

The MINOR PLANET CIRCULARS/MINOR PLANETS AND COMETS are published, on behalf of  
Commission 20 of the International Astronomical Union, usually in batches  
on the date of each full moon, by:

Minor Planet Center, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.

Telephone 617-495-7244/7440/7444 (for emergency use only)

TWX 710-320-6842 ASTROGRAM CAM EASYLINK 62794505

MARSDEN@CFA.BITNET or .SPAN

BRIAN@CFAPS1.SPAN

GARETH@CFAPS1.SPAN

Brian G. Marsden, Director

Gareth V. Williams, Associate Director

### EDITORIAL NOTICE

Because of sharply increased dissemination costs, it will become necessary, starting Oct. 1, to increase the subscription rates to the *MPCs*. The new monthly rates will be \$20.00 at the regular (invoiced) rate and \$13.00 at the special (non-invoiced) rate. In addition, beginning with the Nov. 29 batch, subscribers outside North America will receive the *MPCs* by surface mail, unless they elect to pay an *additional* monthly charge of \$6.00 for airmail delivery; in order to receive the Nov. 29 batch by airmail, subscribers need to inform us by Oct. 27 that they will pay this surcharge.

The Minor Planet Center has initiated a series of *Minor Planet Electronic Circulars* (*MPECs*), containing urgent information about unusual minor planets. These are available in the Computer Service that the Minor Planet Center operates with the Central Bureau for Astronomical Telegrams, and they will also be sent, at least initially, to all e-mail subscribers to the *IAU Circulars* at no extra charge. They contain (and much more extensively) most of the information about near-earth objects that has in the past been contained in the *IAU Circulars* (as well as some less urgent information about comets). The *MPECs* are not issued in printed form, although all the relevant material in them will also be published in the monthly *MPCs*. The monthly subscription charge for the Computer Service remains at \$12.50 (regular rate) or \$7.50 (special rate). Subscribers are also reminded about the Extended Computer Service, which allows them to acquire most of the information in the *MPCs* electronically by logging in to our computers; the additional monthly charge for this is \$22.50.

### ERRATA

<i>MPC</i>	Line	
22276	-22	For Z. Moravec read M. Tichý
22436	- 1	For Pizskéstető read Pizskéstető
22472	-43 to -38	The orbits for 1993 GC <sub>1</sub> , 1993 GE <sub>1</sub> , 1993 GF <sub>1</sub> , 1993 GG <sub>1</sub> , 1993 GH <sub>1</sub> and 1993 GJ <sub>1</sub> were by E. Bowell (computer note E)
22472	-36 to -35	The orbits for 1993 HW and 1993 HX were by E. Bowell (computer note E)
22503	1	For Bařalov read Batalov
22503	4	For Bařalov read Batalov
22505	-46	For emporer read emperor
22508	1	For = 1989 XE read = 1989 XD
22509	44	For (1928- ) read (1927- )
22509	- 4	For M. Takahashi read M. Takeishi

### DELETED OBSERVATION

The following observation is to be deleted.

Object	Date	UT	$\alpha_{2000}$	$\delta_{2000}$	Reference	Obs.
1937 XD	* 1937 12	01.93423	05 33.3	+17 50	<i>MPC</i> 21627	057

### IDENTIFICATION CHANGES

Continuation to *MPC* 22439.

Object	Date	UT	$\alpha_{2000}$	$\delta_{2000}$	Originally	Mag.	Obs.
1934 XL	* 1934 12	08.93919	06 07 52.69	+19 07 59.5	(755)	14.1	008
1980 XL <sub>3</sub>	* 1980 12	10.85974	04 30 28.75	+20 45 13.5	1980 WR <sub>1</sub>	17.5	095
1989 CM <sub>9</sub>	* 1989 02	11.22760	08 23 33.00	+23 37 04.6	1989 CD <sub>1</sub>		675
1989 CM <sub>9</sub>	1989 02	11.26493	08 23 30.97	+23 37 17.1	1989 CD <sub>1</sub>		675
1989 WP <sub>7</sub>	* 1989 11	21.85417	02 56 01.88	+12 19 53.2	1989 UF <sub>8</sub>	16.0 V	095
1989 WP <sub>7</sub>	1989 11	21.86528	02 56 01.23	+12 19 50.2	1989 UF <sub>8</sub>	16.0 V	095
1992 CC <sub>8</sub>	* 1992 02	06.17708	07 59 27.76	+13 32 18.8	1992 CC <sub>3</sub>		809
1992 CC <sub>8</sub>	1992 02	06.19028	07 59 26.94	+13 32 23.5	1992 CC <sub>3</sub>		809
1992 CC <sub>8</sub>	1992 02	06.20347	07 59 26.21	+13 32 27.0	1992 CC <sub>3</sub>		809
1992 OM <sub>10</sub>	* 1992 07	30.29444	21 31 47.99	-10 26 47.6	1992 OR <sub>3</sub>		809
1992 OM <sub>10</sub>	1992 07	30.30486	21 31 47.41	-10 26 50.2	1992 OR <sub>3</sub>		809
1992 OM <sub>10</sub>	1992 07	30.31528	21 31 46.93	-10 26 52.7	1992 OR <sub>3</sub>		809
1992 SM <sub>24</sub>	* 1992 09	26.27951	23 14 01.03	-13 39 47.7	1992 SR <sub>13</sub>		675
1992 SM <sub>24</sub>	1992 09	26.30660	23 14 00.16	-13 40 02.2	1992 SR <sub>13</sub>		675

### IDENTIFICATIONS

The following identifications with numbered minor planets continue the list on *MPC* 22276:

	Note		Note
1934 XL = (885)	1	1977 PM <sub>2</sub> = (965)	1
1977 PN <sub>2</sub> = (776)	2		

Note 1: by G. V. Williams. 2: by R. H. McNaught.

### OBSERVATIONS OF COMETS

Observations are published here for the following observatory codes:

046	Kleř. 0.63-m Maksutov telescope. Observer M. Tichý. Communicated by J. Tichá.
107	Cavezzo. 0.40-m <i>f</i> /2.23 reflector + CCD. Observers R. Calanca and R. Bonomi.

108	Montelupo. Observers M. Tombelli, A. Boattini and S. Bartolini.																				
360	Kuma Kogen. 0.60-m <i>f</i> /6.0 Ritchey-Chrétien + CCD. Observer A. Nakamura.							/1987 XIX	1993 08 17.08283	05 53 06.01	+20 42 06.0	15.9 T	587								
								/1987 XIX	1993 08 17.08924	05 53 06.72	+20 42 05.7		587								
376	Uenohara. 0.30-m reflector + CCD. Observer N. Kawasato.							/1987 XIX	1993 08 17.09427	05 53 07.27	+20 42 06.1		587								
385	Nihondaira Observatory Oohira Station. 0.30-m hyperboloid astrocamera + CCD. Observer T. Urata.							/1987 XIX	1993 08 17.12440	05 53 10.88	+20 42 07.7		587								
410	Sengamine. 0.20-m <i>f</i> /4.8 reflector + CCD. Observer K. Ito.							/1987 XIX	1993 08 24.77917	06 07 57.62	+20 41 54.1	15.6 T	360								
413	Siding Spring. 1.2-m U.K. Schmidt. Observers J. A. Dawe, H. T. MacGillivray, P. R. Standen, K. P. Tritton, S. B. Tritton and W. J. Zealey. Measured by R. H. McNaught.							/1987 XIX	1993 08 27.79115	06 13 44.49	+20 40 23.3	15.6 T	360								
								/1987 XIX	1993 08 27.79444	06 13 44.86	+20 40 22.7		360								
540	Linz. 0.3-m <i>f</i> /5.2 Schmidt-Cassegrain + CCD. Observers E. Meyer, E. Obermair and H. Raab.							/1990 XXI	1993 08 24.69016	01 28 28.23	+19 10 20.3	19.3 T	360								
								/1990 XXI	1993 08 24.69792	01 28 28.08	+19 10 23.2		360								
557	Ondřejov. 0.18-m <i>f</i> /5.6 Maksutov + CCD. Observers P. Pravec and M. Wolf. Measured by P. Pravec.							/1990 XXI	1993 08 25.65347	01 28 04.90	+19 14 32.4	19.2 T	360								
								/1990 XXI	1993 08 25.66042	01 28 04.73	+19 14 33.4		360								
587	Sormano. 0.5-m reflector + CCD. Observers M. Cavagna, C. Gualdoni, E. Galliani and P. Sicoli.							/1990 XXI	1993 08 25.70226	01 28 03.57	+19 14 45.3		360								
								/1990 XXI	1993 09 14.66795	01 11 17.56	+20 10 14.0	18.3 T	385								
595	Farra d'Isonzo. 0.4-m <i>f</i> /4.5 reflector + CCD. Observers W. Boschin, F. Damonte, G. Lombardi, F. Piani and E. Pettarin. Measured by E. Pettarin.							/1990 XXI	1993 09 14.67188	01 11 17.43	+20 10 13.0		385								
596	Colleverde di Guidonia. 0.31-m <i>f</i> /2.8 Baker-Schmidt + CCD. Observer V. S. Casulli.							/1991 XXIV	1993 08 15.22308	21 53 15.65	-13 35 54.1	1	801								
								/1991 XXIV	1993 08 15.23906	21 53 14.91	-13 36 07.0		801								
657	Climenhaga Observatory, Victoria. 0.5-m reflector + CCD. Observers J. B. Tatum and D. D. Balam. Measured by D. D. Balam.							/1992c	1993 08 14.02550	03 12 52.38	+14 51 58.1		557								
								/1992c	1993 08 14.02819	03 12 52.52	+14 51 58.6	15.1 T	557								
658	Dominion Astrophysical Observatory, Victoria. 1.82-m Plaskett telescope + CCD. Observers D. D. Balam, J. B. Tatum and G. C. L. Aikman. Measured by D. D. Balam.							/1992c	1993 08 14.03094	03 12 52.81	+14 52 00.7	15.2 T	557								
								/1992c	1993 08 14.03300	03 12 52.86	+14 52 00.6	15.2 T	557								
675	Palomar. 0.46-m and 1.2-m Schmidts. Observers J. Alu, E. F. Helin, K. Lawrence, D. H. Levy, J. Mueller, C. S. Shoemaker and E. M. Shoemaker. Measured by Lawrence and Mueller.							/1992c	1993 08 14.03918	03 12 52.99	+14 52 01.4		557								
								/1992c	1993 08 17.42249	03 15 26.76	+15 03 08.3	19.6 N	691								
								/1992c	1993 08 17.43204	03 15 27.16	+15 03 10.4	15.5 T	691								
691	Kitt Peak. 0.91-m Spacewatch telescope. Observers J. V. Scotti, R. Jedicke and T. Gehrels.							/1992c	1993 08 24.73090	03 19 54.27	+15 22 39.1	15.8 T	360								
								/1992c	1993 08 24.73420	03 19 54.33	+15 22 39.3		360								
801	Oak Ridge. 1.5-m reflector + CCD. Observers R. E. McCrosky and C.-Y. Shao.							/1992c	1993 08 27.73229	03 21 17.54	+15 28 58.0	15.6 T	360								
								/1992c	1993 08 27.73611	03 21 17.63	+15 28 58.6		360								
871	Akou. 0.33-m <i>f</i> /3.3 reflector + CCD. Observer K. Kawanishi.							/1992c	1993 09 14.50238	03 23 48.82	+15 46 26.5	15.6 T	691								
894	Kiyosato. 0.25-m <i>f</i> /3.4 reflector. Observer S. Otomo.																				
900	Kiryuu Observatory, Ohtsu. 0.26-m <i>f</i> /2.9 reflector. Observer Y. Ikari.							/1992e	1993 08 16.35315	22 13 08.81	-00 59 34.9	22.2 T	691								
902	Ootake. 0.25-m <i>f</i> /3.3 reflector. Observer K. Takehashi. Measured by H. Nakahira.							/1992e	1993 08 16.37442	22 13 07.77	-00 59 43.7	20.3 T	691								
								/1992e	1993 08 16.39606	22 13 06.79	-00 59 51.3		691								
950	La Palma. 1.0-m Jacobus Kapteyn telescope + CCD. Observers D. H. P. Jones, I. P. Williams and D. Harper.							/1992e	1993 09 16.18528	21 52 41.39	-04 31 30.7	22.6 N	691								
								/1992e	1993 09 16.21716	21 52 40.39	-04 31 43.0	20.6 T	691								
								/1992e	1993 09 16.25330	21 52 39.32	-04 31 56.8	20.1 T	691								
Object	Date	UT	$\alpha_{2000}$	$\delta_{2000}$	Mag.	N	Obs.														
<b>Comet McNaught-Tritton (1978 XXVII)</b>																					
/1978 XXVII	1978 04 12.57924		14 04 40.24	-32 43 07.8	17	T	413	/1992f	1993 08 15.30914	21 42 43.50	-05 20 53.2	21.4 N	691								
/1978 XXVII	1978 04 12.62785		14 04 36.48	-32 42 59.4			413	/1992f	1993 08 15.31653	21 42 43.19	-05 20 55.1	19.0 T	691								
/1978 XXVII	1978 05 01.50241		13 40 24.91	-31 35 36.5	17.5	T	413	/1992f	1993 09 16.12678	21 24 49.98	-07 35 46.7	20.3 T	691								
/1978 XXVII	1978 05 01.56491		13 40 20.23	-31 35 17.6			413	/1992f	1993 09 16.14681	21 24 49.50	-07 35 51.3	22.0 N	691								
/1978 XXVII	1979 03 05.6037		11 58 14.75	-30 46 58.6	17.5	T	413		1993 09 16.16767	21 24 49.01	-07 35 56.2	19.9 T	691								
/1978 XXVII	1979 03 05.6523		11 58 11.24	-30 46 47.5			413	/1992j													
/1978 XXVII	1980 01 23.64640		10 23 45.44	-22 10 01.7			413	/1992j	1993 07 22.72292	01 17 14.62	+05 46 36.8	14.1 T	360								
									1993 07 22.72569	01 17 14.78	+05 46 38.6		360								

**Periodic Comet Schwassmann-Wachmann 2****Periodic Comet Encke****Comet Shoemaker-Levy (1991 XXIV)****Periodic Comet Howell****Periodic Comet Singer Brewster****Periodic Comet Shoemaker-Levy 8****Periodic Comet Ashbrook-Jackson**

/1992j	1993 08 13.46205	01 30 44.65	+09 04 33.0	13.4 T	691	/1993i	1993 08 22.42714	03 41 23.54	+39 29 32.6	18.1 T	691
/1992j	1993 08 13.47217	01 30 44.87	+09 04 38.5	17.4 N	691	/1993i	1993 08 22.43646	03 41 24.26	+39 29 39.3	18.2 T	691
/1992j	1993 08 15.34656	01 31 23.21	+09 19 59.1		801	/1993i	1993 08 24.74167	03 44 13.39	+39 57 28.4	17.4 T	360
/1992j	1993 08 15.35975	01 31 23.45	+09 20 05.8		801	/1993i	1993 08 24.74479	03 44 13.53	+39 57 30.6		360
/1992j	1993 08 21.33916	01 32 47.34	+10 06 59.7		801						
/1992j	1993 08 21.35921	01 32 47.52	+10 07 08.7		801						
/1992j	1993 08 24.70747	01 33 08.55	+10 31 57.4	13.6 T	360	/1993j	1993 08 16.15078	15 24 48.49	-14 19 39.9	20.3 T	691
/1992j	1993 08 24.71065	01 33 08.58	+10 31 58.7		360	/1993j	1993 08 16.16050	15 24 49.22	-14 19 44.1	23.0 N	691
/1992j	1993 09 05.88028	01 31 42.09	+11 52 25.2		107	/1993j	1993 08 16.16971	15 24 49.93	-14 19 47.8	21.0 T	691
/1992j	1993 09 14.47870	01 28 09.01	+12 38 58.8	13.2 T	691						
	<b>Periodic Comet Väisälä 1</b>										
/1992u	1993 09 05.44722	14 38 39.60	-05 33 26.7	18.0 T	360	/1993k	1993 08 14.43058	00 48 49.17	+04 03 20.5	21.4 N	691
/1992u	1993 09 05.45069	14 38 40.16	-05 33 28.2		360	/1993k	1993 08 14.43972	00 48 49.36	+04 03 19.5	18.2 T	691
	<b>Periodic Comet Slaughter-Burnham</b>										
/1992w	1993 08 14.48498	04 21 21.71	+28 23 20.8	16.9 T	691	/1993k	1993 08 25.62517	00 50 49.07	+03 35 36.4	17.6 T	360
/1992w	1993 08 24.75729	04 36 29.00	+29 26 20.8	16.9 T	360	/1993k	1993 08 25.63281	00 50 49.09	+03 35 34.6		360
/1992w	1993 08 24.76076	04 36 29.30	+29 26 22.1		360	/1993k	1993 08 25.63941	00 50 49.09	+03 35 33.5		360
/1992w	1993 08 27.76806	04 40 39.73	+29 43 43.9	16.3 T	360	/1993k	1993 09 10.44674	00 48 43.00	+02 19 48.8	20.9 N	691
/1992w	1993 08 27.77153	04 40 40.07	+29 43 45.2		360	/1993k	1993 09 10.47867	00 48 42.35	+02 19 37.3	17.2 T	691
						/1993k	1993 09 10.48871	00 48 42.14	+02 19 33.9	17.3 T	691
	<b>Comet Mueller (1993a)</b>										
/1993a	1993 08 13.02481	07 59 30.28	+60 23 39.5		557	/1993l	1993 08 20.16858	16 24 14.67	-20 29 33.4	16.0 T	675
/1993a	1993 08 13.03257	07 59 30.89	+60 23 44.7		557	/1993l	1993 08 21.18490	16 24 54.40	-20 33 48.1		675
/1993a	1993 08 13.03375	07 59 30.98	+60 23 45.2		557	/1993l	1993 08 22.22726	16 25 36.35	-20 38 15.3		675
/1993a	1993 08 13.03574	07 59 31.16	+60 23 46.6	11.4 T	557	/1993l	1993 09 05.46042	16 37 00.92	-21 38 05.0	16.8 T	360
/1993a	1993 08 13.03712	07 59 31.28	+60 23 47.3	11.4 T	557	/1993l	1993 09 05.46319	16 37 01.03	-21 38 05.8		360
/1993a	1993 08 13.03848	07 59 31.42	+60 23 48.3	11.4 T	557						
/1993a	1993 08 13.03906	07 59 31.42	+60 23 47.9		596	/1993m	1993 08 14.45095	02 32 44.12	+28 37 20.5	21.0 N	691
/1993a	1993 08 13.03986	07 59 31.51	+60 23 49.1	11.4 T	557	/1993m	1993 08 14.46137	02 32 44.57	+28 37 25.1	17.8 T	691
/1993a	1993 08 13.05246	07 59 32.46	+60 23 56.1		596						
/1993a	1993 08 13.06604	07 59 33.73	+60 24 06.2		596	/1993o	1993 08 22.44890	04 08 26.80	-13 01 20.3	18.7 T	691
/1993a	1993 08 21.87823	08 12 23.05	+62 09 13.4	11.8 T	540	/1993o	1993 08 22.45690	04 08 27.54	-13 01 20.6	18.4 T	691
/1993a	1993 08 21.87992	08 12 23.22	+62 09 13.8	11.9 T	540	/1993o	1993 08 22.46484	04 08 28.30	-13 01 19.6	18.5 T	691
/1993a	1993 08 21.88131	08 12 23.38	+62 09 16.5	11.9 T	540	/1993o	1993 08 22.47581	04 08 29.46	-13 01 18.6	18.9 T	691
/1993a	1993 08 21.88270	08 12 23.37	+62 09 18.0	11.9 T	540	/1993o	1993 08 24.76788	04 12 18.48	-12 59 22.7	18.2 T	360
/1993a	1993 09 04.94420	08 36 50.45	+65 48 56.8	10.7 T	587	/1993o	1993 08 24.77118	04 12 18.81	-12 59 22.3		360
/1993a	1993 09 04.97499	08 36 54.20	+65 49 30.5		587	/1993o	1993 08 27.78021	04 17 15.01	-12 57 08.3	17.8 T	360
						/1993o	1993 08 27.78403	04 17 15.38	-12 57 08.1		360
	<b>Periodic Comet Forbes</b>										
/1993f	1993 07 22.72986	01 46 56.45	+14 44 52.7	16.9 T	360						
/1993f	1993 07 22.73264	01 46 56.58	+14 44 53.3		360	/1993p	1993 08 16.44375	01 45 29.07	+49 49 08.1	14.5 T	675
/1993f	1993 08 13.48351	02 00 49.91	+17 44 58.0	17.9 T	691	/1993p	1993 08 16.49444	01 45 27.92	+49 49 15.3		675
/1993f	1993 08 14.01753	02 00 59.55	+17 48 26.2		557	/1993p	1993 08 17.49253	01 44 56.20	+49 51 42.0	14 T	675
/1993f	1993 08 14.01959	02 00 59.69	+17 48 28.7	16.9 T	557	/1993p	1993 08 18.89750	01 44 08.10	+49 54 55.1		595
/1993f	1993 08 24.71603	02 02 10.42	+18 49 01.9	17.5 T	360	/1993p	1993 08 18.91188	01 44 07.54	+49 54 57.0		595
/1993f	1993 08 24.71979	02 02 10.39	+18 49 02.4		360	/1993p	1993 08 18.93596	01 44 06.62	+49 55 00.0		046
/1993f	1993 08 24.72292	02 02 10.46	+18 49 04.2		360	/1993p	1993 08 18.94753	01 44 06.23	+49 55 01.9		046
/1993f	1993 09 14.48846	01 53 24.06	+19 45 23.4	16.5 T	691	/1993p	1993 08 19.29623	01 43 53.63	+49 55 47.0		657
	<b>Periodic Comet Holmes</b>										
/1993i	1993 07 22.74184	02 56 22.11	+32 51 14.5	16.9 T	360	/1993p	1993 08 19.29785	01 43 53.58	+49 55 47.2		657
/1993i	1993 07 22.74514	02 56 22.43	+32 51 17.1		360	/1993p	1993 08 19.29925	01 43 53.52	+49 55 47.4		657
/1993i	1993 08 22.41759	03 41 22.84	+39 29 26.0	21.1 N	691	/1993p	1993 08 19.42604	01 43 48.69	+49 56 04.9	14.0 T	675
						/1993p	1993 08 19.44965	01 43 47.65	+49 56 07.6		675
						/1993p	1993 08 19.83942	01 43 33.11	+49 56 54.5		595

/1993p	1993 08 19.85115	01 43 32.70	+49 56 56.1		595	/1993p	1993 09 04.11571	01 28 52.23	+50 03 52.9		950
/1993p	1993 08 20.61100	01 43 03.08	+49 58 27.9	14.4 T	360	/1993p	1993 09 04.63376	01 28 10.94	+50 03 00.1	14.4 T	871
/1993p	1993 08 20.61539	01 43 02.91	+49 58 28.5		360	/1993p	1993 09 04.64359	01 28 10.21	+50 02 59.5		871
/1993p	1993 08 20.85992	01 42 52.90	+49 58 54.7		595	/1993p	1993 09 04.88442	01 27 50.94	+50 02 31.5		587
/1993p	1993 08 20.86023	01 42 52.86	+49 58 54.5		587	/1993p	1993 09 04.93056	01 27 47.21	+50 02 27.0		587
/1993p	1993 08 20.87750	01 42 52.25	+49 58 57.3		595	/1993p	1993 09 05.64650	01 26 48.65	+50 01 00.5	14.4 T	871
/1993p	1993 08 20.92427	01 42 50.49	+49 59 03.5		108	/1993p	1993 09 05.65461	01 26 47.97	+50 01 00.4		871
/1993p	1993 08 20.93414	01 42 49.95	+49 59 03.8	14.6 T	587	/1993p	1993 09 05.66340	01 26 47.25	+50 00 59.5		871
/1993p	1993 08 20.93987	01 42 49.90	+49 59 05.2		108	/1993p	1993 09 05.90444	01 26 26.92	+50 00 26.6		596
/1993p	1993 08 20.98281	01 42 48.01	+49 59 11.2		108	/1993p	1993 09 05.91931	01 26 25.82	+50 00 25.5		596
/1993p	1993 08 20.99735	01 42 47.42	+49 59 13.2		108	/1993p	1993 09 05.93712	01 26 24.33	+50 00 23.5		596
/1993p	1993 08 21.06980	01 42 44.34	+49 59 20.5		108	/1993p	1993 09 05.94252	01 26 23.93	+50 00 23.0		596
/1993p	1993 08 21.85344	01 42 11.25	+50 00 43.1	14.3 T	540	/1993p	1993 09 09.43551	01 21 14.00	+49 50 16.8		657
/1993p	1993 08 21.85692	01 42 11.24	+50 00 43.0	14.3 T	540	/1993p	1993 09 09.44086	01 21 13.49	+49 50 15.7		657
/1993p	1993 08 21.86380	01 42 10.91	+50 00 43.7	14.4 T	540	/1993p	1993 09 09.44231	01 21 13.35	+49 50 15.4		657
/1993p	1993 08 21.86499	01 42 10.80	+50 00 43.7	14.4 T	540	/1993p	1993 09 10.72535	01 19 10.86	+49 45 17.5	14.1 T	902
/1993p	1993 08 22.51638	01 41 42.40	+50 01 49.1		376	/1993p	1993 09 10.73229	01 19 09.89	+49 45 16.2		902
/1993p	1993 08 22.52714	01 41 41.94	+50 01 50.6		376						
/1993p	1993 08 22.57373	01 41 39.83	+50 01 55.6		376						
/1993p	1993 08 24.29485	01 40 19.05	+50 04 20.7		658						
/1993p	1993 08 24.29763	01 40 18.87	+50 04 21.0		658						
/1993p	1993 08 24.29954	01 40 18.77	+50 04 20.9		658						
/1993p	1993 08 24.30231	01 40 18.65	+50 04 21.2		658						
/1993p	1993 08 24.35955	01 40 15.86	+50 04 27.8		675						
/1993p	1993 08 24.65741	01 40 01.06	+50 04 48.2	14.7 T	360						
/1993p	1993 08 24.66100	01 40 00.89	+50 04 48.5		360						
/1993p	1993 08 25.55069	01 39 15.43	+50 05 45.5	14.7 T	360						
/1993p	1993 08 25.56042	01 39 14.93	+50 05 46.2		360						
/1993p	1993 08 25.61121	01 39 12.13	+50 05 49.2		900						
/1993p	1993 08 25.63791	01 39 10.74	+50 05 51.3	14 T	900						
/1993p	1993 08 25.73319	01 39 05.36	+50 05 56.9	14.5 T	410						
/1993p	1993 08 25.74194	01 39 04.87	+50 05 57.9		410						
/1993p	1993 08 26.84699	01 38 05.25	+50 06 51.2	14.1 T	540						
/1993p	1993 08 26.84948	01 38 04.94	+50 06 50.4	14.2 T	540						
/1993p	1993 08 26.85087	01 38 04.95	+50 06 50.4	14.1 T	540						
/1993p	1993 08 26.85226	01 38 04.85	+50 06 51.2	14.2 T	540						
/1993p	1993 08 27.67118	01 37 18.67	+50 07 24.6	14.8 T	902						
/1993p	1993 08 27.68090	01 37 18.13	+50 07 22.4		902						
/1993p	1993 08 27.78449	01 37 11.63	+50 07 27.8	14.5 T	894						
/1993p	1993 08 27.79236	01 37 11.18	+50 07 27.7		894						
/1993p	1993 08 27.79931	01 37 10.73	+50 07 28.6		894						
/1993p	1993 08 28.91476	01 36 04.48	+50 07 49.4		108						
/1993p	1993 08 28.91853	01 36 04.18	+50 07 49.5		108						
/1993p	1993 08 28.92552	01 36 03.97	+50 07 50.4		108						
/1993p	1993 08 28.93144	01 36 03.50	+50 07 50.6		108						
/1993p	1993 08 31.08195	01 33 45.50	+50 07 43.9		950						
/1993p	1993 08 31.09209	01 33 44.80	+50 07 43.4		950						
/1993p	1993 08 31.11311	01 33 43.37	+50 07 43.0		950						
/1993p	1993 09 02.13373	01 31 21.87	+50 06 24.6		950						
/1993p	1993 09 02.14040	01 31 21.40	+50 06 24.1		950						
/1993p	1993 09 02.16267	01 31 19.50	+50 06 23.3		950						
/1993p	1993 09 04.11025	01 28 52.69	+50 03 53.3		950						

Note 1: weak, trailed image.

#### 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. Numeric 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
- J J2000.0 reduction of previously-reported position
- 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

Object	Date	UT	$\alpha_{2000}$	$\delta_{2000}$	Mag.	N Obs.						
U	uncertain image											
u	unconfirmed image											
V	very faint image											
W	weak image											
w	weak solution											
<b>010 Caussols</b>												
E. W. Elst, Royal Observatory, B-1180 Brussels, Belgium							1982 TP <sub>1</sub>	1993 08 14.95903	21 12 33.94	-10 41 44.5	18.3	010
C. Pollas, Observatoire de la Côte d'Azur, Avenue Copernic, F-06130 Grasse, France							1982 TP <sub>1</sub>	1993 08 14.96944	21 12 33.39	-10 41 46.6		010
Observers E. W. Elst, J. B. Emond							1982 TP <sub>1</sub>	1993 08 14.97986	21 12 32.74	-10 41 49.7		010
Measurer E. W. Elst							1983 RM <sub>3</sub>	1993 08 16.07431	23 12 43.93	-00 33 46.0	18.3	010
0.9-m Schmidt telescope							1983 RM <sub>3</sub>	1993 08 16.08472	23 12 43.36	-00 33 47.0		010
1971 UN <sub>1</sub>	1993 08 15.04861		22 50 31.89	-06 08 02.0	18.4	010	1983 RM <sub>3</sub>	1993 08 16.09514	23 12 42.86	-00 33 46.6		010
1971 UN <sub>1</sub>	1993 08 15.05972		22 50 31.42	-06 08 05.2		010	1983 RM <sub>3</sub>	1993 08 17.05417	23 11 57.24	-00 34 15.1		010
1971 UN <sub>1</sub>	1993 08 15.07083		22 50 31.06	-06 08 08.4		010	1986 VY	1993 08 18.05729	23 23 13.32	-03 59 31.3		010
1971 UN <sub>1</sub>	1993 08 17.00139		22 49 19.64	-06 15 58.5		010	1986 VY	1993 08 19.08403	23 22 33.17	-04 00 55.6	18.2	010
1976 SZ <sub>9</sub>	1993 08 18.05729		23 28 27.03	-06 39 59.1		010	1986 VY	1993 08 19.09479	23 22 32.72	-04 00 57.2		010
1976 SZ <sub>9</sub>	1993 08 19.08403		23 27 53.40	-06 42 49.9	18.0	010	1986 VY	1993 08 19.10556	23 22 32.25	-04 00 57.9		010
1976 SZ <sub>9</sub>	1993 08 19.09479		23 27 52.96	-06 42 52.1		010	1986 XF <sub>1</sub>	1993 08 16.07431	23 14 04.70	-00 56 51.2	18.0	010
1976 SZ <sub>9</sub>	1993 08 19.10556		23 27 52.55	-06 42 54.6		010	1986 XF <sub>1</sub>	1993 08 16.08472	23 14 04.23	-00 56 52.2		010
1978 RR <sub>8</sub>	1993 08 14.95903		21 28 26.57	-08 01 53.8	18.6	010	1986 XF <sub>1</sub>	1993 08 16.09514	23 14 03.89	-00 56 52.9		010
1978 RR <sub>8</sub>	1993 08 14.96944		21 28 26.03	-08 01 58.4		010	1986 XF <sub>1</sub>	1993 08 16.09514	23 14 03.89	-00 56 52.9		010
1978 RR <sub>8</sub>	1993 08 14.97986		21 28 25.51	-08 02 03.9		010	1986 XF <sub>1</sub>	1993 08 17.05417	23 13 31.86	-00 57 54.8		010
1978 RR <sub>8</sub>	1993 08 15.95833		21 27 34.42	-08 09 03.2		010	1989 GT <sub>4</sub>	1993 08 15.04861	22 49 50.58	-03 07 15.7	17.8	010
1978 UK <sub>7</sub>	1993 08 15.04861		22 58 13.19	-04 13 45.9	18.5	010	1989 GT <sub>4</sub>	1993 08 15.05972	22 49 50.11	-03 07 19.3		010
1978 UK <sub>7</sub>	1993 08 15.05972		22 58 12.67	-04 13 49.7		010	1989 GT <sub>4</sub>	1993 08 15.07083	22 49 49.70	-03 07 22.7		010
1978 UK <sub>7</sub>	1993 08 15.07083		22 58 12.19	-04 13 52.0		010	1989 GT <sub>4</sub>	1993 08 17.00139	22 48 33.77	-03 18 35.8		010
1978 UK <sub>7</sub>	1993 08 17.00139		22 56 55.81	-04 22 06.5		010	1990 UW	1993 08 15.04861	22 50 17.48	-07 31 39.4	18.2	010
1980 PX	1993 08 18.05729		23 27 14.69	-03 04 35.0		010	1990 UW	1993 08 15.05972	22 50 16.88	-07 31 41.8		010
1980 PX	1993 08 19.08403		23 26 57.91	-03 09 24.1	17.8	010	1990 UW	1993 08 15.07083	22 50 16.28	-07 31 43.8		010
1980 PX	1993 08 19.09479		23 26 57.65	-03 09 27.8		010	1993 OV <sub>1</sub>	1993 08 14.95903	21 25 47.38	-07 48 10.2	18.0	010
1980 PX	1993 08 19.10556		23 26 57.42	-03 09 30.9		010	1993 OV <sub>1</sub>	1993 08 14.96944	21 25 46.73	-07 48 00.4		010
1981 ET <sub>7</sub>	1993 08 15.00069		22 25 01.44	-05 25 20.5	18.6	010	1993 OV <sub>1</sub>	1993 08 14.97986	21 25 46.13	-07 47 51.1		010
1981 ET <sub>7</sub>	1993 08 15.01146		22 25 00.85	-05 25 23.5		010	1993 OV <sub>1</sub>	1993 08 15.95833	21 24 51.27	-07 31 30.1		010
1981 ET <sub>7</sub>	1993 08 16.02986		22 24 04.81	-05 28 31.9		010	1993 OY <sub>1</sub>	1993 07 15.99722	20 07 29.72	-16 22 17.1	18.3	010
1981 ET <sub>7</sub>	1993 08 16.04097		22 24 04.23	-05 28 34.4		010	1993 OY <sub>1</sub>	1993 07 16.00764	20 07 29.07	-16 22 19.3		010
1981 ET <sub>7</sub>	1993 08 16.05174		22 24 03.64	-05 28 34.8		010	1993 OY <sub>1</sub>	1993 07 16.01806	20 07 28.55	-16 22 20.7		010
1981 EH <sub>13</sub>	1993 08 14.95903		21 14 28.85	-09 57 24.3	18.4	010	1993 OE <sub>2</sub>	1993 07 15.99722	20 05 35.03	-14 54 47.4	18.5	010
1981 EH <sub>13</sub>	1993 08 14.96944		21 14 28.17	-09 57 25.8		010	1993 OE <sub>2</sub>	1993 07 16.00764	20 05 34.31	-14 54 50.5		010
1981 EH <sub>13</sub>	1993 08 14.97986		21 14 27.69	-09 57 27.0		010	1993 OE <sub>2</sub>	1993 07 16.01806	20 05 33.77	-14 54 54.0		010
1981 EH <sub>13</sub>	1993 08 15.95833		21 13 40.07	-10 00 15.1		010	1993 PE	1993 08 14.95903	21 26 07.19	-08 45 45.9	18.0	010
1981 EF <sub>30</sub>	1993 08 15.04861		23 01 45.69	-04 55 11.7	18.5	010	1993 PE	1993 08 14.96944	21 26 06.54	-08 45 48.4		010
1981 EF <sub>30</sub>	1993 08 15.05972		23 01 45.10	-04 55 16.2		010	1993 PE	1993 08 14.97986	21 26 05.97	-08 45 51.0		010
1981 EF <sub>30</sub>	1993 08 15.07083		23 01 44.59	-04 55 22.1		010	1993 PE	1993 08 15.95833	21 25 10.81	-08 48 58.5		010
1981 EQ <sub>33</sub>	1993 08 15.00069		22 29 38.36	-03 19 01.4	18.7	010	1993 PR	1993 08 14.95903	21 14 58.79	-10 17 53.6	18.6	010
1981 EQ <sub>33</sub>	1993 08 15.01146		22 29 37.70	-03 19 00.4		010	1993 PR	1993 08 14.96944	21 14 58.09	-10 17 54.4		010
1981 EQ <sub>33</sub>	1993 08 16.02986		22 28 43.27	-03 20 34.7		010	1993 PR	1993 08 14.97986	21 14 57.35	-10 17 55.1		010
1981 EQ <sub>33</sub>	1993 08 16.04097		22 28 42.72	-03 20 35.4		010	1993 PR	1993 08 15.95833	21 13 58.83	-10 19 04.4		010
1981 EQ <sub>33</sub>	1993 08 16.05174		22 28 42.04	-03 20 37.2		010	1993 PX <sub>2</sub>	* 1993 08 14.95903	21 14 42.96	-10 43 05.0	18.2	010
							1993 PX <sub>2</sub>	1993 08 14.96944	21 14 42.29	-10 43 09.9		010
							1993 PX <sub>2</sub>	1993 08 14.97986	21 14 41.67	-10 43 13.0		010
							1993 PX <sub>2</sub>	1993 08 15.95833	21 13 51.45	-10 49 55.8		010
							1993 PY <sub>2</sub>	* 1993 08 14.95903	21 15 02.42	-09 45 55.3	18.8	010
							1993 PY <sub>2</sub>	1993 08 14.96944	21 15 01.75	-09 45 57.9		010
							1993 PY <sub>2</sub>	1993 08 14.97986	21 15 01.18	-09 45 59.2		010
							1993 PY <sub>2</sub>	1993 08 15.95833	21 14 07.79	-09 49 15.0		010
							1993 PZ <sub>2</sub>	* 1993 08 14.95903	21 15 35.15	-08 16 23.0	18.0	010
							1993 PZ <sub>2</sub>	1993 08 14.96944	21 15 34.64	-08 16 24.9		010
							1993 PZ <sub>2</sub>	1993 08 14.97986	21 15 34.25	-08 16 26.8		010
							1993 PZ <sub>2</sub>	1993 08 15.95833	21 14 56.20	-08 19 53.9		010

1993 PA <sub>3</sub>	* 1993 08 14.95903	21 15 35.75	-10 06 50.3	18.6	010	1993 PO <sub>3</sub>	* 1993 08 14.95903	21 23 33.47	-09 44 44.8	18.0	010
1993 PA <sub>3</sub>	1993 08 14.96944	21 15 35.18	-10 06 50.8		010	1993 PO <sub>3</sub>	1993 08 14.96944	21 23 32.74	-09 44 47.5		010
1993 PA <sub>3</sub>	1993 08 14.97986	21 15 34.67	-10 06 50.2		010	1993 PO <sub>3</sub>	1993 08 14.97986	21 23 32.13	-09 44 49.0		010
1993 PA <sub>3</sub>	1993 08 15.95833	21 14 44.77	-10 06 49.9		010	1993 PO <sub>3</sub>	1993 08 15.95833	21 22 36.78	-09 47 25.1		010
1993 PB <sub>3</sub>	* 1993 08 14.95903	21 16 40.06	-08 54 39.7	17.7	010	1993 PP <sub>3</sub>	* 1993 08 14.95903	21 23 59.52	-11 27 19.0	18.5	010
1993 PB <sub>3</sub>	1993 08 14.96944	21 16 39.39	-08 54 39.9		010	1993 PP <sub>3</sub>	1993 08 14.96944	21 23 58.97	-11 27 17.6		010
1993 PB <sub>3</sub>	1993 08 14.97986	21 16 38.77	-08 54 39.9		010	1993 PP <sub>3</sub>	1993 08 14.97986	21 23 58.21	-11 27 15.0		010
1993 PB <sub>3</sub>	1993 08 15.95833	21 15 44.21	-08 55 13.4		010	1993 PP <sub>3</sub>	1993 08 15.95833	21 22 58.64	-11 23 31.1		010
1993 PC <sub>3</sub>	* 1993 08 14.95903	21 18 38.03	-08 16 42.2	18.3	010	1993 PQ <sub>3</sub>	* 1993 08 14.95903	21 25 14.64	-10 53 01.1	18.2	010
1993 PC <sub>3</sub>	1993 08 14.96944	21 18 37.40	-08 16 43.9		010	1993 PQ <sub>3</sub>	1993 08 14.96944	21 25 14.01	-10 53 05.5		010
1993 PC <sub>3</sub>	1993 08 14.97986	21 18 36.86	-08 16 45.2		010	1993 PQ <sub>3</sub>	1993 08 14.97986	21 25 13.50	-10 53 09.8		010
1993 PC <sub>3</sub>	1993 08 15.95833	21 17 49.77	-08 18 51.1		010	1993 PQ <sub>3</sub>	1993 08 15.95833	21 24 22.07	-11 00 12.0		010
1993 PD <sub>3</sub>	* 1993 08 14.95903	21 19 01.75	-10 44 05.7	18.5	010	1993 PR <sub>3</sub>	* 1993 08 14.95903	21 26 33.08	-10 16 37.3	18.6	010
1993 PD <sub>3</sub>	1993 08 14.96944	21 19 01.02	-10 44 07.8		010	1993 PR <sub>3</sub>	1993 08 14.96944	21 26 32.48	-10 16 43.7		010
1993 PD <sub>3</sub>	1993 08 14.97986	21 19 00.37	-10 44 10.9		010	1993 PR <sub>3</sub>	1993 08 14.97986	21 26 31.80	-10 16 47.3		010
1993 PD <sub>3</sub>	1993 08 15.95833	21 17 59.45	-10 48 08.5		010	1993 PR <sub>3</sub>	1993 08 15.95833	21 25 40.99	-10 23 10.3		010
1993 PE <sub>3</sub>	* 1993 08 14.95903	21 19 15.40	-08 16 38.9	19.0	010	1993 PS <sub>3</sub>	* 1993 08 14.95903	21 27 40.43	-07 35 08.0	18.6	010
1993 PE <sub>3</sub>	1993 08 14.96944	21 19 14.77	-08 16 34.9		010	1993 PS <sub>3</sub>	1993 08 14.96944	21 27 39.86	-07 35 12.5		010
1993 PE <sub>3</sub>	1993 08 14.97986	21 19 13.93	-08 16 34.2		010	1993 PS <sub>3</sub>	1993 08 14.97986	21 27 39.21	-07 35 15.4		010
1993 PE <sub>3</sub>	1993 08 15.95833	21 18 15.84	-08 15 44.1		010	1993 PS <sub>3</sub>	1993 08 15.95833	21 26 46.46	-07 39 39.4		010
1993 PF <sub>3</sub>	* 1993 08 14.95903	21 19 32.99	-07 05 40.7	19.0	010	1993 PT <sub>3</sub>	* 1993 08 14.95903	21 27 59.20	-08 02 45.7	18.5	010
1993 PF <sub>3</sub>	1993 08 14.96944	21 19 32.23	-07 05 40.2		010	1993 PT <sub>3</sub>	1993 08 14.96944	21 27 58.74	-08 02 50.7		010
1993 PF <sub>3</sub>	1993 08 14.97986	21 19 31.52	-07 05 36.9		010	1993 PT <sub>3</sub>	1993 08 14.97986	21 27 58.29	-08 02 56.8		010
1993 PF <sub>3</sub>	1993 08 15.95833	21 18 23.46	-07 02 22.3		010	1993 PT <sub>3</sub>	1993 08 15.95833	21 27 14.58	-08 10 57.7		010
1993 PG <sub>3</sub>	* 1993 08 14.95903	21 20 13.39	-11 37 23.7	18.4	010	1993 PU <sub>3</sub>	* 1993 08 14.95903	21 28 40.39	-10 16 41.9	18.6	010
1993 PG <sub>3</sub>	1993 08 14.96944	21 20 12.77	-11 37 26.3		010	1993 PU <sub>3</sub>	1993 08 14.96944	21 28 39.68	-10 16 44.1		010
1993 PG <sub>3</sub>	1993 08 14.97986	21 20 12.24	-11 37 28.0		010	1993 PU <sub>3</sub>	1993 08 14.97986	21 28 39.12	-10 16 45.1		010
1993 PG <sub>3</sub>	1993 08 15.95833	21 19 19.83	-11 41 56.8		010	1993 PU <sub>3</sub>	1993 08 15.95833	21 27 36.82	-10 17 58.8		010
1993 PH <sub>3</sub>	* 1993 08 14.95903	21 20 18.91	-09 40 13.8	18.5	010	1993 PV <sub>3</sub>	* 1993 08 14.95903	21 28 46.62	-07 43 06.9	18.5	010
1993 PH <sub>3</sub>	1993 08 14.96944	21 20 18.47	-09 40 20.1		010	1993 PV <sub>3</sub>	1993 08 14.96944	21 28 46.08	-07 43 11.4		010
1993 PH <sub>3</sub>	1993 08 14.97986	21 20 18.04	-09 40 24.9		010	1993 PV <sub>3</sub>	1993 08 14.97986	21 28 45.66	-07 43 16.2		010
1993 PH <sub>3</sub>	1993 08 15.95833	21 19 38.36	-09 50 23.2		010	1993 PV <sub>3</sub>	1993 08 15.95833	21 28 02.29	-07 50 07.6		010
1993 PJ <sub>3</sub>	* 1993 08 14.95903	21 20 38.57	-07 32 40.7	18.6	010	1993 PW <sub>3</sub>	* 1993 08 14.95903	21 30 43.96	-07 21 50.0	18.3	010
1993 PJ <sub>3</sub>	1993 08 14.96944	21 20 38.16	-07 32 44.0		010	1993 PW <sub>3</sub>	1993 08 14.96944	21 30 43.43	-07 21 54.5		010
1993 PJ <sub>3</sub>	1993 08 14.97986	21 20 37.88	-07 32 46.9		010	1993 PW <sub>3</sub>	1993 08 14.97986	21 30 42.88	-07 21 59.8		010
1993 PJ <sub>3</sub>	1993 08 15.95833	21 19 59.43	-07 38 35.3		010	1993 PW <sub>3</sub>	1993 08 15.95833	21 29 52.74	-07 29 09.0		010
1993 PK <sub>3</sub>	* 1993 08 14.95903	21 20 42.07	-09 09 07.6	18.6	010	1993 PX <sub>3</sub>	* 1993 08 14.95903	21 31 27.32	-07 46 32.6	18.4	010
1993 PK <sub>3</sub>	1993 08 14.96944	21 20 41.34	-09 09 05.1		010	1993 PX <sub>3</sub>	1993 08 14.96944	21 31 26.62	-07 46 34.2		010
1993 PK <sub>3</sub>	1993 08 14.97986	21 20 40.72	-09 09 04.8		010	1993 PX <sub>3</sub>	1993 08 14.97986	21 31 25.95	-07 46 35.9		010
1993 PK <sub>3</sub>	1993 08 15.95833	21 19 42.72	-09 07 06.0		010	1993 PX <sub>3</sub>	1993 08 15.95833	21 30 26.23	-07 49 01.2		010
1993 PL <sub>3</sub>	* 1993 08 14.95903	21 21 15.07	-09 34 25.3	18.5	010	1993 PY <sub>3</sub>	* 1993 08 14.95903	21 31 28.27	-07 30 55.6	17.8	010
1993 PL <sub>3</sub>	1993 08 14.96944	21 21 14.46	-09 34 25.2		010	1993 PY <sub>3</sub>	1993 08 14.96944	21 31 27.76	-07 31 04.2		010
1993 PL <sub>3</sub>	1993 08 14.97986	21 21 13.88	-09 34 25.6		010	1993 PY <sub>3</sub>	1993 08 14.97986	21 31 27.35	-07 31 12.1		010
1993 PL <sub>3</sub>	1993 08 15.95833	21 20 16.90	-09 34 40.2		010	1993 PY <sub>3</sub>	1993 08 15.95833	21 30 45.11	-07 43 22.8		010
1993 PM <sub>3</sub>	* 1993 08 14.95903	21 21 36.49	-08 03 46.0	18.0	010	1993 PZ <sub>3</sub>	* 1993 08 14.95903	21 31 46.19	-08 32 18.8	18.5	010
1993 PM <sub>3</sub>	1993 08 14.96944	21 21 35.90	-08 03 45.9		010	1993 PZ <sub>3</sub>	1993 08 14.96944	21 31 45.64	-08 32 24.1		010
1993 PM <sub>3</sub>	1993 08 14.97986	21 21 35.24	-08 03 45.4		010	1993 PZ <sub>3</sub>	1993 08 14.97986	21 31 45.22	-08 32 28.5		010
1993 PM <sub>3</sub>	1993 08 15.95833	21 20 40.20	-08 03 21.8		010	1993 PZ <sub>3</sub>	1993 08 15.95833	21 31 01.87	-08 39 28.2		010
1993 PN <sub>3</sub>	* 1993 08 14.95903	21 22 06.00	-08 32 19.5	18.6	010	1993 PA <sub>4</sub>	* 1993 08 14.95903	21 32 51.28	-09 13 05.2	18.2	010
1993 PN <sub>3</sub>	1993 08 14.96944	21 22 05.39	-08 32 23.2		010	1993 PA <sub>4</sub>	1993 08 14.96944	21 32 50.63	-09 13 07.0		010
1993 PN <sub>3</sub>	1993 08 14.97986	21 22 04.93	-08 32 24.1		010	1993 PA <sub>4</sub>	1993 08 14.97986	21 32 50.03	-09 13 09.1		010
1993 PN <sub>3</sub>	1993 08 15.95833	21 21 15.08	-08 37 48.6		010	1993 PA <sub>4</sub>	1993 08 15.95833	21 31 52.94	-09 15 07.2		010

1993 PB <sub>4</sub>	* 1993 08 15.00069	22 14 58.47	-05 45 52.0	18.4	010	1993 PM <sub>4</sub>	1993 08 16.02986	22 17 54.12	-04 03 44.0	010
1993 PB <sub>4</sub>	1993 08 15.01146	22 14 57.83	-05 45 55.7		010	1993 PM <sub>4</sub>	1993 08 16.04097	22 17 53.63	-04 03 49.5	010
1993 PB <sub>4</sub>	1993 08 16.02986	22 14 08.73	-05 53 31.3		010	1993 PM <sub>4</sub>	1993 08 16.05174	22 17 53.12	-04 03 55.5	010
1993 PB <sub>4</sub>	1993 08 16.04097	22 14 08.18	-05 53 37.5		010	1993 PN <sub>4</sub>	* 1993 08 15.00069	22 18 56.01	-05 28 02.8	18.2 010
1993 PB <sub>4</sub>	1993 08 16.05174	22 14 07.54	-05 53 42.5		010	1993 PN <sub>4</sub>	1993 08 15.01146	22 18 55.54	-05 28 09.3	010
1993 PC <sub>4</sub>	* 1993 08 15.00069	22 15 45.32	-05 10 52.1	18.7	010	1993 PN <sub>4</sub>	1993 08 16.02986	22 18 15.72	-05 39 14.5	010
1993 PC <sub>4</sub>	1993 08 15.01146	22 15 44.63	-05 10 54.9		010	1993 PN <sub>4</sub>	1993 08 16.04097	22 18 15.28	-05 39 21.7	010
1993 PC <sub>4</sub>	1993 08 16.02986	22 14 53.50	-05 15 53.5		010	1993 PN <sub>4</sub>	1993 08 16.05174	22 18 14.84	-05 39 28.1	010
1993 PC <sub>4</sub>	1993 08 16.04097	22 14 52.89	-05 15 57.1		010	1993 PO <sub>4</sub>	* 1993 08 15.00069	22 18 58.80	-03 25 50.8	18.2 010
1993 PC <sub>4</sub>	1993 08 16.05174	22 14 52.40	-05 15 59.8		010	1993 PO <sub>4</sub>	1993 08 15.01146	22 18 58.13	-03 25 47.1	010
1993 PD <sub>4</sub>	* 1993 08 15.00069	22 16 26.17	-05 44 15.7	18.7	010	1993 PO <sub>4</sub>	1993 08 16.02986	22 17 58.40	-03 22 18.7	010
1993 PD <sub>4</sub>	1993 08 15.01146	22 16 25.68	-05 44 19.1		010	1993 PO <sub>4</sub>	1993 08 16.04097	22 17 57.73	-03 22 15.3	010
1993 PD <sub>4</sub>	1993 08 16.02986	22 15 37.87	-05 49 08.0		010	1993 PO <sub>4</sub>	1993 08 16.05174	22 17 57.09	-03 22 12.8	010
1993 PD <sub>4</sub>	1993 08 16.04097	22 15 37.25	-05 49 11.9		010	1993 PP <sub>4</sub>	* 1993 08 15.00069	22 19 08.24	-05 46 02.1	18.6 010
1993 PD <sub>4</sub>	1993 08 16.05174	22 15 36.70	-05 49 14.3		010	1993 PP <sub>4</sub>	1993 08 15.01146	22 19 07.66	-05 46 04.2	010
1993 PE <sub>4</sub>	* 1993 08 15.00069	22 16 36.52	-05 26 52.8	18.5	010	1993 PP <sub>4</sub>	1993 08 16.02986	22 18 21.26	-05 50 47.3	010
1993 PE <sub>4</sub>	1993 08 15.01146	22 16 35.81	-05 26 50.8		010	1993 PP <sub>4</sub>	1993 08 16.04097	22 18 20.76	-05 50 50.0	010
1993 PE <sub>4</sub>	1993 08 16.02986	22 15 25.28	-05 24 55.3		010	1993 PP <sub>4</sub>	1993 08 16.05174	22 18 20.24	-05 50 53.9	010
1993 PE <sub>4</sub>	1993 08 16.04097	22 15 24.51	-05 24 54.4		010	1993 PQ <sub>4</sub>	* 1993 08 15.00069	22 19 08.72	-05 38 02.0	18.5 010
1993 PE <sub>4</sub>	1993 08 16.05174	22 15 23.84	-05 24 52.7		010	1993 PQ <sub>4</sub>	1993 08 15.01146	22 19 08.10	-05 38 03.0	010
1993 PF <sub>4</sub>	* 1993 08 15.00069	22 16 48.39	-05 27 59.6	18.3	010	1993 PQ <sub>4</sub>	1993 08 16.02986	22 18 19.38	-05 39 22.5	010
1993 PF <sub>4</sub>	1993 08 15.01146	22 16 48.01	-05 28 07.3		010	1993 PQ <sub>4</sub>	1993 08 16.04097	22 18 18.78	-05 39 24.1	010
1993 PF <sub>4</sub>	1993 08 16.02986	22 16 12.86	-05 39 34.3		010	1993 PQ <sub>4</sub>	1993 08 16.05174	22 18 18.26	-05 39 23.8	010
1993 PF <sub>4</sub>	1993 08 16.04097	22 16 12.41	-05 39 44.7		010	1993 PR <sub>4</sub>	* 1993 08 15.00069	22 20 37.21	-03 48 58.0	18.5 010
1993 PF <sub>4</sub>	1993 08 16.05174	22 16 12.04	-05 39 51.4		010	1993 PR <sub>4</sub>	1993 08 15.01146	22 20 36.69	-03 48 58.6	010
1993 PG <sub>4</sub>	* 1993 08 15.00069	22 17 20.26	-04 43 04.9	18.4	010	1993 PR <sub>4</sub>	1993 08 16.02986	22 19 44.91	-03 49 37.1	010
1993 PG <sub>4</sub>	1993 08 15.01146	22 17 19.67	-04 43 09.7		010	1993 PR <sub>4</sub>	1993 08 16.04097	22 19 44.21	-03 49 37.1	010
1993 PG <sub>4</sub>	1993 08 16.02986	22 16 24.38	-04 50 16.2		010	1993 PR <sub>4</sub>	1993 08 16.05174	22 19 43.72	-03 49 36.8	010
1993 PG <sub>4</sub>	1993 08 16.04097	22 16 23.79	-04 50 20.5		010	1993 PS <sub>4</sub>	* 1993 08 15.00069	22 20 44.81	-03 41 11.7	18.1 010
1993 PG <sub>4</sub>	1993 08 16.05174	22 16 23.17	-04 50 26.0		010	1993 PS <sub>4</sub>	1993 08 15.01146	22 20 44.21	-03 41 14.9	010
1993 PH <sub>4</sub>	* 1993 08 15.00069	22 17 36.77	-06 58 12.8	18.1	010	1993 PS <sub>4</sub>	1993 08 16.02986	22 19 51.72	-03 46 09.8	010
1993 PH <sub>4</sub>	1993 08 15.01146	22 17 36.22	-06 58 14.5		010	1993 PS <sub>4</sub>	1993 08 16.04097	22 19 51.12	-03 46 13.0	010
1993 PH <sub>4</sub>	1993 08 16.02986	22 16 47.44	-07 01 50.7		010	1993 PS <sub>4</sub>	1993 08 16.05174	22 19 50.55	-03 46 16.6	010
1993 PH <sub>4</sub>	1993 08 16.04097	22 16 46.88	-07 01 53.7		010	1993 PT <sub>4</sub>	* 1993 08 15.00069	22 20 47.24	-05 14 47.3	18.6 010
1993 PH <sub>4</sub>	1993 08 16.05174	22 16 46.36	-07 01 55.2		010	1993 PT <sub>4</sub>	1993 08 15.01146	22 20 46.73	-05 14 52.9	010
1993 PJ <sub>4</sub>	* 1993 08 15.00069	22 17 56.15	-05 49 59.2	18.2	010	1993 PT <sub>4</sub>	1993 08 16.02986	22 20 02.93	-05 23 06.3	010
1993 PJ <sub>4</sub>	1993 08 15.01146	22 17 55.58	-05 49 54.0		010	1993 PT <sub>4</sub>	1993 08 16.04097	22 20 02.41	-05 23 12.6	010
1993 PJ <sub>4</sub>	1993 08 16.02986	22 16 58.64	-05 43 52.7		010	1993 PT <sub>4</sub>	1993 08 16.05174	22 20 01.89	-05 23 17.5	010
1993 PJ <sub>4</sub>	1993 08 16.04097	22 16 57.97	-05 43 47.5		010	1993 PU <sub>4</sub>	* 1993 08 15.00069	22 21 12.68	-03 49 26.2	18.5 010
1993 PJ <sub>4</sub>	1993 08 16.05174	22 16 57.42	-05 43 43.3		010	1993 PU <sub>4</sub>	1993 08 15.01146	22 21 12.15	-03 49 30.0	010
1993 PK <sub>4</sub>	* 1993 08 15.00069	22 18 05.19	-04 57 48.4	18.7	010	1993 PU <sub>4</sub>	1993 08 16.02986	22 20 32.15	-03 57 13.3	010
1993 PK <sub>4</sub>	1993 08 15.01146	22 18 04.54	-04 57 46.3		010	1993 PU <sub>4</sub>	1993 08 16.04097	22 20 31.68	-03 57 18.8	010
1993 PK <sub>4</sub>	1993 08 16.02986	22 17 08.33	-04 56 22.6		010	1993 PU <sub>4</sub>	1993 08 16.05174	22 20 31.17	-03 57 24.8	010
1993 PK <sub>4</sub>	1993 08 16.04097	22 17 07.67	-04 56 22.4		010	1993 PV <sub>4</sub>	* 1993 08 15.00069	22 22 20.23	-03 21 52.4	18.8 010
1993 PK <sub>4</sub>	1993 08 16.05174	22 17 07.06	-04 56 21.3		010	1993 PV <sub>4</sub>	1993 08 15.01146	22 22 19.62	-03 21 54.3	010
1993 PL <sub>4</sub>	* 1993 08 15.00069	22 18 12.40	-05 22 43.4	18.5	010	1993 PV <sub>4</sub>	1993 08 16.02986	22 21 20.70	-03 24 13.7	010
1993 PL <sub>4</sub>	1993 08 15.01146	22 18 11.94	-05 22 48.8		010	1993 PV <sub>4</sub>	1993 08 16.04097	22 21 19.99	-03 24 15.6	010
1993 PL <sub>4</sub>	1993 08 16.02986	22 17 32.68	-05 30 05.6		010	1993 PV <sub>4</sub>	1993 08 16.05174	22 21 19.36	-03 24 17.5	010
1993 PL <sub>4</sub>	1993 08 16.04097	22 17 32.18	-05 30 10.4		010	1993 PW <sub>4</sub>	* 1993 08 15.00069	22 22 39.19	-06 49 07.7	18.0 010
1993 PL <sub>4</sub>	1993 08 16.05174	22 17 31.78	-05 30 16.6		010	1993 PW <sub>4</sub>	1993 08 15.01146	22 22 38.62	-06 49 08.0	010
1993 PM <sub>4</sub>	* 1993 08 15.00069	22 18 39.24	-03 54 32.7	18.0	010	1993 PW <sub>4</sub>	1993 08 16.02986	22 21 47.78	-06 49 46.4	010
1993 PM <sub>4</sub>	1993 08 15.01146	22 18 38.72	-03 54 38.2		010	1993 PW <sub>4</sub>	1993 08 16.04097	22 21 47.14	-06 49 45.3	010

1993 PW <sub>4</sub>	1993 08 16.05174	22 21 46.64	-06 49 46.0		010	1993 PH <sub>5</sub>	1993 08 15.01146	22 26 47.79	-05 25 34.3		010
1993 PX <sub>4</sub>	* 1993 08 15.00069	22 23 09.67	-06 07 05.2	19.0	010	1993 PH <sub>5</sub>	1993 08 16.02986	22 26 14.44	-05 31 40.5		010
1993 PX <sub>4</sub>	1993 08 15.01146	22 23 09.20	-06 07 12.1		010	1993 PH <sub>5</sub>	1993 08 16.04097	22 26 14.13	-05 31 44.8		010
1993 PX <sub>4</sub>	1993 08 16.02986	22 22 28.80	-06 14 43.3		010	1993 PH <sub>5</sub>	1993 08 16.05174	22 26 13.74	-05 31 47.9		010
1993 PX <sub>4</sub>	1993 08 16.04097	22 22 28.34	-06 14 49.3		010	1993 PJ <sub>5</sub>	* 1993 08 15.00069	22 27 23.54	-04 32 21.8	18.5	010
1993 PX <sub>4</sub>	1993 08 16.05174	22 22 27.92	-06 14 53.1		010	1993 PJ <sub>5</sub>	1993 08 15.01146	22 27 22.81	-04 32 18.4		010
1993 PY <sub>4</sub>	* 1993 08 15.00069	22 23 31.52	-06 27 33.2	18.4	010	1993 PJ <sub>5</sub>	1993 08 16.02986	22 26 29.89	-04 26 16.8		010
1993 PY <sub>4</sub>	1993 08 15.01146	22 23 30.81	-06 27 36.9		010	1993 PJ <sub>5</sub>	1993 08 16.04097	22 26 29.33	-04 26 12.4		010
1993 PY <sub>4</sub>	1993 08 16.02986	22 22 35.22	-06 32 40.0		010	1993 PJ <sub>5</sub>	1993 08 16.05174	22 26 28.79	-04 26 08.9		010
1993 PY <sub>4</sub>	1993 08 16.04097	22 22 34.61	-06 32 42.7		010	1993 PK <sub>5</sub>	* 1993 08 15.00069	22 27 44.40	-05 40 41.7	18.2	010
1993 PY <sub>4</sub>	1993 08 16.05174	22 22 34.07	-06 32 46.3		010	1993 PK <sub>5</sub>	1993 08 15.01146	22 27 43.89	-05 40 46.1		010
1993 PZ <sub>4</sub>	* 1993 08 15.00069	22 23 45.07	-05 42 21.3	18.3	010	1993 PK <sub>5</sub>	1993 08 16.02986	22 27 08.54	-05 48 00.9		010
1993 PZ <sub>4</sub>	1993 08 15.01146	22 23 44.39	-05 42 26.0		010	1993 PK <sub>5</sub>	1993 08 16.04097	22 27 08.09	-05 48 06.1		010
1993 PZ <sub>4</sub>	1993 08 16.02986	22 22 54.07	-05 47 46.9		010	1993 PK <sub>5</sub>	1993 08 16.05174	22 27 07.69	-05 48 10.8		010
1993 PZ <sub>4</sub>	1993 08 16.04097	22 22 53.45	-05 47 50.9		010	1993 PL <sub>5</sub>	* 1993 08 15.00069	22 27 46.39	-05 17 33.7	18.6	010
1993 PZ <sub>4</sub>	1993 08 16.05174	22 22 52.94	-05 47 54.7		010	1993 PL <sub>5</sub>	1993 08 15.01146	22 27 45.88	-05 17 38.9		010
1993 PA <sub>5</sub>	* 1993 08 15.00069	22 25 18.15	-07 02 59.8	18.3	010	1993 PL <sub>5</sub>	1993 08 16.02986	22 27 00.74	-05 23 17.4		010
1993 PA <sub>5</sub>	1993 08 15.01146	22 25 17.41	-07 02 59.0		010	1993 PL <sub>5</sub>	1993 08 16.04097	22 27 00.18	-05 23 22.2		010
1993 PA <sub>5</sub>	1993 08 16.02986	22 24 15.58	-07 02 29.1		010	1993 PL <sub>5</sub>	1993 08 16.05174	22 26 59.73	-05 23 26.9		010
1993 PA <sub>5</sub>	1993 08 16.04097	22 24 14.85	-07 02 27.9		010	1993 PM <sub>5</sub>	* 1993 08 15.00069	22 28 29.15	-05 49 17.2	18.5	010
1993 PA <sub>5</sub>	1993 08 16.05174	22 24 14.25	-07 02 28.0		010	1993 PM <sub>5</sub>	1993 08 15.01146	22 28 28.57	-05 49 22.2		010
1993 PB <sub>5</sub>	* 1993 08 15.00069	22 25 32.69	-05 05 59.2	18.3	010	1993 PM <sub>5</sub>	1993 08 16.02986	22 27 39.53	-05 56 19.1		010
1993 PB <sub>5</sub>	1993 08 15.01146	22 25 32.10	-05 05 58.7		010	1993 PM <sub>5</sub>	1993 08 16.04097	22 27 38.97	-05 56 22.2		010
1993 PB <sub>5</sub>	1993 08 16.02986	22 24 42.64	-05 06 31.4		010	1993 PM <sub>5</sub>	1993 08 16.05174	22 27 38.39	-05 56 28.3		010
1993 PB <sub>5</sub>	1993 08 16.04097	22 24 42.02	-05 06 32.0		010	1993 PN <sub>5</sub>	* 1993 08 15.00069	22 28 35.01	-03 52 54.7	19.0	010
1993 PB <sub>5</sub>	1993 08 16.05174	22 24 41.51	-05 06 31.5		010	1993 PN <sub>5</sub>	1993 08 15.01146	22 28 34.41	-03 52 57.0		010
1993 PC <sub>5</sub>	* 1993 08 15.00069	22 25 43.81	-04 25 13.3	18.4	010	1993 PN <sub>5</sub>	1993 08 16.02986	22 27 45.67	-03 55 52.1		010
1993 PC <sub>5</sub>	1993 08 15.01146	22 25 43.39	-04 25 16.5		010	1993 PN <sub>5</sub>	1993 08 16.04097	22 27 45.11	-03 55 52.8		010
1993 PC <sub>5</sub>	1993 08 16.02986	22 25 04.76	-04 32 51.8		010	1993 PN <sub>5</sub>	1993 08 16.05174	22 27 44.62	-03 55 55.8		010
1993 PC <sub>5</sub>	1993 08 16.04097	22 25 04.31	-04 32 57.1		010	1993 PO <sub>5</sub>	* 1993 08 15.00069	22 29 59.43	-03 12 01.6	18.7	010
1993 PC <sub>5</sub>	1993 08 16.05174	22 25 03.88	-04 33 02.2		010	1993 PO <sub>5</sub>	1993 08 15.01146	22 29 59.04	-03 12 01.1		010
1993 PD <sub>5</sub>	* 1993 08 15.00069	22 25 52.66	-02 40 13.6	19.0	010	1993 PO <sub>5</sub>	1993 08 16.02986	22 29 14.81	-03 13 53.4		010
1993 PD <sub>5</sub>	1993 08 15.01146	22 25 52.18	-02 40 16.3		010	1993 PO <sub>5</sub>	1993 08 16.04097	22 29 14.38	-03 13 55.9		010
1993 PD <sub>5</sub>	1993 08 16.02986	22 24 59.12	-02 44 28.7		010	1993 PO <sub>5</sub>	1993 08 16.05174	22 29 13.80	-03 13 57.3		010
1993 PD <sub>5</sub>	1993 08 16.04097	22 24 58.41	-02 44 31.6		010	1993 PP <sub>5</sub>	* 1993 08 15.00069	22 29 59.84	-05 31 27.4	18.4	010
1993 PD <sub>5</sub>	1993 08 16.05174	22 24 57.95	-02 44 36.1		010	1993 PP <sub>5</sub>	1993 08 15.01146	22 29 59.37	-05 31 32.6		010
1993 PE <sub>5</sub>	* 1993 08 15.00069	22 26 05.81	-06 38 14.8	18.0	010	1993 PP <sub>5</sub>	1993 08 16.02986	22 29 23.41	-05 38 46.0		010
1993 PE <sub>5</sub>	1993 08 15.01146	22 26 05.10	-06 38 13.8		010	1993 PP <sub>5</sub>	1993 08 16.04097	22 29 22.99	-05 38 50.9		010
1993 PE <sub>5</sub>	1993 08 16.02986	22 25 10.73	-06 37 07.5		010	1993 PP <sub>5</sub>	1993 08 16.05174	22 29 22.58	-05 38 54.3		010
1993 PE <sub>5</sub>	1993 08 16.04097	22 25 10.16	-06 37 07.0		010	1993 PQ <sub>5</sub>	* 1993 08 15.00069	22 30 21.43	-05 39 36.2	18.4	010
1993 PE <sub>5</sub>	1993 08 16.05174	22 25 09.48	-06 37 05.1		010	1993 PQ <sub>5</sub>	1993 08 15.01146	22 30 20.93	-05 39 35.5		010
1993 PF <sub>5</sub>	* 1993 08 15.00069	22 26 36.72	-04 03 17.2	18.7	010	1993 PQ <sub>5</sub>	1993 08 16.02986	22 29 31.52	-05 40 09.6		010
1993 PF <sub>5</sub>	1993 08 15.01146	22 26 36.14	-04 03 17.9		010	1993 PQ <sub>5</sub>	1993 08 16.04097	22 29 30.96	-05 40 09.2		010
1993 PF <sub>5</sub>	1993 08 16.02986	22 25 52.66	-04 06 32.0		010	1993 PQ <sub>5</sub>	1993 08 16.05174	22 29 30.42	-05 40 09.6		010
1993 PF <sub>5</sub>	1993 08 16.04097	22 25 52.13	-04 06 33.4		010	1993 PR <sub>5</sub>	* 1993 08 15.00069	22 30 32.76	-02 27 04.7	18.6	010
1993 PF <sub>5</sub>	1993 08 16.05174	22 25 51.72	-04 06 35.5		010	1993 PR <sub>5</sub>	1993 08 15.01146	22 30 32.28	-02 27 04.3		010
1993 PG <sub>5</sub>	* 1993 08 15.00069	22 26 40.87	-06 36 22.6	18.1	010	1993 PR <sub>5</sub>	1993 08 16.02986	22 29 46.35	-02 27 18.6		010
1993 PG <sub>5</sub>	1993 08 15.01146	22 26 40.20	-06 36 26.4		010	1993 PR <sub>5</sub>	1993 08 16.04097	22 29 45.75	-02 27 18.9		010
1993 PG <sub>5</sub>	1993 08 16.02986	22 25 45.09	-06 42 16.3		010	1993 PR <sub>5</sub>	1993 08 16.05174	22 29 45.21	-02 27 19.0		010
1993 PG <sub>5</sub>	1993 08 16.04097	22 25 44.44	-06 42 19.9		010	1993 PS <sub>5</sub>	* 1993 08 15.00069	22 30 45.76	-03 46 14.7	18.7	010
1993 PG <sub>5</sub>	1993 08 16.05174	22 25 43.84	-06 42 23.3		010	1993 PS <sub>5</sub>	1993 08 15.01146	22 30 45.32	-03 46 19.7		010
1993 PH <sub>5</sub>	* 1993 08 15.00069	22 26 48.26	-05 25 29.7	18.6	010	1993 PS <sub>5</sub>	1993 08 16.02986	22 30 09.95	-03 55 42.0		010



