 G 0.37 Opp. 69 n 0.21083824 Node 140.72050
rms res. 0".94 (M-C) 1893-1992 e 0.1167466 Incl. 18.43050

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(486) Cremona Obs. 81 M 62.33613 Peri. 123.99939
H 10.7 G 0.15 Opp. 25 n 0.27334848 Node 94.43361
rms res. 1".09 (M-V) 1902-1992 e 0.1638825 Incl. 11.08092

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(545) Messalina Obs. 103 M 274.28066 Peri. 321.92783
H 8.84 G 0.15 Opp. 31 n 0.17228628 Node 334.67430
rms res. 1".03 (M-C) 1904-1992 e 0.1757559 Incl. 11.11633

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(598) Octavia Obs. 91 M 118.85467 Peri. 290.42314
H 9.53 G 0.15 Opp. 32 n 0.21446109 Node 92.30695
rms res. 0".91 (M-C) 1906-1991 e 0.2481989 Incl. 12.19697

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(910) Anneliese Obs. 84 M 172.98584 Peri. 205.90268
H 10.3 G 0.15 Opp. 25 n 0.19733729 Node 50.39636
rms res. 0".91 (M-C) 1919-1990 e 0.1572911 Incl. 9.26172

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(959) Arne Obs. 67 M 156.96645 Peri. 331.77844
H 10.2 G 0.15 Opp. 18 n 0.17169373 Node 59.34200
rms res. 0".94 (M-C) 1916-1990 e 0.2019442 Incl. 4.47875

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
(1622) Chacornac Obs. 58 M 11.19226 Peri. 255.94430
H 12.2 G 0.15 Opp. 18 n 0.29514486 Node 4.65369
rms res. 1".12 (M-C) 1930-1992 e 0.1629771 Incl. 6.46692

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Goffin
(2213) Meeus Obs. 27 M 224.31123 Peri. 221.78803
H 13.7 G 0.15 Opp. 8 n 0.30225389 Node 127.11115
rms res. 1".04 (M-C) 1935-1992 e 0.2262698 Incl. 5.33019

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
(4470) 1978 QP1 Obs. 19 M 234.11117 Peri. 195.53293
H 12.0 G 0.15 Opp. 6 n 0.17711262 Node 120.42072
rms res. 0".90 (M-C) 1973-1992 e 0.1670772 Incl. 2.44741

(5343)* 1977 SG3 = 1967 UP
Discovered 1977 Sept. 23 by N. S. Chernykh at the Crimean Astrophysical Observatory.
Id. C. M. Bardwell (MPC 12570)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Bardwell

M	142.84373	(2000.0)	P	Q
n	0.28725158	Peri. 338.74681	+0.70740239	-0.69428797
a	2.2748936	Node 65.94472	+0.66760562	+0.59477759
e	0.1279686	Incl. 8.34073	+0.23213054	+0.40522073
P	3.43	H 13.3	G 0.15	

Residuals in seconds of arc

531010	675	0.3+ 1.9+	771012	675	2.0- 0.6-	771022	675	0.4+ 0.5-
671030	029	0.5- 0.0	771016	675	0.6+ 0.6-	911007	801	(1.5+ 5.7+)
671030	029	0.2- 0.5+	771016	675	0.9+ 0.2-	911007	801	0.2+ 1.6-
671031	029	0.1- 0.5+	771017	675	0.3+ 0.2+	911010	801	0.3+ 0.5+
671031	029	0.5- 0.3+	771017	675	1.1+ 0.1+	911010	801	0.4+ 0.5+
671031	029	0.7- 0.4+	771021	675	0.0 2.3+	911103	801	0.2- 0.1-
770923	095	0.6- 0.3+	771021	675	1.4+ 1.0-	911106	801	0.3+ 0.8-
771008	095	(2.8- 0.3-)	771021	675	0.8- 2.4+	911106	801	0.4- 0.7-
771011	675	(3.2- 0.8+)	771021	675	0.7- 2.0-	911203	596	0.3- 0.9-
771011	675	(3.1- 0.8+)	771022	675	0.8- 1.2-	911203	596	(2.9- 2.6+)
771012	675	0.8- 1.4-	771022	675	0.5+ 0.4+	911203	596	1.5+ 1.3+

(5344)* 1978 RN = 1969 RK1 = 1987 SP21 = 1987 UH1

Discovered 1978 Sept. 1 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. H. Kaneda (MPC 15700)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Kaneda

M	49.67424	(2000.0)	P	Q
n	0.22186633	Peri. 227.63810	+0.74233873	-0.66991592
a	2.7023511	Node 174.38359	+0.64528851	+0.70996378
e	0.1645139	Incl. 7.08895	+0.18037724	+0.21717294
P	4.44	H 13.2	G 0.15	

Residuals in seconds of arc

690913	095	1.0+ 1.9-	870918	095	1.1- 1.2-	910814	808	0.7- 1.8+
780901	095	0.4+ 1.8+	871028	675	2.0+ 0.9+	910913	675	0.1+ 0.1+
780905	095	0.6- 0.1-	871028	675	0.5- 0.3-	910913	675	0.1+ 1.5-
780907	095	0.3+ 0.4-	910805	675	1.6- 0.2+	910913	675	0.0 1.0-
780912	095	1.0- 0.7+	910805	675	1.0+ 1.0+	910913	675	1.0+ 1.2-
780928	095	1.5+ 0.4-	910808	675	0.7- 0.6-	910914	675	0.2+ 0.1-
781004	095	0.9- 2.5+	910808	675	0.3- 0.1+	910914	675	0.0 0.3-
781009	095	1.5- 1.2-	910814	808	0.8+ 0.9+			

(5345)* 1981 EY8 = 1983 SD

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

Id. E. Bowell (MPC 9424)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M	355.59910	(2000.0)	P	Q
n	0.21479578	Peri. 73.47887	+0.94434375	-0.31574073
a	2.7613337	Node 304.83726	+0.24224556	+0.85733113
e	0.2380987	Incl. 6.45810	+0.22255781	+0.40656012
P	4.59	H 14.0	G 0.15	

Residuals in seconds of arc

780707	675	0.1- 0.5+	810311	413	1.3- 0.6+	810429	413	1.2- 0.2+
780708	675	0.3- 0.7+	810311	413	0.6+ 1.5-	830927	046	(5.0+ 3.5-)
780709	675	0.3- 1.2+	810315	413	0.8- 0.1-	830927	046	(3.7+ 2.3+)
810202	413	1.1+ 0.7+	810315	413	0.2+ 0.1+	830928	046	0.0 1.0+
810214	413	1.2+ 0.7+	810405	413	0.3- 1.4-	830928	046	0.6- 0.1-
810301	413	0.6- 1.4+	810405	413	(1.1+ 2.4-)	920808	010	1.0+ 0.6-
810307	413	0.0 0.0	810412	413	1.0- 0.5-	920808	010	0.1- 0.5-
810307	413	0.5+ 0.3+	810412	413	1.3+ 1.2-	920808	010	0.0 0.5-

920809 010 0.9- 1.2- 920825 801 0.6+ 0.3- 920901 801 1.3+ 0.6+
920809 010 1.3- 0.8- 920825 801 1.2+ 0.3+
920809 010 1.7- 0.4- 920901 801 1.5+ 0.5+

(5346)* 1981 QE3 = 1981 TO = 1970 QJ1 = 1987 UO4 = 1989 AY8

Discovered 1981 Aug. 24 by H. Debehogne at the European Southern Observatory.

Id. T. Urata (d, MPC 6880), C. M. Bardwell (MPC 15243)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Bardwell

M	21.17546	(2000.0)	P	Q
n	0.17724839	Peri. 263.95926	+0.91071233	+0.41103587
a	3.1386858	Node 71.76506	-0.36000970	+0.83817569
e	0.1834962	Incl. 2.45307	-0.20247484	+0.35848434
P	5.56	H 11.9	G 0.15	

Residuals in seconds of arc

700831 095 1.2- 2.2- 810903 809 0.2- 1.4+ 810921 809 0.0 1.0-
810824 809 1.2- 0.1- 810903 809 0.5+ 1.1+ 810926 688 1.0+ 2.1-
810824 809 0.6- 0.3+ 810904 809 0.5- 0.6+ 810926 688 0.1- 0.6+
810824 809 0.2- 0.0 810904 809 0.9- 0.1+ 811004 688 (0.4+ 5.2-)
810825 809 0.0 0.3+ 810904 809 1.0- 0.2+ 811004 688 (3.1+ 4.8-)
810825 809 0.3- 0.0 810905 809 0.3+ 1.0+ 871022 095 0.9- 1.6-
810825 809 0.0 0.1+ 810905 809 0.2- 0.3+ 871027 095 2.1+ 0.9-
810826 809 1.0- 0.1+ 810905 809 0.3- 0.4+ 890104 877 0.2+ 3.1+
810826 809 0.6- 0.1+ 810905 095 0.4- 0.5- 890104 877 0.7+ 2.8+
810826 809 0.1+ 0.3+ 810906 809 0.5+ 1.7+ 920728 801 0.1+ 0.2-
810827 809 0.1- 0.2+ 810906 809 0.6+ 1.1+ 920728 801 0.1- 0.5+
810827 809 0.3- 0.3- 810906 809 0.1+ 0.3+ 920802 801 0.4+ 0.2-
810827 809 0.2- 0.1- 810907 809 0.4+ 0.9- 920802 801 0.5+ 0.2-
810828 809 0.5- 0.3+ 810907 809 0.3+ 0.8- 920802 675 0.8- 0.4+
810828 809 0.0 0.3- 810907 809 0.2+ 0.8- 920802 675 1.8- 0.4+
810828 809 0.2+ 0.1+ 810918 809 0.1+ 0.4- 920806 675 1.3- 0.2-
810831 809 0.2+ 1.1+ 810918 809 0.3+ 0.6- 920806 675 1.0- 0.1-
810831 809 0.5+ 0.2+ 810918 809 0.2+ 0.5- 920825 801 0.1+ 0.3+
810831 809 0.2+ 0.2- 810920 809 1.5+ 1.0- 920825 801 0.2+ 0.1+
810902 809 0.1- 1.6+ 810920 809 1.2+ 1.0- 920901 801 1.1+ 0.1-
810902 809 0.1- 1.8+ 810920 809 1.4+ 0.9- 920901 801 0.3+ 0.1-
810902 809 0.7- 2.0+ 810921 809 0.4+ 0.9-
810903 809 0.2- 1.6+ 810921 809 0.5+ 1.2-

(5347)* 1985 DX2 = 1990 DQ

Discovered 1985 Feb. 24 by E. F. Helin at Palomar.

Id. S. Nakano (MPC 16579)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	170.72395	(2000.0)	P	Q
n	0.18848881	Peri. 5.29278	-0.99258211	-0.11471537
a	3.0126291	Node 167.89587	+0.10330819	-0.97043824
e	0.0315998	Incl. 11.07040	+0.06409507	-0.21234408
P	5.23	H 11.7	G 0.15	

Residuals in seconds of arc

850224 675 (3.9- 1.2+) 900228 399 (2.0+ 4.4-) 910611 801 0.5- 0.3+
850224 675 1.5- 0.3- 910508 675 1.9+ 0.4- 910611 801 0.3- 0.6+
850227 675 0.1+ 2.1+ 910508 675 0.3- 0.4- 910614 801 0.2+ 0.1+
850227 675 1.8+ 0.3+ 910510 675 1.5- 2.4- 910614 801 0.0 0.1-
900218 399 (2.3+ 3.6+) 910510 675 0.5- 2.3- 920727 675 (3.7+ 5.8+)
900218 399 (3.1- 1.8-) 910518 413 0.6- 1.9+ 920728 801 0.2- 0.2+
900218 399 1.2+ 0.6+ 910518 413 0.2+ 0.8+ 920728 801 0.0 0.4+
900228 399 1.1- 1.0+ 910518 413 1.3+ 0.8+ 920728 675 (3.0+ 3.7+)

920728 675 1.0+ 0.4+ 920804 675 0.9- 0.8+ 920901 801 0.0 0.1-
920729 801 0.0 0.2+ 920825 801 0.2- 0.7+ 920901 801 0.2- 0.1+
920729 801 0.1+ 0.4+ 920825 801 0.2- 0.5+

(5348)* 1988 BB = 1970 GP2 = 1973 YJ2 = 1984 GA1
Discovered 1988 Jan. 16 by T. Kojima at Chiyoda.
Id. S. Nakano (MPC 12945)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 17.12994 (2000.0) P Q
n 0.21103665 Peri. 174.61411 -0.44809421 -0.88785008
a 2.7940283 Node 301.96846 +0.81554570 -0.35806066
e 0.1709213 Incl. 7.08019 +0.36619229 -0.28898928
P 4.67 H 12.7 G 0.15
Residuals in seconds of arc
491119 675 0.1- 0.1- 880110 552 0.0 0.4- 910912 675 0.0 0.5+
491119 675 1.0- 0.4+ 880116 897 0.9- 0.7+ 910915 675 0.9- 1.0-
700410 805 0.1- 0.2+ 880116 897 (4.0- 2.7+) 910915 675 0.4+ 1.0-
700410 805 0.2+ 0.6+ 880120 897 0.3- 0.2+ 910916 675 0.1+ 0.7-
700410 805 0.0 0.3+ 880120 897 0.6+ 0.0 910916 675 0.3- 0.0
731220 095 1.2+ 0.2- 880123 897 0.0 1.5+ 911110 801 0.3- 0.9+
840403 095 (2.6+ 5.8-) 880123 897 0.8+ 0.2+ 911110 801 0.5- 0.8+
840405 095 (3.4+ 5.1-) 880123 552 0.9- 0.5- 911231 801 0.5+ 0.1+
861002 095 2.0+ 1.3+ 880123 552 0.6+ 0.3+ 920105 801 0.1+ 0.0
880110 552 0.5- 2.1- 910912 675 0.9- 0.2- 920105 801 0.1+ 0.1+

(5349)* 1988 RA = 1974 QD2 = 1974 SH4
Discovered 1988 Sept. 7 by E. F. Helin at Palomar.
Id. G. V. Williams (MPC 20146)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
M 306.04602 (2000.0) P Q
n 0.21200532 Peri. 79.94736 +0.13649531 -0.99041929
a 2.7855110 Node 2.51100 +0.61249671 +0.06775733
e 0.4673550 Incl. 28.55831 +0.77859926 +0.12032692
P 4.65 H 12.7 G 0.15
Residuals in seconds of arc
740826 095 (0.1- 4.9-) 881104 675 0.3+ 1.3- 920703 413 0.4+ 0.4-
740923 095 1.0- 1.0+ 881106 675 0.3+ 1.4- 920704 413 0.3+ 0.1-
850303 413 1.2- 0.1- 881205 801 1.2- 0.2- 920704 413 0.2+ 0.0
850303 413 0.8- 0.2- 881206 801 0.2- 0.0 920805 413 0.0 0.3+
880907 675 0.2- 1.4+ 890105 801 0.8- 1.0+ 920805 413 0.1+ 0.3+
880908 675 0.3+ 1.7+ 890201 801 1.0- 0.6+ 920820 413 0.2+ 0.5+
880916 095 (2.6+ 7.1-) 890304 801 0.4- 1.2+ 920821 413 0.0 0.6+
880916 095 2.1+ 1.5- 890311 801 1.6+ 0.3- 920821 413 0.0 0.7+
881013 675 0.0 1.0- 920619 413 0.3- 0.6+ 920905 413 0.2- 0.5-
881013 675 0.8+ 0.7- 920619 413 0.1- 0.5+ 920905 413 1.0- 0.7-

(5350)* 1989 GL1 = 1933 SQ1 = 1963 SE1 = 1973 TG = 1980 VR3
Discovered 1989 Apr. 3 by E. W. Elst at the European Southern Observatory.
Id. H. Kaneda (MPC 18292)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Kaneda
M 346.96773 (2000.0) P Q
n 0.29534335 Peri. 327.70888 +0.11042109 +0.99327982
a 2.2331501 Node 308.60700 -0.90218275 +0.08553446
e 0.1293999 Incl. 2.54325 -0.41698137 +0.07796829
P 3.34 H 13.1 G 0.15
Residuals in seconds of arc
330925 012 0.6+ 0.1- 630922 760 1.4- 0.7- 801101 675 0.2+ 0.6-
630922 760 0.2- 0.3- 731001 095 1.8+ 0.7- 801102 675 0.5+ 0.8-

890403	809	0.4+	0.7-	890408	809	0.5+	0.5+	920301	801	0.3+ 0.4-
890403	809	0.4+	1.0-	890408	809	0.3+	0.2+	920301	801	0.4+ 0.2-
890403	809	0.2-	0.9-	890408	809	0.3+	0.8+	920307	399	0.7- 1.1-
890405	809	1.1+	0.4+	890410	809	1.4-	0.6-	920307	399	1.3- 0.5+
890405	809	0.3+	0.5+	890410	809	1.7-	0.6-	920507	801	1.0+ 0.6+
890405	809	0.4+	0.5-	890410	809	1.5-	0.9-	920507	801	0.7+ 0.7+

(5351)* 1989 SG5 = 1950 HC = 1969 LF = 1978 WF = 1980 DR4 = 1981 SG9 = 1985 RT4

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

Id. H. Kaneda (MPC 16235), G. V. Williams

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Kaneda

M	106.71452		(2000.0)	P	Q
n	0.26091488	Peri.	65.38736	-0.75177745	+0.65819942
a	2.4255123	Node	155.71341	-0.63474177	-0.70585008
e	0.1461721	Incl.	5.58830	-0.17869959	-0.26181901
P	3.78	H	13.1	G 0.15	

Residuals in seconds of arc

500418	078(14.5+	38.2-)X	850916	809	0.1+	0.1-	910119	801	0.8+	0.7-
500420	078(19.6-	4.4+)X	850916	809	0.0	0.6-	910119	801	0.2+	0.2-
690611	095	2.0+ 1.8-	890926	809	1.7+	1.7-	910211	801	0.1-	0.6+
781124	046	2.4- 0.9+ Y	890926	809	0.9+	2.2-	910211	801	0.0	0.6+
781124	046	(6.0- 2.3-)Y	890926	809	(0.9+	3.0-)	910216	801	0.3-	0.2+
800221	095	2.5- 1.6-	890928	809	1.5+	0.3-	910216	801	0.2-	0.3-
810926	688	2.1- 1.9-	890928	809	1.0+	0.3-	920629	801	0.2-	0.3-
810926	688	2.3- 2.3-	890928	809	0.2-	0.4-	920629	801	0.3-	0.2-
850914	809	0.1- 1.2+	891003	809	0.5+	1.1-	920703	801	0.4-	0.7-
850914	809	0.1- 1.2+	891003	809	0.6+	0.9-	920703	801	0.3-	0.5-
850914	809	0.0 1.3+	891003	809	1.0+	1.1-	920726	801	0.3+	0.0
850915	809	0.0 1.9+	910111	474	0.2-	1.3-	920726	801	0.3+	0.2-
850915	809	0.1+ 1.7+	910111	474	0.7-	0.7+	920729	801	0.3+	0.0
850915	809	0.1+ 1.7+	910118	801	0.4+	0.4-	920729	801	0.3+	0.0
850916	809	0.3- 0.1-	910118	801	0.4+	0.5-				

(5352)* 1989 YN = 1948 UD = 1981 SQ3 = 1983 EL

Discovered 1989 Dec. 27 by Y. Kushida and O. Muramatsu at the Yatsugatake South Base Observary.

Id. S. Nakano (MPC 15899)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	327.72568		(2000.0)	P	Q
n	0.26696517	Peri.	163.35247	+0.46711996	-0.88118409
a	2.3887259	Node	258.74965	+0.80252735	+0.45713736
e	0.1602124	Incl.	4.26228	+0.37114524	+0.12058202
P	3.69	H	12.9	G 0.15	

Residuals in seconds of arc

481028	062	0.4+ 1.0-	891227	896	1.6-	0.3+	900125	896	1.7+	0.8+
481028	062	0.4+ 0.5-	891230	896	0.1+	2.4-	920802	675	0.2+	0.2-
810925	095	1.1- 0.5+	900102	896	0.5+	1.1-	920802	675	0.6-	0.8-
830312	046	(0.2+ 3.9+)	900102	896	0.9+	0.0	920806	675	0.1-	0.1+
830312	046	1.9- 0.5+	900103	896	1.4+	1.4+	920806	675	0.8+	0.1-
830313	046	1.9+ 2.3-	900103	896	0.7-	1.2+	920827	801	0.5+	0.0
830313	046	1.2- 0.6-	900106	896	0.5-	1.6+	920827	801	0.5+	0.0
891226	033	0.7- 0.2-	900106	896	0.7+	1.3+	920901	801	0.0	0.2-
891226	033	0.5- 0.0	900117	896	0.2-	1.5- Y	920901	801	0.1-	0.3-
891226	033	0.3+ 0.2-	900117	896	1.1-	0.6-				

(5353)* 1989 YT = 1931 RE1 = 1968 QB

Discovered 1989 Dec. 20 by Y. Oshima at Gekko.

Id. H. Kaneda (MPC 16435)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5			Kaneda
M 326.59847	(2000.0)	P	Q
n 0.23977375	Peri. 301.08807	+0.91556708	+0.40028691
a 2.5660688	Node 35.35791	-0.34234050	+0.82639030
e 0.2910993	Incl. 3.84689	-0.21104477	+0.39604226
P 4.11	H 13.3	G 0.15	

Residuals in seconds of arc

310912 690 (2.0+ 3.6-)	891129 033 1.1- 1.1+	910118 033 0.4+ 2.6-
310916 690 (7.2- 1.6-)	891220 888 (2.6+ 0.5-)	920404 809 1.2- 1.9+
310921 690 0.6- 1.2-	891220 888 (2.8+ 0.3-)	920404 809 1.3- 1.8+
680819 095 2.0+ 1.5+	891228 888 1.4+ 0.8+	920404 809 1.5- 1.9+
710324 675 (2.8+ 4.0-)	891228 888 0.4+ 2.2+	920406 809 0.3+ 1.8+
710325 675 (1.8+ 3.1-)	891229 888 1.1- 0.1-	920406 809 0.1- 1.8+
710325 675 0.9+ 2.0-	891229 888 0.5- 0.2-	920406 809 0.8- 1.4+
710326 675 0.6+ 1.2-	900101 888 2.1- 0.2-	920423 809 1.8+ 0.7+
891128 033 (2.3- 3.4+)	900101 888 1.2- 0.2+	920423 809 0.3+ 0.2-
891128 033 1.4+ 2.3+	910117 033 0.1- 2.6-	920423 809 1.8+ 0.7-
891129 033 1.5- 0.2+	910117 033 0.2+ 0.3-	

(5354)* 1990 BJ2 = 1976 UR20 = 1985 HK1

Discovered 1990 Jan. 30 by S. Ueda and H. Kaneda at Kushiro.

Id. H. Kaneda (MPC 16240)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5			Kaneda
M 149.51633	(2000.0)	P	Q
n 0.17284482	Peri. 40.47364	-0.99399286	-0.09047692
a 3.1917716	Node 134.21930	+0.06421142	-0.93774901
e 0.0575158	Incl. 4.92920	+0.08862893	-0.33532183
P 5.70	H 11.4	G 0.15	

Residuals in seconds of arc

761023 808 0.4- 0.7-	900130 399 1.2- 1.3+	900228 399 1.9- 0.9+
761023 808 0.4- 0.4+	900130 399 1.4- 1.0+	900228 399 0.7+ 0.4-
850423 688 1.0+ 1.2-	900130 046 0.5+ 0.9-	910316 801 0.3- 1.1+
850423 688 0.5- 1.1-	900130 046 1.9+ 1.1-	910316 801 0.3- 0.7+
900123 399 1.0+ 0.9+	900217 046 0.7- 0.2+	910317 801 0.4- 0.7+
900123 399 1.4- 2.1-	900217 046 1.9+ 0.5-	910317 801 0.4- 1.1+
900123 399 2.1+ 0.7-	900218 399 1.8- 1.2-	920629 801 0.2+ 0.5-
900128 399 (1.8+ 3.0+)	900218 399 (2.6- 1.0+)	920629 801 0.1+ 0.1+
900128 399 0.9+ 2.0+	900218 399 1.6- 1.2+	920731 801 0.3+ 0.3-
900129 046 0.7+ 0.8-	900220 372 0.6- 2.0-	920731 801 0.3+ 0.4-
900129 046 1.7+ 2.1-	900220 372 0.3+ 1.3-	920802 801 0.4+ 0.6-
900130 399 0.0 2.4+	900228 399 1.4- 0.7+	920802 801 0.2+ 1.0-

(5355)* 1991 CA = 1942 GR = 1956 FA = 1956 GO = 1963 FG = 1977 DA5
= 1977 FU1 = 1978 RV3 = 1979 YX5 = 1986 WR6 = 1989 SC11

Discovered 1991 Feb. 3 by S. Ueda and H. Kaneda at Kushiro.