1993 PS <sub>5</sub>	1993 08 16.04097	22 30 09.61	-03 55 47.2		010	1993 PD <sub>6</sub>	* 1993 08 15.04861	22 47 08.51	-04 56 56.1	18.5	010
1993 PS <sub>5</sub>	1993 08 16.05174	22 30 09.16	-03 55 54.2		010	1993 PD <sub>6</sub>	1993 08 15.05972	22 47 08.11	-04 57 02.5		010
1993 PT <sub>5</sub>	* 1993 08 15.00069	22 30 55.44	-03 38 15.0	19.0	010	1993 PD <sub>6</sub>	1993 08 15.07083	22 47 07.65	-04 57 08.2		010
1993 PT <sub>5</sub>	1993 08 15.01146	22 30 55.02	-03 38 16.1		010	1993 PD <sub>6</sub>	1993 08 17.00139	22 45 57.98	-05 14 33.6		010
1993 PT <sub>5</sub>	1993 08 16.02986	22 30 15.94	-03 42 58.7		010	1993 PE <sub>6</sub>	* 1993 08 15.04861	22 47 08.90	-04 58 06.4	18.3	010
1993 PT <sub>5</sub>	1993 08 16.04097	22 30 15.52	-03 43 02.0		010	1993 PE <sub>6</sub>	1993 08 15.05972	22 47 08.25	-04 58 08.9		010
1993 PT <sub>5</sub>	1993 08 16.05174	22 30 15.14	-03 43 04.7		010	1993 PE <sub>6</sub>	1993 08 15.07083	22 47 07.77	-04 58 10.9		010
1993 PU <sub>5</sub>	* 1993 08 15.00069	22 31 09.14	-05 40 19.8	18.5	010	1993 PE <sub>6</sub>	1993 08 17.00139	22 45 29.37	-05 06 43.9		010
1993 PU <sub>5</sub>	1993 08 15.01146	22 31 08.66	-05 40 22.3		010	1993 PF <sub>6</sub>	* 1993 08 15.04861	22 47 17.63	-04 18 44.7	18.3	010
1993 PU <sub>5</sub>	1993 08 16.02986	22 30 25.04	-05 45 57.9		010	1993 PF <sub>6</sub>	1993 08 15.05972	22 47 17.10	-04 18 47.3		010
1993 PU <sub>5</sub>	1993 08 16.04097	22 30 24.51	-05 46 02.1		010	1993 PF <sub>6</sub>	1993 08 15.07083	22 47 16.52	-04 18 51.4		010
1993 PU <sub>5</sub>	1993 08 16.05174	22 30 24.02	-05 46 04.4		010	1993 PF <sub>6</sub>	1993 08 17.00139	22 45 48.26	-04 30 47.7		010
1993 PV <sub>5</sub>	* 1993 08 15.00069	22 31 22.25	-05 14 50.5	18.2	010	1993 PG <sub>6</sub>	* 1993 08 15.04861	22 47 30.10	-05 32 46.2	18.5	010
1993 PV <sub>5</sub>	1993 08 15.01146	22 31 21.68	-05 14 51.4		010	1993 PG <sub>6</sub>	1993 08 15.05972	22 47 29.50	-05 32 46.9		010
1993 PV <sub>5</sub>	1993 08 16.02986	22 30 33.24	-05 15 21.4		010	1993 PG <sub>6</sub>	1993 08 15.07083	22 47 28.97	-05 32 47.9		010
1993 PV <sub>5</sub>	1993 08 16.04097	22 30 32.71	-05 15 21.6		010	1993 PG <sub>6</sub>	1993 08 17.00139	22 45 51.57	-05 36 00.1		010
1993 PV <sub>5</sub>	1993 08 16.05174	22 30 32.20	-05 15 21.5		010	1993 PH <sub>6</sub>	* 1993 08 15.04861	22 47 38.69	-03 32 03.5	18.3	010
1993 PW <sub>5</sub>	* 1993 08 15.00069	22 31 22.70	-03 54 32.0	18.5	010	1993 PH <sub>6</sub>	1993 08 15.05972	22 47 37.96	-03 32 00.7		010
1993 PW <sub>5</sub>	1993 08 15.01146	22 31 22.07	-03 54 35.8		010	1993 PH <sub>6</sub>	1993 08 15.07083	22 47 37.23	-03 31 58.0		010
1993 PW <sub>5</sub>	1993 08 16.02986	22 30 28.36	-03 59 27.5		010	1993 PH <sub>6</sub>	1993 08 17.00139	22 45 36.79	-03 25 43.8		010
1993 PW <sub>5</sub>	1993 08 16.04097	22 30 27.72	-03 59 30.3		010	1993 PJ <sub>6</sub>	* 1993 08 15.04861	22 48 37.31	-02 51 30.1	18.5	010
1993 PW <sub>5</sub>	1993 08 16.05174	22 30 27.15	-03 59 33.2		010	1993 PJ <sub>6</sub>	1993 08 15.05972	22 48 36.80	-02 51 33.0		010
1993 PX <sub>5</sub>	* 1993 08 15.00069	22 31 56.66	-05 55 09.8	18.5	010	1993 PJ <sub>6</sub>	1993 08 15.07083	22 48 36.30	-02 51 35.4		010
1993 PX <sub>5</sub>	1993 08 15.01146	22 31 56.15	-05 55 13.5		010	1993 PJ <sub>6</sub>	1993 08 17.00139	22 47 16.47	-02 59 03.8		010
1993 PX <sub>5</sub>	1993 08 16.02986	22 31 08.62	-05 59 11.4		010	1993 PK <sub>6</sub>	* 1993 08 15.04861	22 49 32.60	-05 37 02.5	18.4	010
1993 PX <sub>5</sub>	1993 08 16.04097	22 31 08.10	-05 59 13.9		010	1993 PK <sub>6</sub>	1993 08 15.05972	22 49 31.93	-05 37 00.9		010
1993 PX <sub>5</sub>	1993 08 16.05174	22 31 07.62	-05 59 15.5		010	1993 PK <sub>6</sub>	1993 08 15.07083	22 49 31.37	-05 36 59.7		010
1993 PY <sub>5</sub>	* 1993 08 15.00069	22 32 21.81	-03 15 59.3	18.4	010	1993 PK <sub>6</sub>	1993 08 17.00139	22 47 48.25	-05 34 26.3		010
1993 PY <sub>5</sub>	1993 08 15.01146	22 32 21.29	-03 16 00.6		010	1993 PL <sub>6</sub>	* 1993 08 15.04861	22 49 38.37	-03 50 12.1	18.5	010
1993 PY <sub>5</sub>	1993 08 16.02986	22 31 23.12	-03 18 09.5		010	1993 PL <sub>6</sub>	1993 08 15.05972	22 49 37.92	-03 50 14.3		010
1993 PY <sub>5</sub>	1993 08 16.04097	22 31 22.34	-03 18 10.7		010	1993 PL <sub>6</sub>	1993 08 15.07083	22 49 37.47	-03 50 17.3		010
1993 PY <sub>5</sub>	1993 08 16.05174	22 31 21.71	-03 18 11.8		010	1993 PL <sub>6</sub>	1993 08 17.00139	22 48 21.87	-03 58 28.1		010
1993 PZ <sub>5</sub>	* 1993 08 15.00069	22 32 59.99	-06 25 17.0	18.5	010	1993 PM <sub>6</sub>	* 1993 08 15.04861	22 49 52.53	-04 30 46.0	19.5	010
1993 PZ <sub>5</sub>	1993 08 15.01146	22 32 59.44	-06 25 20.3		010	1993 PM <sub>6</sub>	1993 08 15.05972	22 49 51.92	-04 30 44.9		010
1993 PZ <sub>5</sub>	1993 08 16.02986	22 32 12.18	-06 29 08.3		010	1993 PM <sub>6</sub>	1993 08 15.07083	22 49 51.42	-04 30 46.1		010
1993 PZ <sub>5</sub>	1993 08 16.04097	22 32 11.60	-06 29 10.4		010	1993 PM <sub>6</sub>	1993 08 17.00139	22 48 18.71	-04 31 46.3		010
1993 PZ <sub>5</sub>	1993 08 16.05174	22 32 11.07	-06 29 13.1		010	1993 PN <sub>6</sub>	* 1993 08 15.04861	22 49 54.74	-05 18 22.6	18.4	010
1993 PA <sub>6</sub>	* 1993 08 15.00069	22 33 33.39	-03 55 44.6	18.6	010	1993 PN <sub>6</sub>	1993 08 15.05972	22 49 54.24	-05 18 25.3		010
1993 PA <sub>6</sub>	1993 08 15.01146	22 33 32.75	-03 55 44.6		010	1993 PN <sub>6</sub>	1993 08 15.07083	22 49 53.79	-05 18 29.1		010
1993 PA <sub>6</sub>	1993 08 16.02986	22 32 41.27	-03 55 22.3		010	1993 PN <sub>6</sub>	1993 08 17.00139	22 48 25.58	-05 30 08.7		010
1993 PA <sub>6</sub>	1993 08 16.04097	22 32 40.64	-03 55 23.3		010	1993 PO <sub>6</sub>	* 1993 08 15.04861	22 51 07.45	-02 41 59.4	18.4	010
1993 PA <sub>6</sub>	1993 08 16.05174	22 32 39.98	-03 55 22.5		010	1993 PO <sub>6</sub>	1993 08 15.05972	22 51 06.89	-02 42 00.0		010
1993 PB <sub>6</sub>	* 1993 08 15.00069	22 33 57.20	-05 26 18.8	18.4	010	1993 PO <sub>6</sub>	1993 08 15.07083	22 51 06.37	-02 42 03.4		010
1993 PB <sub>6</sub>	1993 08 15.01146	22 33 56.74	-05 26 22.3		010	1993 PO <sub>6</sub>	1993 08 17.00139	22 49 43.89	-02 48 41.2		010
1993 PB <sub>6</sub>	1993 08 16.02986	22 33 16.00	-05 31 30.9		010	1993 PP <sub>6</sub>	* 1993 08 15.04861	22 51 11.49	-02 38 49.3	18.4	010
1993 PB <sub>6</sub>	1993 08 16.04097	22 33 15.57	-05 31 34.7		010	1993 PP <sub>6</sub>	1993 08 15.05972	22 51 10.85	-02 38 49.8		010
1993 PB <sub>6</sub>	1993 08 16.05174	22 33 15.09	-05 31 38.1		010	1993 PP <sub>6</sub>	1993 08 15.07083	22 51 10.26	-02 38 51.5		010
1993 PC <sub>6</sub>	* 1993 08 15.00069	22 15 40.27	-02 43 42.0	17.5	010	1993 PP <sub>6</sub>	1993 08 17.00139	22 49 27.32	-02 42 40.1		010
1993 PC <sub>6</sub>	1993 08 15.01146	22 15 39.88	-02 43 56.7		010	1993 PQ <sub>6</sub>	* 1993 08 15.04861	22 51 24.53	-06 32 44.6	18.3	010
1993 PC <sub>6</sub>	1993 08 16.02986	22 15 06.85	-03 09 14.0		010	1993 PQ <sub>6</sub>	1993 08 15.05972	22 51 24.08	-06 32 51.8		010
1993 PC <sub>6</sub>	1993 08 16.04097	22 15 06.48	-03 09 30.1		010	1993 PQ <sub>6</sub>	1993 08 15.07083	22 51 23.60	-06 32 58.6		010
1993 PC <sub>6</sub>	1993 08 16.05174	22 15 06.09	-03 09 46.2		010	1993 PQ <sub>6</sub>	1993 08 17.00139	22 50 07.32	-06 53 09.4		010

1993 PR <sub>6</sub>	* 1993 08 15.04861	22 51 54.31	-05 41 59.2	18.6	010	1993 PE <sub>7</sub>	* 1993 08 15.04861	22 58 22.97	-04 27 12.7	19.0	010
1993 PR <sub>6</sub>	1993 08 15.05972	22 51 53.74	-05 42 03.7		010	1993 PE <sub>7</sub>	1993 08 15.05972	22 58 22.45	-04 27 18.8		010
1993 PR <sub>6</sub>	1993 08 15.07083	22 51 53.28	-05 42 07.2		010	1993 PE <sub>7</sub>	1993 08 15.07083	22 58 22.12	-04 27 22.2		010
1993 PR <sub>6</sub>	1993 08 17.00139	22 50 24.36	-05 53 50.8		010	1993 PE <sub>7</sub>	1993 08 17.00139	22 57 19.57	-04 37 57.5		010
1993 PS <sub>6</sub>	* 1993 08 15.04861	22 51 55.63	-04 01 51.9	18.5	010	1993 PF <sub>7</sub>	* 1993 08 15.04861	22 59 16.00	-05 30 34.7	18.5	010
1993 PS <sub>6</sub>	1993 08 15.05972	22 51 55.22	-04 01 56.2		010	1993 PF <sub>7</sub>	1993 08 15.05972	22 59 15.51	-05 30 38.3		010
1993 PS <sub>6</sub>	1993 08 15.07083	22 51 54.92	-04 01 59.7		010	1993 PF <sub>7</sub>	1993 08 15.07083	22 59 15.13	-05 30 43.5		010
1993 PS <sub>6</sub>	1993 08 17.00139	22 50 45.57	-04 15 22.0		010	1993 PF <sub>7</sub>	1993 08 17.00139	22 58 09.93	-05 42 01.8		010
1993 PT <sub>6</sub>	* 1993 08 15.04861	22 53 56.92	-04 14 06.3	18.5	010	1993 PG <sub>7</sub>	* 1993 08 15.04861	23 00 15.68	-05 29 15.9	18.5	010
1993 PT <sub>6</sub>	1993 08 15.05972	22 53 56.37	-04 14 07.2		010	1993 PG <sub>7</sub>	1993 08 15.05972	23 00 15.14	-05 29 18.8		010
1993 PT <sub>6</sub>	1993 08 15.07083	22 53 55.75	-04 14 08.7		010	1993 PG <sub>7</sub>	1993 08 15.07083	23 00 14.61	-05 29 21.3		010
1993 PT <sub>6</sub>	1993 08 17.00139	22 52 16.61	-04 17 09.2		010	1993 PG <sub>7</sub>	1993 08 17.00139	22 58 50.06	-05 34 08.2		010
1993 PU <sub>6</sub>	* 1993 08 15.04861	22 54 33.34	-06 29 32.5	18.5	010	1993 PH <sub>7</sub>	* 1993 08 15.04861	23 00 35.88	-03 47 34.1	18.5	010
1993 PU <sub>6</sub>	1993 08 15.05972	22 54 32.86	-06 29 28.9		010	1993 PH <sub>7</sub>	1993 08 15.05972	23 00 35.41	-03 47 37.7		010
1993 PU <sub>6</sub>	1993 08 15.07083	22 54 32.38	-06 29 27.7		010	1993 PH <sub>7</sub>	1993 08 15.07083	23 00 34.97	-03 47 41.3		010
1993 PU <sub>6</sub>	1993 08 17.00139	22 53 27.38	-06 23 59.6		010	1993 PH <sub>7</sub>	1993 08 17.00139	22 59 21.47	-03 57 57.8		010
1993 PV <sub>6</sub>	* 1993 08 15.04861	22 54 45.88	-04 49 56.3	18.3	010	1993 PJ <sub>7</sub>	* 1993 08 15.04861	23 00 37.57	-06 08 29.7	18.7	010
1993 PV <sub>6</sub>	1993 08 15.05972	22 54 45.39	-04 49 56.8		010	1993 PJ <sub>7</sub>	1993 08 15.05972	23 00 37.08	-06 08 32.5		010
1993 PV <sub>6</sub>	1993 08 15.07083	22 54 44.87	-04 49 57.5		010	1993 PJ <sub>7</sub>	1993 08 15.07083	23 00 36.66	-06 08 34.6		010
1993 PV <sub>6</sub>	1993 08 17.00139	22 53 24.33	-04 51 48.9		010	1993 PJ <sub>7</sub>	1993 08 17.00139	22 59 20.58	-06 14 56.0		010
1993 PW <sub>6</sub>	* 1993 08 15.04861	22 56 12.12	-05 04 07.6	19.0	010	1993 PK <sub>7</sub>	* 1993 08 15.04861	23 01 42.08	-06 33 43.1	18.5	010
1993 PW <sub>6</sub>	1993 08 15.05972	22 56 11.57	-05 04 10.6		010	1993 PK <sub>7</sub>	1993 08 15.05972	23 01 41.66	-06 33 44.8		010
1993 PW <sub>6</sub>	1993 08 15.07083	22 56 11.13	-05 04 13.0		010	1993 PK <sub>7</sub>	1993 08 15.07083	23 01 41.23	-06 33 48.5		010
1993 PW <sub>6</sub>	1993 08 17.00139	22 54 48.95	-05 13 07.5		010	1993 PK <sub>7</sub>	1993 08 17.00139	23 00 32.83	-06 41 03.9		010
1993 PX <sub>6</sub>	* 1993 08 15.04861	22 56 15.19	-02 57 46.6	18.3	010	1993 PL <sub>7</sub>	* 1993 08 15.04861	23 01 53.53	-03 41 12.7	18.5	010
1993 PX <sub>6</sub>	1993 08 15.05972	22 56 14.67	-02 57 44.3		010	1993 PL <sub>7</sub>	1993 08 15.05972	23 01 53.22	-03 41 19.9		010
1993 PX <sub>6</sub>	1993 08 15.07083	22 56 14.19	-02 57 42.4		010	1993 PL <sub>7</sub>	1993 08 15.07083	23 01 52.81	-03 41 26.9		010
1993 PX <sub>6</sub>	1993 08 17.00139	22 54 51.37	-02 52 52.0		010	1993 PL <sub>7</sub>	1993 08 17.00139	23 00 44.59	-04 01 42.7		010
1993 PY <sub>6</sub>	* 1993 08 15.04861	22 56 16.23	-03 37 28.9	18.3	010	1993 PM <sub>7</sub>	* 1993 08 15.04861	23 02 04.82	-05 08 50.6	18.8	010
1993 PY <sub>6</sub>	1993 08 15.05972	22 56 15.79	-03 37 31.0		010	1993 PM <sub>7</sub>	1993 08 15.05972	23 02 04.39	-05 08 52.7		010
1993 PY <sub>6</sub>	1993 08 15.07083	22 56 15.38	-03 37 35.4		010	1993 PM <sub>7</sub>	1993 08 15.07083	23 02 03.98	-05 08 55.6		010
1993 PY <sub>6</sub>	1993 08 17.00139	22 55 03.97	-03 47 16.9		010	1993 PM <sub>7</sub>	1993 08 17.00139	23 00 57.52	-05 15 26.2		010
1993 PZ <sub>6</sub>	* 1993 08 15.04861	22 57 20.53	-02 57 19.8	18.4	010	1993 PN <sub>7</sub>	* 1993 08 15.04861	23 02 07.52	-02 44 05.0	18.2	010
1993 PZ <sub>6</sub>	1993 08 15.05972	22 57 20.08	-02 57 22.2		010	1993 PN <sub>7</sub>	1993 08 15.05972	23 02 07.10	-02 44 05.5		010
1993 PZ <sub>6</sub>	1993 08 15.07083	22 57 19.54	-02 57 23.5		010	1993 PN <sub>7</sub>	1993 08 15.07083	23 02 06.65	-02 44 08.8		010
1993 PZ <sub>6</sub>	1993 08 17.00139	22 56 00.33	-03 01 56.9		010	1993 PN <sub>7</sub>	1993 08 17.00139	23 00 53.71	-02 48 09.9		010
1993 PA <sub>7</sub>	* 1993 08 15.04861	22 57 35.50	-05 15 05.2	18.6	010	1993 PO <sub>7</sub>	* 1993 08 15.04861	23 02 27.52	-03 49 16.5	18.5	010
1993 PA <sub>7</sub>	1993 08 15.05972	22 57 35.15	-05 15 08.5		010	1993 PO <sub>7</sub>	1993 08 15.05972	23 02 27.00	-03 49 17.3		010
1993 PA <sub>7</sub>	1993 08 15.07083	22 57 34.64	-05 15 12.3		010	1993 PO <sub>7</sub>	1993 08 15.07083	23 02 26.45	-03 49 18.1		010
1993 PA <sub>7</sub>	1993 08 17.00139	22 56 20.95	-05 23 41.4		010	1993 PO <sub>7</sub>	1993 08 17.00139	23 00 56.48	-03 51 57.7		010
1993 PB <sub>7</sub>	* 1993 08 15.04861	22 57 36.72	-06 26 03.4	18.5	010	1993 PP <sub>7</sub>	* 1993 08 15.04861	23 02 45.64	-04 57 51.7	18.4	010
1993 PB <sub>7</sub>	1993 08 15.05972	22 57 36.31	-06 26 05.9		010	1993 PP <sub>7</sub>	1993 08 15.05972	23 02 45.12	-04 57 53.3		010
1993 PB <sub>7</sub>	1993 08 15.07083	22 57 35.86	-06 26 09.6		010	1993 PP <sub>7</sub>	1993 08 15.07083	23 02 44.67	-04 57 54.3		010
1993 PB <sub>7</sub>	1993 08 17.00139	22 56 21.02	-06 34 07.0		010	1993 PP <sub>7</sub>	1993 08 17.00139	23 01 22.53	-05 02 59.6		010
1993 PC <sub>7</sub>	* 1993 08 15.04861	22 57 58.62	-06 13 54.8	18.2	010	1993 PQ <sub>7</sub>	* 1993 08 15.04861	23 02 52.96	-06 01 42.5	19.5	010
1993 PC <sub>7</sub>	1993 08 15.05972	22 57 58.21	-06 13 57.5		010	1993 PQ <sub>7</sub>	1993 08 15.05972	23 02 52.40	-06 01 48.3		010
1993 PC <sub>7</sub>	1993 08 15.07083	22 57 57.78	-06 14 02.6		010	1993 PQ <sub>7</sub>	1993 08 15.07083	23 02 51.99	-06 01 50.0		010
1993 PC <sub>7</sub>	1993 08 17.00139	22 56 49.90	-06 26 03.0		010	1993 PQ <sub>7</sub>	1993 08 17.00139	23 02 15.71	-06 08 34.0		010
1993 PD <sub>7</sub>	* 1993 08 15.04861	22 58 14.01	-06 41 17.5	18.0	010	1993 PR <sub>7</sub>	* 1993 08 15.04861	23 03 01.25	-04 19 04.4	18.4	010
1993 PD <sub>7</sub>	1993 08 15.05972	22 58 13.46	-06 41 15.8		010	1993 PR <sub>7</sub>	1993 08 15.05972	23 03 00.74	-04 19 08.9		010
1993 PD <sub>7</sub>	1993 08 15.07083	22 58 13.00	-06 41 14.2		010	1993 PR <sub>7</sub>	1993 08 15.07083	23 03 00.21	-04 19 14.9		010
1993 PD <sub>7</sub>	1993 08 17.00139	22 56 53.48	-06 37 44.9		010	1993 PR <sub>7</sub>	1993 08 17.00139	23 01 30.82	-04 33 02.7		010

1993 PS <sub>7</sub>	* 1993 08 15.04861	23 03 02.47	-06 13 18.6	18.2	010	1993 QJ <sub>1</sub>	1993 08 16.08472	23 07 07.47	-02 51 34.1	010
1993 PS <sub>7</sub>	1993 08 15.05972	23 03 02.03	-06 13 19.9		010	1993 QJ <sub>1</sub>	1993 08 16.09514	23 07 07.05	-02 51 35.5	010
1993 PS <sub>7</sub>	1993 08 15.07083	23 03 01.59	-06 13 20.9		010	1993 QJ <sub>1</sub>	1993 08 17.05417	23 06 31.07	-02 59 01.2	010
1993 PS <sub>7</sub>	1993 08 17.00139	23 01 52.10	-06 15 48.6		010	1993 QK <sub>1</sub>	* 1993 08 16.07431	23 08 25.40	-01 30 05.8	18.3 010
1993 PT <sub>7</sub>	* 1993 08 15.04861	23 03 49.74	-05 21 42.6	18.5	010	1993 QK <sub>1</sub>	1993 08 16.08472	23 08 24.89	-01 30 08.4	010
1993 PT <sub>7</sub>	1993 08 15.05972	23 03 49.32	-05 21 47.6		010	1993 QK <sub>1</sub>	1993 08 16.09514	23 08 24.38	-01 30 10.4	010
1993 PT <sub>7</sub>	1993 08 15.07083	23 03 48.87	-05 21 53.2		010	1993 QK <sub>1</sub>	1993 08 17.05417	23 07 40.35	-01 33 28.1	010
1993 PT <sub>7</sub>	1993 08 17.00139	23 02 45.63	-05 35 36.4		010	1993 QL <sub>1</sub>	* 1993 08 16.07431	23 08 26.61	-03 29 56.7	18.6 010
1993 PU <sub>7</sub>	* 1993 08 15.04861	23 04 06.49	-05 39 30.7	18.4	010	1993 QL <sub>1</sub>	1993 08 16.08472	23 08 26.37	-03 30 01.5	010
1993 PU <sub>7</sub>	1993 08 15.05972	23 04 06.02	-05 39 33.4		010	1993 QL <sub>1</sub>	1993 08 16.09514	23 08 26.13	-03 30 04.7	010
1993 PU <sub>7</sub>	1993 08 15.07083	23 04 05.49	-05 39 36.5		010	1993 QL <sub>1</sub>	1993 08 17.05417	23 08 06.66	-03 37 10.5	010
1993 PU <sub>7</sub>	1993 08 17.00139	23 02 46.33	-05 46 23.8		010	1993 QM <sub>1</sub>	* 1993 08 16.07431	23 09 32.87	-03 01 03.2	18.0 010
1993 PV <sub>7</sub>	* 1993 08 15.04861	23 04 15.70	-05 45 03.3	18.0	010	1993 QM <sub>1</sub>	1993 08 16.08472	23 09 32.35	-03 01 04.7	010
1993 PV <sub>7</sub>	1993 08 15.05972	23 04 15.31	-05 45 08.6		010	1993 QM <sub>1</sub>	1993 08 16.09514	23 09 31.92	-03 01 06.0	010
1993 PV <sub>7</sub>	1993 08 15.07083	23 04 14.91	-05 45 15.2		010	1993 QM <sub>1</sub>	1993 08 17.05417	23 08 47.96	-03 02 51.0	010
1993 PV <sub>7</sub>	1993 08 17.00139	23 03 09.99	-06 00 58.6		010	1993 QN <sub>1</sub>	* 1993 08 16.07431	23 09 45.50	-04 03 41.0	18.5 010
1993 PW <sub>7</sub>	* 1993 08 15.04861	23 04 23.07	-05 29 11.0	18.3	010	1993 QN <sub>1</sub>	1993 08 16.08472	23 09 45.18	-04 03 44.6	010
1993 PW <sub>7</sub>	1993 08 15.05972	23 04 22.61	-05 29 12.4		010	1993 QN <sub>1</sub>	1993 08 16.09514	23 09 44.80	-04 03 50.7	010
1993 PW <sub>7</sub>	1993 08 15.07083	23 04 22.08	-05 29 15.1		010	1993 QN <sub>1</sub>	1993 08 17.05417	23 09 10.96	-04 10 21.9	010
1993 PW <sub>7</sub>	1993 08 17.00139	23 03 03.93	-05 34 16.4		010	1993 QO <sub>1</sub>	* 1993 08 16.07431	23 10 08.79	-01 04 49.5	18.4 010
1993 PX <sub>7</sub>	* 1993 08 15.04861	23 04 29.10	-06 01 27.5	19.0	010	1993 QO <sub>1</sub>	1993 08 16.08472	23 10 08.31	-01 04 52.2	010
1993 PX <sub>7</sub>	1993 08 15.05972	23 04 28.74	-06 01 33.2		010	1993 QO <sub>1</sub>	1993 08 16.09514	23 10 07.94	-01 04 53.9	010
1993 PX <sub>7</sub>	1993 08 15.07083	23 04 28.33	-06 01 41.3		010	1993 QO <sub>1</sub>	1993 08 17.05417	23 09 32.16	-01 08 15.1	010
1993 PX <sub>7</sub>	1993 08 17.00139	23 03 20.22	-06 19 16.7		010	1993 QP <sub>1</sub>	* 1993 08 16.07431	23 10 28.17	-03 29 43.7	18.0 010
1993 PY <sub>7</sub>	* 1993 08 15.04861	23 04 38.27	-06 35 58.2	19.5	010	1993 QP <sub>1</sub>	1993 08 16.08472	23 10 27.99	-03 29 50.1	010
1993 PY <sub>7</sub>	1993 08 15.05972	23 04 37.72	-06 36 05.3		010	1993 QP <sub>1</sub>	1993 08 16.09514	23 10 27.65	-03 29 56.5	010
1993 PY <sub>7</sub>	1993 08 15.07083	23 04 37.33	-06 36 07.7		010	1993 QP <sub>1</sub>	1993 08 17.05417	23 10 00.57	-03 39 58.5	010
1993 PY <sub>7</sub>	1993 08 17.00139	23 03 31.04	-06 48 39.2		010	1993 QQ <sub>1</sub>	* 1993 08 16.07431	23 10 31.49	-01 49 02.4	18.3 010
1993 QY	1993 08 15.10000	23 09 27.16	-03 30 45.6		010	1993 QQ <sub>1</sub>	1993 08 16.08472	23 10 31.17	-01 49 05.9	010
1993 QY	1993 08 15.11128	23 09 26.92	-03 31 04.3		010	1993 QQ <sub>1</sub>	1993 08 16.09514	23 10 30.80	-01 49 09.2	010
1993 QY	* 1993 08 16.07431	23 09 15.25	-03 54 08.1	16.5	010	1993 QQ <sub>1</sub>	1993 08 17.05417	23 10 01.98	-01 53 05.2	010
1993 QY	1993 08 16.08472	23 09 15.13	-03 54 23.3		010	1993 QR <sub>1</sub>	* 1993 08 16.07431	23 10 33.58	-01 10 37.6	18.5 010
1993 QY	1993 08 16.09514	23 09 14.97	-03 54 38.3		010	1993 QR <sub>1</sub>	1993 08 16.08472	23 10 33.13	-01 10 41.1	010
1993 QY	1993 08 17.04375	23 09 02.21	-04 17 47.0		010	1993 QR <sub>1</sub>	1993 08 16.09514	23 10 32.64	-01 10 44.3	010
1993 QY	1993 08 17.05417	23 09 02.09	-04 18 01.8		010	1993 QR <sub>1</sub>	1993 08 17.05417	23 09 52.98	-01 15 33.4	010
1993 QY	1993 08 17.06458	23 09 01.93	-04 18 17.0		010	1993 QS <sub>1</sub>	* 1993 08 16.07431	23 10 39.92	-04 30 32.3	18.4 010
1993 QY	1993 08 20.03507	23 08 13.46	-05 33 40.3		010	1993 QS <sub>1</sub>	1993 08 16.08472	23 10 39.41	-04 30 33.7	010
1993 QY	1993 08 20.04583	23 08 13.26	-05 33 56.9		010	1993 QS <sub>1</sub>	1993 08 16.09514	23 10 38.82	-04 30 36.2	010
1993 QY	1993 08 20.05625	23 08 13.05	-05 34 13.0		010	1993 QS <sub>1</sub>	1993 08 17.05417	23 09 53.27	-04 33 39.1	010
1993 QF <sub>1</sub>	* 1993 08 16.07431	23 04 45.16	-02 03 11.9	18.5	010	1993 QT <sub>1</sub>	* 1993 08 16.07431	23 11 16.22	-03 01 34.4	18.5 010
1993 QF <sub>1</sub>	1993 08 16.08472	23 04 44.61	-02 03 11.0		010	1993 QT <sub>1</sub>	1993 08 16.08472	23 11 15.84	-03 01 38.5	010
1993 QF <sub>1</sub>	1993 08 16.09514	23 04 44.12	-02 03 10.0		010	1993 QT <sub>1</sub>	1993 08 16.09514	23 11 15.47	-03 01 43.6	010
1993 QF <sub>1</sub>	1993 08 17.05417	23 03 57.74	-02 01 43.7		010	1993 QT <sub>1</sub>	1993 08 17.05417	23 10 41.11	-03 09 15.7	010
1993 QG <sub>1</sub>	* 1993 08 16.07431	23 05 26.76	-04 20 00.1	18.5	010	1993 QU <sub>1</sub>	* 1993 08 16.07431	23 11 51.44	-03 28 52.1	18.2 010
1993 QG <sub>1</sub>	1993 08 16.08472	23 05 26.31	-04 20 03.2		010	1993 QU <sub>1</sub>	1993 08 16.08472	23 11 51.32	-03 28 57.4	010
1993 QG <sub>1</sub>	1993 08 16.09514	23 05 25.85	-04 20 06.8		010	1993 QU <sub>1</sub>	1993 08 16.09514	23 11 51.18	-03 29 01.7	010
1993 QG <sub>1</sub>	1993 08 17.05417	23 04 49.80	-04 26 17.3		010	1993 QU <sub>1</sub>	1993 08 17.05417	23 11 36.89	-03 37 05.6	010
1993 QH <sub>1</sub>	* 1993 08 16.07431	23 06 15.17	-00 32 27.6	18.5	010	1993 QV <sub>1</sub>	* 1993 08 16.07431	23 11 58.76	-02 49 20.7	18.5 010
1993 QH <sub>1</sub>	1993 08 16.08472	23 06 14.73	-00 32 30.9		010	1993 QV <sub>1</sub>	1993 08 16.08472	23 11 58.36	-02 49 23.4	010
1993 QH <sub>1</sub>	1993 08 16.09514	23 06 14.36	-00 32 33.3		010	1993 QV <sub>1</sub>	1993 08 16.09514	23 11 57.93	-02 49 26.2	010
1993 QH <sub>1</sub>	1993 08 17.05417	23 05 40.02	-00 35 52.5		010	1993 QV <sub>1</sub>	1993 08 17.05417	23 11 23.69	-02 53 12.9	010
1993 QJ <sub>1</sub>	* 1993 08 16.07431	23 07 07.99	-02 51 32.6	18.5	010	1993 QW <sub>1</sub>	* 1993 08 16.07431	23 13 25.73	-00 08 38.9	18.4 010

1993 QW <sub>1</sub>	1993 08 16.08472	23 13 25.42	-00 08 41.3	010	1993 QK <sub>2</sub>	1993 08 16.08472	23 16 21.84	-03 31 52.5	010		
1993 QW <sub>1</sub>	1993 08 16.09514	23 13 24.96	-00 08 45.0	010	1993 QK <sub>2</sub>	1993 08 16.09514	23 16 21.63	-03 31 56.3	010		
1993 QW <sub>1</sub>	1993 08 17.05417	23 12 47.41	-00 14 28.5	010	1993 QK <sub>2</sub>	1993 08 17.05417	23 15 59.88	-03 36 33.8	010		
1993 QX <sub>1</sub>	* 1993 08 16.07431	23 13 51.10	-04 25 54.1	18.5	010	1993 QL <sub>2</sub>	* 1993 08 16.07431	23 16 41.02	-03 58 54.5	18.4	010
1993 QX <sub>1</sub>	1993 08 16.08472	23 13 50.49	-04 25 52.2	010	1993 QL <sub>2</sub>	1993 08 16.08472	23 16 40.70	-03 58 59.6	010		
1993 QX <sub>1</sub>	1993 08 16.09514	23 13 49.81	-04 25 51.3	010	1993 QL <sub>2</sub>	1993 08 16.09514	23 16 40.28	-03 59 04.4	010		
1993 QX <sub>1</sub>	1993 08 17.05417	23 12 50.18	-04 23 54.1	010	1993 QL <sub>2</sub>	1993 08 17.05417	23 16 08.63	-04 06 33.4	010		
1993 QY <sub>1</sub>	* 1993 08 16.07431	23 13 57.57	-03 45 43.8	18.5	010	1993 QM <sub>2</sub>	* 1993 08 16.07431	23 17 09.12	-01 03 46.2	18.4	010
1993 QY <sub>1</sub>	1993 08 16.08472	23 13 57.13	-03 45 46.3	010	1993 QM <sub>2</sub>	1993 08 16.08472	23 17 08.87	-01 03 51.7	010		
1993 QY <sub>1</sub>	1993 08 16.09514	23 13 56.71	-03 45 49.3	010	1993 QM <sub>2</sub>	1993 08 16.09514	23 17 08.63	-01 03 57.7	010		
1993 QY <sub>1</sub>	1993 08 17.05417	23 13 17.48	-03 50 24.6	010	1993 QM <sub>2</sub>	1993 08 17.05417	23 16 46.37	-01 12 18.9	010		
1993 QZ <sub>1</sub>	* 1993 08 16.07431	23 14 11.78	-00 39 06.7	18.5	010	1993 QN <sub>2</sub>	* 1993 08 16.07431	23 17 13.93	-01 37 48.6	18.5	010
1993 QZ <sub>1</sub>	1993 08 16.08472	23 14 11.45	-00 39 08.4	010	1993 QN <sub>2</sub>	1993 08 16.08472	23 17 13.49	-01 37 50.9	010		
1993 QZ <sub>1</sub>	1993 08 16.09514	23 14 11.13	-00 39 11.7	010	1993 QN <sub>2</sub>	1993 08 16.09514	23 17 13.06	-01 37 52.6	010		
1993 QZ <sub>1</sub>	1993 08 17.05417	23 13 38.98	-00 42 19.5	010	1993 QN <sub>2</sub>	1993 08 17.05417	23 16 35.16	-01 40 39.9	010		
1993 QA <sub>2</sub>	* 1993 08 16.07431	23 14 15.26	-01 05 44.3	18.0	010	1993 QO <sub>2</sub>	* 1993 08 16.07431	23 17 14.81	-04 15 23.1	18.6	010
1993 QA <sub>2</sub>	1993 08 16.08472	23 14 14.79	-01 05 44.6	010	1993 QO <sub>2</sub>	1993 08 16.08472	23 17 14.44	-04 15 27.0	010		
1993 QA <sub>2</sub>	1993 08 16.09514	23 14 14.34	-01 05 45.1	010	1993 QO <sub>2</sub>	1993 08 16.09514	23 17 14.11	-04 15 28.9	010		
1993 QA <sub>2</sub>	1993 08 17.05417	23 13 35.05	-01 06 37.1	010	1993 QO <sub>2</sub>	1993 08 17.05417	23 16 40.87	-04 19 43.7	010		
1993 QB <sub>2</sub>	* 1993 08 16.07431	23 14 33.25	-01 49 32.3	18.2	010	1993 QP <sub>2</sub>	* 1993 08 16.07431	23 17 30.26	-02 34 23.0	18.6	010
1993 QB <sub>2</sub>	1993 08 16.08472	23 14 32.68	-01 49 32.1	010	1993 QP <sub>2</sub>	1993 08 16.08472	23 17 29.93	-02 34 26.2	010		
1993 QB <sub>2</sub>	1993 08 16.09514	23 14 32.09	-01 49 31.7	010	1993 QP <sub>2</sub>	1993 08 16.09514	23 17 29.60	-02 34 32.4	010		
1993 QB <sub>2</sub>	1993 08 17.05417	23 13 42.07	-01 48 28.4	010	1993 QP <sub>2</sub>	1993 08 17.05417	23 16 52.39	-02 40 34.9	010		
1993 QC <sub>2</sub>	* 1993 08 16.07431	23 14 50.63	-04 31 13.2	18.5	010	1993 QQ <sub>2</sub>	* 1993 08 16.07431	23 18 07.61	-02 28 22.4	18.6	010
1993 QC <sub>2</sub>	1993 08 16.08472	23 14 50.35	-04 31 17.3	010	1993 QQ <sub>2</sub>	1993 08 16.08472	23 18 07.17	-02 28 21.4	010		
1993 QC <sub>2</sub>	1993 08 16.09514	23 14 50.10	-04 31 18.5	010	1993 QQ <sub>2</sub>	1993 08 16.09514	23 18 06.64	-02 28 19.9	010		
1993 QC <sub>2</sub>	1993 08 17.05417	23 14 23.06	-04 34 37.9	010	1993 QQ <sub>2</sub>	1993 08 17.05417	23 17 22.69	-02 26 55.6	010		
1993 QD <sub>2</sub>	* 1993 08 16.07431	23 15 17.80	-02 34 04.6	18.3	010	1993 QR <sub>2</sub>	* 1993 08 16.07431	23 18 25.90	-02 48 15.4	18.5	010
1993 QD <sub>2</sub>	1993 08 16.08472	23 15 17.37	-02 34 02.7	010	1993 QR <sub>2</sub>	1993 08 16.08472	23 18 25.60	-02 48 17.9	010		
1993 QD <sub>2</sub>	1993 08 16.09514	23 15 16.95	-02 34 01.6	010	1993 QR <sub>2</sub>	1993 08 16.09514	23 18 25.35	-02 48 19.9	010		
1993 QD <sub>2</sub>	1993 08 17.05417	23 14 44.05	-02 31 32.6	010	1993 QR <sub>2</sub>	1993 08 17.05417	23 18 00.11	-02 51 03.2	010		
1993 QE <sub>2</sub>	* 1993 08 16.07431	23 15 43.35	-03 06 41.6	18.6	010	1993 QS <sub>2</sub>	* 1993 08 16.07431	23 18 43.52	-04 33 42.1	18.5	010
1993 QE <sub>2</sub>	1993 08 16.08472	23 15 43.02	-03 06 46.8	010	1993 QS <sub>2</sub>	1993 08 16.08472	23 18 43.13	-04 33 42.5	010		
1993 QE <sub>2</sub>	1993 08 16.09514	23 15 42.66	-03 06 52.4	010	1993 QS <sub>2</sub>	1993 08 16.09514	23 18 42.77	-04 33 44.2	010		
1993 QE <sub>2</sub>	1993 08 17.05417	23 15 13.68	-03 14 40.8	010	1993 QS <sub>2</sub>	1993 08 17.05417	23 18 08.80	-04 35 26.5	010		
1993 QF <sub>2</sub>	* 1993 08 16.07431	23 15 44.79	-02 41 11.4	18.7	010	1993 QT <sub>2</sub>	* 1993 08 16.07431	23 18 58.04	-04 21 15.9	17.9	010
1993 QF <sub>2</sub>	1993 08 16.08472	23 15 44.43	-02 41 14.1	010	1993 QT <sub>2</sub>	1993 08 16.08472	23 18 57.72	-04 21 17.7	010		
1993 QF <sub>2</sub>	1993 08 16.09514	23 15 44.06	-02 41 17.3	010	1993 QT <sub>2</sub>	1993 08 16.09514	23 18 57.36	-04 21 19.6	010		
1993 QF <sub>2</sub>	1993 08 17.05417	23 15 11.07	-02 44 00.6	010	1993 QT <sub>2</sub>	1993 08 17.05417	23 18 31.14	-04 23 45.5	010		
1993 QG <sub>2</sub>	* 1993 08 16.07431	23 15 46.61	-03 58 11.9	18.7	010	1993 QU <sub>2</sub>	* 1993 08 16.07431	23 19 46.26	-00 24 50.3	18.4	010
1993 QG <sub>2</sub>	1993 08 16.08472	23 15 46.11	-03 58 13.6	010	1993 QU <sub>2</sub>	1993 08 16.08472	23 19 46.03	-00 24 50.5	010		
1993 QG <sub>2</sub>	1993 08 16.09514	23 15 45.81	-03 58 18.4	010	1993 QU <sub>2</sub>	1993 08 16.09514	23 19 45.76	-00 24 49.9	010		
1993 QG <sub>2</sub>	1993 08 17.05417	23 15 13.35	-04 02 29.3	010	1993 QU <sub>2</sub>	1993 08 17.05417	23 19 22.90	-00 24 02.4	010		
1993 QH <sub>2</sub>	* 1993 08 16.07431	23 15 46.98	-02 22 09.4	18.5	010	1993 QV <sub>2</sub>	* 1993 08 16.07431	23 20 26.51	-00 11 41.9	18.4	010
1993 QH <sub>2</sub>	1993 08 16.08472	23 15 46.59	-02 22 12.2	010	1993 QV <sub>2</sub>	1993 08 16.08472	23 20 26.33	-00 11 44.2	010		
1993 QH <sub>2</sub>	1993 08 16.09514	23 15 46.24	-02 22 14.5	010	1993 QV <sub>2</sub>	1993 08 16.09514	23 20 26.23	-00 11 46.5	010		
1993 QH <sub>2</sub>	1993 08 17.05417	23 15 13.90	-02 25 33.9	010	1993 QV <sub>2</sub>	1993 08 17.05417	23 20 08.63	-00 14 59.3	010		
1993 QJ <sub>2</sub>	* 1993 08 16.07431	23 16 17.38	-00 30 48.0	18.3	010	1993 QW <sub>2</sub>	* 1993 08 16.07431	23 20 33.65	-02 14 18.5	18.5	010
1993 QJ <sub>2</sub>	1993 08 16.08472	23 16 16.92	-00 30 50.9	010	1993 QW <sub>2</sub>	1993 08 16.08472	23 20 33.29	-02 14 21.7	010		
1993 QJ <sub>2</sub>	1993 08 16.09514	23 16 16.49	-00 30 54.4	010	1993 QW <sub>2</sub>	1993 08 16.09514	23 20 33.01	-02 14 24.8	010		
1993 QJ <sub>2</sub>	1993 08 17.05417	23 15 39.36	-00 35 46.9	010	1993 QW <sub>2</sub>	1993 08 17.05417	23 20 02.53	-02 18 59.0	010		
1993 QK <sub>2</sub>	* 1993 08 16.07431	23 16 22.07	-03 31 49.3	19.0	010	1993 QX <sub>2</sub>	* 1993 08 16.07431	23 20 45.72	-00 09 54.8	18.3	010

1993 QX <sub>2</sub>	1993 08 16.08472	23 20 45.31	-00 09 58.2	010	1993 QM <sub>3</sub>	1993 08 19.08403	23 26 29.38	-02 28 35.7	18.2	010	
1993 QX <sub>2</sub>	1993 08 16.09514	23 20 44.89	-00 10 00.3	010	1993 QM <sub>3</sub>	1993 08 19.09479	23 26 28.90	-02 28 36.5		010	
1993 QX <sub>2</sub>	1993 08 17.05417	23 20 11.57	-00 16 01.4	010	1993 QM <sub>3</sub>	1993 08 19.10556	23 26 28.41	-02 28 38.0		010	
1993 QY <sub>2</sub>	* 1993 08 16.07431	23 21 21.08	-03 21 02.4	18.5	010	1993 QN <sub>3</sub>	* 1993 08 18.05729	23 27 13.35	-03 43 27.7	010	
1993 QY <sub>2</sub>	1993 08 16.08472	23 21 20.60	-03 21 02.5	010	1993 QN <sub>3</sub>	1993 08 19.08403	23 26 38.13	-03 49 24.7	18.4	010	
1993 QY <sub>2</sub>	1993 08 16.09514	23 21 20.23	-03 21 03.0	010	1993 QN <sub>3</sub>	1993 08 19.09479	23 26 37.74	-03 49 28.7		010	
1993 QY <sub>2</sub>	1993 08 17.05417	23 20 44.55	-03 21 52.2	010	1993 QN <sub>3</sub>	1993 08 19.10556	23 26 37.39	-03 49 31.9		010	
1993 QZ <sub>2</sub>	* 1993 08 16.07431	23 21 56.91	-01 36 21.1	18.7	010	1993 QO <sub>3</sub>	* 1993 08 18.05729	23 28 11.93	-05 38 46.2	010	
1993 QZ <sub>2</sub>	1993 08 16.08472	23 21 56.74	-01 36 25.7	010	1993 QO <sub>3</sub>	1993 08 19.08403	23 27 41.87	-05 46 25.1	18.5	010	
1993 QZ <sub>2</sub>	1993 08 16.09514	23 21 56.39	-01 36 29.9	010	1993 QO <sub>3</sub>	1993 08 19.09479	23 27 41.53	-05 46 31.0		010	
1993 QZ <sub>2</sub>	1993 08 17.05417	23 21 21.61	-01 41 28.1	010	1993 QO <sub>3</sub>	1993 08 19.10556	23 27 41.21	-05 46 35.4		010	
1993 QA <sub>3</sub>	* 1993 08 16.07431	23 24 09.35	-01 52 08.3	18.5	010	1993 QP <sub>3</sub>	* 1993 08 18.05729	23 29 13.99	-02 21 36.6	010	
1993 QA <sub>3</sub>	1993 08 16.08472	23 24 09.02	-01 52 11.4	010	1993 QP <sub>3</sub>	1993 08 19.08403	23 28 43.29	-02 25 35.8	18.5	010	
1993 QA <sub>3</sub>	1993 08 16.09514	23 24 08.79	-01 52 13.8	010	1993 QP <sub>3</sub>	1993 08 19.09479	23 28 42.98	-02 25 39.1		010	
1993 QA <sub>3</sub>	1993 08 17.05417	23 23 43.19	-01 57 01.6	010	1993 QP <sub>3</sub>	1993 08 19.10556	23 28 42.67	-02 25 41.8		010	
1993 QA <sub>3</sub>	1993 08 18.05729	23 23 15.32	-02 02 14.0	010	1993 QQ <sub>3</sub>	* 1993 08 18.05729	23 29 38.16	-02 32 40.5	010	010	
1993 QA <sub>3</sub>	1993 08 19.08403	23 22 45.55	-02 07 41.3	18.4	010	1993 QQ <sub>3</sub>	1993 08 19.08403	23 29 08.38	-02 36 44.6	18.4	010
1993 QA <sub>3</sub>	1993 08 19.09479	23 22 45.10	-02 07 45.3	010	1993 QQ <sub>3</sub>	1993 08 19.09479	23 29 08.04	-02 36 46.9		010	
1993 QA <sub>3</sub>	1993 08 19.10556	23 22 44.78	-02 07 49.0	010	1993 QQ <sub>3</sub>	1993 08 19.10556	23 29 07.64	-02 36 50.6		010	
1993 QD <sub>3</sub>	* 1993 08 18.05729	23 23 47.20	-03 49 15.8	010	1993 QR <sub>3</sub>	* 1993 08 18.05729	23 29 51.96	-04 46 07.2	010	010	
1993 QD <sub>3</sub>	1993 08 19.08403	23 23 14.88	-03 55 36.3	18.5	010	1993 QR <sub>3</sub>	1993 08 19.08403	23 29 13.79	-04 56 26.7	18.4	010
1993 QD <sub>3</sub>	1993 08 19.09479	23 23 14.51	-03 55 39.7	010	1993 QR <sub>3</sub>	1993 08 19.09479	23 29 13.38	-04 56 33.7		010	
1993 QD <sub>3</sub>	1993 08 19.10556	23 23 14.16	-03 55 44.4	010	1993 QR <sub>3</sub>	1993 08 19.10556	23 29 13.00	-04 56 40.1		010	
1993 QE <sub>3</sub>	* 1993 08 18.05729	23 24 26.16	-06 01 38.0	010	1993 QS <sub>3</sub>	* 1993 08 18.05729	23 30 48.56	-04 19 32.0	010	010	
1993 QE <sub>3</sub>	1993 08 19.08403	23 24 11.23	-06 08 31.5	18.2	010	1993 QS <sub>3</sub>	1993 08 19.08403	23 30 03.39	-04 23 40.6	19.0	010
1993 QE <sub>3</sub>	1993 08 19.09479	23 24 11.04	-06 08 36.8	010	1993 QS <sub>3</sub>	1993 08 19.09479	23 30 02.75	-04 23 44.7		010	
1993 QE <sub>3</sub>	1993 08 19.10556	23 24 10.82	-06 08 41.5	010	1993 QS <sub>3</sub>	1993 08 19.10556	23 30 02.36	-04 23 46.4		010	
1993 QF <sub>3</sub>	* 1993 08 18.05729	23 25 07.55	-04 16 10.9	010	1993 QT <sub>3</sub>	* 1993 08 18.05729	23 30 51.03	-05 35 17.5	010	010	
1993 QF <sub>3</sub>	1993 08 19.08403	23 24 32.74	-04 20 25.3	18.6	010	1993 QT <sub>3</sub>	1993 08 19.08403	23 30 07.44	-05 38 06.1	18.5	010
1993 QF <sub>3</sub>	1993 08 19.09479	23 24 32.10	-04 20 29.3	010	1993 QT <sub>3</sub>	1993 08 19.09479	23 30 06.89	-05 38 06.8		010	
1993 QF <sub>3</sub>	1993 08 19.10556	23 24 31.81	-04 20 32.2	010	1993 QT <sub>3</sub>	1993 08 19.10556	23 30 06.42	-05 38 08.8		010	
1993 QG <sub>3</sub>	* 1993 08 18.05729	23 25 16.26	-03 15 41.1	010	1993 QU <sub>3</sub>	* 1993 08 18.05729	23 31 21.40	-01 49 01.7	010	010	
1993 QG <sub>3</sub>	1993 08 19.08403	23 24 25.04	-03 17 26.0	18.5	010	1993 QU <sub>3</sub>	1993 08 19.08403	23 30 47.72	-01 52 57.2	18.5	010
1993 QG <sub>3</sub>	1993 08 19.09479	23 24 24.42	-03 17 28.5	010	1993 QU <sub>3</sub>	1993 08 19.09479	23 30 47.31	-01 53 00.9		010	
1993 QG <sub>3</sub>	1993 08 19.10556	23 24 23.84	-03 17 29.0	010	1993 QU <sub>3</sub>	1993 08 19.10556	23 30 46.96	-01 53 03.1		010	
1993 QH <sub>3</sub>	* 1993 08 18.05729	23 25 19.98	-02 21 54.9	010	1993 QV <sub>3</sub>	* 1993 08 18.05729	23 31 24.74	-04 44 01.0	010	010	
1993 QH <sub>3</sub>	1993 08 19.08403	23 24 43.98	-02 25 19.2	18.4	010	1993 QV <sub>3</sub>	1993 08 19.08403	23 30 33.41	-04 44 02.8	19.0	010
1993 QH <sub>3</sub>	1993 08 19.09479	23 24 43.58	-02 25 21.0	010	1993 QV <sub>3</sub>	1993 08 19.09479	23 30 32.74	-04 44 03.7		010	
1993 QH <sub>3</sub>	1993 08 19.10556	23 24 43.12	-02 25 23.5	010	1993 QV <sub>3</sub>	1993 08 19.10556	23 30 32.14	-04 44 02.8		010	
1993 QJ <sub>3</sub>	* 1993 08 18.05729	23 25 22.43	-03 35 36.0	010	1993 QW <sub>3</sub>	* 1993 08 18.05729	23 31 50.10	-03 29 12.8	010	010	
1993 QJ <sub>3</sub>	1993 08 19.08403	23 24 48.89	-03 38 07.8	18.0	010	1993 QW <sub>3</sub>	1993 08 19.08403	23 31 10.99	-03 28 22.7	19.0	010
1993 QJ <sub>3</sub>	1993 08 19.09479	23 24 48.47	-03 38 10.4	010	1993 QW <sub>3</sub>	1993 08 19.09479	23 31 10.63	-03 28 20.5		010	
1993 QJ <sub>3</sub>	1993 08 19.10556	23 24 48.05	-03 38 10.8	010	1993 QW <sub>3</sub>	1993 08 19.10556	23 31 10.22	-03 28 21.4		010	
1993 QK <sub>3</sub>	* 1993 08 18.05729	23 25 41.24	-02 06 41.9	010	1993 QX <sub>3</sub>	* 1993 08 18.05729	23 32 00.53	-04 45 18.1	010	010	
1993 QK <sub>3</sub>	1993 08 19.08403	23 25 05.49	-02 11 00.4	18.6	010	1993 QX <sub>3</sub>	1993 08 19.08403	23 31 20.80	-04 46 34.1	18.6	010
1993 QK <sub>3</sub>	1993 08 19.09479	23 25 05.03	-02 11 03.9	010	1993 QX <sub>3</sub>	1993 08 19.09479	23 31 20.37	-04 46 34.5		010	
1993 QK <sub>3</sub>	1993 08 19.10556	23 25 04.62	-02 11 08.1	010	1993 QX <sub>3</sub>	1993 08 19.10556	23 31 19.84	-04 46 35.7		010	
1993 QL <sub>3</sub>	* 1993 08 18.05729	23 27 08.13	-02 03 03.4	010	1993 QY <sub>3</sub>	* 1993 08 18.05729	23 32 54.32	-03 46 29.5	010	010	
1993 QL <sub>3</sub>	1993 08 19.08403	23 26 33.57	-02 06 42.4	18.5	010	1993 QY <sub>3</sub>	1993 08 19.08403	23 32 26.82	-03 54 11.3	18.7	010
1993 QL <sub>3</sub>	1993 08 19.09479	23 26 33.16	-02 06 44.9	010	1993 QY <sub>3</sub>	1993 08 19.09479	23 32 26.48	-03 54 17.6		010	
1993 QL <sub>3</sub>	1993 08 19.10556	23 26 32.75	-02 06 46.6	010	1993 QY <sub>3</sub>	1993 08 19.10556	23 32 26.20	-03 54 22.3		010	
1993 QM <sub>3</sub>	* 1993 08 18.05729	23 27 08.70	-02 27 18.7	010	1993 QZ <sub>3</sub>	* 1993 08 18.05729	23 33 02.38	-05 24 14.0	010	010	

1993 QZ <sub>3</sub>	1993 08 19.08403	23 32 36.26	-05 32 46.6	18.6	010	1993 QN <sub>4</sub>	1993 08 19.08403	23 37 24.31	-06 05 05.5	18.2	010
1993 QZ <sub>3</sub>	1993 08 19.09479	23 32 35.93	-05 32 52.2		010	1993 QN <sub>4</sub>	1993 08 19.09479	23 37 23.97	-06 05 11.0		010
1993 QZ <sub>3</sub>	1993 08 19.10556	23 32 35.65	-05 32 58.7		010	1993 QN <sub>4</sub>	1993 08 19.10556	23 37 23.61	-06 05 16.0		010
1993 QA <sub>4</sub>	* 1993 08 18.05729	23 33 53.02	-02 53 42.3		010	1993 QO <sub>4</sub>	* 1993 08 18.05729	23 37 55.03	-03 04 30.6		010
1993 QA <sub>4</sub>	1993 08 19.08403	23 33 19.06	-02 57 15.5	18.5	010	1993 QO <sub>4</sub>	1993 08 19.08403	23 37 29.66	-03 08 21.1	18.3	010
1993 QA <sub>4</sub>	1993 08 19.09479	23 33 18.67	-02 57 17.6		010	1993 QO <sub>4</sub>	1993 08 19.09479	23 37 29.30	-03 08 24.4		010
1993 QA <sub>4</sub>	1993 08 19.10556	23 33 18.29	-02 57 20.2		010	1993 QO <sub>4</sub>	1993 08 19.10556	23 37 28.98	-03 08 26.8		010
1993 QB <sub>4</sub>	* 1993 08 18.05729	23 33 59.66	-03 28 54.6		010	1993 QP <sub>4</sub>	* 1993 08 18.05729	23 39 17.51	-04 52 33.2		010
1993 QB <sub>4</sub>	1993 08 19.08403	23 33 26.18	-03 32 28.2	18.8	010	1993 QP <sub>4</sub>	1993 08 19.08403	23 39 00.83	-04 57 56.0	18.5	010
1993 QB <sub>4</sub>	1993 08 19.09479	23 33 25.71	-03 32 31.1		010	1993 QP <sub>4</sub>	1993 08 19.09479	23 39 00.59	-04 58 00.7		010
1993 QB <sub>4</sub>	1993 08 19.10556	23 33 25.40	-03 32 34.6		010	1993 QP <sub>4</sub>	1993 08 19.10556	23 39 00.38	-04 58 03.0		010
1993 QC <sub>4</sub>	* 1993 08 18.05729	23 34 42.81	-03 27 38.7		010	1993 QQ <sub>4</sub>	* 1993 08 18.05729	23 39 31.10	-02 29 41.1		010
1993 QC <sub>4</sub>	1993 08 19.08403	23 34 23.78	-03 37 03.2	18.4	010	1993 QQ <sub>4</sub>	1993 08 19.08403	23 38 59.10	-02 33 38.8	18.5	010
1993 QC <sub>4</sub>	1993 08 19.09479	23 34 23.54	-03 37 10.0		010	1993 QQ <sub>4</sub>	1993 08 19.09479	23 38 58.71	-02 33 42.6		010
1993 QC <sub>4</sub>	1993 08 19.10556	23 34 23.27	-03 37 16.6		010	1993 QQ <sub>4</sub>	1993 08 19.10556	23 38 58.41	-02 33 45.3		010
1993 QD <sub>4</sub>	* 1993 08 18.05729	23 35 26.00	-03 30 24.4		010	1993 QR <sub>4</sub>	* 1993 08 18.05729	23 40 08.29	-05 03 23.9		010
1993 QD <sub>4</sub>	1993 08 19.08403	23 34 50.19	-03 32 21.7	18.0	010	1993 QR <sub>4</sub>	1993 08 19.08403	23 39 30.54	-05 06 53.8	18.5	010
1993 QD <sub>4</sub>	1993 08 19.09479	23 34 49.76	-03 32 24.0		010	1993 QR <sub>4</sub>	1993 08 19.09479	23 39 30.11	-05 06 55.8		010
1993 QD <sub>4</sub>	1993 08 19.10556	23 34 49.40	-03 32 24.9		010	1993 QR <sub>4</sub>	1993 08 19.10556	23 39 29.70	-05 06 58.7		010
1993 QE <sub>4</sub>	* 1993 08 18.05729	23 35 41.32	-05 17 41.9		010	1993 QS <sub>4</sub>	* 1993 08 18.05729	23 40 22.44	-05 10 10.0		010
1993 QE <sub>4</sub>	1993 08 19.08403	23 35 01.84	-05 21 13.7	18.4	010	1993 QS <sub>4</sub>	1993 08 19.08403	23 39 39.07	-05 06 23.6	18.2	010
1993 QE <sub>4</sub>	1993 08 19.09479	23 35 01.35	-05 21 15.9		010	1993 QS <sub>4</sub>	1993 08 19.09479	23 39 38.58	-05 06 21.7		010
1993 QE <sub>4</sub>	1993 08 19.10556	23 35 00.92	-05 21 18.4		010	1993 QS <sub>4</sub>	1993 08 19.10556	23 39 38.03	-05 06 19.6		010
1993 QF <sub>4</sub>	* 1993 08 18.05729	23 36 36.76	-05 14 31.4		010	1993 QT <sub>4</sub>	* 1993 08 18.05729	23 41 11.45	-05 12 12.2		010
1993 QF <sub>4</sub>	1993 08 19.08403	23 36 06.21	-05 21 20.6	18.4	010	1993 QT <sub>4</sub>	1993 08 19.08403	23 40 34.36	-05 10 51.6	18.5	010
1993 QF <sub>4</sub>	1993 08 19.09479	23 36 05.82	-05 21 25.9		010	1993 QT <sub>4</sub>	1993 08 19.09479	23 40 33.82	-05 10 50.9		010
1993 QF <sub>4</sub>	1993 08 19.10556	23 36 05.51	-05 21 31.0		010	1993 QT <sub>4</sub>	1993 08 19.10556	23 40 33.33	-05 10 50.4		010
1993 QG <sub>4</sub>	* 1993 08 18.05729	23 36 47.89	-03 33 10.3		010	1993 QU <sub>4</sub>	* 1993 08 18.05729	23 41 28.26	-02 54 41.8		010
1993 QG <sub>4</sub>	1993 08 19.08403	23 36 33.46	-03 37 52.6	18.1	010	1993 QU <sub>4</sub>	1993 08 19.08403	23 41 02.47	-03 04 12.8	18.4	010
1993 QG <sub>4</sub>	1993 08 19.09479	23 36 33.15	-03 37 56.3		010	1993 QU <sub>4</sub>	1993 08 19.09479	23 41 02.24	-03 04 19.6		010
1993 QG <sub>4</sub>	1993 08 19.10556	23 36 32.96	-03 37 59.5		010	1993 QU <sub>4</sub>	1993 08 19.10556	23 41 01.90	-03 04 25.5		010
1993 QH <sub>4</sub>	* 1993 08 18.05729	23 36 51.43	-04 37 07.7		010	1993 QV <sub>4</sub>	* 1993 08 18.05729	23 41 37.39	-03 29 02.9		010
1993 QH <sub>4</sub>	1993 08 19.08403	23 36 25.38	-04 41 19.1	18.3	010	1993 QV <sub>4</sub>	1993 08 19.08403	23 41 03.62	-03 32 26.5	19.0	010
1993 QH <sub>4</sub>	1993 08 19.09479	23 36 25.07	-04 41 21.9		010	1993 QV <sub>4</sub>	1993 08 19.09479	23 41 03.27	-03 32 29.5		010
1993 QH <sub>4</sub>	1993 08 19.10556	23 36 24.75	-04 41 25.5		010	1993 QV <sub>4</sub>	1993 08 19.10556	23 41 02.84	-03 32 31.7		010
1993 QJ <sub>4</sub>	* 1993 08 18.05729	23 37 16.05	-02 05 44.2		010	2548 P-L	1993 08 18.05729	23 41 21.67	-04 55 36.7		010
1993 QJ <sub>4</sub>	1993 08 19.08403	23 36 38.70	-02 11 32.0	18.6	010	2548 P-L	1993 08 19.08403	23 40 49.15	-04 59 57.3	18.3	010
1993 QJ <sub>4</sub>	1993 08 19.09479	23 36 38.21	-02 11 35.8		010	2548 P-L	1993 08 19.09479	23 40 48.78	-05 00 00.5		010
1993 QJ <sub>4</sub>	1993 08 19.10556	23 36 37.85	-02 11 39.8		010	2548 P-L	1993 08 19.10556	23 40 48.40	-05 00 03.8		010
1993 QK <sub>4</sub>	* 1993 08 18.05729	23 37 20.18	-05 42 10.5		010	1210 T-2	1993 08 18.05729	23 22 40.56	-05 05 20.6		010
1993 QK <sub>4</sub>	1993 08 19.08403	23 36 46.53	-05 47 22.9	18.6	010	1210 T-2	1993 08 19.08403	23 21 50.96	-05 08 55.4	18.5	010
1993 QK <sub>4</sub>	1993 08 19.09479	23 36 46.11	-05 47 26.4		010	1210 T-2	1993 08 19.09479	23 21 50.38	-05 08 57.3		010
1993 QK <sub>4</sub>	1993 08 19.10556	23 36 45.74	-05 47 29.8		010	1210 T-2	1993 08 19.10556	23 21 49.79	-05 08 59.7		010
1993 QL <sub>4</sub>	* 1993 08 18.05729	23 37 33.80	-04 29 52.2		010	(34)	1993 08 16.07431	23 13 18.52	-01 23 15.0	15.0	010
1993 QL <sub>4</sub>	1993 08 19.08403	23 37 13.07	-04 35 57.2	18.3	010	(34)	1993 08 16.08472	23 13 17.97	-01 23 18.3		010
1993 QL <sub>4</sub>	1993 08 19.09479	23 37 12.84	-04 36 01.6		010	(34)	1993 08 16.09514	23 13 17.66	-01 23 20.2		010
1993 QL <sub>4</sub>	1993 08 19.10556	23 37 12.59	-04 36 06.3		010	(34)	1993 08 17.05417	23 12 41.79	-01 28 01.3		010
1993 QM <sub>4</sub>	* 1993 08 18.05729	23 37 49.65	-03 56 03.7		010	(76)	1993 08 15.04861	22 56 33.40	-04 29 17.9	16.0	010
1993 QM <sub>4</sub>	1993 08 19.08403	23 37 13.72	-03 59 34.9	18.7	010	(76)	1993 08 15.05972	22 56 33.00	-04 29 20.0		010
1993 QM <sub>4</sub>	1993 08 19.09479	23 37 13.27	-03 59 38.3		010	(76)	1993 08 15.07083	22 56 32.56	-04 29 22.5		010
1993 QM <sub>4</sub>	1993 08 19.10556	23 37 12.88	-03 59 40.3		010	(76)	1993 08 17.00139	22 55 25.46	-04 36 22.7		010
1993 QN <sub>4</sub>	* 1993 08 18.05729	23 37 53.01	-05 57 24.2		010	(150)	1993 08 14.95903	21 30 47.87	-11 20 58.7	14.0	010