Id. H. Kaneda (MPC 17834)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5			Kaneda
M 154.81005	(2000.0)	P	Q
n 0.28037754	Peri. 12.19517	-0.90298848	+0.42965467
a 2.3119258	Node 193.25165	-0.39528134	-0.83339492
e 0.1673251	Incl. 0.73609	-0.16841755	-0.34763455
P 3.52	H 12.8	G 0.15	

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

420410 078(44.7- 41.8+)X	630328 760 (3.1+ 0.9-)	780903 095 1.4- 0.6-
420421 078(0.03- 0.01-)X	770218 381 1.0+ 0.8+	791218 095 (1.1+ 5.0+)
560317 839 1.3- 0.4+	770219 381 0.2+ 0.5+	861128 010 0.3+ 1.8-
560411 839 1.5- 1.6-	770219 381 1.0+ 0.1-	861128 010 0.6+ 0.7-
630328 760 2.5+ 0.2-	770326 095 0.2+ 0.5+	861128 010 0.9- 2.0-

890928 809 0.4- 0.5+ 890930 675 0.2+ 0.2- 910205 886 (4.0- 1.5+)
890928 809 0.1- 0.5+ 891103 675 0.4- 0.2- 910205 886 1.1- 0.3-
890928 809 0.2+ 0.5+ 891103 675 0.3+ 0.5- 910214 399 0.8+ 0.9-
890929 809 0.4- 0.8+ 891124 675 0.4- 0.8+ 910214 399 1.4+ 0.7+
890929 809 0.0 0.9+ 910203 399 0.9+ 0.4+ 910216 511 1.1- 1.0+
890929 809 0.3+ 1.1+ 910203 399 1.3+ 0.6+ 920826 399 1.0+ 1.5+
890930 809 0.6- 0.6+ 910204 399 0.0 0.2- 920901 376 0.5+ 1.0-
890930 809 0.1+ 0.5+ 910204 399 0.6- 0.6- 920901 376 0.3- 0.4-
890930 809 0.5+ 0.5+ 910204 886 2.2- 0.1- 920920 399 0.6+ 0.9-
890930 675 0.2- 0.7- 910204 886 0.9- 0.7+ 920920 399 0.3- 0.3-

(5356)* 1991 FF1 = 1976 SM7 = 1978 EW7
Discovered 1991 Mar. 21 by K. Endate and K. Watanabe at Kitami.
Id. H. Kaneda (MPC 18301)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Kaneda

M	252.22149	(2000.0)	P	Q
n	0.23414366	Peri. 265.95513	+0.18394756	-0.98250678
a	2.6070405	Node 173.23357	+0.97096620	+0.17703042
e	0.1592431	Incl. 14.27231	+0.15293117	+0.05779837
P	4.21	H 12.0	G 0.15	

Residuals in seconds of arc
760925 095 1.2- 0.5- 910409 400 1.1+ 1.2- 920726 801 0.2- 0.4-
760928 095 1.3+ 0.7- 910409 400 (1.3- 4.4-) 920726 675 0.7+ 0.5+
780305 095 0.0 0.7- 920702 675 0.0 0.1+ 920726 675 0.6+ 1.5+
910321 400 1.0- 0.9+ 920702 675 1.2+ 0.3+ 920728 675 0.3+ 0.8-
910321 400 (1.5- 3.8+) 920705 675 0.5- 0.2- 920728 675 0.2- 0.3-
910402 400 0.3- 0.1- 920705 675 0.9- 0.3- 920729 801 0.2- 0.2-
910402 400 0.1- 0.3- 920726 801 0.2- 0.0 920729 801 0.3- 0.2-

(5357)* 1992 EL = 1969 TB4 = 1971 BE3 = 1981 BH = 1990 VJ4 = 1990 WU13
Discovered 1992 Mar. 2 by T. Fujii and K. Watanabe at Kitami.
Id. H. Kaneda (MPC 20034)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Kaneda

M	153.83288	(2000.0)	P	Q
n	0.19088358	Peri. 120.03960	+0.45458015	-0.88063549
a	2.9873791	Node 302.32941	+0.75307874	+0.46006722
e	0.1060312	Incl. 9.09433	+0.47563568	+0.11322231
P	5.16	H 11.0	G 0.15	

Residuals in seconds of arc
691011 095 (4.6+ 6.0+) 901120 095 (1.1+ 3.0-) 920304 400 2.5- 1.9+
710127 805 0.4+ 1.2+ 901123 374 0.0 1.7+ 920304 400 0.5- 1.0-
710129 805 0.7+ 1.0+ 901213 399 0.4+ 0.9- 920322 400 1.2+ 1.9-
810130 688 0.0 0.3+ 901213 399 1.2- 1.9- 920322 400 1.9+ 1.9-
810130 688 0.2- 1.3- 901215 399 1.1- 0.1+ 920324 400 1.4- 0.2-
901115 374 0.9+ 1.3+ 901215 399 0.8- 0.3+ 920324 400 0.8+ 0.2-
901120 095 1.9+ 1.3- 920302 400 0.2- 1.9+

(5358)* 1992 QH = 1951 EQ = 1951 GN1 = 1968 QD1 = 1970 DB = 1975 EP2 = 1980 FZ5 = 1980 GL1 = 1985 FZ = 1987 QA3
Discovered 1992 Aug. 26 by S. Ueda and H. Kaneda at Kushiro.
Id. S. Nakano; 1985 FZ = 1985 GA2 (MPC 18264) is invalid
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	330.80572	(2000.0)	P	Q
n	0.20412423	Peri. 83.50498	+0.49840768	-0.86344045
a	2.8567551	Node 336.10325	+0.69991998	+0.45374760
e	0.1911514	Incl. 11.07978	+0.51156799	+0.22041711
P	4.83	H 11.5	G 0.15	

Residuals in seconds of arc

510305	760	0.1-	0.1-		800414	808	(3.3- | 0.6+)	920826	399	0.9+	0.1-
510305	760	1.4-	0.4-		800414	808	(13.4- | 1.2+)	920826	399	0.1+	1.4-
510403	012	1.3-	1.0+		850321	688	0.5+	0.1-	920826	399	0.4-	1.2-
680827	095	2.7+	1.0-		850321	688	1.2+	1.3-	920828	399	0.7-	0.4-
680831	095	(4.4+ | 1.3-)		850324	688	0.1+	1.0+	920828	399	0.5-	0.1-
700228	805	0.8+	0.4-		850324	688	0.4-	0.3-	920920	399	0.4-	0.2+
700228	805	0.8+	0.3+		870825	809	2.5+	0.8-	920920	399	1.0-	0.1-
700228	805	0.1+	0.0		870825	809	(3.6+ | 1.1-)	920928	399	0.2-	0.5+
750308	095	2.2-	1.1-		870825	809	(4.1+ | 1.1-)	920928	399	0.4-	0.1+
800323	809	0.6+	0.6-		870827	809	1.0-	2.0+				

1975 AN = 1975 AX = 1985 YU = 1986 AG
Id. B. G. Marsden (d, MPC 9064; MPC 10527), F. N. Bowman (d)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M	14.37476		(2000.0)	P	Q
n	0.27006475	Peri.	112.39326	+0.79082198	-0.49021642
a	2.3704135	Node	278.74150	+0.32883946	+0.84529220
e	0.3195528	Incl.	21.76253	+0.51620267	+0.21252988
P	3.65	H	13.0	G 0.15	

Residuals in seconds of arc

750104	330	0.0	1.1+		851218	675	(1.3- | 2.9+)	900302	474	1.9-	1.1-
750113	095	(1.3+ | 3.0+)		860110	675	0.1-	0.5+	900302	474	0.9-	1.6-
750116	095	(0.5- | 10.7-)		860116	675	0.5-	1.1-	920826	801	0.2+	0.5-
851217	675	(8.2-	0.5-)		860205	675	(1.0-	2.5-)	920826	801	0.2+	0.5-
851218	688	0.2-	0.4-		860206	675	0.6+	1.5+	920901	801	0.1+	0.9-
851218	688	1.4+	1.7-		860207	675	0.2-	0.6+	920901	801	0.5+	0.4-

1977 QT2 = 1992 AK3
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M	183.63179		(2000.0)	P	Q
n	0.29683211	Peri.	91.08472	+0.78425341	-0.61968356
a	2.2256769	Node	307.20912	+0.55284723	+0.72037681
e	0.0976167	Incl.	2.20488	+0.28161416	+0.31152774
P	3.32	H	14.0	G 0.15	

Residuals in seconds of arc

770821	095	0.4+	0.3+		770909	095	0.0	0.2+	920112	303	0.3+	0.4-
770823	095	0.4-	0.5-		920111	303	0.3-	0.3+				

1978 UJ4 = 1985 QQ2
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	2.27277		(2000.0)	P	Q
n	0.27541027	Peri.	126.59309	+0.99587370	-0.06027204
a	2.3396414	Node	236.95644	+0.03227201	+0.93393544
e	0.2429429	Incl.	4.64231	+0.08481796	+0.35232355
P	3.58	H	16.0	G 0.15	

Residuals in seconds of arc

781027	675	0.0	0.6+		781128	675	0.6+	0.1+	850817	675	2.4+	0.7+
781028	675	0.7-	0.6-		781129	675	0.5-	0.0	850823	675	0.3-	0.1-
781029	675	0.7+	0.1-		850817	675	2.4-	0.5-	850823	675	0.3+	0.1-

1978 UW7 = 1988 BY4
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	329.87901		(2000.0)	P	Q
n	0.25794352	Peri.	71.41746	+0.33095224	+0.93481493
a	2.4441038	Node	218.68316	-0.92472954	+0.29408644
e	0.2165671	Incl.	11.89328	-0.18800504	+0.19908342
P	3.82	H	13.3	G 0.15	

Residuals in seconds of arc

781027 675	0.2+	0.4+	781128 675	0.1-	0.1+	880126 413	2.1-	0.7+
781028 675	0.7+	0.4-	781129 675	0.1+	0.1-	880127 413	(4.3-	0.9+)
781029 675	0.8-	0.1-	880126 413	0.5+	0.6-	880127 413	1.6+	0.1-

1979 MD2 = 1990 SA29 = 1990 UO12

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 191.32317		(2000.0)	P		Q
n 0.28296614	Peri.	247.93029	+0.27098945		-0.96256018
a 2.2978045	Node	186.35718	+0.90346290		+0.25668037
e 0.1815763	Incl.	3.38019	+0.33214381		+0.08713833
P 3.48	H	14.0	G	0.15	

Residuals in seconds of arc

790623 413	0.3-	0.1-	790629 413	1.8+	0.5-	790725 675	0.3-	0.3+
790624 413	0.4-	0.4+	790724 675	0.6+	0.6-	900929 095	0.2+	0.7+
790625 413	1.8-	0.3+	790724 413	0.3+	0.0	901023 095	0.2-	0.6-

1979 YS = 1976 EE = 1990 OO4 = 1991 RK29

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Ichikawa

M 329.88618		(2000.0)	P		Q
n 0.23227322	Peri.	242.65871	-0.96645254		-0.16003170
a 2.6210177	Node	287.56141	+0.23582270		-0.86279714
e 0.1160306	Incl.	12.16437	-0.10177001		-0.47955287
P 4.24	H	12.5	G	0.15	

Residuals in seconds of arc

760307 808	1.2+	0.7+	800122 095	0.5+	0.9-	900728 675	0.0	0.0
760307 808	0.7+	0.1+	900725 675	0.6-	0.4+	910913 675	0.0	0.5+
791218 809	0.5-	0.2+	900725 675	0.3-	0.8+	910913 675	0.1+	0.1+
791218 809	0.8+	2.0+	900727 675	0.0	0.2-	910914 675	0.2-	0.5-
791218 809	(1.0+	4.9+)	900727 675	0.3+	0.5-	910915 675	0.0	0.2+
791223 095	1.4+	2.0-	900728 675	0.3+	0.9+	910916 675	0.1-	0.2+

1981 FL = 1970 GM1 = 1990 UV7 = 1990 UC8 = 1990 UD9

Id. S. Nakano (unpublished; d, MPC 19057)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 91.55439		(2000.0)	P		Q
n 0.27022509	Peri.	357.18147	-0.99967161		+0.02355960
a 2.3694758	Node	184.20834	-0.01999265		-0.96312388
e 0.1867753	Incl.	7.89551	-0.01603011		-0.26802487
P 3.65	H	14.5	G	0.15	

Residuals in seconds of arc

700411 805	0.2-	1.9+	810405 688	0.7+	1.1-	901019 809	0.6-	1.5+
700411 805	0.9+	1.0+	810405 688	0.5-	0.9-	901019 809	0.1+	1.3+
700411 805	0.6+	1.7+	810410 688	1.8-	0.5+	901024 809	1.6+	0.6-
810330 688	1.4+	1.4-	810410 688	0.6-	0.4-	901024 809	0.9+	1.8-
810330 688	0.4-	1.7-	901019 809	0.1+	1.7+	901024 809	1.9-	2.7-

1981 SE7 = 1990 VZ14 = 1990 WX14

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 239.27608		(2000.0)	P		Q
n 0.22524676	Peri.	270.75318	+0.92361297		+0.36853515
a 2.6752457	Node	67.62640	-0.29041462		+0.85230659
e 0.1173057	Incl.	6.54829	-0.25019680		+0.37115404
P 4.38	H	12.4	G	0.15	

Residuals in seconds of arc

810928 095	0.5-	0.5+	901115 095	(6.6+	2.5+)	901123 095	0.1+	1.0+
811006 095	0.7+	0.7-	901115 095	0.2-	0.2+			
811026 095	0.2-	0.2+	901123 095	0.2+	1.2-			

1983 XN1 = 1982 RK3 = 1992 PF1
Id. A. Lowe (k), G. V. Williams
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	293.80401	(2000.0)	P	Q
n	0.18971678	Peri. 109.91313	+0.43473130	-0.89414402
a	2.9996153	Node 313.83754	+0.76058160	+0.42834633
e	0.0756614	Incl. 8.55565	+0.48220777	+0.13048330
P	5.20	H 12.5	G 0.15	

Residuals in seconds of arc

820912	095	0.0	0.0	920808	010	0.5-	0.3+	920809	010	0.4+	0.3+
831204	561	0.3+	0.1+	920808	010	0.4-	0.5+	920809	010	1.2+	0.4-
831205	561	0.6+	0.4-	920808	010	0.1-	0.2+				
831205	561	0.8-	0.2+	920809	010	0.7-	0.9-				

1984 SZ1 = 1988 RG2 = 1990 DD6
Id. H. Kaneda (MPC 16870; unpublished)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	348.41223	(2000.0)	P	Q
n	0.23821495	Peri. 88.33370	+0.78343753	-0.62002092
a	2.5772509	Node 309.98147	+0.54590968	+0.71920103
e	0.1826814	Incl. 3.17375	+0.29699874	+0.31356649
P	4.14	H 13.5	G 0.15	

Residuals in seconds of arc

840929	046	0.9+	0.7-	880909	046	(5.6+	1.2+)	920803	801	1.1-	0.4+
840930	046	(4.5+	2.1+)	880909	046	2.5+	1.5-	920803	801	0.9-	0.0
840930	046	0.2+	0.0	880909	046	0.3+	1.9-	920824	801	0.7-	0.7+
841001	046	0.8+	1.1+	880910	046	0.2+	1.1-	920824	801	0.6-	0.6+
841006	046	1.0-	1.3+	880910	046	0.7+	2.0-	920901	801	0.7+	0.5+
841006	046	2.5-	1.7+	900224	033	0.6-	1.4-	920901	801	0.8+	0.4+

1984 SF6 = 1992 AF3
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M	116.77689	(2000.0)	P	Q
n	0.17085682	Peri. 307.21645	+0.55197654	-0.83268614
a	3.2164823	Node 109.22411	+0.77912154	+0.49611832
e	0.1507950	Incl. 2.68442	+0.29713889	+0.24596829
P	5.77	H 13.5	G 0.15	

Residuals in seconds of arc

840922	809	0.7-	0.4-	840926	809	0.3-	0.2+	840929	809	0.4+	0.5-
840922	809	0.1-	0.5-	840926	809	0.3-	0.1+	840930	809	0.2-	0.3-
840922	809	0.2+	0.0	840927	809	0.9-	0.1+	840930	809	0.0	0.1-
840923	809	0.2+	0.1-	840927	809	0.7-	0.3+	840930	809	0.4+	0.1+
840923	809	0.4+	0.2-	840927	809	0.4-	0.5+	841001	809	0.7-	0.0
840923	809	0.6+	0.2-	840928	809	1.3+	0.2+	841001	809	0.6-	0.1+
840924	809	0.1-	0.1-	840928	809	1.2+	0.4+	841001	809	0.8-	0.0
840924	809	0.0	0.2+	840928	809	0.9+	0.2+	920111	303	0.6+	0.3+
840924	809	0.2-	0.2+	840929	809	0.2+	0.2-	920112	303	0.6-	0.3-
840926	809	0.4-	0.2+	840929	809	0.4+	0.2-				

1985 UQ = 1978 WX16
Id. E. Bowell (MPC 19018)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	37.05895	(2000.0)	P	Q
n	0.27286396	Peri. 244.81475	+0.89586410	+0.43739462
a	2.3541742	Node 89.16444	-0.37431206	+0.83773532
e	0.1862457	Incl. 4.48493	-0.23941176	+0.32693345
P	3.61	H 14.5	G 0.15	

Residuals in seconds of arc

491121 675	0.1-	0.6+	851020 046	0.1-	0.5-	851024 046	0.7-	0.3+
491121 675	0.2+	0.8-	851020 046	0.1+	0.3-	851024 046	0.5-	0.2-
781130 675	0.2+	0.4+	851021 046	0.1-	0.9+			
781201 675	0.2-	0.3-	851021 046	1.2+	0.2-			

1986 WZ = 1990 SQ11 = 1990 SH27

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 169.80589		(2000.0)	P	Q	
n 0.22296189	Peri.	130.21560	+0.89411473	-0.44557082	
a 2.6934916	Node	256.28738	+0.39552787	+0.83281215	
e 0.1156135	Incl.	2.65523	+0.21003942	+0.32846699	
P 4.42	H	13.5	G 0.15		

Residuals in seconds of arc

861125 046	1.8-	0.2+	861128 046	0.5+	0.8+	900919 675	0.5-	0.4-
861125 046	0.7+	0.4-	861128 046	(5.0+	0.9+)	900919 675	0.0	0.6-
861126 046	1.0-	0.8-	900916 675	0.4-	0.4+	900923 095	0.5+	0.9+
861126 046	1.6+	0.3+	900916 675	0.4+	0.4-			

1987 RA1 = 1976 JS4 = 1990 DV2

Id. R. Nagata (MPC 17440), S. Nakano

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 76.28520		(2000.0)	P	Q	
n 0.19918143	Peri.	17.46423	+0.31223490	+0.94986436	
a 2.9038230	Node	270.73215	-0.87355187	+0.28030390	
e 0.0387868	Incl.	0.93644	-0.37338518	+0.13851866	
P 4.95	H	12.2	G 0.15		

Residuals in seconds of arc

760503 809	1.3-	0.6+	870916 809	2.7+	0.1+	900226 809	0.1-	0.3-
781130 675	1.3-	0.0	870916 809	2.6+	0.0	900301 809	0.4-	0.1+
781201 675	1.0-	0.0	870918 809	1.7+	0.1-	900301 809	0.3-	0.4+
870913 809	0.9-	1.4+	870918 809	1.8+	0.1-	900301 809	0.0	0.5+
870913 809	0.4-	0.5+	870918 809	1.9+	0.2-	920828 399	2.1-	1.3-
870913 809	2.0-	2.0-	900224 809	0.1+	1.4-	920828 399	3.2-	0.2+
870914 809	0.3+	0.7-	900224 809	0.7+	1.5-	920920 399	1.6-	0.2+
870914 809	0.4+	0.7-	900224 809	0.9+	1.6-	920920 399	1.3-	1.3+
870914 809	0.6+	0.7-	900226 809	0.2-	0.1+			
870916 809	2.6+	0.0	900226 809	0.1-	0.1+			

1988 TN2 = 1992 SM

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 40.27136		(2000.0)	P	Q	
n 0.24311333	Peri.	152.30006	+0.96876635	+0.23823297	
a 2.5425151	Node	194.42363	-0.24570722	+0.95964565	
e 0.1694804	Incl.	16.03976	+0.03346209	+0.14941643	
P 4.05	H	12.9	G 0.15		

Residuals in seconds of arc

881011 046	1.6+	0.5+	881105 888	(0.2-	5.8-)	920921 400	0.6+	0.3+
881011 046	2.1+	0.7+	881112 071	0.9-	1.9+	920923 400	(5.9+	0.8-)
881014 046	2.0-	0.1+	881112 071	0.1+	1.3+	920923 400	0.4-	0.6-
881014 046	1.9-	0.2-	881112 071	0.2+	1.4-			
881105 888	0.7+	2.7-	920921 400	0.2-	0.0			

1988 VB1 = 1992 SK1
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
M 39.71763 (2000.0) P Q
n 0.24384121 Peri. 3.54289 +0.99516315 -0.09786375
a 2.5374529 Node 2.13046 +0.08353417 +0.79726043
e 0.1781851 Incl. 13.28560 +0.05169467 +0.59564964
P 4.04 H 13.0 G 0.15
Residuals in seconds of arc

881103	054	0.9+	0.3-	881107	054	1.3-	0.1-	920924 675	0.8+	0.2-
881103	054	0.4+	0.1+	881109	054	0.4+	1.1+	920926 675	0.1-	0.2+
881104	054	0.2+	0.3-	881113	054	0.4-	0.5-	920926 675	0.4+	0.7+
881107	054	0.1-	0.2-	920924	675	1.2-	0.6-			

1988 VR5 = 1991 JZ3
Id. H. Kaneda (MPC 18815)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 38.95553 (2000.0) P Q
n 0.23731464 Peri. 139.21721 +0.98769828 +0.02675543
a 2.5837651 Node 220.06159 -0.06040945 +0.97404998
e 0.1345177 Incl. 13.84979 +0.14423179 +0.22474604
P 4.15 H 13.3 G 0.15
Residuals in seconds of arc (or two decimals in units of degrees)

881104	046	(1.3+ | 4.1-)	881113	071	(0.2+ | 3.4+)	910517 809	0.6-	0.2-
881104	046	1.3+	1.0-	881201	888	2.8+	0.1-	910517 809	0.9-	0.8-
881105	046	1.8-	2.2-	881201	888	2.0+	0.7-	920926 402	1.4-	0.7+
881105	046	0.4-	0.2-	910512	809	1.2+	0.9+	920926 402	1.9-	0.9-
881112	046	1.0-	0.2+	910512	809	0.4+	1.2+	920927 402	1.1+	0.7+
881112	046	1.6-	2.4+	910512	809	(0.00+	0.03+)	920927 402	2.2+	0.8-
881112	071	1.0-	2.8+	910517	809	0.2-	0.1+			

1989 YU5 = 1940 RA1 = 1975 YO = 1982 YK = 1982 YH4
Id. H. Kaneda (MPC 16435)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden
M 8.60521 (2000.0) P Q
n 0.28374037 Peri. 105.18696 +0.95399793 -0.29771283
a 2.2936226 Node 272.14320 +0.25966715 +0.87953203
e 0.2791174 Incl. 2.03163 +0.14986970 +0.37120139
P 3.47 H 14.5 G 0.15
Residuals in seconds of arc

400907	119(57.1+	47.2-)X		891230	511	0.4-	0.1+	920725 010	0.1-	0.8-
751224	330	0.7-	0.2+	900103	511	1.3+	0.5-	920725 010	0.4+	0.5-
821216	511	0.7-	1.7+	900103	511	0.6+	1.7-	920725 010	0.1-	0.1+
821223	095	2.3+	0.6+	900104	511	1.7-	0.7-	920726 010	0.1+	0.8-
891229	511	0.1-	0.6-	900104	511	0.3+	0.9-	920726 010	0.2-	0.1-
891229	511	0.7-	0.5+	900124	033	0.4-	0.3+	920726 010	0.1+	1.1+
891230	511	0.3-	0.2-	900124	033	0.1+	0.1+			

1990 EF7 = 1979 HG3 = 1991 JV2
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 97.14088 (2000.0) P Q
n 0.17043862 Peri. 117.00908 -0.33696405 +0.94116200
a 3.2217416 Node 133.27397 -0.87592976 -0.30329582
e 0.1154300 Incl. 2.03634 -0.34525685 -0.14908299
P 5.78 H 12.8 G 0.15
Residuals in seconds of arc

790425	095	0.0	0.1-	900303	809	0.1+	0.2+	900306 809	0.3+	0.1-
900303	809	0.2-	0.3+	900306	809	0.2+	0.1-	900307 809	0.7-	0.1-
900303	809	0.1+	0.2+	900306	809	0.4+	0.2-	900307 809	0.1-	0.2-

900307 809 0.2- 0.2- 910512 809 1.0+ 0.3+ 910517 809 0.2- 0.6-
910512 809 0.4+ 1.3+ 910517 809 0.1+ 0.6-
910512 809 0.4- 0.6+ 910517 809 0.8- 1.0-