(150)	1993 08 14.96944	21 30 47.24	-11 21 02.2		010	(1811)	1993 08 14.97986	21 15 14.49	-09 14 52.2		010
(150)	1993 08 14.97986	21 30 46.77	-11 21 04.8		010	(1811)	1993 08 15.95833	21 14 33.01	-09 21 00.1		010
(150)	1993 08 15.95833	21 30 00.44	-11 25 19.6		010	(1976)	1993 08 19.08403	23 40 03.81	-06 06 16.7	18.1	010
(174)	1993 08 15.04861	22 47 21.52	-05 26 50.6	15.0	010	(1976)	1993 08 19.09479	23 40 03.32	-06 06 20.4		010
(174)	1993 08 15.05972	22 47 20.90	-05 26 50.4		010	(1976)	1993 08 19.10556	23 40 02.95	-06 06 23.2		010
(174)	1993 08 15.07083	22 47 20.26	-05 26 50.5		010	(2306)	1993 08 15.95833	21 31 33.44	-07 20 00.9	17.9	010
(174)	1993 08 17.00139	22 45 40.17	-05 27 23.5		010	(2324)	1993 08 15.04861	23 05 14.17	-05 40 48.8	17.9	010
(310)	1993 08 16.07431	23 05 19.48	-01 06 57.6	17.0	010	(2324)	1993 08 15.05972	23 05 13.74	-05 40 51.1		010
(310)	1993 08 16.08472	23 05 19.04	-01 06 59.7		010	(2324)	1993 08 15.07083	23 05 13.30	-05 40 54.1		010
(310)	1993 08 16.09514	23 05 18.60	-01 07 01.6		010	(2324)	1993 08 17.00139	23 03 58.68	-05 48 23.9		010
(310)	1993 08 17.05417	23 04 40.03	-01 10 44.6		010	(2350)	1993 07 15.99722	19 56 33.04	-16 56 01.5	18.4	010
(335)	1993 08 15.04861	23 01 33.53	-07 09 36.8	14.0	010	(2350)	1993 07 16.00764	19 56 32.29	-16 56 06.0		010
(335)	1993 08 15.05972	23 01 33.04	-07 09 41.5		010	(2350)	1993 07 16.01806	19 56 31.63	-16 56 09.2		010
(335)	1993 08 15.07083	23 01 32.62	-07 09 46.5		010	(2499)	1993 08 15.04861	22 56 34.95	-06 05 02.7	18.2	010
(358)	1993 08 15.04861	22 53 07.37	-05 22 04.6	16.0	010	(2499)	1993 08 15.05972	22 56 34.52	-06 05 04.4		010
(358)	1993 08 15.05972	22 53 06.88	-05 22 07.2		010	(2499)	1993 08 15.07083	22 56 34.02	-06 05 07.4		010
(358)	1993 08 15.07083	22 53 06.42	-05 22 09.9		010	(2499)	1993 08 17.00139	22 55 18.43	-06 13 06.3		010
(358)	1993 08 17.00139	22 51 51.73	-05 31 44.3		010	(3195)	1993 08 18.05729	23 29 34.59	-01 57 59.5		010
(587)	1993 08 15.00069	22 27 56.65	-04 15 08.6	17.8	010	(3195)	1993 08 19.08403	23 28 59.59	-02 01 20.0	18.1	010
(587)	1993 08 15.01146	22 27 55.84	-04 15 07.0		010	(3195)	1993 08 19.09479	23 28 59.16	-02 01 22.6		010
(587)	1993 08 16.02986	22 26 43.68	-04 12 57.5		010	(3195)	1993 08 19.10556	23 28 58.79	-02 01 24.7		010
(587)	1993 08 16.04097	22 26 42.85	-04 12 56.3		010	(3802)	1993 08 18.05729	23 35 46.32	-05 42 15.9		010
(587)	1993 08 16.05174	22 26 42.10	-04 12 55.0		010	(3802)	1993 08 19.08403	23 35 11.39	-05 49 59.9	18.0	010
(603)	1993 08 18.05729	23 24 00.44	-04 20 36.4		010	(3802)	1993 08 19.09479	23 35 11.01	-05 50 05.3		010
(603)	1993 08 19.08403	23 23 14.45	-04 23 05.4	18.0	010	(3802)	1993 08 19.10556	23 35 10.65	-05 50 09.9		010
(603)	1993 08 19.09479	23 23 13.97	-04 23 06.8		010	(4095)	1993 08 14.95903	21 28 35.50	-09 42 02.5	18.0	010
(603)	1993 08 19.10556	23 23 13.46	-04 23 08.2		010	(4095)	1993 08 14.96944	21 28 34.80	-09 42 05.4		010
(792)	1993 07 15.99722	20 04 46.21	-13 08 46.5	17.8	010	(4095)	1993 08 14.97986	21 28 34.20	-09 42 08.1		010
(792)	1993 07 16.00764	20 04 45.57	-13 08 47.1		010	(4095)	1993 08 15.95833	21 27 36.88	-09 45 56.5		010
(792)	1993 07 16.01806	20 04 44.99	-13 08 47.6		010	(4109)	1993 08 15.04861	22 58 51.63	-05 12 08.8	18.0	010
(1039)	1993 07 15.99722	19 58 34.54	-13 32 51.8	18.0	010	(4109)	1993 08 15.05972	22 58 51.14	-05 12 11.3		010
(1039)	1993 07 16.00764	19 58 33.90	-13 32 52.6		010	(4109)	1993 08 15.07083	22 58 50.51	-05 12 14.8		010
(1039)	1993 07 16.01806	19 58 33.30	-13 32 53.3		010	(4109)	1993 08 17.00139	22 57 28.07	-05 22 40.3		010
(1156)	1993 08 18.05729	23 27 17.95	-05 58 49.0		010	(4235)	1993 08 16.07431	23 21 28.65	-03 51 26.2	18.2	010
(1156)	1993 08 19.08403	23 26 36.01	-06 04 09.2	17.5	010	(4235)	1993 08 16.08472	23 21 28.32	-03 51 28.1		010
(1156)	1993 08 19.09479	23 26 35.50	-06 04 12.9		010	(4235)	1993 08 16.09514	23 21 27.97	-03 51 29.6		010
(1156)	1993 08 19.10556	23 26 35.01	-06 04 15.8		010	(4235)	1993 08 17.05417	23 20 54.11	-03 54 40.6		010
(1494)	1993 08 15.04861	22 45 55.68	-04 12 24.8	17.0	010	(4271)	1993 08 18.05729	23 37 19.59	-03 29 28.7		010
(1494)	1993 08 15.05972	22 45 55.10	-04 12 27.0		010	(4271)	1993 08 19.08403	23 36 50.83	-03 36 49.0	17.3	010
(1494)	1993 08 15.07083	22 45 54.62	-04 12 30.3		010	(4271)	1993 08 19.09479	23 36 50.54	-03 36 53.7		010
(1513)	1993 08 18.05729	23 41 17.30	-05 06 35.3		010	(4271)	1993 08 19.10556	23 36 50.20	-03 36 58.4		010
(1513)	1993 08 19.08403	23 40 38.38	-05 13 17.8	17.9	010	(4796)	1993 08 15.04861	22 51 52.96	-04 20 53.0	18.0	010
(1513)	1993 08 19.09479	23 40 37.88	-05 13 23.2		010	(4796)	1993 08 15.05972	22 51 52.46	-04 20 53.2		010
(1513)	1993 08 19.10556	23 40 37.44	-05 13 26.2		010	(4796)	1993 08 15.07083	22 51 51.98	-04 20 55.5		010
(1641)	1993 08 16.07431	23 24 11.44	-01 21 05.9	17.5	010	(4796)	1993 08 17.00139	22 50 31.28	-04 24 52.2		010
(1641)	1993 08 16.08472	23 24 10.97	-01 21 05.9		010	(4854)	1993 08 16.07431	23 10 03.10	-00 56 57.8	18.5	010
(1641)	1993 08 16.09514	23 24 10.54	-01 21 06.4		010	(4854)	1993 08 16.08472	23 10 02.73	-00 57 01.0		010
(1641)	1993 08 17.05417	23 23 33.94	-01 21 00.3		010	(4854)	1993 08 16.09514	23 10 02.36	-00 57 05.2		010
(1740)	1993 08 15.00069	22 30 24.68	-07 07 17.4	17.8	010	(4854)	1993 08 17.05417	23 09 30.24	-01 02 54.2		010
(1740)	1993 08 15.01146	22 30 24.11	-07 07 18.7		010	(5242)	1993 08 14.95903	21 21 11.73	-10 36 15.9	18.0	010
(1811)	1993 08 14.95903	21 15 15.48	-09 14 45.8	17.0	010	(5242)	1993 08 14.96944	21 21 11.11	-10 36 19.5		010
(1811)	1993 08 14.96944	21 15 14.97	-09 14 49.4		010	(5242)	1993 08 14.97986	21 21 10.59	-10 36 21.4		010

(5242)	1993 08 15.95833	21 20 22.46	-10 40 27.4		010	1991 XA <sub>6</sub>	* 1991 12 11.86597	03 28 23.61	+31 01 27.8	18.8	033
(5294)	1993 07 15.99722	20 03 38.36	-15 22 46.5	18.3	010	1991 XA <sub>6</sub>	1991 12 11.91389	03 28 21.09	+31 01 07.9		033
(5294)	1993 07 16.00764	20 03 37.75	-15 22 52.2		010	1991 XA <sub>6</sub>	1991 12 12.89306	03 27 34.04	+30 54 39.3		033
(5294)	1993 07 16.01806	20 03 37.30	-15 22 55.2		010	1991 XB <sub>6</sub>	* 1991 12 11.86597	03 28 56.61	+30 36 56.9	18.6	033
<b>033 Tautenburg</b>											
F. Börngen, Thüringer Landessternwarte, Sternwarte 5, D-07778 Tautenburg, Germany											
1.3-m Schmidt telescope											
PPM											
1987 QS	1991 10 08.05347	04 29 52.55	+31 35 17.2	19.1	033	1991 XD <sub>6</sub>	* 1991 12 11.86597	03 30 22.10	+29 18 10.1	18.7	033
1987 QS	1991 10 08.10556	04 29 52.55	+31 35 29.8		033	1991 XD <sub>6</sub>	1991 12 11.91389	03 30 19.62	+29 17 52.8		033
1987 QS	1991 10 09.07778	04 29 52.93	+31 39 08.0		I 033	1991 XD <sub>6</sub>	1991 12 12.89306	03 29 33.77	+29 12 30.1		033
1987 QS	1991 10 10.09306	04 29 50.87	+31 42 51.6		033	1991 XE <sub>6</sub>	* 1991 12 11.86597	03 34 43.31	+29 13 22.2	19.6	033
1987 QS	1991 10 30.89931	04 20 28.79	+32 30 37.8	18.7	033	1991 XE <sub>6</sub>	1991 12 11.91389	03 34 40.48	+29 13 04.0		033
1987 QS	1991 10 30.94583	04 20 26.54	+32 30 40.6		033	1991 XF <sub>6</sub>	* 1991 12 11.86597	03 35 03.91	+30 16 59.4	19.8	033
1987 QS	1991 11 01.01042	04 19 32.33	+32 31 16.9		033	1991 XF <sub>6</sub>	1991 12 11.91389	03 35 01.68	+30 16 43.2		033
1987 QS	1991 12 11.86597	03 34 59.08	+30 12 27.6	18.7	033	1991 XG <sub>6</sub>	* 1991 12 11.86597	03 35 46.99	+30 20 05.5	19.3	033
1987 QS	1991 12 11.91389	03 34 56.48	+30 12 09.6		033	1991 XG <sub>6</sub>	1991 12 11.91389	03 35 44.51	+30 19 43.6		033
1987 QS	1991 12 12.89306	03 34 06.57	+30 06 13.5		033	1991 XG <sub>6</sub>	1991 12 12.89306	03 34 56.57	+30 12 34.3		V 033
1987 QS	1992 01 07.74792	03 23 57.27	+27 44 28.2	19.3	033	1991 XH <sub>6</sub>	* 1991 12 11.86597	03 36 38.61	+29 17 28.5	19.2	033
1987 QS	1992 01 07.80139	03 23 57.39	+27 44 14.1		033	1991 XH <sub>6</sub>	1991 12 11.91389	03 36 35.69	+29 17 20.3		033
1988 BK <sub>2</sub>	1992 01 07.74792	03 20 45.29	+28 22 46.6	18.4	033	1991 XJ <sub>6</sub>	* 1991 12 11.86597	03 36 49.79	+31 08 56.4	19.0	033
1988 BK <sub>2</sub>	1992 01 07.80139	03 20 44.28	+28 22 56.6		033	1991 XJ <sub>6</sub>	1991 12 11.91389	03 36 46.41	+31 09 03.7		033
1991 TT <sub>13</sub>	* 1991 10 08.05347	04 22 47.31	+32 17 29.0	18.4	033	1991 XJ <sub>6</sub>	1991 12 12.89306	03 35 39.15	+31 11 55.8		V 033
1991 TT <sub>13</sub>	1991 10 08.10556	04 22 46.97	+32 17 32.7		033	1991 XK <sub>6</sub>	* 1991 12 11.86597	03 37 11.17	+29 14 49.1	19.4	033
1991 TT <sub>13</sub>	1991 10 09.07778	04 22 39.59	+32 18 23.4		033	1991 XK <sub>6</sub>	1991 12 11.91389	03 37 08.79	+29 14 22.6		033
1991 TT <sub>13</sub>	1991 10 10.09306	04 22 30.25	+32 19 11.7		033	1991 XK <sub>6</sub>	1991 12 12.89306	03 36 23.21	+29 06 16.0		033
1991 TT <sub>13</sub>	1991 10 30.89931	04 13 43.24	+32 12 05.8	18.2	033	1991 XL <sub>6</sub>	* 1991 12 11.86597	03 38 05.29	+30 53 28.8	19.4	033
1991 TT <sub>13</sub>	1991 10 30.94583	04 13 41.38	+32 12 01.6		033	1991 XL <sub>6</sub>	1991 12 11.91389	03 38 02.85	+30 53 20.1		033
1991 TT <sub>13</sub>	1991 11 01.01042	04 12 58.22	+32 10 15.4		033	1991 XL <sub>6</sub>	1991 12 12.89306	03 37 16.19	+30 50 28.4		V 033
1991 TT <sub>13</sub>	1991 12 11.86597	03 38 07.33	+29 12 55.4	17.8	033	1991 XM <sub>6</sub>	* 1991 12 11.86597	03 40 11.29	+30 16 01.7	18.5	033
1991 TT <sub>13</sub>	1991 12 11.91389	03 38 05.09	+29 12 36.2		033	1991 XM <sub>6</sub>	1991 12 11.91389	03 40 08.35	+30 15 51.0		033
1991 TT <sub>13</sub>	1991 12 12.89306	03 37 21.38	+29 06 33.2		033	1991 XM <sub>6</sub>	1991 12 12.89306	03 39 11.05	+30 12 39.1		033
1991 TT <sub>13</sub>	1992 01 07.74792	03 25 43.93	+26 33 52.5	18.3	033	1991 XN <sub>6</sub>	* 1991 12 11.86597	03 42 13.98	+29 17 33.2	18.6	033
1991 TT <sub>13</sub>	1992 01 07.80139	03 25 43.50	+26 33 36.2		033	1991 XN <sub>6</sub>	1991 12 11.91389	03 42 12.64	+29 17 32.1		033
1991 TU <sub>13</sub>	* 1991 10 08.05347	04 25 40.74	+32 56 50.2	19.5	033	1992 AM <sub>6</sub>	* 1992 01 07.74792	03 23 23.42	+27 57 15.6	19.4	033
1991 TU <sub>13</sub>	1991 10 08.10556	04 25 41.00	+32 57 06.5		033	1992 AM <sub>6</sub>	1992 01 07.80139	03 23 23.85	+27 56 48.8		033
1991 TU <sub>13</sub>	1991 10 09.07778	04 25 47.31	+33 02 08.9		033	1992 AN <sub>6</sub>	* 1992 01 07.74792	03 25 07.66	+27 54 01.8	19.2	033
1991 TU <sub>13</sub>	1991 10 10.09306	04 25 51.66	+33 07 19.9		033	1992 AN <sub>6</sub>	1992 01 07.80139	03 25 06.99	+27 54 05.7		033
1991 UE <sub>5</sub>	* 1991 10 30.89931	04 20 31.73	+33 57 46.0	17.7	033	1992 AO <sub>6</sub>	* 1992 01 07.74792	03 29 42.49	+29 11 02.7	19.0	033
1991 UE <sub>5</sub>	1991 10 30.94583	04 20 30.30	+33 57 50.0		033	1992 AO <sub>6</sub>	1992 01 07.80139	03 29 42.42	+29 10 42.0		033
1991 UE <sub>5</sub>	1991 11 01.01042	04 19 55.78	+33 58 53.8		033	3422 T-3	1991 12 11.86597	03 30 11.33	+29 06 34.3	18.0	033
1991 UE <sub>5</sub>	1991 12 11.86597	03 40 42.67	+31 01 55.7	17.3	033	3422 T-3	1991 12 11.91389	03 30 08.71	+29 06 28.3		033
1991 UE <sub>5</sub>	1991 12 11.91389	03 40 40.15	+31 01 30.6		033	3422 T-3	1991 12 12.89306	03 29 18.98	+29 04 55.1		033
1991 UE <sub>5</sub>	1991 12 12.89306	03 39 53.02	+30 53 10.4		033	(902)	1991 10 30.89931	04 18 37.84	+31 28 35.0	16.0	033
1991 VC <sub>3</sub>	1992 01 07.74792	03 28 15.99	+28 27 05.9	17.6	033	(902)	1991 10 30.94583	04 18 35.80	+31 28 44.3		033
1991 VC <sub>3</sub>	1992 01 07.80139	03 28 15.18	+28 27 47.4		033	(902)	1991 11 01.01042	04 17 49.29	+31 32 01.2		033
1991 XZ <sub>5</sub>	* 1991 12 11.86597	03 33 46.52	+29 23 47.4	18.1	033	(902)	1991 12 11.86597	03 36 01.11	+30 46 42.0	15.9	033
1991 XZ <sub>5</sub>	1991 12 11.91389	03 33 43.73	+29 23 34.7		033	(902)	1991 12 11.91389	03 35 58.69	+30 46 28.8		033
1991 XZ <sub>5</sub>	1991 12 12.89306	03 32 51.28	+29 19 45.1		033	(902)	1991 12 12.89306	03 35 12.91	+30 42 18.7		033
1991 XZ <sub>5</sub>	1992 01 07.74792	03 22 30.94	+27 45 26.6	18.7	033	(902)	1992 01 07.74792	03 27 56.04	+28 58 53.6	16.5	033
1991 XZ <sub>5</sub>	1992 01 07.80139	03 22 31.16	+27 45 17.3		033	(902)	1992 01 07.80139	03 27 56.63	+28 58 43.3		033



(2455)	1991 12 11.86597	03 28 08.89	+29 08 02.5	16.6	033	1993 ON <sub>2</sub>	* 1993 07 24.93270	20 56 55.57	-09 47 07.3	15.8	046
(2455)	1991 12 11.91389	03 28 06.66	+29 07 43.6		033	1993 ON <sub>2</sub>	1993 07 24.94705	20 56 54.89	-09 47 02.0		046
(2455)	1991 12 12.89306	03 27 25.30	+29 01 32.6		033	1993 ON <sub>2</sub>	1993 07 26.96505	20 55 00.15	-09 33 11.4		046
(2455)	1992 01 07.74792	03 19 34.70	+26 35 21.5	17.1	033	1993 ON <sub>2</sub>	1993 07 26.97650	20 54 59.43	-09 33 06.9		046
(2455)	1992 01 07.80139	03 19 34.97	+26 35 07.2		033	1993 OO <sub>2</sub>	* 1993 07 24.93270	20 56 59.46	-09 47 03.0	16.5	046
(2790)	1992 01 07.74792	03 17 34.24	+27 38 17.7	17.0	033	1993 OO <sub>2</sub>	1993 07 24.94705	20 56 58.58	-09 47 00.4		046
(2790)	1992 01 07.80139	03 17 34.42	+27 38 28.2		033	1993 OO <sub>2</sub>	1993 07 26.96505	20 55 00.73	-09 36 05.9		046
(3745)	1991 10 08.05347	04 37 03.80	+32 43 36.0	18.7	033	1993 OO <sub>2</sub>	1993 07 26.97650	20 54 59.84	-09 36 02.4		046
(3745)	1991 10 08.10556	04 37 03.65	+32 43 57.3		033	1993 OP <sub>2</sub>	* 1993 07 24.93270	21 01 03.49	-09 22 01.1	16.3	046
(3745)	1991 10 09.07778	04 37 01.68	+32 50 02.7		033	1993 OP <sub>2</sub>	1993 07 26.96505	20 59 03.58	-09 27 03.0		046
(3745)	1991 10 10.09306	04 36 56.96	+32 56 20.7		033	1993 OP <sub>2</sub>	1993 07 26.97650	20 59 02.65	-09 27 04.1		046
(3871)	1991 12 11.86597	03 33 36.13	+30 39 53.1	17.9	033	1993 OQ <sub>2</sub>	* 1993 07 24.93270	21 02 09.03	-09 51 07.1	16.3	046
(3871)	1991 12 11.91389	03 33 34.02	+30 39 29.5		033	1993 OQ <sub>2</sub>	1993 07 26.96505	21 00 31.37	-10 12 31.4		046
(3871)	1991 12 12.89306	03 32 53.39	+30 31 48.7		033	1993 OR <sub>2</sub>	* 1993 07 24.93270	21 04 05.60	-10 02 39.4	16.0	046
(3871)	1992 01 07.74792	03 23 06.26	+27 19 27.3	18.2	033	1993 OR <sub>2</sub>	1993 07 26.96505	21 02 09.83	-10 10 35.0		I 046
(3871)	1992 01 07.80139	03 23 06.04	+27 19 07.0		033	1993 OR <sub>2</sub>	1993 07 26.97650	21 02 09.08	-10 10 37.6		046
(5121)	1991 10 30.89931	04 23 34.02	+31 51 56.0	16.5	033	1993 OS <sub>2</sub>	* 1993 07 24.96696	20 54 59.70	-15 54 06.5	16.3	046
(5121)	1991 10 30.94583	04 23 32.00	+31 52 09.7		033	1993 OS <sub>2</sub>	1993 07 24.98154	20 54 58.95	-15 54 11.5		046
(5121)	1991 11 01.01042	04 22 45.82	+31 56 53.0		033	1993 OS <sub>2</sub>	1993 07 26.93802	20 53 03.99	-16 04 30.0		E 046
(5121)	1991 12 11.86597	03 38 15.03	+31 40 55.0	16.5	033	1993 OT <sub>2</sub>	* 1993 07 24.96696	20 56 12.88	-14 31 40.6	16.4	046
(5121)	1991 12 11.91389	03 38 12.45	+31 40 42.0		033	1993 OT <sub>2</sub>	1993 07 24.98154	20 56 12.16	-14 31 44.4		046
(5121)	1991 12 12.89306	03 37 23.65	+31 36 30.9		033	1993 OT <sub>2</sub>	1993 07 26.93802	20 54 23.24	-14 46 12.4		046
						1993 OT <sub>2</sub>	1993 07 26.94959	20 54 22.49	-14 46 16.1		046
						1993 OU <sub>2</sub>	* 1993 07 24.96696	20 59 09.59	-13 46 56.5	16.1	046
						1993 OU <sub>2</sub>	1993 07 24.98154	20 59 08.57	-13 47 01.5		046
						1993 OU <sub>2</sub>	1993 07 26.93802	20 57 24.68	-13 59 33.3		046
						1993 OV <sub>2</sub>	* 1993 07 24.96696	21 03 13.83	-15 20 42.5	15.8	046
						1993 OV <sub>2</sub>	1993 07 24.98154	21 03 13.28	-15 20 44.1		U 046
						1993 OV <sub>2</sub>	1993 07 26.93802	21 01 35.61	-15 24 03.9		046
						1993 OW <sub>2</sub>	* 1993 07 24.96696	21 07 47.52	-13 43 16.7	16.1	E 046
						1993 OW <sub>2</sub>	1993 07 26.93802	21 06 23.71	-13 48 59.2		E 046
						1993 OW <sub>2</sub>	1993 07 26.94959	21 06 22.97	-13 49 02.9		E 046
						(1234)	1993 07 24.96696	21 03 19.55	-15 42 32.2		046
						(1234)	1993 07 24.98154	21 03 18.67	-15 42 34.4		046
						(1234)	1993 07 26.93802	21 01 40.07	-15 44 02.9		046
						(1234)	1993 07 26.94959	21 01 39.73	-15 44 03.4		046
						(1825)	1993 07 24.96696	20 59 31.37	-14 50 41.1		046
						(1825)	1993 07 24.98154	20 59 30.45	-14 50 43.5		046
						(1853)	1993 07 24.93270	21 01 20.11	-12 09 20.8		E 046
						(1853)	1993 07 24.94705	21 01 19.34	-12 09 19.9		E 046
						(2131)	1993 07 26.93802	21 01 20.08	-13 49 13.8		046
						(2131)	1993 07 26.94959	21 01 18.34	-13 48 53.2		046
						(2141)	1993 07 24.93270	20 59 31.11	-10 46 25.0	15.2	046
						(2302)	1993 07 24.96696	21 01 33.84	-16 47 37.4		E 046
						(2302)	1993 07 24.98154	21 01 32.89	-16 47 35.1		E 046
						(2349)	1993 07 24.96696	20 58 23.86	-14 28 50.8		046
						(2349)	1993 07 24.98154	20 58 23.19	-14 29 00.2		046
						(2466)	1993 07 24.93270	21 00 34.26	-12 07 42.2		E 046
						(2466)	1993 07 24.94705	21 00 33.61	-12 07 46.9		E 046

**046 Kleř**

J. Tichá, Hvězdárna Kleř, CS-37001 České Budějovice, Czech Republic

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

Measurers Z. Vávrová, M. Tichý

0.63-m Maksutov reflector, 0.57-m reflector

PPM

1993 KL <sub>2</sub>	* 1993 05 17.94456	16 03 22.02	-05 21 47.9	15.8	046	1993 OW <sub>2</sub>	1993 07 26.93802	21 06 23.71	-13 48 59.2		E 046
1993 KL <sub>2</sub>	1993 05 17.95880	16 03 21.18	-05 21 46.7		046	1993 OW <sub>2</sub>	1993 07 26.94959	21 06 22.97	-13 49 02.9		E 046
1993 KL <sub>2</sub>	1993 05 20.03663	16 01 29.45	-05 19 20.4		046	(1234)	1993 07 24.96696	21 03 19.55	-15 42 32.2		046
1993 KL <sub>2</sub>	1993 05 20.04803	16 01 28.68	-05 19 19.7		046	(1234)	1993 07 24.98154	21 03 18.67	-15 42 34.4		046
1993 KM <sub>2</sub>	* 1993 05 17.94456	16 04 31.18	-06 35 59.4	16.3	046	(1234)	1993 07 26.93802	21 01 40.07	-15 44 02.9		046
1993 KM <sub>2</sub>	1993 05 17.95880	16 04 30.40	-06 35 54.5		046	(1234)	1993 07 26.94959	21 01 39.73	-15 44 03.4		046
1993 KM <sub>2</sub>	1993 05 20.03663	16 02 40.27	-06 28 40.2		046	(1825)	1993 07 24.96696	20 59 31.37	-14 50 41.1		046
1993 KM <sub>2</sub>	1993 05 20.04803	16 02 39.84	-06 28 36.5		046	(1825)	1993 07 24.98154	20 59 30.45	-14 50 43.5		046
1993 KN <sub>2</sub>	* 1993 05 17.97986	16 01 51.33	-10 33 31.6	16.3	046	(1853)	1993 07 24.93270	21 01 20.11	-12 09 20.8		E 046
1993 KN <sub>2</sub>	1993 05 17.99410	16 01 50.64	-10 33 32.6		U 046	(1853)	1993 07 24.94705	21 01 19.34	-12 09 19.9		E 046
1993 KN <sub>2</sub>	1993 05 19.97986	16 00 09.23	-10 35 21.7		E 046	(2131)	1993 07 26.93802	21 01 20.08	-13 49 13.8		046
1993 KO <sub>2</sub>	* 1993 05 17.97986	16 09 44.89	-08 49 49.5	16.3	046	(2131)	1993 07 26.94959	21 01 18.34	-13 48 53.2		046
1993 KO <sub>2</sub>	1993 05 17.99410	16 09 44.00	-08 49 47.0		046	(2141)	1993 07 24.93270	20 59 31.11	-10 46 25.0	15.2	046
1993 KO <sub>2</sub>	1993 05 19.97986	16 08 06.46	-08 44 55.4		046	(2302)	1993 07 24.96696	21 01 33.84	-16 47 37.4		E 046
1993 KO <sub>2</sub>	1993 05 19.99132	16 08 05.86	-08 44 53.2		046	(2302)	1993 07 24.98154	21 01 32.89	-16 47 35.1		E 046
1993 MF	1993 07 24.89734	22 07 35.89	+33 04 13.5		046	(2349)	1993 07 24.96696	20 58 23.86	-14 28 50.8		046
1993 MF	1993 07 24.90168	22 07 36.69	+33 04 24.8		046	(2349)	1993 07 24.98154	20 58 23.19	-14 29 00.2		046
1993 MF	1993 07 24.90585	22 07 37.57	+33 04 34.6		046	(2466)	1993 07 24.93270	21 00 34.26	-12 07 42.2		E 046
1993 MF	1993 07 24.91036	22 07 38.73	+33 04 45.1		046	(2466)	1993 07 24.94705	21 00 33.61	-12 07 46.9		E 046
1993 MF	1993 07 26.99323	22 15 42.63	+34 24 37.8		046						
1993 MF	1993 07 26.99716	22 15 43.35	+34 24 46.1		046						
1993 MF	1993 07 27.00098	22 15 44.17	+34 24 54.2		046						
1993 MF	1993 07 27.00480	22 15 44.85	+34 25 01.6		046						

**095 Crimean Astrophysical Observatory**N. S. Chernykh, Crimean Astrophysical Observatory, P.O. Nauchnyj, Crimea  
334413, Ukraine

Observers N. Chernykh, V. Rumyantsev

Measurer V. Rumyantsev

1993 MF	1993 08 17.85023	23 31 04.91	+41 22 38.1	095
1993 MF	1993 08 17.86759	23 31 07.66	+41 22 42.2	095
1993 MF	1993 08 17.88843	23 31 10.89	+41 22 47.6	095
1993 MF	1993 08 17.90579	23 31 13.53	+41 22 51.4	095
1993 MF	1993 08 21.86979	23 41 32.35	+41 24 48.1	095
1993 MF	1993 08 21.88368	23 41 34.23	+41 24 47.8	095
1993 MF	1993 08 21.89757	23 41 36.20	+41 24 46.9	095
1993 MF	1993 08 21.91146	23 41 38.04	+41 24 46.0	095
1993 MF	1993 08 24.84896	23 48 27.42	+41 13 53.2	095
1993 MF	1993 08 24.86285	23 48 29.04	+41 13 48.6	095
1993 MF	1993 08 24.87847	23 48 30.95	+41 13 45.6	095
1993 MF	1993 08 24.89583	23 48 33.03	+41 13 39.9	095
1993 MF	1993 08 25.89739	23 50 42.57	+41 07 42.7	095
1993 MF	1993 08 25.91128	23 50 44.21	+41 07 37.4	095
1993 MF	1993 08 25.92656	23 50 45.95	+41 07 31.4	095
1993 MF	1993 08 25.93976	23 50 47.47	+41 07 27.6	095

**107 Cavezzo**

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

Observers R. Calanca, R. Bonomi

0.40-m  $f/2.23$  reflector + CCD

GSC

1993 MF	1993 09 05.82658	00 09 13.06	+38 57 04.1	107
1993 MF	1993 09 05.87150	00 09 16.39	+38 56 22.8	107

**108 Montelupo**

M. Tombelli, Via Bozzeto 26, I-50056 Montelupo, Florence, Italy

Observers M. Tombelli, S. Bartolini, A. Boattini

Measurer M. Tombelli

0.20-m  $f/10$  reflector + CCD

1993 MF	1993 08 01.90205	22 38 16.56	+37 31 45.8	108
1993 MF	1993 08 01.94809	22 38 26.45	+37 33 03.0	108
1993 MF	1993 08 01.96226	22 38 29.49	+37 33 26.1	108
1993 MF	1993 08 01.98760	22 38 34.76	+37 34 07.4	108
1993 MF	1993 08 09.84716	23 06 34.10	+40 14 03.5	108
1993 MF	1993 08 09.85935	23 06 36.56	+40 14 15.1	108
1993 MF	1993 08 12.87377	23 16 23.12	+40 50 36.7	108
1993 MF	1993 08 12.87738	23 16 23.78	+40 50 39.7	108
1993 MF	1993 08 12.88745	23 16 25.56	+40 50 46.1	108
1993 MF	1993 08 12.90451	23 16 28.63	+40 50 57.3	108
1993 MF	1993 08 18.85926	23 33 50.36	+41 25 01.9	108
1993 MF	1993 08 18.87833	23 33 53.22	+41 25 05.1	108
1993 MF	1993 08 18.89549	23 33 55.85	+41 25 08.4	108
1993 MF	1993 08 20.89486	23 39 07.70	+41 26 05.6	108
1993 MF	1993 08 20.89938	23 39 08.36	+41 26 05.7	108
1993 MF	1993 08 20.91618	23 39 10.69	+41 26 05.8	108
1993 MF	1993 08 20.94525	23 39 14.80	+41 26 05.9	108
1993 MF	1993 08 28.87509	23 56 40.38	+40 43 33.5	108
1993 MF	1993 08 28.88149	23 56 40.96	+40 43 30.6	108
1993 MF	1993 08 28.88808	23 56 41.65	+40 43 29.1	108
1993 MF	1993 08 28.89640	23 56 42.41	+40 43 26.6	108

1993 QP	1993 08 29.01405	23 10 41.50	+21 54 55.1	108
1993 QP	1993 08 29.03489	23 10 42.68	+21 55 39.3	108
1993 QP	1993 08 29.04761	23 10 43.19	+21 56 07.9	108

**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

1986 RH <sub>12</sub>	1993 04 19.23438	14 52 25.61	-12 00 56.4	293
1986 RH <sub>12</sub>	1993 04 19.24549	14 52 25.20	-12 00 53.9	293

**303 Mérida**

O. A. Naranjo, Dept. de Física, Universidad de los Andes, Mérida 5101, Venezuela

Observer O. A. Naranjo

1.0-m Schmidt

(15)	1993 08 12.19028	19 23 11.32	-19 36 09.7	9	303
(15)	1993 08 14.11250	19 21 48.78	-19 30 58.8	9	303

**376 Uenohara**

N. Kawasato, 3-11-10, Hana-Koganei, Kodaira, Tokyo 187, Japan

0.30-m reflector + CCD

GSC

1989 UT <sub>2</sub>	1993 09 14.61285	01 15 13.99	+19 13 32.0	376	
1989 UT <sub>2</sub>	1993 09 14.62529	01 15 13.57	+19 13 29.6	376	
1989 UT <sub>2</sub>	1993 09 16.61551	01 14 01.31	+19 02 15.8	376	
1989 UT <sub>2</sub>	1993 09 16.62697	01 14 00.84	+19 02 12.3	376	
1992 CJ	1993 08 11.63380	00 04 21.44	+06 26 24.8	376	
1992 CJ	1993 08 11.65359	00 04 21.04	+06 26 21.6	376	
1992 CJ	1993 08 11.66638	00 04 20.85	+06 26 18.6	376	
1993 RL	* 1993 09 14.75527	00 38 58.50	-03 01 47.3	18.5	376
1993 RL	1993 09 14.76615	00 38 57.92	-03 01 50.7	376	
1993 RL	1993 09 16.58009	00 37 37.94	-03 17 25.9	376	
1993 RL	1993 09 16.60150	00 37 36.92	-03 17 38.5	376	
1993 RM	* 1993 09 14.75527	00 38 58.97	-03 04 19.9	18.5	376
1993 RM	1993 09 14.76615	00 38 58.41	-03 04 22.0	376	
1993 RM	1993 09 16.58009	00 37 53.97	-03 12 35.3	376	
1993 RM	1993 09 16.60150	00 37 52.90	-03 12 46.1	376	
1993 RN	* 1993 09 14.76071	00 38 12.20	-02 39 01.8	17.5	376
1993 RN	1993 09 14.77899	00 38 11.47	-02 39 08.3	376	
1993 RN	1993 09 16.56759	00 36 51.83	-02 49 15.9	376	
1993 RN	1993 09 16.58976	00 36 50.68	-02 49 24.1	376	

**385 Nihondaira Observatory Oohira station**

T. Urata, 6-1, Muramatsuhara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan

0.31-m  $f/4.7$  reflector + CCD

GSC

1986 WE	1993 09 14.65035	00 14 58.15	-08 53 03.3	385
1986 WE	1993 09 14.65414	00 14 57.97	-08 53 05.7	385
1986 WE	1993 09 14.65802	00 14 57.69	-08 53 06.9	385
1989 XC	1993 09 14.59675	22 46 46.03	-13 16 20.5	385
1989 XC	1993 09 14.61198	22 46 45.26	-13 16 24.8	385
1989 XC	1993 09 14.61600	22 46 45.06	-13 16 26.0	385
1990 UD	1993 09 14.47340	19 59 44.62	-28 55 26.0	385
1990 UD	1993 09 14.47752	19 59 44.79	-28 55 24.7	385

1990 UD	1993 09 14.48660	19 59 45.01	-28 55 23.5	385
1990 UB <sub>2</sub>	1993 09 14.53390	21 13 33.26	-26 35 56.3	385
1990 UB <sub>2</sub>	1993 09 14.54171	21 13 33.24	-26 35 55.3	385
1990 UB <sub>2</sub>	1993 09 14.55513	21 13 33.28	-26 35 53.5	385
1991 CY	1993 09 14.62956	00 11 18.47	+15 58 42.8	385
1991 CY	1993 09 14.63416	00 11 18.20	+15 58 42.0	385
1991 CY	1993 09 14.63851	00 11 18.03	+15 58 41.4	385

**400 Kitami**

K. Watanabe, 3-8 Mason Hashimoto B-203, atsubetsu cyuo 3 jo 4 chome,  
Atsubetsu-ku, Sapporo 004, Japan

Observer K. Endate

Measurer K. Watanabe

0.25-m *f*/2.6 Schmidt camera

GSC

1985 XR	1993 09 12.50625	23 55 32.46	-05 46 16.8	16.5	400
1985 XR	1993 09 12.52431	23 55 31.34	-05 46 24.9		400
1985 XR	1993 09 13.58056	23 54 41.24	-05 53 21.4	16.5	400
1985 XR	1993 09 13.59444	23 54 40.58	-05 53 29.1		400
1991 GG <sub>1</sub>	1993 09 12.47639	00 03 35.18	+07 20 22.7	16.5	400
1991 GG <sub>1</sub>	1993 09 12.49097	00 03 34.58	+07 20 20.8		400
1991 GG <sub>1</sub>	1993 09 13.55139	00 02 43.08	+07 18 23.7	16.5	400
1991 GG <sub>1</sub>	1993 09 13.56528	00 02 42.23	+07 18 19.8		400
1993 RD	* 1993 09 12.47639	00 02 49.36	+04 35 13.4	16.5	400
1993 RD	1993 09 12.49097	00 02 48.31	+04 35 12.0		400
1993 RD	1993 09 13.55139	00 01 47.21	+04 32 55.6	16.5	400
1993 RD	1993 09 13.56528	00 01 46.50	+04 32 53.8		400
1993 RE	* 1993 09 12.47639	00 03 30.83	+03 52 20.7	16.5	400
1993 RE	1993 09 12.49097	00 03 30.01	+03 52 21.3		400
1993 RE	1993 09 13.55139	00 02 39.47	+03 47 05.6	16.5	400
1993 RE	1993 09 13.56528	00 02 38.82	+03 47 04.3		400
1993 RF	* 1993 09 12.47639	23 59 55.35	+06 50 46.0	16.5	400
1993 RF	1993 09 12.49097	23 59 54.65	+06 50 40.0		400
1993 RF	1993 09 13.55139	23 58 58.98	+06 43 35.7	16.5	400
1993 RF	1993 09 13.56528	23 58 58.20	+06 43 28.7		400
1993 RG	* 1993 09 12.50625	00 02 40.94	-01 11 33.2	16.0	400
1993 RG	1993 09 12.52431	00 02 39.84	-01 11 30.9		400
1993 RG	1993 09 13.58056	00 01 38.86	-01 10 05.4	16.5	400
1993 RG	1993 09 13.59444	00 01 38.32	-01 10 02.8		400
1993 RH	* 1993 09 12.50625	00 07 29.57	-01 15 46.0	15.5	400
1993 RH	1993 09 12.52431	00 07 28.42	-01 15 40.9		400
1993 RH	1993 09 13.58056	00 06 17.70	-01 11 04.0	15.5	400
1993 RH	1993 09 13.59444	00 06 16.84	-01 11 00.5		400
1993 RJ	* 1993 09 12.50625	23 55 34.85	-03 38 25.7	16.5	400
1993 RJ	1993 09 12.52431	23 55 33.70	-03 38 27.0		400
1993 RJ	1993 09 13.58056	23 54 31.12	-03 40 12.6	16.5	400
1993 RJ	1993 09 13.59444	23 54 30.37	-03 40 11.0		400
1993 RK	* 1993 09 12.47639	23 58 04.78	+05 28 12.0	16.0	400
1993 RK	1993 09 12.49097	23 58 03.94	+05 28 19.5		400
1993 RK	1993 09 13.55139	23 56 57.01	+05 34 42.3	16.0	400
1993 RK	1993 09 13.56528	23 56 56.12	+05 34 45.2		400
(396)	1993 09 12.47639	00 03 22.52	+04 34 56.4	14.5	400
(396)	1993 09 12.49097	00 03 21.84	+04 34 53.0		400

(396)	1993 09 13.55139	00 02 30.70	+04 29 18.6	14.5	400
(396)	1993 09 13.56528	00 02 30.07	+04 29 15.0		400

**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

1989 TB <sub>11</sub>	1993 08 25.66608	21 44 20.20	-14 47 54.2	16.9 V	410
1989 TB <sub>11</sub>	1993 08 25.68049	21 44 19.27	-14 47 54.6		410
1989 TB <sub>11</sub>	1993 09 14.52730	21 29 35.55	-15 16 17.0	17.4 V	410
1989 TB <sub>11</sub>	1993 09 14.54682	21 29 34.88	-15 16 18.2		410
1990 XA	1993 08 11.57946	20 42 48.18	-11 08 52.3	16.4 V	410
1990 XA	1993 08 11.59196	20 42 47.39	-11 08 53.8		410

**413 Siding Spring**

R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357,  
Australia

Observers C. P. Cass, M. J. Drinkwater, G. J. Garradd, R. H. McNaught,  
K. S. Russell, A. Savage, D. I. Steel, W. J. Zealey

Measurers R. H. McNaught, G. J. Garradd

Uppsala Southern Schmidt, U.K. Schmidt, 1.0-m reflector + CCD

1942 CG	1993 08 25.69178	20 06 02.98	-27 20 03.6		413
1942 CG	1993 08 25.69367	20 06 02.90	-27 20 03.8		413
1942 CG	1993 08 25.69560	20 06 02.83	-27 20 04.1		413
1975 GQ <sub>1</sub>	* 1975 04 12.54499	13 22 08.71	-38 50 23.0		413
1975 GQ <sub>1</sub>	1975 04 12.64021	13 22 02.29	-38 49 53.0		413
1975 GQ <sub>1</sub>	1975 04 12.66799	13 22 00.37	-38 49 44.4		413
1977 QQ <sub>5</sub>	* 1977 08 21.54940	23 48 32.89	-34 17 42.1	14.5 V	413
1977 QQ <sub>5</sub>	1977 08 21.59106	23 48 39.36	-34 20 43.9		413
1977 QQ <sub>5</sub>	1977 10 12.61865	03 11 08.52	-66 48 59.5	16 V	413
1977 QQ <sub>5</sub>	1977 10 12.67420	03 11 17.12	-66 48 54.1		413
1977 QQ <sub>5</sub>	1977 10 19.71034	03 28 28.00	-66 14 32.9		413
1977 QQ <sub>5</sub>	1977 10 19.75200	03 28 32.41	-66 14 10.4		413
1977 QQ <sub>5</sub>	1978 01 06.45931	04 15 32.15	-21 15 39.8	17 V	413
1977 QQ <sub>5</sub>	1978 01 06.51139	04 15 34.75	-21 13 02.1		413
1979 EN	* 1979 03 05.6037	11 58 29.80	-30 46 40.2	18 V	413
1979 EN	1979 03 05.6523	11 58 27.51	-30 46 29.3		413
1981 EL <sub>33</sub>	1978 04 12.65154	15 07 29.43	-27 42 02.6		413
1981 EL <sub>33</sub>	1978 04 12.70015	15 07 27.66	-27 42 03.3		413
1983 RB	1993 09 02.78520	01 37 48.27	+04 39 49.2		413
1983 RB	1993 09 02.78682	01 37 48.24	+04 39 45.0		413
1984 FN	1993 09 02.79963	03 44 57.48	+09 38 41.3		413
1984 FN	1993 09 02.80156	03 44 57.57	+09 38 42.1		413
1984 FN	1993 09 02.80353	03 44 57.65	+09 38 42.8		413
1988 WC	1976 05 01.61074	13 36 17.80	-32 06 55.8		413
1988 WC	1976 05 01.65241	13 36 16.42	-32 05 41.8		413
1988 WC	1983 07 09.48157	17 28 29.92	-05 08 28.7		V 413
1988 WC	1983 08 13.40093	17 14 01.44	-05 21 07.0		F 413
1989 TS	1993 08 25.61830	17 17 12.27	-67 22 52.1		413
1989 TS	1993 08 25.62019	17 17 12.40	-67 22 51.2		413
1989 TS	1993 08 25.62234	17 17 12.55	-67 22 50.3		413
1989 WQ <sub>1</sub>	1978 08 09.53171	21 44 09.60	-46 37 48.9		F 413
1989 WQ <sub>1</sub>	1978 08 09.58032	21 44 04.94	-46 38 19.1		F 413

1989 WQ <sub>1</sub>	1993 08 12.65649	00 07 44.88	-35 07 39.0	18	V	413	1993 EA	1986 04 13.59865	13 28 00.06	+02 52 04.4	F	413
1989 WQ <sub>1</sub>	1993 08 12.69816	00 07 43.52	-35 08 17.6			413	1993 EA	1986 04 13.62252	13 27 56.66	+02 52 23.9		413
1990 TB	1993 08 23.48456	15 19 32.30	-12 10 57.2			413	1993 EA	1986 04 13.64336	13 27 53.74	+02 52 43.2		413
1990 TB	1993 08 23.48938	15 19 32.75	-12 10 59.3			413	1993 EA	1989 05 13.53036	15 38 47.43	+00 22 40.5	B	413
1990 WW <sub>2</sub>	1979 08 14.62323	00 05 10.04	-31 19 59.4			413	1993 EA	1989 05 13.59286	15 38 32.29	+00 25 20.3	B	413
1990 WW <sub>2</sub>	1979 08 14.74823	00 05 13.60	-31 21 54.7			413	1993 HQ <sub>1</sub>	1993 07 31.44389	13 02 36.50	-23 05 07.4	r	413
1990 WW <sub>2</sub>	1979 11 26.45838	00 21 30.77	-22 08 05.8			413	1993 HQ <sub>1</sub>	1993 07 31.44741	13 02 36.89	-23 05 09.1	r	413
1990 WW <sub>2</sub>	1979 11 26.47227	00 21 31.85	-22 07 46.6			413	1993 KH	1993 07 30.40714	10 25 22.64	-39 30 36.6		413
1991 AB <sub>1</sub>	1993 08 23.49209	16 30 14.02	-12 10 01.0			413	1993 KH	1993 07 31.38906	10 21 42.44	-39 34 35.9		413
1991 AB <sub>1</sub>	1993 08 23.51374	16 30 14.66	-12 10 08.6			413	1993 KH	1993 07 31.39553	10 21 41.02	-39 34 36.4		413
1991 QG	1981 11 23.63958	05 49 53.54	+12 59 08.1		F	413	1993 MF	1993 08 24.64983	23 47 59.48	+41 15 34.6		413
1991 QG	1981 11 23.69514	05 49 50.29	+12 58 49.1		F	413	1993 MF	1993 08 24.65161	23 47 59.68	+41 15 33.9		413
1991 RC	1992 10 15.49113	20 27 43.48	-17 02 13.7			413	1993 MF	1993 08 24.65336	23 47 59.89	+41 15 33.4		413
1991 RC	1992 10 15.50113	20 27 43.92	-17 02 16.3			413	1993 MF	1993 08 24.65460	23 48 00.04	+41 15 33.0		413
1991 RC	1993 09 03.44677	15 41 44.26	+03 20 26.8			413	1993 MO	1993 07 30.43853	17 02 20.25	-27 34 38.5		413
1991 RC	1993 09 03.44880	15 41 45.39	+03 20 18.8			413	1993 MO	1993 07 30.44285	17 02 20.46	-27 34 54.1		413
1991 RC	1993 09 03.45912	15 41 51.19	+03 19 39.7			413	1993 MO	1993 07 31.51314	17 03 22.65	-28 37 34.1		413
1991 RC	1993 09 03.46145	15 41 52.44	+03 19 31.3			413	1993 MO	1993 08 24.53175	17 47 11.42	-44 50 21.3		413
1991 RC	1993 09 03.46354	15 41 53.65	+03 19 22.5			413	1993 MO	1993 08 24.53363	17 47 11.71	-44 50 24.1		413
1991 RC	1993 09 03.46888	15 41 56.58	+03 19 03.7			413	1993 MO	1993 08 24.53772	17 47 12.32	-44 50 29.9		413
1991 RC	1993 09 03.47128	15 41 57.98	+03 18 54.7			413	1993 MO	1993 08 25.62891	17 50 02.59	-45 17 28.5		413
1991 RC	1993 09 03.47322	15 41 59.17	+03 18 46.5			413	1993 MO	1993 08 25.63133	17 50 03.14	-45 17 30.6		413
1991 RC	1993 09 07.38260	16 16 13.33	-00 32 14.7			413	1993 MO	1993 09 01.49521	18 09 19.19	-47 40 27.2		413
1991 TY	1976 08 24.47126	22 14 45.28	-32 11 56.6			413	1993 MO	1993 09 01.49752	18 09 19.58	-47 40 29.6		413
1991 TY	1976 08 24.51640	22 14 43.73	-32 13 09.0			413	1993 OV <sub>1</sub>	1975 04 08.58050	13 26 08.11	-36 53 49.8		413
1991 TY	1976 10 24.40304	22 26 00.01	-40 55 33.8			413	1993 OV <sub>1</sub>	1975 04 08.66383	13 26 02.59	-36 54 45.1		413
1991 TY	1976 10 24.44471	22 26 02.95	-40 55 15.8			413	1993 OV <sub>1</sub>	1975 04 12.54499	13 21 40.83	-37 35 24.5		413
1991 TY	1987 07 29.56126	19 05 40.42	-13 22 36.2			413	1993 OV <sub>1</sub>	1975 04 12.62832	13 21 34.52	-37 36 13.4		413
1991 TD <sub>1</sub>	1975 10 06.61356	01 36 41.59	+03 10 59.2			413	1993 OV <sub>1</sub>	1975 04 12.64021	13 21 33.52	-37 36 18.5		413
1991 TD <sub>1</sub>	1975 10 06.66218	01 36 39.81	+03 09 24.5			413	1993 OV <sub>1</sub>	1975 04 12.66799	13 21 31.51	-37 36 34.4		413
1992 EU	1993 08 23.46069	14 47 55.36	-45 18 44.3			413	1993 OV <sub>1</sub>	1993 04 27.75824	19 18 16.86	-44 58 24.7	V	413
1992 EU	1993 08 23.47594	14 47 56.06	-45 18 42.0			413	1993 OV <sub>1</sub>	1993 04 27.79296	19 18 24.85	-44 58 21.2	V	413
1992 EU	1993 08 23.47987	14 47 56.26	-45 18 41.8			413	1993 OV <sub>1</sub>	1993 08 24.66638	21 18 01.58	-05 26 11.8		413
1992 FM <sub>1</sub>	1985 03 01.60722	11 49 52.67	-03 47 05.6			413	1993 OV <sub>1</sub>	1993 08 24.66877	21 18 01.48	-05 26 10.0		413
1992 FM <sub>1</sub>	1985 03 01.67667	11 49 46.35	-03 47 49.5			413	1993 OV <sub>1</sub>	1993 08 24.67126	21 18 01.37	-05 26 08.1		413
1992 FM <sub>1</sub>	1986 08 01.67699	23 30 17.59	-12 32 54.8			413	1993 OZ <sub>2</sub>	1993 09 01.48858	23 25 01.68	-39 17 59.2		413
1992 FM <sub>1</sub>	1986 08 01.72560	23 30 15.30	-12 32 47.8			413	1993 OZ <sub>2</sub>	1993 09 01.49044	23 25 01.67	-39 18 01.6		413
1992 FW <sub>1</sub>	1981 01 08.49056	04 34 02.48	-19 44 46.6			413	1993 OZ <sub>2</sub>	1993 09 01.49236	23 25 01.65	-39 18 04.3		413
1992 FW <sub>1</sub>	1981 01 08.53569	04 34 02.34	-19 44 21.0			413	1993 OZ <sub>2</sub>	1993 09 02.79098	23 24 56.17	-39 44 55.4		413
1992 FW <sub>1</sub>	1987 10 16.59406	02 42 45.29	+00 05 03.2			413	1993 PB	1993 08 24.61477	20 43 56.90	-08 58 19.5		413
1992 FW <sub>1</sub>	1987 10 16.69823	02 42 41.64	+00 02 38.4			413	1993 PB	1993 08 24.61933	20 43 56.30	-08 58 17.9		413
1992 FW <sub>1</sub>	1987 10 20.56098	02 40 26.42	-01 27 34.9			413	1993 PB	1993 08 25.68713	20 41 36.09	-08 52 18.1		413
1992 FW <sub>1</sub>	1987 10 20.62696	02 40 23.72	-01 29 04.8			413	1993 PB	1993 08 25.68946	20 41 35.78	-08 52 17.4		413
1992 JB	1992 03 25.39539	06 04 38.49	-72 40 26.2			413	1993 PB	1993 09 03.53037	20 25 13.74	-08 07 05.0		413
1992 JB	1992 03 25.39956	06 04 40.26	-72 40 37.9		T	413	1993 PB	1993 09 03.53329	20 25 13.44	-08 07 04.3		413
1992 OJ	1987 03 31.72190	16 28 06.75	-47 48 16.1			413	1993 PC	1993 08 24.64435	22 05 28.38	-13 06 40.9		413
1992 OJ	1987 03 31.74273	16 28 07.66	-47 48 29.0			413	1993 PC	1993 08 25.71299	22 02 49.60	-13 16 59.7		413
1992 QA	1974 07 13.44931	16 13 39.85	-56 12 21.3			413	1993 QA	1993 08 25.70304	21 24 41.24	-15 04 40.5		413
1992 QA	1990 10 20.55747	03 04 28.70	+00 13 19.3			413	1993 QA	1993 08 25.70690	21 24 40.86	-15 04 44.4		413
1992 QA	1990 10 20.61302	03 04 23.64	+00 13 39.5			413	1993 QA	1993 09 03.54155	21 11 58.42	-17 40 46.6	V	413
1992 TC	1990 08 19.48785	17 52 37.06	-42 49 29.4	17.5	V	413	1993 QA	1993 09 03.54530	21 11 58.28	-17 40 49.0	V	413
1993 EA	1986 04 13.55003	13 28 07.04	+02 51 18.7		F	413	1993 QP	1993 08 25.71597	23 07 01.60	+19 49 26.9		413

1993 QP	1993 08 25.71814	23 07 01.72	+19 49 31.8	413
1993 QP	1993 08 25.72016	23 07 01.82	+19 49 36.3	413
(243)	1993 05 11.44726	11 39 23.47	+01 02 40.7	413
(243)	1993 05 11.45229	11 39 23.46	+01 02 40.8	413
(243)	1993 06 30.46037	12 02 58.56	-01 22 31.0	413
(243)	1993 06 30.46185	12 02 58.64	-01 22 31.4	413
(243)	1993 07 01.39953	12 03 47.00	-01 27 37.1	413
(243)	1993 07 01.40110	12 03 47.09	-01 27 37.6	413
(776)	1976 06 29.47394	16 14 11.74	-18 41 01.7	15 V 413
(776)	1977 07 16.77728	23 57 54.28	-25 59 13.5	413
(776)	1977 07 22.76609	00 00 00.60	-26 48 43.2	413
(776)	1977 08 08.70334	00 00 48.94	-29 29 01.3	13.5 V 413
(776)	1977 08 21.57023	23 56 05.80	-31 34 52.5	413
(776)	1991 08 11.38608	15 49 27.35	-19 03 55.4	15.5 V 413
(965)	1977 07 16.77728	00 06 32.85	-26 39 47.1	413
(965)	1977 07 22.76609	00 06 47.39	-27 10 12.6	413
(965)	1977 08 08.70334	00 03 02.23	-28 49 07.7	413
(3097)	1993 01 30.63428	10 51 33.46	-00 25 41.5	413
(4055)	1993 09 02.79427	03 46 17.99	+00 17 26.6	413
(4055)	1993 09 02.79760	03 46 18.34	+00 17 20.3	413
(4401)	1993 08 25.72432	23 25 47.04	-42 19 34.3	413
(4401)	1993 08 25.72781	23 25 46.71	-42 19 35.7	413
(4649)	1993 07 31.55826	14 42 24.72	-09 34 22.2	413
(5407)	1980 08 10.65907	23 24 26.06	-17 56 57.7	413
(5407)	1980 08 10.70421	23 24 23.79	-17 57 40.5	413
(5407)	1980 10 01.49500	22 33 04.13	-26 04 04.8	413
(5407)	1980 10 01.53304	22 33 02.88	-26 04 03.0	413
(5642)	1993 08 23.41905	14 16 02.46	-36 03 44.4	413
(5642)	1993 08 23.42192	14 16 02.80	-36 03 43.7	413
(5645)	1993 08 24.58350	19 32 20.72	-50 19 24.0	413
(5645)	1993 08 24.58715	19 32 20.36	-50 19 22.1	413
(5645)	1993 08 24.59069	19 32 19.98	-50 19 20.5	413
(5645)	1993 08 25.66214	19 30 30.96	-50 10 54.9	413
(5645)	1993 08 25.66478	19 30 30.71	-50 10 53.5	413
(5645)	1993 09 01.50029	19 21 17.80	-49 06 47.2	413
(5645)	1993 09 01.50326	19 21 17.67	-49 06 45.2	413
(5645)	1993 09 03.52480	19 19 20.32	-48 44 53.1	b 413
(5645)	1993 09 03.52715	19 19 20.15	-48 44 52.4	b 413
(5646)	1993 09 01.48318	16 51 19.85	-35 45 37.6	413
(5646)	1993 09 01.48514	16 51 20.14	-35 45 37.2	413
(5646)	1993 09 03.47677	16 56 21.38	-35 37 24.9	413
(5646)	1993 09 03.47885	16 56 21.77	-35 37 24.4	413

**544 Wilhelm Foerster Observatory, Berlin**

W. Hasse, Wilhelm-Foerster-Sternwarte, Munsterdamm 90, D-12169 Berlin, Germany

Observers S. Ebert, W. Hasse, C. Rodinke

Measurers S. Ebert, W. Hasse, C. Rodinke, K. Toedtke, S. Klose

0.15-m  $f/15$  double refractor

PPM

(3)	1993 02 26.96597	06 12 45.85	+09 03 39.5	544
(3)	1993 02 26.97083	06 12 46.02	+09 03 42.5	544
(3)	1993 03 28.85833	06 43 18.86	+12 46 28.2	T 544

(6)	1993 03 09.94132	09 48 28.92	+18 50 43.5	544
(6)	1993 03 09.95521	09 48 28.30	+18 50 48.8	544

**557 Ondřejov**

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

0.18-m  $f/5.6$  Maksutov + CCD

1993 MF	1993 08 12.86971	23 16 22.05	+40 50 31.6	557
1993 MF	1993 08 12.87241	23 16 22.54	+40 50 33.4	557
1993 MF	1993 08 12.87367	23 16 22.80	+40 50 34.7	557
1993 MF	1993 08 12.87492	23 16 23.02	+40 50 35.9	557
1993 MF	1993 08 12.87618	23 16 23.24	+40 50 36.3	557
1993 MF	1993 08 12.87804	23 16 23.57	+40 50 38.1	557
1993 MF	1993 08 12.87931	23 16 23.82	+40 50 38.6	557

**568 Mauna Kea Observatory**

J. X. Luu, Physics Department, Varian Building, Stanford University, Stanford, CA 94305, U.S.A.

Observers Y.-I. Byun, D. Jewitt, J. X. Luu

Measurers D. Jewitt, J. X. Luu

2.2-m reflector + CCD

1992 QB <sub>1</sub>	1993 07 15.55616	00 08 33.62	+00 59 45.8	568
1992 QB <sub>1</sub>	1993 07 15.59765	00 08 33.58	+00 59 45.5	568
1993 FW	1993 05 17.35082	12 23 58.68	-02 38 22.6	568
1993 FW	1993 05 17.39862	12 23 58.55	-02 38 22.0	568
1993 RO	* 1993 09 14.3364	23 22 25.55	-04 00 52.9	23 R 568
1993 RO	1993 09 14.5241	23 22 24.47	-04 00 59.9	568
1993 RO	1993 09 15.4216	23 22 19.41	-04 01 33.4	568
1993 RO	1993 09 15.4723	23 22 19.12	-04 01 35.1	568
1993 RO	1993 09 16.4090	23 22 13.83	-04 02 10.0	568
1993 RO	1993 09 16.4216	23 22 13.74	-04 02 10.1	568
1993 RO	1993 09 17.4060	23 22 08.18	-04 02 46.8	568
1993 RO	1993 09 17.4183	23 22 08.07	-04 02 47.4	568
1993 RP	* 1993 09 15.4963	00 49 01.88	+05 13 37.6	24.5 R 568
1993 RP	1993 09 15.5850	00 49 01.42	+05 13 34.8	568
1993 RP	1993 09 16.4558	00 48 57.17	+05 13 07.0	568
1993 RP	1993 09 16.4976	00 48 56.97	+05 13 05.8	568
1993 RP	1993 09 17.4630	00 48 52.23	+05 12 35.1	568
1993 RP	1993 09 17.4964	00 48 52.06	+05 12 33.8	568

**573 Eldagsen**

W. Bonk, Nordstrasse 33, D-31832 Springe, Germany  
AGK3

(96)	1993 08 13.93642	23 14 51.76	+03 32 25.2	573
(96)	1993 08 13.94337	23 14 51.51	+03 32 25.3	573
(220)	1993 08 17.84308	21 33 19.17	+02 49 48.9	573
(220)	1993 08 17.85129	21 33 18.78	+02 49 49.2	573
(568)	1993 08 19.84632	20 52 27.98	+09 56 15.6	573
(568)	1993 08 19.85332	20 52 27.63	+09 56 13.9	573
(714)	1993 08 13.91865	23 04 40.39	+16 42 24.6	573
(714)	1993 08 13.92982	23 04 40.05	+16 42 23.6	573
(849)	1993 08 17.86582	23 52 09.97	+24 07 46.8	573
(849)	1993 08 17.87276	23 52 09.95	+24 07 46.8	573

**587 Sormano**

P. Sicoli, Via Valli 9, I-22040 Garbagnate Monastero (Como), Italy  
 Observers P. Sicoli, E. Colzani, P. Ghezzi, C. Gualdoni, M. Cavagna  
 0.5-m reflector + CCD  
 PPM, GSC

1993 OL	1993 08 28.80819	15 49 38.59	+08 15 22.4	15.9 V	587
1993 OL	1993 08 28.83811	15 49 28.96	+08 17 03.5		587
1993 OL	1993 08 28.86414	15 49 20.47	+08 18 33.1		587
1993 OL	1993 08 28.87514	15 49 16.98	+08 19 10.0		587
1993 OL	1993 09 01.86768	15 29 00.02	+11 52 29.1		587
1993 OL	1993 09 01.87396	15 28 58.27	+11 52 46.1		587
1993 OL	1993 09 04.80503	15 14 59.14	+14 11 14.6		587
1993 OL	1993 09 04.80938	15 14 57.92	+14 11 26.3		587
1993 OL	1993 09 04.81412	15 14 56.52	+14 11 38.6		587
1993 OV <sub>1</sub>	1993 08 11.97104	21 28 43.31	-08 41 00.8		587
1993 OV <sub>1</sub>	1993 08 11.97863	21 28 42.80	-08 40 54.0		587
1993 OV <sub>1</sub>	1993 08 11.98562	21 28 42.25	-08 40 45.3		587
1993 OV <sub>1</sub>	1993 08 17.00005	21 23 54.28	-07 14 40.6	17.0 V	587
1993 OV <sub>1</sub>	1993 08 17.01828	21 23 53.21	-07 14 24.0		587
1993 OV <sub>1</sub>	1993 08 17.02951	21 23 52.56	-07 14 13.3		587
1993 PB	1993 08 17.04034	21 02 37.87	-09 44 08.4	18.2 V	587
1993 PB	1993 08 17.04734	21 02 36.63	-09 44 04.9		587
1993 PB	1993 08 20.90520	20 52 39.14	-09 20 10.6		587
1993 PB	1993 08 20.91383	20 52 37.92	-09 20 08.7	18.4 V	587
1993 PB	1993 08 20.91790	20 52 37.25	-09 20 06.2		587
1993 PE	1993 08 11.99054	21 28 55.08	-08 36 45.9		587
1993 PE	1993 08 11.99562	21 28 54.78	-08 36 47.0		587
1993 PE	1993 08 16.93971	21 24 15.63	-08 52 08.8	16.7 V	587
1993 PE	1993 08 16.94768	21 24 15.23	-08 52 10.8		587
1993 PE	1993 08 16.95246	21 24 14.81	-08 52 09.5		587
1993 PE	1993 08 17.96643	21 23 18.07	-08 55 29.5		587
1993 PE	1993 08 17.97319	21 23 17.70	-08 55 31.2		587
1993 PE	1993 08 17.98181	21 23 17.31	-08 55 34.3		587
1993 QP	1993 09 04.90017	23 17 57.76	+25 45 19.4		587
1993 QP	1993 09 04.91087	23 17 58.25	+25 45 39.1		587
1993 QP	1993 09 04.92083	23 17 58.88	+25 45 57.9		587
(1051)	1993 08 20.82410	15 52 56.10	+03 56 12.8		587
(1051)	1993 08 20.83511	15 52 56.52	+03 56 07.5		587
(1051)	1993 08 20.84969	15 52 57.17	+03 56 02.1		587
(1531)	1993 07 23.99780	21 15 23.56	-04 31 38.7		587
(1531)	1993 07 24.00566	21 15 23.13	-04 31 38.2		587
(1531)	1993 07 24.01375	21 15 22.77	-04 31 36.9		587
(1531)	1993 07 27.89309	21 11 57.43	-04 26 33.2		587
(1531)	1993 07 27.89645	21 11 57.23	-04 26 33.3		587
(2272)	1993 07 27.84649	19 10 59.13	+16 48 42.5		587
(2272)	1993 07 27.87665	19 10 57.44	+16 48 18.0		587
(2272)	1993 08 20.96710	18 56 05.18	+09 35 44.5		587
(2272)	1993 08 21.00355	18 56 04.53	+09 35 00.3		587
(2302)	1993 07 23.94924	21 02 34.00	-16 49 47.5		587
(2302)	1993 07 23.95897	21 02 33.39	-16 49 46.0		587
(2302)	1993 07 23.98632	21 02 31.75	-16 49 42.4		587

**589 Santa Lucia Stroncone**

A. Vagnozzi, Via Santa Lucia 68, I-05039 Stroncone (Terni), Italy  
 Observers A. Vagnozzi, V. Risoldi, G. Bernabei, E. Gregori, F. Lombardi  
 0.50-m  $f/2.8$  Ritchey-Chrétien + CCD  
 GSC

1976 UP <sub>18</sub>	1993 08 07.89633	19 57 29.66	-10 47 18.6		589
1976 UP <sub>18</sub>	1993 08 07.95726	19 57 26.26	-10 47 38.8		589
1976 UP <sub>18</sub>	1993 08 07.97834	19 57 25.13	-10 47 46.5		589
1993 NA	1993 08 07.85035	19 58 41.30	-11 56 53.1		589
1993 NA	1993 08 07.86181	19 58 40.82	-11 56 57.8		589
1993 OM	1993 08 10.90056	19 55 46.45	-11 00 15.5		589
1993 OM	1993 08 10.91381	19 55 46.07	-11 00 16.8		589
1993 OM	1993 08 10.93019	19 55 45.25	-11 00 17.6		589
1993 RB	* 1993 09 10.86617	00 00 14.03	+05 02 38.0	17.0 V	589
1993 RB	1993 09 10.89542	00 00 12.18	+05 02 34.9		589
1993 RB	1993 09 10.90868	00 00 11.38	+05 02 33.6		589
1993 RB	1993 09 10.93450	00 00 09.72	+05 02 31.4		589
1993 RB	1993 09 11.87790	23 59 11.17	+05 00 49.1		589
1993 RB	1993 09 11.88885	23 59 10.46	+05 00 47.9		589
1993 RB	1993 09 11.90235	23 59 09.64	+05 00 47.1		589
1993 RB	1993 09 12.80571	23 58 12.87	+04 59 03.0	I	589
1993 RB	1993 09 12.84901	23 58 10.17	+04 58 56.6		589
1993 RC	* 1993 09 11.87790	23 59 06.81	+05 02 21.7	18.0 V	589
1993 RC	1993 09 11.88885	23 59 06.41	+05 02 14.6		589
1993 RC	1993 09 11.90235	23 59 05.83	+05 02 06.0		589
1993 RC	1993 09 12.85958	23 58 31.10	+04 52 37.1	O	589
1993 RC	1993 09 12.86896	23 58 30.72	+04 52 32.3		589
1993 RC	1993 09 12.88346	23 58 30.19	+04 52 23.3		589

**595 Farra d'Isonzo**

L. Bittesini, Via dei Conventi 10, I-34070 Farra D'Isonzo (GO), Italy  
 Observers L. Bittesini, W. Boschin, G. Lombardi, E. Pettarin, F. Piani, A. Toso  
 Measurers E. Pettarin, A. Toso  
 0.4-m  $f/4.5$  reflector + CCD  
 GSC

1990 XA	1993 07 17.96679	21 03 50.24	-10 34 00.0		595
1990 XA	1993 07 18.03625	21 03 46.88	-10 34 03.0		595
1990 XA	1993 07 18.91581	21 03 05.46	-10 34 37.8		595
1990 XA	1993 07 18.98201	21 03 02.24	-10 34 39.4		595
1993 NA	1993 07 30.01743	20 05 21.79	-11 10 09.3		595
1993 NA	1993 07 30.03194	20 05 20.86	-11 10 15.9		595
1993 OM	1993 08 15.84568	19 52 25.09	-11 07 22.5	19 V I	595
1993 OM	1993 08 15.87350	19 52 24.16	-11 07 25.6		595
1993 OM	1993 08 15.90226	19 52 22.97	-11 07 27.1		595
1993 OM	1993 08 16.84836	19 51 47.49	-11 08 52.2		595
1993 OM	1993 08 16.86941	19 51 46.68	-11 08 55.3		595
1993 OM	1993 08 16.89150	19 51 45.84	-11 08 57.2		595
1993 PA	1993 08 14.93738	19 53 49.34	-11 23 54.3		595
1993 PA	1993 08 14.95395	19 53 48.81	-11 24 04.9		595
1993 PA	1993 08 14.97080	19 53 48.50	-11 24 10.2		595
1993 PF	* 1993 08 12.93906	19 55 05.20	-11 09 30.2	19 V	595
1993 PF	1993 08 12.95946	19 55 03.98	-11 09 29.3		595