1990 OQ3 = 1990 SF18 = 1970 SU = 1980 RX5 = 1982 BV14 = 1987 UH4
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 265.70310 (2000.0) P Q
n 0.29171786 Peri. 16.84336 +0.63941343 +0.76563021
a 2.2516145 Node 292.96301 -0.71394161 +0.55724115
e 0.1893276 Incl. 4.38713 -0.28537316 +0.32139180
P 3.38 H 13.4 G 0.15
Residuals in seconds of arc
700928 095 1.1+ 0.7+ 820131 675 0.6+ 0.3- 900727 675 0.4- 0.3-
701002 095 1.2- 1.4- 871028 399 1.6+ 0.2+ 900730 675 0.8- 0.1-
800913 675 0.1+ 0.3+ 871028 399 1.4- 1.1- 900730 675 0.2+ 0.4-
800914 675 0.2+ 0.3+ 871028 399 0.4- 1.1+ 900916 675 0.6+ 0.2+
820130 675 0.5- 0.2+ 900727 675 0.0 0.1+ 900916 675 0.6+ 0.3+

1990 QP2 = 1990 SM29 = 1971 SV3 = 1971 UV3 = 1983 EJ
Id. S. Nakano (MPC 17447), G. V. Williams (d)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
M 112.00588 (2000.0) P Q
n 0.20498668 Peri. 61.81474 +0.45701353 -0.88945959
a 2.8487366 Node 0.99113 +0.80522020 +0.41348327
e 0.0505172 Incl. 1.71364 +0.37783471 +0.19466179
P 4.81 H 12.5 G 0.15
Residuals in seconds of arc
710926 805 1.2+ 0.7+ 900829 675 (3.3+ 0.3+) 900923 809 0.8+ 1.8+
711020 805 1.6- 0.3+ 900914 675 2.1- 1.6- 900923 809 0.7+ 1.7+
711020 805 0.3+ 0.7- 900914 675 0.2- 1.1- 900924 809 0.3- 0.8+
830310 046 0.4- 0.0 900914 675 1.7- 1.8- 900924 809 0.2- 0.6+
830310 046 (0.0 4.5-) 900914 675 0.2+ 0.9- 900924 809 0.1+ 0.5+
830312 046 0.1- 1.4- 900918 675 0.4- 0.2+ 900930 809 0.1- 0.3-
830312 046 (3.6- 2.7-) 900918 675 0.7+ 0.2- 900930 809 0.3+ 0.3+
900824 675 0.8+ 0.1+ 900920 675 0.7- 0.3- 900930 809 0.7+ 0.8+
900824 675 0.8+ 0.4- 900920 675 0.1+ 1.1- 901022 675 0.4+ 0.0
900829 675 0.6+ 1.2- 900923 809 0.4+ 1.9+ 901022 675 0.1- 1.4-

1990 QZ4 = 1991 XE3
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden
M 134.85364 (2000.0) P Q
n 0.17714319 Peri. 233.51599 +0.95849214 -0.22646566
a 3.1399283 Node 138.76405 +0.25968851 +0.94422588
e 0.1982822 Incl. 15.23583 -0.11770596 +0.23906233
P 5.56 H 12.0 G 0.15
Residuals in seconds of arc
900824 675 0.5- 0.4+ 900829 675 0.0 0.8- 911209 809 1.4+ 0.9+
900824 675 0.3+ 0.1+ 911201 809 1.3+ 1.1- 911209 809 0.2- 0.7+
900826 675 0.3+ 0.2+ 911201 809 0.1+ 0.2- 911209 809 1.2- 1.2+
900826 675 0.1- 0.2+ 911201 809 1.4- 1.5-

1990 RM17 = 1990 SW19 = 1990 UA12 = 1977 DL5 = 1982 DE2
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 147.36035 (2000.0) P Q
n 0.18930203 Peri. 46.22450 +0.86824668 -0.49343380
a 3.0039950 Node 343.13084 +0.38848686 +0.74095372
e 0.1090327 Incl. 10.25856 +0.30858655 +0.45553338
P 5.21 H 11.9 G 0.15

Residuals in seconds of arc

770218 381	0.3+	0.7+	820220 046	1.6-	0.4+	900918 675	0.6+	0.6-
770219 381	0.3-	0.4+	820221 046	0.2+	0.8+	900918 675	0.3-	0.4-
770219 381	0.4+	0.5-	820221 046	1.9+	1.3-	900923 095	0.9-	0.5-
820220 046	0.8-	0.4-	900915 095	0.4-	1.2+	901023 095	0.9+	0.4+

1990 SK3 = 1990 SF29 = 1990 UR12 = 1980 PC = 1986 GX2
Id. S. Nakano, N. S. Chernykh (d)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	295.46322		(2000.0)	P	Q
n	0.30134773	Peri.	244.03936	+0.67248378	+0.73752896
a	2.2033869	Node	68.36291	-0.65305324	+0.63058745
e	0.1693272	Incl.	3.81078	-0.34826287	+0.24168263
P	3.27	H	13.7	G 0.15	

Residuals in seconds of arc

800806 688	0.3-	0.6+	900918 675	0.6+	0.4+	900929 095	0.1-	1.1+
860404 095	0.2-	0.4-	900920 675	0.6+	0.9-	901023 095	2.3-	0.8+
900918 675	0.7+	1.2-	900920 675	0.9+	1.1-			

1990 SN3 = 1990 SY26 = 1990 SG29 = 1990 UQ12 = 1990 XX1 = 1977 TR4 = 1977 UC1 = 1987 XH = 1992 CV3
Id. S. Nakano, N. S. Chernykh (d)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	289.68389		(2000.0)	P	Q
n	0.30209420	Peri.	281.42910	+0.72093276	+0.69106498
a	2.1997557	Node	34.89335	-0.59526222	+0.65580482
e	0.2129738	Incl.	5.19717	-0.35485044	+0.30389014
P	3.26	H	13.9	G 0.15	

Residuals in seconds of arc

771007 095	0.4+	1.2-	900920 675	0.1+	0.9-	901206 372	0.6-	2.9+
771017 095	1.3+	1.9-	900920 675	0.4+	1.1-	901206 372	1.3+	2.0+
871215 033	0.3-	0.1+	900922 095	0.9-	0.8+	920208 033	0.4+	0.7-
871215 033	0.9-	0.1-	900922 095	0.8-	0.8-	920208 033	1.0-	0.6-
900918 675	0.4-	1.5-	900929 095	0.3+	1.5+	920209 033	0.1+	0.5-
900918 675	0.3+	0.2+	901023 095	0.3-	1.0+			

1990 SK11 = 1990 QA19 = 1990 SL29 = 1987 XR
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	230.16964		(2000.0)	P	Q
n	0.29045229	Peri.	107.46279	+0.94576514	-0.32210396
a	2.2581503	Node	271.34357	+0.27974998	+0.87354036
e	0.1095513	Incl.	2.41689	+0.16513103	+0.36493325
P	3.39	H	13.9	G 0.15	

Residuals in seconds of arc

871214 046	1.7-	1.2+	900830 095	1.1+	0.4-	900919 675	0.3+	0.4-
871214 046	0.3+	0.3+	900831 095	2.3-	2.2+	900919 675	0.7+	1.1-
871215 046	1.4+	1.3-	900916 675	0.3+	0.7-	900923 095	1.0-	1.6+
871215 046	(5.4+	2.2+)	900916 675	0.8+	1.0-			

1990 SH28 = 1990 TQ8 = 1990 TD16 = 1974 WR = 1979 SH6 = 1979 UB3 = 1992 BY2
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	159.10626		(2000.0)	P	Q
n	0.18109967	Peri.	340.50315	+0.99469933	-0.10274048
a	3.0940282	Node	25.39497	+0.09559400	+0.90891476
e	0.1914412	Incl.	0.56123	+0.03788189	+0.40412664
P	5.44	H	12.9	G 0.15	

Residuals in seconds of arc

741118 095	0.3-	1.5+	791016 095	2.0-	1.7-	900930 095	3.3+	0.5+
790923 095	2.2+	0.7+	900924 095	1.4-	2.0+	901014 046	0.2+	0.0

901014 046 0.5+ 0.2+ 901015 095 1.0- 2.2- 920205 691 0.0 0.1-
901015 046 0.0 0.1+ 920126 691 0.2- 0.3- 920205 691 0.1- 0.2+
901015 046 1.0- 0.6- 920126 691 0.6- 0.4- 920205 691 0.3+ 0.0
901015 095 0.4- 0.4- 920126 691 0.2+ 0.4-

1990 SO28 = 1990 RB15 = 1990 ST17 = 1990 TW15 = 1981 UM29
Id. N. S. Chernykh (d), S. Nakano
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 189.23594 (2000.0) P Q
n 0.21404747 Peri. 329.38324 +0.98168216 +0.17963889
a 2.7677657 Node 20.55791 -0.11641451 +0.82931202
e 0.1443864 Incl. 10.41531 -0.15082372 +0.52912328
P 4.60 H 12.7 G 0.15
Residuals in seconds of arc
811024 675 0.4+ 0.9+ 900914 809 0.1- 1.0- 900926 095 1.7+ 1.9-
811025 675 0.1+ 0.3- 900924 095 (7.9+ 8.4+) 900926 095 0.7+ 0.0
811026 675 0.6- 0.6- 900924 095 1.3- 0.3+ 901014 095 (1.3+ 7.4+)
900914 809 0.1+ 0.4- 900924 046 0.7- 0.8+ 901014 095 0.3+ 0.4-
900914 809 0.2- 0.0 900924 046 0.5- 2.6+

1990 UW3 = 1992 HV
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 191.87012 (2000.0) P Q
n 0.26697716 Peri. 300.87153 +0.29258124 -0.95534091
a 2.3886544 Node 132.05629 +0.89530072 +0.25844265
e 0.1495091 Incl. 3.20199 +0.33590599 +0.14328694
P 3.69 H 16.2 G 0.15
Residuals in seconds of arc
901016 809 1.3- 0.1- 901020 809 0.0 0.9+ 920423 691 0.2+ 0.8+
901016 809 0.6+ 0.1+ 901024 809 2.6+ 1.6+ 920423 691 0.1+ 0.0
901016 809 1.5+ 0.4- 901024 809 1.1- 0.5- 920428 691 0.3+ 0.2-
901020 809 0.2- 0.3- 901024 809 0.8- 2.0- 920428 691 0.2- 0.5-
901020 809 1.2- 0.6+ 920423 691 0.1+ 0.4+ 920428 691 0.5- 0.5-

1990 VD7 = 1990 UM6 = 1940 EE = 1969 TF3 = 1983 TP1
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 358.57268 (2000.0) P Q
n 0.28439782 Peri. 277.32583 -0.10056460 +0.99483819
a 2.2900864 Node 346.87935 -0.88765304 -0.09586694
e 0.0029853 Incl. 3.42341 -0.44939831 -0.03326432
P 3.47 H 13.1 G 0.15
Residuals in seconds of arc
400312 053(43.3+ 61.0+)X 831012 688 0.1- 0.0 901110 046 0.3- 0.4+
400327 053(15.9- 8.2+)X 831012 688 0.4+ 0.5- 901113 046 0.1+ 0.6+
400329 053(48.2- 24.8-)X 901024 046 0.1+ 0.2- 901113 046 0.1+ 1.4-
400410 053 (1.3+ 67.1+)X 901024 046 0.3+ 0.1-
691009 095 0.2- 0.3+ 901110 046 0.4- 0.9+

1991 AM
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Bardwell
M 290.32468 (2000.0) P Q
n 0.44713854 Peri. 152.60353 +0.19279786 +0.89298397
a 1.6937188 Node 125.59673 -0.96670325 +0.24393517
e 0.6950203 Incl. 30.01120 -0.16826710 -0.37825291
P 2.20 H 16.5 G 0.15
From 21 observations 1991 Jan. 14-Feb. 19, mean residual 0".43.

1991 CC1 = 1979 XU = 1992 QZ
Id. E. Helin (k), B. G. Marsden

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M 168.10872	(2000.0)	P	Q	
n 0.28105396	Peri. 54.87083	-0.91589836	+0.39692020	
a 2.3082149	Node 148.39178	-0.39533576	-0.86609851	
e 0.1503074	Incl. 6.55946	-0.06956892	-0.30385478	
P 3.51	H 13.0	G 0.15		

Residuals in seconds of arc

791214 095	0.0	0.5-	910309 894	2.1+	1.4+	920829 675	0.5+	0.1+
910214 675	(3.8+	2.9-)	910309 894	0.9+	0.3-	920829 675	0.8+	0.2-
910216 675	0.6-	0.6-	910314 894	(3.4+	0.9+)	920901 675	0.5+	1.1-
910216 675	1.0-	0.4-	910317 898	1.0-	0.5-	920901 675	1.0-	1.7-
910220 675	0.5-	0.4+	910317 898	0.4-	0.9-			
910220 675	0.5-	0.0	910318 898	0.2+	1.5-			

1991 CX2 = 1979 SB15 = 1988 GE1

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 98.72191	(2000.0)	P	Q	
n 0.30279307	Peri. 108.92686	+0.08689640	+0.99592570	
a 2.1963696	Node 165.99277	-0.94738744	+0.09009522	
e 0.1557931	Incl. 5.71535	-0.30806825	+0.00385394	
P 3.26	H 13.8	G 0.15		

Residuals in seconds of arc

790920 675	0.1-	0.3+	910222 511	(4.4-	3.7+)	910309 809	0.1+	0.2+
790921 675	0.0	0.3+	910307 809	0.7+	1.0+	910314 809	0.5-	0.2-
880413 054	0.3-	0.3-	910307 809	1.3+	0.5+	910314 809	0.7-	0.0
880414 054	0.3+	0.6+	910307 809	2.1+	0.2+	910314 809	1.0-	0.2-
910212 511	0.3-	0.4-	910309 809	0.0	0.4-			
910212 511	1.9-	0.3-	910309 809	0.2+	0.1+			

1991 CM5 = 1989 OK1 = 1992 RC

Id. G. V. Williams (MPC 20820; unpublished)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M 156.37185	(2000.0)	P	Q	
n 0.36425818	Peri. 109.94309	-0.49447127	+0.80384724	
a 1.9417643	Node 125.94331	-0.86817638	-0.47516311	
e 0.0550728	Incl. 24.10496	+0.04204677	-0.35784025	
P 2.71	H 14.0	G 0.15		

Residuals in seconds of arc

871030 413	1.0-	0.6-	910119 675	0.6+	1.3-	920902 413	0.2-	0.9-
871030 413	0.0	2.4+	910119 675	1.6+	0.9-	920902 413	0.0	1.3+
890729 675	0.5-	2.3-	910209 675	0.4+	0.3-	920904 413	1.1-	0.9-
890729 675	(22.3+	26.2+)	910209 675	1.1-	0.9-	920904 413	1.1+	0.4+
910118 675	0.7-	0.1+	910210 675	0.8+	0.1+	920905 413	0.4+	1.2-
910118 675	0.6-	1.4-	910210 675	(2.2-	3.4+)	920905 413	0.3+	1.2-

1991 DM1 = 1971 QW

Id. S. Nakano, T. Urata

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Urata

M 63.78320	(2000.0)	P	Q	
n 0.23549828	Peri. 127.83530	+0.38427758	+0.92114997	
a 2.5970335	Node 164.41155	-0.90270021	+0.38891940	
e 0.1789776	Incl. 13.28534	-0.19355380	+0.01498114	
P 4.19	H 11.7	G 0.15		

Residuals in seconds of arc

710818 095	0.1-	0.6+	910318 385	0.4-	0.1+	920830 885	0.3-	0.6+
910223 889	0.2+	0.5-	910402 400	0.0	0.7+	920830 885	0.6+	0.3-
910223 889	0.7-	1.1-	910402 400	0.2-	0.1+	920901 885	0.5+	0.1-
910223 889	0.1-	0.6-	910502 385	0.5+	1.0-	920901 885	0.3+	0.1+
910318 385	0.3-	0.2+	910502 385	1.0+	0.2+	920901 885	0.5+	0.2+

920920	399	0.5-	0.2+	920930	385	0.7-	0.0	920930	385	0.5+ 0.4-
920920	399	0.1-	1.3-	920930	385	0.1-	1.0-			
920930	385	0.5-	0.4+	920930	385	0.1-	0.7-			

1991 OK1 = 1986 RO9 = 1989 AA7
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Marsden

M	149.54589	(2000.0)	P	Q	
n	0.17413263	Peri.	298.68563	-0.41839773	+0.89833851
a	3.1760155	Node	305.96210	-0.76487693	-0.42800165
e	0.0333815	Incl.	9.52277	-0.48980264	-0.09900764
P	5.66	H	12.0	G 0.15	

Residuals in seconds of arc

860908	095	0.7+	0.2-	910718	809	0.1+	0.5+	910805	809	0.4+ 0.4-
860911	095	0.6-	0.0	910718	809	0.4+	0.7+	910805	809	0.5- 0.9-
890110	033	0.4-	0.0	910718	809	0.4+	0.6+	910805	809	0.8- 0.5-
890111	033	0.4-	0.3-	910719	809	0.2+	0.4-			
890112	033	0.1+	0.8-	910719	809	0.2+	0.4-			

1991 PJ7 = 6382 P-L
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	119.86244	(2000.0)	P	Q	
n	0.28487156	Peri.	23.98330	+0.99862238	-0.03847447
a	2.2875468	Node	338.13194	+0.01678406	+0.87846509
e	0.1733036	Incl.	5.49693	+0.04971551	+0.47625497
P	3.46	H	15.5	G 0.15	

Residuals in seconds of arc

600924	675	0.7+	0.1+	910814	809	0.5+	0.9+	910906	809	0.3- 0.1-
600925	675	0.4+	0.4-	910814	809	0.0	1.3+	910906	809	0.7- 0.2-
600926	675	0.7-	0.6-	910814	809	0.7-	1.0+	910906	809	0.3- 0.5-
910806	809	1.0+	1.4-	910904	809	0.9-	0.1-	910907	809	1.7+ 1.5+
910806	809	1.1+	1.2-	910904	809	0.6-	0.1-	910907	809	0.1+ 1.3+
910806	809	0.9+	1.4-	910904	809	1.0-	0.5-	910907	809	1.1- 0.2+

1991 PH12 = 1986 RN4 = 1986 TU2 = 1986 VK9
Id. S. Nakano, E. W. Elst (d)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	16.63684	(2000.0)	P	Q	
n	0.18102162	Peri.	143.16429	+0.24600200	-0.95120974
a	3.0949175	Node	291.92435	+0.83453002	+0.30558475
e	0.1274853	Incl.	11.58098	+0.49299357	-0.04263779
P	5.44	H	11.9	G 0.15	

Residuals in seconds of arc

860907	071	2.7-	2.5+	861104	511	1.8+	0.3-	910810	675	0.8+ 0.2-
860907	071	(3.8-	3.8+)	861104	511	1.5+	0.8-	910910	675	0.6- 0.8-
861004	017	2.3-	0.7-	910807	675	0.7+	0.9-	910910	675	0.5- 0.3-
861004	017	(1.7-	4.5-)	910807	675	0.6+	0.6+			
861104	511	1.2+	0.4+	910810	675	0.4-	0.9+			

1991 RQ11 = 1990 HG3
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	235.30367	(2000.0)	P	Q	
n	0.23189011	Peri.	60.77876	-0.93968463	+0.28132994
a	2.6239038	Node	134.77032	-0.31948789	-0.92504163
e	0.0419708	Incl.	15.90401	+0.12214864	-0.25524781
P	4.25	H	13.5	G 0.15	

Residuals in seconds of arc

900429	413	2.0-	0.1+	900430	413	1.8+	0.3+	910805	809	0.0 0.2+
900429	413	0.3+	0.2-	910805	809	0.1+	0.3-	910904	809	0.9+ 0.1-
900430	413	0.1-	0.3-	910805	809	0.2-	0.1+	910904	809	0.3+ 0.5+

910904 809 0.7- 0.1+ 910906 809 0.6+ 0.2+ 910907 809 0.6- 0.2+
910905 809 1.3+ 1.5- 910906 809 0.2- 0.1+ 910907 809 0.6- 1.3+
910905 809 0.0 0.7- 910906 809 0.1+ 0.1+
910905 809 1.1- 0.2+ 910907 809 0.0 0.5-

1991 RQ14 = 1986 WE1
Id. S. Nakano, K. Ichikawa
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 93.03364 (2000.0) P Q
n 0.17553927 Peri. 286.11760 +0.96507134 +0.26037247
a 3.1590259 Node 58.79836 -0.22552274 +0.88204480
e 0.1864612 Incl. 1.94582 -0.13332970 +0.39268708
P 5.61 H 13.3 G 0.15
Residuals in seconds of arc
861125 046 2.2+ 0.1+ 861128 046 0.1- 1.6+ 910915 675 0.0 0.2-
861125 046 0.6- 0.6+ 910911 675 1.5+ 2.2+ 910915 675 0.4+ 0.1-
861126 046 1.1- 1.0- 910911 675 0.5- 0.9+ 910916 675 1.0- 1.3-
861126 046 0.7+ 0.3- 910914 675 0.1+ 0.8- 910916 675 0.5- 1.3-
861128 046 1.1- 1.0- 910914 675 0.2- 0.5+

1991 RP25 = 1988 FO3 = 1990 JP
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano
M 38.49670 (2000.0) P Q
n 0.18148518 Peri. 37.76448 +0.22857582 -0.96439893
a 3.0896451 Node 39.52819 +0.83453780 +0.12375974
e 0.1607862 Incl. 12.06153 +0.50129808 +0.23370545
P 5.43 H 12.4 G 0.15
Residuals in seconds of arc
880317 399 0.6- 1.4+ 900503 413 1.0+ 0.4+ 910915 675 0.5- 0.3-
880317 399 1.6- 1.1+ 900504 413 1.3- 0.1+ 910915 675 0.3+ 0.8+
880317 399 0.1- 0.1+ 910912 675 0.8+ 0.5- 910916 675 0.6- 0.1-
880321 399 0.6+ 0.9+ 910912 675 0.6- 0.2- 910916 675 0.4+ 0.1-
880321 399 0.6+ 0.9- 910913 675 0.4- 0.7+
880321 399 1.9+ 1.5- 910913 675 0.0 0.8+

1991 RA30 = 1988 VV4
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Ichikawa
M 235.92668 (2000.0) P Q
n 0.27131063 Peri. 123.56719 -0.60836081 +0.78401716
a 2.3631512 Node 108.47564 -0.76445413 -0.53708052
e 0.0240983 Incl. 7.47242 -0.21332374 -0.31122599
P 3.63 H 13.0 G 0.15
Residuals in seconds of arc
881112 675 0.1+ 0.5- 910915 675 0.1+ 0.3+ 910916 675 0.1- 0.2-
881113 675 0.1- 0.5+ 910915 675 0.1+ 0.5+ 910916 675 0.3+ 0.5+
910914 675 0.3+ 0.7- 910915 675 0.1- 0.1-
910914 675 0.3- 0.1- 910915 675 0.4- 0.0

1991 SC2 = 1977 XB1 = 1979 DJ = 1981 RU5
Id. A. Lowe (k), G. V. Williams
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams
M 109.50888 (2000.0) P Q
n 0.19822364 Peri. 206.01540 +0.84239204 +0.53719031
a 2.9131695 Node 121.42749 -0.48531349 +0.79055709
e 0.0666071 Incl. 2.85171 -0.23419323 +0.29401710
P 4.97 H 13.5 G 0.15

Residuals in seconds of arc

771207	675	0.9-	0.5-		810902	675	0.5-	0.0		910914	675	0.1-	0.2-
771208	675	1.0+	0.3+		910910	675	1.3+	0.4+		910916	675	0.2-	0.1+
790228	801	0.6+	2.0+		910910	675	0.3-	0.8+		910916	675	0.5-	0.5+
810901	675	0.2+	0.9+		910914	675	0.6-	0.6-					

1991 XR1 = 1971 UA3 = 1990 RX9

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	93.44944	(2000.0)	P	Q	
n	0.19814036	Peri.	23.02563	+0.57323196	-0.81918681
a	2.9139857	Node	32.00718	+0.74627786	+0.51268451
e	0.0818345	Incl.	1.98807	+0.33834076	+0.25707502
P	4.97	H	12.8	G 0.15	

Residuals in seconds of arc

711028	095	0.2+	0.8-		900918	675	(0.9-	10.0+)		911210	033	0.0	0.1+
900914	675	2.2-	0.0		900918	675	1.2+	1.1+		911210	033	1.4+	0.6+
900914	675	1.4-	0.8+		911208	691	0.8-	0.0		911211	033	0.5+	0.5+
900916	675	1.6+	1.6-		911208	691	0.6-	0.0		911228	033	0.0	0.5-
900916	675	0.8+	0.1-		911208	691	0.7-	0.1+					

1992 FE

Id. R. H. McNaught (1985 observations)

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	71.33489	(2000.0)	P	Q	
n	1.10399928	Peri.	82.24745	+0.82179956	-0.56640837
a	0.9271646	Node	312.22843	+0.48428430	+0.75156605
e	0.4054037	Incl.	4.79239	+0.30019027	+0.33812725
P	0.89	H	17.0	G 0.15	

Residuals in seconds of arc

850417	413	1.9-	0.2+		920404	474	0.3+	1.1+		920524	413	0.9-	0.3-
850417	413	1.8+	1.2+		920404	413	0.4+	1.0-		920618	413	1.1-	0.5-
850417	413	0.9+	0.2+		920406	413	0.0	0.4+		920618	413	0.6-	0.9-
850417	413	0.8-	0.2-		920409	413	0.1+	0.0		920619	413	1.2-	0.7-
920326	413	(3.0+	0.8+)		920409	474	0.0	0.4-		920619	413	0.3-	0.5-
920326	413	0.0	0.0		920409	474	0.4-	0.7+		920703	413	0.1+	1.9+
920329	413	0.4-	0.6-		920410	413	0.0	0.1-		920703	413	0.0	0.3-
920331	413	0.1+	0.2+		920422	413	0.9+	0.4-		920823	413	1.0+	0.3-
920401	413	0.2-	0.0		920422	413	0.8+	0.3-		920823	413	0.6+	0.3-
920401	413	1.0-	0.8-		920504	801	(1.3+	2.8-)					
920404	474	0.6+	1.1+		920524	413	0.5-	0.3-					

1992 FW1

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	127.82846	(2000.0)	P	Q	
n	0.27657233	Peri.	267.75996	-0.15071864	-0.98543358
a	2.3330832	Node	191.82178	+0.98852780	-0.14943946
e	0.2677749	Incl.	22.61183	+0.00983299	-0.08116959
P	3.56	H	15.0	G 0.15	

From 9 observations 1992 Mar. 11-June 19, mean residual 0".66.