1993 PF	1993 08 12.97942	19 55 02.95	-11 09 28.5	595	(238)	1993 08 12.96274	22 05 03.11	+00 20 55.5	597
1993 PF	1993 08 14.85505	19 53 32.11	-11 08 02.5	595	(238)	1993 08 12.97035	22 05 02.85	+00 20 52.5	597
1993 PF	1993 08 14.90940	19 53 29.47	-11 08 01.5	595	(358)	1993 08 17.96285	22 51 13.35	-05 36 35.6	597
1993 PF	1993 08 15.84568	19 52 45.72	-11 07 22.1	595	(358)	1993 08 17.97171	22 51 12.99	-05 36 38.6	597
1993 PF	1993 08 15.87350	19 52 44.68	-11 07 22.2	595	(542)	1993 08 12.98553	22 19 36.67	-08 34 29.8	597
1993 PF	1993 08 15.90226	19 52 43.13	-11 07 20.5	595	(542)	1993 08 12.99486	22 19 36.32	-08 34 35.1	597
1993 PF	1993 08 16.84836	19 52 00.34	-11 06 41.2	595	(2000)	1993 08 17.93590	21 06 33.00	+05 59 05.4	597
1993 PF	1993 08 16.86941	19 51 59.51	-11 06 42.7	595	(2000)	1993 08 17.94051	21 06 32.67	+05 59 06.6	597
1993 PF	1993 08 16.89150	19 51 58.41	-11 06 41.5	I 595	(2131)	1993 08 17.87822	20 10 16.31	-03 26 40.2	597
1993 PF	1993 08 20.93363	19 49 09.00	-11 04 20.0	595	(2131)	1993 08 17.89561	20 10 14.25	-03 26 14.7	597
1993 PF	1993 08 20.95431	19 49 08.19	-11 04 18.6	I 595					
(5471)	1993 07 29.89503	20 53 09.50	-04 23 51.4	595					
(5471)	1993 07 29.91684	20 53 08.39	-04 23 52.8	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

A920 TA	1993 08 10.83851	20 50 55.84	-09 08 27.4	596
A920 TA	1993 08 10.88306	20 50 53.61	-09 08 35.9	596
A920 TA	1993 08 10.88551	20 50 53.64	-09 08 32.4	596
1949 PN	1993 08 16.96549	00 19 31.40	+10 45 36.5	596
1949 PN	1993 08 16.99292	00 19 30.82	+10 45 50.1	596
1949 PN	1993 08 17.00101	00 19 30.54	+10 45 52.2	596
1989 GT <sub>4</sub>	1993 08 15.92427	22 49 17.06	-03 12 15.7	596
1989 GT <sub>4</sub>	1993 08 15.94222	22 49 16.34	-03 12 21.6	596
1989 GT <sub>4</sub>	1993 08 15.95199	22 49 15.80	-03 12 23.5	596
1990 XA	1993 08 16.84222	20 38 30.75	-11 19 25.4	596
1990 XA	1993 08 16.85568	20 38 30.07	-11 19 29.3	596
1992 FD	1993 08 09.82597	21 09 26.95	+11 46 42.5	596
1992 FD	1993 08 09.83785	21 09 26.36	+11 46 31.6	596
1992 FR	1993 09 12.80180	22 12 49.91	-03 26 46.6	596
1992 FR	1993 09 12.81730	22 12 49.25	-03 26 52.1	596
1992 FR	1993 09 12.83344	22 12 48.63	-03 27 02.3	596
1993 PV <sub>6</sub>	1993 09 05.85258	22 36 32.42	-05 32 23.6	596
1993 PV <sub>6</sub>	1993 09 05.88165	22 36 30.74	-05 32 26.9	596
1993 PV <sub>6</sub>	1993 09 06.84264	22 35 39.65	-05 34 55.1	596
1993 PV <sub>6</sub>	1993 09 06.87894	22 35 37.69	-05 35 01.8	596
(2083)	1993 08 04.82526	20 41 52.32	+13 25 24.7	596
(2083)	1993 08 04.83771	20 41 51.43	+13 25 27.2	596
(2083)	1993 08 04.85990	20 41 49.62	+13 25 32.3	596
(5640)	1993 08 06.92335	21 52 09.26	-09 58 00.4	596
(5640)	1993 08 06.94212	21 52 08.60	-09 58 08.9	596
(5640)	1993 08 07.89690	21 51 32.51	-10 03 16.8	596
(5640)	1993 08 07.92337	21 51 31.43	-10 03 26.2	596
(5640)	1993 08 07.93603	21 51 30.82	-10 03 29.3	596

**597 Springe**

N. Ehring, Detmoldstrasse 8, D-30171 Hannover, Germany

(201)	1993 08 12.98089	22 21 52.45	-08 21 32.9	597
(201)	1993 08 12.98553	22 21 52.32	-08 21 34.9	597
(220)	1993 08 17.86471	21 33 17.88	+02 49 51.7	597
(220)	1993 08 17.87182	21 33 17.55	+02 49 51.7	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

Measurer D. D. Balam

0.5-m reflector + CCD

1989 RZ	1993 08 12.44065	04 16 06.78	+38 03 28.9	657
1989 RZ	1993 08 12.44282	04 16 07.14	+38 03 31.8	657
1989 RZ	1993 08 12.44481	04 16 07.54	+38 03 33.7	657
1993 MF	1993 08 12.39093	23 14 49.95	+40 45 46.2	657
1993 MF	1993 08 12.39247	23 14 50.23	+40 45 47.2	657
1993 MF	1993 08 12.39374	23 14 50.45	+40 45 48.0	657
1993 MF	1993 09 09.42687	00 13 23.22	+37 51 01.4	657
1993 MF	1993 09 09.42823	00 13 23.29	+37 50 59.8	657
1993 MF	1993 09 09.42964	00 13 23.37	+37 50 58.1	657
1993 OV <sub>1</sub>	1993 08 11.26740	21 29 26.78	-08 54 05.8	657
1993 OV <sub>1</sub>	1993 08 11.26990	21 29 26.62	-08 54 03.9	657
1993 OV <sub>1</sub>	1993 08 11.27216	21 29 26.47	-08 54 01.5	657
1993 OV <sub>1</sub>	1993 08 11.27453	21 29 26.31	-08 53 58.7	657
1993 OV <sub>1</sub>	1993 08 19.23488	21 21 59.88	-06 40 19.8	657
1993 OV <sub>1</sub>	1993 08 19.23718	21 21 59.73	-06 40 17.4	657
1993 PE	* 1993 08 12.31384	21 28 36.81	-08 37 44.2	16.1 657
1993 PE	1993 08 12.31707	21 28 36.65	-08 37 43.9	657
1993 PE	1993 08 12.31909	21 28 36.59	-08 37 44.5	657
1993 PE	1993 08 13.28925	21 27 41.69	-08 40 38.0	657
1993 PE	1993 08 13.29170	21 27 41.54	-08 40 38.7	657
1993 PE	1993 08 13.29416	21 27 41.40	-08 40 39.0	657
1993 PE	1993 08 17.21719	21 24 00.23	-08 53 03.3	657
1993 PE	1993 08 17.21948	21 24 00.11	-08 53 03.2	657
1993 PE	1993 08 17.22171	21 23 59.94	-08 53 04.4	657
1993 PE	1993 08 17.23211	21 23 59.38	-08 53 05.9	657
1993 PE	1993 08 17.23444	21 23 59.24	-08 53 06.4	657
1993 PE	1993 08 19.24190	21 22 07.59	-08 59 45.7	657
1993 PE	1993 08 19.24475	21 22 07.41	-08 59 46.4	657
1993 PE	1993 08 19.24705	21 22 07.32	-08 59 47.0	657
1993 PE	1993 08 19.24926	21 22 07.15	-08 59 47.5	657
1993 PE	1993 09 09.22105	21 06 39.70	-10 09 11.8	657
1993 PE	1993 09 09.22767	21 06 39.44	-10 09 11.4	657
1993 PE	1993 09 09.23367	21 06 39.26	-10 09 14.1	657
1993 QP	1993 08 26.18824	23 07 36.17	+20 07 15.4	657
1993 QP	1993 08 26.19237	23 07 36.35	+20 07 25.7	657
1993 QP	1993 08 26.19778	23 07 36.74	+20 07 37.3	16.3 657

1993 QP	1993 08 26.20113	23 07 36.97	+20 07 46.3	657
1993 QP	1993 08 26.20461	23 07 37.19	+20 07 54.6	657
(5641)	1993 08 11.25655	21 10 26.69	-04 33 04.2	657
(5641)	1993 08 11.25884	21 10 26.54	-04 33 07.6	657
(5641)	1993 08 11.26098	21 10 26.41	-04 33 10.7	657
(5641)	1993 08 12.28008	21 09 23.73	-04 58 07.8	657
(5641)	1993 08 12.28255	21 09 23.60	-04 58 11.5	657
(5641)	1993 08 12.29370	21 09 22.90	-04 58 27.8	657
(5641)	1993 08 18.26888	21 03 28.46	-07 25 30.6	657
(5641)	1993 08 18.27101	21 03 28.32	-07 25 33.9	657
(5641)	1993 08 18.27314	21 03 28.19	-07 25 36.9	657

**658 Dominion Astrophysical Observatory, Victoria**

J. B. Tatum, Dept. of Physics, University of Victoria, P.O. Box 1700, Victoria,  
BC V8W 2Y2, Canada

Observers D. D. Balam, J. B. Tatum, G. C. L. Aikman

Measurer D. D. Balam

1.82-m Plaskett telescope + CCD

GSC

1989 RZ	1993 08 24.49643	04 54 59.98	+41 28 28.6	658
1989 RZ	1993 08 24.49951	04 55 00.58	+41 28 30.6	658
1989 RZ	1993 08 24.50181	04 55 01.02	+41 28 33.5	658
1989 UY <sub>3</sub>	1993 08 24.22650	23 04 40.94	+25 30 44.6	658
1989 UY <sub>3</sub>	1993 08 24.23598	23 04 40.52	+25 30 44.1	658
1989 UY <sub>3</sub>	1993 08 24.24095	23 04 40.47	+25 30 43.9	658
1993 KC	1993 08 21.19521	16 33 41.18	+14 09 57.1	658
1993 KC	1993 08 21.19876	16 33 41.59	+14 09 55.8	658
1993 KC	1993 08 21.20146	16 33 42.03	+14 09 54.7	658
1993 KC	1993 08 21.20516	16 33 42.56	+14 09 53.4	658
1993 MF	1993 08 24.24549	23 47 06.94	+41 16 50.6	658
1993 MF	1993 08 24.24802	23 47 07.27	+41 16 50.1	658
1993 MF	1993 08 24.25034	23 47 07.58	+41 16 49.5	658
1993 ME <sub>1</sub>	1993 08 21.20891	17 43 01.68	+10 29 24.0	658
1993 ME <sub>1</sub>	1993 08 21.21123	17 43 02.00	+10 29 24.0	658
1993 ME <sub>1</sub>	1993 08 21.21412	17 43 02.32	+10 29 23.3	658

**664 Manastash Ridge Observatory**

M. Hammergren, Dept. of Astronomy FM-20, Univ. of Washington, Seattle,  
WA 98195, U.S.A.

Observers M. Hammergren, D. Hoard, S. Wachter

Measurer M. Hammergren

$\lambda = 239.2775$ ,  $\rho \cos \phi' = 0.6840$ ,  $\rho \sin \phi' = +0.7273$  (see MPC 22434).

0.76-m  $f/5.7$  reflector + CCD

1993 OX <sub>2</sub>	* 1993 07 25.38589	00 24 03.64	-00 03 08.1	20.2 V	F 664
1993 OX <sub>2</sub>	1993 07 25.38821	00 24 03.76	-00 03 06.5	19.4 V	F 664
1993 OX <sub>2</sub>	1993 07 25.39147	00 24 03.86	-00 03 06.4	19.7 V	664
1993 OX <sub>2</sub>	1993 07 25.43057	00 24 05.06	-00 03 06.8	19.8 V	664
1993 OX <sub>2</sub>	1993 08 14.39266	00 30 17.33	-00 43 39.9	18.8 V	664
1993 OX <sub>2</sub>	1993 08 14.39661	00 30 17.32	-00 43 40.8	18.6 V	664
1993 OX <sub>2</sub>	1993 08 14.40068	00 30 17.34	-00 43 41.6	19.0 V	664
1993 OX <sub>2</sub>	1993 08 14.45829	00 30 17.42	-00 43 55.2	18.6 V	664
1993 OX <sub>2</sub>	1993 08 15.41999	00 30 19.47	-00 47 51.1	18.7 V	664
1993 OX <sub>2</sub>	1993 08 15.42751	00 30 19.51	-00 47 53.0	19.0 V	664

1993 OX <sub>2</sub>	1993 08 15.43721	00 30 19.48	-00 47 54.8	18.7 V	664
1993 OX <sub>2</sub>	1993 08 15.44724	00 30 19.47	-00 47 57.5	19.0 V	664
1993 OX <sub>2</sub>	1993 08 15.48054	00 30 19.44	-00 48 05.7	19.0 V	664
1993 OX <sub>2</sub>	1993 08 16.36678	00 30 20.12	-00 51 53.6	18.8 V	664
1993 OX <sub>2</sub>	1993 08 16.39535	00 30 20.09	-00 52 01.3	18.8 V	664
1993 OX <sub>2</sub>	1993 08 16.45384	00 30 19.92	-00 52 16.7	19.1 V	G 664
1993 OY <sub>2</sub>	* 1993 07 25.40454	00 39 48.88	-00 01 34.5	18.5 V	E 664
1993 OY <sub>2</sub>	1993 07 25.41366	00 39 49.07	-00 01 28.6	18.2 V	E 664
1993 OY <sub>2</sub>	1993 08 16.41058	00 39 01.49	+03 04 47.3	18.2 V	664
1993 OY <sub>2</sub>	1993 08 16.43779	00 39 01.22	+03 05 00.0	18.2 V	664
1993 OY <sub>2</sub>	1993 08 18.39914	00 38 09.96	+03 19 17.4	17.4 R	664
1993 OY <sub>2</sub>	1993 08 18.43691	00 38 08.80	+03 19 33.5	17.4 R	664
(2611)	1993 07 24.42559	00 39 58.74	+00 00 54.4	16.9 V	664
(2611)	1993 07 24.43856	00 39 58.90	+00 00 54.3	17.1 V	664
(2611)	1993 07 25.40454	00 40 11.17	+00 01 07.4	17.0 V	664
(2611)	1993 07 25.41366	00 40 11.28	+00 01 07.7	16.9 V	664
(2611)	1993 07 26.38287	00 40 22.51	+00 01 14.4	16.7 V	664
(2611)	1993 07 26.42108	00 40 22.84	+00 01 13.9	17.1 V	664
(2611)	1993 07 26.46130	00 40 23.31	+00 01 14.2	16.6 V	664

**670 Camarillo**

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

0.25-m Schmidt-Cassegrain + CCD

GSC

1983 RB	1993 09 12.27847	01 32 56.62	-01 33 46.6	16.0 V	670
1983 RB	1993 09 12.28542	01 32 56.27	-01 34 04.1		670
1983 RB	1993 09 12.29583	01 32 55.77	-01 34 24.6		670
1983 RB	1993 09 12.30972	01 32 55.15	-01 34 56.1		670
1993 MF	1993 09 12.21354	00 16 07.31	+36 53 06.0	13.7 V	670
1993 MF	1993 09 12.22049	00 16 07.64	+36 52 57.4		670
1993 MF	1993 09 12.22743	00 16 07.93	+36 52 49.0		670
1993 QP	1993 09 09.17953	23 22 14.87	+27 42 40.0	16.6 V	670
1993 QP	1993 09 09.19336	23 22 15.57	+27 43 05.5		670
1993 QP	1993 09 09.20723	23 22 16.34	+27 43 26.1		670
(212)	1993 09 12.32919	01 36 51.58	+15 52 55.8	12.4 V	670
(212)	1993 09 12.34375	01 36 51.20	+15 52 55.6		670
(212)	1993 09 12.35556	01 36 50.92	+15 52 55.7		670
(212)	1993 09 12.36807	01 36 50.60	+15 52 55.6		670
(726)	1993 09 12.16743	23 25 14.73	+28 48 16.3	12.2 V	670
(726)	1993 09 12.17970	23 25 14.30	+28 48 12.2		670
(726)	1993 09 12.19219	23 25 13.83	+28 48 08.4		670

**674 Ford Observatory, Wrightwood**

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

Observers J. B. Child, G. Fisch

1991 AB <sub>1</sub>	1993 08 22.27917	16 29 38.69	-12 02 54.8	16.4	674
1991 AB <sub>1</sub>	1993 08 22.29931	16 29 39.19	-12 03 03.3		674
(2059)	1993 08 22.32361	18 48 41.51	-03 27 14.2		674
(2059)	1993 08 22.35208	18 48 40.53	-03 27 29.5	18.3	674
(2059)	1993 08 22.37431	18 48 40.04	-03 27 38.9		674
(2059)	1993 08 22.38472	18 48 39.64	-03 27 42.8		674



**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), T. Gehrels (4, L), E. Helin (2, S), H. E. Holt (3, S),  
 W. Johnson (2, S), K. Lawrence (2, S), D. H. Levy (3, S), M. Nassir (2, S),  
 C. S. Shoemaker (3, S), E. M. Shoemaker (3, S)

Measurers J. Alu (2), B. M. Cudnik (3), K. E. Daniels (6), K. Lawrence (2),  
 M. Nassir (2), C. S. Shoemaker (3), B. A. Skiff (6), P. W. Tracadas (6),  
 C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)

1.2-m (L) and 0.46-m (S) Schmidt telescopes

1949 WP <sub>1</sub>	* 1949 11 19.28646	03 18 50.80	+13 29 55.8	18.2	6 675
1950 XA <sub>1</sub>	* 1950 12 11.22535	04 19 57.97	+24 29 03.6	17.5	6 675
1950 XA <sub>1</sub>	1950 12 11.25153	04 19 56.35	+24 28 57.8		6 675
1950 XB <sub>1</sub>	* 1950 12 11.22535	04 38 16.60	+27 14 46.4	17.2	6 675
1950 XB <sub>1</sub>	1950 12 11.25139	04 38 13.73	+27 14 21.9		6 675
1950 XC <sub>1</sub>	* 1950 12 11.22848	04 33 01.45	+26 01 04.6	16.8	6 675
1950 XC <sub>1</sub>	1950 12 11.25139	04 32 59.65	+26 01 06.2		6 675
1951 PR	* 1951 08 11.37569	23 46 09.26	+10 36 37.5		6 675
1951 PR	1951 08 11.40000	23 46 08.38	+10 36 52.2		6 675
1951 WV <sub>2</sub>	1951 11 30.26597	03 47 30.42	+25 44 42.7		6 675
1951 WV <sub>2</sub>	* 1951 11 30.28751	03 47 29.38	+25 44 32.2	17.8	6 675
1951 WW <sub>2</sub>	1951 11 28.31597	05 36 52.81	+18 41 51.3		6 675
1951 WW <sub>2</sub>	* 1951 11 28.33541	05 36 51.77	+18 41 51.5	17.0	6 675
1951 WX <sub>2</sub>	1951 11 28.31597	05 36 18.26	+18 45 02.6		6 675
1951 WX <sub>2</sub>	* 1951 11 28.34236	05 36 17.08	+18 44 55.4		6 675
1953 PO <sub>1</sub>	* 1953 08 11.43993	23 54 24.84	+26 24 46.9		6 675
1953 PO <sub>1</sub>	1953 08 11.46319	23 54 24.45	+26 24 50.8		6 675
1953 TA <sub>1</sub>	1953 10 31.26076	00 44 08.54	+06 33 01.2		6 675
1953 TA <sub>1</sub>	1953 10 31.28403	00 44 08.34	+06 32 51.1		6 675
1953 UG <sub>1</sub>	* 1953 10 31.26076	00 56 08.08	+07 29 00.5	17.8	6 675
1953 UG <sub>1</sub>	1953 10 31.28421	00 56 07.20	+07 28 54.5		6 675
1953 UH <sub>1</sub>	* 1953 10 31.26076	01 00 22.77	+07 06 57.3	17.5	6 675
1953 UH <sub>1</sub>	1953 10 31.28439	01 00 21.71	+07 06 46.5		6 675
1953 UJ <sub>1</sub>	* 1953 10 31.26076	01 00 51.80	+08 01 29.3	17.2	6 675
1953 UJ <sub>1</sub>	1953 10 31.28417	01 00 50.58	+08 01 25.9		6 675
1953 YN	* 1953 12 31.09028	01 05 41.19	+19 33 28.3	18.0	6 675
1953 YN	1953 12 31.13194	01 05 42.88	+19 33 28.9		6 675
1956 ES <sub>1</sub>	* 1956 03 15.36379	13 03 41.48	+14 32 09.7		6 675
1956 ES <sub>1</sub>	1956 03 15.38576	13 03 40.40	+14 32 18.4		6 675
1974 SJ <sub>3</sub>	1951 08 08.40556	00 31 02.89	-03 16 04.1		6 675
1974 SJ <sub>3</sub>	1951 08 08.42986	00 31 02.42	-03 16 03.2		6 675
1976 AH	1951 11 30.26597	03 44 57.98	+27 24 01.9		6 675
1976 AH	1951 11 30.29445	03 44 56.48	+27 23 50.1		6 675
1978 VV <sub>6</sub>	1951 11 30.26597	03 48 53.93	+21 22 54.3		6 675
1978 VV <sub>6</sub>	1951 11 30.29445	03 48 51.79	+21 22 49.9		6 675
1978 VG <sub>8</sub>	1949 11 23.22847	01 34 50.05	+06 50 10.5		6 675
1978 VG <sub>8</sub>	1949 11 23.25590	01 34 49.61	+06 50 14.3		6 675

1979 MC <sub>2</sub>	1951 08 11.42639	23 57 46.28	+01 26 22.8		6 675
1979 MC <sub>2</sub>	1951 08 11.45069	23 57 45.79	+01 26 19.6		6 675
1979 MR <sub>3</sub>	1993 07 20.18854	18 10 04.25	-18 55 09.7	16.5	2 675
1979 MR <sub>3</sub>	1993 07 20.21094	18 10 03.38	-18 55 19.0		2 675
1980 GL	1951 08 08.40556	00 27 50.87	-05 29 55.2		6 675
1980 GL	1951 08 08.42986	00 27 50.43	-05 29 56.9		6 675
1980 RL <sub>7</sub>	1951 08 11.37569	23 51 36.50	+13 26 44.0		6 675
1980 RL <sub>7</sub>	1951 08 11.40000	23 51 36.14	+13 26 47.5		6 675
1981 CB <sub>1</sub>	1955 10 25.40764	04 54 05.74	+25 43 59.7		6 675
1981 CB <sub>1</sub>	1955 10 25.43125	04 54 05.47	+25 44 05.0		6 675
1981 EO <sub>21</sub>	1953 10 31.26076	00 47 43.33	+08 23 37.4		6 675
1981 EA <sub>22</sub>	1951 08 11.42639	00 04 18.44	+02 02 36.0		6 675
1981 EA <sub>22</sub>	1951 08 11.45069	00 04 18.12	+02 02 27.0		6 675
1981 ED <sub>28</sub>	1951 08 11.42639	00 02 52.17	-00 33 18.7		6 675
1981 ED <sub>28</sub>	1951 08 11.45069	00 02 51.79	-00 33 22.3		6 675
1981 EV <sub>46</sub>	1953 10 31.26076	01 04 10.79	+09 06 49.6		6 675
1981 EV <sub>46</sub>	1953 10 31.28403	01 04 09.81	+09 06 44.5		6 675
1981 ER <sub>47</sub>	1951 11 30.26597	03 45 09.10	+21 54 47.0		6 675
1981 ER <sub>47</sub>	1951 11 30.29445	03 45 07.34	+21 54 44.1		6 675
1982 FX <sub>3</sub>	1951 11 30.26597	03 50 05.75	+25 55 42.9		6 675
1982 FX <sub>3</sub>	1951 11 30.29445	03 50 04.28	+25 55 38.7		6 675
1982 TX	1953 08 11.43993	23 58 48.12	+25 45 38.7		6 675
1982 TX	1953 08 11.46319	23 58 48.78	+25 45 52.4		6 675
1982 UD <sub>7</sub>	1953 10 31.26076	01 02 53.96	+06 22 29.9		6 675
1982 UD <sub>7</sub>	1953 10 31.28403	01 02 53.19	+06 22 19.4		6 675
1983 JQ	1951 11 28.31597	05 35 44.48	+21 01 10.4		6 675
1983 JQ	1951 11 28.34236	05 35 43.17	+21 01 09.6		6 675
1983 QH <sub>1</sub>	1949 11 19.25833	03 22 09.29	+10 54 41.2		6 675
1983 QH <sub>1</sub>	1949 11 19.28646	03 22 07.49	+10 54 35.7		6 675
1983 RB	1993 08 14.46458	01 32 05.16	+16 51 28.9	17	3 675
1983 RB	1993 08 14.49253	01 32 06.48	+16 50 29.7		3 675
1983 RB	1993 08 16.49322	01 33 47.43	+15 40 47.1		3 675
1983 RB	1993 08 17.45729	01 34 30.68	+15 06 32.5		3 675
1983 RB	1993 08 17.48506	01 34 31.63	+15 05 33.4		3 675
1983 RB	1993 08 18.48142	01 35 12.30	+14 29 45.1		3 675
1983 VS <sub>1</sub>	1953 10 31.26272	00 51 13.06	+06 36 08.8		6 675
1983 VS <sub>1</sub>	1953 10 31.28403	00 51 11.90	+06 36 05.8		6 675
1983 XE	1951 11 28.31597	05 50 52.32	+19 37 47.6		6 675
1983 XE	1951 11 28.34236	05 50 51.09	+19 37 41.2		6 675
1984 AR	1955 10 25.40764	04 53 39.25	+23 28 27.8		6 675
1984 AR	1955 10 25.43125	04 53 38.81	+23 28 29.6		6 675
1984 HL <sub>1</sub>	1951 08 11.42639	00 04 18.19	-01 45 25.7		6 675
1984 HL <sub>1</sub>	1951 08 11.45069	00 04 17.56	-01 45 28.7	17.8	6 675
1984 HL <sub>1</sub>	1955 10 25.40764	04 58 11.47	+25 03 34.9		6 675
1984 HL <sub>1</sub>	1955 10 25.43125	04 58 11.14	+25 03 37.7		6 675
1984 SC <sub>1</sub>	1951 08 08.40556	00 27 43.15	-04 56 38.9		6 675
1984 SC <sub>1</sub>	1951 08 08.42986	00 27 43.09	-04 56 31.2		6 675
1984 SQ <sub>3</sub>	1951 11 30.26597	03 33 52.15	+24 51 47.5		6 675
1984 SQ <sub>3</sub>	1951 11 30.29445	03 33 50.11	+24 51 42.9		6 675
1987 DG <sub>6</sub>	1950 12 11.22535	04 36 04.80	+23 13 24.8		6 675
1987 DG <sub>6</sub>	1950 12 11.25139	04 36 03.47	+23 13 21.8		6 675
1987 DW <sub>6</sub>	1951 11 30.26597	03 48 18.26	+21 24 16.6		6 675

1987 DW <sub>6</sub>	1951 11 30.29445	03 48 16.68	+21 24 11.7	6 675	1991 GA	1955 10 25.40764	04 48 12.93	+26 42 39.2	6 675
1987 EV	1951 11 30.26597	03 46 23.88	+26 08 20.0	6 675	1991 GA	1955 10 25.43125	04 48 12.16	+26 42 43.1	6 675
1987 EV	1951 11 30.29445	03 46 22.05	+26 08 12.5	6 675	1991 PY <sub>11</sub>	1953 10 31.26076	01 02 17.07	+08 03 40.7	6 675
1987 RC <sub>1</sub>	1953 10 31.26076	00 47 08.40	+04 25 41.6	6 675	1991 PY <sub>11</sub>	1953 10 31.28403	01 02 15.86	+08 03 31.4	6 675
1987 RC <sub>1</sub>	1953 10 31.28403	00 47 07.60	+04 25 37.7	6 675	1991 QC	1951 11 28.31597	05 52 47.51	+20 42 19.2	6 675
1987 SO <sub>9</sub>	1949 11 23.22847	01 46 44.04	+07 00 04.5	6 675	1991 QC	1951 11 28.34236	05 52 46.10	+20 42 17.1	6 675
1987 SO <sub>9</sub>	1949 11 23.25590	01 46 43.13	+07 00 01.4	6 675	1991 RX <sub>2</sub>	1950 12 11.22535	04 39 23.99	+25 10 34.5	16.8 6 675
1988 CW <sub>4</sub>	1955 10 25.40764	04 41 55.69	+24 10 24.5	6 675	1991 RX <sub>2</sub>	1950 12 11.25139	04 39 22.14	+25 10 28.4	6 675
1988 CW <sub>4</sub>	1955 10 25.43125	04 41 54.88	+24 10 20.5	6 675	1991 SX <sub>1</sub>	1955 10 25.40764	05 01 51.78	+25 44 48.7	6 675
1988 RX <sub>4</sub>	1951 11 28.31597	05 49 32.85	+20 46 36.1	6 675	1991 SX <sub>1</sub>	1955 10 25.43125	05 01 51.44	+25 44 48.7	6 675
1988 RX <sub>4</sub>	1951 11 28.32500	05 49 32.17	+20 46 38.1	6 675	1991 TQ	1950 12 11.22535	04 16 26.40	+21 26 09.1	6 675
1988 RX <sub>12</sub>	1951 08 07.28056	20 34 17.47	-04 30 51.1	6 675	1991 TQ	1950 12 11.25139	04 16 24.73	+21 26 08.4	6 675
1988 RX <sub>12</sub>	1951 08 07.30833	20 34 16.42	-04 30 58.5	6 675	1992 BW	1993 08 20.21771	20 17 54.40	-19 57 12.4	16.0 2 675
1988 RX <sub>12</sub>	1951 09 22.14236	20 16 30.76	-08 50 57.1	6 675	1992 BW	1993 08 20.24167	20 17 52.48	-19 56 54.5	2 675
1988 RX <sub>12</sub>	1951 09 22.17222	20 16 30.86	-08 51 05.7	6 675	1992 BW	1993 08 23.24705	20 14 02.96	-19 17 55.5	2 675
1988 UC	1953 10 31.26076	00 54 36.83	+04 34 54.2	6 675	1992 BW	1993 08 23.27622	20 14 01.01	-19 17 33.1	2 675
1988 UC	1953 10 31.28403	00 54 35.73	+04 34 52.3	6 675	1992 CA	1993 08 19.36510	22 13 28.49	-16 41 34.6	15.0 2 675
1988 VZ <sub>3</sub>	1950 12 11.22535	04 18 52.86	+25 46 29.7	6 675	1992 CA	1993 08 19.38906	22 13 27.18	-16 42 16.1	2 675
1988 VZ <sub>3</sub>	1950 12 11.25173	04 18 51.31	+25 46 16.6	6 675	1992 CA	1993 08 22.37083	22 10 56.70	-18 07 07.6	2 675
1989 CV	1955 10 25.40764	04 50 39.90	+26 32 10.5	6 675	1992 CA	1993 08 22.39149	22 10 55.53	-18 07 40.6	2 675
1989 CV	1955 10 25.43125	04 50 39.16	+26 32 11.5	6 675	1992 CJ	1993 08 22.47899	23 59 35.43	+05 49 20.5	16.0 2 675
1989 GH	1951 08 08.40556	00 41 26.97	-04 56 33.8	6 675	1992 CJ	1993 08 23.47656	23 58 59.85	+05 44 31.7	2 675
1989 PU	1993 08 20.28750	21 02 12.64	-19 29 15.6	16.0 2 675	1992 CJ	1993 08 23.49358	23 58 59.16	+05 44 27.6	2 675
1989 PU	1993 08 20.31042	21 02 11.56	-19 29 52.6	2 675	1992 NJ	1953 10 31.26076	01 06 40.31	+04 36 17.4	6 675
1989 PU	1993 08 22.28125	21 00 56.86	-20 25 34.4	2 675	1992 NJ	1953 10 31.28403	01 06 38.97	+04 36 21.3	6 675
1989 PU	1993 08 22.30990	21 00 55.79	-20 26 22.6	2 675	1992 PF <sub>2</sub>	1951 09 22.14236	20 14 22.28	-12 38 45.6	6 675
1989 WB <sub>2</sub>	1951 11 30.26597	03 36 26.42	+26 50 52.3	6 675	1992 PF <sub>2</sub>	1951 09 22.17222	20 14 22.97	-12 38 50.3	6 675
1989 WB <sub>2</sub>	1951 11 30.29445	03 36 24.73	+26 50 43.2	6 675	1992 TD <sub>1</sub>	1951 08 11.37569	23 45 02.96	+14 05 04.9	6 675
1990 BH <sub>1</sub>	1950 12 11.20973	04 24 23.15	+21 41 08.6	6 675	1992 TD <sub>1</sub>	1951 08 11.40000	23 45 02.81	+14 05 01.6	6 675
1990 BH <sub>1</sub>	1950 12 11.25139	04 24 20.70	+21 41 08.7	6 675	1993 CC	1951 08 08.40556	00 41 17.74	-08 04 54.4	6 675
1990 JN <sub>1</sub>	1953 10 31.26076	00 57 14.76	+07 18 11.7	6 675	1993 CC	1951 08 08.42986	00 41 17.66	-08 05 04.5	6 675
1990 JN <sub>1</sub>	1953 10 31.28403	00 57 13.81	+07 18 06.0	6 675	1993 KL	1991 11 01.37257	02 53 20.55	+15 18 54.7	17.0 2 675
1990 ON <sub>2</sub>	1950 12 11.25139	04 37 50.24	+27 15 38.1	6 675	1993 KL	1991 11 01.39635	02 53 18.66	+15 18 58.1	2 675
1990 ON <sub>2</sub>	1953 10 31.26076	00 54 33.43	+08 05 22.6	6 675	1993 KL	1991 11 03.37483	02 50 46.30	+15 23 41.4	2 675
1990 ON <sub>2</sub>	1953 10 31.28403	00 54 32.28	+08 05 16.5	6 675	1993 KL	1991 11 03.40920	02 50 43.41	+15 23 44.1	2 675
1990 ON <sub>2</sub>	1993 04 17.41076	16 38 30.10	-26 10 20.7	18.4 9 675	1993 KM	1993 06 21.29392	16 58 48.55	+14 41 31.0	16.0 2 675
1990 ON <sub>2</sub>	1993 04 17.45677	16 38 29.55	-26 10 28.1	9 675	1993 KM	1993 06 21.32674	16 58 47.44	+14 41 23.2	2 675
1990 OQ <sub>3</sub>	1993 04 17.37431	15 15 50.86	-25 46 41.7	17.2 9 675	1993 KM	1993 06 24.29688	16 57 23.07	+14 28 06.7	2 675
1990 OQ <sub>3</sub>	1993 04 17.40330	15 15 49.59	-25 46 41.0	9 675	1993 KM	1993 06 24.33316	16 57 22.03	+14 27 55.5	2 675
1990 RR <sub>2</sub>	1993 04 17.47049	16 08 24.20	-14 54 58.9	18.2 9 675	1993 MF	1993 08 20.41632	23 37 52.68	+41 26 31.5	14.0 2 675
1990 VD <sub>4</sub>	1949 11 23.22847	01 34 59.19	+07 13 10.4	6 675	1993 MF	1993 08 20.43611	23 37 55.31	+41 26 32.4	2 675
1990 VD <sub>4</sub>	1949 11 23.25590	01 34 58.78	+07 13 07.9	6 675	1993 MF	1993 08 23.43472	23 45 13.69	+41 20 31.1	2 675
1991 AP <sub>1</sub>	1993 08 20.32413	21 39 29.47	-14 23 58.6	2 675	1993 MF	1993 08 23.45972	23 45 16.82	+41 20 25.1	2 675
1991 AP <sub>1</sub>	1993 08 20.34740	21 39 28.44	-14 24 06.0	2 675	1993 MO	1993 07 21.19288	16 56 40.67	-17 22 58.0	16.3 3 675
1991 AP <sub>1</sub>	1993 08 23.33819	21 36 25.40	-14 36 40.2	2 675	1993 MO	1993 07 22.19114	16 56 59.92	-18 34 39.2	3 675
1991 AP <sub>1</sub>	1993 08 23.36528	21 36 23.89	-14 36 42.7	2 675	1993 MO	1993 07 22.23350	16 57 00.36	-18 37 43.0	3 675
1991 BJ	1950 12 11.22535	04 15 30.24	+22 49 24.4	6 675	1993 MS <sub>1</sub>	1990 10 17.48750	03 16 39.05	+20 13 10.3	16.5 2 675
1991 BJ	1950 12 11.25139	04 15 28.60	+22 49 22.4	6 675	1993 MS <sub>1</sub>	1990 10 17.51493	03 16 37.67	+20 12 58.0	2 675
1991 BV	1951 08 08.40556	00 28 31.12	-04 55 58.9	6 675	1993 MS <sub>1</sub>	1990 12 18.14948	02 30 12.42	+13 17 36.8	17.3 2 675
1991 BV	1951 08 08.42986	00 28 31.28	-04 56 07.4	6 675	1993 MS <sub>1</sub>	1990 12 18.17257	02 30 11.99	+13 17 31.6	2 675
1991 CU <sub>1</sub>	1955 10 25.40764	04 55 30.86	+26 35 06.1	6 675	1993 NH	1993 06 17.29688	17 48 04.26	-04 55 41.7	17.6 3 675
1991 CU <sub>1</sub>	1955 10 25.43125	04 55 30.39	+26 35 08.4	6 675	1993 NH	1993 06 17.34444	17 48 00.83	-04 54 34.2	3 675

1993 NH	1993 08 19.19323	17 25 42.19	+07 07 26.0	16.5	2 675	1993 QN	* 1993 08 20.41632	00 05 56.10	+39 36 51.2	16.0	2 675
1993 NH	1993 08 19.21753	17 25 43.38	+07 07 27.3		2 675	1993 QN	1993 08 20.43611	00 05 55.00	+39 37 23.0		2 675
1993 NH	1993 08 21.16753	17 27 25.37	+07 06 50.3		2 675	1993 QN	1993 08 23.43472	00 03 20.72	+41 02 18.8		2 675
1993 NH	1993 08 21.19115	17 27 26.59	+07 06 49.0		2 675	1993 QN	1993 08 23.45972	00 03 19.43	+41 03 00.4		2 675
1993 NJ	* 1993 07 15.28038	18 54 07.38	-03 07 28.1	15.0	2 675	1993 QO	* 1993 08 20.33125	21 50 34.68	+00 12 12.2	15.5	2 675
1993 NJ	1993 07 15.30503	18 54 06.09	-03 07 32.6	15.3	2 675	1993 QO	1993 08 20.35451	21 50 32.30	+00 12 31.0		2 675
1993 NJ	1993 07 17.26458	18 52 30.17	-03 13 27.6	15.0	2 675	1993 QO	1993 08 24.26302	21 44 20.51	+01 04 20.7		2 675
1993 NJ	1993 07 17.28872	18 52 29.10	-03 13 32.0	15.6	2 675	1993 QO	1993 08 24.28542	21 44 18.15	+01 04 38.9		2 675
1993 NJ	1993 08 21.20990	18 38 18.57	-06 24 57.6	16.0	2 675	1993 QP	* 1993 08 23.39410	23 04 23.66	+18 15 01.1	17.0	2 675
1993 NJ	1993 08 21.23420	18 38 18.56	-06 25 07.6		2 675	1993 QP	1993 08 23.41649	23 04 25.11	+18 15 54.4		2 675
1993 NJ	1993 08 23.23629	18 38 31.35	-06 38 15.9		2 675	1993 QP	1993 08 24.31319	23 05 28.22	+18 52 35.9		2 675
1993 NJ	1993 08 23.26528	18 38 31.94	-06 38 29.4		2 675	1993 QP	1993 08 24.33594	23 05 29.31	+18 53 32.9		2 675
1993 OL	1993 08 14.15798	17 23 51.76	-08 38 55.8	16	3 675	1993 QQ	* 1993 08 20.28750	21 05 03.60	-23 16 36.7	15.5	2 675
1993 OL	1993 08 14.18506	17 23 39.24	-08 36 49.5		3 675	1993 QQ	1993 08 22.28125	21 02 30.20	-22 39 25.7		2 675
1993 OL	1993 08 15.15850	17 16 19.95	-07 22 36.7		3 675	1993 QQ	1993 08 22.30990	21 02 27.83	-22 38 53.9		2 675
1993 OL	1993 08 16.15815	17 08 56.95	-06 06 25.2		3 675	1993 QR	* 1993 08 19.35903	22 06 07.16	-05 37 22.4	16.5	2 675
1993 OL	1993 08 17.15954	17 01 42.56	-04 50 30.0		3 675	1993 QR	1993 08 19.38299	22 06 05.75	-05 37 41.7		2 675
1993 OL	1993 08 18.22239	16 54 11.84	-03 30 43.6		3 675	1993 QR	1993 08 22.36372	22 03 16.77	-06 19 54.6		2 675
1993 OL	1993 08 23.22865	16 21 25.38	+02 26 52.8		2 675	1993 QR	1993 08 22.38490	22 03 15.52	-06 20 12.6		2 675
1993 OL	1993 08 23.23282	16 21 23.92	+02 27 11.4		2 675	1993 QS	* 1993 08 19.35903	22 07 26.60	-03 21 17.1	15.0	2 675
1993 OP	1993 08 19.31563	20 57 02.97	+14 11 35.5	16.0	2 675	1993 QS	1993 08 19.38299	22 07 25.83	-03 21 38.2		2 675
1993 OP	1993 08 19.34045	20 57 00.90	+14 11 46.2		2 675	1993 QS	1993 08 22.36372	22 05 53.61	-04 10 32.6		2 675
1993 OP	1993 08 22.26892	20 53 10.32	+14 31 14.0		2 675	1993 QS	1993 08 22.38490	22 05 52.93	-04 10 52.0		2 675
1993 OP	1993 08 22.29809	20 53 08.05	+14 31 26.4		2 675	1993 QT	* 1993 08 19.41354	23 00 08.20	-13 46 24.4	15.5	2 675
1993 OV	1993 08 19.20521	18 27 28.74	+03 16 10.9	16.0	2 675	1993 QT	1993 08 19.43750	23 00 05.91	-13 46 12.5		2 675
1993 OV	1993 08 19.22951	18 27 28.52	+03 16 05.0		2 675	1993 QT	1993 08 21.39306	22 57 03.10	-13 30 07.8		2 675
1993 OV	1993 08 21.17378	18 27 08.56	+03 09 04.7		2 675	1993 QT	1993 08 21.42431	22 56 59.97	-13 29 52.9		2 675
1993 OV	1993 08 21.19670	18 27 08.22	+03 08 57.7		2 675	1993 QU	* 1993 08 19.41354	23 13 39.33	-13 31 34.8	16.0	2 675
1993 OC <sub>2</sub>	1993 08 19.37674	22 20 13.63	-14 29 39.2	16.0	2 675	1993 QU	1993 08 19.43750	23 13 37.61	-13 31 21.4		2 675
1993 OC <sub>2</sub>	1993 08 19.40035	22 20 11.18	-14 29 33.3		2 675	1993 QU	1993 08 21.39306	23 11 22.40	-13 14 23.7		2 675
1993 OC <sub>2</sub>	1993 08 24.26858	22 12 27.50	-14 04 27.8		2 675	1993 QU	1993 08 21.42431	23 11 20.20	-13 14 06.2		2 675
1993 OC <sub>2</sub>	1993 08 24.29097	22 12 25.31	-14 04 20.3		2 675	1993 QV	* 1993 08 19.41354	23 14 40.33	-16 09 36.0	16.0	2 675
1993 OD <sub>2</sub>	1993 08 19.37674	22 48 25.96	-14 55 08.0	15.0	2 675	1993 QV	1993 08 19.43750	23 14 39.46	-16 09 53.6		2 675
1993 OD <sub>2</sub>	1993 08 19.40035	22 48 25.02	-14 55 36.2		2 675	1993 QV	1993 08 21.39306	23 13 35.80	-16 33 09.8		2 675
1993 OD <sub>2</sub>	1993 08 21.35747	22 47 21.51	-15 28 34.1		2 675	1993 QV	1993 08 21.42431	23 13 34.55	-16 33 34.6		2 675
1993 OD <sub>2</sub>	1993 08 21.38003	22 47 20.71	-15 28 53.7		2 675	1993 QW	* 1993 08 22.42882	23 46 14.26	-05 20 28.2	16.5	2 675
1993 OZ <sub>2</sub>	* 1993 07 23.41753	23 08 12.80	-23 01 02.7	17.5	3 675	1993 QW	1993 08 22.45625	23 46 13.97	-05 21 18.6		2 675
1993 OZ <sub>2</sub>	1993 07 23.46111	23 08 14.87	-23 01 58.0		3 675	1993 QW	1993 08 24.35330	23 45 56.02	-06 19 08.3		2 675
1993 OZ <sub>2</sub>	1993 08 13.34166	23 22 00.51	-31 31 18.0	17	3 675	1993 QW	1993 08 24.37604	23 45 55.69	-06 19 50.9		2 675
1993 OZ <sub>2</sub>	1993 08 13.37430	23 22 01.03	-31 32 07.9		3 675	1993 QX	* 1993 08 23.44774	00 22 08.33	-09 34 00.2	16.5	2 675
1993 OZ <sub>2</sub>	1993 08 14.35243	23 22 23.47	-31 57 38.5		3 675	1993 QX	1993 08 23.47101	00 22 08.27	-09 34 27.7		2 675
1993 OZ <sub>2</sub>	1993 08 14.37969	23 22 23.98	-31 58 21.2		3 675	1993 QX	1993 08 24.37066	00 22 04.65	-09 53 07.8		2 675
1993 OA <sub>3</sub>	* 1993 07 26.41545	22 53 58.67	+25 57 36.1	16.0	3 675	1993 QY	1993 08 19.41944	23 08 24.34	-05 17 42.4	15.0	2 675
1993 OA <sub>3</sub>	1993 07 26.45729	22 53 57.88	+25 58 43.3		3 675	1993 QY	1993 08 19.44358	23 08 23.83	-05 18 17.8		2 675
1993 OA <sub>3</sub>	1993 08 13.39583	22 43 30.24	+33 02 30.6	15.7	3 675	1993 QY	1993 08 22.40625	23 07 26.31	-06 36 40.0		2 675
1993 OA <sub>3</sub>	1993 08 13.42621	22 43 28.60	+33 03 06.8		3 675	1993 QY	1993 08 22.43420	23 07 25.61	-06 37 26.3		2 675
1993 OA <sub>3</sub>	1993 08 14.33194	22 42 38.60	+33 20 56.3		3 675	1993 QZ	* 1993 08 20.33125	22 13 03.66	-00 05 01.2	16.0	2 675
1993 OA <sub>3</sub>	1993 08 15.36510	22 41 39.14	+33 40 44.1		3 675	1993 QZ	1993 08 20.35417	22 13 02.76	-00 05 28.3		2 675
1993 OA <sub>3</sub>	1993 08 16.30208	22 40 43.75	+33 58 12.3		3 675	1993 QZ	1993 08 21.41875	22 12 21.17	-00 26 55.9		2 675
1993 PC <sub>6</sub>	1993 08 19.37083	22 13 13.16	-04 34 17.9	16.0	2 675	1993 QA <sub>1</sub>	* 1993 08 19.36510	21 56 20.57	-20 00 27.3	15.5	2 675
1993 PC <sub>6</sub>	1993 08 19.39462	22 13 12.43	-04 34 51.7		2 675	1993 QA <sub>1</sub>	1993 08 19.38906	21 56 19.44	-20 00 41.9		2 675
1993 PC <sub>6</sub>	1993 08 22.37813	22 11 26.63	-05 53 04.4		2 675	1993 QA <sub>1</sub>	1993 08 22.37083	21 54 04.90	-20 33 11.6		2 675

1993 QA <sub>1</sub>	1993 08 22.39149	21 54 04.06	-20 33 22.3		2 675	2096 P-L	1960 09 29.39514	00 45 05.75	+06 00 23.9		4 675
1993 QB <sub>1</sub>	* 1993 08 19.36510	21 57 28.39	-19 19 52.5	15.5	2 675	2096 P-L	1960 10 17.31529	00 30 14.15	+03 49 08.4		4 675
1993 QB <sub>1</sub>	1993 08 19.38906	21 57 27.02	-19 20 01.0		2 675	2096 P-L	1960 10 22.26809	00 26 47.22	+03 16 39.3		4 675
1993 QB <sub>1</sub>	1993 08 22.37083	21 54 50.64	-19 38 28.1		2 675	2096 P-L	1960 10 25.30351	00 24 56.25	+02 58 30.3		4 675
1993 QB <sub>1</sub>	1993 08 22.39149	21 54 49.53	-19 38 33.0		2 675	2096 P-L	1960 10 26.35766	00 24 20.83	+02 52 33.4		4 675
1993 QC <sub>1</sub>	* 1993 08 19.36510	21 58 22.94	-19 47 36.2	16.5	2 675	2604 P-L	1950 12 11.22535	04 27 41.94	+26 03 40.5		6 675
1993 QC <sub>1</sub>	1993 08 19.38906	21 58 21.64	-19 47 45.6		2 675	2604 P-L	1950 12 11.25139	04 27 39.85	+26 03 38.6		6 675
1993 QC <sub>1</sub>	1993 08 22.37083	21 55 51.11	-20 03 20.3		2 675	2777 P-L	1949 11 23.22847	01 55 54.31	+07 49 03.0		6 675
1993 QC <sub>1</sub>	1993 08 22.39149	21 55 50.20	-20 03 23.8		2 675	2777 P-L	1949 11 23.25590	01 55 53.23	+07 48 57.8		6 675
1993 QD <sub>1</sub>	* 1993 08 19.36510	22 02 58.50	-19 15 24.6	16.0	2 675	4017 P-L	1951 08 08.40556	00 32 45.81	-02 58 43.7		6 675
1993 QD <sub>1</sub>	1993 08 19.38906	22 02 56.72	-19 15 18.1		2 675	4017 P-L	1951 08 08.42986	00 32 45.89	-02 58 35.4		6 675
1993 QD <sub>1</sub>	1993 08 22.37083	21 59 29.05	-18 59 16.7		2 675	4521 P-L	* 1960 09 24.41183	00 23 32.43	+03 39 47.1	17.6	4 675
1993 QD <sub>1</sub>	1993 08 22.39149	21 59 27.60	-18 59 08.8		2 675	4521 P-L	1960 09 26.31530	00 22 01.54	+03 30 50.6		4 675
1993 QE <sub>1</sub>	* 1993 08 19.36510	22 17 21.10	-22 03 37.0	15.0	2 675	4521 P-L	1960 09 27.40836	00 21 08.97	+03 25 43.5		4 675
1993 QE <sub>1</sub>	1993 08 19.38906	22 17 19.95	-22 03 53.9		2 675	4521 P-L	1960 09 28.39725	00 20 21.59	+03 21 01.3		4 675
1993 QE <sub>1</sub>	1993 08 22.37083	22 15 10.52	-22 40 53.6		2 675	4521 P-L	1960 10 17.27085	00 06 30.21	+01 56 50.6		4 675
1993 QE <sub>1</sub>	1993 08 22.39149	22 15 09.69	-22 41 05.5		2 675	4521 P-L	1960 10 22.22293	00 03 39.53	+01 39 03.8		4 675
1993 QB <sub>3</sub>	* 1993 08 20.32413	21 43 23.21	-12 48 16.1	16.0	2 675	4521 P-L	1960 10 24.35836	00 02 34.61	+01 32 15.3		4 675
1993 QB <sub>3</sub>	1993 08 20.34740	21 43 21.73	-12 48 51.2		2 675	4521 P-L	1960 10 26.32573	00 01 40.17	+01 26 29.5		4 675
1993 QB <sub>3</sub>	1993 08 23.33819	21 40 55.54	-14 00 31.6		2 675	4600 P-L	1949 11 23.22847	01 43 16.77	+07 55 08.0		6 675
1993 QB <sub>3</sub>	1993 08 23.36528	21 40 54.33	-14 01 12.3		2 675	4600 P-L	1949 11 23.25590	01 43 16.06	+07 55 04.9		6 675
1993 QC <sub>3</sub>	* 1993 08 21.26962	20 39 09.65	-18 45 06.3	17.0	2 675	2245 T-1	1950 12 11.22535	04 26 25.72	+22 15 20.4		6 675
1993 QC <sub>3</sub>	1993 08 21.29201	20 39 08.36	-18 45 39.0		2 675	2245 T-1	1950 12 11.25139	04 26 24.00	+22 15 20.0		6 675
1993 QC <sub>3</sub>	1993 08 23.28212	20 37 48.57	-19 27 35.6		2 675	1001 T-2	1973 09 19.18611	00 05 38.69	+00 36 19.5		4 675
1993 QC <sub>3</sub>	1993 08 23.31024	20 37 47.60	-19 28 11.8		2 675	1001 T-2	1973 09 19.23785	00 05 36.14	+00 36 01.4		4 675
1993 QW <sub>4</sub>	* 1993 08 19.35903	22 10 35.16	-07 16 15.8	16.5	2 675	1001 T-2	1973 09 20.22847	00 04 51.45	+00 30 25.4		4 675
1993 QW <sub>4</sub>	1993 08 19.38299	22 10 33.05	-07 16 03.1		2 675	1001 T-2	1973 09 24.34688	00 01 44.21	+00 06 48.5		4 675
1993 QW <sub>4</sub>	1993 08 22.36372	22 06 10.79	-06 49 41.7		2 675	1001 T-2	1973 09 24.41597	00 01 40.94	+00 06 25.0		4 675
1993 QW <sub>4</sub>	1993 08 22.38490	22 06 08.81	-06 49 31.3		2 675	1001 T-2	1973 09 25.24375	00 01 03.36	+00 01 40.1		4 675
1993 QX <sub>4</sub>	* 1993 08 19.41944	23 03 21.28	-04 57 37.6	16.0	2 675	1001 T-2	1973 09 25.30729	00 01 00.45	+00 01 17.9		4 675
1993 QX <sub>4</sub>	1993 08 19.44358	23 03 20.26	-04 57 51.4		2 675	1001 T-2	* 1973 09 29.25330	23 58 01.75	-00 21 13.1	18.2	4 675
1993 QX <sub>4</sub>	1993 08 22.40625	23 01 21.32	-05 27 47.4		2 675	1001 T-2	1973 09 29.31806	23 57 58.70	-00 21 35.2		4 675
1993 QX <sub>4</sub>	1993 08 22.43420	23 01 20.11	-05 28 04.2		2 675	1001 T-2	1973 10 04.28958	23 54 20.18	-00 49 11.6		4 675
1993 QY <sub>4</sub>	* 1993 08 21.44219	23 13 12.52	+08 49 24.4	17.0	2 675	1001 T-2	1973 10 04.31493	23 54 18.96	-00 49 17.8		4 675
1993 QY <sub>4</sub>	1993 08 21.46632	23 13 10.51	+08 49 34.1		2 675	1001 T-2	1973 10 04.35208	23 54 17.41	-00 49 31.8		4 675
1993 QY <sub>4</sub>	1993 08 22.41215	23 11 59.43	+08 55 43.0		2 675	1001 T-2	1973 10 04.37674	23 54 16.27	-00 49 36.5		4 675
1993 QY <sub>4</sub>	1993 08 22.44010	23 11 57.27	+08 55 53.8		2 675	1296 T-2	1973 09 19.19948	00 26 47.01	+01 41 07.3		4 675
1993 QZ <sub>4</sub>	* 1993 08 19.36510	21 57 30.50	-19 49 50.9	16.5	2 675	1296 T-2	1973 09 19.22500	00 26 45.93	+01 41 01.1		4 675
1993 QZ <sub>4</sub>	1993 08 19.38906	21 57 29.00	-19 49 53.3		2 675	1296 T-2	1973 09 19.25006	00 26 44.55	+01 40 50.4		4 675
1993 QZ <sub>4</sub>	1993 08 22.37083	21 54 21.11	-19 55 37.8		2 675	1296 T-2	1973 09 20.30278	00 25 52.33	+01 34 29.8		4 675
1993 QZ <sub>4</sub>	1993 08 22.39149	21 54 19.69	-19 55 37.3		2 675	1296 T-2	1973 09 24.34688	00 22 29.28	+01 09 53.7		4 675
1993 QA <sub>5</sub>	* 1993 08 22.49705	23 36 53.93	+14 53 25.2		2 675	1296 T-2	1973 09 24.38750	00 22 27.03	+01 09 41.6		4 675
1993 QA <sub>5</sub>	1993 08 24.31892	23 35 55.65	+14 47 52.5		2 675	1296 T-2	1973 09 24.45434	00 22 23.58	+01 09 15.5		4 675
1993 QA <sub>5</sub>	1993 08 24.34167	23 35 55.01	+14 47 47.8		2 675	1296 T-2	1973 09 25.28125	00 21 41.86	+01 04 12.7		4 675
1993 QB <sub>5</sub>	* 1993 08 22.46788	23 26 21.61	+10 16 39.0	15.5	2 675	1296 T-2	1973 09 25.34601	00 21 38.59	+01 03 48.6		4 675
1993 QB <sub>5</sub>	1993 08 22.49705	23 26 20.81	+10 16 25.8		2 675	1296 T-2	* 1973 09 29.25330	00 18 19.90	+00 39 59.4	19.3	4 675
1993 QB <sub>5</sub>	1993 08 24.31892	23 25 29.68	+10 04 00.0		2 675	1296 T-2	1973 09 29.31806	00 18 16.45	+00 39 36.0		4 675
1993 QB <sub>5</sub>	1993 08 24.34167	23 25 28.92	+10 03 50.3		2 675	1296 T-2	1973 09 30.21007	00 17 31.43	+00 34 12.7		4 675
2096 P-L	* 1960 09 24.45000	00 49 09.56	+06 35 05.7	17.8	4 675	1296 T-2	1973 09 30.27431	00 17 28.11	+00 33 49.4		4 675
2096 P-L	1960 09 26.37010	00 47 36.73	+06 21 53.1		4 675	1296 T-2	1973 10 04.28958	00 14 07.23	+00 09 58.1		4 675
2096 P-L	1960 09 26.37988	00 47 36.29	+06 21 48.9		4 675	1296 T-2	1973 10 04.35208	00 14 03.91	+00 09 34.6		4 675
2096 P-L	1960 09 28.43822	00 45 53.97	+06 07 14.4		4 675	2189 T-2	1973 09 19.19948	00 44 26.38	+06 46 16.4		4 675

2189 T-2	1973 09 19.25006	00 44 23.85	+06 46 01.9	4 675	(1117)	1951 08 11.42639	00 15 27.42	-00 20 35.0	6 675
2189 T-2	1973 09 20.26458	00 43 34.62	+06 41 01.9	4 675	(1117)	1951 08 11.45069	00 15 27.40	-00 20 41.4	6 675
2189 T-2	1973 09 24.36181	00 40 09.40	+06 20 00.0	4 675	(1143)	1951 11 28.31597	05 50 34.38	+20 48 13.4	6 675
2189 T-2	1973 09 25.25642	00 39 23.91	+06 15 12.8	4 675	(1143)	1951 11 28.34236	05 50 33.58	+20 48 13.7	6 675
2189 T-2	1973 09 25.32031	00 39 20.57	+06 14 52.2	4 675	(1159)	1951 08 11.42639	00 01 06.36	-02 23 13.8	6 675
2189 T-2	1973 09 29.26632	00 35 56.11	+05 53 19.6	4 675	(1159)	1951 08 11.45069	00 01 05.59	-02 23 09.0	6 675
2189 T-2	* 1973 09 29.33073	00 35 52.69	+05 52 59.7	18.4	4 675	1951 08 11.42639	00 06 17.74	-01 35 49.1	6 675
2189 T-2	1973 09 30.22257	00 35 06.29	+05 47 59.0	4 675	(1217)	1951 08 11.45069	00 06 17.25	-01 35 56.2	6 675
2189 T-2	1973 09 30.28785	00 35 02.83	+05 47 35.5	4 675	(1299)	1951 08 11.42639	00 11 34.20	+01 09 29.1	6 675
2189 T-2	1973 10 04.30208	00 31 34.03	+05 25 02.5	4 675	(1299)	1951 08 11.45069	00 11 34.13	+01 09 23.4	6 675
2189 T-2	1973 10 04.36476	00 31 30.65	+05 24 40.0	4 675	(1319)	1951 08 11.42639	23 56 30.32	+03 32 27.9	6 675
2189 T-2	1973 10 05.32917	00 30 41.11	+05 19 14.9	4 675	(1319)	1951 08 11.44201	23 56 29.90	+03 32 27.1	6 675
2189 T-2	1973 10 05.39132	00 30 37.78	+05 18 53.6	4 675	(1324)	1951 11 30.26597	03 48 17.59	+26 43 43.3	6 675
2232 T-2	1951 08 11.42639	00 10 07.68	+02 28 37.6	6 675	(1324)	1951 11 30.29098	03 48 15.81	+26 43 36.2	6 675
2232 T-2	1951 08 11.45069	00 10 07.53	+02 28 34.5	6 675	(1382)	1950 12 11.22188	04 21 05.72	+24 02 53.5	6 675
3104 T-3	1953 10 31.26076	01 00 40.38	+04 31 39.8	6 675	(1382)	1950 12 11.25173	04 21 03.78	+24 02 49.3	6 675
3104 T-3	1953 10 31.28403	01 00 39.80	+04 31 34.2	6 675	(1446)	1953 10 31.26076	00 52 18.91	+06 31 10.5	6 675
3395 T-3	1949 11 19.25833	03 25 02.56	+11 54 14.7	6 675	(1446)	1953 10 31.28403	00 52 17.79	+06 31 04.8	6 675
3395 T-3	1949 11 19.28646	03 25 00.79	+11 54 05.6	6 675	(1448)	1955 10 25.40764	05 04 15.06	+24 48 07.1	6 675
4391 T-3	1949 11 19.25833	03 16 59.42	+10 58 55.2	6 675	(1448)	1955 10 25.43125	05 04 15.01	+24 48 12.5	6 675
4391 T-3	1949 11 19.28646	03 16 57.38	+10 58 57.5	6 675	(1470)	1950 12 11.22535	04 26 38.86	+26 11 10.5	6 675
(210)	1951 11 30.26597	03 40 09.62	+23 58 21.0	6 675	(1470)	1950 12 11.25173	04 26 37.48	+26 11 08.3	6 675
(210)	1951 11 30.29011	03 40 08.17	+23 58 19.8	6 675	(1571)	1953 12 31.10590	00 42 20.05	+21 51 46.7	6 675
(271)	1950 12 11.22535	04 32 23.45	+27 26 11.6	6 675	(1571)	1953 12 31.13194	00 42 21.26	+21 51 45.8	6 675
(271)	1950 12 11.25139	04 32 21.92	+27 26 05.6	6 675	(1622)	1953 10 31.28403	00 44 44.56	+08 28 42.9	6 675
(272)	1951 11 30.26597	03 29 07.02	+21 33 41.3	6 675	(1645)	1950 12 11.22535	04 17 34.18	+21 51 09.0	6 675
(272)	1951 11 30.29445	03 29 05.43	+21 33 37.6	6 675	(1645)	1950 12 11.25139	04 17 32.91	+21 51 05.2	6 675
(344)	1955 10 25.40764	04 41 16.29	+27 11 30.5	6 675	(1647)	1951 11 28.31597	05 33 55.74	+20 55 54.7	6 675
(344)	1955 10 25.43125	04 41 15.29	+27 11 35.6	6 675	(1647)	1951 11 28.34583	05 33 54.56	+20 55 52.6	6 675
(418)	1955 10 25.40764	04 58 47.90	+24 39 54.7	6 675	(1692)	1951 11 28.31597	05 57 39.25	+20 22 59.1	6 675
(418)	1955 10 25.43125	04 58 47.52	+24 39 50.3	6 675	(1692)	1951 11 28.34236	05 57 38.03	+20 22 57.6	6 675
(423)	1950 12 11.22535	04 34 13.62	+22 41 29.2	6 675	(1712)	1953 08 11.43993	23 54 22.49	+24 23 34.1	6 675
(423)	1950 12 11.25139	04 34 12.30	+22 41 32.3	6 675	(1712)	1953 08 11.46319	23 54 21.81	+24 23 38.5	6 675
(569)	1953 10 31.26076	01 08 20.03	+09 37 57.1	6 675	(1767)	1951 08 07.28056	20 44 26.16	-04 06 02.4	6 675
(569)	1953 10 31.28403	01 08 18.84	+09 37 50.3	6 675	(1767)	1951 08 07.30833	20 44 24.96	-04 06 09.5	6 675
(580)	1951 11 28.31597	05 30 49.85	+21 10 16.0	6 675	(1823)	1955 10 25.40764	05 01 54.71	+26 46 30.8	6 675
(580)	1951 11 28.34236	05 30 48.51	+21 10 18.0	6 675	(1823)	1955 10 25.43125	05 01 53.96	+26 46 31.9	6 675
(684)	1951 08 11.42639	23 55 20.14	+00 29 34.5	6 675	(1894)	1951 08 11.42639	00 02 04.89	+01 38 31.2	6 675
(684)	1951 08 11.45069	23 55 19.59	+00 29 36.9	6 675	(1894)	1951 08 11.45069	00 02 04.45	+01 38 28.8	6 675
(721)	1951 08 08.40556	00 37 24.82	-04 46 21.2	6 675	(1974)	1951 08 07.30833	20 33 34.70	-08 37 37.2	6 675
(721)	1951 08 08.42986	00 37 24.75	-04 46 22.8	6 675	(1974)	1951 09 22.14236	20 16 39.80	-12 46 02.4	6 675
(852)	1953 10 31.26076	01 03 19.58	+05 38 49.6	6 675	(1974)	1951 09 22.17222	20 16 39.92	-12 46 09.6	6 675
(852)	1953 10 31.28403	01 03 17.69	+05 39 03.5	6 675	(2034)	1951 08 08.40556	00 43 02.73	-03 05 27.4	6 675
(896)	1950 12 11.22535	04 16 45.92	+22 12 17.8	6 675	(2034)	1951 08 08.42986	00 43 02.88	-03 05 25.6	6 675
(896)	1950 12 11.25139	04 16 44.33	+22 12 09.0	6 675	(2045)	1953 10 31.26076	00 58 03.81	+08 58 19.2	6 675
(996)	1953 10 31.26076	01 02 05.39	+07 12 42.0	6 675	(2045)	1953 10 31.28403	00 58 02.57	+08 58 14.8	6 675
(996)	1953 10 31.28403	01 02 04.40	+07 12 36.9	6 675	(2067)	1949 11 23.22847	01 38 21.66	+06 22 35.7	6 675
(1082)	1949 11 23.22847	01 51 39.21	+08 49 14.2	6 675	(2067)	1949 11 23.25590	01 38 20.87	+06 22 32.8	6 675
(1082)	1949 11 23.25590	01 51 38.45	+08 49 10.9	6 675	(2079)	1953 12 31.10590	00 57 39.11	+18 56 40.6	6 675
(1090)	1951 08 07.30833	20 42 35.83	-08 05 56.6	6 675	(2079)	1953 12 31.13194	00 57 40.09	+18 56 45.9	6 675
(1109)	1955 10 25.40764	05 00 28.03	+24 59 46.8	6 675	(2092)	1950 12 11.22535	04 15 50.00	+21 03 27.7	6 675
(1109)	1955 10 25.43125	05 00 27.45	+24 59 46.0	6 675	(2215)	1950 12 11.22535	04 26 35.15	+22 11 49.8	6 675