1992 HE

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	60.47227	(2000.0)	P	Q	
n	0.29381583	Peri.	262.59550	+0.24720988	+0.92805291
a	2.2408834	Node	27.32024	-0.45725358	+0.36520838
e	0.5717853	Incl.	37.37070	-0.85428709	+0.07307966
P	3.35	H	14.0	G 0.15	

From 55 observations 1992 Apr. 25-Sept. 26, mean residual 0".57.

1992 HK1 = 1992 HE4 = 1969 UH1 = 1969 VN = 1989 RS3
Id. S. Nakano (d, MPC 20484; unpublished), A. Lowe (d, ibid.)
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	289.46587	(2000.0)	P	Q
n	0.19878457	Peri. 299.07783	+0.93155950	+0.36233384
a	2.9076867	Node 39.69989	-0.31500004	+0.84574300
e	0.0641360	Incl. 2.70846	-0.18158157	+0.39170521
P	4.96	H 13.4	G 0.15	

Residuals in seconds of arc

691016	095	3.6+	1.5-	920406	809	0.4+	0.1+	920425	691	1.9-	0.4-
691111	095	2.5-	1.3-	920406	809	0.2-	0.5-	920425	691	1.1-	0.3-
890907	033	0.1-	0.9+	920423	809	0.9+	0.5-	920425	691	1.2-	0.5-
890907	033	0.4-	0.9+	920423	809	1.1+	0.5-	920502	691	0.1+	0.7-
920404	809	0.5-	1.0-	920423	809	1.2+	0.5+	920502	691	0.2-	0.1-
920404	809	0.7-	0.4-	920425	809	0.2+	1.0+	920502	691	0.2-	0.0
920404	809	0.5-	0.9-	920425	809	0.8+	1.3+				
920406	809	0.5+	0.5+	920425	809	0.8+	0.9+				

1992 JE
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	44.98866	(2000.0)	P	Q
n	0.30404300	Peri. 109.46491	+0.54986445	+0.83488947
a	2.1903459	Node 193.97456	-0.79953234	+0.51757297
e	0.4630335	Incl. 5.86360	-0.24165495	+0.18729064
P	3.24	H 16.0	G 0.15	

From 53 observations 1992 May 2-Sept. 6, mean residual 0".80.

1992 LR
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	68.24960	(2000.0)	P	Q
n	0.39777051	Peri. 67.73882	+0.51428044	+0.85715555
a	1.8311095	Node 233.24143	-0.79927807	+0.46707687
e	0.4090911	Incl. 2.02318	-0.31091831	+0.21707962
P	2.48	H 18.0	G 0.15	

From 126 observations 1992 May 21-Sept. 6, mean residual 0".67.

1992 ME
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	56.09299	(2000.0)	P	Q
n	0.28264191	Peri. 134.11929	-0.20924338	+0.91197526
a	2.2995614	Node 120.59950	-0.97264243	-0.15686198
e	0.2521951	Incl. 24.20232	-0.10091535	-0.37907183
P	3.49	H 14.0	G 0.15	

From 26 observations 1992 June 21-Sept. 5, mean residual 0".91.

1992 NA
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M	32.18114	(2000.0)	P	Q
n	0.26677144	Peri. 7.86522	+0.99868446	+0.04116906
a	2.3898822	Node 349.62681	-0.05118142	+0.83672963
e	0.5611948	Incl. 9.77453	+0.00313169	+0.54606651
P	3.69	H 16.5	G 0.15	

From 49 observations 1992 July 1-Sept. 20, mean residual 0".56.

1992 OF = 1969 TJ6
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M 35.68836		(2000.0)	P	Q
n 0.25687401	Peri.	281.46832	+0.98284780	+0.17447077
a 2.4508831	Node	68.50603	-0.13400951	+0.89825529
e 0.3250238	Incl.	3.68188	-0.12669515	+0.40335764
P 3.84	H 15.0	G 0.15		

Residuals in seconds of arc

691015 095	0.0	0.9-	920809 413	0.1+	0.2-	920821 413	0.2+	0.2-
691017 095	0.6+	0.3-	920809 413	0.2+	0.2-	920822 413	0.0	0.1-
920728 413	0.4+	0.4-	920820 413	0.3+	0.5+	920822 413	0.1-	0.2-
920728 413	1.3-	0.5-	920820 413	0.2+	0.5+	920905 413	0.7-	0.9+
920729 413	1.0+	0.6-	920821 413	0.2+	0.3-	920905 413	0.8-	0.9+
920730 413	0.5+	0.3+	920821 413	0.2+	0.4-	920906 413	0.2-	0.7+
920802 413	0.6-	0.5-	920821 413	0.1+	0.3-	920906 413	0.2-	0.6+

1992 OM
Epoch 1992 Aug. 6.0 TT = JDT 2448840.5 Williams

M 7.27688		(2000.0)	P	Q
n 0.30326819	Peri.	346.80893	+0.51233303	+0.85259346
a 2.1940750	Node	313.89795	-0.77438433	+0.40682112
e 0.4084317	Incl.	8.21428	-0.37127319	+0.32799538
P 3.25	H 16.0	G 0.15		

From 40 observations 1992 July 27-Sept. 6.

1992 OT = 1977 RV1 = 1991 EA3
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Williams

M 19.19432		(2000.0)	P	Q
n 0.25892908	Peri.	166.47740	+0.82801820	+0.55512832
a 2.4378978	Node	159.20694	-0.53288247	+0.82286456
e 0.2063885	Incl.	12.83452	-0.17441941	+0.12135265
P 3.81	H 13.0	G 0.15		

Residuals in seconds of arc

770908 675	0.2-	1.9-	910311 809	0.3-	0.6-	920726 675	0.2+	1.7+
770908 095	(4.9-	9.1+)	910313 809	0.1-	0.9-	920728 675	0.1+	1.1-
770909 675	0.7+	1.5-	910313 809	0.3+	0.8-	920728 675	0.1-	0.1-
910311 809	0.5-	0.6-	910313 809	0.4+	0.7-	920829 675	0.2+	0.3-
910311 809	0.5-	0.7-	920726 675	1.0+	0.7-	920829 675	1.5-	1.0+

1992 PD2 = 1987 SN19
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Ichikawa

M 47.32541		(2000.0)	P	Q
n 0.18920475	Peri.	85.95537	+0.37724269	+0.92451549
a 3.0050246	Node	206.41380	-0.89081111	+0.34617285
e 0.2026849	Incl.	7.02383	-0.25326571	+0.15948501
P 5.21	H 12.4	G 0.15		

Residuals in seconds of arc

870917 095	0.4-	0.5+	920731 675	0.1+	0.1+	920806 675	0.4-	0.6-
870923 095	0.5+	0.4-	920802 675	0.1+	0.0	920806 675	0.3-	0.3+
920731 675	0.2+	0.1+	920802 675	0.3+	0.1+			

1992 PF2 = 1976 YM3 = 1982 SU10
Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M 90.76943		(2000.0)	P	Q
n 0.28888108	Peri.	49.70410	-0.17729336	+0.98315030
a 2.2663309	Node	210.17149	-0.92769479	-0.18205455
e 0.1527054	Incl.	5.08266	-0.32855660	-0.01648106
P 3.41	H 13.4	G 0.15		

Residuals in seconds of arc

761216	095	0.9-	0.6-		920731	675	0.1-	0.4-		920802	675	0.0	0.2-
761220	095	0.9+	0.6+		920731	675	0.3-	0.1+		920806	675	0.1+	0.3+
820926	095	0.0	0.1+		920802	675	0.3-	0.1-		920806	675	0.7+	0.1+

1992 PJ2 = 1988 JZ

Epoch 1993 Jan. 13.0 TT = JDT 2449000.5 Nakano

M	53.81908	(2000.0)	P	Q	
n	0.26267967	Peri.	82.89136	+0.41939361	+0.90631989
a	2.4146364	Node	212.06430	-0.86671220	+0.38274981
e	0.3175934	Incl.	5.61005	-0.27003510	+0.17912798
P	3.75	H	14.3	G 0.15	

Residuals in seconds of arc

880509	046	0.9+	0.9+		920731	675	0.3-	0.0		920806	675	0.0	0.7-
880509	046	0.9-	0.2-		920731	675	0.0	0.3+		920806	675	0.0	0.0
880512	046	1.1-	1.3+		920802	675	0.1+	0.4+					
880512	046	1.1+	2.1-		920802	675	0.3+	0.0					

1992 QN

Epoch 1992 Aug. 26.0 TT = JDT 2448860.5 Williams

M	99.99311	(2000.0)	P	Q	
n	0.75802864	Peri.	202.12526	-0.94950181	+0.31355573
a	1.1912758	Node	356.09503	-0.25703950	-0.79810910
e	0.3599686	Incl.	9.60512	-0.17993615	-0.51449457
P	1.30	H	16.5	G 0.15	

From 23 observations 1992 Aug. 29-Sept. 22.

1992 QB1

Epoch 1992 Aug. 26.0 TT = JDT 2448860.5 Marsden

M	199.70335	(2000.0)	P	Q	
n	0.00711638	Peri.	175.04184	-0.99573762	-0.09222980
a	26.7688662	Node	359.66504	+0.08142528	-0.87653005
e	0.6823190	Incl.	4.88175	+0.04331868	-0.47242856
P	138.50	H	7.0	G 0.15	

From 12 observations 1992 Aug. 30-Sept. 27. Eccentricity assumed.

1992 SL

Epoch 1992 Sept. 15.0 TT = JDT 2448880.5 Williams

M	4.61081	(2000.0)	P	Q	
n	0.47633929	Peri.	344.54549	+0.96866345	+0.24836127
a	1.6237722	Node	1.08575	-0.20938960	+0.82261058
e	0.3279636	Incl.	8.47644	-0.13359311	+0.51149634
P	2.07	H	17.5	G 0.15	

From 18 observations 1992 Sept. 24-Oct. 2.

1992 ST

Epoch 1992 Sept. 15.0 TT = JDT 2448880.5 Williams

M	336.43175	(2000.0)	P	Q	
n	0.25273928	Peri.	32.94029	+0.46098235	-0.88433031
a	2.4775412	Node	29.80277	+0.77865673	+0.36316232
e	0.4247104	Incl.	8.54611	+0.42566297	+0.29338205
P	3.90	H	14.0	G 0.15	

From 6 observations 1992 Sept. 23-25.

1992 SY
Epoch 1992 Sept. 15.0 TT = JDT 2448880.5 Marsden

M	302.66336	(2000.0)	P	Q
n	0.31705423	Peri. 113.47488	-0.49729279	-0.86746257
a	2.1300036	Node 6.40307	+0.74124784	-0.43346968
e	0.5195611	Incl. 7.44064	+0.45083426	-0.24415718
P	3.11	H 18.0	G 0.15	

From 15 observations 1992 Sept. 27-Oct. 2.

1992 SZ
Epoch 1992 Sept. 15.0 TT = JDT 2448880.5 Marsden

M	10.64376	(2000.0)	P	Q
n	0.30930134	Peri. 314.53541	+0.75385257	+0.65692519
a	2.1654501	Node 4.45253	-0.54803887	+0.63914586
e	0.4576263	Incl. 9.24600	-0.36243578	+0.39992732
P	3.19	H 20.0	G 0.15	

From 14 observations 1992 Sept. 28-Oct. 3.

* * * * *

EPHEMERIDES.

Periodic Comet Swift-Tuttle (1992t) Elements MPC 20908

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1
1992	10 05	12 44.90	+59 16.6	1.609	1.477	64.1	37.5	8.1
1992	10 10	13 25.80	+58 42.5	1.503	1.420	65.6	39.8	7.7
1992	10 15	14 10.20	+57 17.0	1.406	1.363	66.6	42.2	7.3
1992	10 20	14 55.97	+54 45.1	1.321	1.309	67.1	44.5	6.9
1992	10 25	15 40.47	+50 57.0	1.252	1.256	66.8	46.7	6.5
1992	10 30	16 21.45	+45 53.3	1.201	1.205	65.9	48.7	6.1
1992	11 04	16 57.69	+39 46.2	1.172	1.158	64.1	50.4	5.8
1992	11 09	17 28.97	+32 56.9	1.167	1.114	61.5	51.4	5.5
1992	11 14	17 55.67	+25 51.2	1.184	1.074	58.4	51.7	5.3
1992	11 19	18 18.44	+18 52.7	1.223	1.039	54.8	51.0	5.2
1992	11 24	18 37.97	+12 18.4	1.279	1.009	50.9	49.4	5.1
1992	11 29	18 54.86	+06 17.7	1.349	0.986	46.8	46.8	5.1
1992	12 04	19 09.64	+00 53.2	1.429	0.969	42.6	43.5	5.1
1992	12 09	19 22.73	-03 56.5	1.513	0.960	38.3	39.5	5.1
1992	12 14	19 34.49	-08 15.0	1.600	0.959	34.1	35.1	5.2
1992	12 19	19 45.23	-12 06.3	1.685	0.965	29.9	30.5	5.4
1992	12 24	19 55.19	-15 34.5	1.768	0.979	25.7	25.8	5.6

Periodic Comet Ciffreo (1992s) Elements MPC 20908

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m2
1992	10 05	23 38.05	-24 28.0	1.088	2.000	146.6	16.0	18.6
1992	10 15	23 30.86	-23 25.0	1.095	1.954	138.1	19.9	18.6
1992	10 25	23 26.60	-21 44.7	1.118	1.912	129.5	23.6	18.8
1992	11 04	23 25.93	-19 32.6	1.155	1.872	121.3	26.9	18.9
1992	11 14	23 28.98	-16 55.4	1.201	1.836	113.5	29.6	19.0
1992	11 24	23 35.51	-13 59.2	1.256	1.804	106.5	31.7	19.1
1992	12 04	23 45.17	-10 48.6	1.316	1.776	100.0	33.1	19.2
1992	12 14	23 57.52	-07 27.7	1.381	1.752	94.1	34.1	19.3
1992	12 24	00 12.16	-03 59.7	1.450	1.733	88.7	34.6	19.4
1993	01 03	00 28.80	-00 27.6	1.523	1.720	83.7	34.6	19.5
1993	01 13	00 47.14	+03 05.7	1.598	1.712	79.1	34.4	19.6
1993	01 23	01 06.99	+06 37.2	1.677	1.709	74.9	33.8	19.7
1993	02 02	01 28.21	+10 04.0	1.759	1.711	70.9	33.0	19.8
1993	02 12	01 50.67	+13 23.1	1.844	1.720	67.1	31.9	19.9

1992 QB1 a,e,i = 26.77, 0.68, 5 Elements MPC 20935

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
1992	10 05	23 58.58	-00 07.9	43.663	44.640	167.5	0.3	23.5
1992	10 15	23 57.86	-00 12.5	43.715	44.637	157.4	0.5	23.6
1992	10 25	23 57.20	-00 16.7	43.795	44.635	147.3	0.7	23.6
1992	11 04	23 56.62	-00 20.4	43.900	44.632	137.2	0.9	23.6
1992	11 14	23 56.14	-00 23.4	44.027	44.629	127.0	1.0	23.6
1992	11 24	23 55.77	-00 25.6	44.172	44.626	116.8	1.1	23.6
1992	12 04	23 55.54	-00 27.1	44.332	44.623	106.6	1.2	23.7
1992	12 14	23 55.45	-00 27.6	44.499	44.620	96.4	1.3	23.7
1992	12 24	23 55.50	-00 27.1	44.671	44.617	86.3	1.3	23.7

Comet Helin-Lawrence (1992q) Elements MPC 20909

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1
1992	10 05	01 18.72	-34 13.3	1.909	2.753	140.2	13.5	14.3
1992	10 15	00 57.05	-39 51.1	1.916	2.681	131.3	16.2	14.2
1992	10 25	00 33.13	-44 26.0	1.965	2.611	120.2	19.2	14.1
1992	11 04	00 09.22	-47 47.7	2.046	2.543	108.6	21.7	14.1
1992	11 14	23 47.64	-50 02.2	2.147	2.478	97.5	23.3	14.1
1992	11 24	23 30.02	-51 24.6	2.255	2.415	87.1	24.1	14.1
1992	12 04	23 17.13	-52 11.6	2.363	2.357	77.6	24.1	14.1
1992	12 14	23 08.95	-52 37.9	2.461	2.302	69.1	23.6	14.1
1992	12 24	23 05.06	-52 54.1	2.544	2.251	61.7	22.6	14.1
1993	01 03	23 04.97	-53 08.0	2.607	2.204	55.5	21.6	14.0
1993	01 13	23 08.16	-53 25.1	2.647	2.163	50.7	20.6	14.0
1993	01 23	23 14.31	-53 49.6	2.663	2.127	47.6	20.0	13.9
1993	02 02	23 23.23	-54 24.9	2.654	2.097	46.3	19.9	13.8
1993	02 12	23 34.91	-55 14.3	2.619	2.073	46.9	20.3	13.8

1992 ST a,e,i = 2.48, 0.42, 9 Elements MPC 20935

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
1992	10 05	01 28.82	+03 10.3	0.583	1.576	168.8	7.1	14.3
1992	10 15	01 20.06	+04 34.9	0.544	1.540	176.0	2.6	13.9
1992	10 25	01 10.28	+06 18.3	0.524	1.509	166.6	8.8	14.1
1992	11 04	01 01.93	+08 20.4	0.521	1.481	155.5	16.1	14.3
1992	11 14	00 57.27	+10 38.4	0.533	1.459	145.1	22.8	14.5
1992	11 24	00 57.61	+13 07.6	0.559	1.442	135.9	28.5	14.8
1992	12 04	01 03.43	+15 44.2	0.595	1.431	128.0	32.9	15.0
1992	12 14	01 14.51	+18 23.9	0.640	1.426	121.3	36.1	15.3
1992	12 24	01 30.24	+21 02.3	0.692	1.427	115.6	38.4	15.5

1992 SL a,e,i = 1.62, 0.33, 8 Elements MPC 20935

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
1992	10 05	01 35.60	+27 28.7	0.138	1.126	154.3	22.7	14.5
1992	10 15	01 27.97	+33 51.3	0.169	1.152	154.7	21.7	15.0
1992	10 25	01 21.88	+36 51.8	0.207	1.184	153.9	21.7	15.5
1992	11 04	01 19.84	+37 43.8	0.252	1.220	151.8	22.6	16.0
1992	11 14	01 22.78	+37 25.7	0.306	1.260	148.3	24.4	16.6
1992	11 24	01 30.23	+36 35.2	0.369	1.303	143.8	26.6	17.1
1992	12 04	01 41.56	+35 36.1	0.441	1.348	138.6	28.9	17.6
1992	12 14	01 55.90	+34 41.5	0.522	1.394	133.0	31.1	18.1
1992	12 24	02 12.46	+33 56.5	0.613	1.441	127.3	32.9	18.6
1993	01 03	02 30.76	+33 22.6	0.714	1.487	121.7	34.2	19.1
1993	01 13	02 50.36	+32 58.7	0.822	1.534	116.0	35.2	19.5

Periodic Comet Brewington (1992p) Elements MPC 20908

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m2
1992	10 05	08 42.17	+34 37.4	2.173	2.044	69.2	27.2	16.5
1992	10 15	08 59.82	+33 56.1	2.133	2.108	75.0	27.2	16.5

1992	10	25	09	14.79	+33	20.3	2.087	2.173	81.4	26.9	16.5
1992	11	04	09	26.93	+32	53.0	2.036	2.240	88.4	26.3	16.5
1992	11	14	09	36.05	+32	36.6	1.982	2.308	96.1	25.2	16.5
1992	11	24	09	41.94	+32	32.5	1.928	2.376	104.5	23.7	16.4
1992	12	04	09	44.35	+32	40.8	1.878	2.446	113.6	21.7	16.4
1992	12	14	09	43.12	+32	59.5	1.835	2.516	123.5	19.1	16.3
1992	12	24	09	38.23	+33	24.8	1.805	2.585	133.8	15.9	16.2
1993	01	03	09	29.97	+33	50.4	1.793	2.656	144.5	12.4	16.1
1993	01	13	09	19.08	+34	08.7	1.804	2.726	154.6	8.9	16.1
1993	01	23	09	06.70	+34	13.4	1.842	2.796	162.2	6.2	16.0
1993	02	02	08	54.24	+34	00.3	1.909	2.865	162.7	5.9	16.2
1993	02	12	08	43.05	+33	29.5	2.005	2.935	156.0	7.9	16.4

(5145) Pholus a,e,i = 20.47, 0.58, 25 Elements MPC 19850

Date		TT	R. A. (2000)		Decl.		Delta	r	Elong.	Phase	V
1992	10	25	09	29.35	+20	40.0	9.083	8.859	73.9	6.2	17.3
1992	11	04	09	32.23	+20	44.8	8.930	8.868	83.3	6.4	17.3
1992	11	14	09	34.43	+20	53.4	8.773	8.877	92.8	6.4	17.2
1992	11	24	09	35.90	+21	06.0	8.619	8.886	102.6	6.2	17.2
1992	12	04	09	36.61	+21	22.7	8.471	8.896	112.6	5.9	17.2
1992	12	14	09	36.55	+21	43.1	8.334	8.905	122.7	5.3	17.1
1992	12	24	09	35.74	+22	06.8	8.214	8.915	133.0	4.6	17.0
1993	01	03	09	34.24	+22	33.1	8.116	8.925	143.5	3.8	17.0
1993	01	13	09	32.14	+23	01.0	8.042	8.935	153.8	2.8	16.9
1993	01	23	09	29.58	+23	29.4	7.996	8.945	163.7	1.8	16.8
1993	02	02	09	26.71	+23	57.1	7.981	8.956	171.0	1.0	16.7
1993	02	12	09	23.73	+24	23.1	7.997	8.966	168.4	1.3	16.8
1993	02	22	09	20.83	+24	46.2	8.044	8.977	159.5	2.2	16.8
1993	03	04	09	18.19	+25	05.8	8.120	8.988	149.5	3.2	16.9
1993	03	14	09	16.00	+25	21.4	8.222	9.000	139.3	4.1	17.0
1993	03	24	09	14.38	+25	32.6	8.348	9.011	129.2	4.9	17.1
1993	04	03	09	13.42	+25	39.4	8.492	9.023	119.3	5.5	17.2
1993	04	13	09	13.20	+25	42.1	8.650	9.035	109.5	6.0	17.2
1993	04	23	09	13.73	+25	40.9	8.818	9.047	100.0	6.3	17.3
1993	05	03	09	15.01	+25	36.0	8.990	9.059	90.7	6.4	17.3
1993	05	13	09	17.00	+25	28.0	9.163	9.071	81.6	6.3	17.4

Periodic Comet Smirnova-Chernykh Elements MPC 14593

Date		TT	R. A. (2000)		Decl.		Delta	r	Elong.	Phase	m2
1992	11	04	12	42.29	+01	11.9	4.376	3.586	33.1	8.7	18.8
1992	11	14	12	53.79	+00	03.5	4.291	3.589	39.9	10.2	18.7
1992	11	24	13	04.89	-01	00.3	4.193	3.593	47.0	11.6	18.7
1992	12	04	13	15.48	-01	58.7	4.083	3.596	54.2	12.8	18.6
1992	12	14	13	25.45	-02	51.1	3.962	3.601	61.7	13.9	18.6
1992	12	24	13	34.65	-03	36.6	3.832	3.605	69.4	14.8	18.5
1993	01	03	13	42.94	-04	14.6	3.695	3.610	77.4	15.4	18.4
1993	01	13	13	50.15	-04	44.5	3.554	3.615	85.7	15.7	18.3
1993	01	23	13	56.09	-05	05.8	3.412	3.620	94.3	15.7	18.3
1993	02	02	14	00.58	-05	18.0	3.271	3.626	103.2	15.3	18.2
1993	02	12	14	03.46	-05	21.1	3.137	3.632	112.6	14.5	18.1
1993	02	22	14	04.58	-05	15.0	3.012	3.638	122.4	13.3	18.0
1993	03	04	14	03.88	-05	00.5	2.901	3.645	132.5	11.6	17.9
1993	03	14	14	01.41	-04	38.7	2.808	3.652	143.0	9.4	17.9
1993	03	24	13	57.34	-04	11.5	2.738	3.659	153.7	6.9	17.8
1993	04	03	13	52.01	-03	41.4	2.694	3.666	164.2	4.2	17.8
1993	04	13	13	45.90	-03	11.7	2.678	3.674	172.3	2.1	17.8
1993	04	23	13	39.56	-02	45.5	2.691	3.682	168.7	3.1	17.8
1993	05	03	13	33.60	-02	25.9	2.732	3.690	158.8	5.7	17.9
1993	05	13	13	28.53	-02	14.9	2.800	3.698	148.4	8.2	17.9

1993 05 23	13 24.72	-02 14.0	2.892	3.707	138.1	10.5	18.0
1993 06 02	13 22.44	-02 23.5	3.003	3.716	128.1	12.4	18.1
1993 06 12	13 21.78	-02 43.2	3.130	3.725	118.6	13.8	18.2
1993 06 22	13 22.73	-03 12.2	3.269	3.734	109.5	14.9	18.3
1993 07 02	13 25.24	-03 49.4	3.416	3.744	100.9	15.5	18.4
1993 07 12	13 29.17	-04 33.8	3.568	3.753	92.6	15.7	18.5
1993 07 22	13 34.39	-05 24.0	3.721	3.763	84.6	15.6	18.6
1993 08 01	13 40.78	-06 18.9	3.873	3.773	76.8	15.2	18.7
1993 08 11	13 48.17	-07 17.6	4.021	3.784	69.3	14.5	18.8
1993 08 21	13 56.48	-08 18.9	4.162	3.794	62.0	13.6	18.9
1993 08 31	14 05.57	-09 22.0	4.295	3.805	54.9	12.5	19.0
1993 09 10	14 15.36	-10 25.9	4.418	3.815	47.8	11.3	19.0
1993 09 20	14 25.76	-11 30.1	4.529	3.826	40.8	9.9	19.1
1993 09 30	14 36.68	-12 33.6	4.627	3.837	33.9	8.4	19.2

1991 JW a,e,i = 1.04, 0.12, 9 Elements MPC 20023

Date TT	R. A. (2000)	Decl.	Delta	r	Variation		V
1992 11 14	20 31.08	-28 56.2	0.202	0.944	+0.93	+11.1	19.4
1992 11 24	21 24.55	-17 32.0	0.184	0.959	+0.02	-39.6	19.1
1992 12 04	22 14.65	-03 54.0	0.178	0.977	-0.84	-100.9	18.8
1992 12 14	23 01.91	+09 46.1	0.185	0.996	-1.65	-147.3	18.7
1992 12 24	23 47.56	+21 30.4	0.203	1.016	-2.46	-164.6	18.7
1993 01 03	00 32.92	+30 35.2	0.229	1.036	-3.30	-159.0	18.8
1993 01 13	01 18.69	+37 09.6	0.260	1.056	-4.14	-141.9	19.1
1993 01 23	02 05.22	+41 38.6	0.295	1.075	-4.90	-120.7	19.3
1993 02 02	02 52.47	+44 27.2	0.332	1.092	-5.50	-99.2	19.5
1993 02 12	03 39.72	+45 53.7	0.370	1.109	-5.85	-79.0	19.8
1993 02 22	04 26.12	+46 11.4	0.410	1.123	-5.89	-60.9	20.0

Comet Spacewatch (1992h) Elements MPC 20310

Date TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m2
1992 11 14	13 31.84	+05 29.3	4.928	4.161	35.4	7.9	21.2
1992 11 24	13 37.74	+06 17.2	4.752	4.100	44.0	9.6	21.0
1992 12 04	13 43.31	+07 18.7	4.556	4.040	53.0	11.2	20.9
1992 12 14	13 48.39	+08 36.5	4.344	3.980	62.1	12.6	20.7
1992 12 24	13 52.79	+10 14.0	4.121	3.922	71.5	13.8	20.5
1993 01 03	13 56.26	+12 14.9	3.892	3.864	81.1	14.6	20.3
1993 01 13	13 58.49	+14 43.0	3.663	3.808	90.9	15.0	20.1
1993 01 23	13 59.15	+17 41.7	3.441	3.753	100.9	14.9	19.9
1993 02 02	13 57.79	+21 13.3	3.233	3.700	110.8	14.4	19.7
1993 02 12	13 53.89	+25 17.8	3.049	3.647	120.2	13.5	19.5
1993 02 22	13 46.88	+29 50.8	2.897	3.597	128.4	12.4	19.4
1993 03 04	13 36.15	+34 42.0	2.784	3.547	134.2	11.6	19.2
1993 03 14	13 21.26	+39 34.5	2.716	3.500	136.0	11.4	19.1
1993 03 24	13 02.09	+44 07.3	2.695	3.454	133.2	12.1	19.0
1993 04 03	12 39.23	+47 59.9	2.718	3.410	126.7	13.6	19.0
1993 04 13	12 14.12	+50 58.3	2.779	3.369	118.0	15.2	19.0
1993 04 23	11 48.84	+52 58.9	2.871	3.329	108.5	16.6	19.0
1993 05 03	11 25.56	+54 07.6	2.983	3.292	98.8	17.6	19.0
1993 05 13	11 05.82	+54 36.2	3.107	3.257	89.4	18.1	19.1
1993 05 23	10 50.32	+54 37.4	3.235	3.224	80.4	18.0	19.1
1993 06 02	10 39.06	+54 22.5	3.358	3.194	72.0	17.6	19.2
1993 06 12	10 31.61	+54 00.1	3.473	3.166	64.2	16.8	19.2
1993 06 22	10 27.43	+53 36.0	3.573	3.142	57.3	15.8	19.2
1993 07 02	10 25.96	+53 14.4	3.654	3.120	51.2	14.7	19.3
1993 07 12	10 26.69	+52 58.4	3.716	3.101	46.2	13.7	19.3
1993 07 22	10 29.24	+52 50.1	3.754	3.085	42.6	12.9	19.3
1993 08 01	10 33.28	+52 51.6	3.769	3.072	40.7	12.4	19.3

1990 SB a,e,i = 2.39, 0.55, 18 Elements MPC 20148

Date TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
1992 11 14	09 01.26	-02 03.6	3.173	3.379	93.4	17.0	19.6
1992 11 24	09 03.43	-03 02.4	3.001	3.350	102.1	16.7	19.4
1992 12 04	09 03.69	-03 55.2	2.834	3.320	111.2	16.1	19.2
1992 12 14	09 01.85	-04 39.0	2.676	3.288	120.6	14.9	19.1
1992 12 24	08 57.78	-05 10.6	2.531	3.255	130.3	13.3	18.9
1993 01 03	08 51.52	-05 26.0	2.405	3.221	139.9	11.3	18.6
1993 01 13	08 43.31	-05 22.1	2.302	3.185	148.8	9.2	18.4
1993 01 23	08 33.64	-04 57.0	2.226	3.148	155.4	7.5	18.3
1993 02 02	08 23.29	-04 10.6	2.179	3.109	156.8	7.2	18.2
1993 02 12	08 13.18	-03 05.6	2.162	3.069	152.1	8.7	18.2
1993 02 22	08 04.20	-01 46.8	2.173	3.028	143.8	11.1	18.3
1993 03 04	07 57.11	-00 20.4	2.209	2.985	134.0	13.8	18.4
1993 03 14	07 52.38	+01 07.6	2.266	2.941	124.1	16.3	18.5
1993 03 24	07 50.24	+02 32.2	2.338	2.895	114.3	18.3	18.6
1993 04 03	07 50.70	+03 49.6	2.421	2.847	104.9	19.8	18.7
1993 04 13	07 53.61	+04 57.5	2.509	2.799	96.1	20.9	18.8
1993 04 23	07 58.76	+05 54.5	2.598	2.748	87.7	21.4	18.8
1993 05 03	08 05.92	+06 39.9	2.685	2.697	79.8	21.6	18.8
1993 05 13	08 14.85	+07 13.5	2.767	2.643	72.4	21.4	18.9

1988 JB1 a,e,i = 3.14, 0.40, 20 Elements MPC 13590

Date TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
1992 11 14	09 34.48	+04 49.9	2.926	3.051	87.7	18.9	19.7
1992 11 24	09 41.29	+04 22.3	2.745	3.010	95.9	19.0	19.6
1992 12 04	09 46.60	+04 04.2	2.565	2.970	104.5	18.7	19.4
1992 12 14	09 50.17	+03 58.6	2.391	2.929	113.7	17.9	19.2
1992 12 24	09 51.76	+04 08.6	2.226	2.887	123.5	16.5	18.9
1993 01 03	09 51.13	+04 37.6	2.075	2.846	133.8	14.4	18.7
1993 01 13	09 48.20	+05 28.0	1.942	2.804	144.9	11.7	18.4
1993 01 23	09 43.03	+06 40.9	1.831	2.762	156.4	8.2	18.1
1993 02 02	09 35.98	+08 14.7	1.747	2.719	168.2	4.2	17.8
1993 02 12	09 27.75	+10 04.5	1.692	2.677	174.8	1.9	17.5
1993 02 22	09 19.27	+12 02.6	1.667	2.634	164.6	5.7	17.7
1993 03 04	09 11.62	+13 59.9	1.672	2.592	152.5	10.2	17.8
1993 03 14	09 05.80	+15 48.1	1.701	2.549	140.7	14.3	18.0
1993 03 24	09 02.48	+17 21.6	1.751	2.507	129.6	17.9	18.1
1993 04 03	09 02.06	+18 37.1	1.817	2.465	119.2	20.7	18.3
1993 04 13	09 04.62	+19 33.8	1.894	2.423	109.7	22.9	18.4
1993 04 23	09 10.01	+20 12.1	1.977	2.382	100.9	24.5	18.5
1993 05 03	09 17.99	+20 32.7	2.062	2.341	92.9	25.5	18.6
1993 05 13	09 28.26	+20 36.8	2.147	2.301	85.5	26.0	18.7

1992 10 25	04 11.10	-03 00.3	1.847	2.714	143.9	12.5	17.7
- 5.78 -1.12	- 59.1 + 4.9	1991 RQ11	20930	- 8.97 +0.18	-4.5 +12.1		
1992 11 24	03 46.56	-04 49.2	1.781	2.706	154.4	9.1	17.5

1992 11 24	05 19.83	+20 02.1	2.006	2.958	161.3	6.2	17.8
- 8.13 -0.71	-6.1 - 0.1	1991 SC2	20931	- 7.99 +0.74	-2.9 + 1.4		
1992 12 24	04 52.98	+19 45.9	2.028	2.977	161.5	6.0	17.9

1992 11 24	06 36.01	+30 51.6	1.846	2.705	143.6	12.5	16.1
- 5.32 -1.43	- 14.3 - 2.9	1991 PH12	20930	- 9.91 +0.09	- 39.3 - 4.4		
1992 12 24	06 10.38	+29 34.1	1.734	2.714	173.8	2.2	15.5

1992 12 24	06 28.99	+24 55.9	2.280	3.262	175.6	1.3	17.8
- 9.00 -0.10	+ 10.1 - 1.6	1991 RQ14	20931	- 5.81 +1.04	+0.6 - 1.1		
1993 01 23	06 04.69	+25 10.9	2.437	3.312	147.9	9.1	18.4

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1992 12 24    07 08.51   +20 45.0    1.433    2.400   166.4     5.5    16.1
- 9.94 -0.82  + 48.0 + 1.9   1991 RA30   20931   - 8.49 +1.24  + 41.4 - 3.1
1993 01 23    06 37.05   +23 08.4    1.463    2.394   155.4     9.8    16.4

1992 12 24    07 54.99   +22 25.2    1.906    2.833   156.1     8.1    16.6
- 7.32 -0.97  + 32.7 + 1.6    (5338)     20801   - 8.75 +0.57  + 25.9 - 3.3
1993 01 23    07 28.04   +24 02.2    1.888    2.855   166.8     4.5    16.5

1992 12 24    07 57.08   +28 45.8    1.914    2.839   155.7     8.2    17.2
- 8.15 -1.05  + 31.5 - 1.4   1982 SL6    19017   - 9.63 +0.63    +6.1 - 5.8
1993 01 23    07 27.29   +29 50.4    1.900    2.858   163.9     5.5    17.1

1992 12 24    07 59.61   +14 17.3    1.301    2.221   152.8    11.7    17.3
- 8.64 -1.32  + 19.0 + 6.7   1985 TB3    17436   -10.29 +0.85  + 40.8 + 0.3
1993 01 23    07 27.19   +15 58.9    1.303    2.272   166.6     5.8    17.1

1992 12 24    07 48.94   +13 39.0    4.935    5.841   154.9     4.1    18.2
- 4.37 -0.34  + 15.1 + 2.0   5191 T-3    19523   - 4.92 +0.16  + 23.4 + 0.6
1993 01 23    07 34.09   +14 39.4    4.885    5.851   167.7     2.1    18.0

1992 12 24    08 02.53   +26 08.0    1.352    2.280   154.6    10.7    16.6
- 9.11 -1.43  + 32.6 - 0.2   1978 RV5    13684   -11.04 +0.90    +8.2 - 6.3
1993 01 23    07 27.98   +27 20.7    1.352    2.318   165.4     6.1    16.5

1992 12 24    07 58.84   +23 36.0    1.719    2.645   155.3     8.9    18.2
- 7.45 -1.12  + 25.0 + 1.2   1274 T-2    19882   - 9.32 +0.60  + 15.0 - 3.8
1993 01 23    07 30.50   +24 45.1    1.683    2.651   167.1     4.8    18.0

1992 12 24    08 00.79   +14 45.6    1.354    2.273   152.7    11.4    17.1
- 7.74 -1.40    -2.2 + 5.7   1991 RG     19312   -10.60 +0.63  + 21.6 + 1.8
1993 01 23    07 29.51   +15 21.9    1.271    2.241   166.9     5.7    16.7

1992 12 24    07 51.15   +23 01.0    4.699    5.617   157.0     3.9    17.2
- 4.70 -0.38  + 14.2 + 0.4   3108 T-3    15908   - 5.35 +0.18  + 11.5 - 1.2
1993 01 23    07 35.04   +23 42.4    4.649    5.617   168.4     2.0    17.0

1992 12 24    08 01.65   +21 29.1    1.889    2.808   154.4     8.7    18.1
- 8.63 -1.05  + 21.5 + 1.6   1980 RL2    19014   -10.22 +0.59  + 16.4 - 2.8
1993 01 23    07 30.34   +22 33.9    1.872    2.841   167.7     4.2    17.9

1992 12 24    07 58.88   +04 56.4    2.205    3.084   148.1     9.7    18.1
- 7.38 -0.82  - 15.7 + 6.9    (5308)     20788   - 8.69 +0.43  + 23.5 + 5.2
1993 01 23    07 32.47   +05 11.2    2.168    3.116   161.4     5.8    17.9

1992 12 24    08 06.59   +25 25.6    1.323    2.247   153.7    11.2    18.1
- 9.51 -1.47  + 32.5 + 0.2   1985 QP     19295   -11.44 +0.93    +9.5 - 6.2
1993 01 23    07 30.72   +26 40.5    1.337    2.305   166.3     5.8    17.9

1992 12 24    07 59.57   +06 20.3    1.361    2.261   148.8    13.0    17.4
- 6.23 -1.23    -3.9 +10.4   1989 EC3    15894   - 8.55 +0.59  + 52.0 + 6.5
1993 01 23    07 34.02   +07 39.7    1.306    2.268   163.5     7.1    17.1

1992 12 24    08 04.29   +08 35.4    2.069    2.956   149.1     9.8    17.6
- 8.14 -0.94  - 14.7 + 5.9   1987 KB     13606   - 9.82 +0.45  + 17.0 + 4.0
1993 01 23    07 34.78   +08 42.4    2.021    2.980   164.4     5.1    17.3

1992 12 24    08 05.89   +26 26.1    2.165    3.078   153.8     8.1    17.6
- 8.61 -0.99  + 20.3 - 0.6   1991 RN     19033   -10.25 +0.52    +2.7 - 4.4
1993 01 23    07 34.80   +27 07.7    2.144    3.111   166.8     4.1    17.4
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1992 12 24	08 04.13	+03 51.2	1.951	2.824	146.4	11.1	18.2	
- 7.60 -1.00	- 10.8 + 8.3	1991 SF1	19315	- 9.62 +0.42	+ 36.6 + 6.3			
1993 01 23	07 35.70	+04 33.5	1.877	2.827	161.4	6.4	17.9	
1992 12 24	08 04.14	+19 08.5	2.227	3.137	153.4	8.1	17.8	
- 7.50 -0.90	+1.0 + 2.0	1017 T-3	19882	- 9.15 +0.42	+4.2 - 0.7			
1993 01 23	07 36.73	+19 21.3	2.178	3.151	169.4	3.3	17.5	
1992 12 24	08 05.15	+10 45.0	1.521	2.423	150.0	11.7	16.8	
- 7.61 -1.19	-9.3 + 7.0	1980 TK6	18621	- 9.68 +0.60	+ 25.4 + 3.7			
1993 01 23	07 35.90	+11 15.3	1.492	2.459	166.3	5.4	16.6	
1992 12 24	08 03.13	+12 58.7	0.938	1.862	151.5	14.6	16.6	
- 5.66 -1.70	-4.4 + 9.3	1983 AW	18108	- 9.15 +0.77	+ 38.8 + 3.6			
1993 01 23	07 36.34	+14 00.7	0.884	1.858	167.9	6.4	16.2	
1992 12 24	08 07.30	+39 38.7	2.205	3.099	150.6	9.0	16.2	
- 8.00 -1.14	+ 32.0 - 5.0	(5024)	19489	-10.06 +0.55	- 16.5 - 9.4			
1993 01 23	07 37.08	+40 10.1	2.170	3.101	157.2	7.1	16.1	
1992 12 24	08 04.35	+10 56.4	2.461	3.351	150.3	8.4	18.2	
- 6.90 -0.78	+3.6 + 4.7	1986 RD	19297	- 8.43 +0.33	+ 25.4 + 2.2			
1993 01 23	07 39.30	+11 44.5	2.409	3.376	167.2	3.7	17.9	
1992 12 24	08 12.16	+32 43.5	1.504	2.417	151.8	11.1	18.4	
- 9.24 -1.37	+ 34.2 - 3.9	2012 P-L	15901	-10.87 +0.88	- 10.6 - 8.7			
1993 01 23	07 37.81	+33 27.8	1.559	2.517	162.9	6.6	18.4	
1992 12 24	08 09.92	+14 23.4	1.552	2.457	150.5	11.4	18.6	
- 7.39 -1.25	+ 17.5 + 6.0	2232 T-2	18833	- 9.96 +0.52	+ 38.6 + 0.5			
1993 01 23	07 40.62	+15 57.7	1.510	2.484	169.6	4.1	18.2	
1992 12 24	08 10.45	+25 38.0	1.835	2.747	152.8	9.4	17.6	
- 7.29 -1.21	+ 33.3 + 0.9	1981 EG1	14614	-10.09 +0.42	+ 18.4 - 5.1			
1993 01 23	07 41.37	+27 06.6	1.760	2.731	168.0	4.3	17.3	
1992 12 24	08 11.38	+29 47.5	1.665	2.578	152.4	10.2	16.6	
- 7.48 -1.30	+ 65.2 - 0.8	1987 VU	16026	-10.03 +0.58	+ 32.0 - 8.8			
1993 01 23	07 41.63	+32 28.0	1.670	2.631	164.2	5.8	16.5	
1992 12 24	08 13.65	+16 38.0	1.439	2.346	150.5	11.9	17.9	
- 8.15 -1.39	+ 17.3 + 5.2	1988 PL	19300	-10.96 +0.60	+ 30.8 - 0.8			
1993 01 23	07 41.31	+18 01.3	1.406	2.382	170.4	4.0	17.5	
1992 12 24	08 13.77	+09 54.2	1.441	2.333	147.8	13.0	18.4	
- 8.31 -1.31	-5.9 + 8.0	1985 SC3	19018	-10.75 +0.62	+ 32.4 + 3.8			
1993 01 23	07 41.61	+10 41.7	1.422	2.391	167.0	5.3	18.1	
1992 12 24	08 10.65	-12 37.5	2.034	2.804	133.6	14.7	17.1	
- 6.82 -1.02	- 56.1 +12.3	1990 FQ1	19503	- 9.35 +0.30	+ 30.6 +14.6			
1993 01 23	07 43.97	-13 20.2	1.928	2.798	145.9	11.4	16.9	
1992 12 24	08 10.32	+22 50.1	2.057	2.965	152.6	8.8	16.8	
- 6.84 -0.99	+ 10.8 + 1.1	1986 WN7	20633	- 8.77 +0.42	+5.1 - 2.6			
1993 01 23	07 44.31	+23 20.7	2.030	3.005	170.5	3.1	16.5	
1992 12 24	08 09.92	+12 58.5	2.408	3.296	150.0	8.6	17.5	
- 5.90 -0.85	+ 34.5 + 5.2	1989 GP6	16699	- 8.04 +0.23	+ 53.9 + 0.8			
1993 01 23	07 47.03	+15 19.3	2.313	3.288	170.8	2.7	17.1	

1992 12 24	08 17.30	+34 32.2	1.910	2.807	150.4	10.0	16.3
- 7.26 -1.26	+ 37.6 - 2.9	1986 VF5	19019	-10.04 +0.47		-2.1 - 8.8	
1993 01 23	07 48.15	+35 36.3	1.879	2.832	162.3	6.1	16.1
1992 12 24	08 20.17	+34 49.2	2.048	2.940	149.7	9.7	17.5
- 8.14 -1.25	+ 45.2 - 2.8	1981 EF28	19672	-10.97 +0.45		+5.0 - 9.0	
1993 01 23	07 48.35	+36 16.2	2.018	2.969	161.7	6.0	17.4
1992 12 24	08 25.88	+39 30.1	1.610	2.495	147.3	12.3	18.3
- 9.12 -1.59	+ 44.4 - 6.0	4017 P-L	6639	-12.03 +0.76		- 19.3 -12.3	
1993 01 23	07 49.79	+40 19.4	1.639	2.578	158.1	8.2	18.2
1992 12 24	08 19.21	+14 33.4	1.380	2.278	148.5	13.0	16.2
- 6.42 -1.45	- 10.7 + 5.8	1988 XZ	20016	-10.17 +0.41		+ 14.7 + 2.1	
1993 01 23	07 50.89	+14 46.2	1.301	2.279	171.3	3.7	15.6
1992 12 24	08 23.65	+29 07.9	1.619	2.518	149.8	11.3	18.3
- 8.48 -1.35	+ 32.0 - 1.3	4314 P-L	14629	-10.93 +0.64		+1.7 - 7.2	
1993 01 23	07 50.84	+30 09.4	1.652	2.621	167.2	4.8	18.1
1992 12 24	08 19.18	+19 15.4	2.296	3.186	149.9	8.9	17.4
- 6.23 -0.98	+ 17.5 + 2.8	1976 UB2	13480	- 8.86 +0.21		+ 22.0 - 1.3	
1993 01 23	07 54.37	+20 22.2	2.196	3.176	173.5	2.0	17.0
1992 12 24	08 24.84	+21 39.6	1.358	2.259	149.1	12.9	17.2
- 7.67 -1.52	+ 25.2 + 3.1	1988 VD3	14028	-10.94 +0.59		+ 20.1 - 4.1	
1993 01 23	07 53.02	+23 00.9	1.354	2.334	172.5	3.2	16.8
1992 12 24	08 27.10	+47 11.5	2.152	3.003	143.9	11.1	16.4
- 8.18 -1.53	+ 73.7 - 6.4	(5029)	19490	-12.04 +0.45		+5.2 -14.1	
1993 01 23	07 53.11	+49 24.0	2.139	3.029	149.5	9.5	16.4
1992 12 24	08 23.33	+13 23.1	1.607	2.491	147.1	12.4	17.8
- 6.26 -1.38	+ 10.7 + 6.6	1940 ED	9684	-10.52 +0.18		+ 39.1 + 2.0	
1993 01 23	07 55.27	+14 46.4	1.469	2.448	172.2	3.1	17.1
1992 12 24	08 21.34	+20 24.9	2.726	3.610	149.7	7.9	18.3
- 5.73 -0.85	+ 25.2 + 2.3	1990 SL9	20019	- 8.18 +0.12		+ 27.4 - 1.6	
1993 01 23	07 58.68	+21 51.0	2.605	3.586	174.1	1.6	17.9
1992 12 24	08 22.49	+19 49.7	2.644	3.526	149.3	8.2	18.3
- 6.03 -0.84	+ 20.7 + 2.3	1985 RV4	11515	- 8.19 +0.19		+ 22.8 - 1.5	
1993 01 23	07 59.26	+21 01.8	2.586	3.567	174.5	1.5	17.9
1992 12 24	08 27.42	+12 13.3	1.765	2.637	145.8	12.1	16.8
- 6.51 -1.30	+ 21.4 + 7.1	(5064)	19668	-10.57 +0.15		+ 51.3 + 2.0	
1993 01 23	07 59.14	+14 11.8	1.634	2.613	172.5	2.8	16.1
1992 12 24	08 15.44	+00 47.1	4.781	5.591	142.3	6.2	17.9
- 3.77 -0.41	+9.1 + 4.4	1988 RG1	18290	- 4.90 +0.06		+ 33.4 + 3.3	
1993 01 23	08 01.56	+01 52.6	4.653	5.596	161.7	3.2	17.7
1992 12 24	08 24.52	+08 49.1	2.276	3.132	144.9	10.4	17.9
- 6.00 -0.93	- 15.6 + 5.5	1986 TB7	19298	- 8.48 +0.19		+ 14.2 + 3.8	
1993 01 23	08 00.75	+08 50.1	2.196	3.166	168.2	3.6	17.6
1992 12 24	08 24.74	-10 40.2	2.377	3.130	132.8	13.3	17.1
- 5.91 -0.92	- 10.5 +11.3	1990 HC1	19304	- 8.53 +0.15		+ 62.0 +11.2	
1993 01 23	08 01.11	-09 22.9	2.257	3.152	150.7	8.8	16.9