(2215)	1950 12 11.25139	04 26 33.44	+22 11 58.3	6 675	(3518)	1951 08 08.40556	00 41 06.45	-02 56 30.2	6 675
(2314)	1953 10 31.26076	01 06 41.09	+05 32 20.9	6 675	(3518)	1951 08 08.42986	00 41 06.83	-02 56 41.7	6 675
(2314)	1953 10 31.28403	01 06 39.63	+05 32 19.3	6 675	(3526)	1949 11 23.22847	01 43 04.13	+09 28 28.7	6 675
(2363)	1953 08 11.43993	23 58 33.42	+23 01 45.6	6 675	(3526)	1949 11 23.25590	01 43 03.16	+09 28 28.2	6 675
(2363)	1953 08 11.46319	23 58 33.06	+23 01 44.2	6 675	(3547)	1951 11 30.26597	03 30 10.20	+22 57 20.5	6 675
(2446)	1953 10 31.26076	00 53 37.27	+05 50 27.2	6 675	(3547)	1951 11 30.29445	03 30 08.67	+22 57 11.9	6 675
(2446)	1953 10 31.28403	00 53 36.38	+05 50 22.9	6 675	(3571)	1955 10 25.40764	04 50 26.50	+23 19 36.4	6 675
(2466)	1951 11 28.31597	05 54 54.20	+15 29 11.9	6 675	(3571)	1955 10 25.43125	04 50 25.92	+23 19 36.5	6 675
(2466)	1951 11 28.34236	05 54 52.93	+15 29 09.6	6 675	(3647)	1951 08 08.40556	00 30 29.97	-04 53 54.2	6 675
(2490)	1949 11 23.22847	01 38 54.09	+07 33 51.5	6 675	(3647)	1951 08 08.42986	00 30 30.23	-04 54 00.7	6 675
(2490)	1949 11 23.25590	01 38 53.51	+07 33 37.7	6 675	(3664)	1951 11 30.26597	03 38 59.46	+21 37 22.3	6 675
(2500)	1951 11 30.26597	03 36 01.41	+22 01 34.7	6 675	(3664)	1951 11 30.29445	03 38 57.95	+21 37 14.2	6 675
(2500)	1951 11 30.29445	03 35 59.41	+22 01 32.4	6 675	(3695)	1951 08 07.30833	20 37 23.91	-07 29 50.2	6 675
(2501)	1955 10 25.40764	05 07 01.01	+26 28 23.3	6 675	(3708)	1953 12 31.10590	00 50 31.78	+20 37 27.0	6 675
(2501)	1955 10 25.43125	05 07 00.40	+26 28 25.3	6 675	(3708)	1953 12 31.13194	00 50 32.29	+20 37 24.4	6 675
(2522)	1950 12 11.22535	04 24 38.19	+26 35 18.9	6 675	(3713)	1951 11 28.31597	05 47 57.08	+15 15 09.3	6 675
(2522)	1950 12 11.25173	04 24 36.76	+26 35 12.2	6 675	(3713)	1951 11 28.34236	05 47 55.85	+15 15 11.4	6 675
(2529)	1953 10 31.26076	00 54 45.59	+06 25 22.0	6 675	(3780)	1951 08 11.42639	00 18 36.59	+00 16 08.5	6 675
(2529)	1953 10 31.28403	00 54 44.72	+06 25 14.6	6 675	(3780)	1951 08 11.45069	00 18 36.35	+00 16 05.3	6 675
(2535)	1951 11 28.31597	05 52 51.70	+17 15 06.2	6 675	(3784)	1956 03 15.36379	13 03 38.40	+14 07 17.8	6 675
(2535)	1951 11 28.34236	05 52 50.32	+17 15 03.5	6 675	(3784)	1956 03 15.38576	13 03 37.53	+14 07 27.0	6 675
(2552)	1950 12 11.22535	04 27 29.80	+23 24 02.0	6 675	(3798)	1955 10 25.40764	05 02 55.35	+26 27 59.3	6 675
(2552)	1950 12 11.25139	04 27 27.93	+23 23 57.6	6 675	(3798)	1955 10 25.43125	05 02 54.78	+26 28 00.7	6 675
(2555)	1951 08 11.42639	23 56 53.53	+00 54 01.7	6 675	(3811)	1953 12 31.10590	01 03 58.75	+19 33 31.6	6 675
(2555)	1951 08 11.45069	23 56 53.11	+00 54 00.2	6 675	(3811)	1953 12 31.13194	01 04 00.16	+19 33 35.4	6 675
(2616)	1951 08 11.42639	00 18 30.06	+01 14 43.6	6 675	(3829)	1949 11 19.25833	03 26 55.85	+10 31 30.2	6 675
(2616)	1951 08 11.45069	00 18 30.06	+01 14 42.2	6 675	(3829)	1949 11 19.28646	03 26 54.42	+10 31 21.7	6 675
(2740)	1953 10 31.26076	00 58 34.70	+05 20 23.9	6 675	(3906)	1956 03 15.36379	12 53 54.46	+17 12 35.3	6 675
(2740)	1953 10 31.28403	00 58 33.80	+05 20 15.9	6 675	(3906)	1956 03 15.38576	12 53 53.59	+17 12 50.1	6 675
(2778)	1951 08 08.40556	00 20 01.57	-05 44 03.0	6 675	(3942)	1951 08 08.40556	00 22 49.46	-02 47 43.0	6 675
(2778)	1951 08 08.42986	00 20 01.74	-05 44 08.1	6 675	(3942)	1951 08 08.42986	00 22 49.44	-02 47 41.9	6 675
(2780)	1950 12 11.22535	04 27 41.71	+25 17 29.5	6 675	(3966)	1953 10 31.26076	01 07 15.47	+06 11 21.4	6 675
(2780)	1950 12 11.25173	04 27 39.86	+25 17 21.6	6 675	(3966)	1953 10 31.28403	01 07 14.53	+06 11 16.5	6 675
(2796)	1951 08 07.30833	20 29 41.56	-07 32 09.1	6 675	(4061)	1951 08 11.42639	23 57 33.56	-01 55 11.7	6 675
(2796)	1951 09 22.14236	20 12 40.72	-13 33 47.2	6 675	(4061)	1951 08 11.45069	23 57 33.13	-01 55 14.5	6 675
(2912)	1951 11 28.31597	05 57 38.83	+17 29 05.0	6 675	(4089)	1951 08 11.42639	00 19 58.64	+03 06 27.3	6 675
(2912)	1951 11 28.34236	05 57 37.43	+17 29 09.5	6 675	(4089)	1951 08 11.45069	00 19 58.50	+03 06 27.1	6 675
(3079)	1951 08 11.42639	00 06 37.71	+02 15 09.5	6 675	(4109)	1949 11 23.22847	01 53 59.57	+09 49 28.7	6 675
(3079)	1951 08 11.45069	00 06 37.20	+02 15 06.2	6 675	(4109)	1949 11 23.25590	01 53 58.71	+09 49 23.9	6 675
(3090)	1951 09 22.14236	20 11 41.42	-13 01 23.5	6 675	(4175)	1951 08 07.28056	20 21 15.77	-07 25 49.9	6 675
(3090)	1951 09 22.17222	20 11 41.46	-13 01 29.4	6 675	(4175)	1951 08 07.30833	20 21 14.51	-07 26 00.2	6 675
(3157)	1951 11 30.26597	03 32 11.02	+22 33 48.2	6 675	(4218)	1949 11 23.22847	01 46 38.05	+09 34 50.1	6 675
(3157)	1951 11 30.29445	03 32 09.59	+22 33 47.1	6 675	(4218)	1949 11 23.25590	01 46 37.16	+09 34 41.6	6 675
(3161)	1951 08 11.42639	00 16 39.22	-00 28 02.2	6 675	(4230)	1951 11 28.31597	05 32 42.86	+19 18 16.8	6 675
(3161)	1951 08 11.45069	00 16 38.55	-00 27 59.1	6 675	(4230)	1951 11 28.34236	05 32 41.85	+19 18 15.8	6 675
(3335)	1951 08 07.30833	20 42 49.53	-06 19 07.7	6 675	(4305)	1949 11 23.22847	01 45 12.28	+09 14 29.4	6 675
(3363)	1953 10 31.26076	00 59 44.92	+04 39 00.1	6 675	(4305)	1949 11 23.25590	01 45 11.41	+09 14 24.9	6 675
(3363)	1953 10 31.28403	00 59 43.93	+04 38 54.7	6 675	(4323)	1951 11 30.26597	03 43 00.01	+22 26 35.8	6 675
(3397)	1953 12 31.10590	01 00 36.66	+21 01 25.8	6 675	(4323)	1951 11 30.29445	03 42 58.23	+22 26 23.4	6 675
(3397)	1953 12 31.13194	01 00 37.66	+21 01 40.1	6 675	(4345)	1951 08 11.42639	23 58 36.53	-02 14 20.8	6 675
(3419)	1955 10 25.40764	05 04 14.68	+25 02 48.5	6 675	(4345)	1951 08 11.45069	23 58 36.23	-02 14 23.5	6 675
(3419)	1955 10 25.43125	05 04 14.14	+25 02 52.7	6 675	(4348)	1953 10 31.28403	00 53 32.33	+09 26 06.0	6 675

(4379)	1949 11 23.22847	01 51 42.83	+07 13 27.7	6 675	(5473)	1955 10 25.40764	04 52 32.22	+21 16 12.1	6 675
(4379)	1949 11 23.25590	01 51 42.17	+07 13 14.6	6 675	(5473)	1955 10 25.43125	04 52 31.74	+21 16 19.1	6 675
(4459)	1951 08 11.42639	00 06 48.94	+00 14 09.0	6 675	(5515)	1951 08 11.42639	00 04 20.40	+01 52 49.0	6 675
(4459)	1951 08 11.45069	00 06 48.72	+00 14 03.1	6 675	(5515)	1951 08 11.45069	00 04 19.92	+01 52 40.7	6 675
(4638)	1955 10 25.40764	05 05 06.59	+26 15 28.2	6 675	(5580)	1951 11 30.26597	03 24 31.81	+27 08 01.3	6 675
(4638)	1955 10 25.43125	05 05 06.16	+26 15 27.5	6 675	(5580)	1951 11 30.29445	03 24 30.06	+27 07 58.0	6 675
(4658)	1951 08 11.42639	00 17 36.56	+01 28 11.0	6 675	(5647)	1993 06 22.42674	20 18 32.52	+06 39 03.5	16.5 2 675
(4658)	1951 08 11.45069	00 17 36.63	+01 28 10.6	6 675	(5647)	1993 06 22.45694	20 18 31.15	+06 39 13.9	2 675
(4696)	1951 08 11.42639	00 16 41.34	+02 19 30.6	6 675	(5647)	1993 06 25.28837	20 16 36.85	+06 56 21.9	2 675
(4696)	1951 08 11.45069	00 16 41.08	+02 19 28.2	6 675	(5647)	1993 06 25.46302	20 16 29.20	+06 57 21.2	2 675
(4709)	1955 10 25.40764	04 41 36.64	+26 52 49.6	6 675					
(4709)	1955 10 25.43125	04 41 36.19	+26 52 45.2	6 675					
(4733)	1951 11 30.26597	03 36 35.03	+21 59 35.5	6 675	<b>689 U.S. Naval Observatory, Flagstaff Station</b>				
(4733)	1951 11 30.29792	03 36 32.67	+21 59 32.2	6 675	D. K. Yeomans, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena,				
(4750)	1951 11 30.26597	03 44 13.93	+27 33 35.9	6 675	CA 91109, U.S.A.				
(4750)	1951 11 30.29445	03 44 11.92	+27 33 26.3	6 675	Observers C. Dahn, H. Harris, S. Leggett, A. Monet, D. Monet, J. Pier, R. Stone,				
(4758)	1950 12 11.22535	04 15 10.84	+21 37 33.9	6 675	R. Walker, F. Vrba				
(4758)	1950 12 11.25139	04 15 09.53	+21 37 31.1	6 675	1.5-m astrometric reflector + CCD				
(4805)	1953 12 31.10590	01 05 14.56	+19 30 36.4	6 675	(243)	1992 01 28.14125	05 02 12.95	+24 00 07.5	689
(4805)	1953 12 31.13194	01 05 14.96	+19 30 34.1	6 675	(243)	1992 01 28.14362	05 02 12.93	+24 00 07.4	689
(4929)	1949 11 23.22847	01 46 48.88	+06 45 40.9	6 675	(243)	1992 01 28.14540	05 02 12.92	+24 00 07.3	689
(4929)	1949 11 23.25590	01 46 47.84	+06 45 38.3	6 675	(243)	1992 01 28.14741	05 02 12.90	+24 00 07.2	689
(4946)	1950 12 11.22535	04 24 23.31	+27 21 51.9	6 675	(243)	1992 01 28.15311	05 02 12.85	+24 00 07.0	689
(4946)	1950 12 11.25173	04 24 22.29	+27 21 53.6	6 675	(243)	1992 01 28.16067	05 02 12.79	+24 00 06.7	689
(4946)	1992 06 08.29271	15 44 02.56	-21 29 56.8	9 675	(243)	1992 01 28.16624	05 02 12.74	+24 00 06.4	689
(4946)	1992 06 08.33524	15 44 01.03	-21 29 58.9	9 675	(243)	1992 01 28.17125	05 02 12.70	+24 00 06.2	689
(4976)	1950 12 11.22535	04 34 09.31	+24 02 07.5	6 675	(243)	1992 01 28.17597	05 02 12.66	+24 00 06.0	689
(4976)	1950 12 11.25139	04 34 07.95	+24 02 00.2	6 675	(243)	1992 01 28.18076	05 02 12.62	+24 00 05.7	689
(5084)	1951 08 08.40556	00 33 29.68	-04 25 22.9	6 675	(243)	1992 01 28.18551	05 02 12.58	+24 00 05.5	689
(5084)	1951 08 08.42986	00 33 29.44	-04 25 25.1	6 675	(243)	1992 01 28.19069	05 02 12.54	+24 00 05.3	689
(5094)	1953 10 31.26076	00 50 26.49	+06 32 43.1	6 675	(243)	1992 01 28.19468	05 02 12.50	+24 00 05.1	689
(5138)	1951 08 11.42639	00 03 53.08	+00 56 18.4	6 675	(243)	1992 01 28.19618	05 02 12.49	+24 00 05.0	689
(5138)	1951 08 11.45069	00 03 52.66	+00 56 15.2	6 675	(243)	1992 01 28.19802	05 02 12.48	+24 00 04.9	689
(5146)	1953 12 31.10590	00 56 03.16	+20 45 49.3	6 675	(243)	1992 01 28.19976	05 02 12.46	+24 00 04.8	689
(5146)	1953 12 31.13194	00 56 03.82	+20 45 48.6	6 675	(243)	1992 01 28.20137	05 02 12.45	+24 00 04.8	689
(5194)	1951 08 11.42639	00 14 34.90	-01 22 31.0	6 675	(243)	1992 01 29.14233	05 02 07.03	+23 59 23.0	689
(5285)	1956 03 15.36379	13 01 14.37	+16 03 06.6	6 675	(243)	1992 01 29.15139	05 02 06.97	+23 59 22.6	689
(5285)	1956 03 15.38576	13 01 13.77	+16 03 13.6	6 675	(243)	1992 01 29.15787	05 02 06.93	+23 59 22.3	689
(5302)	1951 11 30.26597	03 45 10.88	+23 42 38.8	6 675	(243)	1992 01 29.16410	05 02 06.89	+23 59 22.0	689
(5302)	1951 11 30.29445	03 45 09.01	+23 42 34.3	6 675	(243)	1992 01 29.17058	05 02 06.84	+23 59 21.8	689
(5306)	1949 11 23.22847	01 35 47.73	+06 35 16.8	6 675	(243)	1992 01 29.17806	05 02 06.80	+23 59 21.4	689
(5306)	1949 11 23.25590	01 35 46.93	+06 35 15.1	6 675	(243)	1993 04 28.19156	11 41 19.65	+00 48 45.0	689
(5369)	1951 08 11.42639	23 55 14.55	+01 16 54.7	6 675	(243)	1993 04 28.19596	11 41 19.57	+00 48 45.6	689
(5369)	1951 08 11.45069	23 55 14.75	+01 16 50.8	6 675	(243)	1993 04 28.19887	11 41 19.51	+00 48 46.0	689
(5394)	1951 08 11.42639	00 06 31.49	+02 52 30.1	6 675	(243)	1993 04 28.20572	11 41 19.38	+00 48 46.8	689
(5394)	1951 08 11.45069	00 06 31.08	+02 52 29.3	6 675	(243)	1993 04 29.23689	11 41 01.92	+00 50 43.6	689
(5422)	1951 11 30.26597	03 43 42.21	+25 32 19.4	6 675	(243)	1993 04 29.23927	11 41 01.87	+00 50 43.9	689
(5422)	1951 11 30.29445	03 43 40.56	+25 32 19.0	6 675	(243)	1993 04 29.24152	11 41 01.84	+00 50 44.2	689
(5427)	1949 11 23.22847	01 42 54.91	+08 25 16.4	6 675	(243)	1993 05 25.14639	11 41 23.57	+00 51 41.2	689
(5427)	1949 11 23.25590	01 42 54.36	+08 24 52.0	6 675	(243)	1993 05 25.14858	11 41 23.60	+00 51 41.0	689
(5468)	1951 08 08.40556	00 35 39.11	-05 55 38.4	6 675	(243)	1993 05 25.15172	11 41 23.65	+00 51 40.6	689
(5468)	1951 08 08.42986	00 35 38.87	-05 55 46.2	6 675	(243)	1993 05 25.15567	11 41 23.72	+00 51 40.3	689

**691 Kitt Peak, Steward Observatory**T. Gehrels, Space Sciences Building, University of Arizona, Tucson, AZ 85721,  
U.S.A.

Observers T. Gehrels, R. Jedicke, J. V. Scotti

0.91-m Spacewatch telescope

GSC

1950 DO	1993 08 16.21208	21 32 04.24	-11 49 25.9	16.7 V	691	1993 FZ <sub>3</sub>	* 1993 03 24.32219	12 21 01.59	-00 07 16.1	18.7 V	691
1950 DO	1993 08 16.24462	21 32 02.51	-11 49 32.6		691	1993 FZ <sub>3</sub>	1993 03 24.35407	12 20 59.80	-00 07 06.4		691
1950 DO	1993 08 16.28016	21 32 00.61	-11 49 40.2		691	1993 FZ <sub>3</sub>	1993 03 24.38568	12 20 58.07	-00 06 56.3		691
1981 EK <sub>10</sub>	1993 08 13.39209	22 02 53.17	-10 30 18.3	18.3 V	691	1993 HD <sub>6</sub>	1993 04 21.23168	13 27 42.32	-09 55 22.5	17.1 V	691
1981 EK <sub>10</sub>	1993 08 13.41076	22 02 52.05	-10 30 22.9		691	1993 HD <sub>6</sub>	1993 04 21.26399	13 27 40.53	-09 55 22.1		691
1981 EK <sub>10</sub>	1993 08 13.42890	22 02 50.95	-10 30 27.3		691	1993 HD <sub>6</sub>	1993 04 21.29592	13 27 38.74	-09 55 22.0		691
1981 EH <sub>13</sub>	1993 08 13.19443	21 15 55.88	-09 52 29.5	17.2 V	691	1993 OT	1993 08 13.20055	21 24 46.20	-10 00 53.0	19.6 V	691
1981 EH <sub>13</sub>	1993 08 13.22686	21 15 54.18	-09 52 35.1		691	1993 OT	1993 08 13.23299	21 24 44.44	-10 00 48.4	19.4 V	691
1981 EH <sub>13</sub>	1993 08 13.26048	21 15 52.39	-09 52 40.6		691	1993 OT	1993 08 13.26661	21 24 42.66	-10 00 43.5	19.3 V	691
1981 EH <sub>13</sub>	1993 08 14.25120	21 15 03.51	-09 55 23.6	17.0 V	691	1993 PB	* 1993 08 13.19268	21 13 24.40	-10 09 10.9	18.0 V	691
1981 EH <sub>13</sub>	1993 08 14.26069	21 15 03.02	-09 55 25.4		691	1993 PB	1993 08 13.22507	21 13 18.68	-10 08 58.4	17.9 V	691
1981 EH <sub>13</sub>	1993 08 14.26994	21 15 02.54	-09 55 26.8		691	1993 PB	1993 08 13.25864	21 13 12.78	-10 08 44.7	18.0 V	691
1982 TP <sub>1</sub>	1993 08 13.29715	21 14 04.66	-10 34 51.9	17.4 V	691	1993 PB	1993 08 14.24796	21 10 22.56	-10 02 12.0	17.8 V	691
1982 TP <sub>1</sub>	1993 08 13.33329	21 14 02.62	-10 35 00.7		691	1993 PB	1993 08 14.25743	21 10 21.00	-10 02 07.8		691
1982 TP <sub>1</sub>	1993 08 13.36581	21 14 00.77	-10 35 08.8		691	1993 PB	1993 08 14.26667	21 10 19.32	-10 02 04.2	18.0 V	691
1985 CR <sub>2</sub>	1993 08 14.37407	22 04 20.73	-11 05 54.6	16.8 V	691	1993 PB	1993 08 15.33552	21 07 18.46	-09 55 04.5	17.9 V	691
1985 CR <sub>2</sub>	1993 08 14.39275	22 04 19.59	-11 06 00.5		691	1993 PB	1993 08 15.34303	21 07 17.18	-09 55 01.5	17.9 V	691
1985 CR <sub>2</sub>	1993 08 14.41109	22 04 18.49	-11 06 06.4		691	1993 PB	1993 08 15.35614	21 07 14.92	-09 54 56.5	17.9 V	691
1985 CR <sub>2</sub>	1993 08 15.36589	22 03 23.15	-11 10 54.4	16.8 V	691	1993 PB	1993 08 17.25916	21 02 02.73	-09 42 43.0	18.1 V	691
1985 CR <sub>2</sub>	1993 08 15.38760	22 03 21.86	-11 11 01.0		691	1993 PB	1993 08 17.26722	21 02 01.38	-09 42 40.1	18.0 V	691
1985 CR <sub>2</sub>	1993 08 15.40952	22 03 20.55	-11 11 07.8		691	1993 PB	1993 08 17.27534	21 02 00.08	-09 42 36.7	18.1 V	691
1986 RT <sub>2</sub>	1993 08 15.37281	22 13 22.81	-11 38 55.8		691	1993 PB	1993 08 22.23831	20 49 25.34	-09 12 13.0	18.3 V	691
1986 RT <sub>2</sub>	1993 08 15.39453	22 13 21.54	-11 39 01.2	16.1 V	691	1993 PB	1993 08 22.24630	20 49 24.15	-09 12 10.3	18.3 V	691
1986 RT <sub>2</sub>	1993 08 15.41644	22 13 20.27	-11 39 06.6		691	1993 PB	1993 08 22.25371	20 49 23.09	-09 12 07.7	18.3 V	691
1989 VR	1992 04 24.40357	14 41 41.31	-13 45 00.7	17.1 V	691	1993 PB	1993 09 11.14185	20 15 13.71	-07 34 08.7	21.0 V	691
1989 VR	1992 04 24.42516	14 41 40.24	-13 44 55.4	17.3 V	691	1993 PB	1993 09 11.20926	20 15 09.15	-07 33 51.8	20.1 V	691
1989 VR	1992 04 24.44584	14 41 39.25	-13 44 49.6	17.4 V	691	1993 PC	* 1993 08 15.38287	22 27 53.44	-11 33 25.6	19.2 V	691
1990 JN <sub>1</sub>	1991 10 07.17871	00 35 09.54	+05 18 20.9	17.6 V	691	1993 PC	1993 08 15.40456	22 27 50.33	-11 33 38.3	19.6 V	691
1990 JN <sub>1</sub>	1991 10 07.20018	00 35 08.49	+05 18 13.8		691	1993 PC	1993 08 15.42645	22 27 47.18	-11 33 51.7	19.4 V	691
1990 JN <sub>1</sub>	1991 10 07.22058	00 35 07.50	+05 18 07.4		691	1993 PC	1993 08 16.30564	22 25 44.91	-11 42 48.7	19.0 V	691
1990 RH <sub>4</sub>	1993 08 16.21716	21 39 24.54	-12 04 27.1	16.7 V	691	1993 PC	1993 08 16.31534	22 25 43.51	-11 42 54.5	19.0 V	691
1990 RH <sub>4</sub>	1993 08 16.24970	21 39 22.56	-12 04 41.6		691	1993 PC	1993 08 16.32450	22 25 42.19	-11 43 00.1	18.9 V	691
1990 RH <sub>4</sub>	1993 08 16.28524	21 39 20.38	-12 04 57.1		691	1993 PC	1993 08 18.41697	22 20 43.78	-12 04 21.6	18.9 V	691
1990 RH <sub>4</sub>	1993 08 17.28481	21 38 21.52	-12 12 13.0	16.4 V	691	1993 PC	1993 08 18.42618	22 20 42.42	-12 04 27.4	19.0 V	691
1990 RH <sub>4</sub>	1993 08 17.29290	21 38 21.02	-12 12 16.5		691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1990 RH <sub>4</sub>	1993 08 17.30044	21 38 20.56	-12 12 19.8		691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1991 PJ <sub>13</sub>	1991 09 05.25649	22 23 34.74	-09 31 56.0		691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1991 PJ <sub>13</sub>	1991 09 05.27696	22 23 33.57	-09 31 58.7		691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1991 PJ <sub>13</sub>	1991 09 05.30574	22 23 31.89	-09 32 03.8	17.5 V	691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1991 VL <sub>16</sub>	* 1991 11 09.18486	02 33 15.07	+19 13 10.0		691	1993 PC	1993 08 18.43592	22 20 40.99	-12 04 33.0	19.1 V	I 691
1991 VL <sub>16</sub>	1991 11 09.20642	02 33 13.65	+19 13 01.4	18.7 V	691	1993 PD	* 1993 08 15.43726	04 54 59.16	+23 54 39.3	20.9 V	691
1992 CD <sub>8</sub>	* 1992 02 09.32378	08 29 04.77	+19 47 07.3		691	1993 PD	1993 08 15.44909	04 55 00.94	+23 54 41.4	20.9 V	691
1992 CD <sub>8</sub>	1992 02 09.34940	08 29 03.46	+19 47 11.3		691	1993 PD	1993 08 15.46076	04 55 02.61	+23 54 44.4	20.7 V	691
1992 CD <sub>8</sub>	1992 02 09.37569	08 29 02.13	+19 47 15.5	18.4 V	691	1993 PD	1993 08 16.45745	04 57 28.84	+23 58 10.0	21.3 V	691
1992 JF <sub>4</sub>	* 1992 05 06.33101	15 40 52.23	-10 32 50.9	18.3 V	691	1993 PD	1993 08 16.46901	04 57 30.54	+23 58 12.4	22.0 V	691
1992 JF <sub>4</sub>	1992 05 06.35549	15 40 51.13	-10 32 43.4		691	1993 PG	* 1993 08 13.18646	21 04 25.13	-09 56 56.9	19.9 V	691
					691	1993 PG	1993 08 13.21889	21 04 23.44	-09 56 56.3		691
					691	1993 PG	1993 08 13.25251	21 04 21.73	-09 56 56.3		691
					691	1993 PG	1993 08 17.25849	21 01 04.05	-09 57 17.6	20.3 V	691
					691	1993 PG	1993 08 17.26656	21 01 03.64	-09 57 17.8		691
					691	1993 PG	1993 08 17.27468	21 01 03.25	-09 57 17.4		691



1993 PH	* 1993 08 13.18715	21 05 24.97	-09 58 28.5	19.9 V	691	1993 PP	1993 08 14.25935	21 13 07.00	-09 47 47.2	20.0 V	691
1993 PH	1993 08 13.21958	21 05 22.85	-09 58 26.9		691	1993 PP	1993 08 14.26860	21 13 06.47	-09 47 49.6		691
1993 PH	1993 08 13.25319	21 05 20.69	-09 58 26.0		691	1993 PP	1993 08 15.33887	21 12 08.88	-09 52 10.3	19.9 V	691
1993 PH	1993 08 17.25855	21 01 09.85	-09 56 23.7	19.8 V	691	1993 PP	1993 08 15.34639	21 12 08.44	-09 52 12.6		691
1993 PH	1993 08 17.26662	21 01 09.36	-09 56 23.7		691	1993 PP	1993 08 15.35952	21 12 07.75	-09 52 15.0		691
1993 PH	1993 08 17.27475	21 01 08.83	-09 56 23.3		691	1993 PQ	* 1993 08 13.19441	21 15 54.33	-09 48 52.4		691
1993 PJ	* 1993 08 13.18843	21 07 16.36	-09 49 13.3		691	1993 PQ	1993 08 13.22685	21 15 52.95	-09 49 09.1	20.1 V	691
1993 PJ	1993 08 13.22087	21 07 14.64	-09 49 20.4	18.4 V	691	1993 PQ	1993 08 13.26047	21 15 51.50	-09 49 26.1		691
1993 PJ	1993 08 13.25449	21 07 12.80	-09 49 29.4		691	1993 PQ	1993 08 14.25130	21 15 11.43	-09 58 01.7		691
1993 PJ	1993 08 14.24526	21 06 21.58	-09 53 24.0		691	1993 PQ	1993 08 14.26078	21 15 11.14	-09 58 04.3		691
1993 PJ	1993 08 14.25475	21 06 21.04	-09 53 26.2	18.5 V	691	1993 PQ	1993 08 14.27003	21 15 10.62	-09 58 07.4	19.5 V	691
1993 PJ	1993 08 14.26399	21 06 20.61	-09 53 28.3		691	1993 PR	* 1993 08 13.29893	21 16 39.30	-10 16 00.5	18.1 V	691
1993 PK	1993 07 22.26240	21 26 52.39	-09 46 16.9	18.7 V	691	1993 PR	1993 08 13.33508	21 16 37.02	-10 16 02.5		691
1993 PK	1993 07 22.30671	21 26 50.43	-09 46 14.8	18.6 V	691	1993 PR	1993 08 13.36759	21 16 34.97	-10 16 04.7		691
1993 PK	1993 07 22.36151	21 26 47.88	-09 46 12.5	18.8 V	691	1993 PR	1993 08 14.25164	21 15 41.53	-10 17 03.4	17.8 V	691
1993 PK	* 1993 08 13.18936	21 08 36.68	-09 44 45.8	18.3 V	691	1993 PR	1993 08 14.26113	21 15 40.92	-10 17 04.1		691
1993 PK	1993 08 13.22179	21 08 34.93	-09 44 46.4		691	1993 PR	1993 08 14.27037	21 15 40.34	-10 17 04.4		691
1993 PK	1993 08 13.25541	21 08 33.13	-09 44 47.9		691	1993 PS	* 1993 08 13.30788	21 29 34.47	-10 36 53.1	19.0 V	691
1993 PK	1993 08 17.26129	21 05 07.17	-09 47 27.3	18.2 V	691	1993 PS	1993 08 13.34403	21 29 32.64	-10 37 13.2		691
1993 PK	1993 08 17.26936	21 05 06.73	-09 47 27.9		691	1993 PS	1993 08 13.37655	21 29 31.02	-10 37 31.8		691
1993 PK	1993 08 17.27749	21 05 06.30	-09 47 28.1		691	1993 PS	1993 08 14.28310	21 28 47.84	-10 46 06.8		691
1993 PL	* 1993 08 13.19049	21 10 14.56	-09 59 24.7	17.2 V	691	1993 PS	1993 08 14.31517	21 28 46.30	-10 46 24.5		691
1993 PL	1993 08 13.22292	21 10 12.63	-09 59 30.7		691	1993 PS	1993 08 14.34767	21 28 44.62	-10 46 43.1	18.7 V	691
1993 PL	1993 08 13.25654	21 10 10.62	-09 59 37.0		691	1993 PT	* 1993 08 13.31271	21 36 32.72	-10 38 47.3	19.7 V	691
1993 PL	1993 08 15.33615	21 08 13.06	-10 06 12.3		691	1993 PT	1993 08 13.34886	21 36 31.04	-10 38 59.1		691
1993 PL	1993 08 15.34367	21 08 12.62	-10 06 13.7	17.2 V	691	1993 PT	1993 08 13.38138	21 36 29.54	-10 39 09.3		691
1993 PL	1993 08 15.35680	21 08 11.85	-10 06 16.2		691	1993 PT	1993 08 14.28796	21 35 49.04	-10 44 02.1	19.8 V	691
1993 PM	* 1993 08 13.19054	21 10 18.88	-10 03 10.7		691	1993 PT	1993 08 14.35253	21 35 46.03	-10 44 22.0		691
1993 PM	1993 08 13.22298	21 10 17.39	-10 03 13.2	20.6 V	691	1993 PU	* 1993 08 13.31360	21 37 50.03	-10 36 55.2		691
1993 PM	1993 08 13.25660	21 10 15.71	-10 03 16.6		691	1993 PU	1993 08 13.34975	21 37 48.03	-10 37 07.5	19.4 V	691
1993 PM	1993 08 14.24734	21 09 28.43	-10 05 01.6		691	1993 PU	1993 08 13.38227	21 37 46.26	-10 37 18.5		691
1993 PM	1993 08 14.25682	21 09 28.02	-10 05 02.4	20.7 V	691	1993 PU	1993 08 14.28877	21 36 58.75	-10 42 31.9		691
1993 PM	1993 08 14.26607	21 09 27.52	-10 05 03.5		691	1993 PU	1993 08 14.32083	21 36 57.09	-10 42 43.3	19.1 V	691
1993 PM	1993 08 15.33642	21 08 36.52	-10 06 58.4		691	1993 PU	1993 08 14.35333	21 36 55.26	-10 42 54.2		691
1993 PM	1993 08 15.34394	21 08 36.14	-10 06 58.6	20.7 V	691	1993 PV	* 1993 08 13.39278	22 03 52.96	-10 42 01.7		691
1993 PM	1993 08 15.35707	21 08 35.50	-10 06 59.9		691	1993 PV	1993 08 13.41145	22 03 52.08	-10 42 08.9	20.0 V	691
1993 PN	* 1993 08 13.19087	21 10 47.16	-10 07 51.9		691	1993 PV	1993 08 13.42959	22 03 51.17	-10 42 15.4		691
1993 PN	1993 08 13.22330	21 10 45.72	-10 08 05.4		691	1993 PV	1993 08 14.37322	22 03 07.36	-10 47 29.1	20.0 V	691
1993 PN	1993 08 13.25693	21 10 44.35	-10 08 19.7	20.3 V	691	1993 PV	1993 08 14.39191	22 03 06.43	-10 47 35.6		691
1993 PN	1993 08 14.24774	21 10 03.05	-10 15 27.4		691	1993 PV	1993 08 14.41025	22 03 05.53	-10 47 41.5		691
1993 PN	1993 08 14.25722	21 10 02.73	-10 15 30.5	20.5 V	691	1993 PW	* 1993 08 13.39649	22 09 14.03	-10 32 51.9		691
1993 PN	1993 08 14.26647	21 10 02.27	-10 15 34.2		691	1993 PW	1993 08 13.41516	22 09 13.27	-10 33 04.8	19.9 V	691
1993 PO	* 1993 08 13.19195	21 12 20.85	-10 09 39.6	18.1 V	691	1993 PW	1993 08 13.43330	22 09 12.53	-10 33 16.6		691
1993 PO	1993 08 13.22438	21 12 19.05	-10 09 51.8		691	1993 PW	1993 08 14.37703	22 08 36.93	-10 43 58.2		691
1993 PO	1993 08 13.25800	21 12 17.22	-10 10 04.8		691	1993 PW	1993 08 14.39571	22 08 36.15	-10 44 11.4	19.7 V	691
1993 PO	1993 08 14.24869	21 11 26.15	-10 16 27.3	17.8 V	691	1993 PW	1993 08 14.41406	22 08 35.37	-10 44 23.7		691
1993 PO	1993 08 14.25818	21 11 25.65	-10 16 30.8		691	1993 PX	* 1993 08 13.39710	22 10 07.34	-10 40 01.3	19.8 V	691
1993 PO	1993 08 14.26742	21 11 25.14	-10 16 34.6		691	1993 PX	1993 08 13.41577	22 10 06.31	-10 40 07.5		691
1993 PP	* 1993 08 13.19315	21 14 04.56	-09 43 29.6	20.2 V	691	1993 PX	1993 08 13.43391	22 10 05.34	-10 40 13.3		691
1993 PP	1993 08 13.22558	21 14 02.76	-09 43 37.4		691	1993 PX	1993 08 14.37747	22 09 15.32	-10 45 28.9	20.0 V	691
1993 PP	1993 08 13.25920	21 14 00.85	-09 43 45.4		691	1993 PX	1993 08 14.39615	22 09 14.29	-10 45 35.9		691
1993 PP	1993 08 14.24987	21 13 07.52	-09 47 45.0		691	1993 PX	1993 08 14.41450	22 09 13.27	-10 45 42.0		691

1993 PY	* 1993 08 13.39835	22 11 55.41	-10 39 18.7	20.4 V	691	1993 PF <sub>1</sub>	1993 08 14.40391	22 20 25.83	-10 47 01.4		691
1993 PY	1993 08 13.41702	22 11 54.57	-10 39 24.2		691	1993 PF <sub>1</sub>	1993 08 14.42225	22 20 24.92	-10 47 07.9	19.4 V	691
1993 PY	1993 08 13.43516	22 11 53.72	-10 39 29.6		691	1993 PG <sub>1</sub>	* 1993 08 14.24661	21 08 25.49	-09 59 54.1	20.9 V	691
1993 PY	1993 08 14.37881	22 11 11.68	-10 44 10.5		691	1993 PG <sub>1</sub>	1993 08 14.25610	21 08 24.99	-09 59 56.1		691
1993 PY	1993 08 14.39750	22 11 10.73	-10 44 15.5	20.6 V	691	1993 PG <sub>1</sub>	1993 08 14.26534	21 08 24.50	-09 59 58.9		691
1993 PY	1993 08 14.41584	22 11 09.92	-10 44 20.7		691	1993 PG <sub>1</sub>	1993 08 15.33566	21 07 30.80	-10 03 59.2		691
1993 PZ	* 1993 08 13.39866	22 12 21.96	-10 38 09.7		691	1993 PG <sub>1</sub>	1993 08 15.34318	21 07 30.42	-10 04 00.3		691
1993 PZ	1993 08 13.41733	22 12 21.17	-10 38 14.1	18.8 V	691	1993 PG <sub>1</sub>	1993 08 15.35631	21 07 29.73	-10 04 03.5	20.7 V	691
1993 PZ	1993 08 13.43547	22 12 20.33	-10 38 18.9		691	1993 PH <sub>1</sub>	* 1993 08 14.24703	21 09 02.00	-09 54 24.4		691
1993 PZ	1993 08 14.37914	22 11 39.46	-10 42 27.0	18.6 V	691	1993 PH <sub>1</sub>	1993 08 14.25652	21 09 01.43	-09 54 24.9	19.6 V	691
1993 PZ	1993 08 14.39782	22 11 38.57	-10 42 32.3		691	1993 PH <sub>1</sub>	1993 08 14.26576	21 09 00.79	-09 54 25.1		691
1993 PZ	1993 08 14.41616	22 11 37.80	-10 42 37.3		691	1993 PH <sub>1</sub>	1993 08 15.33591	21 07 52.34	-09 54 42.2	19.5 V	691
1993 PA <sub>1</sub>	* 1993 08 13.39941	22 13 27.32	-10 42 32.5	19.6 V	691	1993 PH <sub>1</sub>	1993 08 15.34343	21 07 51.86	-09 54 42.4		691
1993 PA <sub>1</sub>	1993 08 13.41809	22 13 26.66	-10 42 47.0		691	1993 PH <sub>1</sub>	1993 08 15.35656	21 07 50.98	-09 54 42.6		691
1993 PA <sub>1</sub>	1993 08 13.43623	22 13 26.00	-10 43 01.7		691	1993 PJ <sub>1</sub>	* 1993 08 14.24879	21 11 34.69	-10 05 54.8		691
1993 PA <sub>1</sub>	1993 08 14.38004	22 12 57.49	-10 55 44.5		691	1993 PJ <sub>1</sub>	1993 08 14.25828	21 11 34.13	-10 05 56.8	18.6 V	691
1993 PA <sub>1</sub>	1993 08 14.39872	22 12 56.80	-10 55 59.7		691	1993 PJ <sub>1</sub>	1993 08 14.26752	21 11 33.55	-10 05 59.8		691
1993 PA <sub>1</sub>	1993 08 14.41707	22 12 56.19	-10 56 14.7	19.6 V	691	1993 PJ <sub>1</sub>	1993 08 15.33774	21 10 30.61	-10 10 23.2		691
1993 PA <sub>1</sub>	1993 08 22.31937	22 08 29.33	-12 46 22.7		691	1993 PJ <sub>1</sub>	1993 08 15.34525	21 10 30.16	-10 10 24.8	18.5 V	691
1993 PA <sub>1</sub>	1993 08 22.32707	22 08 29.03	-12 46 29.7	19.4 V	691	1993 PJ <sub>1</sub>	1993 08 15.35839	21 10 29.37	-10 10 28.3		691
1993 PA <sub>1</sub>	1993 08 22.33580	22 08 28.76	-12 46 36.6		691	1993 PK <sub>1</sub>	* 1993 08 14.24986	21 13 06.80	-09 59 31.9		691
1993 PB <sub>1</sub>	* 1993 08 13.40042	22 14 54.59	-10 42 41.1	19.1 V	691	1993 PK <sub>1</sub>	1993 08 14.25934	21 13 06.20	-09 59 35.3		691
1993 PB <sub>1</sub>	1993 08 13.41909	22 14 53.61	-10 42 44.1		691	1993 PK <sub>1</sub>	1993 08 14.26859	21 13 05.71	-09 59 38.1	20.9 V	691
1993 PB <sub>1</sub>	1993 08 13.43723	22 14 52.69	-10 42 46.8		691	1993 PK <sub>1</sub>	1993 08 15.33892	21 12 12.62	-10 05 45.9		691
1993 PB <sub>1</sub>	1993 08 14.38084	22 14 06.89	-10 45 50.9	18.9 V	691	1993 PK <sub>1</sub>	1993 08 15.34643	21 12 12.18	-10 05 47.5	20.8 V	691
1993 PB <sub>1</sub>	1993 08 14.39952	22 14 05.86	-10 45 54.1		691	1993 PK <sub>1</sub>	1993 08 15.35957	21 12 11.51	-10 05 52.2		691
1993 PB <sub>1</sub>	1993 08 14.41786	22 14 04.95	-10 45 58.2		691	1993 PL <sub>1</sub>	* 1993 08 14.27958	21 23 43.17	-11 07 24.6	19.9 V	691
1993 PC <sub>1</sub>	* 1993 08 13.40049	22 15 00.88	-10 42 08.7		691	1993 PL <sub>1</sub>	1993 08 14.31165	21 23 41.74	-11 07 35.8		691
1993 PC <sub>1</sub>	1993 08 13.41917	22 15 00.12	-10 42 24.3	18.0 V	691	1993 PL <sub>1</sub>	1993 08 14.34415	21 23 40.27	-11 07 48.2		691
1993 PC <sub>1</sub>	1993 08 13.43730	22 14 59.36	-10 42 41.1		691	1993 PL <sub>1</sub>	1993 08 15.19520	21 23 03.61	-11 13 06.0	20.2 V	691
1993 PC <sub>1</sub>	1993 08 15.37306	22 13 43.99	-11 11 14.6		691	1993 PL <sub>1</sub>	1993 08 15.22739	21 23 02.17	-11 13 18.6		691
1993 PC <sub>1</sub>	1993 08 15.39477	22 13 42.99	-11 11 32.7		691	1993 PL <sub>1</sub>	1993 08 15.26015	21 23 00.78	-11 13 30.2		691
1993 PC <sub>1</sub>	1993 08 15.41669	22 13 42.15	-11 11 53.3	18.0 V	691	1993 PM <sub>1</sub>	* 1993 08 14.27995	21 24 14.57	-11 10 35.3	19.2 V	691
1993 PC <sub>1</sub>	1993 08 22.31953	22 08 57.73	-12 55 05.0		691	1993 PM <sub>1</sub>	1993 08 14.31201	21 24 12.84	-11 10 39.8		691
1993 PC <sub>1</sub>	1993 08 22.32723	22 08 57.40	-12 55 12.0	18.3 V	691	1993 PM <sub>1</sub>	1993 08 14.34451	21 24 11.12	-11 10 45.0		691
1993 PC <sub>1</sub>	1993 08 22.33597	22 08 57.07	-12 55 19.1		691	1993 PM <sub>1</sub>	1993 08 15.19548	21 23 27.10	-11 12 53.7		691
1993 PD <sub>1</sub>	* 1993 08 13.40179	22 16 53.38	-10 38 25.8	17.9 V	691	1993 PM <sub>1</sub>	1993 08 15.22766	21 23 25.45	-11 12 58.5	19.5 V	691
1993 PD <sub>1</sub>	1993 08 13.42046	22 16 52.57	-10 38 30.3		691	1993 PM <sub>1</sub>	1993 08 15.26042	21 23 23.71	-11 13 02.9		691
1993 PD <sub>1</sub>	1993 08 13.43860	22 16 51.82	-10 38 34.5		691	1993 PN <sub>1</sub>	* 1993 08 14.28552	21 32 17.88	-11 08 53.1		691
1993 PD <sub>1</sub>	1993 08 14.38229	22 16 12.88	-10 42 21.3		691	1993 PN <sub>1</sub>	1993 08 14.31759	21 32 15.87	-11 09 02.2	19.7 V	691
1993 PD <sub>1</sub>	1993 08 14.40098	22 16 12.12	-10 42 26.2	18.0 V	691	1993 PN <sub>1</sub>	1993 08 14.35008	21 32 13.85	-11 09 12.2		691
1993 PD <sub>1</sub>	1993 08 14.41932	22 16 11.34	-10 42 30.6		691	1993 PN <sub>1</sub>	1993 08 15.23315	21 31 21.31	-11 13 37.7	19.7 V	691
1993 PE <sub>1</sub>	* 1993 08 13.40434	22 20 33.89	-10 39 38.8		691	1993 PN <sub>1</sub>	1993 08 15.26591	21 31 19.29	-11 13 48.3		691
1993 PE <sub>1</sub>	1993 08 13.42301	22 20 32.97	-10 39 40.0	18.7 V	691	1993 PO <sub>1</sub>	* 1993 08 14.28732	21 34 53.31	-11 08 49.3	19.7 V	691
1993 PE <sub>1</sub>	1993 08 13.44115	22 20 32.09	-10 39 42.0		691	1993 PO <sub>1</sub>	1993 08 14.31938	21 34 51.64	-11 09 02.4		691
1993 PE <sub>1</sub>	1993 08 14.38477	22 19 47.83	-10 41 10.3	18.7 V	691	1993 PO <sub>1</sub>	1993 08 14.35189	21 34 49.93	-11 09 15.7		691
1993 PE <sub>1</sub>	1993 08 14.40346	22 19 46.95	-10 41 11.7		691	1993 PO <sub>1</sub>	1993 08 15.20288	21 34 08.08	-11 15 11.4	19.2 V	691
1993 PE <sub>1</sub>	1993 08 14.42180	22 19 46.03	-10 41 12.8		691	1993 PO <sub>1</sub>	1993 08 15.23506	21 34 06.39	-11 15 25.0		691
1993 PF <sub>1</sub>	* 1993 08 13.40486	22 21 18.83	-10 41 52.7	19.9 V	691	1993 PO <sub>1</sub>	1993 08 15.26782	21 34 04.68	-11 15 39.1		691
1993 PF <sub>1</sub>	1993 08 13.42353	22 21 17.80	-10 41 58.0		691	1993 PP <sub>1</sub>	* 1993 08 14.29034	21 39 14.86	-11 11 50.2		691
1993 PF <sub>1</sub>	1993 08 13.44166	22 21 16.83	-10 42 04.1		691	1993 PP <sub>1</sub>	1993 08 14.32240	21 39 13.29	-11 12 01.8	20.0 V	691
1993 PF <sub>1</sub>	1993 08 14.38522	22 20 26.73	-10 46 54.9		691	1993 PP <sub>1</sub>	1993 08 14.35491	21 39 11.70	-11 12 13.4		691

1993 PP <sub>1</sub>	1993 08 15.20592	21 38 31.98	-11 17 33.1		691	1993 PY <sub>1</sub>	1993 08 14.40003	22 14 50.59	-11 09 11.5	19.4 V	691
1993 PP <sub>1</sub>	1993 08 15.23810	21 38 30.39	-11 17 45.8	20.1 V	691	1993 PY <sub>1</sub>	1993 08 14.41838	22 14 49.45	-11 09 14.1		691
1993 PP <sub>1</sub>	1993 08 15.27086	21 38 28.77	-11 17 57.6		691	1993 PY <sub>1</sub>	1993 08 15.37316	22 13 52.42	-11 11 28.5	19.5 V	691
1993 PQ <sub>1</sub>	* 1993 08 14.29847	21 50 59.21	-11 08 35.6		691	1993 PY <sub>1</sub>	1993 08 15.39487	22 13 51.09	-11 11 31.7		691
1993 PQ <sub>1</sub>	1993 08 14.33053	21 50 57.46	-11 08 41.8	18.2 V	691	1993 PY <sub>1</sub>	1993 08 15.41678	22 13 49.70	-11 11 35.2		691
1993 PQ <sub>1</sub>	1993 08 14.36303	21 50 55.64	-11 08 46.5		691	1993 PZ <sub>1</sub>	* 1993 08 14.38304	22 17 17.72	-11 12 06.1		691
1993 PQ <sub>1</sub>	1993 08 15.21399	21 50 10.62	-11 11 04.0	18.2 V	691	1993 PZ <sub>1</sub>	1993 08 14.40173	22 17 17.22	-11 12 24.0		691
1993 PQ <sub>1</sub>	1993 08 15.24617	21 50 08.87	-11 11 08.9		691	1993 PZ <sub>1</sub>	1993 08 14.42008	22 17 16.71	-11 12 41.8	19.3 V	691
1993 PQ <sub>1</sub>	1993 08 15.27893	21 50 07.08	-11 11 14.2		691	1993 PZ <sub>1</sub>	1993 08 15.37525	22 16 54.06	-11 28 43.1		691
1993 PR <sub>1</sub>	* 1993 08 14.30086	21 54 25.75	-11 09 01.6		691	1993 PZ <sub>1</sub>	1993 08 15.39697	22 16 53.45	-11 29 04.8	18.9 V	691
1993 PR <sub>1</sub>	1993 08 14.33292	21 54 24.19	-11 09 23.8	19.6 V	691	1993 PZ <sub>1</sub>	1993 08 15.41889	22 16 52.84	-11 29 27.1		691
1993 PR <sub>1</sub>	1993 08 14.36543	21 54 22.74	-11 09 43.7		691	1993 PA <sub>2</sub>	* 1993 08 15.19600	21 24 13.00	-11 39 42.8		691
1993 PR <sub>1</sub>	1993 08 15.21647	21 53 45.24	-11 18 46.0		691	1993 PA <sub>2</sub>	1993 08 15.22818	21 24 11.08	-11 39 45.5	18.6 V	691
1993 PR <sub>1</sub>	1993 08 15.24865	21 53 43.78	-11 19 06.1		691	1993 PA <sub>2</sub>	1993 08 15.26094	21 24 09.10	-11 39 47.8		691
1993 PR <sub>1</sub>	1993 08 15.28141	21 53 42.26	-11 19 27.4	19.8 V	691	1993 PA <sub>2</sub>	1993 08 16.20596	21 23 14.35	-11 40 59.0	18.5 V	691
1993 PS <sub>1</sub>	* 1993 08 14.30173	21 55 41.12	-11 09 34.3	18.9 V	691	1993 PA <sub>2</sub>	1993 08 16.23850	21 23 12.41	-11 41 00.9		691
1993 PS <sub>1</sub>	1993 08 14.33379	21 55 39.43	-11 09 43.7		691	1993 PA <sub>2</sub>	1993 08 16.27404	21 23 10.17	-11 41 04.3		691
1993 PS <sub>1</sub>	1993 08 14.36629	21 55 37.74	-11 09 51.4		691	1993 PB <sub>2</sub>	* 1993 08 15.19860	21 27 57.51	-11 39 18.7		691
1993 PS <sub>1</sub>	1993 08 15.21728	21 54 55.33	-11 13 23.6		691	1993 PB <sub>2</sub>	1993 08 15.23077	21 27 55.31	-11 39 22.5	20.0 V	691
1993 PS <sub>1</sub>	1993 08 15.24946	21 54 53.76	-11 13 32.8	19.0 V	691	1993 PB <sub>2</sub>	1993 08 15.26352	21 27 53.07	-11 39 25.7		691
1993 PS <sub>1</sub>	1993 08 15.28222	21 54 52.05	-11 13 41.4		691	1993 PB <sub>2</sub>	1993 08 16.20846	21 26 50.89	-11 41 12.3		691
1993 PT <sub>1</sub>	* 1993 08 14.37567	22 06 39.72	-11 09 30.6		691	1993 PB <sub>2</sub>	1993 08 16.24100	21 26 48.69	-11 41 16.2	19.9 V	691
1993 PT <sub>1</sub>	1993 08 14.39436	22 06 38.65	-11 09 35.9	20.1 V	691	1993 PB <sub>2</sub>	1993 08 16.27653	21 26 46.30	-11 41 20.6		691
1993 PT <sub>1</sub>	1993 08 14.41270	22 06 37.59	-11 09 45.5		691	1993 PC <sub>2</sub>	* 1993 08 15.20133	21 31 54.08	-11 36 50.3	19.7 V	691
1993 PT <sub>1</sub>	1993 08 15.36752	22 05 44.38	-11 15 51.5		691	1993 PC <sub>2</sub>	1993 08 15.23351	21 31 52.16	-11 37 02.5		691
1993 PT <sub>1</sub>	1993 08 15.38923	22 05 43.10	-11 16 00.4	21.1 V	691	1993 PC <sub>2</sub>	1993 08 15.26626	21 31 50.22	-11 37 14.4		691
1993 PT <sub>1</sub>	1993 08 15.41115	22 05 41.83	-11 16 08.5		691	1993 PC <sub>2</sub>	1993 08 16.21130	21 30 56.69	-11 42 56.2	19.6 V	691
1993 PU <sub>1</sub>	* 1993 08 14.37583	22 06 52.85	-11 13 04.3	18.7 V	691	1993 PC <sub>2</sub>	1993 08 16.24384	21 30 54.77	-11 43 08.0		691
1993 PU <sub>1</sub>	1993 08 14.39451	22 06 51.77	-11 13 04.1		691	1993 PC <sub>2</sub>	1993 08 16.27938	21 30 52.66	-11 43 20.9		691
1993 PU <sub>1</sub>	1993 08 14.41285	22 06 50.73	-11 13 03.3		691	1993 PD <sub>2</sub>	* 1993 08 15.20404	21 35 48.72	-11 41 07.3		691
1993 PU <sub>1</sub>	1993 08 15.36768	22 05 57.69	-11 12 29.1	18.8 V	691	1993 PD <sub>2</sub>	1993 08 15.23621	21 35 46.85	-11 41 16.0		691
1993 PU <sub>1</sub>	1993 08 15.38939	22 05 56.42	-11 12 28.0		691	1993 PD <sub>2</sub>	1993 08 15.26897	21 35 44.86	-11 41 25.1	20.5 V	691
1993 PU <sub>1</sub>	1993 08 15.41130	22 05 55.18	-11 12 27.6		691	1993 PD <sub>2</sub>	1993 08 16.21400	21 34 50.91	-11 45 42.8	20.7 V	691
1993 PV <sub>1</sub>	* 1993 08 14.37674	22 08 12.05	-11 04 39.3	20.4 V	691	1993 PD <sub>2</sub>	1993 08 16.28208	21 34 46.94	-11 46 01.6		691
1993 PV <sub>1</sub>	1993 08 14.39543	22 08 11.33	-11 04 54.5		691	1993 PE <sub>2</sub>	* 1993 08 15.20584	21 38 25.11	-11 41 25.5	20.0 V	691
1993 PV <sub>1</sub>	1993 08 14.41377	22 08 10.64	-11 05 09.6		691	1993 PE <sub>2</sub>	1993 08 15.23802	21 38 23.26	-11 41 34.7		691
1993 PV <sub>1</sub>	1993 08 15.36882	22 07 36.97	-11 18 13.9	20.6 V	691	1993 PE <sub>2</sub>	1993 08 15.27078	21 38 21.39	-11 41 44.5		691
1993 PV <sub>1</sub>	1993 08 15.39054	22 07 36.10	-11 18 31.9		691	1993 PE <sub>2</sub>	1993 08 16.21583	21 37 29.09	-11 46 29.3		691
1993 PV <sub>1</sub>	1993 08 15.41246	22 07 35.28	-11 18 49.8		691	1993 PE <sub>2</sub>	1993 08 16.24837	21 37 27.24	-11 46 39.0	19.9 V	691
1993 PW <sub>1</sub>	* 1993 08 14.37717	22 08 49.50	-11 10 34.4		691	1993 PE <sub>2</sub>	1993 08 16.28391	21 37 25.21	-11 46 49.9		691
1993 PW <sub>1</sub>	1993 08 14.39586	22 08 48.56	-11 10 39.6	17.6 V	691	1993 PF <sub>2</sub>	* 1993 08 15.20761	21 40 57.93	-11 35 32.9		691
1993 PW <sub>1</sub>	1993 08 14.41420	22 08 47.64	-11 10 44.5		691	1993 PF <sub>2</sub>	1993 08 15.23979	21 40 56.42	-11 35 54.3	20.4 V	691
1993 PW <sub>1</sub>	1993 08 15.36909	22 08 00.58	-11 15 01.4		691	1993 PF <sub>2</sub>	1993 08 15.27255	21 40 54.84	-11 36 16.1		691
1993 PW <sub>1</sub>	1993 08 15.39081	22 07 59.47	-11 15 07.4	17.6 V	691	1993 PF <sub>2</sub>	1993 08 16.21772	21 40 12.72	-11 46 42.7		691
1993 PW <sub>1</sub>	1993 08 15.41272	22 07 58.35	-11 15 13.1		691	1993 PF <sub>2</sub>	1993 08 16.25026	21 40 11.22	-11 47 03.8	20.6 V	691
1993 PX <sub>1</sub>	* 1993 08 14.38111	22 14 30.82	-11 08 19.5		691	1993 PF <sub>2</sub>	1993 08 16.28581	21 40 09.61	-11 47 27.5		691
1993 PX <sub>1</sub>	1993 08 14.39979	22 14 29.74	-11 08 25.9	20.4 V	691	1993 PG <sub>2</sub>	* 1993 08 15.20986	21 44 13.13	-11 41 58.7	20.0 V	691
1993 PX <sub>1</sub>	1993 08 14.41814	22 14 28.70	-11 08 32.0		691	1993 PG <sub>2</sub>	1993 08 15.24204	21 44 11.47	-11 42 07.5		691
1993 PX <sub>1</sub>	1993 08 15.37296	22 13 35.09	-11 14 09.1		691	1993 PG <sub>2</sub>	1993 08 15.27480	21 44 09.87	-11 42 16.1		691
1993 PX <sub>1</sub>	1993 08 15.39467	22 13 33.78	-11 14 17.0		691	1993 PG <sub>2</sub>	1993 08 16.21993	21 43 24.26	-11 46 37.4		691
1993 PX <sub>1</sub>	1993 08 15.41658	22 13 32.54	-11 14 24.7	20.9 V	691	1993 PG <sub>2</sub>	1993 08 16.25247	21 43 22.62	-11 46 47.0		691
1993 PY <sub>1</sub>	* 1993 08 14.38136	22 14 51.72	-11 09 09.4		691	1993 PG <sub>2</sub>	1993 08 16.28802	21 43 20.86	-11 46 57.0	20.5 V	691

1993 PH <sub>2</sub>	* 1993 08 15.21366	21 49 42.21	-11 42 32.1	18.9 V	691	1993 PQ <sub>2</sub>	1993 08 15.40060	22 22 07.51	-11 28 10.7	691
1993 PH <sub>2</sub>	1993 08 15.24584	21 49 40.65	-11 42 40.2		691	1993 PQ <sub>2</sub>	1993 08 15.42251	22 22 06.34	-11 28 15.5	691
1993 PH <sub>2</sub>	1993 08 15.27860	21 49 38.99	-11 42 48.7		691	1993 PQ <sub>2</sub>	1993 08 16.30279	22 21 20.56	-11 31 22.2	691
1993 PH <sub>2</sub>	1993 08 16.22373	21 48 53.60	-11 46 45.8	18.8 V	691	1993 PQ <sub>2</sub>	1993 08 16.31251	22 21 19.99	-11 31 25.0	18.7 V 691
1993 PH <sub>2</sub>	1993 08 16.25628	21 48 52.02	-11 46 55.0		691	1993 PQ <sub>2</sub>	1993 08 16.32167	22 21 19.50	-11 31 26.8	691
1993 PH <sub>2</sub>	1993 08 16.29182	21 48 50.20	-11 47 03.0		691	1993 PR <sub>2</sub>	* 1993 08 15.37912	22 22 28.72	-11 28 58.9	691
1993 PJ <sub>2</sub>	* 1993 08 15.21399	21 50 10.81	-11 41 55.6		691	1993 PR <sub>2</sub>	1993 08 15.40083	22 22 27.77	-11 29 10.3	19.7 V 691
1993 PJ <sub>2</sub>	1993 08 15.24617	21 50 09.22	-11 42 08.8	19.4 V	691	1993 PR <sub>2</sub>	1993 08 15.42275	22 22 26.78	-11 29 22.6	691
1993 PJ <sub>2</sub>	1993 08 15.27893	21 50 07.62	-11 42 22.9		691	1993 PR <sub>2</sub>	1993 08 16.30295	22 21 49.22	-11 37 29.4	19.7 V 691
1993 PJ <sub>2</sub>	1993 08 16.22407	21 49 22.79	-11 49 03.2		691	1993 PR <sub>2</sub>	1993 08 16.31267	22 21 48.78	-11 37 34.9	691
1993 PJ <sub>2</sub>	1993 08 16.25661	21 49 21.20	-11 49 17.9	19.3 V	691	1993 PR <sub>2</sub>	1993 08 16.32184	22 21 48.37	-11 37 40.1	691
1993 PJ <sub>2</sub>	1993 08 16.29216	21 49 19.42	-11 49 32.4		691	1993 PR <sub>2</sub>	1993 08 18.41665	22 20 15.78	-11 57 12.8	691
1993 PK <sub>2</sub>	* 1993 08 15.21549	21 52 20.75	-11 31 29.9		691	1993 PR <sub>2</sub>	1993 08 18.42587	22 20 15.36	-11 57 17.8	19.8 V 691
1993 PK <sub>2</sub>	1993 08 15.24767	21 52 19.15	-11 31 50.8		691	1993 PR <sub>2</sub>	1993 08 18.43561	22 20 14.92	-11 57 23.7	691
1993 PK <sub>2</sub>	1993 08 15.28043	21 52 17.52	-11 32 10.8	19.2 V	691	1993 PS <sub>2</sub>	* 1993 08 15.37976	22 23 24.51	-11 32 06.9	19.8 V 691
1993 PK <sub>2</sub>	1993 08 16.22558	21 51 34.07	-11 42 11.3		691	1993 PS <sub>2</sub>	1993 08 15.40147	22 23 23.34	-11 32 06.7	691
1993 PK <sub>2</sub>	1993 08 16.25813	21 51 32.50	-11 42 32.5	19.4 V	691	1993 PS <sub>2</sub>	1993 08 15.42339	22 23 22.14	-11 32 06.8	691
1993 PK <sub>2</sub>	1993 08 16.29367	21 51 30.71	-11 42 54.4		691	1993 PS <sub>2</sub>	1993 08 16.30346	22 22 35.95	-11 32 06.6	691
1993 PL <sub>2</sub>	* 1993 08 15.21598	21 53 03.00	-11 41 43.7	18.1 V	691	1993 PS <sub>2</sub>	1993 08 16.31317	22 22 35.47	-11 32 06.3	691
1993 PL <sub>2</sub>	1993 08 15.24816	21 53 01.45	-11 41 52.2		691	1993 PS <sub>2</sub>	1993 08 16.32233	22 22 34.98	-11 32 06.1	19.9 V 691
1993 PL <sub>2</sub>	1993 08 15.28092	21 52 59.86	-11 42 01.9		691	1993 PT <sub>2</sub>	* 1993 08 15.38023	22 24 05.33	-11 29 59.5	691
1993 PL <sub>2</sub>	1993 08 16.22606	21 52 15.74	-11 46 30.4	18.0 V	691	1993 PT <sub>2</sub>	1993 08 15.40195	22 24 04.40	-11 30 08.7	691
1993 PL <sub>2</sub>	1993 08 16.25861	21 52 14.15	-11 46 40.5		691	1993 PT <sub>2</sub>	1993 08 15.42386	22 24 03.37	-11 30 16.5	20.2 V 691
1993 PL <sub>2</sub>	1993 08 16.29415	21 52 12.41	-11 46 49.9		691	1993 PT <sub>2</sub>	1993 08 16.30401	22 23 24.05	-11 35 32.2	691
1993 PM <sub>2</sub>	* 1993 08 15.33521	21 06 51.76	-09 42 06.8		691	1993 PT <sub>2</sub>	1993 08 16.31373	22 23 23.57	-11 35 35.8	20.2 V 691
1993 PM <sub>2</sub>	1993 08 15.34273	21 06 51.25	-09 42 07.3	19.8 V	691	1993 PT <sub>2</sub>	1993 08 16.32289	22 23 23.12	-11 35 39.1	691
1993 PM <sub>2</sub>	1993 08 15.35586	21 06 50.47	-09 42 08.6		691	1993 PU <sub>2</sub>	* 1993 08 15.38032	22 24 12.73	-11 36 26.6	691
1993 PM <sub>2</sub>	1993 08 17.26120	21 04 58.89	-09 45 04.3	20.0 V	691	1993 PU <sub>2</sub>	1993 08 15.40203	22 24 11.66	-11 36 35.7	691
1993 PM <sub>2</sub>	1993 08 17.26927	21 04 58.30	-09 45 03.9		691	1993 PU <sub>2</sub>	1993 08 15.42395	22 24 10.44	-11 36 42.0	20.4 V 691
1993 PM <sub>2</sub>	1993 08 17.27739	21 04 57.87	-09 45 06.5		691	1993 PU <sub>2</sub>	1993 08 16.30404	22 23 26.72	-11 42 05.2	20.3 V 691
1993 PN <sub>2</sub>	* 1993 08 15.37643	22 18 35.92	-11 38 12.7		691	1993 PU <sub>2</sub>	1993 08 16.31376	22 23 26.18	-11 42 08.5	691
1993 PN <sub>2</sub>	1993 08 15.39814	22 18 34.98	-11 38 23.6		691	1993 PU <sub>2</sub>	1993 08 16.32292	22 23 25.68	-11 42 12.3	691
1993 PN <sub>2</sub>	1993 08 15.42006	22 18 34.01	-11 38 35.0	20.3 V	691	1993 PU <sub>2</sub>	1993 08 18.41761	22 21 38.57	-11 55 03.6	691
1993 PN <sub>2</sub>	1993 08 22.32237	22 13 32.33	-12 39 10.2	19.7 V	691	1993 PU <sub>2</sub>	1993 08 18.42682	22 21 38.06	-11 55 07.3	691
1993 PN <sub>2</sub>	1993 08 22.33006	22 13 31.99	-12 39 14.5		691	1993 PU <sub>2</sub>	1993 08 18.43657	22 21 37.54	-11 55 10.9	20.8 V 691
1993 PN <sub>2</sub>	1993 08 22.33879	22 13 31.57	-12 39 19.1		691	1993 PV <sub>2</sub>	* 1993 08 15.44450	05 05 25.82	+23 56 39.0	691
1993 PO <sub>2</sub>	* 1993 08 15.37735	22 19 56.02	-11 42 26.9		691	1993 PV <sub>2</sub>	1993 08 15.45631	05 05 26.63	+23 56 41.9	17.9 V 691
1993 PO <sub>2</sub>	1993 08 15.39907	22 19 54.95	-11 42 35.3	17.3 V	691	1993 PV <sub>2</sub>	1993 08 15.46797	05 05 27.46	+23 56 44.9	691
1993 PO <sub>2</sub>	1993 08 15.42098	22 19 53.88	-11 42 43.8		691	1993 PV <sub>2</sub>	1993 08 16.45209	05 06 36.62	+24 00 53.1	691
1993 PO <sub>2</sub>	1993 08 22.32287	22 14 16.20	-12 28 23.8	17.1 V	691	1993 PV <sub>2</sub>	1993 08 16.46379	05 06 37.42	+24 00 55.9	17.9 V 691
1993 PO <sub>2</sub>	1993 08 22.33057	22 14 15.83	-12 28 27.0		691	1993 PV <sub>2</sub>	1993 08 16.47533	05 06 38.25	+24 00 58.8	691
1993 PO <sub>2</sub>	1993 08 22.33930	22 14 15.32	-12 28 30.6		691	1993 PW <sub>2</sub>	* 1993 08 13.41756	22 12 41.37	-10 39 28.6	691
1993 PP <sub>2</sub>	* 1993 08 15.37837	22 21 24.31	-11 29 58.0	19.5 V	691	1993 PW <sub>2</sub>	1993 08 13.43570	22 12 40.39	-10 39 34.7	17.1 V 691
1993 PP <sub>2</sub>	1993 08 15.40009	22 21 23.40	-11 30 07.3		691	1993 PW <sub>2</sub>	1993 08 14.37929	22 11 52.49	-10 44 52.2	17.0 V 691
1993 PP <sub>2</sub>	1993 08 15.42201	22 21 22.53	-11 30 16.7		691	1993 PW <sub>2</sub>	1993 08 14.39797	22 11 51.46	-10 44 58.4	691
1993 PP <sub>2</sub>	1993 08 16.30260	22 20 47.59	-11 36 38.8	19.6 V	691	1993 PW <sub>2</sub>	1993 08 14.41631	22 11 50.49	-10 45 04.9	691
1993 PP <sub>2</sub>	1993 08 16.31232	22 20 47.20	-11 36 42.9		691	1993 PX <sub>2</sub>	1993 08 13.29858	21 16 09.07	-10 31 48.6	691
1993 PP <sub>2</sub>	1993 08 16.32148	22 20 46.83	-11 36 46.8		691	1993 PX <sub>2</sub>	1993 08 13.33473	21 16 07.09	-10 32 03.3	691
1993 PP <sub>2</sub>	1993 08 18.41603	22 19 22.15	-11 51 58.1	19.5 V	691	1993 PX <sub>2</sub>	1993 08 13.36725	21 16 05.28	-10 32 16.3	17.5 V 691
1993 PP <sub>2</sub>	1993 08 18.42525	22 19 21.75	-11 52 02.3		691	1993 PA <sub>3</sub>	1993 08 13.19525	21 17 06.55	-10 06 53.7	18.0 V 691
1993 PP <sub>2</sub>	1993 08 18.43500	22 19 21.35	-11 52 05.6		691	1993 PA <sub>3</sub>	1993 08 13.22768	21 17 04.85	-10 06 53.6	691
1993 PQ <sub>2</sub>	* 1993 08 15.37889	22 22 08.70	-11 28 06.2	18.5 V	691	1993 PA <sub>3</sub>	1993 08 13.26130	21 17 03.06	-10 06 54.2	691