1992 12 24	08 30.28	+25 25.5	1.765	2.653	148.3	11.2	17.0
- 6.95 -1.31	+8.3 + 0.6	1982 TK3	13687	-10.33 +0.34		-5.1 - 4.4	
1993 01 23	08 01.30	+25 39.6	1.716	2.694	172.2	2.8	16.6
1992 12 24	08 35.38	+33 48.1	1.504	2.389	146.9	13.0	16.5
- 7.83 -1.71	+8.2 - 3.3	1981 DT2	18806	-12.22 +0.48		- 37.0 - 9.7	
1993 01 23	08 01.27	+33 16.8	1.444	2.410	165.5	5.9	16.2
1992 12 24	08 27.00	+19 24.0	2.338	3.216	148.2	9.3	18.5
- 6.26 -0.94	+ 28.2 + 2.8	1991 PG16	20025	- 8.62 +0.23		+ 30.7 - 1.9	
1993 01 23	08 02.53	+21 01.1	2.316	3.298	175.3	1.4	18.1
1992 12 24	08 25.75	+08 48.7	2.038	2.897	144.6	11.3	17.0
- 5.39 -1.04	- 19.3 + 6.0	(5061)	19667	- 8.38 +0.16		+ 14.2 + 4.4	
1993 01 23	08 02.90	+08 43.9	1.933	2.904	168.4	3.9	16.5
1992 12 24	08 32.66	+23 53.3	1.873	2.755	147.6	11.0	18.3
- 7.22 -1.38	+ 24.2 + 2.1	1987 QT1	20500	-11.58 +0.14		+ 16.0 - 4.4	
1993 01 23	08 01.65	+25 05.7	1.740	2.720	172.7	2.6	17.7
1992 12 24	08 30.74	+21 01.7	1.789	2.673	147.7	11.4	17.6
- 6.77 -1.30	+ 10.7 + 2.7	1991 PQ11	19507	-10.41 +0.25		+ 10.9 - 2.4	
1993 01 23	08 02.11	+21 43.6	1.710	2.692	174.9	1.9	17.0
1992 12 24	08 25.58	+08 47.1	2.367	3.220	144.7	10.2	17.9
- 5.51 -0.88	+ 21.9 + 6.3	1985 PE	20143	- 7.88 +0.17		+ 50.2 + 2.4	
1993 01 23	08 03.57	+10 42.5	2.309	3.284	170.2	2.9	17.5
1992 12 24	08 32.36	+14 09.9	1.766	2.636	145.4	12.2	18.6
- 6.85 -1.28	-2.1 + 5.2	1991 PX14	20822	-10.51 +0.23		+ 19.2 + 1.4	
1993 01 23	08 03.54	+14 42.6	1.683	2.663	173.6	2.4	18.0
1992 12 24	08 21.49	-05 58.6	4.729	5.486	136.7	7.1	18.1
- 3.98 -0.44	- 25.0 + 4.9	1990 TV12	19867	- 5.24 +0.05		+6.1 + 5.0	
1993 01 23	08 06.77	-06 27.2	4.601	5.502	153.8	4.5	17.9
1992 12 24	08 31.73	+14 24.3	1.866	2.735	145.6	11.7	17.3
- 6.01 -1.24	+ 30.5 + 6.3	1991 TM	19035	- 9.95 +0.11		+ 52.6 + 0.4	
1993 01 23	08 05.30	+16 39.8	1.747	2.730	175.2	1.7	16.6
1992 12 24	08 36.11	+20 57.3	1.782	2.658	146.4	11.8	17.6
- 7.12 -1.33	+ 36.6 + 3.5	1988 XK1	14203	-10.86 +0.26		+ 35.6 - 3.7	
1993 01 23	08 06.21	+22 59.0	1.734	2.716	175.0	1.8	17.1
1992 12 24	08 36.23	+36 06.6	2.166	3.034	146.3	10.4	17.7
- 7.12 -1.36	+ 46.9 - 1.9	2045 T-2	15081	-11.37 +0.15		+8.6 - 9.7	
1993 01 23	08 05.69	+37 44.6	2.059	3.009	161.4	6.0	17.4
1992 12 24	08 39.24	+34 36.6	2.017	2.885	145.9	11.0	18.5
- 7.90 -1.38	+ 33.4 - 2.3	1981 EH11	11838	-11.65 +0.30		-5.0 - 9.0	
1993 01 23	08 06.80	+35 31.7	1.972	2.929	163.6	5.4	18.3
1992 12 24	08 36.91	+08 02.8	1.792	2.636	141.8	13.3	18.1
- 5.95 -1.29	-3.0 + 7.7	1991 RF14	19870	-10.21 +0.06		+ 38.5 + 4.9	
1993 01 23	08 10.20	+09 01.0	1.658	2.631	169.2	4.0	17.6
1992 12 24	08 35.79	+31 52.8	2.486	3.354	147.0	9.2	17.7
- 5.97 -1.08	+ 42.0 - 0.5	1985 TQ1	14195	- 9.27 +0.11		+ 18.6 - 6.6	
1993 01 23	08 10.73	+33 34.9	2.407	3.370	165.7	4.1	17.4

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1992 12 24    08 42.87   +37 27.6    1.383    2.259   144.7    14.6    15.8
- 6.16 -1.95  + 40.8 - 3.3   1943 DL     20008   -12.18 +0.30  - 17.5 -14.0
1993 01 23    08 11.19   +38 22.8    1.311    2.264   161.0     8.2    15.4

1992 12 24    08 45.05   +33 52.8    1.719    2.586   144.9    12.6    17.7
- 8.14 -1.54  + 42.1 - 2.2   1978 RN5    10025   -12.04 +0.42    -0.1 -10.0
1993 01 23    08 11.15   +35 10.1    1.734    2.694   164.1     5.7    17.5

1992 12 24    08 34.29   +20 11.4    2.766    3.628   146.7     8.6    17.1
- 5.19 -0.89  + 44.8 + 3.2   1983 HB1    18623    - 8.08 +0.02  + 48.8 - 2.0
1993 01 23    08 12.71   +22 41.3    2.649    3.631   176.2     1.0    16.6

1992 12 24    08 41.30   +27 31.4    1.903    2.773   146.0    11.5    18.0
- 6.64 -1.32  + 23.0 + 0.5   1991 PE10   20337   -10.48 +0.21    +4.9 - 5.8
1993 01 23    08 12.79   +28 25.0    1.851    2.827   170.8     3.2    17.6

1992 12 24    08 38.11   +12 17.1    1.415    2.281   143.4    14.9    16.7
- 4.52 -1.54  - 13.5 + 6.9   1982 FF2    19292   -10.13 -0.04  + 22.8 + 4.0
1993 01 23    08 13.37   +12 36.3    1.259    2.239   172.9     3.1    15.9

1992 12 24    08 33.07   -05 22.5    2.746    3.510   134.9    11.4    18.6
- 4.65 -0.82    -7.7 + 8.5   1977 EL5    17012    - 7.36 +0.01  + 46.4 + 8.4
1993 01 23    08 13.53   -04 24.5    2.578    3.501   156.0     6.6    18.3

1992 12 24    08 41.29   +20 43.4    2.066    2.927   145.2    11.1    18.1
- 6.59 -1.19  + 20.1 + 2.9   1991 PK15   20025   -10.18 +0.14  + 21.1 - 2.5
1993 01 23    08 13.69   +21 55.3    1.996    2.979   176.9     1.0    17.5

1992 12 24    08 39.28   +15 38.7    1.824    2.685   144.3    12.3    18.0
- 5.57 -1.30  + 31.1 + 6.1   1987 QF3    19020    - 9.94 +0.04  + 50.8 - 0.2
1993 01 23    08 13.57   +17 53.3    1.704    2.688   177.5     0.9    17.2

1992 12 24    08 33.09   +15 22.6    1.303    2.186   145.6    14.7    15.6
- 2.77 -1.50  + 21.5 + 7.8   1967 DA     13043    - 7.88 +0.06  + 51.0 + 0.8
1993 01 23    08 14.27   +17 24.4    1.196    2.179   177.3     1.2    14.8

1992 12 24    08 40.33   +23 41.0    1.781    2.653   145.9    12.0    16.5
- 5.26 -1.35  + 36.9 + 3.0    (5013)     19484    - 9.69 +0.08  + 31.9 - 4.6
1993 01 23    08 15.28   +25 38.2    1.690    2.671   173.7     2.3    15.9

1992 12 24    08 33.32   +38 45.5    4.938    5.781   146.2     5.4    17.2
- 4.47 -0.59  + 45.1 - 1.4   1990 VU1    18634    - 6.34 +0.01  + 25.9 - 4.6
1993 01 23    08 16.00   +40 37.9    4.876    5.805   158.8     3.5    17.1

1992 12 24    08 48.08   +23 58.5    1.631    2.496   144.2    13.3    17.3
- 6.73 -1.58  + 47.2 + 3.5   1985 TW3    19296   -12.00 +0.09  + 38.9 - 6.1
1993 01 23    08 16.90   +26 25.6    1.549    2.528   173.0     2.7    16.8

1992 12 24    08 41.53   +11 30.8    1.949    2.793   142.3    12.4    17.1
- 4.78 -1.18    +7.4 + 6.4    (5103)     19834    - 8.89 -0.02  + 37.5 + 2.7
1993 01 23    08 18.90   +12 45.0    1.812    2.792   173.3     2.4    16.5

1992 12 24    08 39.88   -05 44.8    1.525    2.314   133.4    18.0    16.7
- 3.95 -1.31    -4.4 +14.8   1981 QG1    10041    - 8.04 +0.11  + 84.8 +12.3
1993 01 23    08 19.28   -03 39.9    1.463    2.399   156.9     9.3    16.3

1992 12 24    08 46.11   +11 08.0    1.962    2.797   141.1    12.7    18.4
- 5.58 -1.23    +5.3 + 6.4   1114 T-1    19319    - 9.86 -0.02  + 35.5 + 2.8
1993 01 23    08 20.74   +12 15.8    1.831    2.810   172.8     2.5    17.8
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1992 12 24 08 43.35 +23 39.1 2.398 3.254 145.2 9.9 16.6
- 4.90 -1.07 + 54.2 + 3.1 1991 VK5 19683 - 8.67 -0.04 + 52.0 - 3.8
1993 01 23 08 21.11 +26 31.3 2.280 3.260 172.9 2.1 16.1

1992 12 24 08 48.45 +16 20.6 1.317 2.181 142.4 16.0 17.7
- 5.47 -1.66 + 14.3 + 6.8 1988 XR 14202 -10.69 +0.18 + 34.5 - 0.7
1993 01 23 08 20.82 +17 47.6 1.273 2.258 178.3 0.7 16.9

1993 01 23 08 22.32 +25 13.1 1.839 2.820 174.2 2.0 17.8
-10.56 +0.09 + 34.4 - 4.6 1979 TT2 13164 - 5.60 +1.34 +1.7 - 5.1
1993 02 22 07 55.80 +26 08.1 2.045 2.890 142.1 12.1 18.6

1993 01 23 08 23.71 -02 04.4 1.779 2.719 158.5 7.6 17.1
- 8.73 -0.04 + 49.1 +10.5 1990 KE 19504 - 4.87 +1.17 + 84.2 + 0.8
1993 02 22 08 01.07 +01 33.5 1.885 2.748 144.0 12.2 17.4

1993 01 23 08 24.41 +36 42.1 2.355 3.308 162.8 5.1 16.9
-10.09 -0.03 +5.7 - 8.0 1990 QF5 19304 - 6.06 +1.21 - 39.5 - 5.9
1993 02 22 07 57.92 +35 47.3 2.484 3.291 138.6 11.5 17.3

1993 01 23 08 24.95 +25 38.2 1.589 2.570 173.8 2.4 16.9
-11.72 -0.11 + 28.9 - 5.0 1990 DM3 17444 - 6.69 +1.55 -7.7 - 5.7
1993 02 22 07 54.26 +26 10.9 1.700 2.552 141.7 13.9 17.6

1993 01 23 08 25.24 +07 53.9 1.871 2.842 168.4 4.0 15.9
- 8.62 -0.12 + 31.9 + 5.3 (5067) 19669 - 5.23 +1.13 + 45.5 - 0.8
1993 02 22 08 02.17 +10 01.2 1.945 2.818 145.7 11.4 16.3

1993 01 23 08 28.18 +27 12.8 2.003 2.981 172.1 2.6 15.6
- 8.88 -0.04 + 28.3 - 4.6 (5116) 19839 - 5.01 +1.17 -4.7 - 5.3
1993 02 22 08 05.10 +27 49.5 2.160 3.013 143.5 11.3 16.2

1993 01 23 08 28.93 +17 26.5 1.451 2.435 177.3 1.1 17.9
-11.01 -0.03 + 56.0 - 0.5 1978 RX1 13853 - 5.78 +1.51 + 34.0 - 5.5
1993 02 22 08 00.93 +19 50.6 1.617 2.491 144.8 13.2 18.8

1993 01 23 08 30.94 +28 06.3 1.518 2.495 171.1 3.5 17.2
-11.92 +0.06 -7.5 - 6.7 1983 RT3 12317 - 6.05 +1.59 - 42.9 - 4.0
1993 02 22 08 01.18 +26 45.5 1.695 2.555 143.0 13.5 18.0

1993 01 23 08 31.83 +22 08.5 2.437 3.420 176.4 1.0 16.7
- 8.35 -0.12 + 33.8 - 1.7 (5154) 19991 - 5.62 +0.94 + 14.2 - 4.1
1993 02 22 08 08.92 +23 24.8 2.551 3.414 145.7 9.4 17.2

1993 01 23 08 33.38 +24 46.3 1.620 2.601 174.0 2.3 17.9
-11.72 -0.25 + 25.4 - 4.3 1974 QM2 10773 - 7.39 +1.48 -8.9 - 5.6
1993 02 22 08 01.53 +25 13.3 1.707 2.571 143.6 13.2 18.5

1993 01 23 08 37.07 +48 22.8 0.970 1.892 150.9 14.7 14.1
-14.80 -0.72 +170.7 -30.2 1981 YO1 18622 - 6.31 +2.88 -2.1 -21.2
1993 02 22 07 58.70 +52 17.6 1.137 1.920 129.0 23.6 14.8

1993 01 23 08 36.53 +21 38.5 1.088 2.071 175.9 2.0 16.5
-11.74 -0.30 + 14.3 - 3.0 1990 EL7 19303 - 6.03 +1.87 - 14.8 - 5.0
1993 02 22 08 05.87 +21 41.1 1.175 2.068 145.5 15.7 17.3

1993 01 23 08 38.24 +26 26.9 1.174 2.153 172.0 3.6 16.1
-11.45 -0.16 + 29.5 - 6.8 1988 TC1 20634 - 5.51 +1.78 - 17.8 - 6.9
1993 02 22 08 09.24 +26 44.4 1.317 2.200 144.7 15.1 16.8

1993 01 23	08 37.33	+21 45.9	2.035	3.018	175.7	1.4	18.0
- 8.40 -0.25	+ 36.7 - 1.3	3211 T-2	15728	- 5.71 +1.05	+ 15.6 - 4.8		
1993 02 22	08 13.77	+23 10.6	2.094	2.973	146.9	10.5	18.5
1993 01 23	08 37.93	+14 55.7	1.513	2.494	174.0	2.4	17.6
-10.73 -0.20	+ 40.2 + 1.7	1980 FT3	18805	- 6.50 +1.40	+ 30.7 - 3.9		
1993 02 22	08 09.14	+16 52.5	1.633	2.522	147.2	12.3	18.3
1993 01 23	08 37.91	+08 40.1	4.769	5.736	168.5	2.0	17.4
- 4.86 -0.08	+ 23.7 + 2.0	1988 TH1	20815	- 3.84 +0.40	+ 29.2 - 0.2		
1993 02 22	08 23.98	+10 03.5	4.843	5.728	151.1	4.8	17.6
1993 01 23	08 40.76	+30 33.5	2.054	3.024	168.1	3.9	17.8
-10.97 -0.23	+ 14.0 - 6.3	1981 EB9	11837	- 7.47 +1.24	- 27.3 - 6.0		
1993 02 22	08 10.40	+30 12.8	2.156	3.010	143.5	11.3	18.3
1993 01 23	08 40.88	+25 53.0	1.507	2.485	172.2	3.1	15.1
-11.89 -0.30	- 16.7 - 5.6	(5083)	19826	- 7.44 +1.54	- 49.8 - 4.1		
1993 02 22	08 08.48	+24 10.3	1.581	2.460	145.4	13.2	15.6
1993 01 23	08 40.67	+18 58.4	2.644	3.626	175.5	1.2	17.4
- 7.79 -0.20	+ 34.9 - 0.1	1983 JQ	18809	- 5.81 +0.80	+ 22.8 - 3.3		
1993 02 22	08 18.45	+20 30.8	2.716	3.598	148.7	8.2	17.8
1993 01 23	08 41.70	+18 20.1	1.874	2.856	175.1	1.7	17.9
- 9.53 -0.25	+ 32.9 - 0.1	1981 EU20	11840	- 6.47 +1.14	+ 18.0 - 4.0		
1993 02 22	08 15.14	+19 43.6	1.969	2.857	148.1	10.5	18.4
1993 01 23	08 41.48	+08 18.2	1.691	2.662	167.8	4.5	16.7
- 9.79 -0.25	+ 40.6 + 5.5	1991 PO10	19506	- 6.50 +1.20	+ 51.2 - 1.8		
1993 02 22	08 14.37	+10 49.3	1.782	2.678	148.7	11.1	17.1
1993 01 23	08 43.19	+26 13.4	1.519	2.497	171.6	3.3	17.7
-11.29 -0.31	+ 25.3 - 5.3	1266 T-2	19035	- 7.07 +1.49	- 14.9 - 6.4		
1993 02 22	08 12.33	+26 30.9	1.621	2.500	145.4	13.0	18.3
1993 01 23	08 43.62	+16 39.8	1.161	2.143	174.1	2.7	16.3
-10.75 -0.30	+ 52.0 + 1.0	1985 UG2	17436	- 5.85 +1.65	+ 31.9 - 6.0		
1993 02 22	08 15.13	+18 58.5	1.279	2.184	148.2	13.8	17.0
1993 01 23	08 43.29	+17 50.1	2.170	3.152	174.6	1.7	17.7
- 9.26 -0.21	+ 29.9 0.0	1982 QG	19292	- 6.56 +1.00	+ 17.5 - 3.4		
1993 02 22	08 17.33	+19 07.3	2.282	3.169	148.7	9.3	18.2
1993 01 23	08 43.44	+17 33.5	1.704	2.685	174.5	2.0	16.5
-10.52 -0.16	+3.4 - 0.1	1991 PY14	19032	- 6.60 +1.28	-5.9 - 2.4		
1993 02 22	08 15.11	+17 34.0	1.847	2.740	148.5	10.9	17.2
1993 01 23	08 43.83	+30 24.0	1.877	2.847	168.0	4.1	17.0
-11.34 -0.17	+ 10.2 - 6.9	1972 AU	13602	- 7.23 +1.34	- 32.1 - 5.7		
1993 02 22	08 13.20	+29 48.9	2.026	2.887	144.3	11.5	17.5
1993 01 23	08 44.44	+30 48.0	1.272	2.243	167.5	5.4	16.2
-11.01 -0.31	+ 45.6 - 9.2	1984 UX1	10841	- 5.91 +1.70	- 17.7 - 9.3		
1993 02 22	08 15.35	+31 29.6	1.403	2.278	143.9	14.8	16.9
1993 01 23	08 43.29	+11 14.0	2.191	3.165	170.2	3.0	16.0
- 8.52 -0.23	+8.8 + 3.0	1988 BO4	17960	- 6.19 +0.93	+ 15.3 - 0.7		
1993 02 22	08 19.09	+11 56.8	2.255	3.151	149.9	9.1	16.4

1993 01 23	08 44.46	+24 19.6	1.164	2.144	172.8	3.3	17.8
-10.18 -0.35	+ 14.4 - 4.5	1981 ER18	11839	- 5.39 +1.67		- 22.6 - 6.0	
1993 02 22	08 17.36	+24 09.8	1.258	2.158	147.3	14.3	18.5
1993 01 23	08 43.83	+18 45.0	2.195	3.177	174.7	1.6	16.9
- 9.25 -0.23	+ 30.5 - 0.3	1982 SX5	14784	- 6.70 +0.99		+ 16.3 - 3.7	
1993 02 22	08 17.66	+20 01.2	2.290	3.177	148.6	9.3	17.4
1993 01 23	08 44.58	+24 20.4	1.876	2.855	172.8	2.5	17.4
-10.48 -0.24	+ 41.2 - 3.6	2246 T-1	19322	- 7.04 +1.22		+8.2 - 6.0	
1993 02 22	08 15.60	+25 38.8	2.010	2.887	146.4	10.9	18.0
1993 01 23	08 45.35	+22 06.1	1.458	2.439	173.8	2.5	17.0
-10.77 -0.22	+ 39.7 - 3.0	1969 TT1	9291	- 6.37 +1.45		+7.6 - 6.1	
1993 02 22	08 16.53	+23 22.5	1.606	2.497	147.4	12.3	17.8
1993 01 23	08 45.09	+24 16.8	2.225	3.204	172.7	2.2	17.8
- 9.13 -0.13	+ 33.9 - 3.1	1986 XR5	19861	- 6.09 +1.02		+6.5 - 5.0	
1993 02 22	08 20.14	+25 20.7	2.409	3.286	147.5	9.3	18.4
1993 01 23	08 44.41	+19 14.3	2.300	3.282	174.6	1.6	17.1
- 7.98 -0.19	+ 37.4 - 0.5	1979 SP14	18282	- 5.58 +0.90		+ 22.1 - 3.9	
1993 02 22	08 22.06	+20 49.8	2.421	3.311	149.4	8.7	17.6
1993 01 23	08 45.88	+16 11.3	1.087	2.067	173.3	3.2	15.6
- 9.83 -0.33	+ 31.0 + 1.7	(5075)	19823	- 5.07 +1.64		+ 18.2 - 4.7	
1993 02 22	08 19.90	+17 36.8	1.195	2.109	149.6	13.7	16.3
1993 01 23	08 47.05	+27 46.4	1.117	2.094	169.9	4.8	15.3
-11.62 -0.17	+ 17.5 - 8.0	1989 AD	14204	- 5.55 +1.79		- 32.5 - 6.6	
1993 02 22	08 17.69	+27 20.8	1.285	2.178	146.2	14.6	16.1
1993 01 23	08 46.54	+19 09.1	2.018	2.998	174.1	1.9	16.6
- 8.90 -0.25	+ 31.5 - 0.5	1989 GB4	14795	- 6.24 +1.03		+ 15.5 - 4.1	
1993 02 22	08 21.46	+20 26.1	2.120	3.013	149.4	9.6	17.2
1993 01 23	08 48.14	+21 01.4	1.490	2.471	173.6	2.6	16.9
-12.14 -0.14	+7.8 - 2.5	1986 CC2	15413	- 7.26 +1.50		- 14.3 - 3.7	
1993 02 22	08 16.02	+20 53.6	1.665	2.558	148.0	11.8	17.7
1993 01 23	08 48.13	+23 20.0	1.689	2.669	172.7	2.7	18.1
-11.21 -0.32	+ 32.1 - 3.3	1991 PO13	20508	- 7.64 +1.34		+0.5 - 5.8	
1993 02 22	08 16.79	+24 13.4	1.799	2.684	147.2	11.5	18.6
1993 01 23	08 46.41	+11 00.9	2.661	3.634	169.6	2.8	17.7
- 7.66 -0.20	+ 26.9 + 2.7	1985 TL	16871	- 5.83 +0.75		+ 30.6 - 1.3	
1993 02 22	08 24.43	+12 34.5	2.746	3.644	151.2	7.5	18.0
1993 01 23	08 48.34	+20 40.1	1.580	2.561	173.6	2.5	16.8
-11.11 -0.30	+ 64.4 - 2.0	1988 RF7	14953	- 7.31 +1.38		+ 31.8 - 7.0	
1993 02 22	08 17.62	+23 13.5	1.719	2.610	147.7	11.7	17.5
1993 01 23	08 49.96	+07 03.4	1.914	2.878	165.8	4.8	17.9
- 9.34 -0.32	+ 43.4 + 5.7	1980 TE7	19292	- 6.91 +1.03		+ 56.3 - 1.4	
1993 02 22	08 23.09	+09 46.1	1.986	2.890	150.8	9.6	18.2
1993 01 23	08 49.80	+02 47.5	1.548	2.502	162.0	7.0	16.0
- 8.32 -0.53	+ 58.1 +10.9	1989 EL1	14624	- 6.38 +1.12		+ 94.7 + 0.4	
1993 02 22	08 24.69	+06 56.2	1.516	2.429	150.9	11.4	16.0

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1993 01 23    08 50.61   +15 36.4    2.085    3.063   172.1     2.5    16.8
- 8.49 -0.29  + 34.8 + 1.3   1981 SA5    14947   - 6.24 +0.95  + 27.3 - 3.3
1993 02 22    08 26.23   +17 18.0    2.172    3.076   151.2     8.9    17.2

1993 01 23    08 52.85   +14 32.8    1.519    2.496   171.0     3.5    16.7
-10.65 -0.36  + 27.9 + 2.0   1988 US     14024   - 7.22 +1.33  + 21.5 - 3.4
1993 02 22    08 22.93   +15 56.8    1.625    2.534   150.6    11.1    17.3

1993 01 23    08 52.54   +25 06.4    1.915    2.892   170.9     3.1    17.0
- 9.63 -0.30  + 29.9 - 3.6   1991 RN10   20509   - 6.76 +1.13   -2.1 - 5.8
1993 02 22    08 25.31   +25 52.0    2.033    2.922   148.4    10.2    17.5

1993 01 23    08 52.59   +12 27.0    1.765    2.739   169.8     3.7    17.3
- 8.98 -0.49  + 30.9 + 3.7   2318 T-3    14632   - 7.14 +1.05  + 34.6 - 2.3
1993 02 22    08 25.55   +14 16.4    1.757    2.668   151.4    10.2    17.5

1993 01 23    08 55.38   +27 44.1    1.858    2.830   168.7     3.9    16.5
- 9.86 -0.37  + 69.6 - 5.2   1991 PM1    19309   - 7.03 +1.18  + 22.4 - 8.6
1993 02 22    08 27.21   +30 08.4    1.998    2.877   146.8    10.9    17.0

1993 01 23    08 55.64   +13 15.2    1.204    2.180   169.7     4.6    16.5
-10.49 -0.48  + 18.1 + 3.7   1991 PS     20821   - 6.74 +1.52  + 18.7 - 2.8
1993 02 22    08 26.11   +14 22.3    1.289    2.209   151.5    12.3    17.0

1993 01 23    08 51.91   +08 50.4    4.900    5.864   167.1     2.2    17.3
- 5.39 -0.12    -0.1 + 1.8    (5120)     19841   - 4.60 +0.37   +6.1 + 0.2
1993 02 22    08 36.04   +09 02.3    4.961    5.866   154.0     4.2    17.5

1993 01 23    08 57.76   +25 55.7    1.479    2.453   169.4     4.2    17.5
-10.81 -0.46  + 64.3 - 5.0   1981 US22   20629   - 7.36 +1.42  + 15.1 - 9.0
1993 02 22    08 27.02   +28 02.0    1.603    2.496   147.8    12.2    18.0

1993 01 23    08 58.25   +27 35.2    1.285    2.258   168.3     5.1    16.5
-11.34 -0.76  + 44.6 - 5.7    (5200)     20132   - 8.36 +1.60  - 10.2 - 9.8
1993 02 22    08 24.31   +28 34.1    1.311    2.208   147.0    14.1    16.9

1993 01 23    08 53.91   +20 19.6    4.728    5.705   172.3     1.3    17.5
- 5.54 -0.13    +8.9 - 0.4    (5119)     19840   - 4.66 +0.40   +1.6 - 1.8
1993 02 22    08 37.63   +20 37.8    4.816    5.714   152.9     4.5    17.8

1993 01 23    08 59.16   +24 35.9    1.785    2.760   169.9     3.6    17.8
-11.32 -0.46  + 29.3 - 3.7   1991 RE15   19680   - 8.56 +1.24   -5.2 - 6.2
1993 02 22    08 26.19   +25 16.5    1.870    2.764   148.8    10.7    18.2

1993 01 23    08 59.80   +23 11.1    1.489    2.465   170.4     3.8    17.2
-10.82 -0.40  + 51.2 - 3.6   3285 T-2    15257   - 7.26 +1.38  + 12.5 - 7.4
1993 02 22    08 29.40   +24 53.5    1.633    2.537   149.6    11.4    17.8

1993 01 23    09 00.36   +25 27.8    1.707    2.680   169.2     3.9    17.2
-10.77 -0.47  + 59.1 - 4.1   1988 VD7    14201   - 7.99 +1.26  + 16.5 - 8.1
1993 02 22    08 29.03   +27 28.5    1.817    2.710   148.4    11.0    17.6

1993 01 23    09 00.82   +37 59.3    1.582    2.528   159.6     7.8    16.2
-10.33 -0.68  + 72.2 -10.6   1985 FC2    20631   - 7.61 +1.45   -8.0 -12.9
1993 02 22    08 29.96   +39 39.5    1.655    2.506   141.5    14.2    16.5

1993 01 23    09 00.15   +08 48.4    1.541    2.507   165.8     5.5    16.9
- 8.52 -0.46  + 23.9 + 5.9   1991 RZ2    19313   - 6.20 +1.12  + 37.8 - 1.2
1993 02 22    08 35.17   +10 34.1    1.604    2.530   153.8     9.9    17.2
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1993 01 23    09 03.99   +21 17.4    1.681    2.656   169.9     3.7    18.2
-11.03 -0.57  + 37.4 - 1.6   1978 SD3    20009   - 8.77 +1.22  + 10.0 - 6.1
1993 02 22    08 30.98   +22 36.8    1.740    2.648   150.8    10.5    18.6

1993 01 23    09 03.25   +12 02.9    1.488    2.458   167.5     5.0    16.7
- 9.39 -0.48  + 25.1 + 4.0   1991 PF18   20026   - 6.82 +1.20  + 27.9 - 2.6
1993 02 22    08 35.83   +13 34.4    1.573    2.500   153.9    10.0    17.1

1993 01 23    09 02.51   +28 31.4    1.925    2.893   167.0     4.4    15.9
- 8.49 -0.49  + 42.6 - 4.4    (5084)     19826   - 6.63 +1.03    +1.3 - 7.8
1993 02 22    08 37.04   +29 43.3    1.985    2.877   148.8    10.3    16.2

1993 01 23    09 02.11   +18 25.9    2.607    3.581   170.4     2.6    18.0
- 7.90 -0.33  + 32.4 + 0.1   1985 RD     20012   - 6.58 +0.72  + 20.6 - 3.5
1993 02 22    08 38.45   +19 52.0    2.673    3.585   153.4     7.1    18.3

1993 01 23    09 02.33   +14 57.3    2.128    3.101   169.3     3.4    18.2
- 8.12 -0.38  + 38.3 + 1.8   1991 VL10   20511   - 6.51 +0.85  + 32.2 - 3.3
1993 02 22    08 38.11   +16 52.6    2.197    3.116   154.0     8.0    18.5

1993 01 23    09 04.39   +10 00.9    1.674    2.640   166.0     5.2    18.2
- 9.92 -0.50  + 41.7 + 4.9   1981 TT     18808   - 7.78 +1.11  + 47.5 - 2.6
1993 02 22    08 34.87   +12 28.6    1.741    2.665   153.8     9.4    18.5

1993 01 23    09 03.94   +18 25.4    1.387    2.363   169.9     4.2    16.3
- 8.43 -0.57  + 61.1 + 0.8   1991 RA16   20027   - 6.10 +1.23  + 37.9 - 7.1
1993 02 22    08 38.81   +21 08.5    1.459    2.384   153.0    10.9    16.7

1993 01 23    09 04.72   +07 01.0    1.621    2.581   163.7     6.1    17.2
- 8.75 -0.38  + 45.0 + 6.3   1988 AA5    14621   - 6.27 +1.08  + 56.8 - 2.2
1993 02 22    08 39.50   +09 49.4    1.743    2.672   154.9     9.0    17.5

1993 01 23    09 04.25   +13 55.0    1.577    2.549   168.4     4.5    16.9
- 7.87 -0.61  + 73.2 + 4.5   5016 T-3    19036   - 6.47 +1.04  + 68.7 - 5.4
1993 02 22    08 39.69   +17 46.1    1.584    2.512   154.2     9.9    17.1

1993 01 23    09 07.96   +25 59.4    1.728    2.697   167.5     4.5    15.9
-10.93 -0.44    +9.8 - 4.5   1991 PN13   19031   - 8.05 +1.24  - 25.5 - 5.6
1993 02 22    08 36.39   +25 37.7    1.849    2.755   150.7    10.1    16.4

1993 01 23    09 07.40   +16 16.9    1.393    2.366   168.6     4.7    16.5
- 9.52 -0.67  + 41.8 + 2.1   1986 EF5    20013   - 7.46 +1.25  + 29.2 - 5.3
1993 02 22    08 38.37   +18 17.0    1.435    2.363   153.8    10.7    16.8

1993 01 23    09 09.03   +24 05.7    1.445    2.416   168.1     4.8    16.4
-10.68 -0.83  + 45.0 - 2.6   2557 P-L    19317   - 9.02 +1.31    +5.7 - 8.4
1993 02 22    08 35.50   +25 32.5    1.451    2.363   150.6    11.9    16.7

1993 01 23    09 08.31   +02 39.5    1.222    2.172   159.7     9.1    16.5
- 9.33 -0.66  + 31.8 +11.6   1988 UV     17207   - 6.99 +1.32  + 70.1 + 0.3
1993 02 22    08 40.17   +05 33.4    1.270    2.204   154.5    11.2    16.7

1993 01 23    09 08.25   +11 20.1    1.860    2.826   166.1     4.8    17.0
- 9.62 -0.44  + 12.4 + 3.4   1987 SM4    18812   - 7.65 +1.00  + 17.7 - 1.4
1993 02 22    08 39.70   +12 14.3    1.944    2.871   154.9     8.4    17.3

1993 01 23    09 06.69   +14 42.6    1.609    2.581   168.2     4.5    16.0
- 7.62 -0.67  + 81.3 + 4.7   1988 BK     14198   - 6.68 +0.98  + 76.5 - 5.8
1993 02 22    08 42.20   +18 58.8    1.587    2.516   154.5     9.8    16.1
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1993 01 23    09 09.16   +20 47.3    1.286    2.260   168.7     4.9    18.2
-10.05 -0.60  + 60.0 - 1.6   4240 T-2    15086   - 7.08 +1.40  + 24.2 - 8.2
1993 02 22    08 39.77   +23 05.7    1.401    2.324   152.5    11.3    18.8

1993 01 23    09 07.22   +23 59.0    2.604    3.574   168.5     3.2    17.7
- 7.85 -0.39  + 35.4 - 1.8   4234 T-2    20037   - 6.76 +0.72  + 12.3 - 5.1
1993 02 22    08 43.26   +25 16.7    2.654    3.560   152.3     7.4    17.9

1993 01 23    09 09.22   +09 39.3    1.201    2.167   164.9     6.8    16.6
- 9.21 -0.78  + 43.4 + 7.5   1991 PW17   20025   - 7.30 +1.33  + 56.2 - 3.1
1993 02 22    08 40.55   +12 28.4    1.222    2.160   155.1    11.1    16.8

1993 01 23    09 08.47   +10 32.5    2.358    3.321   165.6     4.2    18.2
- 8.17 -0.35  + 49.8 + 3.3   4349 T-1    19881   - 6.79 +0.76  + 51.2 - 2.6
1993 02 22    08 43.99   +13 15.1    2.452    3.379   155.9     6.9    18.5

1993 01 23    09 09.47   -05 45.4    1.638    2.550   152.2    10.4    16.4
- 8.31 -0.56  + 11.8 +13.2    (5046)     19661   - 6.83 +0.99  + 71.2 + 5.0
1993 02 22    08 43.90   -03 25.8    1.655    2.571   152.1    10.4    16.4

1993 01 23    09 12.92   +23 52.2    1.862    2.831   167.3     4.4    17.4
-10.96 -0.48    +3.9 - 3.2   1981 ES4    18806   - 8.65 +1.13  - 24.1 - 4.8
1993 02 22    08 40.53   +23 24.5    1.962    2.876   152.5     9.1    17.8

1993 01 23    09 11.60   +19 05.0    1.500    2.472   168.2     4.7    16.2
- 9.66 -0.79  + 38.9 + 0.6   1991 UM4    20642   - 8.45 +1.15  + 19.0 - 6.1
1993 02 22    08 40.84   +20 44.1    1.494    2.420   153.6    10.5    16.5

1993 01 23    09 13.26   +16 56.1    1.571    2.541   167.5     4.8    17.6
-10.15 -0.66  + 48.5 + 1.4    (5269)     20616   - 8.40 +1.15  + 32.2 - 5.7
1993 02 22    08 42.09   +19 10.2    1.629    2.557   154.4     9.6    17.9

1993 01 23    09 11.92   +19 24.0    2.655    3.624   168.1     3.2    18.2
- 7.72 -0.37  + 35.2 - 0.2   1985 RJ4    11511   - 6.69 +0.67  + 21.0 - 3.9
1993 02 22    08 48.41   +20 55.3    2.734    3.655   155.2     6.5    18.5

1993 01 23    09 14.23   +30 44.8    1.803    2.761   163.6     5.8    17.0
- 9.66 -0.65  + 62.7 - 5.8   1991 RB25   20339   - 8.06 +1.10    +8.4 -10.0
1993 02 22    08 44.40   +32 39.0    1.881    2.772   148.3    10.8    17.4

1993 01 23    09 13.77   +20 03.4    1.906    2.876   167.7     4.2    15.9
- 8.85 -0.52  + 12.6 - 0.7   1983 CY2    19497   - 7.39 +0.94    -4.7 - 4.2
1993 02 22    08 46.69   +20 21.5    1.963    2.890   155.0     8.3    16.1

1993 01 23    09 13.08   +12 53.8    2.018    2.982   166.0     4.6    17.8
- 8.38 -0.46  + 52.0 + 2.9   1982 QM     19016   - 7.02 +0.85  + 48.0 - 3.7
1993 02 22    08 47.56   +15 36.1    2.100    3.033   156.5     7.5    18.1

1993 01 23    09 12.45   +18 48.8    2.571    3.540   168.0     3.3    17.5
- 7.67 -0.39  + 36.2 + 0.1    (5043)     19660   - 6.69 +0.68  + 23.0 - 3.9
1993 02 22    08 48.95   +20 24.9    2.639    3.562   155.5     6.6    17.8

1993 01 23    09 13.90   +12 37.6    1.832    2.796   165.7     5.0    18.0
- 8.37 -0.52  + 29.5 + 3.3   2327 T-3    19883   - 7.01 +0.91  + 30.2 - 2.7
1993 02 22    08 48.18   +14 18.2    1.890    2.827   156.8     7.9    18.2

1993 01 23    09 14.55   +11 29.4    1.852    2.814   165.0     5.2    18.0
- 8.76 -0.60  + 49.7 + 4.4   1975 LQ     13602   - 7.78 +0.89  + 52.4 - 3.2
1993 02 22    08 47.00   +14 16.7    1.872    2.807   156.6     8.1    18.2
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1993 01 23	09 14.80	+03 24.7	1.952	2.894	159.3	6.9	17.7	
- 8.59 -0.48	+ 24.1 + 7.3	1981 DB3	19015	- 7.30 +0.86	+ 49.1 + 0.6			
1993 02 22	08 48.48	+05 26.9	2.008	2.942	156.5	7.7	17.8	
1993 01 23	09 14.69	+20 14.0	1.500	2.470	167.5	5.0	16.8	
- 8.10 -0.60	+ 47.2 - 0.5	4601 P-L	15727	- 6.30 +1.10	+ 21.0 - 6.8			
1993 02 22	08 49.94	+22 07.9	1.590	2.522	155.0	9.5	17.1	
1993 01 23	09 15.97	+09 02.0	1.542	2.501	163.2	6.5	17.6	
- 9.48 -0.70	+ 19.6 + 5.9	1991 RA10	20152	- 8.24 +1.07	+ 34.1 - 1.1			
1993 02 22	08 46.13	+10 35.5	1.560	2.498	156.5	9.1	17.8	
1993 01 23	09 17.59	+17 48.7	1.665	2.632	166.6	5.0	17.8	
-10.42 -0.73	+ 30.2 + 0.7	(5077)	19824	- 9.21 +1.08	+ 14.5 - 4.9			
1993 02 22	08 44.80	+19 06.1	1.688	2.618	155.0	9.2	18.0	
1993 01 23	09 14.23	+05 30.1	2.364	3.311	161.0	5.5	17.1	
- 7.67 -0.42	+ 14.3 + 5.3	(5115)	19839	- 6.78 +0.68	+ 32.5 + 0.5			
1993 02 22	08 50.53	+06 49.1	2.399	3.334	157.2	6.6	17.2	
1993 01 23	09 15.72	+06 08.0	1.928	2.878	161.3	6.3	16.8	
- 7.68 -0.53	+ 14.7 + 6.1	1988 CW4	20633	- 6.78 +0.80	+ 35.3 + 0.4			
1993 02 22	08 51.56	+07 33.6	1.946	2.885	157.6	7.5	16.9	
1993 01 23	09 12.84	-02 36.1	4.572	5.477	154.6	4.4	17.4	
- 4.63 -0.20	+ 15.2 + 4.4	1988 RO	19022	- 4.30 +0.31	+ 35.2 + 1.9			
1993 02 22	08 58.52	-01 15.9	4.573	5.493	156.4	4.1	17.4	
1993 01 23	09 20.04	+17 12.9	1.678	2.644	165.9	5.2	17.9	
-10.19 -0.74	+ 31.3 + 1.1	1990 ES3	19303	- 9.14 +1.04	+ 17.4 - 4.8			
1993 02 22	08 47.76	+18 36.9	1.702	2.635	155.8	8.8	18.1	
1993 01 23	09 18.79	+31 12.6	2.129	3.082	162.6	5.5	17.0	
- 8.82 -0.61	+ 41.6 - 5.0	1975 SA1	13683	- 7.86 +0.89	-4.2 - 8.5			
1993 02 22	08 51.00	+32 15.0	2.172	3.067	149.6	9.4	17.2	
1993 01 23	09 20.16	+16 27.7	1.815	2.780	165.7	5.0	17.9	
- 9.51 -0.60	+ 37.6 + 1.3	1976 UG2	20008	- 8.22 +0.96	+ 25.3 - 4.6			
1993 02 22	08 50.68	+18 12.7	1.883	2.819	156.6	8.0	18.2	
1993 01 23	09 18.69	+02 59.7	2.226	3.162	158.4	6.6	17.7	
- 8.29 -0.51	+6.5 + 6.5	1968 OH	14779	- 7.62 +0.71	+ 32.7 + 1.7			
1993 02 22	08 52.57	+04 07.3	2.232	3.167	157.1	7.0	17.8	
1993 01 23	09 19.96	+14 45.4	1.421	2.386	165.3	6.0	17.6	
- 8.77 -0.90	+ 43.0 + 4.0	1979 QW3	20328	- 8.33 +1.05	+ 38.9 - 4.8			
1993 02 22	08 50.70	+17 04.4	1.391	2.334	156.9	9.6	17.7	
1993 01 23	09 19.20	+15 51.3	2.043	3.007	165.8	4.6	16.6	
- 7.80 -0.57	+ 44.9 + 2.0	1988 CP2	19677	- 7.14 +0.77	+ 36.8 - 4.2			
1993 02 22	08 54.33	+18 05.2	2.067	3.005	157.5	7.2	16.8	
1993 01 23	09 19.91	+14 53.1	2.089	3.051	165.3	4.7	16.5	
- 7.62 -0.56	+ 41.6 + 2.4	(5033)	19492	- 7.06 +0.73	+ 36.7 - 3.6			
1993 02 22	08 55.49	+17 01.8	2.102	3.042	158.0	7.0	16.6	
1993 01 23	09 22.79	+17 40.4	1.352	2.318	165.4	6.2	17.5	
- 9.21 -0.76	+ 60.4 + 1.2	1991 RN11	20640	- 7.60 +1.19	+ 37.1 - 7.4			
1993 02 22	08 53.95	+20 22.5	1.436	2.376	156.6	9.5	17.8	

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1993 01 23    09 26.47   +25 22.4    1.170    2.134   163.9     7.4    15.5
-10.72 -0.94  + 44.2 - 4.6   1988 RP1    13693   - 8.60 +1.48    -7.6 - 9.8
1993 02 22    08 53.00   +26 26.8    1.256    2.186   153.5    11.6    15.9

1993 01 23    09 27.54   +30 41.6    1.343    2.297   161.3     7.9    16.3
-10.55 -1.12  + 55.9 - 6.4    (5030)     19491   - 9.80 +1.34  - 11.2 -12.7
1993 02 22    08 52.46   +32 00.1    1.355    2.266   150.0    12.6    16.5

1993 01 23    09 26.63   +16 51.1    1.843    2.804   164.3     5.4    17.5
- 8.85 -0.66  + 35.7 + 1.3   1987 UJ     12580   - 8.10 +0.87  + 23.5 - 4.6
1993 02 22    08 58.37   +18 30.9    1.891    2.834   158.2     7.4    17.7

1993 01 23    09 29.67   -13 19.9    1.980    2.830   143.2    12.0    18.0
- 9.68 -0.77  - 44.4 +12.9   1987 OC     16697   - 9.78 +0.76  + 31.7 +10.3
1993 02 22    08 57.65   -13 34.2    1.932    2.822   148.4    10.6    17.9

1993 01 23    09 25.57   +00 34.7    1.910    2.835   155.4     8.3    16.7
- 6.74 -0.62  + 31.0 + 9.2   1975 SS     14184   - 6.55 +0.69  + 67.5 + 2.0
1993 02 22    09 03.22   +03 16.0    1.888    2.836   159.3     7.1    16.7

1993 01 23    09 29.11   +04 56.7    1.419    2.361   158.1     9.0    15.7
- 8.84 -0.92  - 30.2 + 7.4   1979 YS     20922   - 8.69 +0.98    +5.0 + 3.3
1993 02 22    08 59.29   +04 26.4    1.392    2.342   158.8     8.8    15.7

1993 01 23    09 30.65   +07 51.7    1.677    2.622   159.6     7.5    17.1
- 9.19 -0.81  + 19.4 + 6.2    (5051)     19663   - 8.98 +0.87  + 37.0 - 0.6
1993 02 22    09 00.29   +09 29.0    1.670    2.622   160.0     7.4    17.0

1993 01 23    09 30.30   +19 13.4    1.144    2.108   163.8     7.5    16.9
- 8.52 -1.14  + 58.2 + 1.9   2559 P-L    20514   - 8.32 +1.21  + 32.0 - 9.0
1993 02 22    09 00.67   +21 49.0    1.143    2.091   157.4    10.5    17.0

1993 01 23    09 30.64   +16 19.6    1.370    2.330   163.3     7.0    18.2
- 8.51 -0.88  + 80.8 + 3.0   1991 PC6    20024   - 7.86 +1.06  + 60.9 - 8.3
1993 02 22    09 02.49   +20 13.2    1.424    2.373   158.5     8.8    18.4

1993 01 23    09 29.31   -02 46.0    2.117    3.023   152.2     8.7    17.4
- 7.73 -0.60    +6.5 + 9.2   1991 VE1    19518   - 7.54 +0.66  + 48.7 + 3.8
1993 02 22    09 04.08   -01 13.2    2.108    3.046   157.6     7.1    17.4

1993 01 23    09 30.93   +13 38.1    2.063    3.015   162.4     5.7    15.9
- 8.07 -0.61  + 12.5 + 2.4    (5074)     19823   - 7.69 +0.72  + 12.4 - 2.2
1993 02 22    09 04.82   +14 23.9    2.092    3.044   160.8     6.1    16.0

1993 01 23    09 30.89   +00 28.4    1.707    2.630   154.5     9.3    16.4
- 7.97 -0.71  + 16.4 + 9.7   1987 UW1    19021   - 7.61 +0.81  + 55.7 + 2.3
1993 02 22    09 04.71   +02 30.3    1.722    2.671   159.4     7.5    16.4

1993 01 23    09 30.36   -02 54.9    2.258    3.161   152.0     8.4    17.5
- 7.64 -0.64  + 10.3 + 8.9   1990 OD     19027   - 7.95 +0.56  + 52.6 + 4.1
1993 02 22    09 04.75   -01 11.7    2.184    3.123   157.7     6.9    17.4

1993 01 23    09 30.91   +01 31.1    2.018    2.941   155.3     8.0    17.4
- 7.12 -0.70  + 43.3 + 9.0   1976 GN2    19011   - 7.49 +0.61  + 77.9 + 1.5
1993 02 22    09 06.58   +04 46.8    1.952    2.904   160.6     6.5    17.3