1993 PD <sub>3</sub>	1993 08 14.27683	21 19 44.45	-10 41 19.0	17.6 V	691	1993 QE	1993 08 16.31556	22 26 02.41	-11 54 56.3	18.2 V	691
1993 PD <sub>3</sub>	1993 08 14.30889	21 19 42.34	-10 41 25.8		691	1993 QE	1993 08 16.32472	22 26 01.95	-11 54 58.6		691
1993 PD <sub>3</sub>	1993 08 14.34138	21 19 40.22	-10 41 34.3		691	1993 QE	1993 08 18.41949	22 24 21.57	-12 03 45.1	18.1 V	691
1993 PP <sub>3</sub>	1993 08 15.19569	21 23 45.32	-11 26 20.7		691	1993 QE	1993 08 18.42871	22 24 21.13	-12 03 47.1		691
1993 PP <sub>3</sub>	1993 08 15.22786	21 23 43.28	-11 26 13.6	17.4 V	691	1993 QE	1993 08 18.43845	22 24 20.63	-12 03 49.8		691
1993 PP <sub>3</sub>	1993 08 15.26062	21 23 41.18	-11 26 06.2		691	1993 QF	* 1993 08 16.30662	22 27 09.88	-11 53 11.8	20.6 V	691
1993 PQ <sub>3</sub>	1993 08 14.28105	21 25 50.19	-10 48 07.6	17.1 V	691	1993 QF	1993 08 16.31634	22 27 09.50	-11 53 15.9		691
1993 PQ <sub>3</sub>	1993 08 14.31311	21 25 48.43	-10 48 20.5		691	1993 QF	1993 08 16.32550	22 27 09.15	-11 53 20.6		691
1993 PQ <sub>3</sub>	1993 08 14.34561	21 25 46.65	-10 48 34.9		691	1993 QF	1993 08 18.42049	22 25 47.99	-12 10 19.4		691
1993 PR <sub>3</sub>	1993 08 13.20285	21 28 05.55	-10 05 24.7	17.9 V	691	1993 QF	1993 08 18.42970	22 25 47.65	-12 10 24.2		691
1993 PR <sub>3</sub>	1993 08 13.23529	21 28 03.76	-10 05 37.5		691	1993 QF	1993 08 18.43945	22 25 47.23	-12 10 29.4	21.2 V	691
1993 PR <sub>3</sub>	1993 08 13.26891	21 28 01.88	-10 05 50.2		691	1993 QG	* 1993 08 16.30753	22 28 28.66	-11 40 17.4	19.1 V	691
1993 PU <sub>3</sub>	1993 08 13.30848	21 30 25.86	-10 14 39.6		691	1993 QG	1993 08 16.31725	22 28 28.29	-11 40 19.7		691
1993 PU <sub>3</sub>	1993 08 13.34462	21 30 23.46	-10 14 42.2	17.6 V	691	1993 QG	1993 08 16.32641	22 28 27.97	-11 40 21.8		691
1993 PU <sub>3</sub>	1993 08 13.37713	21 30 21.27	-10 14 44.7		691	1993 QG	1993 08 18.42145	22 27 11.40	-11 48 53.7		691
1993 PA <sub>4</sub>	1993 08 17.30886	21 30 34.32	-09 17 52.0		691	1993 QG	1993 08 18.43067	22 27 11.04	-11 48 55.8		691
1993 PA <sub>4</sub>	1993 08 17.35027	21 30 31.64	-09 17 58.7		691	1993 QG	1993 08 18.44041	22 27 10.68	-11 48 58.6	19.2 V	691
1993 PA <sub>4</sub>	1993 08 17.38251	21 30 29.70	-09 18 02.4	17.5 V	691	1993 QH	* 1993 08 16.30777	22 28 49.36	-11 48 46.5		691
1993 QA	* 1993 08 16.21713	21 39 21.67	-12 08 06.6	19.3 V	691	1993 QH	1993 08 16.31749	22 28 48.90	-11 48 52.1		691
1993 QA	1993 08 16.24966	21 39 18.55	-12 08 43.3	19.5 V	691	1993 QH	1993 08 16.32665	22 28 48.48	-11 48 57.2	20.8 V	691
1993 QA	1993 08 16.28518	21 39 15.16	-12 09 22.7	19.5 V	691	1993 QH	1993 08 18.42146	22 27 12.67	-12 09 15.6		691
1993 QA	1993 08 17.28436	21 37 43.17	-12 27 54.4	19.1 V	691	1993 QH	1993 08 18.43068	22 27 12.17	-12 09 20.6		691
1993 QA	1993 08 17.29245	21 37 42.42	-12 28 03.3	19.3 V	691	1993 QH	1993 08 18.44043	22 27 11.73	-12 09 26.5	20.6 V	691
1993 QA	1993 08 17.29999	21 37 41.66	-12 28 11.8	19.3 V	691	1993 QJ	* 1993 08 16.44597	04 57 46.20	+24 05 40.9		691
1993 QA	1993 08 18.38715	21 36 00.64	-12 48 26.8	19.6 V	691	1993 QJ	1993 08 16.46921	04 57 48.08	+24 05 44.0	19.6 V	691
1993 QA	1993 08 18.39654	21 35 59.72	-12 48 37.3	19.8 V	691	1993 QJ	1993 08 18.45513	05 00 31.83	+24 10 15.3	20.8 V	691
1993 QA	1993 08 18.40620	21 35 58.92	-12 48 47.0	19.0 V	I 691	1993 QJ	1993 08 18.46679	05 00 32.74	+24 10 17.0		691
1993 QA	1993 08 22.26343	21 29 59.80	-14 00 58.1	19.9 V	691	1993 QJ	1993 08 18.47843	05 00 33.72	+24 10 19.2		691
1993 QA	1993 08 22.27455	21 29 58.70	-14 01 10.7	19.8 V	691	1993 QK	* 1993 08 17.28375	21 36 23.50	-12 29 36.8	17.4 V	691
1993 QA	1993 08 22.28293	21 29 57.88	-14 01 20.1	19.8 V	691	1993 QK	1993 08 17.29185	21 36 23.12	-12 29 39.1		691
1993 QA	1993 09 14.12176	21 00 05.19	-20 19 51.0	19.7 V	691	1993 QK	1993 08 17.29939	21 36 22.76	-12 29 41.4		691
1993 QA	1993 09 14.13174	21 00 04.66	-20 19 59.3	19.7 V	691	1993 QK	1993 08 18.38685	21 35 35.11	-12 35 17.0	17.4 V	691
1993 QA	1993 09 14.14129	21 00 04.10	-20 20 07.5	20.0 V	691	1993 QK	1993 08 18.39626	21 35 34.68	-12 35 19.6		691
1993 QB	* 1993 08 16.21880	21 41 46.84	-12 08 25.3	20.9 V	691	1993 QK	1993 08 18.40592	21 35 34.22	-12 35 22.4		691
1993 QB	1993 08 16.25135	21 41 45.15	-12 08 37.4		691	1993 QL	* 1993 08 17.28702	21 41 33.28	-12 36 33.3		691
1993 QB	1993 08 16.28689	21 41 43.31	-12 08 51.1		691	1993 QL	1993 08 17.29511	21 41 32.84	-12 36 36.6	18.7 V	691
1993 QB	1993 08 17.28657	21 40 53.96	-12 15 15.9	20.6 V	691	1993 QL	1993 08 17.30265	21 41 32.45	-12 36 39.4		691
1993 QB	1993 08 17.29466	21 40 53.61	-12 15 20.2		691	1993 QL	1993 08 18.39031	21 40 34.43	-12 43 27.1		691
1993 QB	1993 08 17.30220	21 40 53.16	-12 15 22.7		691	1993 QL	1993 08 18.39971	21 40 33.88	-12 43 30.3	19.1 V	691
1993 QC	* 1993 08 16.22087	21 44 46.20	-12 08 57.7	19.3 V	691	1993 QL	1993 08 18.40937	21 40 33.38	-12 43 33.8		691
1993 QC	1993 08 16.25342	21 44 44.32	-12 09 09.9		691	1993 QM	* 1993 08 17.28723	21 41 51.80	-12 34 37.8		691
1993 QC	1993 08 16.28896	21 44 42.26	-12 09 22.6		691	1993 QM	1993 08 17.29532	21 41 51.33	-12 34 39.7		691
1993 QC	1993 08 17.28856	21 43 46.34	-12 15 18.7		691	1993 QM	1993 08 17.30286	21 41 50.89	-12 34 40.9	19.8 V	691
1993 QC	1993 08 17.29665	21 43 45.87	-12 15 22.0	18.8 V	691	1993 QM	1993 08 18.39049	21 40 50.26	-12 38 45.2		691
1993 QC	1993 08 17.30419	21 43 45.41	-12 15 24.9		691	1993 QM	1993 08 18.39989	21 40 49.70	-12 38 47.9	20.3 V	691
1993 QD	* 1993 08 16.30499	22 24 48.43	-11 52 42.3	20.8 V	691	1993 QM	1993 08 18.40955	21 40 49.15	-12 38 50.6		691
1993 QD	1993 08 16.31470	22 24 47.96	-11 52 43.1		691	1993 RA	* 1993 09 09.27355	22 19 50.32	-07 38 07.6	19.9 V	691
1993 QD	1993 08 16.32386	22 24 47.43	-11 52 44.0		691	1993 RA	1993 09 09.30671	22 19 47.56	-07 38 34.7	20.4 V	691
1993 QD	1993 08 18.41852	22 22 57.35	-11 57 30.7		691	1993 RA	1993 09 09.34165	22 19 44.63	-07 39 06.3	20.0 V	691
1993 QD	1993 08 18.42773	22 22 56.85	-11 57 31.4	20.9 V	691	1993 RA	1993 09 10.18686	22 18 39.66	-07 51 15.3	20.7 V	691
1993 QD	1993 08 18.43748	22 22 56.34	-11 57 32.7		691	1993 RA	1993 09 10.19591	22 18 38.94	-07 51 24.0	21.1 V	691
1993 QE	* 1993 08 16.30585	22 26 02.89	-11 54 53.9		691	1993 RA	1993 09 10.20482	22 18 38.14	-07 51 30.7	20.8 V	691



1968 OA <sub>1</sub>	1993 08 22.22937	21 38 40.16	-02 33 54.2	801	1982 TP <sub>1</sub>	1993 08 15.18895	21 12 21.12	-10 42 42.0	801
1971 UN <sub>1</sub>	1993 08 15.26980	22 50 23.95	-06 08 53.9	801	1982 TP <sub>1</sub>	1993 08 15.20691	21 12 20.10	-10 42 46.6	801
1971 UN <sub>1</sub>	1993 08 15.28693	22 50 23.26	-06 08 57.5	p 801	1982 TP <sub>1</sub>	1993 08 22.16171	21 06 11.39	-11 11 46.6	801
1971 UN <sub>1</sub>	1993 08 22.27243	22 45 49.16	-06 38 59.2	801	1982 TP <sub>1</sub>	1993 08 22.18138	21 06 10.35	-11 11 51.6	801
1971 UN <sub>1</sub>	1993 08 22.29013	22 45 48.44	-06 39 03.8	801	1984 BK	1993 08 14.20900	21 32 38.50	-12 12 25.5	801
1976 GY <sub>3</sub>	1993 08 20.29560	22 58 02.95	-02 07 47.0	801	1984 BK	1993 08 14.22241	21 32 37.66	-12 12 27.6	801
1976 GY <sub>3</sub>	1993 08 20.31212	22 58 02.10	-02 07 54.0	801	1984 BK	1993 08 20.24380	21 26 37.04	-12 27 26.3	801
1976 GY <sub>3</sub>	1993 08 22.27669	22 56 22.05	-02 20 46.1	801	1984 BK	1993 08 20.27627	21 26 35.06	-12 27 30.8	801
1976 GY <sub>3</sub>	1993 08 22.29273	22 56 21.19	-02 20 52.3	801	1984 OA	1993 08 21.36560	02 17 26.57	-06 33 37.8	801
1977 PO <sub>1</sub>	1993 08 15.32688	00 28 54.67	+15 40 16.6	801	1984 OA	1993 08 21.37406	02 17 26.92	-06 33 42.5	801
1977 PO <sub>1</sub>	1993 08 15.34399	00 28 54.35	+15 40 19.5	801	1984 OA	1993 08 22.36220	02 18 10.65	-06 43 08.5	801
1977 PO <sub>1</sub>	1993 08 22.33670	00 26 36.08	+16 07 16.0	801	1984 OA	1993 08 22.37067	02 18 11.01	-06 43 13.8	r 801
1977 PO <sub>1</sub>	1993 08 22.35833	00 26 35.55	+16 07 20.3	801	1985 CC <sub>2</sub>	1993 08 14.25941	22 37 08.73	-12 14 00.8	801
1977 UO <sub>5</sub>	1993 08 15.27604	23 03 30.77	-09 53 52.3	801	1985 CC <sub>2</sub>	1993 08 22.24359	22 30 02.64	-13 11 49.3	801
1977 UO <sub>5</sub>	1993 08 15.29375	23 03 30.10	-09 53 56.2	801	1985 CC <sub>2</sub>	1993 08 22.26492	22 30 01.41	-13 11 58.8	801
1977 UO <sub>5</sub>	1993 08 22.27972	22 58 55.77	-10 25 52.8	801	1985 PO	1993 08 15.15987	20 43 17.08	-16 58 40.0	801
1977 UO <sub>5</sub>	1993 08 22.29546	22 58 55.10	-10 25 57.3	801	1985 PO	1993 08 15.17868	20 43 16.16	-16 58 46.0	801
1978 SO <sub>4</sub>	1993 08 15.26153	22 37 39.97	-15 26 33.3	801	1985 PO	1993 08 22.12487	20 38 08.36	-17 33 50.9	801
1978 SO <sub>4</sub>	1993 08 15.28380	22 37 39.08	-15 26 37.2	801	1985 PO	1993 08 22.14110	20 38 07.63	-17 33 55.2	801
1978 SO <sub>4</sub>	1993 08 22.24692	22 33 00.89	-15 46 27.4	801	1985 XR	1993 08 15.31995	00 11 13.93	-03 05 43.2	801
1978 SO <sub>4</sub>	1993 08 22.26831	22 32 59.97	-15 46 29.8	801	1985 XR	1993 08 15.34127	00 11 13.58	-03 05 48.4	801
1979 MR <sub>3</sub>	1993 07 16.13994	18 12 55.08	-18 27 53.1	801	1985 XR	1993 08 22.33237	00 08 52.26	-03 37 52.1	w 801
1979 MR <sub>3</sub>	1993 07 16.15868	18 12 54.14	-18 27 59.9	I 801	1985 XR	1993 08 22.35635	00 08 51.66	-03 37 59.3	w 801
1979 MR <sub>3</sub>	1993 07 21.11125	18 09 29.08	-19 01 23.2	V 801	1986 QQ	1993 08 15.31483	23 47 02.86	-03 45 55.4	801
1979 MR <sub>3</sub>	1993 07 21.13182	18 09 28.20	-19 01 31.5	V 801	1986 QQ	1993 08 15.33323	23 47 02.27	-03 45 57.4	801
1979 SR	1993 08 14.32464	01 20 28.78	+14 00 32.7	801	1986 RT <sub>2</sub>	1993 08 15.24211	22 13 30.20	-11 38 23.8	801
1979 SR	1993 08 14.35690	01 20 29.49	+14 00 33.7	801	1986 RT <sub>2</sub>	1993 08 15.25649	22 13 29.36	-11 38 27.5	801
1980 PX	1993 08 15.30376	23 27 48.91	-02 52 57.8	801	1986 RT <sub>2</sub>	1993 08 22.23444	22 06 52.53	-12 08 09.0	801
1980 PX	1993 08 15.33532	23 27 48.49	-02 53 05.1	801	1986 RT <sub>2</sub>	1993 08 22.25889	22 06 51.07	-12 08 15.1	801
1980 PX	1993 08 22.28751	23 25 53.66	-03 25 58.9	801	1986 RW <sub>2</sub>	1993 08 15.12630	20 23 46.56	-22 44 27.8	801
1980 PX	1993 08 22.31880	23 25 52.82	-03 26 09.2	801	1986 RW <sub>2</sub>	1993 08 15.14286	20 23 45.70	-22 44 29.7	801
1980 SQ	1993 08 15.10719	20 03 57.06	-11 20 33.5	801	1986 RY <sub>5</sub>	1993 08 20.09755	20 56 10.29	-05 44 00.2	801
1980 SQ	1993 08 15.12341	20 03 56.27	-11 20 37.6	801	1986 RY <sub>5</sub>	1993 08 20.11374	20 56 09.51	-05 44 05.4	801
1980 SQ	1993 08 20.12003	20 00 15.81	-11 41 09.8	801	1986 RY <sub>5</sub>	1993 08 22.14992	20 54 39.27	-05 55 02.6	801
1980 SQ	1993 08 20.13712	20 00 15.10	-11 41 13.5	801	1986 RY <sub>5</sub>	1993 08 22.17292	20 54 38.16	-05 55 09.3	801
1981 DF <sub>2</sub>	1993 08 14.31199	00 53 41.73	+18 42 08.6	801	1988 CH <sub>2</sub>	1993 08 15.08998	19 07 05.30	-20 09 12.1	801
1981 DF <sub>2</sub>	1993 08 14.33100	00 53 42.27	+18 42 17.9	801	1988 CH <sub>2</sub>	1993 08 15.11215	19 07 04.67	-20 09 18.0	I 801
1981 EL <sub>4</sub>	1993 08 15.21862	21 52 03.37	-08 53 49.1	801	1988 PX <sub>2</sub>	1993 08 14.18888	21 16 59.34	-04 34 50.8	801
1981 EL <sub>4</sub>	1993 08 15.23355	21 52 02.59	-08 53 50.9	801	1988 PX <sub>2</sub>	1993 08 14.20284	21 16 58.70	-04 34 55.8	801
1981 EQ <sub>12</sub>	1993 08 15.16190	20 47 28.90	-02 46 54.1	801	1988 PX <sub>2</sub>	1993 08 22.16483	21 11 16.38	-05 27 09.5	801
1981 EQ <sub>12</sub>	1993 08 15.18353	20 47 27.95	-02 46 57.2	I 801	1988 PX <sub>2</sub>	1993 08 22.18455	21 11 15.56	-05 27 17.3	801
1981 EQ <sub>12</sub>	1993 08 20.08847	20 44 18.20	-03 01 55.9	I 801	1988 RK <sub>9</sub>	1993 08 15.09350	19 52 26.15	-13 26 03.2	801
1981 EQ <sub>12</sub>	1993 08 20.10347	20 44 17.56	-03 01 58.4	I 801	1988 RK <sub>9</sub>	1993 08 15.10944	19 52 25.61	-13 26 11.2	801
1981 EX <sub>13</sub>	1993 08 15.31773	23 57 40.02	+09 48 04.4	801	1988 RK <sub>9</sub>	1993 08 20.11797	19 49 59.45	-14 09 22.3	801
1981 EX <sub>13</sub>	1993 08 15.33846	23 57 39.60	+09 48 01.8	801	1988 RK <sub>9</sub>	1993 08 20.13509	19 49 58.97	-14 09 31.4	801
1981 EX <sub>13</sub>	1993 08 22.32442	23 55 01.37	+09 28 36.9	801	1989 LW	1993 08 14.31483	00 54 32.22	+34 47 59.0	801
1981 EX <sub>13</sub>	1993 08 22.35269	23 55 00.58	+09 28 30.6	801	1989 LW	1993 08 14.33374	00 54 32.83	+34 48 03.3	801
1981 EX <sub>43</sub>	1993 08 14.15323	20 39 00.88	-07 46 48.3	801	1989 LW	1993 08 22.33876	00 58 10.93	+35 07 12.8	801
1981 EX <sub>43</sub>	1993 08 20.12678	20 34 18.68	-08 22 31.5	801	1989 RZ	1993 08 14.36213	04 22 07.50	+38 38 00.8	801
1981 EX <sub>43</sub>	1993 08 20.14160	20 34 17.97	-08 22 36.9	801	1989 RZ	1993 08 14.36852	04 22 08.72	+38 38 08.7	801
1982 BD <sub>13</sub>	1993 08 22.11134	20 01 12.44	-21 05 50.9	801	1989 RO <sub>2</sub>	1993 08 14.36019	03 55 33.89	+34 34 44.7	801
1982 BD <sub>13</sub>	1993 08 22.13094	20 01 11.72	-21 05 50.6	801	1989 RO <sub>2</sub>	1993 08 14.36414	03 55 34.46	+34 34 49.8	801

1989 SP	1993 08 14.26515	23 14 11.77	+10 57 32.6	801	1992 EM	1993 08 22.34127	01 24 38.11	+16 59 02.6	801
1989 SP	1993 08 14.30606	23 14 10.82	+10 57 24.4	801	1992 EM	1993 08 22.36491	01 24 37.92	+16 59 11.1	801
1989 SP	1993 08 22.28514	23 10 38.98	+10 19 59.8	801	1992 FD	1993 08 14.18234	21 05 45.43	+10 45 44.3	I 801
1989 SP	1993 08 22.30037	23 10 38.48	+10 19 54.2	801	1992 FD	1993 08 14.19131	21 05 44.93	+10 45 35.7	I 801
1989 UL	1993 08 14.17963	20 58 57.46	-08 15 57.7	801	1992 FD	1993 08 20.10015	21 00 58.92	+09 14 56.6	I 801
1989 UL	1993 08 14.19741	20 58 56.54	-08 16 02.6	801	1992 FD	1993 08 20.11073	21 00 58.41	+09 14 46.5	801
1989 UL	1993 08 22.14661	20 52 37.98	-08 51 29.4	801	1992 FR	1993 08 15.25424	22 34 18.13	+00 36 19.0	801
1989 UL	1993 08 22.16992	20 52 36.80	-08 51 35.4	801	1992 FR	1993 08 15.26687	22 34 17.58	+00 36 13.5	801
1989 VR	1993 08 15.20065	21 25 44.11	-12 51 41.9	801	1992 FR	1993 08 22.24104	22 29 00.16	-00 17 40.7	801
1989 VR	1993 08 15.21574	21 25 43.38	-12 51 46.1	801	1992 FR	1993 08 22.26145	22 28 59.18	-00 17 50.8	801
1989 VR	1993 08 22.19705	21 20 14.49	-13 22 39.0	801	1992 FZ <sub>1</sub>	1993 08 21.32883	00 08 30.26	-07 53 19.0	801
1989 YZ <sub>1</sub>	1993 08 15.21306	21 28 51.02	-17 25 36.1	801	1992 FZ <sub>1</sub>	1993 08 21.35431	00 08 29.68	-07 53 33.1	801
1989 YZ <sub>1</sub>	1993 08 15.22709	21 28 50.33	-17 25 38.7	801	1992 FZ <sub>1</sub>	1993 08 22.33003	00 08 09.28	-08 02 32.4	801
1989 YZ <sub>1</sub>	1993 08 22.20037	21 23 24.28	-17 50 09.3	801	1992 FZ <sub>1</sub>	1993 08 22.35034	00 08 08.78	-08 02 43.7	801
1990 RS <sub>17</sub>	1993 08 15.09609	20 02 55.44	-22 46 50.3	801	1992 JP	1993 07 17.25725	21 02 36.41	-16 27 30.2	801
1990 RS <sub>17</sub>	1993 08 15.11505	20 02 54.58	-22 46 46.0	801	1992 JP	1993 07 17.27340	21 02 35.77	-16 27 37.0	801
1990 RS <sub>17</sub>	1993 08 22.08652	19 58 57.16	-22 17 37.3	801	1992 JP	1993 07 18.25024	21 01 57.87	-16 34 31.6	801
1990 RS <sub>17</sub>	1993 08 22.10787	19 58 56.52	-22 17 32.8	I 801	1992 JP	1993 07 18.26663	21 01 57.25	-16 34 37.4	801
1990 SK <sub>3</sub>	1993 07 18.22297	20 41 10.00	-25 11 30.9	801	1992 JP	1993 08 15.15153	20 41 53.35	-19 55 22.6	801
1990 SK <sub>3</sub>	1993 07 18.23633	20 41 09.30	-25 11 36.0	801	1992 JP	1993 08 15.17200	20 41 52.46	-19 55 31.4	801
1990 SK <sub>3</sub>	1993 07 21.22600	20 38 36.94	-25 30 11.8	801	1992 JP	1993 08 22.12207	20 37 19.00	-20 40 06.6	801
1990 SK <sub>3</sub>	1993 07 21.24229	20 38 36.10	-25 30 16.7	801	1992 JP	1993 08 22.13763	20 37 18.43	-20 40 12.7	801
1990 UK <sub>1</sub>	1993 08 22.07873	19 38 33.49	-14 59 27.5	801	1993 KM	1993 08 15.06440	17 07 42.06	+04 16 55.2	801
1990 UK <sub>1</sub>	1993 08 22.10558	19 38 32.63	-14 59 31.4	I 801	1993 KM	1993 08 15.07272	17 07 42.51	+04 16 46.9	801
1990 XA	1993 08 15.13648	20 39 52.13	-11 15 58.4	801	1993 KM	1993 08 20.07572	17 12 21.77	+03 04 21.7	I 801
1990 XA	1993 08 15.15373	20 39 51.28	-11 16 00.6	801	1993 KM	1993 08 20.08396	17 12 22.33	+03 04 15.0	I 801
1990 XA	1993 08 20.12421	20 36 00.05	-11 26 08.0	801	1993 MF	1993 08 14.27020	23 20 40.02	+41 03 10.1	801
1990 XA	1993 08 20.13885	20 35 59.42	-11 26 09.7	I 801	1993 MF	1993 08 20.33168	23 37 39.20	+41 26 25.7	801
1990 YQ	1993 08 15.13977	20 42 04.41	-15 40 20.1	801	1993 MF	1993 08 20.33503	23 37 39.67	+41 26 25.4	801
1990 YQ	1993 08 15.15639	20 42 03.42	-15 40 24.3	801	1993 ME <sub>1</sub>	1993 08 19.09280	17 39 21.49	+10 35 10.2	I 801
1990 YQ	1993 08 20.13047	20 37 28.63	-16 00 39.1	801	1993 ME <sub>1</sub>	1993 08 19.09976	17 39 22.07	+10 35 08.3	I 801
1990 YQ	1993 08 20.14513	20 37 27.84	-16 00 42.3	801	1993 MG <sub>1</sub>	1993 08 14.15067	20 01 46.14	+00 46 30.4	801
1991 AD <sub>2</sub>	1993 08 15.13194	20 35 41.81	-17 35 25.0	801	1993 MG <sub>1</sub>	1993 08 14.16854	20 01 45.58	+00 46 40.2	801
1991 AD <sub>2</sub>	1993 08 15.14552	20 35 41.12	-17 35 28.7	801	1993 MG <sub>1</sub>	1993 08 20.11601	19 59 46.52	+01 23 36.8	801
1991 AD <sub>2</sub>	1993 08 22.12005	20 30 19.48	-18 09 13.7	801	1993 MG <sub>1</sub>	1993 08 20.14726	19 59 45.99	+01 23 46.8	801
1991 AD <sub>2</sub>	1993 08 22.13538	20 30 18.81	-18 09 18.5	801	1993 OL	1993 08 16.04267	17 09 47.65	-06 15 14.8	801
1991 FV	1993 08 21.32148	23 52 26.56	+14 17 50.8	801	1993 OL	1993 08 16.04460	17 09 46.78	-06 15 06.0	801
1991 FV	1993 08 21.34522	23 52 25.79	+14 17 51.4	801	1993 OL	1993 08 19.02981	16 48 37.84	-02 30 50.1	801
1991 FV	1993 08 22.32160	23 51 55.55	+14 18 02.5	801	1993 OL	1993 08 19.03131	16 48 37.21	-02 30 42.3	801
1991 FV	1993 08 22.34362	23 51 54.83	+14 18 02.6	801	1993 OL	1993 08 22.02421	16 28 55.65	+01 04 12.3	801
1991 VX <sub>1</sub>	1993 08 22.05310	17 15 46.53	+01 26 04.6	801	1993 OL	1993 08 22.02712	16 28 54.52	+01 04 24.6	801
1992 BW	1993 08 15.11985	20 25 13.42	-21 02 37.7	801	1993 OV <sub>1</sub>	1993 08 14.20520	21 26 30.45	-08 01 06.1	801
1992 BW	1993 08 20.12247	20 18 02.19	-19 58 25.7	801	1993 OV <sub>1</sub>	1993 08 14.21462	21 26 29.82	-08 00 56.3	801
1992 BW	1993 08 20.13316	20 18 01.29	-19 58 17.5	801	1993 OV <sub>1</sub>	1993 08 22.19356	21 19 42.12	-05 58 27.4	801
1992 CA	1993 08 14.23696	22 17 31.80	-14 15 41.7	801	1993 OV <sub>1</sub>	1993 08 22.20487	21 19 41.60	-05 58 18.3	801
1992 CA	1993 08 14.24539	22 17 31.39	-14 15 56.0	I 801	1993 PC <sub>6</sub>	1993 09 12.09272	22 00 23.62	-14 50 52.4	801
1992 CA	1993 08 22.23917	22 11 03.40	-18 03 25.2	I 801	1993 PC <sub>6</sub>	1993 09 12.10328	22 00 23.30	-14 51 07.3	801
1992 CA	1993 08 22.24931	22 11 02.84	-18 03 42.8	801	6034 P-L	1993 08 14.15797	20 54 59.77	-03 50 33.1	801
1992 CJ	1993 08 21.32506	00 00 14.96	+05 54 34.9	801	6034 P-L	1993 08 14.17300	20 54 59.12	-03 50 38.0	801
1992 CJ	1993 08 21.34236	00 00 14.27	+05 54 31.8	801	6034 P-L	1993 08 20.09410	20 50 56.81	-04 33 32.6	801
1992 EM	1993 08 14.32780	01 24 25.45	+16 06 44.1	801	6034 P-L	1993 08 20.10781	20 50 56.26	-04 33 38.9	801
1992 EM	1993 08 14.35354	01 24 25.65	+16 06 54.0	801	6555 P-L	1993 08 15.19639	21 16 55.26	-16 58 21.3	801



6555 P-L	1993 08 15.20961	21 16 54.69	-16 58 25.9	801	1981 EU <sub>18</sub>	1993 07 20.24375	19 55 19.93	-20 57 59.3	18.2	4 809	
6766 P-L	1993 08 14.18640	21 10 12.32	-04 47 54.1	V 801	1981 EU <sub>18</sub>	1993 07 20.25694	19 55 19.22	-20 58 01.5		4 809	
6766 P-L	1993 08 14.20072	21 10 11.67	-04 48 00.3	V 801	1981 EU <sub>18</sub>	1993 07 20.27014	19 55 18.49	-20 58 04.4		4 809	
6766 P-L	1993 08 22.15500	21 04 53.14	-05 47 29.8	801	1981 EU <sub>18</sub>	1993 07 24.22708	19 52 02.99	-21 07 11.9		4 809	
6766 P-L	1993 08 22.17640	21 04 52.28	-05 47 39.5	801	1981 UT	1993 04 24.27639	13 14 01.71	-10 51 59.4	16.4	3 809	
2170 T-2	1993 08 20.23978	21 37 35.75	+02 18 23.4	801	1981 UT	1993 04 24.29028	13 14 00.91	-10 51 55.1		3 809	
2170 T-2	1993 08 20.27934	21 37 33.82	+02 17 59.3	801	1981 UT	1993 04 25.08472	13 13 15.75	-10 48 01.7		3 809	
2170 T-2	1993 08 22.21347	21 36 04.15	+01 58 23.2	801	1981 UT	1993 04 25.09861	13 13 14.97	-10 47 57.9		3 809	
2170 T-2	1993 08 22.22556	21 36 03.54	+01 58 16.0	801	1981 UT	1993 04 25.11250	13 13 14.19	-10 47 54.1		3 809	
3070 T-2	1993 08 15.16509	20 52 33.05	-17 50 17.4	801	1981 UT	1993 04 25.97986	13 12 25.29	-10 43 38.2		3 809	
3070 T-2	1993 08 15.18162	20 52 32.09	-17 50 22.7	801	1981 UT	1993 04 25.99375	13 12 24.48	-10 43 34.2		3 809	
3070 T-2	1993 08 22.12826	20 46 17.92	-18 27 19.8	801	1981 UT	1993 04 26.00764	13 12 23.68	-10 43 30.2		3 809	
3070 T-2	1993 08 22.14360	20 46 17.10	-18 27 24.9	801	1983 EM <sub>1</sub>	1993 04 27.11736	13 31 12.50	-11 17 35.4	15.9	3 809	
(243)	1993 05 26.07513	11 41 40.06	+00 50 02.6	801	1983 EM <sub>1</sub>	1993 04 27.13125	13 31 11.69	-11 17 32.9		3 809	
(243)	1993 05 26.08894	11 41 40.30	+00 50 01.5	801	1983 EM <sub>1</sub>	1993 04 27.14514	13 31 10.90	-11 17 30.0		3 809	
(243)	1993 05 26.10322	11 41 40.53	+00 49 59.7	801	1983 EM <sub>1</sub>	1993 05 01.26250	13 27 16.50	-11 04 49.4		3 809	
(243)	1993 05 26.12194	11 41 40.86	+00 49 57.1	801	1983 EM <sub>1</sub>	1993 05 01.27500	13 27 15.79	-11 04 46.5		3 809	
(1895)	1993 08 15.31483	23 47 08.46	-03 45 12.7	801	1983 EM <sub>1</sub>	1993 05 01.28750	13 27 15.06	-11 04 43.7		3 809	
(1895)	1993 08 15.33323	23 47 07.97	-03 45 16.1	801	1983 VN <sub>7</sub>	1993 07 20.24375	20 01 39.61	-19 17 06.6	18.2	4 809	
(2059)	1993 08 15.08591	18 53 11.14	-02 31 14.8	801	1983 VN <sub>7</sub>	1993 07 20.25694	20 01 38.90	-19 17 08.5		4 809	
(2059)	1993 08 15.09998	18 53 10.41	-02 31 21.2	801	1983 VN <sub>7</sub>	1993 07 20.27014	20 01 38.15	-19 17 10.4		4 809	
(5641)	1993 08 14.18434	21 07 27.88	-05 44 57.1	801	1983 VN <sub>7</sub>	1993 07 24.22708	19 58 18.48	-19 28 34.6		4 809	
(5641)	1993 08 14.19426	21 07 27.26	-05 45 11.9	801	1987 UG	1993 04 25.13055	13 19 32.66	-08 36 15.5	17.0	3 809	
(5641)	1993 08 22.15240	20 59 56.82	-08 59 52.7	801	1987 UG	1993 04 25.14722	13 19 31.84	-08 36 09.6		3 809	
(5641)	1993 08 22.16758	20 59 55.97	-09 00 14.5	801	1987 UG	1993 04 25.16389	13 19 30.98	-08 36 04.6		3 809	
(5643)	1993 08 22.06990	18 58 47.58	-17 06 32.7	801	1987 UG	1993 04 26.02570	13 18 47.65	-08 31 13.6		3 809	
(5650)	1993 08 14.25435	22 41 52.87	+11 12 56.7	801	1987 UG	1993 04 26.03958	13 18 46.93	-08 31 09.3		3 809	
(5650)	1993 08 14.26749	22 41 52.26	+11 12 56.0	801	1987 UG	1993 04 26.05347	13 18 46.21	-08 31 04.7		3 809	
(5650)	1993 08 20.29196	22 37 08.35	+11 02 34.4	801	1990 VQ <sub>1</sub>	1993 05 01.08715	13 42 16.26	-14 09 53.4	14.8	3 809	
(5650)	1993 08 20.30856	22 37 07.51	+11 02 32.0	801	1990 VQ <sub>1</sub>	1993 05 01.10104	13 42 15.62	-14 09 45.2		3 809	
					1990 VQ <sub>1</sub>	1993 05 01.11493	13 42 14.95	-14 09 36.6		3 809	
					1990 WU <sub>5</sub>	1993 07 20.24375	20 06 30.03	-18 33 27.7	18.3	4 809	
					1990 WU <sub>5</sub>	1993 07 20.25694	20 06 29.23	-18 33 30.7		4 809	
					1990 WU <sub>5</sub>	1993 07 20.27014	20 06 28.48	-18 33 34.4		4 809	
					1990 WU <sub>5</sub>	1993 07 24.22708	20 02 49.80	-18 50 09.8		4 809	
					1991 VO	1993 04 25.13055	13 19 17.22	-08 33 08.9	16.7	3 809	
					1991 VO	1993 04 25.14722	13 19 16.41	-08 33 01.5		3 809	
					1991 VO	1993 04 25.16389	13 19 15.62	-08 32 53.6		3 809	
					1991 VO	1993 04 26.02570	13 18 35.16	-08 25 59.0		3 809	
					1991 VO	1993 04 26.03958	13 18 34.50	-08 25 52.1		3 809	
					1991 VO	1993 04 26.05347	13 18 33.83	-08 25 45.5		3 809	
					1992 DK	1993 04 18.34792	15 00 38.88	-17 38 21.8	15.8	3 809	
					1992 DK	1993 04 18.36875	15 00 37.95	-17 38 21.7		3 809	
					1992 DK	1993 04 18.38959	15 00 36.98	-17 38 21.6		3 809	
					1992 DK	1993 04 21.15625	14 58 28.20	-17 37 32.0		3 809	
					1992 DK	1993 04 21.17709	14 58 27.22	-17 37 31.8		3 809	
					1992 DK	1993 04 21.19791	14 58 26.25	-17 37 31.2		3 809	
					1992 DK	1993 04 26.33125	14 54 15.59	-17 35 13.6		3 809	
					1992 DK	1993 04 26.34514	14 54 14.89	-17 35 13.3		3 809	
					1992 DK	1993 04 26.35902	14 54 14.21	-17 35 12.7		3 809	
					1992 FP	1993 07 20.24375	20 06 26.12	-23 00 11.4	18.1	4 809	
					1992 FP	1993 07 20.25694	20 06 25.41	-23 00 14.2		4 809	
1977 EO <sub>1</sub>	1993 04 25.28333	13 33 36.11	-07 45 39.8	16.0	3 809	1992 DK	1993 04 18.36875	15 00 37.95	-17 38 21.7	3 809	
1977 EO <sub>1</sub>	1993 04 25.29723	13 33 35.47	-07 45 36.9		3 809	1992 DK	1993 04 18.38959	15 00 36.98	-17 38 21.6	3 809	
1977 EO <sub>1</sub>	1993 04 25.31111	13 33 34.81	-07 45 34.0		3 809	1992 DK	1993 04 21.15625	14 58 28.20	-17 37 32.0	3 809	
1977 EO <sub>1</sub>	1993 04 26.22778	13 32 52.63	-07 42 40.7		3 809	1992 DK	1993 04 21.17709	14 58 27.22	-17 37 31.8	3 809	
1977 EO <sub>1</sub>	1993 04 26.24167	13 32 52.02	-07 42 37.8		3 809	1992 DK	1993 04 21.19791	14 58 26.25	-17 37 31.2	3 809	
1977 EO <sub>1</sub>	1993 04 26.25555	13 32 51.41	-07 42 35.2		3 809	1992 DK	1993 04 26.33125	14 54 15.59	-17 35 13.6	3 809	
1977 EA <sub>6</sub>	1993 07 20.24375	20 05 20.07	-21 27 04.1	18.1	4 809	1992 DK	1993 04 26.34514	14 54 14.89	-17 35 13.3	3 809	
1977 EA <sub>6</sub>	1993 07 20.25694	20 05 19.24	-21 27 05.0		4 809	1992 DK	1993 04 26.35902	14 54 14.21	-17 35 12.7	3 809	
1977 EA <sub>6</sub>	1993 07 20.27014	20 05 18.33	-21 27 06.4		4 809	1992 FP	1993 07 20.24375	20 06 26.12	-23 00 11.4	18.1	4 809
1977 EA <sub>6</sub>	1993 07 24.22708	20 01 06.93	-21 32 19.1		4 809	1992 FP	1993 07 20.25694	20 06 25.41	-23 00 14.2	4 809	

1992 FP	1993 07 20.27014	20 06 24.71	-23 00 16.4		4 809	1993 GK <sub>1</sub>	1993 04 18.05209	13 14 04.57	-11 22 51.5		3 809
1992 FP	1993 07 24.22708	20 03 06.64	-23 10 34.9		4 809	1993 GK <sub>1</sub>	1993 04 18.07291	13 14 03.46	-11 22 45.3		3 809
1992 QB <sub>1</sub>	1993 06 25.37850	00 08 36.94	+00 59 54.7	23.9 R	5 809	1993 GK <sub>1</sub>	1993 04 18.09375	13 14 02.35	-11 22 39.1		3 809
1992 QB <sub>1</sub>	1993 06 26.42452	00 08 37.65	+00 59 59.0	23.5 R	5 809	1993 GK <sub>1</sub>	1993 04 21.05625	13 11 30.47	-11 08 35.4		3 809
1992 QB <sub>1</sub>	1993 07 14.422	00 08 34.68	+00 59 52.2		5 809	1993 GK <sub>1</sub>	1993 04 21.07709	13 11 29.43	-11 08 30.0		3 809
1992 QB <sub>1</sub>	1993 07 15.429	00 08 33.69	+00 59 46.3		5 809	1993 GK <sub>1</sub>	1993 04 21.09792	13 11 28.34	-11 08 24.0		3 809
1992 QB <sub>1</sub>	1993 07 16.416	00 08 32.63	+00 59 40.1		5 809	1993 GL <sub>1</sub>	* 1993 04 12.07916	13 19 29.50	-11 04 40.4	16.1	3 809
1993 FW	1993 06 25.05761	12 23 19.44	-02 32 50.2	23.8 R	5 809	1993 GL <sub>1</sub>	1993 04 12.10000	13 19 28.32	-11 04 37.7		3 809
1993 FC <sub>1</sub>	1993 04 24.27639	13 17 04.62	-09 52 45.8	16.2	3 809	1993 GL <sub>1</sub>	1993 04 12.12083	13 19 27.15	-11 04 34.8		3 809
1993 FC <sub>1</sub>	1993 04 24.29028	13 17 04.02	-09 52 36.5		3 809	1993 GL <sub>1</sub>	1993 04 13.07291	13 18 33.62	-11 02 28.2		3 809
1993 FC <sub>1</sub>	1993 04 25.08472	13 16 32.87	-09 43 16.9		3 809	1993 GL <sub>1</sub>	1993 04 13.09167	13 18 32.54	-11 02 25.9		3 809
1993 FC <sub>1</sub>	1993 04 25.09861	13 16 32.33	-09 43 07.4		3 809	1993 GL <sub>1</sub>	1993 04 13.10973	13 18 31.52	-11 02 23.6		3 809
1993 FC <sub>1</sub>	1993 04 25.11250	13 16 31.75	-09 42 58.0		3 809	1993 GL <sub>1</sub>	1993 04 14.06736	13 17 37.94	-11 00 14.9		3 809
1993 FC <sub>1</sub>	1993 04 25.97986	13 15 58.26	-09 32 52.5		3 809	1993 GL <sub>1</sub>	1993 04 14.08820	13 17 36.76	-11 00 11.7		3 809
1993 FC <sub>1</sub>	1993 04 25.99375	13 15 57.69	-09 32 42.6		3 809	1993 GL <sub>1</sub>	1993 04 14.10902	13 17 35.61	-11 00 09.2		3 809
1993 FC <sub>1</sub>	1993 04 26.00764	13 15 57.20	-09 32 32.8		3 809	1993 GL <sub>1</sub>	1993 04 18.05209	13 13 56.90	-10 51 05.1		3 809
1993 FV <sub>3</sub>	1993 04 27.06875	12 59 04.37	-04 56 57.1	16.3	3 809	1993 GL <sub>1</sub>	1993 04 18.07291	13 13 55.74	-10 51 02.1		3 809
1993 FV <sub>3</sub>	1993 04 27.08264	12 59 03.83	-04 56 53.6		3 809	1993 GL <sub>1</sub>	1993 04 18.09375	13 13 54.58	-10 50 59.0		3 809
1993 FV <sub>3</sub>	1993 04 27.09653	12 59 03.31	-04 56 49.8		3 809	1993 GL <sub>1</sub>	1993 04 21.05625	13 11 14.97	-10 44 05.3		3 809
1993 FV <sub>3</sub>	1993 04 28.02500	12 58 28.68	-04 52 20.2		3 809	1993 GL <sub>1</sub>	1993 04 21.07709	13 11 13.85	-10 44 02.4		3 809
1993 FV <sub>3</sub>	1993 04 28.03750	12 58 28.20	-04 52 16.4		3 809	1993 GL <sub>1</sub>	1993 04 21.09792	13 11 12.73	-10 43 59.3		3 809
1993 FV <sub>3</sub>	1993 04 28.05000	12 58 27.72	-04 52 13.0		3 809	1993 GM <sub>1</sub>	* 1993 04 14.06736	13 13 18.64	-11 02 49.9	16.2	3 809
1993 GB	1993 04 27.11736	13 31 16.38	-11 41 04.5	15.7	3 809	1993 GM <sub>1</sub>	1993 04 14.08820	13 13 17.74	-11 02 42.8		3 809
1993 GB	1993 04 27.13125	13 31 15.54	-11 41 06.4		3 809	1993 GM <sub>1</sub>	1993 04 14.10902	13 13 16.83	-11 02 35.7		3 809
1993 GB	1993 04 27.14514	13 31 14.69	-11 41 08.5		3 809	1993 GM <sub>1</sub>	1993 04 18.05209	13 10 27.55	-10 39 21.8		3 809
1993 GB	1993 04 28.19514	13 30 11.58	-11 43 36.9		3 809	1993 GM <sub>1</sub>	1993 04 18.07291	13 10 26.67	-10 39 14.5		3 809
1993 GB	1993 04 28.20764	13 30 10.83	-11 43 38.6		3 809	1993 GM <sub>1</sub>	1993 04 18.09375	13 10 25.75	-10 39 07.3		3 809
1993 GB	1993 04 28.22014	13 30 10.09	-11 43 40.6		3 809	1993 GM <sub>1</sub>	1993 04 21.05625	13 08 23.08	-10 21 46.6		3 809
1993 GH	1993 04 25.28333	13 32 17.62	-06 13 58.1	16.0	3 809	1993 GM <sub>1</sub>	1993 04 21.07709	13 08 22.21	-10 21 39.4		3 809
1993 GH	1993 04 25.29723	13 32 16.92	-06 13 56.7		3 809	1993 GM <sub>1</sub>	1993 04 21.09792	13 08 21.34	-10 21 32.0		3 809
1993 GH	1993 04 25.31111	13 32 16.20	-06 13 55.3		3 809	1993 GN <sub>1</sub>	* 1993 04 14.13403	14 57 00.99	-22 25 19.5	16.7	3 809
1993 GH	1993 04 26.22778	13 31 29.93	-06 12 48.9		3 809	1993 GN <sub>1</sub>	1993 04 14.15486	14 57 00.02	-22 25 14.2		3 809
1993 GH	1993 04 26.24167	13 31 29.24	-06 12 47.7		3 809	1993 GN <sub>1</sub>	1993 04 14.17570	14 56 59.04	-22 25 09.2		3 809
1993 GH	1993 04 26.25555	13 31 28.56	-06 12 46.4		3 809	1993 GN <sub>1</sub>	1993 04 17.37222	14 54 33.42	-22 11 20.6		3 809
1993 GP	1993 04 25.23056	13 32 13.04	-09 12 44.9	16.9	3 809	1993 GN <sub>1</sub>	1993 04 17.38888	14 54 32.65	-22 11 16.1		3 809
1993 GP	1993 04 25.24445	13 32 12.17	-09 12 43.0		3 809	1993 GN <sub>1</sub>	1993 04 17.40556	14 54 31.88	-22 11 12.1		3 809
1993 GP	1993 04 25.25833	13 32 11.30	-09 12 41.5		3 809	1993 GN <sub>1</sub>	1993 04 18.14792	14 53 56.62	-22 07 40.4		3 809
1993 GP	1993 04 26.17986	13 31 13.28	-09 10 52.1		3 809	1993 GN <sub>1</sub>	1993 04 18.16875	14 53 55.61	-22 07 34.5		3 809
1993 GP	1993 04 26.19375	13 31 12.40	-09 10 50.3		3 809	1993 GN <sub>1</sub>	1993 04 18.18958	14 53 54.60	-22 07 28.7		3 809
1993 GP	1993 04 26.20764	13 31 11.50	-09 10 48.6		3 809	1993 GN <sub>1</sub>	1993 04 20.34375	14 52 05.73	-21 56 38.4		3 809
1993 GB <sub>1</sub>	1993 04 25.18611	13 24 19.15	-06 32 39.1	16.8	3 809	1993 GN <sub>1</sub>	1993 04 20.36459	14 52 04.65	-21 56 32.2		3 809
1993 GB <sub>1</sub>	1993 04 25.20000	13 24 18.39	-06 32 33.9		3 809	1993 GN <sub>1</sub>	1993 04 20.38541	14 52 03.60	-21 56 26.0		3 809
1993 GB <sub>1</sub>	1993 04 25.21389	13 24 17.61	-06 32 28.4		3 809	1993 GN <sub>1</sub>	1993 04 24.19167	14 48 39.93	-21 35 10.9		3 809
1993 GB <sub>1</sub>	1993 04 26.08194	13 23 29.50	-06 26 44.8		3 809	1993 GN <sub>1</sub>	1993 04 24.20834	14 48 39.04	-21 35 05.1		3 809
1993 GB <sub>1</sub>	1993 04 26.09583	13 23 28.71	-06 26 39.1		3 809	1993 GN <sub>1</sub>	1993 04 24.22500	14 48 38.13	-21 34 59.6		3 809
1993 GB <sub>1</sub>	1993 04 26.10973	13 23 27.91	-06 26 34.0		3 809	1993 GN <sub>1</sub>	1993 04 26.27500	14 46 43.05	-21 22 26.0		3 809
1993 GK <sub>1</sub>	* 1993 04 12.07916	13 19 26.42	-11 50 57.7	16.8	3 809	1993 GN <sub>1</sub>	1993 04 26.28889	14 46 42.18	-21 22 19.1		3 809
1993 GK <sub>1</sub>	1993 04 12.10000	13 19 25.29	-11 50 52.1		3 809	1993 GN <sub>1</sub>	1993 04 26.30278	14 46 41.27	-21 22 14.2		3 809
1993 GK <sub>1</sub>	1993 04 12.12083	13 19 24.16	-11 50 46.1		3 809	1993 GO <sub>1</sub>	* 1993 04 14.06736	13 14 51.27	-11 35 36.8	16.9	3 809
1993 GK <sub>1</sub>	1993 04 14.06736	13 17 37.93	-11 41 43.3		3 809	1993 GO <sub>1</sub>	1993 04 14.08820	13 14 50.17	-11 35 29.6		3 809
1993 GK <sub>1</sub>	1993 04 14.08820	13 17 36.76	-11 41 37.0		3 809	1993 GO <sub>1</sub>	1993 04 14.10902	13 14 49.11	-11 35 22.2		3 809
1993 GK <sub>1</sub>	1993 04 14.10902	13 17 35.62	-11 41 31.3		3 809	1993 GO <sub>1</sub>	1993 04 18.05209	13 11 24.55	-11 12 46.9		3 809

1993 GO <sub>1</sub>	1993 04 18.07291	13 11 23.49	-11 12 40.1		3 809	1993 HL <sub>6</sub>	1993 04 21.03125	11 53 36.36	-04 48 18.4		3 809
1993 GO <sub>1</sub>	1993 04 18.09375	13 11 22.42	-11 12 33.4		3 809	1993 HL <sub>6</sub>	1993 04 23.99861	11 52 57.91	-04 19 51.9		3 809
1993 HR	1993 04 27.20764	13 49 48.84	-14 18 23.6	16.4	3 809	1993 HL <sub>6</sub>	1993 04 24.01250	11 52 57.70	-04 19 44.3		3 809
1993 HR	1993 04 27.22153	13 49 48.08	-14 18 21.4		3 809	1993 HL <sub>6</sub>	1993 04 26.97569	11 52 37.11	-03 53 28.8		3 809
1993 HR	1993 04 27.23541	13 49 47.34	-14 18 19.3		3 809	1993 HL <sub>6</sub>	1993 04 26.98959	11 52 36.99	-03 53 21.5		3 809
1993 HR	1993 05 01.08715	13 46 18.24	-14 08 38.2		3 809	1993 HL <sub>6</sub>	1993 04 27.00347	11 52 36.94	-03 53 14.6		3 809
1993 HR	1993 05 01.10104	13 46 17.49	-14 08 36.4		3 809	1993 HM <sub>6</sub>	* 1993 04 22.37361	15 59 47.80	-18 59 48.4	16.9	3 809
1993 HR	1993 05 01.11493	13 46 16.75	-14 08 34.3		3 809	1993 HM <sub>6</sub>	1993 04 22.39027	15 59 47.17	-18 59 47.8		3 809
1993 HS	1993 04 27.20764	13 49 08.08	-12 31 54.9	16.6	3 809	1993 HM <sub>6</sub>	1993 04 22.40694	15 59 46.56	-18 59 47.1		3 809
1993 HS	1993 04 27.22153	13 49 07.22	-12 31 52.0		3 809	1993 HM <sub>6</sub>	1993 04 27.34792	15 56 36.66	-18 56 57.7		3 809
1993 HS	1993 04 27.23541	13 49 06.34	-12 31 49.1		3 809	1993 HM <sub>6</sub>	1993 04 27.36041	15 56 36.14	-18 56 57.1		3 809
1993 HS	1993 04 28.31667	13 47 59.19	-12 27 54.5		3 809	1993 HM <sub>6</sub>	1993 04 27.37292	15 56 35.63	-18 56 56.1		3 809
1993 HS	1993 04 28.32916	13 47 58.40	-12 27 51.8		3 809	1993 HN <sub>6</sub>	* 1993 04 24.07083	13 11 26.24	-07 24 09.4	16.4	3 809
1993 HS	1993 04 28.34167	13 47 57.59	-12 27 49.1		3 809	1993 HN <sub>6</sub>	1993 04 24.08750	13 11 25.55	-07 24 05.1		3 809
1993 HD <sub>6</sub>	1993 04 25.13055	13 24 13.88	-09 55 17.5	17.0	3 809	1993 HN <sub>6</sub>	1993 04 24.10416	13 11 24.88	-07 24 01.0		3 809
1993 HD <sub>6</sub>	1993 04 25.14722	13 24 12.99	-09 55 17.6		3 809	1993 HN <sub>6</sub>	1993 04 24.12222	13 11 24.14	-07 23 57.3		3 809
1993 HD <sub>6</sub>	1993 04 25.16389	13 24 12.10	-09 55 17.7		3 809	1993 HN <sub>6</sub>	1993 04 25.03333	13 10 47.44	-07 20 09.2		3 809
1993 HD <sub>6</sub>	1993 04 26.02570	13 23 27.17	-09 55 21.1		3 809	1993 HN <sub>6</sub>	1993 04 25.05000	13 10 46.76	-07 20 04.9		3 809
1993 HD <sub>6</sub>	1993 04 26.03958	13 23 26.41	-09 55 21.2		3 809	1993 HN <sub>6</sub>	1993 04 25.06667	13 10 46.07	-07 20 00.7		3 809
1993 HD <sub>6</sub>	1993 04 26.05347	13 23 25.71	-09 55 21.2		3 809	1993 HO <sub>6</sub>	* 1993 04 24.07083	13 12 16.19	-07 45 09.0	16.7	3 809
1993 HG <sub>6</sub>	* 1993 04 18.05209	13 07 57.92	-11 26 53.1	16.6	3 809	1993 HO <sub>6</sub>	1993 04 24.08750	13 12 15.44	-07 45 06.1		3 809
1993 HG <sub>6</sub>	1993 04 18.07291	13 07 56.71	-11 26 53.6		3 809	1993 HO <sub>6</sub>	1993 04 24.10416	13 12 14.68	-07 45 03.5		3 809
1993 HG <sub>6</sub>	1993 04 18.09375	13 07 55.47	-11 26 53.9		3 809	1993 HO <sub>6</sub>	1993 04 24.12222	13 12 13.37	-07 45 05.4		3 809
1993 HG <sub>6</sub>	1993 04 21.05625	13 04 59.44	-11 28 16.5		3 809	1993 HO <sub>6</sub>	1993 04 25.03333	13 11 32.30	-07 42 37.3		3 809
1993 HG <sub>6</sub>	1993 04 21.07709	13 04 58.22	-11 28 17.1		3 809	1993 HO <sub>6</sub>	1993 04 25.05000	13 11 31.52	-07 42 34.7		3 809
1993 HG <sub>6</sub>	1993 04 21.09792	13 04 56.99	-11 28 17.5		3 809	1993 HO <sub>6</sub>	1993 04 25.06667	13 11 30.78	-07 42 31.9		3 809
1993 HH <sub>6</sub>	* 1993 04 29.21320	13 35 07.08	-11 09 13.7	16.6	3 809	1993 HP <sub>6</sub>	* 1993 04 24.19167	14 45 40.87	-22 51 27.8	16.8	3 809
1993 HH <sub>6</sub>	1993 04 29.22569	13 35 06.41	-11 09 11.9		3 809	1993 HP <sub>6</sub>	1993 04 24.20834	14 45 39.79	-22 51 27.5		3 809
1993 HH <sub>6</sub>	1993 05 01.30417	13 33 12.82	-11 05 49.7		3 809	1993 HP <sub>6</sub>	1993 04 24.22500	14 45 38.73	-22 51 27.4		3 809
1993 HH <sub>6</sub>	1993 05 01.31667	13 33 12.12	-11 05 49.1		3 809	1993 HP <sub>6</sub>	1993 04 25.33055	14 44 27.16	-22 51 15.8		3 809
1993 HH <sub>6</sub>	1993 05 01.32917	13 33 11.43	-11 05 48.0		3 809	1993 HP <sub>6</sub>	1993 04 25.34444	14 44 26.23	-22 51 15.2		3 809
1993 HJ <sub>6</sub>	* 1993 04 24.27639	13 13 17.00	-09 41 04.0	16.9	3 809	1993 HP <sub>6</sub>	1993 04 25.35834	14 44 25.30	-22 51 14.8		3 809
1993 HJ <sub>6</sub>	1993 04 24.29028	13 13 16.31	-09 40 59.5		3 809	1993 HQ <sub>6</sub>	* 1993 04 25.13055	13 19 44.75	-09 17 57.0	17.0	3 809
1993 HJ <sub>6</sub>	1993 04 25.08472	13 12 38.20	-09 36 50.0		3 809	1993 HQ <sub>6</sub>	1993 04 25.14722	13 19 44.00	-09 17 52.8		3 809
1993 HJ <sub>6</sub>	1993 04 25.09861	13 12 37.51	-09 36 45.4		3 809	1993 HQ <sub>6</sub>	1993 04 25.16389	13 19 43.23	-09 17 48.7		3 809
1993 HJ <sub>6</sub>	1993 04 25.11250	13 12 36.84	-09 36 41.0		3 809	1993 HQ <sub>6</sub>	1993 04 26.02570	13 19 04.41	-09 14 32.2		3 809
1993 HJ <sub>6</sub>	1993 04 25.97986	13 11 55.67	-09 32 08.5		3 809	1993 HQ <sub>6</sub>	1993 04 26.03958	13 19 03.79	-09 14 28.9		3 809
1993 HJ <sub>6</sub>	1993 04 25.99375	13 11 54.98	-09 32 04.5		3 809	1993 HQ <sub>6</sub>	1993 04 26.05347	13 19 03.14	-09 14 25.7		3 809
1993 HJ <sub>6</sub>	1993 04 26.00764	13 11 54.31	-09 32 00.5		3 809	1993 HR <sub>6</sub>	* 1993 04 25.13055	13 21 37.77	-09 18 42.7	17.0	3 809
1993 HK <sub>6</sub>	* 1993 04 18.28125	13 22 03.93	-10 11 34.6		3 809	1993 HR <sub>6</sub>	1993 04 25.14722	13 21 37.17	-09 18 44.3		3 809
1993 HK <sub>6</sub>	1993 04 18.30209	13 22 02.96	-10 11 28.7		3 809	1993 HR <sub>6</sub>	1993 04 25.16389	13 21 36.58	-09 18 45.8		3 809
1993 HK <sub>6</sub>	1993 04 18.32291	13 22 01.97	-10 11 23.0		3 809	1993 HR <sub>6</sub>	1993 04 26.02570	13 21 04.75	-09 20 03.5		3 809
1993 HK <sub>6</sub>	1993 04 24.27639	13 17 23.22	-09 44 35.0		3 809	1993 HR <sub>6</sub>	1993 04 26.03958	13 21 04.23	-09 20 05.0		3 809
1993 HK <sub>6</sub>	1993 04 24.29028	13 17 22.56	-09 44 31.4		3 809	1993 HR <sub>6</sub>	1993 04 26.05347	13 21 03.71	-09 20 06.3		3 809
1993 HK <sub>6</sub>	1993 04 25.08472	13 16 46.83	-09 41 00.0		3 809	1993 HS <sub>6</sub>	* 1993 04 25.13055	13 21 40.33	-09 58 31.1	17.0	3 809
1993 HK <sub>6</sub>	1993 04 25.09861	13 16 46.19	-09 40 56.2		3 809	1993 HS <sub>6</sub>	1993 04 25.14722	13 21 39.55	-09 58 27.6		3 809
1993 HK <sub>6</sub>	1993 04 25.11250	13 16 45.54	-09 40 52.1		3 809	1993 HS <sub>6</sub>	1993 04 25.16389	13 21 38.80	-09 58 23.8		3 809
1993 HL <sub>6</sub>	* 1993 04 17.98541	11 54 34.08	-05 19 31.8	16.2	3 809	1993 HS <sub>6</sub>	1993 04 26.02570	13 20 59.39	-09 55 12.0		3 809
1993 HL <sub>6</sub>	1993 04 18.00625	11 54 33.66	-05 19 19.2		3 809	1993 HS <sub>6</sub>	1993 04 26.03958	13 20 58.76	-09 55 08.6		3 809
1993 HL <sub>6</sub>	1993 04 18.02708	11 54 33.27	-05 19 06.4		3 809	1993 HS <sub>6</sub>	1993 04 26.05347	13 20 58.12	-09 55 05.4		3 809
1993 HL <sub>6</sub>	1993 04 20.98959	11 53 37.17	-04 48 44.4		3 809	1993 HT <sub>6</sub>	* 1993 04 25.13055	13 22 03.33	-09 44 15.7	17.1	3 809
1993 HL <sub>6</sub>	1993 04 21.01041	11 53 36.77	-04 48 31.5		3 809	1993 HT <sub>6</sub>	1993 04 25.14722	13 22 02.14	-09 44 16.4		3 809

1993 HT <sub>6</sub>	1993 04 25.16389	13 22 00.94	-09 44 17.6	3 809	1993 HB <sub>7</sub>	1993 04 27.30000	14 51 08.44	-19 43 01.4	3 809
1993 HT <sub>6</sub>	1993 04 26.02570	13 20 58.63	-09 45 14.3	3 809	1993 HB <sub>7</sub>	1993 04 27.31389	14 51 07.83	-19 42 59.6	3 809
1993 HT <sub>6</sub>	1993 04 26.03958	13 20 57.62	-09 45 15.3	3 809	1993 HB <sub>7</sub>	1993 04 27.32777	14 51 07.26	-19 42 57.9	3 809
1993 HT <sub>6</sub>	1993 04 26.05347	13 20 56.61	-09 45 16.1	3 809	1993 HC <sub>7</sub>	* 1993 04 29.21320	13 33 16.87	-11 51 51.2	16.8 3 809
1993 HU <sub>6</sub>	* 1993 04 25.13055	13 22 34.88	-08 57 21.0	16.9 3 809	1993 HC <sub>7</sub>	1993 04 29.22569	13 33 16.27	-11 51 48.4	3 809
1993 HU <sub>6</sub>	1993 04 25.14722	13 22 34.17	-08 57 11.5	3 809	1993 HC <sub>7</sub>	1993 05 01.30417	13 31 46.71	-11 45 46.5	3 809
1993 HU <sub>6</sub>	1993 04 25.16389	13 22 33.48	-08 57 01.8	3 809	1993 HC <sub>7</sub>	1993 05 01.31667	13 31 46.19	-11 45 44.2	3 809
1993 HU <sub>6</sub>	1993 04 26.02570	13 21 56.89	-08 48 32.3	3 809	1993 HC <sub>7</sub>	1993 05 01.32917	13 31 45.64	-11 45 41.8	3 809
1993 HU <sub>6</sub>	1993 04 26.03958	13 21 56.28	-08 48 24.1	3 809	1993 HD <sub>7</sub>	* 1993 04 29.21320	13 35 18.28	-10 08 39.8	16.4 3 809
1993 HU <sub>6</sub>	1993 04 26.05347	13 21 55.66	-08 48 16.0	3 809	1993 HD <sub>7</sub>	1993 04 29.22569	13 35 17.52	-10 08 38.1	3 809
1993 HV <sub>6</sub>	* 1993 04 25.23056	13 30 35.15	-09 15 26.9	16.6 3 809	1993 HD <sub>7</sub>	1993 05 01.30417	13 33 18.96	-10 02 49.5	3 809
1993 HV <sub>6</sub>	1993 04 25.24445	13 30 34.07	-09 15 23.8	3 809	1993 HD <sub>7</sub>	1993 05 01.31667	13 33 18.22	-10 02 47.6	3 809
1993 HV <sub>6</sub>	1993 04 25.25833	13 30 32.98	-09 15 20.4	3 809	1993 HD <sub>7</sub>	1993 05 01.32917	13 33 17.49	-10 02 45.2	3 809
1993 HV <sub>6</sub>	1993 04 26.17986	13 29 22.68	-09 12 06.2	3 809	1993 HE <sub>7</sub>	* 1993 04 29.24306	13 38 13.31	-14 06 08.4	17.0 3 809
1993 HV <sub>6</sub>	1993 04 26.19375	13 29 21.59	-09 12 03.4	3 809	1993 HE <sub>7</sub>	1993 04 29.25555	13 38 12.62	-14 06 06.2	3 809
1993 HV <sub>6</sub>	1993 04 26.20764	13 29 20.48	-09 12 00.5	3 809	1993 HE <sub>7</sub>	1993 05 03.36389	13 34 18.61	-13 55 07.6	3 809
1993 HW <sub>6</sub>	* 1993 04 25.28333	13 28 38.55	-06 50 12.7	16.6 3 809	1993 HF <sub>7</sub>	* 1993 04 29.24306	13 39 57.70	-14 08 03.1	16.9 3 809
1993 HW <sub>6</sub>	1993 04 25.29723	13 28 37.94	-06 50 09.0	3 809	1993 HF <sub>7</sub>	1993 04 29.25555	13 39 57.04	-14 07 59.5	3 809
1993 HW <sub>6</sub>	1993 04 25.31111	13 28 37.37	-06 50 05.3	3 809	1993 HF <sub>7</sub>	1993 05 03.36389	13 36 31.86	-13 47 00.5	3 809
1993 HW <sub>6</sub>	1993 04 26.22778	13 27 58.25	-06 46 13.3	3 809	1993 HG <sub>7</sub>	* 1993 04 24.27639	13 16 00.91	-10 37 28.9	16.7 3 809
1993 HW <sub>6</sub>	1993 04 26.24167	13 27 57.64	-06 46 09.8	3 809	1993 HG <sub>7</sub>	1993 04 24.29028	13 16 00.29	-10 37 21.8	3 809
1993 HW <sub>6</sub>	1993 04 26.25555	13 27 57.04	-06 46 06.4	3 809	1993 HG <sub>7</sub>	1993 04 25.08472	13 15 23.41	-10 30 10.3	3 809
1993 HX <sub>6</sub>	* 1993 04 27.11736	13 30 52.09	-10 15 24.9	16.6 3 809	1993 HG <sub>7</sub>	1993 04 25.09861	13 15 22.76	-10 30 02.8	3 809
1993 HX <sub>6</sub>	1993 04 27.13125	13 30 51.49	-10 15 21.9	3 809	1993 HG <sub>7</sub>	1993 04 25.11250	13 15 22.11	-10 29 55.2	3 809
1993 HX <sub>6</sub>	1993 04 27.14514	13 30 50.90	-10 15 18.2	3 809	1993 HG <sub>7</sub>	1993 04 25.97986	13 14 41.56	-10 21 59.4	3 809
1993 HX <sub>6</sub>	1993 05 01.26250	13 27 55.07	-09 59 14.7	3 809	1993 HG <sub>7</sub>	1993 04 25.99375	13 14 40.91	-10 21 52.1	3 809
1993 HX <sub>6</sub>	1993 05 01.27500	13 27 54.53	-09 59 11.7	3 809	1993 HG <sub>7</sub>	1993 04 26.00764	13 14 40.25	-10 21 44.6	3 809
1993 HX <sub>6</sub>	1993 05 01.28750	13 27 53.98	-09 59 09.2	3 809	1993 HH <sub>7</sub>	* 1993 04 24.27639	13 18 26.39	-10 47 45.2	17.0 3 809
1993 HY <sub>6</sub>	* 1993 04 27.11736	13 34 56.21	-10 47 21.1	15.8 3 809	1993 HH <sub>7</sub>	1993 04 24.29028	13 18 25.55	-10 47 41.1	3 809
1993 HY <sub>6</sub>	1993 04 27.13125	13 34 55.37	-10 47 18.5	3 809	1993 HH <sub>7</sub>	1993 04 25.08472	13 17 40.07	-10 43 44.4	3 809
1993 HY <sub>6</sub>	1993 04 27.14514	13 34 54.54	-10 47 15.7	3 809	1993 HH <sub>7</sub>	1993 04 25.09861	13 17 39.26	-10 43 40.8	3 809
1993 HY <sub>6</sub>	1993 05 01.26250	13 30 50.91	-10 34 56.0	3 809	1993 HH <sub>7</sub>	1993 04 25.11250	13 17 38.46	-10 43 36.3	3 809
1993 HY <sub>6</sub>	1993 05 01.27500	13 30 50.16	-10 34 53.5	3 809	1993 HH <sub>7</sub>	1993 04 25.97986	13 16 49.13	-10 39 19.6	3 809
1993 HY <sub>6</sub>	1993 05 01.28750	13 30 49.42	-10 34 51.0	3 809	1993 HH <sub>7</sub>	1993 04 25.99375	13 16 48.33	-10 39 15.4	3 809
1993 HY <sub>6</sub>	1993 05 01.30417	13 30 48.36	-10 34 50.7	3 809	1993 HH <sub>7</sub>	1993 04 26.00764	13 16 47.55	-10 39 11.4	3 809
1993 HY <sub>6</sub>	1993 05 01.31667	13 30 47.64	-10 34 48.7	3 809	1993 HJ <sub>7</sub>	* 1993 04 17.37222	14 50 27.13	-22 01 56.5	16.9 3 809
1993 HY <sub>6</sub>	1993 05 01.32917	13 30 46.93	-10 34 46.7	3 809	1993 HJ <sub>7</sub>	1993 04 17.38888	14 50 26.18	-22 01 55.8	3 809
1993 HZ <sub>6</sub>	* 1993 04 27.16111	13 33 04.46	-12 58 04.3	16.8 3 809	1993 HJ <sub>7</sub>	1993 04 17.40556	14 50 25.26	-22 01 55.4	3 809
1993 HZ <sub>6</sub>	1993 04 27.17500	13 33 03.79	-12 57 59.4	3 809	1993 HJ <sub>7</sub>	1993 04 18.14792	14 49 44.72	-22 01 27.2	3 809
1993 HZ <sub>6</sub>	1993 04 27.18889	13 33 03.12	-12 57 54.6	3 809	1993 HJ <sub>7</sub>	1993 04 18.16875	14 49 43.56	-22 01 26.7	3 809
1993 HZ <sub>6</sub>	1993 04 28.23541	13 32 13.19	-12 51 54.4	3 809	1993 HJ <sub>7</sub>	1993 04 18.18958	14 49 42.42	-22 01 26.0	3 809
1993 HZ <sub>6</sub>	1993 04 28.24792	13 32 12.62	-12 51 49.8	3 809	1993 HK <sub>7</sub>	* 1993 04 24.07083	13 15 32.69	-08 27 17.8	3 809
1993 HZ <sub>6</sub>	1993 04 28.26041	13 32 12.05	-12 51 45.3	3 809	1993 HK <sub>7</sub>	1993 04 24.08750	13 15 31.80	-08 27 12.4	3 809
1993 HA <sub>7</sub>	* 1993 04 18.21458	14 55 54.16	-21 03 08.0	17.1 3 809	1993 HK <sub>7</sub>	1993 04 24.10416	13 15 30.97	-08 27 06.6	3 809
1993 HA <sub>7</sub>	1993 04 18.23541	14 55 53.27	-21 03 05.5	3 809	1993 HK <sub>7</sub>	1993 04 25.03333	13 14 46.53	-08 22 10.5	3 809
1993 HA <sub>7</sub>	1993 04 18.25625	14 55 52.34	-21 03 02.7	3 809	1993 HK <sub>7</sub>	1993 04 25.05000	13 14 45.75	-08 22 05.3	3 809
1993 HA <sub>7</sub>	1993 04 27.30000	14 49 19.03	-20 41 56.2	3 809	1993 HK <sub>7</sub>	1993 04 25.06667	13 14 44.95	-08 22 00.0	3 809
1993 HA <sub>7</sub>	1993 04 27.31389	14 49 18.43	-20 41 54.1	3 809	1993 NF	1993 07 20.24375	19 53 53.04	-18 35 21.9	17.8 4 809
1993 HA <sub>7</sub>	1993 04 27.32777	14 49 17.83	-20 41 52.1	3 809	1993 NF	1993 07 20.25694	19 53 52.40	-18 35 33.0	4 809
1993 HB <sub>7</sub>	* 1993 04 18.21458	14 57 43.77	-20 02 47.6	17.2 3 809	1993 NF	1993 07 20.27014	19 53 51.72	-18 35 44.9	4 809
1993 HB <sub>7</sub>	1993 04 18.23541	14 57 42.87	-20 02 44.5	3 809	1993 NF	1993 07 24.22708	19 50 42.52	-19 33 20.8	4 809
1993 HB <sub>7</sub>	1993 04 18.25625	14 57 41.98	-20 02 41.9	3 809	1993 OB <sub>3</sub>	* 1993 07 20.24375	19 52 54.96	-19 26 19.9	18.3 4 809

1993 OB <sub>3</sub>	1993 07 20.25694	19 52 54.18	-19 26 23.1		4 809	1993 OP <sub>3</sub>	1993 07 20.25694	19 56 24.79	-22 45 39.5		4 809
1993 OB <sub>3</sub>	1993 07 20.27014	19 52 53.43	-19 26 25.7		4 809	1993 OP <sub>3</sub>	1993 07 20.27014	19 56 23.96	-22 45 40.4		4 809
1993 OB <sub>3</sub>	1993 07 24.22708	19 48 51.58	-19 51 14.5		4 809	1993 OP <sub>3</sub>	1993 07 24.22708	19 52 25.06	-22 50 58.4		4 809
1993 OC <sub>3</sub>	* 1993 07 20.24375	19 53 03.14	-22 04 50.4	18.2	4 809	1993 OQ <sub>3</sub>	* 1993 07 20.24375	19 56 40.31	-21 10 31.4	18.5	4 809
1993 OC <sub>3</sub>	1993 07 20.25694	19 53 02.31	-22 04 51.2		4 809	1993 OQ <sub>3</sub>	1993 07 20.25694	19 56 39.58	-21 10 34.7		4 809
1993 OC <sub>3</sub>	1993 07 20.27014	19 53 01.54	-22 04 50.9		4 809	1993 OQ <sub>3</sub>	1993 07 20.27014	19 56 38.87	-21 10 37.0		4 809
1993 OC <sub>3</sub>	1993 07 24.22708	19 49 11.90	-22 05 02.2		4 809	1993 OQ <sub>3</sub>	1993 07 24.22708	19 53 28.12	-21 22 54.7		4 809
1993 OD <sub>3</sub>	* 1993 07 20.24375	19 53 17.31	-19 33 09.0	18.4	4 809	1993 OR <sub>3</sub>	* 1993 07 20.24375	19 56 44.60	-19 40 06.1	18.2	4 809
1993 OD <sub>3</sub>	1993 07 20.25694	19 53 16.60	-19 33 13.3		4 809	1993 OR <sub>3</sub>	1993 07 20.25694	19 56 43.67	-19 40 09.8		4 809
1993 OD <sub>3</sub>	1993 07 20.27014	19 53 15.90	-19 33 17.0		4 809	1993 OR <sub>3</sub>	1993 07 20.27014	19 56 42.78	-19 40 13.0		4 809
1993 OD <sub>3</sub>	1993 07 24.22708	19 50 03.26	-19 53 33.9	18.4	4 809	1993 OR <sub>3</sub>	1993 07 24.22708	19 52 59.22	-19 55 38.1		4 809
1993 OE <sub>3</sub>	* 1993 07 20.24375	19 54 22.05	-21 27 55.4	18.0	4 809	1993 OS <sub>3</sub>	* 1993 07 20.24375	19 56 54.31	-21 13 46.4	18.5	4 809
1993 OE <sub>3</sub>	1993 07 20.25694	19 54 21.11	-21 27 53.5		4 809	1993 OS <sub>3</sub>	1993 07 20.25694	19 56 53.32	-21 13 45.6		4 809
1993 OE <sub>3</sub>	1993 07 20.27014	19 54 20.20	-21 27 51.9		4 809	1993 OS <sub>3</sub>	1993 07 20.27014	19 56 52.46	-21 13 44.2		4 809
1993 OE <sub>3</sub>	1993 07 24.22708	19 50 08.89	-21 19 18.4		4 809	1993 OS <sub>3</sub>	1993 07 24.22708	19 52 40.27	-21 08 48.8		4 809
1993 OF <sub>3</sub>	* 1993 07 20.24375	19 54 54.29	-21 59 09.5	18.2	4 809	1993 OT <sub>3</sub>	* 1993 07 20.24375	19 57 26.73	-19 38 37.6	18.2	4 809
1993 OF <sub>3</sub>	1993 07 20.25694	19 54 53.40	-21 59 10.3		4 809	1993 OT <sub>3</sub>	1993 07 20.25694	19 57 25.68	-19 38 41.0		4 809
1993 OF <sub>3</sub>	1993 07 20.27014	19 54 52.62	-21 59 12.2		4 809	1993 OT <sub>3</sub>	1993 07 20.27014	19 57 24.74	-19 38 45.9		4 809
1993 OF <sub>3</sub>	1993 07 24.22708	19 51 01.54	-22 06 18.3		4 809	1993 OT <sub>3</sub>	1993 07 24.22708	19 52 40.89	-19 55 42.2		4 809
1993 OG <sub>3</sub>	* 1993 07 20.24375	19 55 09.25	-22 20 17.5	18.2	4 809	1993 OU <sub>3</sub>	* 1993 07 20.24375	19 57 58.17	-22 05 48.4	18.5	4 809
1993 OG <sub>3</sub>	1993 07 20.25694	19 55 08.46	-22 20 20.0		4 809	1993 OU <sub>3</sub>	1993 07 20.25694	19 57 57.17	-22 05 52.5		4 809
1993 OG <sub>3</sub>	1993 07 20.27014	19 55 07.85	-22 20 22.6		4 809	1993 OU <sub>3</sub>	1993 07 20.27014	19 57 56.43	-22 05 57.1		4 809
1993 OG <sub>3</sub>	1993 07 24.22708	19 51 42.01	-22 33 13.1		4 809	1993 OU <sub>3</sub>	1993 07 24.22708	19 54 16.80	-22 26 19.9		4 809
1993 OH <sub>3</sub>	* 1993 07 20.24375	19 55 15.06	-20 31 23.8	18.7	4 809	1993 OV <sub>3</sub>	* 1993 07 20.24375	19 58 12.64	-20 18 00.1	18.0	4 809
1993 OH <sub>3</sub>	1993 07 20.25694	19 55 14.14	-20 31 22.1		4 809	1993 OV <sub>3</sub>	1993 07 20.25694	19 58 12.04	-20 18 03.7		4 809
1993 OH <sub>3</sub>	1993 07 20.27014	19 55 13.12	-20 31 20.2		4 809	1993 OV <sub>3</sub>	1993 07 20.27014	19 58 11.47	-20 18 07.3		4 809
1993 OH <sub>3</sub>	1993 07 24.22708	19 51 00.31	-20 22 57.0		4 809	1993 OV <sub>3</sub>	1993 07 24.22708	19 55 28.99	-20 34 51.0		4 809
1993 OJ <sub>3</sub>	* 1993 07 20.24375	19 55 20.85	-21 01 14.3	18.3	4 809	1993 OW <sub>3</sub>	* 1993 07 20.24375	19 58 32.74	-19 27 53.7	18.0	4 809
1993 OJ <sub>3</sub>	1993 07 20.25694	19 55 19.95	-21 01 12.3		4 809	1993 OW <sub>3</sub>	1993 07 20.25694	19 58 31.99	-19 27 57.5		4 809
1993 OJ <sub>3</sub>	1993 07 20.27014	19 55 19.06	-21 01 11.1		4 809	1993 OW <sub>3</sub>	1993 07 20.27014	19 58 31.19	-19 28 02.4		4 809
1993 OJ <sub>3</sub>	1993 07 24.22708	19 51 05.66	-20 53 36.8		4 809	1993 OW <sub>3</sub>	1993 07 24.22708	19 55 05.34	-19 49 03.8		4 809
1993 OK <sub>3</sub>	* 1993 07 20.24375	19 55 26.81	-19 27 02.4	18.4	4 809	1993 OX <sub>3</sub>	* 1993 07 20.24375	19 59 03.20	-22 52 50.3	18.3	4 809
1993 OK <sub>3</sub>	1993 07 20.25694	19 55 26.01	-19 27 03.2		4 809	1993 OX <sub>3</sub>	1993 07 20.25694	19 59 02.39	-22 52 50.7		4 809
1993 OK <sub>3</sub>	1993 07 20.27014	19 55 25.21	-19 27 04.2		4 809	1993 OX <sub>3</sub>	1993 07 20.27014	19 59 01.49	-22 52 51.4		4 809
1993 OK <sub>3</sub>	1993 07 24.22708	19 51 41.28	-19 30 10.1		4 809	1993 OX <sub>3</sub>	1993 07 24.22708	19 54 56.46	-22 53 29.9		4 809
1993 OL <sub>3</sub>	* 1993 07 20.24375	19 55 30.20	-20 12 11.2	18.2	4 809	1993 OY <sub>3</sub>	* 1993 07 20.24375	19 59 15.66	-19 04 17.1	18.4	4 809
1993 OL <sub>3</sub>	1993 07 20.25694	19 55 29.26	-20 12 11.5		4 809	1993 OY <sub>3</sub>	1993 07 20.25694	19 59 14.79	-19 04 20.1		4 809
1993 OL <sub>3</sub>	1993 07 20.27014	19 55 28.44	-20 12 13.3		4 809	1993 OY <sub>3</sub>	1993 07 20.27014	19 59 13.96	-19 04 23.4		4 809
1993 OL <sub>3</sub>	1993 07 24.22708	19 51 28.76	-20 16 06.5		4 809	1993 OY <sub>3</sub>	1993 07 24.22708	19 55 08.17	-19 21 10.6		4 809
1993 OM <sub>3</sub>	* 1993 07 20.24375	19 55 35.70	-20 03 54.4	18.0	4 809	1993 OZ <sub>3</sub>	* 1993 07 20.24375	19 59 17.12	-22 01 15.4	18.3	4 809
1993 OM <sub>3</sub>	1993 07 20.25694	19 55 34.90	-20 03 59.2		4 809	1993 OZ <sub>3</sub>	1993 07 20.25694	19 59 16.25	-22 01 18.7		4 809
1993 OM <sub>3</sub>	1993 07 20.27014	19 55 33.96	-20 04 05.5		4 809	1993 OZ <sub>3</sub>	1993 07 20.27014	19 59 15.53	-22 01 21.1		4 809
1993 OM <sub>3</sub>	1993 07 24.22708	19 51 30.91	-20 30 40.1		4 809	1993 OZ <sub>3</sub>	1993 07 24.22708	19 55 30.07	-22 15 22.5		4 809
1993 ON <sub>3</sub>	* 1993 07 20.24375	19 55 57.72	-21 59 15.9	18.2	4 809	1993 OA <sub>4</sub>	* 1993 07 20.24375	19 59 25.40	-20 12 50.5	18.2	4 809
1993 ON <sub>3</sub>	1993 07 20.25694	19 55 56.93	-21 59 17.0		4 809	1993 OA <sub>4</sub>	1993 07 20.25694	19 59 24.64	-20 12 53.2		4 809
1993 ON <sub>3</sub>	1993 07 20.27014	19 55 56.13	-21 59 17.5		4 809	1993 OA <sub>4</sub>	1993 07 20.27014	19 59 23.94	-20 12 56.2		4 809
1993 ON <sub>3</sub>	1993 07 24.22708	19 52 11.38	-22 01 58.7		4 809	1993 OA <sub>4</sub>	1993 07 24.22708	19 55 58.60	-20 27 28.1		4 809
1993 OO <sub>3</sub>	* 1993 07 20.24375	19 56 04.89	-20 52 05.4	18.0	4 809	1993 OB <sub>4</sub>	* 1993 07 20.24375	19 59 37.03	-21 00 03.7	18.4	4 809
1993 OO <sub>3</sub>	1993 07 20.25694	19 56 03.99	-20 52 06.1		4 809	1993 OB <sub>4</sub>	1993 07 20.25694	19 59 36.08	-21 00 04.4		4 809
1993 OO <sub>3</sub>	1993 07 20.27014	19 56 03.10	-20 52 08.0		4 809	1993 OB <sub>4</sub>	1993 07 20.27014	19 59 35.24	-21 00 05.2		4 809
1993 OO <sub>3</sub>	1993 07 24.22708	19 51 57.92	-20 59 15.0		4 809	1993 OB <sub>4</sub>	1993 07 24.22708	19 55 32.69	-21 04 42.8		4 809
1993 OP <sub>3</sub>	* 1993 07 20.24375	19 56 25.69	-22 45 37.9	18.5	4 809	1993 OC <sub>4</sub>	* 1993 07 20.24375	19 59 39.60	-21 29 59.6	18.0	4 809

1993 OC <sub>4</sub>	1993 07 20.25694	19 59 38.66	-21 29 59.9		4 809	1993 OQ <sub>4</sub>	1993 07 20.27014	20 02 31.84	-18 09 51.0		4 809
1993 OC <sub>4</sub>	1993 07 20.27014	19 59 37.76	-21 30 00.0		4 809	1993 OQ <sub>4</sub>	1993 07 24.22708	19 58 45.10	-18 28 00.3		4 809
1993 OC <sub>4</sub>	1993 07 24.22708	19 55 23.97	-21 31 59.6		4 809	1993 OR <sub>4</sub>	* 1993 07 20.24375	20 02 37.36	-20 51 11.1	18.6	4 809
1993 OD <sub>4</sub>	* 1993 07 20.24375	20 00 01.27	-20 09 51.6	18.6	4 809	1993 OR <sub>4</sub>	1993 07 20.25694	20 02 36.71	-20 51 16.8		4 809
1993 OD <sub>4</sub>	1993 07 20.25694	20 00 00.49	-20 09 57.0		4 809	1993 OR <sub>4</sub>	1993 07 20.27014	20 02 35.89	-20 51 22.6		4 809
1993 OD <sub>4</sub>	1993 07 20.27014	19 59 59.81	-20 10 01.3		4 809	1993 OR <sub>4</sub>	1993 07 24.22708	19 59 18.29	-21 22 37.9		4 809
1993 OD <sub>4</sub>	1993 07 24.22708	19 56 34.85	-20 31 32.3		4 809	1993 OS <sub>4</sub>	* 1993 07 20.24375	20 02 41.16	-22 00 10.6	18.1	4 809
1993 OE <sub>4</sub>	* 1993 07 20.24375	20 00 13.21	-21 26 26.0	18.3	4 809	1993 OS <sub>4</sub>	1993 07 20.25694	20 02 40.49	-22 00 11.0		4 809
1993 OE <sub>4</sub>	1993 07 20.25694	20 00 12.50	-21 26 34.6		4 809	1993 OS <sub>4</sub>	1993 07 20.27014	20 02 39.70	-22 00 12.8		4 809
1993 OE <sub>4</sub>	1993 07 20.27014	20 00 11.75	-21 26 42.3		4 809	1993 OS <sub>4</sub>	1993 07 24.22708	19 59 05.79	-22 07 19.7		4 809
1993 OE <sub>4</sub>	1993 07 24.22708	19 56 52.33	-22 07 54.0		4 809	1993 OT <sub>4</sub>	* 1993 07 20.24375	20 02 51.72	-21 34 55.5	18.5	4 809
1993 OF <sub>4</sub>	* 1993 07 20.24375	20 00 16.79	-20 19 29.0	18.4	4 809	1993 OT <sub>4</sub>	1993 07 20.25694	20 02 50.97	-21 34 59.5		4 809
1993 OF <sub>4</sub>	1993 07 20.25694	20 00 16.16	-20 19 29.0		4 809	1993 OT <sub>4</sub>	1993 07 20.27014	20 02 50.16	-21 35 04.6		4 809
1993 OF <sub>4</sub>	1993 07 20.27014	20 00 15.44	-20 19 30.7		4 809	1993 OT <sub>4</sub>	1993 07 24.22708	19 59 18.79	-21 57 16.3		4 809
1993 OF <sub>4</sub>	1993 07 24.22708	19 56 58.44	-20 23 13.4		4 809	1993 OU <sub>4</sub>	* 1993 07 20.24375	20 02 54.94	-18 03 25.2	18.6	4 809
1993 OG <sub>4</sub>	* 1993 07 20.24375	20 00 27.20	-20 13 10.2	18.0	4 809	1993 OU <sub>4</sub>	1993 07 20.25694	20 02 54.35	-18 03 29.7		4 809
1993 OG <sub>4</sub>	1993 07 20.25694	20 00 26.32	-20 13 09.7		4 809	1993 OU <sub>4</sub>	1993 07 20.27014	20 02 53.56	-18 03 36.2		4 809
1993 OG <sub>4</sub>	1993 07 20.27014	20 00 25.50	-20 13 08.9		4 809	1993 OU <sub>4</sub>	1993 07 24.22708	19 59 14.75	-18 30 08.8		4 809
1993 OG <sub>4</sub>	1993 07 24.22708	19 56 29.78	-20 09 18.3		4 809	1993 OV <sub>4</sub>	* 1993 07 20.24375	20 03 03.08	-19 36 31.0	18.4	4 809
1993 OH <sub>4</sub>	* 1993 07 20.24375	20 00 28.39	-22 18 32.4	18.4	4 809	1993 OV <sub>4</sub>	1993 07 20.25694	20 03 02.19	-19 36 32.5		4 809
1993 OH <sub>4</sub>	1993 07 20.25694	20 00 27.51	-22 18 36.3		4 809	1993 OV <sub>4</sub>	1993 07 20.27014	20 03 01.32	-19 36 33.0		4 809
1993 OH <sub>4</sub>	1993 07 20.27014	20 00 26.65	-22 18 38.5		4 809	1993 OV <sub>4</sub>	1993 07 24.22708	19 58 53.92	-19 42 06.7		4 809
1993 OH <sub>4</sub>	1993 07 24.22708	19 56 21.32	-22 31 41.7		4 809	1993 OW <sub>4</sub>	* 1993 07 20.24375	20 03 06.70	-22 29 10.3	18.2	4 809
1993 OJ <sub>4</sub>	* 1993 07 20.24375	20 00 54.06	-20 59 10.4	18.5	4 809	1993 OW <sub>4</sub>	1993 07 20.25694	20 03 05.99	-22 29 18.6		4 809
1993 OJ <sub>4</sub>	1993 07 20.25694	20 00 53.28	-20 59 12.5		4 809	1993 OW <sub>4</sub>	1993 07 20.27014	20 03 05.22	-22 29 27.6		4 809
1993 OJ <sub>4</sub>	1993 07 20.27014	20 00 52.65	-20 59 14.3		4 809	1993 OW <sub>4</sub>	1993 07 24.22708	19 59 29.75	-23 16 19.7		4 809
1993 OJ <sub>4</sub>	1993 07 24.22708	19 57 30.76	-21 08 15.6		4 809	1993 OX <sub>4</sub>	* 1993 07 20.24375	20 03 20.03	-21 11 44.3	18.6	4 809
1993 OK <sub>4</sub>	* 1993 07 20.24375	20 00 56.75	-20 11 01.1	18.5	4 809	1993 OX <sub>4</sub>	1993 07 20.25694	20 03 19.24	-21 11 46.3		4 809
1993 OK <sub>4</sub>	1993 07 20.25694	20 00 56.05	-20 11 03.2		4 809	1993 OX <sub>4</sub>	1993 07 20.27014	20 03 18.42	-21 11 48.6		4 809
1993 OK <sub>4</sub>	1993 07 20.27014	20 00 55.30	-20 11 04.4		4 809	1993 OX <sub>4</sub>	1993 07 24.22708	19 59 40.22	-21 19 09.9		4 809
1993 OK <sub>4</sub>	1993 07 24.22708	19 57 39.12	-20 20 41.7		4 809	1993 OY <sub>4</sub>	* 1993 07 20.24375	20 03 29.77	-20 47 03.0	18.5	4 809
1993 OL <sub>4</sub>	* 1993 07 20.24375	20 01 06.88	-21 36 43.1	18.5	4 809	1993 OY <sub>4</sub>	1993 07 20.25694	20 03 29.03	-20 47 04.3		4 809
1993 OL <sub>4</sub>	1993 07 20.25694	20 01 06.36	-21 36 45.8		4 809	1993 OY <sub>4</sub>	1993 07 20.27014	20 03 28.35	-20 47 05.0		4 809
1993 OL <sub>4</sub>	1993 07 20.27014	20 01 05.79	-21 36 48.0		4 809	1993 OY <sub>4</sub>	1993 07 24.22708	20 00 04.45	-20 53 31.0		4 809
1993 OL <sub>4</sub>	1993 07 24.22708	19 58 05.93	-21 45 37.6		4 809	1993 OZ <sub>4</sub>	* 1993 07 20.24375	20 03 38.41	-19 01 00.7	17.4	4 809
1993 OM <sub>4</sub>	* 1993 07 20.24375	20 01 14.51	-20 16 14.0	18.4	4 809	1993 OZ <sub>4</sub>	1993 07 20.25694	20 03 37.64	-19 01 05.1		4 809
1993 OM <sub>4</sub>	1993 07 20.25694	20 01 13.57	-20 16 17.3		4 809	1993 OZ <sub>4</sub>	1993 07 20.27014	20 03 36.84	-19 01 10.0		4 809
1993 OM <sub>4</sub>	1993 07 20.27014	20 01 12.82	-20 16 20.8		4 809	1993 OZ <sub>4</sub>	1993 07 24.22708	19 59 57.94	-19 23 35.5		4 809
1993 OM <sub>4</sub>	1993 07 24.22708	19 57 38.57	-20 32 36.4		4 809	1993 OA <sub>5</sub>	* 1993 07 20.24375	20 03 50.52	-21 31 43.6	18.6	4 809
1993 ON <sub>4</sub>	* 1993 07 20.24375	20 01 20.10	-21 55 53.0	18.4	4 809	1993 OA <sub>5</sub>	1993 07 20.25694	20 03 49.71	-21 31 44.6		4 809
1993 ON <sub>4</sub>	1993 07 20.25694	20 01 19.40	-21 55 58.4		4 809	1993 OA <sub>5</sub>	1993 07 20.27014	20 03 48.82	-21 31 44.7		4 809
1993 ON <sub>4</sub>	1993 07 20.27014	20 01 18.58	-21 56 05.1		4 809	1993 OA <sub>5</sub>	1993 07 24.22708	19 59 56.29	-21 30 11.1		4 809
1993 ON <sub>4</sub>	1993 07 24.22708	19 57 56.98	-22 19 50.1		4 809	1993 OB <sub>5</sub>	* 1993 07 20.24375	20 04 00.15	-22 25 08.6	18.6	4 809
1993 OO <sub>4</sub>	* 1993 07 20.24375	20 01 20.90	-19 15 57.9	18.4	4 809	1993 OB <sub>5</sub>	1993 07 20.25694	20 03 59.18	-22 25 09.9		4 809
1993 OO <sub>4</sub>	1993 07 20.25694	20 01 20.14	-19 16 02.1		4 809	1993 OB <sub>5</sub>	1993 07 20.27014	20 03 58.50	-22 25 11.4		4 809
1993 OO <sub>4</sub>	1993 07 20.27014	20 01 19.37	-19 16 05.3		4 809	1993 OB <sub>5</sub>	1993 07 24.22708	20 00 13.05	-22 30 58.4		4 809
1993 OO <sub>4</sub>	1993 07 24.22708	19 57 42.77	-19 33 49.2		4 809	1993 OC <sub>5</sub>	* 1993 07 20.24375	20 04 04.53	-20 09 58.3	18.5	4 809
1993 OP <sub>4</sub>	* 1993 07 20.24375	20 02 15.03	-22 00 52.4	18.5	4 809	1993 OC <sub>5</sub>	1993 07 20.25694	20 04 03.80	-20 09 59.9		4 809
1993 OP <sub>4</sub>	1993 07 20.25694	20 02 14.28	-22 00 55.0		4 809	1993 OC <sub>5</sub>	1993 07 20.27014	20 04 02.95	-20 10 01.5		4 809
1993 OP <sub>4</sub>	1993 07 24.22708	19 59 01.90	-22 11 02.8		4 809	1993 OC <sub>5</sub>	1993 07 24.22708	20 00 21.34	-20 17 19.0	18.5	4 809
1993 OQ <sub>4</sub>	* 1993 07 20.24375	20 02 33.47	-18 09 43.2	18.2	4 809	1993 OD <sub>5</sub>	* 1993 07 20.24375	20 04 04.97	-22 27 43.8	18.2	4 809
1993 OQ <sub>4</sub>	1993 07 20.25694	20 02 32.67	-18 09 47.2		4 809	1993 OD <sub>5</sub>	1993 07 20.25694	20 04 04.16	-22 27 45.5		4 809

1993 OD <sub>5</sub>	1993 07 20.27014	20 04 03.26	-22 27 47.1		4 809	1993 OR <sub>5</sub>	1993 07 20.27014	20 05 53.32	-19 09 23.1		4 809
1993 OD <sub>5</sub>	1993 07 24.22708	20 00 10.55	-22 36 51.2		4 809	1993 OR <sub>5</sub>	1993 07 24.22708	20 02 42.21	-19 19 15.1		4 809
1993 OE <sub>5</sub>	* 1993 07 20.24375	20 04 14.86	-20 48 14.0	18.4	4 809	1993 OS <sub>5</sub>	* 1993 07 20.24375	20 05 59.08	-20 59 02.4	18.0	4 809
1993 OE <sub>5</sub>	1993 07 20.25694	20 04 14.06	-20 48 16.0		4 809	1993 OS <sub>5</sub>	1993 07 20.25694	20 05 58.41	-20 59 17.6		4 809
1993 OE <sub>5</sub>	1993 07 20.27014	20 04 13.35	-20 48 18.0		4 809	1993 OS <sub>5</sub>	1993 07 20.27014	20 05 57.67	-20 59 31.4		4 809
1993 OE <sub>5</sub>	1993 07 24.22708	20 00 39.17	-20 57 45.4		4 809	1993 OS <sub>5</sub>	1993 07 24.22708	20 02 54.94	-22 06 33.5		4 809
1993 OF <sub>5</sub>	* 1993 07 20.24375	20 04 17.57	-19 24 40.4	18.2	4 809	1993 OT <sub>5</sub>	* 1993 07 20.24375	20 06 10.01	-21 45 19.4	18.3	4 809
1993 OF <sub>5</sub>	1993 07 20.25694	20 04 16.82	-19 24 40.5		4 809	1993 OT <sub>5</sub>	1993 07 20.25694	20 06 09.33	-21 45 21.3		4 809
1993 OF <sub>5</sub>	1993 07 20.27014	20 04 16.11	-19 24 41.0		4 809	1993 OT <sub>5</sub>	1993 07 20.27014	20 06 08.65	-21 45 22.9		4 809
1993 OF <sub>5</sub>	1993 07 24.22708	20 00 54.75	-19 26 22.5		4 809	1993 OT <sub>5</sub>	1993 07 24.22708	20 02 49.73	-21 53 41.2		4 809
1993 OG <sub>5</sub>	* 1993 07 20.24375	20 04 26.17	-21 59 57.9	18.2	4 809	1993 OU <sub>5</sub>	* 1993 07 20.24375	20 06 17.58	-21 13 03.4	18.3	4 809
1993 OG <sub>5</sub>	1993 07 20.25694	20 04 25.25	-21 59 58.3		4 809	1993 OU <sub>5</sub>	1993 07 20.25694	20 06 16.91	-21 13 06.4		4 809
1993 OG <sub>5</sub>	1993 07 20.27014	20 04 24.37	-21 59 58.4		4 809	1993 OU <sub>5</sub>	1993 07 20.27014	20 06 16.30	-21 13 08.5		4 809
1993 OG <sub>5</sub>	1993 07 24.22708	20 00 19.53	-21 59 26.9		4 809	1993 OU <sub>5</sub>	1993 07 24.22708	20 03 00.62	-21 27 35.9		4 809
1993 OH <sub>5</sub>	* 1993 07 20.24375	20 04 31.18	-19 47 43.0	18.3	4 809	1993 OV <sub>5</sub>	* 1993 07 20.24375	20 06 27.71	-19 42 10.3	18.2	4 809
1993 OH <sub>5</sub>	1993 07 20.25694	20 04 30.47	-19 47 44.4		4 809	1993 OV <sub>5</sub>	1993 07 20.25694	20 06 26.84	-19 42 14.1		4 809
1993 OH <sub>5</sub>	1993 07 20.27014	20 04 29.77	-19 47 47.1		4 809	1993 OV <sub>5</sub>	1993 07 20.27014	20 06 25.93	-19 42 18.8		4 809
1993 OH <sub>5</sub>	1993 07 24.22708	20 01 15.33	-19 58 27.7		4 809	1993 OV <sub>5</sub>	1993 07 24.22708	20 02 22.53	-20 03 14.6		4 809
1993 OJ <sub>5</sub>	* 1993 07 20.24375	20 04 49.15	-22 50 07.9	18.3	4 809	1993 OW <sub>5</sub>	* 1993 07 20.24375	20 06 32.94	-18 50 07.4	18.4	4 809
1993 OJ <sub>5</sub>	1993 07 20.25694	20 04 48.38	-22 50 10.0		4 809	1993 OW <sub>5</sub>	1993 07 20.25694	20 06 32.31	-18 50 05.1		4 809
1993 OJ <sub>5</sub>	1993 07 20.27014	20 04 47.64	-22 50 12.1		4 809	1993 OW <sub>5</sub>	1993 07 20.27014	20 06 31.55	-18 50 04.8		4 809
1993 OJ <sub>5</sub>	1993 07 24.22708	20 01 15.97	-22 59 29.2		4 809	1993 OW <sub>5</sub>	1993 07 24.22708	20 03 08.57	-18 47 18.8		4 809
1993 OK <sub>5</sub>	* 1993 07 20.24375	20 04 53.50	-18 03 55.7	18.0	4 809	1993 OX <sub>5</sub>	* 1993 07 20.24375	20 06 35.29	-17 59 36.2	18.2	4 809
1993 OK <sub>5</sub>	1993 07 20.25694	20 04 52.70	-18 03 56.6		4 809	1993 OX <sub>5</sub>	1993 07 20.25694	20 06 34.37	-17 59 36.4		4 809
1993 OK <sub>5</sub>	1993 07 20.27014	20 04 51.88	-18 03 59.0		4 809	1993 OX <sub>5</sub>	1993 07 20.27014	20 06 33.51	-17 59 37.9		4 809
1993 OK <sub>5</sub>	1993 07 24.22708	20 01 01.09	-18 13 44.6		4 809	1993 OX <sub>5</sub>	1993 07 24.22708	20 02 20.12	-18 02 53.2		4 809
1993 OL <sub>5</sub>	* 1993 07 20.24375	20 05 00.74	-20 46 13.9	18.5	4 809	1993 OY <sub>5</sub>	* 1993 07 20.24375	20 06 38.65	-21 36 53.9	18.4	4 809
1993 OL <sub>5</sub>	1993 07 20.25694	20 04 59.84	-20 46 17.1		4 809	1993 OY <sub>5</sub>	1993 07 20.25694	20 06 37.79	-21 36 59.9		4 809
1993 OL <sub>5</sub>	1993 07 20.27014	20 04 59.06	-20 46 19.7		4 809	1993 OY <sub>5</sub>	1993 07 20.27014	20 06 37.05	-21 37 04.5		4 809
1993 OL <sub>5</sub>	1993 07 24.22708	20 00 56.86	-20 59 20.8		4 809	1993 OY <sub>5</sub>	1993 07 24.22708	20 03 06.79	-22 02 42.2		4 809
1993 OM <sub>5</sub>	* 1993 07 20.24375	20 05 01.14	-17 55 53.9	18.3	4 809	1993 OZ <sub>5</sub>	* 1993 07 20.24375	20 06 51.17	-21 03 04.9	18.2	4 809
1993 OM <sub>5</sub>	1993 07 20.25694	20 05 00.32	-17 55 54.5		4 809	1993 OZ <sub>5</sub>	1993 07 20.25694	20 06 50.42	-21 03 06.1		4 809
1993 OM <sub>5</sub>	1993 07 20.27014	20 04 59.47	-17 55 57.4		4 809	1993 OZ <sub>5</sub>	1993 07 20.27014	20 06 49.64	-21 03 06.9		4 809
1993 OM <sub>5</sub>	1993 07 24.22708	20 01 15.77	-18 10 00.9		4 809	1993 OZ <sub>5</sub>	1993 07 24.22708	20 03 12.79	-21 10 44.2		4 809
1993 ON <sub>5</sub>	* 1993 07 20.24375	20 05 24.46	-21 22 09.9	18.4	4 809	1993 OA <sub>6</sub>	* 1993 07 20.24375	20 06 51.43	-21 14 51.3	18.1	4 809
1993 ON <sub>5</sub>	1993 07 20.25694	20 05 23.76	-21 22 13.3		4 809	1993 OA <sub>6</sub>	1993 07 20.25694	20 06 50.71	-21 14 53.0		4 809
1993 ON <sub>5</sub>	1993 07 20.27014	20 05 23.04	-21 22 15.5		4 809	1993 OA <sub>6</sub>	1993 07 20.27014	20 06 50.02	-21 14 55.4		4 809
1993 ON <sub>5</sub>	1993 07 24.22708	20 01 59.59	-21 35 21.8		4 809	1993 OA <sub>6</sub>	1993 07 24.22708	20 03 32.09	-21 27 28.7		4 809
1993 OO <sub>5</sub>	* 1993 07 20.24375	20 05 28.23	-20 57 37.7	18.5	4 809	1993 OB <sub>6</sub>	* 1993 07 20.24375	20 07 09.05	-22 41 54.8	18.1	4 809
1993 OO <sub>5</sub>	1993 07 20.25694	20 05 27.36	-20 57 41.1		4 809	1993 OB <sub>6</sub>	1993 07 20.25694	20 07 08.13	-22 41 58.6		4 809
1993 OO <sub>5</sub>	1993 07 20.27014	20 05 26.49	-20 57 43.9		4 809	1993 OB <sub>6</sub>	1993 07 20.27014	20 07 07.35	-22 42 02.6		4 809
1993 OO <sub>5</sub>	1993 07 24.22708	20 01 17.71	-21 12 43.6		4 809	1993 OB <sub>6</sub>	1993 07 24.22708	20 02 39.55	-22 51 29.2		4 809
1993 OP <sub>5</sub>	* 1993 07 20.24375	20 05 35.57	-20 14 19.5	18.5	4 809	1993 OC <sub>6</sub>	* 1993 07 20.24375	20 07 24.67	-23 07 45.5	18.6	4 809
1993 OP <sub>5</sub>	1993 07 20.25694	20 05 34.75	-20 14 19.1		4 809	1993 OC <sub>6</sub>	1993 07 20.25694	20 07 23.92	-23 07 44.7		4 809
1993 OP <sub>5</sub>	1993 07 20.27014	20 05 33.92	-20 14 18.5		4 809	1993 OC <sub>6</sub>	1993 07 20.27014	20 07 23.11	-23 07 43.5		4 809
1993 OP <sub>5</sub>	1993 07 24.22708	20 01 35.42	-20 11 20.3	18.6	4 809	1993 OC <sub>6</sub>	1993 07 24.22708	20 03 35.06	-23 05 10.4		4 809
1993 OQ <sub>5</sub>	* 1993 07 20.24375	20 05 52.12	-19 34 11.4	18.1	4 809	1993 OD <sub>6</sub>	* 1993 07 20.24375	20 07 33.47	-20 11 56.1	18.4	4 809
1993 OQ <sub>5</sub>	1993 07 20.25694	20 05 51.27	-19 34 11.5		4 809	1993 OD <sub>6</sub>	1993 07 20.25694	20 07 32.56	-20 11 55.8		4 809
1993 OQ <sub>5</sub>	1993 07 20.27014	20 05 50.44	-19 34 11.3		4 809	1993 OD <sub>6</sub>	1993 07 20.27014	20 07 31.72	-20 11 56.6		4 809
1993 OQ <sub>5</sub>	1993 07 24.22708	20 02 01.57	-19 34 43.8		4 809	1993 OD <sub>6</sub>	1993 07 24.22708	20 03 27.21	-20 15 01.0	18.2	4 809
1993 OR <sub>5</sub>	* 1993 07 20.24375	20 05 54.65	-19 09 19.4	18.3	4 809	1993 OE <sub>6</sub>	* 1993 07 20.24375	20 07 34.56	-19 30 31.2	18.3	4 809
1993 OR <sub>5</sub>	1993 07 20.25694	20 05 54.01	-19 09 21.0		4 809	1993 OE <sub>6</sub>	1993 07 20.25694	20 07 33.76	-19 30 37.0		4 809

1993 OE <sub>6</sub>	1993 07 20.27014	20 07 33.03	-19 30 43.2		4 809	1993 OS <sub>6</sub>	1993 07 20.27014	20 10 21.15	-18 29 46.1		4 809
1993 OE <sub>6</sub>	1993 07 24.22708	20 04 00.14	-20 00 42.3		4 809	1993 OS <sub>6</sub>	1993 07 24.22708	20 06 07.39	-18 29 06.9		4 809
1993 OF <sub>6</sub>	* 1993 07 20.24375	20 07 40.21	-20 35 28.6	18.3	4 809	1993 OT <sub>6</sub>	* 1993 07 20.24375	20 10 38.43	-19 19 57.1	18.2	4 809
1993 OF <sub>6</sub>	1993 07 20.25694	20 07 39.32	-20 35 30.7		4 809	1993 OT <sub>6</sub>	1993 07 20.25694	20 10 37.65	-19 20 00.9		4 809
1993 OF <sub>6</sub>	1993 07 20.27014	20 07 38.42	-20 35 32.9		4 809	1993 OT <sub>6</sub>	1993 07 20.27014	20 10 36.90	-19 20 03.8		4 809
1993 OF <sub>6</sub>	1993 07 24.22708	20 03 34.06	-20 43 01.3		4 809	1993 OT <sub>6</sub>	1993 07 24.22708	20 07 06.01	-19 36 24.1		4 809
1993 OG <sub>6</sub>	* 1993 07 20.24375	20 08 25.22	-19 45 09.4	18.2	4 809	1993 OU <sub>6</sub>	* 1993 07 20.24375	20 11 08.93	-22 16 48.5	18.0	4 809
1993 OG <sub>6</sub>	1993 07 20.25694	20 08 24.41	-19 45 10.5		4 809	1993 OU <sub>6</sub>	1993 07 20.25694	20 11 08.10	-22 16 48.4		4 809
1993 OG <sub>6</sub>	1993 07 20.27014	20 08 23.60	-19 45 11.7		4 809	1993 OU <sub>6</sub>	1993 07 20.27014	20 11 07.26	-22 16 48.0		4 809
1993 OG <sub>6</sub>	1993 07 24.22708	20 04 34.84	-19 52 08.5		4 809	1993 OU <sub>6</sub>	1993 07 24.22708	20 06 50.71	-22 09 27.8		4 809
1993 OH <sub>6</sub>	* 1993 07 20.24375	20 08 56.70	-19 40 21.3	18.3	4 809	1993 OV <sub>6</sub>	* 1993 07 20.24375	20 11 18.96	-18 12 50.2	18.6	4 809
1993 OH <sub>6</sub>	1993 07 20.25694	20 08 55.85	-19 40 26.7		4 809	1993 OV <sub>6</sub>	1993 07 20.25694	20 11 18.05	-18 12 49.8		4 809
1993 OH <sub>6</sub>	1993 07 20.27014	20 08 54.98	-19 40 29.8		4 809	1993 OV <sub>6</sub>	1993 07 20.27014	20 11 17.04	-18 12 51.5		4 809
1993 OH <sub>6</sub>	1993 07 24.22708	20 04 52.51	-20 02 46.1		4 809	1993 OV <sub>6</sub>	1993 07 24.22708	20 07 03.68	-18 19 14.2		4 809
1993 OJ <sub>6</sub>	* 1993 07 20.24375	20 08 58.37	-21 29 04.0	18.5	4 809	1993 OW <sub>6</sub>	* 1993 07 20.24375	20 11 23.52	-18 47 29.8	18.2	4 809
1993 OJ <sub>6</sub>	1993 07 20.25694	20 08 57.65	-21 29 09.1		4 809	1993 OW <sub>6</sub>	1993 07 20.25694	20 11 22.63	-18 47 34.3		4 809
1993 OJ <sub>6</sub>	1993 07 20.27014	20 08 56.97	-21 29 13.5		4 809	1993 OW <sub>6</sub>	1993 07 20.27014	20 11 21.73	-18 47 38.4		4 809
1993 OJ <sub>6</sub>	1993 07 24.22708	20 05 44.07	-21 51 26.6		4 809	1993 OW <sub>6</sub>	1993 07 24.22708	20 07 16.32	-19 09 09.5		4 809
1993 OK <sub>6</sub>	* 1993 07 20.24375	20 08 58.61	-21 15 11.2	17.9	4 809	1993 OX <sub>6</sub>	* 1993 07 20.24375	20 11 31.16	-20 58 38.8	18.0	4 809
1993 OK <sub>6</sub>	1993 07 20.25694	20 08 57.80	-21 15 15.9		4 809	1993 OX <sub>6</sub>	1993 07 20.25694	20 11 30.47	-20 58 43.7		4 809
1993 OK <sub>6</sub>	1993 07 20.27014	20 08 57.01	-21 15 21.2		4 809	1993 OX <sub>6</sub>	1993 07 20.27014	20 11 29.78	-20 58 48.6		4 809
1993 OK <sub>6</sub>	1993 07 24.22708	20 05 13.81	-21 39 32.9		4 809	1993 OX <sub>6</sub>	1993 07 24.22708	20 08 16.79	-21 23 53.0		4 809
1993 OL <sub>6</sub>	* 1993 07 20.24375	20 09 05.80	-21 43 23.6	18.4	4 809	1993 OY <sub>6</sub>	* 1993 07 20.24375	20 11 40.37	-19 24 23.0	17.8	4 809
1993 OL <sub>6</sub>	1993 07 20.25694	20 09 05.07	-21 43 25.3		4 809	1993 OY <sub>6</sub>	1993 07 20.25694	20 11 39.56	-19 24 29.3		4 809
1993 OL <sub>6</sub>	1993 07 20.27014	20 09 04.21	-21 43 27.2		4 809	1993 OY <sub>6</sub>	1993 07 20.27014	20 11 38.88	-19 24 36.6		4 809
1993 OL <sub>6</sub>	1993 07 24.22708	20 05 22.74	-21 52 14.5	18.6	4 809	1993 OY <sub>6</sub>	1993 07 24.22708	20 08 23.74	-20 00 00.0		4 809
1993 OM <sub>6</sub>	* 1993 07 20.24375	20 09 36.79	-21 48 51.1	18.6	4 809	1993 OZ <sub>6</sub>	* 1993 07 20.24375	20 11 52.81	-19 32 30.9	18.4	4 809
1993 OM <sub>6</sub>	1993 07 20.25694	20 09 36.04	-21 48 53.6		4 809	1993 OZ <sub>6</sub>	1993 07 20.25694	20 11 52.07	-19 32 39.5		4 809
1993 OM <sub>6</sub>	1993 07 20.27014	20 09 35.21	-21 48 56.9		4 809	1993 OZ <sub>6</sub>	1993 07 20.27014	20 11 51.39	-19 32 45.9		4 809
1993 OM <sub>6</sub>	1993 07 24.22708	20 05 34.81	-22 01 08.9		4 809	1993 OZ <sub>6</sub>	1993 07 24.22708	20 08 42.94	-20 08 32.9		4 809
1993 ON <sub>6</sub>	* 1993 07 20.24375	20 09 49.97	-22 02 44.7	18.5	4 809	1993 OA <sub>7</sub>	* 1993 07 20.24375	20 11 55.75	-20 43 37.3	18.2	4 809
1993 ON <sub>6</sub>	1993 07 20.25694	20 09 49.16	-22 02 49.4		4 809	1993 OA <sub>7</sub>	1993 07 20.25694	20 11 54.83	-20 43 40.0		4 809
1993 ON <sub>6</sub>	1993 07 20.27014	20 09 48.38	-22 02 53.4		4 809	1993 OA <sub>7</sub>	1993 07 20.27014	20 11 54.01	-20 43 43.6		4 809
1993 ON <sub>6</sub>	1993 07 24.22708	20 06 18.47	-22 24 56.9		4 809	1993 OA <sub>7</sub>	1993 07 24.22708	20 07 56.89	-21 00 52.8		4 809
1993 OO <sub>6</sub>	* 1993 07 20.24375	20 10 03.61	-22 48 48.7	18.5	4 809	1993 OB <sub>7</sub>	* 1993 07 20.24375	20 11 56.03	-22 10 50.7	18.4	4 809
1993 OO <sub>6</sub>	1993 07 20.25694	20 10 02.83	-22 48 54.7		4 809	1993 OB <sub>7</sub>	1993 07 20.25694	20 11 55.38	-22 10 52.7		4 809
1993 OO <sub>6</sub>	1993 07 20.27014	20 10 01.97	-22 48 58.9		4 809	1993 OB <sub>7</sub>	1993 07 20.27014	20 11 54.67	-22 10 55.3		4 809
1993 OO <sub>6</sub>	1993 07 24.22708	20 06 03.53	-23 13 47.0		4 809	1993 OB <sub>7</sub>	1993 07 24.22708	20 08 40.58	-22 22 23.6		4 809
1993 OP <sub>6</sub>	* 1993 07 20.24375	20 10 10.05	-19 42 11.0	18.6	4 809	1993 OC <sub>7</sub>	* 1993 07 20.24375	20 12 13.94	-21 36 59.3	18.5	4 809
1993 OP <sub>6</sub>	1993 07 20.25694	20 10 09.15	-19 42 12.8		4 809	1993 OC <sub>7</sub>	1993 07 20.25694	20 12 13.22	-21 37 03.3		4 809
1993 OP <sub>6</sub>	1993 07 20.27014	20 10 08.30	-19 42 14.6		4 809	1993 OC <sub>7</sub>	1993 07 20.27014	20 12 12.51	-21 37 06.8		4 809
1993 OP <sub>6</sub>	1993 07 24.22708	20 06 21.68	-19 50 46.6		4 809	1993 OC <sub>7</sub>	1993 07 24.22708	20 08 40.21	-21 59 20.4		4 809
1993 OQ <sub>6</sub>	* 1993 07 20.24375	20 10 11.62	-19 13 00.9	18.5	4 809	1993 OD <sub>7</sub>	* 1993 07 20.24375	20 12 24.08	-19 45 24.2	18.3	4 809
1993 OQ <sub>6</sub>	1993 07 20.25694	20 10 10.91	-19 13 04.3		4 809	1993 OD <sub>7</sub>	1993 07 20.25694	20 12 23.23	-19 45 29.6		4 809
1993 OQ <sub>6</sub>	1993 07 20.27014	20 10 10.21	-19 13 08.1		4 809	1993 OD <sub>7</sub>	1993 07 20.27014	20 12 22.42	-19 45 34.9		4 809
1993 OQ <sub>6</sub>	1993 07 24.22708	20 06 57.92	-19 31 43.6	18.6	4 809	1993 OD <sub>7</sub>	1993 07 24.22708	20 08 41.28	-20 09 25.9		4 809
1993 OR <sub>6</sub>	* 1993 07 20.24375	20 10 15.35	-21 04 26.6	18.7	4 809	1993 OE <sub>7</sub>	* 1993 07 20.24375	20 12 26.36	-20 17 44.6	18.2	4 809
1993 OR <sub>6</sub>	1993 07 20.25694	20 10 14.65	-21 04 34.4		4 809	1993 OE <sub>7</sub>	1993 07 20.25694	20 12 25.60	-20 17 47.1		4 809
1993 OR <sub>6</sub>	1993 07 20.27014	20 10 13.84	-21 04 42.1		4 809	1993 OE <sub>7</sub>	1993 07 20.27014	20 12 24.83	-20 17 50.4		4 809
1993 OR <sub>6</sub>	1993 07 24.22708	20 06 42.92	-21 43 43.6	18.6	4 809	1993 OE <sub>7</sub>	1993 07 24.22708	20 08 59.25	-20 34 05.3		4 809
1993 OS <sub>6</sub>	* 1993 07 20.24375	20 10 22.95	-18 29 46.3	18.3	4 809	1993 OF <sub>7</sub>	* 1993 07 20.24375	20 12 53.30	-19 47 25.2	18.5	4 809
1993 OS <sub>6</sub>	1993 07 20.25694	20 10 22.01	-18 29 46.4		4 809	1993 OF <sub>7</sub>	1993 07 20.25694	20 12 52.38	-19 47 25.1		4 809



1993 OF <sub>7</sub>	1993 07 20.27014	20 12 51.47	-19 47 24.7		4 809	(64)	1993 05 01.27500	13 27 23.75	-11 24 19.3		3 809
1993 OF <sub>7</sub>	1993 07 24.22708	20 08 34.71	-19 45 01.3		4 809	(64)	1993 05 01.28750	13 27 23.18	-11 24 15.4		3 809
1993 OG <sub>7</sub>	* 1993 07 20.24375	20 12 54.46	-18 46 56.5	18.7	4 809	(211)	1993 05 01.08715	13 46 55.54	-15 35 36.8		3 809
1993 OG <sub>7</sub>	1993 07 20.25694	20 12 53.68	-18 46 59.6		4 809	(211)	1993 05 01.10104	13 46 54.91	-15 35 32.4		3 809
1993 OG <sub>7</sub>	1993 07 20.27014	20 12 52.89	-18 47 00.5		4 809	(211)	1993 05 01.11493	13 46 54.29	-15 35 28.6		3 809
1993 OG <sub>7</sub>	1993 07 24.22708	20 08 59.70	-18 54 47.3		4 809	(263)	1993 07 20.24375	20 00 57.46	-18 28 22.9	16.0	4 809
1993 OH <sub>7</sub>	* 1993 07 20.24375	20 13 03.73	-19 59 00.8	18.0	4 809	(263)	1993 07 20.25694	20 00 56.64	-18 28 24.4		4 809
1993 OH <sub>7</sub>	1993 07 20.25694	20 13 02.83	-19 59 03.7		4 809	(263)	1993 07 20.27014	20 00 55.92	-18 28 25.0		4 809
1993 OH <sub>7</sub>	1993 07 20.27014	20 13 01.98	-19 59 07.5		4 809	(263)	1993 07 24.22708	19 57 30.03	-18 38 04.8		4 809
1993 OH <sub>7</sub>	1993 07 24.22708	20 08 59.68	-20 19 35.7		4 809	(296)	1993 07 20.24375	20 02 26.90	-20 14 45.8	17.5	4 809
1993 OJ <sub>7</sub>	* 1993 07 20.24375	20 13 04.28	-19 36 13.3	18.2	4 809	(296)	1993 07 20.25694	20 02 26.04	-20 14 48.9		4 809
1993 OJ <sub>7</sub>	1993 07 20.25694	20 13 03.38	-19 36 14.3		4 809	(296)	1993 07 20.27014	20 02 25.12	-20 14 52.5		4 809
1993 OJ <sub>7</sub>	1993 07 20.27014	20 13 02.41	-19 36 14.4		4 809	(296)	1993 07 24.22708	19 58 14.10	-20 31 38.0		4 809
1993 OJ <sub>7</sub>	1993 07 24.22708	20 08 41.74	-19 38 19.7		4 809	(342)	1993 05 01.08715	13 48 07.44	-15 08 02.9		3 809
1993 OK <sub>7</sub>	* 1993 07 20.24375	20 13 19.07	-21 21 04.2	18.3	4 809	(342)	1993 05 01.10104	13 48 06.70	-15 07 56.8		3 809
1993 OK <sub>7</sub>	1993 07 20.25694	20 13 18.29	-21 21 06.5		4 809	(342)	1993 05 01.11493	13 48 06.02	-15 07 50.9		3 809
1993 OK <sub>7</sub>	1993 07 20.27014	20 13 17.44	-21 21 08.2		4 809	(451)	1993 04 05.15799	15 44 53.94	-04 34 16.1		3 809
1993 OK <sub>7</sub>	1993 07 24.22708	20 09 30.94	-21 30 29.2		4 809	(451)	1993 04 05.26910	15 44 51.24	-04 34 00.6		3 809
1993 OL <sub>7</sub>	* 1993 07 20.24375	20 14 15.43	-21 55 21.5	18.5	4 809	(451)	1993 04 05.38021	15 44 48.56	-04 33 45.0		3 809
1993 OL <sub>7</sub>	1993 07 20.25694	20 14 14.65	-21 55 25.0		4 809	(451)	1993 04 06.16979	15 44 30.15	-04 31 53.3		3 809
1993 OL <sub>7</sub>	1993 07 20.27014	20 14 13.99	-21 55 27.2		4 809	(451)	1993 04 06.22118	15 44 28.84	-04 31 46.7		3 809
1993 OL <sub>7</sub>	1993 07 24.22708	20 10 52.47	-22 07 02.1		4 809	(451)	1993 04 06.31285	15 44 26.52	-04 31 33.2		3 809
5568 P-L	1993 04 25.23056	13 33 38.08	-09 16 30.6	16.8	3 809	(451)	1993 04 07.17326	15 44 05.39	-04 29 32.6		3 809
5568 P-L	1993 04 25.24445	13 33 37.33	-09 16 28.2		3 809	(451)	1993 04 07.27396	15 44 02.68	-04 29 18.6		3 809
5568 P-L	1993 04 25.25833	13 33 36.60	-09 16 26.0		3 809	(451)	1993 04 07.37465	15 44 00.00	-04 29 04.2		3 809
9511 P-L	1993 07 20.24375	19 56 45.08	-19 48 00.7	18.1	4 809	(451)	1993 04 08.15521	15 43 39.92	-04 27 14.5		3 809
9511 P-L	1993 07 20.25694	19 56 44.35	-19 48 02.3		4 809	(451)	1993 04 08.25938	15 43 37.04	-04 27 00.3		3 809
9511 P-L	1993 07 20.27014	19 56 43.70	-19 48 03.9		4 809	(451)	1993 04 08.36354	15 43 34.14	-04 26 45.9		3 809
9511 P-L	1993 07 24.22708	19 53 31.29	-19 57 55.7		4 809	(451)	1993 04 09.16285	15 43 12.61	-04 24 54.0		3 809
4129 T-2	1993 04 24.07083	13 15 14.09	-07 25 19.9	15.8	3 809	(451)	1993 04 09.26701	15 43 09.58	-04 24 39.2		3 809
4129 T-2	1993 04 24.08750	13 15 13.15	-07 25 18.7		3 809	(451)	1993 04 09.37118	15 43 06.53	-04 24 24.8		3 809
4129 T-2	1993 04 24.10416	13 15 12.25	-07 25 17.7		3 809	(451)	1993 04 10.15347	15 42 44.56	-04 22 36.5		3 809
4129 T-2	1993 04 24.12222	13 15 11.03	-07 25 15.0		3 809	(451)	1993 04 10.25764	15 42 41.48	-04 22 22.1		3 809
4129 T-2	1993 04 25.03333	13 14 20.21	-07 24 08.8		3 809	(451)	1993 04 10.36181	15 42 38.34	-04 22 07.6		3 809
4129 T-2	1993 04 25.05000	13 14 19.25	-07 24 08.1		3 809	(451)	1993 04 11.14410	15 42 15.43	-04 20 19.7		3 809
4129 T-2	1993 04 25.06667	13 14 18.30	-07 24 07.2		3 809	(451)	1993 04 11.24826	15 42 12.19	-04 20 05.4		3 809
4129 T-2	1993 04 27.02084	13 12 31.73	-07 22 03.4	15.8	3 809	(451)	1993 04 11.35243	15 42 08.93	-04 19 51.2		3 809
4129 T-2	1993 04 27.03472	13 12 31.00	-07 22 02.5		3 809	(451)	1993 04 12.13854	15 41 45.08	-04 18 03.6		3 809
4129 T-2	1993 04 27.04862	13 12 30.24	-07 22 02.0		3 809	(451)	1993 04 12.24271	15 41 41.70	-04 17 49.9		3 809
4129 T-2	1993 04 28.06875	13 11 36.49	-07 21 06.9		3 809	(451)	1993 04 12.34688	15 41 38.31	-04 17 35.5		3 809
4129 T-2	1993 04 28.08125	13 11 35.80	-07 21 06.3		3 809	(451)	1993 04 13.16979	15 41 12.26	-04 15 44.9		3 809
4129 T-2	1993 04 28.09375	13 11 35.15	-07 21 05.6		3 809	(717)	1993 04 18.28125	13 21 03.25	-10 03 41.7	16.0	3 809
(64)	1993 04 27.11736	13 30 37.76	-11 43 53.5		3 809	(717)	1993 04 18.30209	13 21 02.38	-10 03 36.6		3 809
(64)	1993 04 27.13125	13 30 37.08	-11 43 49.4		3 809	(717)	1993 04 18.32291	13 21 01.50	-10 03 31.0		3 809
(64)	1993 04 27.14514	13 30 36.39	-11 43 45.1		3 809	(717)	1993 04 24.27639	13 16 51.68	-09 39 34.9		3 809
(64)	1993 04 28.19514	13 29 45.97	-11 38 46.8		3 809	(717)	1993 04 24.29028	13 16 51.10	-09 39 32.5		3 809
(64)	1993 04 28.20764	13 29 45.36	-11 38 43.3		3 809	(717)	1993 04 25.08472	13 16 18.76	-09 36 21.8		3 809
(64)	1993 04 28.22014	13 29 44.76	-11 38 39.5		3 809	(717)	1993 04 25.09861	13 16 18.20	-09 36 18.9		3 809
(64)	1993 04 30.21007	13 28 12.00	-11 29 14.9		3 809	(717)	1993 04 25.11250	13 16 17.66	-09 36 15.5		3 809
(64)	1993 04 30.22049	13 28 11.50	-11 29 11.7		3 809	(717)	1993 04 25.97986	13 15 42.73	-09 32 51.0		3 809
(64)	1993 04 30.23090	13 28 11.04	-11 29 08.8		3 809	(717)	1993 04 25.99375	13 15 42.20	-09 32 47.7		3 809
(64)	1993 05 01.26250	13 27 24.32	-11 24 22.6		3 809	(717)	1993 04 26.00764	13 15 41.66	-09 32 44.4		3 809

(832)	1993 07 20.24375	19 58 32.27	-19 33 40.4	17.8	4 809	(1652)	1993 04 27.16111	13 33 11.37	-14 06 52.4	3 809
(832)	1993 07 20.25694	19 58 31.44	-19 33 42.1		4 809	(1652)	1993 04 27.17500	13 33 10.64	-14 06 46.0	3 809
(832)	1993 07 20.27014	19 58 30.65	-19 33 43.6		4 809	(1652)	1993 04 27.18889	13 33 09.88	-14 06 39.7	3 809
(832)	1993 07 24.22708	19 55 01.37	-19 42 29.5		4 809	(1652)	1993 04 28.23541	13 32 13.80	-13 59 00.7	3 809
(969)	1993 04 27.16111	13 32 12.87	-13 17 22.8		3 809	(1652)	1993 04 28.24792	13 32 13.16	-13 58 55.1	3 809
(969)	1993 04 27.17500	13 32 12.10	-13 17 18.0		3 809	(1652)	1993 04 28.26041	13 32 12.47	-13 58 49.4	3 809
(969)	1993 04 27.18889	13 32 11.38	-13 17 13.3		3 809	(2006)	1993 04 12.07916	13 21 00.46	-11 35 19.0	3 809
(969)	1993 04 28.23541	13 31 16.31	-13 11 33.6		3 809	(2006)	1993 04 12.10000	13 20 59.20	-11 35 14.0	3 809
(969)	1993 04 28.24792	13 31 15.68	-13 11 29.8		3 809	(2006)	1993 04 12.12083	13 20 57.95	-11 35 08.8	3 809
(969)	1993 04 28.26041	13 31 15.03	-13 11 25.9		3 809	(2006)	1993 04 14.06736	13 19 00.72	-11 26 35.1	3 809
(1036)	1993 04 28.23541	13 36 01.28	-13 59 00.7		3 809	(2006)	1993 04 14.08820	13 18 59.48	-11 26 29.3	3 809
(1036)	1993 04 28.24792	13 36 00.62	-13 58 52.5		3 809	(2006)	1993 04 14.10902	13 18 58.23	-11 26 23.9	3 809
(1036)	1993 04 28.26041	13 35 59.95	-13 58 44.3		3 809	(2006)	1993 04 18.05209	13 15 02.75	-11 08 44.0	3 809
(1036)	1993 05 03.36389	13 31 23.15	-13 01 50.8		3 809	(2006)	1993 04 18.07291	13 15 01.49	-11 08 38.4	3 809
(1058)	1993 04 27.11736	13 30 49.01	-10 57 07.7		3 809	(2006)	1993 04 18.09375	13 15 00.25	-11 08 33.0	3 809
(1058)	1993 04 27.13125	13 30 48.22	-10 57 01.0		3 809	(2006)	1993 04 21.05625	13 12 07.47	-10 55 10.7	3 809
(1058)	1993 04 27.14514	13 30 47.40	-10 56 54.7		3 809	(2006)	1993 04 21.07709	13 12 06.27	-10 55 05.2	3 809
(1058)	1993 04 28.19514	13 29 46.44	-10 48 42.1		3 809	(2006)	1993 04 21.09792	13 12 05.03	-10 54 59.7	3 809
(1058)	1993 04 28.20764	13 29 45.71	-10 48 36.3		3 809	(2114)	1993 04 29.30278	13 39 52.42	-10 50 44.5	16.8 3 809
(1058)	1993 04 28.22014	13 29 44.96	-10 48 30.5		3 809	(2114)	1993 04 29.31528	13 39 51.89	-10 50 41.5	3 809
(1058)	1993 04 30.21007	13 27 52.28	-10 33 04.4		3 809	(2114)	1993 05 02.29931	13 37 46.87	-10 39 16.8	3 809
(1058)	1993 04 30.22049	13 27 51.70	-10 32 59.5		3 809	(2114)	1993 05 02.31181	13 37 46.35	-10 39 13.7	3 809
(1058)	1993 04 30.23090	13 27 51.11	-10 32 55.0		3 809	(2114)	1993 05 02.32430	13 37 45.80	-10 39 11.2	3 809
(1058)	1993 05 01.26250	13 26 54.00	-10 25 00.5		3 809	(2165)	1993 04 27.11736	13 33 56.19	-10 01 13.2	3 809
(1058)	1993 05 01.27500	13 26 53.31	-10 24 55.1		3 809	(2165)	1993 04 27.13125	13 33 55.62	-10 01 10.4	3 809
(1058)	1993 05 01.28750	13 26 52.63	-10 24 49.4		3 809	(2165)	1993 04 27.14514	13 33 55.05	-10 01 07.0	3 809
(1190)	1993 04 29.21320	13 33 27.33	-10 06 50.4		3 809	(2226)	1993 04 25.23056	13 31 01.33	-08 26 25.8	3 809
(1190)	1993 04 29.22569	13 33 26.68	-10 06 47.5		3 809	(2226)	1993 04 25.24445	13 31 00.68	-08 26 22.7	3 809
(1190)	1993 05 01.26250	13 31 39.87	-09 58 50.6		3 809	(2226)	1993 04 25.25833	13 31 00.04	-08 26 19.6	3 809
(1190)	1993 05 01.27500	13 31 39.20	-09 58 47.4		3 809	(2226)	1993 04 26.17986	13 30 16.95	-08 22 48.5	3 809
(1190)	1993 05 01.28750	13 31 38.54	-09 58 44.5		3 809	(2226)	1993 04 26.19375	13 30 16.30	-08 22 45.4	3 809
(1190)	1993 05 01.30417	13 31 37.61	-09 58 39.3		3 809	(2226)	1993 04 26.20764	13 30 15.65	-08 22 42.5	3 809
(1190)	1993 05 01.31667	13 31 36.97	-09 58 36.8		3 809	(2252)	1993 04 23.10278	12 36 05.03	-06 16 00.0	3 809
(1190)	1993 05 01.32917	13 31 36.33	-09 58 33.9		3 809	(2252)	1993 04 23.12222	12 36 04.20	-06 15 55.5	3 809
(1353)	1993 04 23.10278	12 34 35.30	-07 22 13.3		3 809	(2252)	1993 04 23.14166	12 36 03.35	-06 15 51.6	3 809
(1353)	1993 04 23.12222	12 34 34.62	-07 22 05.4		3 809	(2252)	1993 04 24.02812	12 35 25.10	-06 12 40.0	3 809
(1353)	1993 04 23.14166	12 34 33.93	-07 21 57.7		3 809	(2252)	1993 04 24.03854	12 35 24.64	-06 12 37.8	3 809
(1363)	1993 04 25.23056	13 30 26.21	-09 41 00.9		3 809	(2252)	1993 04 24.05035	12 35 24.13	-06 12 35.4	3 809
(1363)	1993 04 25.24445	13 30 25.60	-09 40 57.2		3 809	(2361)	1993 04 26.33125	14 52 26.36	-16 28 32.4	3 809
(1363)	1993 04 25.25833	13 30 24.97	-09 40 52.9		3 809	(2361)	1993 04 26.34514	14 52 25.69	-16 28 29.4	3 809
(1363)	1993 04 26.17986	13 29 42.99	-09 36 26.2		3 809	(2361)	1993 04 26.35902	14 52 25.03	-16 28 26.7	3 809
(1363)	1993 04 26.19375	13 29 42.34	-09 36 22.1		3 809	(2376)	1993 04 21.36736	16 01 36.45	-19 51 59.6	15.8 3 809
(1363)	1993 04 26.20764	13 29 41.71	-09 36 18.7		3 809	(2376)	1993 04 21.38541	16 01 35.83	-19 51 58.5	3 809
(1578)	1993 04 22.37361	15 59 55.55	-20 15 38.5		3 809	(2376)	1993 04 21.40347	16 01 35.25	-19 51 57.3	3 809
(1578)	1993 04 22.39027	15 59 55.08	-20 15 37.0		3 809	(2376)	1993 04 22.37361	16 01 03.55	-19 51 07.7	3 809
(1578)	1993 04 22.40694	15 59 54.58	-20 15 36.2		3 809	(2376)	1993 04 22.39027	16 01 02.99	-19 51 07.2	3 809
(1578)	1993 04 25.37917	15 58 24.21	-20 11 24.5		3 809	(2376)	1993 04 22.40694	16 01 02.46	-19 51 06.3	3 809
(1578)	1993 04 25.39305	15 58 23.77	-20 11 23.1		3 809	(2376)	1993 04 25.37917	15 59 18.83	-19 48 20.4	3 809
(1578)	1993 04 25.40694	15 58 23.36	-20 11 22.0		3 809	(2376)	1993 04 25.39305	15 59 18.35	-19 48 19.5	3 809
(1578)	1993 04 27.34792	15 57 21.63	-20 08 29.4		3 809	(2376)	1993 04 25.40694	15 59 17.84	-19 48 18.3	3 809
(1578)	1993 04 27.36041	15 57 21.22	-20 08 28.3		3 809	(2376)	1993 04 27.34792	15 58 05.53	-19 46 18.0	3 809
(1578)	1993 04 27.37292	15 57 20.82	-20 08 27.2		3 809	(2376)	1993 04 27.36041	15 58 05.05	-19 46 16.8	3 809