1993 01 23    09 33.61   +05 19.9    1.327    2.268   157.5     9.6    17.5
- 8.02 -0.99  + 41.1 +10.2   1981 UU26   20630   - 8.24 +0.95  + 72.6 - 0.7
1993 02 22    09 05.61   +08 30.6    1.303    2.262   161.2     8.1    17.4
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1993 01 23    09 34.65   +30 38.4    2.277    3.220   160.1     6.0    17.3
- 9.34 -0.66  + 40.6 - 4.7   1982 TT2    19497   - 8.86 +0.80    -3.1 - 8.3
1993 02 22    09 04.67   +31 41.1    2.346    3.254   152.1     8.2    17.5

1993 01 23    09 34.30   +02 23.3    1.724    2.651   155.3     8.9    16.9
- 8.40 -0.80  + 19.0 + 8.9   1969 TA     18280   - 8.50 +0.78  + 53.8 + 1.7
1993 02 22    09 06.04   +04 25.9    1.704    2.656   160.4     7.2    16.8

1993 01 23    09 36.48   +27 02.8    1.335    2.289   161.2     8.0    16.0
- 9.11 -1.14  + 63.2 - 3.4   1979 HH3    19013   - 9.19 +1.13    +9.3 -11.9
1993 02 22    09 04.81   +29 07.4    1.345    2.276   153.9    11.0    16.1

1993 01 23    09 38.48   +28 59.5    0.991    1.946   160.1     9.9    15.9
- 9.26 -1.40  + 41.1 - 6.5   2835 P-L    20648   - 8.90 +1.47  - 30.1 -13.4
1993 02 22    09 05.90   +29 28.7    1.012    1.950   153.9    12.9    16.0

1993 01 23    09 39.37   +13 57.7    1.314    2.266   160.6     8.3    17.4
- 9.34 -1.00  + 35.0 + 4.0   1981 SU2    10528   - 9.00 +1.08  + 30.1 - 4.8
1993 02 22    09 08.00   +15 51.7    1.352    2.311   161.2     7.9    17.5

1993 01 23    09 35.81   +14 14.1    2.402    3.350   161.5     5.4    17.7
- 7.19 -0.56  + 36.7 + 2.3   1985 RP2    20143   - 7.14 +0.57  + 33.3 - 3.1
1993 02 22    09 12.26   +16 08.9    2.438    3.393   162.1     5.1    17.7

1993 01 23    09 36.99   +05 16.9    1.498    2.434   156.8     9.2    15.9
- 7.26 -0.79  + 54.3 + 8.8   1982 SJ1    19293   - 7.01 +0.85  + 75.7 - 2.1
1993 02 22    09 12.55   +08 52.0    1.546    2.509   162.9     6.6    15.9

1993 01 23    09 40.40   +05 28.1    1.683    2.614   156.2     8.7    17.2
- 8.56 -0.94  + 26.3 + 8.0   1991 UU     19511   - 9.41 +0.72  + 53.7 + 0.4
1993 02 22    09 10.36   +07 42.2    1.624    2.583   162.2     6.7    17.0

1993 01 23    09 38.33   -07 59.3    2.093    2.965   146.7    10.5    17.8
- 7.51 -0.71  + 52.4 +12.7    (5040)     19659   - 7.97 +0.58  +109.9 + 4.7
1993 02 22    09 12.74   -03 41.0    2.030    2.970   157.9     7.2    17.6

1993 01 23    09 41.03   +12 55.8    1.197    2.148   159.8     9.1    16.2
- 8.51 -1.04  + 33.4 + 5.1   1991 PJ5    19310   - 8.25 +1.10  + 33.0 - 4.6
1993 02 22    09 11.91   +14 53.4    1.242    2.205   162.4     7.8    16.2

1993 01 23    09 39.32   +03 49.7    1.955    2.880   155.4     8.2    17.3
- 7.19 -0.74    +0.1 + 6.9   1988 DD3    13681   - 7.69 +0.60  + 28.9 + 2.0
1993 02 22    09 14.53   +04 42.2    1.915    2.874   162.5     5.9    17.2

1993 01 23    09 42.03   +07 04.4    1.447    2.384   156.9     9.3    17.8
- 8.94 -0.94  + 38.3 + 8.0   1978 SH3    13853   - 8.99 +0.93  + 57.7 - 1.8
1993 02 22    09 11.67   +09 46.6    1.470    2.432   162.8     6.9    17.8

1993 01 23    09 42.37   +20 04.1    1.085    2.041   161.0     9.0    15.3
- 8.74 -1.28  + 23.3 + 0.3   1986 ET     14022   - 8.98 +1.21    -4.3 - 7.7
1993 02 22    09 11.16   +20 47.4    1.092    2.050   160.0     9.5    15.4

1993 01 23    09 41.46   +33 24.0    1.816    2.751   157.4     7.9    16.5
- 8.33 -0.87  + 53.8 - 6.3   1991 RP25   20931   - 8.21 +0.89    -5.2 -11.1
1993 02 22    09 13.39   +34 45.6    1.885    2.792   151.0     9.9    16.6

1993 01 23    09 46.03   +18 40.1    1.717    2.663   160.0     7.2    16.8
- 9.75 -1.03  + 31.0 + 1.0   1990 DA1    19503   -10.67 +0.79  + 13.4 - 5.9
1993 02 22    09 12.02   +19 59.7    1.680    2.634   160.6     7.2    16.8
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1993 01 23	09 40.59	+04 28.6	2.445	3.366	155.6	6.9	17.8	
- 6.98 -0.64	+ 25.3 + 6.0	1989 GF4	20636	- 7.62 +0.45	+ 47.3 + 0.8			
1993 02 22	09 16.68	+06 27.2	2.380	3.340	163.5	4.8	17.6	
1993 01 23	09 37.03	+19 01.4	4.051	4.997	162.2	3.5	17.7	
- 4.87 -0.35	+ 29.6 + 0.4	1989 UX5	19503	- 5.09 +0.28	+ 22.2 - 2.6			
1993 02 22	09 20.95	+20 24.7	4.052	5.003	162.2	3.5	17.7	
1993 01 23	09 46.11	+23 51.0	1.338	2.287	159.9	8.5	16.7	
- 8.84 -1.17	+ 45.5 - 1.6	1980 TA4	20010	- 9.38 +1.02	+4.9 - 9.8			
1993 02 22	09 14.71	+25 21.9	1.349	2.297	158.1	9.3	16.8	
1993 01 23	09 45.77	+21 18.0	1.653	2.600	160.2	7.4	17.2	
- 8.27 -1.04	+ 22.8 - 0.2	1989 FL	17443	- 9.41 +0.74	-1.5 - 6.8			
1993 02 22	09 15.95	+22 02.1	1.596	2.550	160.3	7.5	17.1	
1993 01 23	09 42.36	+11 48.1	2.767	3.703	159.1	5.4	18.1	
- 6.54 -0.55	+ 32.1 + 3.0	1979 QX9	17627	- 7.02 +0.41	+ 35.7 - 1.8			
1993 02 22	09 20.26	+13 38.6	2.743	3.706	164.6	4.1	18.0	
1993 01 23	10 08.66	+54 40.3	1.002	1.863	139.3	20.1	18.0	
-19.40 -2.88	+ 30.4 -27.1	3509 P-L	15903	-17.58 +3.10	-163.2 -26.4			
1993 02 22	09 01.89	+51 19.4	1.011	1.853	135.8	21.9	18.0	
1993 01 23	09 50.32	+24 22.8	1.682	2.624	158.9	7.8	18.0	
- 9.39 -1.05	+ 52.8 - 1.5	2536 P-L	19689	-10.19 +0.83	+ 15.0 - 9.3			
1993 02 22	09 17.47	+26 18.8	1.690	2.633	157.9	8.1	18.0	
1993 01 23	09 45.01	+14 23.2	2.458	3.397	159.4	5.8	17.2	
- 6.51 -0.61	+ 40.2 + 2.5	1985 UQ4	19499	- 6.98 +0.47	+ 37.4 - 3.2			
1993 02 22	09 22.78	+16 30.2	2.467	3.430	164.4	4.4	17.1	
1993 01 23	09 44.62	+10 08.4	2.194	3.128	157.9	6.8	16.7	
- 6.19 -0.68	+ 44.8 + 4.8	1990 QB4	18822	- 6.89 +0.48	+ 53.4 - 2.1			
1993 02 22	09 22.86	+12 48.5	2.167	3.134	165.4	4.6	16.6	
1993 01 23	09 49.84	+18 36.8	1.293	2.241	159.1	9.0	16.8	
- 8.42 -1.08	+ 39.7 + 1.2	1979 UC4	18804	- 8.60 +1.00	+ 17.2 - 7.3			
1993 02 22	09 20.46	+20 17.8	1.350	2.312	162.2	7.5	16.9	
1993 01 23	09 42.99	+08 25.6	3.388	4.314	157.4	5.0	17.7	
- 5.17 -0.45	+ 33.5 + 3.6	1973 SK1	15698	- 5.74 +0.28	+ 43.3 - 0.5			
1993 02 22	09 25.30	+10 28.2	3.324	4.291	166.2	3.2	17.6	
1993 01 23	09 46.89	+09 17.7	1.354	2.293	157.0	9.7	16.6	
- 6.59 -1.06	+ 53.3 + 8.2	1985 CE2	12697	- 7.70 +0.76	+ 69.3 - 3.3			
1993 02 22	09 22.07	+12 43.0	1.330	2.300	165.2	6.3	16.4	
1993 01 23	09 51.51	+14 00.8	1.472	2.412	157.8	8.9	17.7	
- 8.72 -1.04	+ 20.9 + 3.6	1991 PZ12	20338	- 9.34 +0.85	+ 18.7 - 3.8			
1993 02 22	09 20.91	+15 13.9	1.488	2.455	164.4	6.2	17.6	
1993 01 23	09 51.67	+23 23.7	1.664	2.606	158.7	7.9	17.0	
- 8.55 -1.14	+ 75.0 + 0.4	1991 UE3	19514	-10.20 +0.70	+ 41.5 -10.1			
1993 02 22	09 20.13	+26 38.1	1.625	2.569	158.1	8.3	17.0	
1993 01 23	09 56.00	-06 11.6	1.184	2.071	145.4	15.7	14.1	
-10.06 -1.60	-173.2 + 7.5	1990 QJ	17212	-13.17 +0.82	- 87.9 +18.0			
1993 02 22	09 16.67	-13 03.2	1.100	2.026	151.7	13.4	13.8	

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1993 01 23    10 05.31   +34 47.4    1.057    1.983   152.4    13.3    15.4
-13.60 -2.09  - 35.5 -13.9    (5168)     19996   -15.45 +1.61  -143.2 -15.6
1993 02 22    09 14.82   +30 22.6    0.992    1.933   154.6    12.7    15.2

1993 01 23    09 50.06   +18 15.5    1.538    2.483   159.0     8.2    14.9
- 6.43 -1.06  +112.5 + 4.3    (5208)     20135   - 7.93 +0.65  + 92.4 -10.1
1993 02 22    09 25.38   +23 49.7    1.524    2.480   160.9     7.5    14.8

1993 01 23    09 52.47   +12 05.1    2.147    3.077   156.9     7.2    16.6
- 7.82 -0.75    +9.5 + 3.2   1986 VD1    14790   - 8.53 +0.54  + 13.7 - 1.7
1993 02 22    09 25.55   +12 48.9    2.142    3.111   166.0     4.4    16.5

1993 01 23    09 52.49   +14 49.2    2.220    3.153   157.8     6.8    17.7
- 7.32 -0.80  + 38.0 + 2.9   1986 RC1    20144   - 8.51 +0.46  + 35.3 - 3.6
1993 02 22    09 26.43   +16 51.1    2.165    3.132   165.1     4.7    17.6

1993 01 23    09 53.36   +30 35.8    2.603    3.527   156.5     6.4    17.5
- 7.97 -0.72  + 33.7 - 3.5   1979 SW2    19013   - 8.62 +0.52    -3.6 - 7.7
1993 02 22    09 26.18   +31 28.7    2.622    3.544   155.2     6.7    17.5

1993 01 23    09 56.49   +06 28.4    1.691    2.610   153.5     9.7    17.9
- 8.21 -1.04  + 21.8 + 7.3   1978 VL5    16021   - 9.81 +0.60  + 45.8   0.0
1993 02 22    09 26.43   +08 23.3    1.634    2.606   166.3     5.2    17.6

1993 01 23    09 53.32   +15 44.6    2.064    2.999   157.8     7.1    16.8
- 6.74 -0.80  + 46.9 + 2.8   1981 UE26   20630   - 7.79 +0.50  + 40.5 - 4.5
1993 02 22    09 29.12   +18 09.0    2.050    3.017   165.0     4.9    16.7

1993 01 23    09 55.60   +12 21.4    2.155    3.082   156.3     7.4    16.8
- 7.72 -0.77  + 18.7 + 3.3    (5102)     19834   - 8.54 +0.52  + 21.5 - 2.2
1993 02 22    09 28.83   +13 31.6    2.157    3.128   166.7     4.2    16.7

1993 01 23    09 58.60   +35 12.4    1.904    2.819   153.4     9.0    16.8
- 8.96 -1.06  + 74.3 - 6.3   1987 UN     19299   - 9.92 +0.78    +8.8 -13.0
1993 02 22    09 26.87   +37 29.2    1.966    2.867   150.1     9.9    16.9

1993 01 23    09 59.18   +23 39.4    1.334    2.273   156.9     9.8    15.2
- 9.13 -1.12  + 37.3 - 2.2   1941 UN     16019   - 9.30 +1.02    -2.9 - 9.0
1993 02 22    09 27.57   +24 43.5    1.424    2.380   160.6     7.9    15.4

1993 01 23    09 59.46   +31 47.6    2.194    3.113   154.8     7.7    16.8
- 8.73 -1.00  + 47.8 - 3.8    (5167)     19996   -10.27 +0.56    +0.4 -10.3
1993 02 22    09 28.08   +33 11.8    2.158    3.078   154.0     8.1    16.8

1993 01 23    09 56.31   +06 52.5    1.288    2.214   153.8    11.3    17.5
- 6.62 -1.23  + 42.1 +10.0   3395 T-3    19331   - 8.69 +0.68  + 71.6 - 1.3
1993 02 22    09 29.81   +10 04.1    1.232    2.208   167.3     5.7    17.1

1993 01 23    10 02.28   +36 11.7    1.450    2.366   152.3    11.2    16.9
- 9.24 -1.40  + 38.4 - 8.3    (5266)     20495   -10.67 +0.99  - 40.7 -14.7
1993 02 22    09 27.96   +36 20.1    1.455    2.370   151.2    11.6    16.9

1993 01 23    09 57.19   +14 03.3    1.842    2.773   156.5     8.1    18.1
- 7.00 -0.94  + 33.5 + 3.7   3271 T-1    19324   - 8.52 +0.51  + 33.2 - 3.7
1993 02 22    09 31.21   +15 57.1    1.796    2.767   166.5     4.8    17.9

1993 01 23    10 00.37   +20 24.3    1.589    2.524   156.8     8.8    16.1
- 7.52 -1.21  + 41.2 + 1.5   1989 CM1    14478   - 9.87 +0.57  + 20.2 - 7.7
1993 02 22    09 31.00   +22 13.5    1.511    2.474   163.0     6.7    15.9
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1993 01 23    09 59.72   +15 28.6    1.936    2.865   156.3     7.9    16.9
- 7.35 -0.90  + 29.8 + 2.7   1977 QL1    19290   - 8.67 +0.52  + 24.5 - 4.1
1993 02 22    09 33.07   +17 02.5    1.916    2.887   166.4     4.6    16.7

1993 01 23    10 01.30   +07 41.0    1.296    2.219   153.1    11.6    16.3
- 6.86 -1.28    +7.9 + 8.0   1991 RX2    19313   - 9.13 +0.66  + 34.6 - 0.1
1993 02 22    09 33.74   +08 59.8    1.241    2.218   168.1     5.3    15.9

1993 01 23    10 01.18   +10 41.7    1.662    2.585   154.4     9.5    17.3
- 7.25 -1.03  + 62.8 + 6.5   1991 RK2    20026   - 8.90 +0.56  + 70.2 - 4.1
1993 02 22    09 34.01   +14 20.9    1.641    2.616   167.7     4.6    17.1

1993 01 23    10 03.86   +21 17.1    1.651    2.582   156.0     8.9    17.6
- 7.95 -1.23  + 68.0 + 1.9   1981 WS1    19496   -10.46 +0.54  + 43.3 - 9.1
1993 02 22    09 32.98   +24 24.6    1.588    2.546   161.7     7.0    17.4

1993 01 23    10 00.57   +08 31.8    1.865    2.781   153.7     9.0    17.5
- 6.45 -0.94  + 35.0 + 6.4   2181 T-2    16883   - 8.26 +0.43  + 52.1 - 1.2
1993 02 22    09 35.98   +10 56.4    1.794    2.771   168.8     4.0    17.1

1993 01 23    09 58.75   +01 43.9    2.200    3.094   150.3     9.1    16.6
- 5.85 -0.75  + 35.6 + 8.0    (5032)     19491   - 7.14 +0.37  + 66.3 + 1.4
1993 02 22    09 37.20   +04 28.8    2.148    3.121   167.6     3.9    16.3

1993 01 23    10 08.25   +31 04.8    1.945    2.859   153.3     8.9    17.3
- 9.49 -1.08  + 40.8 - 4.4   1991 RD7    20822   -10.83 +0.69  - 10.4 -10.6
1993 02 22    09 34.50   +32 01.7    1.968    2.898   155.6     8.1    17.3

1993 01 23    10 04.30   +12 52.0    2.016    2.935   154.5     8.3    17.3
- 7.85 -0.89  + 30.7 + 3.6   1991 PM11   19031   - 9.16 +0.50  + 31.6 - 3.1
1993 02 22    09 36.22   +14 37.9    2.011    2.986   168.1     3.9    17.2

1993 01 23    10 04.71   +09 58.6    2.044    2.957   153.4     8.6    17.7
- 7.70 -0.94  + 27.6 + 5.0    (5026)     19489   - 9.52 +0.42  + 38.3 - 1.6
1993 02 22    09 36.37   +11 49.7    1.977    2.954   168.8     3.7    17.4

1993 01 23    10 05.34   +17 07.0    1.919    2.843   155.3     8.3    18.3
- 7.80 -1.08  + 51.1 + 3.1   3262 T-2    15085   -10.14 +0.42  + 42.4 - 5.7
1993 02 22    09 35.68   +19 43.6    1.833    2.802   165.4     5.1    18.0

1993 01 23    10 03.96   +10 04.7    2.101    3.014   153.6     8.4    17.6
- 6.06 -0.86  + 32.1 + 5.1   4545 P-L    17836   - 7.84 +0.35  + 43.4 - 1.6
1993 02 22    09 40.88   +12 10.3    2.029    3.008   169.8     3.3    17.3

1993 01 23    10 05.21   +15 23.9    2.298    3.217   155.0     7.4    18.4
- 6.25 -0.80  + 43.5 + 2.8   1975 VK2    10761   - 7.79 +0.35  + 39.5 - 3.9
1993 02 22    09 42.03   +17 40.9    2.262    3.236   167.9     3.7    18.2

1993 01 23    10 04.09   +17 42.5    2.825    3.743   155.7     6.2    17.6
- 5.99 -0.67  + 49.5 + 1.7   1985 UW4    17017   - 7.31 +0.27  + 41.4 - 4.1
1993 02 22    09 42.40   +20 09.7    2.788    3.757   166.3     3.6    17.4

1993 01 23    10 05.82   +15 29.3    1.191    2.124   154.8    11.4    15.7
- 5.66 -1.37  + 65.3 + 5.9   1989 AZ5    14954   - 8.30 +0.64  + 57.8 - 8.0
1993 02 22    09 41.16   +18 59.8    1.165    2.140   166.9     6.0    15.5

1993 01 23    10 09.58   +08 07.2    1.784    2.690   151.5    10.1    18.2
- 7.23 -1.02  + 34.5 + 6.6   1987 QW7    19020   - 9.14 +0.47  + 51.1 - 1.5
1993 02 22    09 42.27   +10 30.6    1.754    2.734   170.3     3.5    17.8
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1993 01 23    10 07.10   +09 32.3    2.076    2.985   152.6     8.7    18.2
- 6.13 -0.93  + 35.4 + 5.7   1989 GS4    17961   - 8.35 +0.29  + 50.0 - 1.3
1993 02 22    09 43.13   +11 53.3    1.967    2.947   170.4     3.2    17.7

1993 01 23    10 13.50   +19 36.6    1.595    2.515   153.7    10.0    17.8
- 8.36 -1.24  + 46.2 + 1.6    (5300)     20785   -10.60 +0.60  + 24.5 - 7.8
1993 02 22    09 41.66   +21 40.0    1.582    2.551   165.1     5.7    17.6

1993 01 23    10 10.89   +21 29.0    2.157    3.074   154.3     8.0    18.2
- 7.44 -0.92  + 38.2 + 0.3   1977 RY6    12568   - 9.14 +0.42  + 17.5 - 6.4
1993 02 22    09 43.54   +23 05.0    2.143    3.107   164.3     5.0    18.0

1993 01 23    10 13.85   +18 20.3    1.593    2.512   153.4    10.1    17.3
- 7.54 -1.28  + 47.0 + 2.9   1991 SL1    19315   -10.40 +0.48  + 32.2 - 7.2
1993 02 22    09 43.69   +20 37.7    1.533    2.505   166.2     5.4    17.0

1993 01 23    10 12.69   +08 04.8    1.720    2.624   150.8    10.6    17.3
- 6.99 -1.15  + 33.8 + 7.3   1991 UV     19511   - 9.82 +0.36  + 54.8 - 1.0
1993 02 22    09 44.69   +10 33.1    1.624    2.605   170.9     3.4    16.9

1993 01 23    10 15.30   +18 24.7    1.277    2.200   153.1    11.7    17.0
- 7.68 -1.53  + 40.7 + 3.1   1988 TJ2    18291   -11.01 +0.62  + 22.8 - 8.2
1993 02 22    09 43.29   +20 21.1    1.226    2.200   166.3     6.1    16.6

1993 01 23    10 07.18   +08 49.2    2.518    3.421   152.3     7.7    18.2
- 5.31 -0.71  + 38.3 + 4.8   1981 EG21   17818   - 6.82 +0.26  + 50.2 - 1.1
1993 02 22    09 47.21   +11 12.9    2.464    3.446   171.5     2.4    17.9

1993 01 23    10 15.00   +27 34.9    1.872    2.784   152.8     9.3    18.3
- 7.69 -1.28  + 83.0 - 0.1    (5038)     19658   -11.06 +0.34  + 43.6 -11.7
1993 02 22    09 43.87   +31 06.5    1.785    2.725   157.4     8.0    18.1

1993 01 23    10 12.91   -00 52.3    2.260    3.124    +0.81    -3.1   18.4
- 6.38 -0.92  + 24.1 + 8.8   1990 KL     17210   - 8.91 +0.19  + 65.6 + 3.8
1993 02 22    09 47.94   +01 31.3    2.100    3.075    +0.87    -3.4   17.9

1993 01 23    10 10.49   -10 28.1    2.561    3.373   139.8    10.9    17.9
- 5.21 -0.79    +0.7 + 9.7   1972 HL     15239   - 7.43 +0.14  + 57.6 + 7.8
1993 02 22    09 49.82   -08 57.3    2.364    3.308   159.2     6.1    17.4

1993 01 23    10 13.83   +01 19.2    1.355    2.246   147.1    13.8    16.2
- 5.71 -1.32    -1.4 +11.0    (5019)     19487   - 9.02 +0.40  + 50.6 + 4.4
1993 02 22    09 48.57   +02 45.1    1.263    2.242   168.9     4.9    15.7

1993 01 23    10 17.88   +10 59.3    1.914    2.814   150.7     9.8    18.0
- 7.89 -1.03    +7.9 + 4.3   1991 RA1    19034   - 9.98 +0.42  + 16.2 - 1.6
1993 02 22    09 48.40   +11 46.2    1.882    2.864   171.7     2.9    17.7

1993 01 23    10 13.37   +11 03.4    2.043    2.947   151.8     9.1    17.0
- 6.15 -0.93  + 30.9 + 4.8   1933 UM1    16692   - 8.26 +0.32  + 39.5 - 2.1
1993 02 22    09 49.47   +13 01.8    1.985    2.968   171.7     2.8    16.6

1993 01 23    10 11.52   +13 18.6    2.716    3.620   153.0     7.1    17.7
- 5.59 -0.71  + 44.7 + 3.3    (5320)     20792   - 7.26 +0.22  + 46.7 - 2.7
1993 02 22    09 50.52   +15 46.7    2.652    3.631   170.6     2.5    17.4

1993 01 23    10 15.77   +01 56.3    1.526    2.412   147.0    12.8    17.1
- 6.11 -1.26    +7.1 +10.0   1980 RB8    19014   - 9.51 +0.31  + 53.3 + 3.7
1993 02 22    09 49.46   +03 38.6    1.409    2.388   169.7     4.3    16.5
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