(2376)	1993 04 27.37292	15 58 04.59	-19 46 15.9	3 809	(3047)	1993 04 27.23541	13 48 19.16	-13 48 08.9	3 809
(2424)	1993 04 25.13055	13 25 17.85	-08 15 07.1	3 809	(3047)	1993 04 28.31667	13 47 23.16	-13 43 01.2	3 809
(2424)	1993 04 25.14722	13 25 16.82	-08 15 05.9	3 809	(3047)	1993 04 28.32916	13 47 22.52	-13 42 57.6	3 809
(2424)	1993 04 25.16389	13 25 15.82	-08 15 04.8	3 809	(3047)	1993 04 28.34167	13 47 21.90	-13 42 54.1	3 809
(2424)	1993 04 26.02570	13 24 23.84	-08 14 22.8	3 809	(3079)	1993 04 27.06875	13 00 49.13	-04 01 23.1	16.9 3 809
(2424)	1993 04 26.03958	13 24 23.00	-08 14 22.2	3 809	(3079)	1993 04 27.08264	13 00 48.51	-04 01 18.7	3 809
(2424)	1993 04 26.05347	13 24 22.14	-08 14 21.2	3 809	(3079)	1993 04 27.09653	13 00 47.94	-04 01 14.9	3 809
(2424)	1993 04 28.11180	13 22 20.79	-08 12 53.1	3 809	(3126)	1993 04 18.28125	13 17 56.70	-09 04 05.2	3 809
(2424)	1993 04 28.12431	13 22 20.05	-08 12 53.5	3 809	(3126)	1993 04 18.30209	13 17 55.83	-09 03 56.9	3 809
(2424)	1993 04 28.13681	13 22 19.31	-08 12 54.2	3 809	(3126)	1993 04 18.32291	13 17 54.95	-09 03 48.8	3 809
(2458)	1993 07 20.24375	20 14 56.80	-19 19 55.6	17.9 4 809	(3126)	1993 04 24.07083	13 13 56.98	-08 25 42.4	3 809
(2458)	1993 07 20.25694	20 14 56.08	-19 19 58.6	4 809	(3126)	1993 04 24.08750	13 13 56.32	-08 25 36.1	3 809
(2458)	1993 07 20.27014	20 14 55.44	-19 20 01.1	4 809	(3126)	1993 04 24.10416	13 13 55.61	-08 25 30.1	3 809
(2462)	1993 07 20.24375	20 03 18.87	-21 57 37.9	18.1 4 809	(3126)	1993 04 24.12222	13 13 54.90	-08 25 22.8	3 809
(2462)	1993 07 20.25694	20 03 18.09	-21 57 40.6	4 809	(3126)	1993 04 25.03333	13 13 18.62	-08 19 26.3	3 809
(2462)	1993 07 20.27014	20 03 17.28	-21 57 43.4	4 809	(3126)	1993 04 25.05000	13 13 17.95	-08 19 19.9	3 809
(2462)	1993 07 24.22708	19 59 16.52	-22 13 05.6	4 809	(3126)	1993 04 25.06667	13 13 17.28	-08 19 13.5	3 809
(2548)	1993 07 20.24375	19 58 57.97	-22 01 05.5	17.5 4 809	(3126)	1993 04 27.02084	13 12 00.87	-08 06 40.4	3 809
(2548)	1993 07 20.25694	19 58 56.99	-22 01 01.3	4 809	(3126)	1993 04 27.03472	13 12 00.31	-08 06 35.1	3 809
(2548)	1993 07 20.27014	19 58 56.05	-22 00 57.7	4 809	(3126)	1993 04 27.04862	13 11 59.75	-08 06 30.3	3 809
(2548)	1993 07 24.22708	19 54 24.68	-21 41 23.8	4 809	(3126)	1993 04 28.06875	13 11 20.75	-08 00 02.9	3 809
(2633)	1993 04 25.28333	13 29 38.53	-06 05 13.7	3 809	(3126)	1993 04 28.08125	13 11 20.28	-07 59 57.9	3 809
(2633)	1993 04 25.29723	13 29 37.68	-06 05 09.9	3 809	(3126)	1993 04 28.09375	13 11 19.79	-07 59 52.8	3 809
(2633)	1993 04 25.31111	13 29 36.83	-06 05 06.0	3 809	(3148)	1993 04 25.13055	13 27 10.69	-09 36 37.8	3 809
(2633)	1993 04 26.22778	13 28 41.98	-06 01 10.1	3 809	(3148)	1993 04 25.14722	13 27 09.99	-09 36 33.9	3 809
(2633)	1993 04 26.24167	13 28 41.14	-06 01 06.8	3 809	(3148)	1993 04 25.16389	13 27 09.31	-09 36 29.6	3 809
(2633)	1993 04 26.25555	13 28 40.33	-06 01 03.3	3 809	(3246)	1993 04 27.06875	12 59 36.52	-03 42 06.1	3 809
(2733)	1993 07 20.24375	19 53 03.46	-19 27 59.1	18.0 4 809	(3246)	1993 04 27.08264	12 59 36.07	-03 41 58.5	3 809
(2733)	1993 07 20.25694	19 53 02.63	-19 28 04.5	4 809	(3246)	1993 04 27.09653	12 59 35.64	-03 41 50.8	3 809
(2733)	1993 07 20.27014	19 53 01.78	-19 28 09.2	4 809	(3246)	1993 04 28.02500	12 59 06.45	-03 33 12.8	3 809
(2733)	1993 07 24.22708	19 49 03.67	-19 53 39.0	4 809	(3246)	1993 04 28.03750	12 59 06.04	-03 33 06.1	3 809
(2891)	1993 07 20.24375	19 53 37.55	-21 12 34.1	17.8 4 809	(3246)	1993 04 28.05000	12 59 05.65	-03 32 59.2	3 809
(2891)	1993 07 20.25694	19 53 36.87	-21 12 38.1	4 809	(3414)	1993 04 27.11736	13 28 17.91	-10 02 21.9	3 809
(2891)	1993 07 20.27014	19 53 36.25	-21 12 41.2	4 809	(3414)	1993 04 27.13125	13 28 17.07	-10 02 19.1	3 809
(2891)	1993 07 24.22708	19 50 33.91	-21 31 07.5	4 809	(3414)	1993 04 27.14514	13 28 16.28	-10 02 16.8	3 809
(3005)	1993 04 27.06875	12 59 44.00	-04 05 21.8	3 809	(3454)	1993 04 27.06875	12 55 07.47	-04 17 38.5	3 809
(3005)	1993 04 27.08264	12 59 43.41	-04 05 16.9	3 809	(3454)	1993 04 27.08264	12 55 06.90	-04 17 32.8	3 809
(3005)	1993 04 27.09653	12 59 42.83	-04 05 12.9	3 809	(3454)	1993 04 27.09653	12 55 06.31	-04 17 27.9	3 809
(3005)	1993 04 28.02500	12 59 03.83	-04 00 01.3	3 809	(3549)	1993 07 20.24375	19 56 00.47	-18 17 07.5	18.0 4 809
(3005)	1993 04 28.03750	12 59 03.31	-03 59 57.3	3 809	(3549)	1993 07 20.25694	19 55 59.76	-18 17 08.6	4 809
(3005)	1993 04 28.05000	12 59 02.77	-03 59 53.2	3 809	(3549)	1993 07 20.27014	19 55 58.96	-18 17 09.2	4 809
(3014)	1993 04 22.37361	15 58 50.11	-18 49 01.2	3 809	(3549)	1993 07 24.22708	19 52 22.71	-18 20 11.7	4 809
(3014)	1993 04 22.39027	15 58 49.50	-18 48 59.1	3 809	(3680)	1993 04 29.30278	13 39 49.92	-11 33 07.8	16.9 3 809
(3014)	1993 04 22.40694	15 58 48.92	-18 48 56.3	3 809	(3680)	1993 04 29.31528	13 39 49.18	-11 33 06.5	3 809
(3014)	1993 04 25.37917	15 57 02.55	-18 42 07.5	3 809	(3680)	1993 05 02.29931	13 36 52.61	-11 25 39.4	3 809
(3014)	1993 04 25.39305	15 57 02.04	-18 42 05.3	3 809	(3680)	1993 05 02.31181	13 36 51.84	-11 25 37.9	3 809
(3014)	1993 04 25.40694	15 57 01.52	-18 42 03.0	3 809	(3680)	1993 05 02.32430	13 36 51.09	-11 25 35.9	3 809
(3014)	1993 04 27.34792	15 55 43.84	-18 37 11.6	3 809	(4052)	1993 07 20.24375	20 01 10.68	-22 37 16.3	18.0 4 809
(3014)	1993 04 27.36041	15 55 43.32	-18 37 09.8	3 809	(4052)	1993 07 20.25694	20 01 09.96	-22 37 15.8	4 809
(3014)	1993 04 27.37292	15 55 42.82	-18 37 07.7	3 809	(4052)	1993 07 20.27014	20 01 09.13	-22 37 16.7	4 809
(3047)	1993 04 27.20764	13 48 20.59	-13 48 16.1	16.7 3 809	(4052)	1993 07 24.22708	19 57 36.87	-22 37 40.0	4 809
(3047)	1993 04 27.22153	13 48 19.86	-13 48 12.7	3 809	(4393)	1993 07 20.24375	20 03 54.36	-19 58 55.4	18.2 4 809

(4393)	1993 07 20.25694	20 03 53.70	-19 58 57.9	4 809	(5578)	1993 04 25.25833	13 32 50.11	-08 14 10.4	3 809
(4393)	1993 07 20.27014	20 03 53.04	-19 58 59.9	4 809	(5578)	1993 04 26.17986	13 32 09.08	-08 09 47.9	3 809
(4393)	1993 07 24.22708	20 00 42.54	-20 10 43.8	4 809	(5578)	1993 04 26.19375	13 32 08.49	-08 09 44.0	3 809
(4621)	1993 04 25.18611	13 23 27.68	-07 23 24.1	3 809	(5578)	1993 04 26.20764	13 32 07.88	-08 09 39.9	3 809
(4621)	1993 04 25.20000	13 23 26.94	-07 23 18.2	3 809					
(4621)	1993 04 25.21389	13 23 26.16	-07 23 12.5	3 809					
(4621)	1993 04 26.08194	13 22 39.70	-07 17 12.4	3 809					
(4621)	1993 04 26.09583	13 22 38.96	-07 17 06.5	3 809					
(4621)	1993 04 26.10973	13 22 38.20	-07 17 00.8	3 809					
(4677)	1993 04 24.07083	13 15 55.85	-08 10 34.4	3 809					
(4677)	1993 04 24.08750	13 15 55.17	-08 10 30.5	3 809					
(4677)	1993 04 24.10416	13 15 54.48	-08 10 25.9	3 809					
(4677)	1993 04 25.03333	13 15 16.30	-08 06 39.5	3 809					
(4677)	1993 04 25.05000	13 15 15.60	-08 06 35.7	3 809					
(4677)	1993 04 25.06667	13 15 14.91	-08 06 31.6	3 809					
(4677)	1993 04 27.02084	13 13 56.11	-07 58 46.5	3 809					
(4677)	1993 04 27.03472	13 13 55.54	-07 58 43.3	3 809					
(4677)	1993 04 27.04862	13 13 54.98	-07 58 39.9	3 809					
(4711)	1993 07 20.24375	20 11 34.23	-21 52 14.7	15.0 4 809					
(4711)	1993 07 20.25694	20 11 33.45	-21 52 23.7	4 809					
(4711)	1993 07 20.27014	20 11 32.71	-21 52 33.0	4 809					
(4711)	1993 07 24.22708	20 07 59.44	-22 38 21.0	4 809					
(4784)	1993 04 12.07916	13 21 29.10	-12 10 02.2	3 809					
(4784)	1993 04 12.10000	13 21 27.97	-12 09 57.6	3 809					
(4784)	1993 04 12.12083	13 21 26.85	-12 09 53.1	3 809					
(4784)	1993 04 14.06736	13 19 42.09	-12 02 29.0	3 809					
(4784)	1993 04 14.08820	13 19 40.97	-12 02 24.3	3 809					
(4784)	1993 04 14.10902	13 19 39.84	-12 02 19.5	3 809					
(5073)	1993 04 23.10278	12 38 09.92	-05 49 45.0	15.3 3 809					
(5073)	1993 04 23.12222	12 38 08.96	-05 49 44.1	3 809					
(5073)	1993 04 23.14166	12 38 08.00	-05 49 43.4	3 809					
(5073)	1993 04 24.02812	12 37 24.31	-05 49 22.5	3 809					
(5073)	1993 04 24.03854	12 37 23.77	-05 49 22.3	3 809					
(5073)	1993 04 24.05035	12 37 23.17	-05 49 21.7	3 809					
(5073)	1993 05 01.12222	12 32 22.78	-05 49 53.6	3 809					
(5073)	1993 05 01.13611	12 32 22.24	-05 49 54.1	3 809					
(5073)	1993 05 01.15000	12 32 21.72	-05 49 54.5	3 809					
(5141)	1993 07 20.24375	19 57 50.93	-19 05 49.5	17.9 4 809					
(5141)	1993 07 20.25694	19 57 50.14	-19 05 51.8	4 809					
(5141)	1993 07 20.27014	19 57 49.48	-19 05 54.2	4 809					
(5141)	1993 07 24.22708	19 54 26.39	-19 19 32.2	4 809					
(5248)	1993 04 21.36736	15 57 30.21	-20 09 54.8	16.5 3 809					
(5248)	1993 04 21.38541	15 57 29.72	-20 09 53.9	3 809					
(5248)	1993 04 21.40347	15 57 29.21	-20 09 52.8	3 809					
(5248)	1993 04 22.37361	15 57 03.04	-20 08 47.5	3 809					
(5248)	1993 04 22.39027	15 57 02.59	-20 08 46.3	3 809					
(5248)	1993 04 22.40694	15 57 02.16	-20 08 44.8	3 809					
(5248)	1993 04 27.34792	15 54 17.07	-20 01 21.2	3 809					
(5248)	1993 04 27.36041	15 54 16.63	-20 01 20.3	3 809					
(5248)	1993 04 27.37292	15 54 16.22	-20 01 18.9	3 809					
(5578)	1993 04 25.23056	13 32 51.33	-08 14 18.6	16.7 3 809					
(5578)	1993 04 25.24445	13 32 50.72	-08 14 14.6	3 809					
					<b>886 Susono</b>				
					T. Furuta, 17-2 Mitsuike, Kagiya, Tokai 477, Japan				
					Observer M. Akiyama				
					Measurer T. Furuta				
					0.25-m <i>f</i> /4.2 Wright-Schmidt camera				
					AGK3				
					1986 WE	1990 12 27.71892	07 20 08.20	+22 33 30.1	16.0 886
					1986 WE	1990 12 27.73038	07 20 07.25	+22 33 33.4	886
					<b>894 Otomo</b>				
					S. Otomo, Kiyosato 3545-3902, Takane-cho, Kitakoma-gun, Yamanashi-ken, 407-03, Japan				
					0.25-m <i>f</i> /3.4 reflector				
					PPM				
					1980 PX	1993 08 27.76007	23 23 24.86	-03 58 59.9	894
					1980 PX	1993 08 27.77257	23 23 24.47	-03 59 04.7	894
					1980 RV <sub>2</sub>	1993 08 11.61424	21 27 06.03	-17 14 30.6	894
					1980 RV <sub>2</sub>	1993 08 11.62743	21 27 05.20	-17 14 33.9	894
					1983 QH <sub>1</sub>	1993 05 27.69363	16 52 49.59	-14 44 01.9	894
					1983 QH <sub>1</sub>	1993 05 27.70660	16 52 48.87	-14 44 00.7	894
					1986 JS	1993 08 11.61424	21 25 25.98	-17 31 31.0	894
					1986 JS	1993 08 11.62743	21 25 25.31	-17 31 38.7	894
					1986 QS <sub>1</sub>	1993 08 11.61424	21 20 10.63	-16 25 17.7	894
					1986 QS <sub>1</sub>	1993 08 11.62743	21 20 09.99	-16 25 24.7	894
					1990 QM <sub>4</sub>	1993 05 26.61916	16 30 19.64	-11 33 28.1	894
					1990 QM <sub>4</sub>	1993 05 26.63229	16 30 18.92	-11 33 26.9	894
					1990 QM <sub>4</sub>	1993 06 09.58160	16 17 22.54	-11 29 27.5	894
					1990 QM <sub>4</sub>	1993 06 09.59271	16 17 21.84	-11 29 29.5	894
					1993 KO	1993 05 25.62951	15 55 32.44	-12 08 07.1	16.5 894
					1993 KO	1993 05 25.64271	15 55 31.64	-12 08 03.2	894
					1993 KO	1993 05 26.59282	15 54 39.61	-12 02 37.6	894
					1993 KO	1993 05 26.60590	15 54 38.86	-12 02 32.4	894
					1993 KO	1993 05 27.58681	15 53 45.50	-11 57 04.4	894
					1993 KO	1993 05 27.59931	15 53 44.72	-11 57 00.8	894
					1993 KO	1993 05 28.63021	15 52 49.10	-11 51 26.4	894
					1993 KO	1993 05 28.64201	15 52 48.46	-11 51 22.1	894
					1993 KO	1993 06 14.57454	15 40 24.43	-10 47 49.3	17.0 894
					1993 KO	1993 06 14.58681	15 40 23.94	-10 47 47.7	894
					1993 QB <sub>3</sub>	1993 08 11.69271	21 50 05.49	-09 30 17.8	16.7 894
					1993 QB <sub>3</sub>	1993 08 11.70521	21 50 05.17	-09 30 36.4	894
					3051 P-L	1993 05 27.69363	16 55 47.44	-14 00 08.0	894
					3051 P-L	1993 05 27.70660	16 55 46.94	-14 00 04.6	894
					(655)	1993 06 14.57454	15 38 03.81	-10 51 30.5	894
					(655)	1993 06 14.58681	15 38 03.34	-10 51 30.3	894
					(4164)	1993 05 26.59282	15 56 22.99	-12 31 43.7	894
					(4164)	1993 05 26.60590	15 56 22.25	-12 31 37.3	894
					(4164)	1993 05 27.58681	15 55 31.39	-12 26 09.5	894
					(4164)	1993 05 27.59931	15 55 30.72	-12 26 05.9	894

(4164)	1993 06 14.57454	15 41 38.76	-11 01 45.8	17.5	894
(4164)	1993 06 14.58681	15 41 38.28	-11 01 43.4		894
(4563)	1993 05 25.62951	15 55 56.70	-12 25 56.1		894
(4563)	1993 05 25.64271	15 55 55.79	-12 25 53.5		894
(4563)	1993 05 26.59282	15 54 55.28	-12 23 36.6		894
(4563)	1993 05 26.60590	15 54 54.46	-12 23 32.6		894
(4563)	1993 05 27.59931	15 53 51.39	-12 21 14.5		894
(5166)	1993 08 11.61424	21 20 37.46	-16 02 10.6		894
(5166)	1993 08 11.62743	21 20 36.78	-16 02 14.6		894
(5640)	1993 08 11.69271	21 49 01.15	-10 24 42.7	16.2	894
(5640)	1993 08 11.70521	21 49 00.65	-10 24 48.2		894

**970 Chelmsford**

G. M. Hurst, 16 Westminster Close, Kempshott Rise, Basingstoke, Hants.  
RG22 4PP, England

Observer N. James

0.30-m  $f/5.25$  reflector

GSC

1993 MF	1993 08 23.88182	23 46 17.47	+41 18 24.7	V 970
1993 MF	1993 08 30.92465	00 00 21.28	+40 21 45.4	970
1993 MF	1993 08 30.94220	00 00 22.96	+40 21 33.9	970

**ORBITAL ELEMENTS**

Orbital elements have been computed by the following contributors:

C. M. Bardwell, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street,  
Cambridge, MA 02138, U.S.A. (B)

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001,  
U.S.A. (E)

E. Goffin, Agfa-Gevaert N.V., Mortsel, Belgium

K. Ichikawa, 45 Shiromae Kamiwada-cho, Okazaki-shi, Aichi, 444-02 Japan

B. G. Marsden, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street,  
Cambridge, MA 02138, U.S.A. (M)

S. Nakano, 3-19, 1 chome, Takenokuchi, Sumoto, Hyogo-ken 656, Japan (N)

G. V. Williams, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street,  
Cambridge, MA 02138, U.S.A. (W)

**Comet McNaught-Tritton (1978 XXVII)**

Epoch 1978 Sept. 9.0 TT = JDT 2443760.5

$T$  1978 Aug. 24.54012 TT

		Marsden			
$q$	(2000.0)	<b>P</b>	<b>Q</b>		
$z$	-0.0003400	$\omega$ 229.50943	-0.84461027	-0.31951484	
	$\pm 0.0000287$	$\Omega$ 72.21598	-0.24060148	+0.94332637	
$e$	1.0021364	$i$ 153.18292	-0.47827233	+0.08969744	

From 7 observations 1978 Apr. 12-1980 Jan. 23, mean residual  $0''.62$ .

**Periodic Comet Brewington (1992p)**

Epoch 1992 June 27.0 TT = JDT 2448800.5

$T$  1992 June 7.79266 TT

		Nakano			
$q$	(2000.0)	<b>P</b>	<b>Q</b>		
$n$	0.09193085	$\omega$ 47.83607	+0.84175848	-0.53282826	
$a$	4.8621519	$\Omega$ 343.73584	+0.35681317	+0.66979185	
$e$	0.6707263	$i$ 18.05786	+0.40512593	+0.51717785	
$P$	10.72				

From 87 observations 1992 Aug. 28-1993 Mar. 30, mean residual  $1''.03$ .

**Periodic Comet Helin-Lawrence (1993l)**

Epoch 1993 June 22.0 TT = JDT 2449160.5

$T$  1993 June 30.33388 TT

		Nakano			
$q$	(2000.0)	<b>P</b>	<b>Q</b>		
$n$	0.10425965	$\omega$ 163.72549	-0.24177758	+0.95505449	
$a$	4.4708683	$\Omega$ 92.03756	-0.90829820	-0.16057405	
$e$	0.3088304	$i$ 9.88174	-0.34137659	-0.24917244	
$P$	9.45				

From 53 observations 1993 Apr. 21-Sept. 5, mean residual  $1''.12$ .

**Comet Mueller (1993p)**

$T$  1994 Mar. 26.24370 TT

		Nakano			
$q$	(2000.0)	<b>P</b>	<b>Q</b>		
		$\omega$ 261.05554	+0.21200284	-0.94974540	
		$\Omega$ 193.79440	+0.18555350	-0.19225159	
$e$	1.0	$i$ 105.01213	-0.95949189	-0.24702833	

From 72 observations 1993 Aug. 16-Sept. 10.

**One-opposition minor planets**

Planet	$H$	Epoch	$M$	$\omega$	$\Omega$	$i$	$e$	$a$	Arc	O	N	C
1989 AB <sub>3</sub>	12.1	890114	59.96	299.11	113.86	11.19	0.1015	3.0070	33	5	D	N
1989 AA <sub>5</sub>	12.5	890114	172.58	193.59	116.12	12.02	0.1802	2.4446	38	6	D	W
1989 CW <sub>7</sub>	15.0	890203	40.72	226.32	198.97	3.47	0.1116	2.2326	24	4	D	N
1989 TZ <sub>11</sub>	15.3	891001	10.11	279.80	69.69	8.45	0.3612	2.3524	29	5	D	N
1989 VS <sub>2</sub>	12.4	891110	58.95	266.94	61.31	14.08	0.1863	2.6539	29	8	D	N
1989 VZ <sub>5</sub>	14.2	891110	14.72	347.70	31.64	2.20	0.1287	2.5695	13	6	D	N
1989 YX <sub>6</sub>	14.6	891220	11.71	324.30	113.08	5.26	0.2060	2.3975	30	5	D	N
1990 DU <sub>4</sub>	14.3	900310	59.70	268.67	186.75	2.66	0.1460	2.3425	35	0	D	N
1990 HD	13.8	900419	324.53	127.02	134.35	1.46	0.1818	2.1643	30	5	D	N
1991 AE <sub>3</sub>	13.8	910124	38.33	286.21	140.38	3.02	0.2644	2.7764	24	5	D	N
1991 EX <sub>2</sub>	14.0	910305	8.34	166.72	346.10	7.47	0.0215	2.2443	28	8	D	N
1991 GV <sub>4</sub>	15.0	910414	289.45	103.93	187.67	2.70	0.1651	2.4499	39	0	D	N
1991 PL <sub>8</sub>	13.8	910812	13.31	266.71	31.61	1.39	0.1645	3.0728	30	7	D	N
1991 PJ <sub>13</sub>	15.0	910812	7.73	344.46	333.60	2.67	0.1544	2.2414	38	7	D	W
1991 PZ <sub>14</sub>	13.6	910812	47.96	70.65	195.80	6.59	0.1576	2.5282	29	7	D	N
1991 RW <sub>23</sub>	13.2	910921	323.77	192.65	198.80	4.06	0.0833	2.7998	40	0	D	N
1991 RT <sub>26</sub>	12.9	911011	19.79	160.67	194.77	13.22	0.1687	2.6195	62	8	D	N
1991 RA <sub>41</sub>	14.5	910901	41.94	263.61	34.90	2.08	0.1933	3.0416	10	4	D	N
1991 RJ <sub>41</sub>	15.2	911011	351.22	7.65	12.96	7.66	0.1271	2.2820	26	6	D	N
1991 TL <sub>13</sub>	14.4	911011	15.19	334.66	13.23	9.67	0.1397	2.6085	19	5	D	N
1992 BT <sub>5</sub>	15.8	920208	8.50	259.20	219.20	3.68	0.0691	2.2006	13	9	D	N
1992 EC	13.8	920228	288.80	255.12	349.75	7.19	0.0642	2.3803	32	6	D	N
1992 GZ <sub>1</sub>	15.8	920408	16.14	156.00	13.56	0.32	0.3443	2.9226	21	9	D	N
1992 HB <sub>4</sub>	14.5	920428	178.22	181.36	211.10	22.44	0.0854	1.9601	8	8	D	N
1992 PM	15.2	920806	301.44	166.70	220.90	2.22	0.1110	2.3678	14	9	D	N
1992 QA <sub>1</sub>	14.3	920826	21.38	146.30	152.88	10.80	0.3212	2.5286	28	6	D	N
1992 RQ <sub>3</sub>	13.3	920915	332.47	53.49	341.16	25.75	0.2745	3.1410	26	8	D	N

1992 RP <sub>7</sub>	15.3	920915	318.32	303.07	112.57	3.82	0.2174	2.5875	21	0	D	N
1992 RS <sub>7</sub>	16.2	920915	345.77	247.19	135.01	4.52	0.3156	2.5978	21	0	D	N
1992 SX <sub>16</sub>	16.4	921005	348.90	199.60	187.14	8.34	0.2813	2.5334	7	8	D	N
1992 SK <sub>17</sub>	15.7	921005	1.34	158.84	204.82	1.07	0.1677	2.8379	6	6	D	N
<b>1993 FW</b>	<b>7.0</b>	<b>930423</b>	<b>0.09</b>	<b>359.50</b>	<b>187.91</b>	<b>7.74</b>	<b>0.0407</b>	<b>43.9311</b>	<b>89</b>	<b>0</b>	<b>E</b>	<b>M</b>
1993 FV <sub>3</sub>	13.5	930403	21.21	345.46	183.79	1.84	0.1391	2.4060	38	0	W	
1993 GB	14.0	930403	1.66	173.94	25.37	9.08	0.1906	2.3750	14	0	W	
1993 GP	13.0	930403	107.03	42.69	29.92	11.06	0.2497	2.3171	11	0	W	
1993 GB <sub>1</sub>	14.0	930403	295.40	106.63	174.62	1.98	0.1429	2.1588	11	0	W	
1993 GK <sub>1</sub>	14.0	930403	18.97	207.44	325.08	1.94	0.1677	2.3974	9	0	W	
1993 GL <sub>1</sub>	12.5	930403	4.12	185.58	9.17	6.31	0.1118	2.6889	9	0	W	
1993 GM <sub>1</sub>	11.5	930403	32.41	287.07	230.01	4.19	0.1423	3.1576	7	9	W	
1993 HD <sub>6</sub>	12.0	930423	131.75	44.93	24.93	21.37	0.0603	3.2036	7	0	W	
1993 HL <sub>6</sub>	13.5	930403	355.39	339.06	215.77	7.55	0.1348	2.1799	9	0	W	
1993 HG <sub>7</sub>	12.0	930423	183.73	169.22	213.60	11.67	0.1226	2.4362	2	8	E	W
1993 HH <sub>7</sub>	13.0	930423	179.49	31.04	356.10	2.73	0.1137	2.2335	2	8	E	W
1993 MC	12.0	930602	11.68	34.81	221.05	12.97	0.2440	2.5826	10	8	W	
1993 MG <sub>1</sub>	13.5	930712	1.60	15.47	277.80	14.65	0.3838	2.6880	58	0	B	
1993 NA	16.0	930712	16.48	78.91	193.88	4.56	0.1849	2.3161	29	0	W	
1993 NF	13.0	930712	352.95	185.32	120.58	19.99	0.2312	2.9149	9	8	M	
1993 NJ	11.5	930801	37.66	43.23	201.93	11.05	0.1314	2.5292	39	7	W	
1993 OM	14.5	930801	281.33	128.36	261.46	9.20	0.0637	2.9710	23	0	W	
1993 OP	13.0	930801	316.69	95.68	286.28	23.91	0.1997	2.2880	35	8	W	
1993 OT	19.0	930801	339.49	58.92	295.17	4.48	0.3136	2.3188	20	9	M	
1993 OV	12.5	930801	250.23	170.43	248.01	19.56	0.1192	1.9139	36	8	W	
1993 OY <sub>1</sub>	13.0	930712	308.17	200.33	172.29	2.52	0.2322	2.5084	9	8	M	
1993 OC <sub>2</sub>	14.0	930801	121.80	220.96	334.74	18.54	0.0523	1.9357	32	8	W	
1993 OD <sub>2</sub>	12.5	930801	9.00	170.80	140.18	16.09	0.2290	2.5887	29	8	W	
1993 OE <sub>2</sub>	16.0	930712	327.68	178.89	160.66	3.64	0.1638	2.2311	7	9	M	
1993 OX <sub>2</sub>	15.0	930801	351.08	212.39	145.02	5.87	0.1790	2.7842	22	0	W	
1993 OY <sub>2</sub>	14.5	930801	22.43	318.27	352.48	17.28	0.2102	2.6435	24	6	W	
<b>1993 OZ<sub>2</sub></b>	<b>14.5</b>	<b>930801</b>	<b>344.74</b>	<b>247.56</b>	<b>117.55</b>	<b>21.78</b>	<b>0.4346</b>	<b>2.9994</b>	<b>41</b>	<b>0</b>	<b>W</b>	
1993 OA <sub>3</sub>	12.5	930801	354.11	59.38	283.29	23.24	0.2438	2.3329	21	7	W	
1993 PA	16.5	930801	348.01	144.38	178.44	6.10	0.1895	2.3079	4	9	W	
1993 PE	13.5	930801	334.22	81.53	267.10	3.94	0.1006	2.3878	7	0	W	
1993 PF	15.0	930801	114.17	251.76	284.67	16.18	0.1478	2.5392	8	0	W	
1993 PM	16.0	930801	352.39	42.49	283.11	6.55	0.1285	3.1620	2	9	E	W
1993 PP	16.0	930801	246.25	204.06	238.99	3.85	0.1324	2.5772	2	9	W	
1993 PA <sub>1</sub>	19.0	930801	343.48	199.40	145.89	7.98	0.2210	2.1604	9	9	W	
1993 PC <sub>1</sub>	15.5	930801	359.91	175.80	146.95	16.61	0.1456	2.5565	9	9	W	
1993 PP <sub>2</sub>	15.0	930801	69.14	98.67	145.82	11.68	0.1209	3.2271	3	9	W	
1993 PR <sub>2</sub>	16.5	930801	306.12	264.63	144.59	9.78	0.2740	2.7492	3	9	W	
1993 PU <sub>2</sub>	18.0	930801	26.75	165.00	123.33	1.90	0.1407	2.4177	3	9	W	
1993 PX <sub>2</sub>	16.0	930801	338.41	161.66	182.35	3.30	0.1596	2.1237	3	7	W	
1993 PA <sub>3</sub>	13.5	930801	22.97	346.88	304.55	14.00	0.0605	3.2076	3	7	E	W
1993 PQ <sub>3</sub>	13.5	930801	171.68	346.28	158.23	8.62	0.1234	2.4569	2	7	E	W
1993 PR <sub>3</sub>	16.0	930801	353.74	141.51	182.86	3.41	0.1218	2.2894	3	7	E	W
1993 PU <sub>3</sub>	16.0	930801	0.98	16.92	298.75	5.56	0.0768	2.1781	3	7	E	W
1993 PA <sub>4</sub>	14.0	930801	234.36	155.55	299.76	8.17	0.1172	2.5240	2	7	E	W
1993 PC <sub>6</sub>	13.5	930821	354.83	181.82	155.93	25.31	0.1992	2.3976	28	0	M	
<b>1993 QA</b>	<b>18.0</b>	<b>930821</b>	<b>240.28</b>	<b>323.25</b>	<b>146.79</b>	<b>12.63</b>	<b>0.3160</b>	<b>1.4769</b>	<b>29</b>	<b>0</b>	<b>M</b>	
<b>1993 QP</b>	<b>18.5</b>	<b>930821</b>	<b>356.29</b>	<b>46.83</b>	<b>297.27</b>	<b>7.13</b>	<b>0.4589</b>	<b>2.2563</b>	<b>17</b>	<b>0</b>	<b>M</b>	
1993 QY	13.0	930801	326.42	236.36	156.37	28.45	0.3292	2.6081	7	0	W	
1993 QA <sub>3</sub>	14.5	930801	15.13	134.34	173.35	4.64	0.2764	3.1747	3	8	M	
1993 QB <sub>3</sub>	14.1	930821	319.60	250.87	146.74	20.91	0.3135	2.2834	12	6	N	
<b>1993 RA</b>	<b>18.5</b>	<b>930910</b>	<b>314.42</b>	<b>266.74</b>	<b>171.44</b>	<b>6.13</b>	<b>0.4451</b>	<b>2.0027</b>	<b>5</b>	<b>0</b>	<b>M</b>	
1993 RB	14.5	930910	38.56	341.11	335.51	7.25	0.0061	2.1940	2	9	E	W

**1993 RO** **8.0** **930910** **0.00** **179.31** **170.51** **2.53** **0.0000** **32.3231** **3** **8** **E** **M**  
**1993 RP** **8.5** **930910** **0.00** **180.57** **192.15** **2.79** **0.0000** **35.3745** **2** **6** **E** **M**

1989 AB<sub>3</sub> = 1989 CD<sub>1</sub> (S. Nakano)  
 1989 AA<sub>5</sub> = 1989 CM<sub>9</sub> (G. V. Williams)  
 1989 CW<sub>7</sub> = 1989 AS<sub>9</sub> (S. Nakano)  
 1989 TZ<sub>11</sub> = 1989 RW<sub>5</sub> = 1989 SQ<sub>14</sub> (S. Nakano)  
 1989 VS<sub>2</sub> = 1989 WX<sub>4</sub> = 1989 WP<sub>7</sub> = 1989 XJ<sub>3</sub> (S. Nakano)  
 1989 VZ<sub>5</sub> = 1989 UT<sub>8</sub> (S. Nakano)  
 1989 YX<sub>6</sub> = 1990 BC<sub>4</sub> (S. Nakano)  
 1990 DU<sub>4</sub> = 1990 GD<sub>1</sub> (S. Nakano)  
 1990 HD = 1990 KW<sub>2</sub> (S. Nakano)  
 1991 AE<sub>3</sub> = 1991 CV<sub>4</sub> (S. Nakano)  
 1991 EX<sub>2</sub> = 1991 CC<sub>6</sub> (S. Nakano)  
 1991 GV<sub>4</sub> = 1991 KN (S. Nakano)  
 1991 PL<sub>8</sub> = 1991 RZ<sub>38</sub> (S. Nakano)  
 1991 PJ<sub>13</sub> = 1991 RT<sub>34</sub> (S. Nakano)  
 1991 PZ<sub>14</sub> = 1991 RU<sub>6</sub> (S. Nakano)  
 1991 RW<sub>23</sub> = 1991 PB<sub>21</sub> (S. Nakano)  
 1991 RT<sub>26</sub> = 1991 TS<sub>12</sub> = 1991 VM<sub>14</sub> (S. Nakano)  
 1991 RA<sub>41</sub> = 1991 RN<sub>32</sub> (S. Nakano)  
 1991 RJ<sub>41</sub> = 1991 TM<sub>13</sub> (S. Nakano)  
 1991 TL<sub>13</sub> = 1991 SB<sub>5</sub> (S. Nakano)  
 1992 BT<sub>5</sub> = 1992 CC<sub>8</sub> = 1992 CP<sub>7</sub> (S. Nakano)  
 1992 BT<sub>5</sub> = 1992 CP<sub>7</sub> (G. V. Williams)  
 1992 EC = 1992 GH<sub>5</sub> (S. Nakano)  
 1992 GZ<sub>1</sub> = 1992 HV<sub>5</sub> (S. Nakano)  
 1992 HB<sub>4</sub> = 1992 JD<sub>4</sub> (S. Nakano)  
 1992 PM = 1992 OR<sub>3</sub> (S. Nakano)  
 1992 QA<sub>1</sub> = 1992 SM<sub>24</sub> (S. Nakano)  
 1992 RQ<sub>3</sub> = 1992 SO<sub>1</sub> (S. Nakano)  
 1992 RP<sub>7</sub> = 1992 SS<sub>22</sub> (S. Nakano)  
 1992 RS<sub>7</sub> = 1992 SA<sub>23</sub> (S. Nakano)  
 1992 SX<sub>16</sub> = 1992 SC<sub>18</sub> (S. Nakano)  
 1992 SK<sub>17</sub> = 1992 SF<sub>18</sub> (S. Nakano)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(83) Beatrix** Obs. 246 *M* 308.97136  $\omega$  166.76066  
*H* 8.66 *G* 0.15 Opp. 56 *n* 0.25998166  $\Omega$  27.87839  
 rms res. 0<sup>h</sup>.98 (M-C) 1865–1993 *e* 0.0827247 *i* 4.97475

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(88) Thisbe** Obs. 836 *M* 199.08787  $\omega$  34.90267  
*H* 7.04 *G* 0.14 Opp. 65 *n* 0.21411134  $\Omega$  277.02984  
 rms res. 0<sup>h</sup>.84 (M-C) 1866–1993 *e* 0.1635790 *i* 5.21949

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(91) Aegina** Obs. 386 *M* 104.92734  $\omega$  73.53949  
*H* 8.84 *G* 0.15 Opp. 66 *n* 0.23618353  $\Omega$  11.03251  
 rms res. 1<sup>h</sup>.00 (M-C) 1866–1993 *e* 0.1042497 *i* 2.11889

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(107) Camilla** Obs. 316 *M* 351.07664  $\omega$  296.83358  
*H* 7.08 *G* 0.08 Opp. 59 *n* 0.15176227  $\Omega$  174.14868  
 rms res. 0<sup>h</sup>.98 (M-C) 1868–1991 *e* 0.0837588 *i* 9.92630

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(112) Iphigenia** Obs. 62 *M* 149.24104  $\omega$  16.44580  
*H* 9.84 *G* 0.15 Opp. 30 *n* 0.25968115  $\Omega$  324.04000  
 rms res. 0''90 (M-C) 1870-1993 *e* 0.1294272 *i* 2.61113

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(137) Meliboea** Obs. 313 *M* 154.44840  $\omega$  107.78688  
*H* 8.05 *G* 0.15 Opp. 46 *n* 0.17970880  $\Omega$  202.57418  
 rms res. 0''97 (M-C) 1874-1991 *e* 0.2233470 *i* 13.43695

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(155) Scylla** Obs. 47 *M* 225.57062  $\omega$  45.96871  
*H* 11.39 *G* 0.15 Opp. 12 *n* 0.21544589  $\Omega$  41.24554  
 rms res. 0''93 (M-C) 1875-1992 *e* 0.2765125 *i* 11.39446

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(158) Koronis** Obs. 193 *M* 109.42088  $\omega$  143.65240  
*H* 9.27 *G* 0.15 Opp. 45 *n* 0.20266124  $\Omega$  279.08857  
 rms res. 0''96 (M-C) 1876-1993 *e* 0.0515647 *i* 1.00052

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(160) Una** Obs. 266 *M* 109.21518  $\omega$  50.37404  
*H* 9.08 *G* 0.15 Opp. 44 *n* 0.21863200  $\Omega$  9.09486  
 rms res. 0''87 (M-C) 1876-1993 *e* 0.0644087 *i* 3.83336

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(191) Kolga** Obs. 163 *M* 87.94873  $\omega$  225.09295  
*H* 9.07 *G* 0.15 Opp. 41 *n* 0.20014367  $\Omega$  159.76774  
 rms res. 0''94 (M-C) 1878-1991 *e* 0.0889229 *i* 11.50285

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(197) Arete** Obs. 282 *M* 354.88549  $\omega$  246.52045  
*H* 9.18 *G* 0.15 Opp. 53 *n* 0.21733590  $\Omega$  81.88533  
 rms res. 0''93 (M-V) 1879-1992 *e* 0.1625210 *i* 8.78891

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(209) Dido** Obs. 239 *M* 260.66907  $\omega$  255.46048  
*H* 8.24 *G* 0.15 Opp. 52 *n* 0.17687888  $\Omega$  1.02691  
 rms res. 0''95 (M-C) 1879-1993 *e* 0.0674582 *i* 7.19450

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(243) Ida** Obs. 428 *M* 126.01329  $\omega$  112.99365  
*H* 9.94 *G* 0.15 Opp. 42 *n* 0.20335843  $\Omega$  324.60838  
 rms res. 0''68 (M-C) 1884-1993 *e* 0.0429982 *i* 1.13730

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(251) Sophia** Obs. 81 *M* 214.16248  $\omega$  289.65741  
*H* 10.0 *G* 0.15 Opp. 24 *n* 0.18141238  $\Omega$  156.50178  
 rms res. 1''07 (M-C) 1885-1991 *e* 0.1070963 *i* 10.52843

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(264) Libussa** Obs. 140 *M* 286.90338  $\omega$  340.24604  
*H* 8.42 *G* 0.15 Opp. 43 *n* 0.21068186  $\Omega$  49.90122  
 rms res. 1''05 (M-C) 1886-1992 *e* 0.1370119 *i* 10.43120

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(270) Anahita** Obs. 388 *M* 199.72767  $\omega$  79.81078  
*H* 8.75 *G* 0.15 Opp. 55 *n* 0.30235410  $\Omega$  254.79966  
 rms res. 1''00 (M-C) 1887-1993 *e* 0.1505830 *i* 2.36472

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(382) Dodona** Obs. 136 *M* 299.30099  $\omega$  272.22545  
*H* 8.77 *G* 0.15 Opp. 37 *n* 0.17935320  $\Omega$  313.79827  
 rms res. 0''94 (M-C) 1894-1993 *e* 0.1789466 *i* 7.41033

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(404) Arsinoë** Obs. 109 *M* 218.21740  $\omega$  121.47663  
*H* 9.01 *G* 0.15 Opp. 29 *n* 0.23602507  $\Omega$  92.73554  
 rms res. 0''96 (M-C) 1895-1986 *e* 0.2001835 *i* 14.12141

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(407) Arachne** Obs. 165 *M* 9.07898  $\omega$  81.03178  
*H* 8.88 *G* 0.15 Opp. 38 *n* 0.23180121  $\Omega$  294.96863  
 rms res. 0''96 (M-C) 1895-1991 *e* 0.0713037 *i* 7.54174

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(412) Elisabetha** Obs. 188 *M* 356.43597  $\omega$  93.66593  
*H* 9.0 *G* 0.15 Opp. 39 *n* 0.21450235  $\Omega$  106.73588  
 rms res. 0''86 (M-C) 1896-1993 *e* 0.0447909 *i* 13.75540

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(431) Nephele** Obs. 186 *M* 183.45555  $\omega$  212.42578  
*H* 8.72 *G* 0.15 Opp. 48 *n* 0.17830264  $\Omega$  117.54343  
 rms res. 0''96 (M-C) 1897-1993 *e* 0.1833449 *i* 1.82687

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(444) Gyptis** Obs. 509 *M* 17.08638  $\omega$  154.57959  
*H* 7.83 *G* 0.22 Opp. 60 *n* 0.21378807  $\Omega$  195.99795  
 rms res. 1''07 (M-C) 1899-1992 *e* 0.1763040 *i* 10.26507

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(449) Hamburga** Obs. 169 *M* 263.56171  $\omega$  45.95641  
*H* 9.47 *G* 0.15 Opp. 38 *n* 0.24138788  $\Omega$  86.10686  
 rms res. 0''97 (M-C) 1899-1992 *e* 0.1685458 *i* 3.09271

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(477) Italia** Obs. 104 *M* 178.81630  $\omega$  322.12598  
*H* 10.25 *G* 0.15 Opp. 31 *n* 0.26268182  $\Omega$  10.83575  
 rms res. 1''01 (M-C) 1901-1993 *e* 0.1902053 *i* 5.30020

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(511) Davida** Obs. 930 *M* 128.40103  $\omega$  339.18944  
*H* 6.22 *G* 0.16 Opp. 70 *n* 0.17437432  $\Omega$  107.83386  
 rms res. 0''86 (M-C) 1903-1993 *e* 0.1804257 *i* 15.92665

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Goffin  
**(521) Brixia** Obs. 181 *M* 285.44872  $\omega$  315.35301  
*H* 8.31 *G* -0.06 Opp. 40 *n* 0.21719447  $\Omega$  90.12072  
 rms res. 0''96 (M-C) 1904-1992 *e* 0.2805691 *i* 10.56829

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(532) Herculina** Obs. 2069 *M* 138.55462  $\omega$  74.82407  
*H* 5.81 *G* 0.26 Opp. 65 *n* 0.21342630  $\Omega$  108.05529  
 rms res. 0".73 (M-V) 1904–1992 *e* 0.1754653 *i* 16.34441

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(559) Nanon** Obs. 136 *M* 232.99067  $\omega$  130.81880  
*H* 9.36 *G* 0.15 Opp. 32 *n* 0.22086376  $\Omega$  112.32022  
 rms res. 0".91 (M-C) 1905–1991 *e* 0.0676005 *i* 9.30642

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(571) Dulcinea** Obs. 86 *M* 153.26032  $\omega$  26.95924  
*H* 11.59 *G* 0.15 Opp. 16 *n* 0.26307253  $\Omega$  3.40588  
 rms res. 0".89 (M-C) 1905–1993 *e* 0.2404434 *i* 5.23987

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(584) Semiramis** Obs. 159 *M* 62.96197  $\omega$  84.43576  
*H* 8.71 *G* 0.24 Opp. 40 *n* 0.26962006  $\Omega$  282.55596  
 rms res. 0".95 (M-C) 1906–1992 *e* 0.2351720 *i* 10.71184

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(626) Notburga** Obs. 93 *M* 73.08597  $\omega$  43.33610  
*H* 9.00 *G* 0.15 Opp. 32 *n* 0.23870834  $\Omega$  341.99857  
 rms res. 1".02 (M-C) 1907–1992 *e* 0.2433291 *i* 25.36144

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(679) Pax** Obs. 103 *M* 203.16973  $\omega$  266.14484  
*H* 9.02 *G* 0.15 Opp. 28 *n* 0.23671498  $\Omega$  112.66914  
 rms res. 0".98 (M-C) 1909–1992 *e* 0.3114070 *i* 24.35435

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(712) Boliviana** Obs. 150 *M* 16.29538  $\omega$  180.58304  
*H* 8.32 *G* 0.03 Opp. 35 *n* 0.23868041  $\Omega$  231.21126  
 rms res. 0".96 (M-C) 1911–1992 *e* 0.1891696 *i* 12.80266

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(762) Pulcova** Obs. 104 *M* 321.57076  $\omega$  182.72352  
*H* 8.28 *G* 0.15 Opp. 31 *n* 0.17508529  $\Omega$  306.28510  
 rms res. 0".92 (M-C) 1913–1991 *e* 0.0915666 *i* 13.01671

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(820) Adriana** Obs. 78 *M* 241.06149  $\omega$  181.21827  
*H* 10.3 *G* 0.15 Opp. 24 *n* 0.17808041  $\Omega$  118.96178  
 rms res. 1".01 (M-C) 1916–1993 *e* 0.0596800 *i* 5.94371

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(829) Academia** Obs. 61 *M* 155.82535  $\omega$  40.80056  
*H* 10.7 *G* 0.15 Opp. 20 *n* 0.23756969  $\Omega$  352.89995  
 rms res. 0".97 (M-C) 1914–1993 *e* 0.0981142 *i* 8.30991

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(855) Newcombia** Obs. 45 *M* 71.12145  $\omega$  232.94511  
*H* 11.80 *G* 0.15 Opp. 17 *n* 0.27164739  $\Omega$  17.51642  
 rms res. 1".07 (M-C) 1916–1992 *e* 0.1799661 *i* 10.91076

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(884) Priamus** Obs. 96 *M* 223.84908  $\omega$  332.27057  
*H* 8.81 *G* 0.15 Opp. 28 *n* 0.08421423  $\Omega$  301.73383  
 rms res. 0".90 (M-C) 1917–1992 *e* 0.1209126 *i* 8.92162

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(910) Anneliese** Obs. 89 *M* 212.45492  $\omega$  205.90727  
*H* 10.3 *G* 0.15 Opp. 26 *n* 0.19739169  $\Omega$  50.39814  
 rms res. 0".92 (M-C) 1919–1992 *e* 0.1574991 *i* 9.26218

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(959) Arne** Obs. 78 *M* 191.06443  $\omega$  332.01769  
*H* 10.2 *G* 0.15 Opp. 19 *n* 0.17208874  $\Omega$  59.27720  
 rms res. 0".88 (M-C) 1916–1993 *e* 0.2038766 *i* 4.48628

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1063) Aquilegia** Obs. 65 *M* 300.19904  $\omega$  107.00561  
*H* 11.38 *G* 0.15 Opp. 24 *n* 0.28002710  $\Omega$  95.55892  
 rms res. 1".06 (M-C) 1906–1992 *e* 0.0394569 *i* 5.97570

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1143) Odysseus** Obs. 190 *M* 167.11286  $\omega$  235.35223  
*H* 7.93 *G* 0.15 Opp. 33 *n* 0.08187434  $\Omega$  221.37069  
 rms res. 0".86 (M-C) 1930–1992 *e* 0.0918022 *i* 3.13259

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1364) Safara** Obs. 66 *M* 146.64985  $\omega$  222.78528  
*H* 10.6 *G* 0.15 Opp. 24 *n* 0.18868127  $\Omega$  64.42607  
 rms res. 0".99 (M-C) 1932–1992 *e* 0.0735989 *i* 11.50256

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1487) Boda** Obs. 90 *M* 182.58614  $\omega$  102.47175  
*H* 10.6 *G* 0.15 Opp. 21 *n* 0.17611863  $\Omega$  97.69821  
 rms res. 0".96 (M-C) 1929–1992 *e* 0.1045308 *i* 2.47136

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1645) Waterfield** Obs. 92 *M* 37.77009  $\omega$  102.21158  
*H* 10.7 *G* 0.15 Opp. 16 *n* 0.18448735  $\Omega$  267.11851  
 rms res. 0".69 (M-C) 1933–1990 *e* 0.1199877 *i* 1.01977

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1767) Lampland** Obs. 64 *M* 343.23937  $\omega$  139.56259  
*H* 12.20 *G* 0.15 Opp. 9 *n* 0.18777707  $\Omega$  192.50593  
 rms res. 0".92 (M-C) 1951–1991 *e* 0.0971546 *i* 9.83348

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1866) Sisyphus** Obs. 149 *M* 357.21625  $\omega$  293.00995  
*H* 13.0 *G* 0.15 Opp. 14 *n* 0.37829684  $\Omega$  63.70378  
 rms res. 0".89 (M-C) 1964–1992 *e* 0.5393247 *i* 41.16523

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1867) Deiphobus** Obs. 57 *M* 205.84246  $\omega$  357.27258  
*H* 8.61 *G* 0.15 Opp. 13 *n* 0.08425779  $\Omega$  283.67801  
 rms res. 0".81 (M-C) 1971–1993 *e* 0.0435485 *i* 26.88072



Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1917) Cuyo** Obs. 81 *M* 71.62542  $\omega$  194.14882  
*H* 13.9 *G* 0.15 Opp. 10 *n* 0.31277680  $\Omega$  188.51844  
 rms res. 0".85 (M-C) 1954-1992 *e* 0.5052111 *i* 23.98469

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1921) Pala** Obs. 25 *M* 142.39646  $\omega$  18.41802  
*H* 14.3 *G* 0.15 Opp. 5 *n* 0.16816571  $\Omega$  353.27337  
 rms res. 0".83 (M-C) 1973-1987 *e* 0.4068146 *i* 19.57912

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1943) Anteros** Obs. 99 *M* 301.56853  $\omega$  338.13609  
*H* 15.75 *G* 0.15 Opp. 8 *n* 0.57621612  $\Omega$  246.48069  
 rms res. 0".83 (M-C) 1973-1992 *e* 0.2559949 *i* 8.70241

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(1981) Midas** Obs. 32 *M* 192.01646  $\omega$  267.67821  
*H* 15.0 *G* 0.15 Opp. 7 *n* 0.41642246  $\Omega$  357.18475  
 rms res. 0".94 (M-C) 1973-1992 *e* 0.6499408 *i* 39.84433

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2006) Polonskaya** Obs. 23 *M* 206.90093  $\omega$  24.32941  
*H* 12.6 *G* 0.15 Opp. 7 *n* 0.27800029  $\Omega$  1.22769  
 rms res. 0".79 (M-C) 1955-1993 *e* 0.1926230 *i* 4.91902

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2207) Antenor** Obs. 144 *M* 34.30682  $\omega$  299.25895  
*H* 8.89 *G* 0.15 Opp. 12 *n* 0.08483051  $\Omega$  159.21852  
 rms res. 0".85 (M-C) 1959-1990 *e* 0.0173379 *i* 6.80671

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2213) Meeus** Obs. 31 *M* 284.67106  $\omega$  221.90440  
*H* 13.7 *G* 0.15 Opp. 8 *n* 0.30242319  $\Omega$  127.09291  
 rms res. 1".05 (M-C) 1935-1992 *e* 0.2264089 *i* 5.33012

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2314) Field** Obs. 32 *M* 61.45663  $\omega$  179.02647  
*H* 12.8 *G* 0.15 Opp. 7 *n* 0.28997744  $\Omega$  34.24192  
 rms res. 0".96 (M-C) 1953-1990 *e* 0.0245480 *i* 5.73302

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2424) Tautenburg** Obs. 39 *M* 97.13522  $\omega$  91.94697  
*H* 12.9 *G* 0.15 Opp. 10 *n* 0.27364809  $\Omega$  30.51386  
 rms res. 0".85 (M-C) 1924-1993 *e* 0.1354007 *i* 8.91019

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2490) Bussolini** Obs. 35 *M* 112.94195  $\omega$  209.90607  
*H* 11.9 *G* 0.15 Opp. 11 *n* 0.23353585  $\Omega$  212.82628  
 rms res. 0".81 (M-C) 1949-1991 *e* 0.1305031 *i* 12.98023

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2552) Remek** Obs. 28 *M* 284.47199  $\omega$  343.33200  
*H* 14.6 *G* 0.15 Opp. 4 *n* 0.31329897  $\Omega$  343.79707  
 rms res. 0".84 (M-C) 1950-1981 *e* 0.1879271 *i* 0.90470

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2633) Bishop** Obs. 37 *M* 282.81030  $\omega$  266.14688  
*H* 13.1 *G* 0.15 Opp. 12 *n* 0.29698080  $\Omega$  62.58331  
 rms res. 0".89 (M-C) 1951-1993 *e* 0.1384049 *i* 3.13036

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2733) Hamina** Obs. 29 *M* 186.75688  $\omega$  352.45577  
*H* 13.2 *G* 0.15 Opp. 5 *n* 0.27411814  $\Omega$  121.69953  
 rms res. 1".07 (M-C) 1938-1993 *e* 0.1362420 *i* 10.39684

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2740) Tsoj** Obs. 32 *M* 314.84782  $\omega$  92.37623  
*H* 11.7 *G* 0.15 Opp. 8 *n* 0.18941804  $\Omega$  198.41507  
 rms res. 0".84 (M-C) 1953-1990 *e* 0.0634591 *i* 9.36643

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2797) Teucer** Obs. 31 *M* 127.40831  $\omega$  46.54436  
*H* 8.4 *G* 0.15 Opp. 7 *n* 0.08460101  $\Omega$  70.04654  
 rms res. 0".95 (M-C) 1975-1993 *e* 0.0895595 *i* 22.35135

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(2986) Mrinalini** Obs. 33 *M* 283.18173  $\omega$  303.61659  
*H* 11.9 *G* 0.15 Opp. 8 *n* 0.17372673  $\Omega$  51.79511  
 rms res. 0".93 (M-C) 1960-1993 *e* 0.1464068 *i* 2.55047

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3008) Nojiri** Obs. 64 *M* 225.55880  $\omega$  302.32618  
*H* 12.0 *G* 0.15 Opp. 6 *n* 0.17515904  $\Omega$  168.89519  
 rms res. 0".89 (M-C) 1938-1993 *e* 0.1439353 *i* 0.79498

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3157) Novikov** Obs. 26 *M* 210.63575  $\omega$  315.57336  
*H* 11.5 *G* 0.15 Opp. 8 *n* 0.17512809  $\Omega$  42.66592  
 rms res. 0".84 (M-C) 1951-1990 *e* 0.1350379 *i* 7.57413

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3200) Phaethon** Obs. 97 *M* 330.61616  $\omega$  321.80168  
*H* 14.60 *G* 0.15 Opp. 6 *n* 0.68762041  $\Omega$  265.60457  
 rms res. 0".87 (M-C) 1983-1992 *e* 0.8901486 *i* 22.09584

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3362) Khufu** Obs. 55 *M* 104.71941  $\omega$  54.85333  
*H* 18.10 *G* 0.15 Opp. 5 *n* 1.00141828  $\Omega$  152.67031  
 rms res. 0".83 (M-C) 1984-1992 *e* 0.4686284 *i* 9.91418

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3434) Hurless** Obs. 26 *M* 297.73894  $\omega$  261.93856  
*H* 13.1 *G* 0.15 Opp. 6 *n* 0.23002815  $\Omega$  88.42170  
 rms res. 0".80 (M-C) 1951-1993 *e* 0.2314907 *i* 3.44686

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(3547) 1978 TM<sub>6</sub>** Obs. 30 *M* 234.94792  $\omega$  160.39802  
*H* 13.3 *G* 0.15 Opp. 9 *n* 0.25288083  $\Omega$  274.94004  
 rms res. 0".87 (M-C) 1951-1990 *e* 0.0528083 *i* 3.91849

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(3554) Amun** Obs. 83 *M* 52.98315  $\omega$  359.33511  
*H* 15.82 *G* 0.15 Opp. 4 *n* 1.02575544  $\Omega$  358.71709  
 rms res. 0''90 (M-N) 1986–1989 *e* 0.2805294 *i* 23.36422

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(3647) Dermott** Obs. 20 *M* 345.33015  $\omega$  219.15301  
*H* 11.5 *G* 0.15 Opp. 8 *n* 0.21034179  $\Omega$  126.47992  
 rms res. 1''01 (M-C) 1951–1989 *e* 0.1018387 *i* 8.04204

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(3871) Reiz** Obs. 19 *M* 52.56763  $\omega$  208.44240  
*H* 12.3 *G* 0.15 Opp. 7 *n* 0.17239531  $\Omega$  274.20224  
 rms res. 0''86 (M-C) 1958–1992 *e* 0.0827961 *i* 15.58586

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(3966) Cherednichenko** Obs. 30 *M* 241.88753  $\omega$  58.64597  
*H* 12.1 *G* 0.15 Opp. 6 *n* 0.16969990  $\Omega$  32.75060  
 rms res. 0''85 (M-C) 1953–1991 *e* 0.0262699 *i* 3.55893

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4061) Martelli** Obs. 22 *M* 299.59620  $\omega$  243.75195  
*H* 11.8 *G* 0.15 Opp. 9 *n* 0.17949354  $\Omega$  24.44808  
 rms res. 0''75 (M-C) 1951–1990 *e* 0.1433523 *i* 1.68623

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(4109) 1969 OW** Obs. 19 *M* 24.81530  $\omega$  116.62332  
*H* 13.4 *G* 0.15 Opp. 6 *n* 0.28913731  $\Omega$  176.88950  
 rms res. 1''05 (M-C) 1949–1993 *e* 0.1592478 *i* 1.51189

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4175) Billbaum** Obs. 32 *M* 24.57211  $\omega$  315.97661  
*H* 12.4 *G* 0.15 Opp. 6 *n* 0.22376665  $\Omega$  163.87577  
 rms res. 0''88 (M-C) 1951–1991 *e* 0.1821527 *i* 13.56546

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4218) Demottoni** Obs. 26 *M* 134.47702  $\omega$  36.50171  
*H* 14.3 *G* 0.15 Opp. 5 *n* 0.29252923  $\Omega$  209.83421  
 rms res. 0''59 (M-C) 1949–1989 *e* 0.1443103 *i* 4.89937

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(4310) Strömholm** Obs. 22 *M* 58.07516  $\omega$  350.91605  
*H* 13.6 *G* 0.15 Opp. 7 *n* 0.31024782  $\Omega$  178.67837  
 rms res. 1''04 (M-C) 1969–1993 *e* 0.0552424 *i* 3.51303

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4323) 1981 QN** Obs. 32 *M* 178.33178  $\omega$  101.87736  
*H* 13.6 *G* 0.15 Opp. 7 *n* 0.29267709  $\Omega$  260.23446  
 rms res. 0''92 (M-C) 1951–1991 *e* 0.2027878 *i* 4.41438

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4345) Rachmaninoff** Obs. 44 *M* 36.11569  $\omega$  349.78360  
*H* 12.4 *G* 0.15 Opp. 5 *n* 0.19920289  $\Omega$  136.74293  
 rms res. 0''94 (M-C) 1951–1991 *e* 0.0365360 *i* 2.85478

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4379) 1988 PT<sub>1</sub>** Obs. 23 *M* 271.02719  $\omega$  175.47869  
*H* 11.8 *G* 0.15 Opp. 6 *n* 0.17511625  $\Omega$  211.47431  
 rms res. 0''81 (M-C) 1949–1992 *e* 0.1175368 *i* 21.67188

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(4423) 1949 GH** Obs. 17 *M* 313.75630  $\omega$  105.12822  
*H* 11.2 *G* 0.15 Opp. 5 *n* 0.15833633  $\Omega$  193.92382  
 rms res. 1''07 (M-C) 1949–1993 *e* 0.1004457 *i* 19.28096

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams  
**(4563) Kahnia** Obs. 25 *M* 277.46134  $\omega$  228.75892  
*H* 13.4 *G* 0.15 Opp. 4 *n* 0.29139249  $\Omega$  132.12545  
 rms res. 0''96 (M-C) 1980–1993 *e* 0.1621018 *i* 4.76209

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4638) 1989 EG** Obs. 51 *M* 117.07607  $\omega$  259.46195  
*H* 13.5 *G* 0.15 Opp. 9 *n* 0.30345048  $\Omega$  277.52928  
 rms res. 0''86 (M-C) 1955–1993 *e* 0.0900057 *i* 3.50779

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4696) Arpigny** Obs. 20 *M* 285.97620  $\omega$  130.89829  
*H* 12.5 *G* 0.15 Opp. 5 *n* 0.20413987  $\Omega$  178.96757  
 rms res. 0''85 (M-C) 1951–1993 *e* 0.0542356 *i* 1.88781

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4733) ORO** Obs. 29 *M* 189.33769  $\omega$  157.78683  
*H* 13.8 *G* 0.15 Opp. 5 *n* 0.30503970  $\Omega$  43.21373  
 rms res. 0''74 (M-C) 1951–1991 *e* 0.0735253 *i* 4.72293

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4750) Mukai** Obs. 24 *M* 317.91419  $\omega$  139.46692  
*H* 13.7 *G* 0.15 Opp. 7 *n* 0.30531490  $\Omega$  295.23861  
 rms res. 0''85 (M-C) 1951–1991 *e* 0.0901519 *i* 4.90179

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4805) Asteropaïos** Obs. 21 *M* 124.01084  $\omega$  89.54279  
*H* 10.1 *G* 0.15 Opp. 5 *n* 0.08177793  $\Omega$  278.38901  
 rms res. 0''89 (M-C) 1953–1991 *e* 0.0894003 *i* 11.98654

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4929) Yamatai** Obs. 41 *M* 289.61160  $\omega$  89.20411  
*H* 13.4 *G* 0.15 Opp. 7 *n* 0.29993477  $\Omega$  127.63101  
 rms res. 0''64 (M-C) 1949–1993 *e* 0.0585404 *i* 2.48522

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(4946) 1988 BW<sub>1</sub>** Obs. 31 *M* 16.94606  $\omega$  202.45369  
*H* 9.9 *G* 0.15 Opp. 5 *n* 0.08115513  $\Omega$  59.05855  
 rms res. 0''98 (M-C) 1950–1992 *e* 0.0495687 *i* 21.88909

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell  
**(5084) 1977 FN<sub>1</sub>** Obs. 19 *M* 4.00650  $\omega$  120.94699  
*H* 11.8 *G* 0.15 Opp. 5 *n* 0.17610647  $\Omega$  42.19007  
 rms res. 0''76 (M-C) 1951–1991 *e* 0.0976206 *i* 7.43182

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5124) 1989 CW** Obs. 45 *M* 20.68807  $\omega$  280.90263  
*H* 13.7 *G* 0.15 Opp. 5 *n* 0.28932661  $\Omega$  323.47190  
 rms res. 0".90 (M-C) 1982-1993 *e* 0.0794515 *i* 0.88047

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5248) 1983 GQ** Obs. 44 *M* 347.50683  $\omega$  213.10535  
*H* 13.8 *G* 0.15 Opp. 5 *n* 0.29797817  $\Omega$  71.94823  
 rms res. 1".06 (M-C) 1983-1993 *e* 0.1713236 *i* 0.35453

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5285) 1989 EO<sub>11</sub>** Obs. 34 *M* 231.24932  $\omega$  257.00071  
*H* 9.9 *G* 0.15 Opp. 5 *n* 0.08536004  $\Omega$  144.30799  
 rms res. 0".95 (M-C) 1956-1992 *e* 0.0495174 *i* 25.24764

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5422) Hodgkin** Obs. 17 *M* 59.09173  $\omega$  7.28716  
*H* 12.3 *G* 0.15 Opp. 6 *n* 0.19244810  $\Omega$  33.52455  
 rms res. 0".65 (M-C) 1951-1992 *e* 0.2390385 *i* 6.64004

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5427) 1986 JQ** Obs. 42 *M* 199.95623  $\omega$  73.22139  
*H* 13.2 *G* 0.15 Opp. 5 *n* 0.36716590  $\Omega$  219.99522  
 rms res. 0".88 (M-C) 1949-1992 *e* 0.0744958 *i* 20.39288

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
**(5580) 1988 RP<sub>1</sub>** Obs. 36 *M* 116.37964  $\omega$  34.68244  
*H* 13.1 *G* 0.15 Opp. 5 *n* 0.29093343  $\Omega$  17.49373  
 rms res. 0".92 (M-C) 1951-1993 *e* 0.1526251 *i* 5.78967

**(5656)\* A920 TA = 1978 WW<sub>18</sub> = 1981 JZ<sub>5</sub>**  
 Discovered 1920 Oct. 8 by W. Baade at Hamburg-Bergedorf.  
 Id. G. V. Williams (*MPC* 19853)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
*M* 348.49355 (2000.0) *P* *Q*  
*n* 0.25540393  $\omega$  82.21963 +0.87733252 +0.47535944  
*a* 2.4602789  $\Omega$  249.37724 -0.46331100 +0.80336380  
*e* 0.2606377 *i* 4.02751 -0.12502227 +0.35866420  
*P* 3.86 *H* 13.2 *G* 0.15

Residuals in seconds of arc  
 201008 029 (1.8+ 3.2+) 810509 675 0.6- 1.1+ 930718 801 0.1+ 0.0  
 201010 029 0.0 1.5- 920401 801 2.4+ 1.1- 930810 596 0.5- 0.2+  
 201017 029 0.7+ 2.5+ 920401 801 0.7- 2.3- 930810 596 (1.4- 3.2-)  
 201017 029 (3.2- 0.8-) 930715 104 0.1- 0.8- 930810 596 0.8+ 0.6+  
 201020 029 0.6- 0.0 930715 104 0.0 0.7- 930814 801 0.3+ 0.1-  
 781130 675 0.5- 0.6- 930717 801 0.2+ 0.2- 930814 801 0.3+ 0.0  
 781201 675 0.6- 0.9- 930717 801 0.1+ 0.2- 930820 801 0.4+ 0.1-  
 810508 675 2.0- 1.1+ 930718 801 0.0 0.3-

**(5657)\* 1936 QE<sub>1</sub> = 1986 RU<sub>1</sub>**  
 Discovered 1936 Aug. 28 by K. Reinmuth at Heidelberg.  
 Id. H. Kaneda (*MPC* 16574)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
*M* 219.98513 (2000.0) *P* *Q*  
*n* 0.23679137  $\omega$  203.41768 +0.98089151 -0.18656693  
*a* 2.5875701  $\Omega$  166.96818 +0.19328488 +0.96683305  
*e* 0.1664639 *i* 14.16417 -0.02219937 +0.17443229  
*P* 4.16 *H* 12.8 *G* 0.15

Residuals in seconds of arc  
 360828 024 (5.2- 9.2-) 900718 801 0.5- 0.1- 920106 801 0.2+ 0.3-  
 360911 024 (4.2- 5.9-) 900720 801 0.1- 0.0 920106 801 0.0 0.4-  
 360917 024 0.4- 3.7+ 900720 801 0.3+ 0.4- 930327 801 0.2- 0.3-  
 860905 046 0.3+ 1.8- 900817 801 0.2+ 0.2- 930327 801 0.0 0.9-  
 860906 046 0.4+ 1.1- 900817 801 0.1+ 0.1- 930419 801 0.4- 0.4-  
 860907 095 0.0 1.1- 900819 801 0.3+ 0.2- 930419 801 0.2+ 0.2+  
 860912 095 (3.7+ 4.6-) 900819 801 0.2+ 0.4-  
 900718 801 0.5- 0.1- 920101 801 0.1- 0.6-

**(5658)\* 1950 DO = 1980 VE<sub>4</sub>**

Discovered 1950 Feb. 17 by K. Reinmuth at Heidelberg.

Id. E. Bowell (*MPC* 18103)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
*M* 290.51928 (2000.0) *P* *Q*  
*n* 0.21557036  $\omega$  108.52505 +0.82236290 -0.56701753  
*a* 2.7547150  $\Omega$  286.04289 +0.50182506 +0.76178324  
*e* 0.0566086 *i* 2.80402 +0.26812473 +0.31333276  
*P* 4.57 *H* 12.6 *G* 0.15

Residuals in seconds of arc  
 500217 024 1.3- 2.0- 910122 675 0.0 0.2+ 930718 801 0.9+ 0.1+  
 500223 024 1.5- 0.6- 910122 675 1.0- 0.2+ 930722 801 0.7+ 0.0  
 500307 024 1.3+ 1.1- 910123 399 0.5+ 0.3- 930722 801 0.4+ 0.2-  
 500315 024 (0.1+ 3.8-) 910123 399 1.5- 0.0 930814 801 0.9+ 0.3-  
 500322 024 (0.2- 3.9-) 910123 399 1.0- 2.1- 930816 691 1.1- 0.3-  
 801101 675 0.5+ 0.2+ 920405 675 (3.2+ 1.8-) 930816 691 0.9- 0.2-  
 801102 675 0.4- 0.2- 920407 675 0.4+ 1.2- 930816 691 0.8- 0.5-  
 891124 675 0.4+ 1.2- 920407 675 0.4+ 1.5+ 930822 801 0.4+ 0.7-  
 891124 675 (0.3+ 3.1-) 920408 675 0.0 0.4- 930822 801 0.0 1.2-  
 910114 399 1.0+ 1.3+ 920408 675 0.9- 0.2-  
 910114 399 1.9+ 0.4+ 930718 801 1.2+ 0.2-

**(5659)\* 1968 OA<sub>1</sub> = 1988 CE<sub>5</sub>**

Discovered 1968 July 18 by C. Torres and S. Cofre at Cerro El Roble.

Id. C. M. Bardwell (*MPC* 13038)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5  
*M* 312.24413 (2000.0) *P* *Q*  
*n* 0.27708888  $\omega$  168.87901 +0.93857712 -0.34018786  
*a* 2.3301828  $\Omega$  211.20306 +0.30741261 +0.90046119  
*e* 0.1251383 *i* 6.40987 +0.15674970 +0.27100158  
*P* 3.56 *H* 14.6 *G* 0.15

Residuals in seconds of arc  
 680718 805 0.5+ 1.1- 880216 809 0.6+ 0.3+ 910116 801 0.4- 0.8+  
 680725 805 0.5+ 1.0- 880221 809 0.6+ 0.2+ 910116 801 0.1+ 0.9+  
 680728 805 0.3+ 0.1- 880221 809 0.3+ 1.4+ 930616 691 1.8- 0.2+  
 680730 805 0.1- 1.8+ 880221 809 0.5+ 1.0+ 930616 691 1.2- 0.2+  
 680823 805 1.4- 0.9+ 880223 809 1.5- 0.4+ 930616 691 1.2- 0.5+

880213	809	0.6+	0.8+	880223	809	1.4-	0.7+	930820	801	0.3+	0.9+
880215	809	1.9+	0.1-	880223	809	0.4-	0.1-	930820	801	0.9+	1.1+
880216	809	0.1+	0.3-	901220	801	0.5+	0.9+	930822	801	0.4+	0.8+
880216	809	0.5+	0.0	901220	801	1.0-	1.3-	930822	801	0.2+	0.7+

**(5660)\* 1974 MA = 1993 OL**

Discovered 1974 June 26 by C. T. Kowal at Palomar.

Id. R. Sinnott (*IAUC* 5858)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	329.18836		(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.41291443	$\omega$	126.63389	+0.21095747	-0.82932636
<i>a</i>	1.7860598	$\Omega$	302.65824	+0.57815001	+0.53267169
<i>e</i>	0.7627421	<i>i</i>	37.92089	+0.78818749	-0.16875623
<i>P</i>	2.39	<i>H</i>	15.5	<i>G</i>	0.15

Residuals in seconds of arc

740626	675	0.2-	0.3+	930728	474	1.1-	0.4+	930822	801	0.4-	0.5-
740626	675	1.1-	0.6-	930728	474	0.8+	0.9+	930823	786	0.1-	0.5-
740627	675	2.6-	1.0-	930728	596	0.3-	0.7+	930823	786	0.1-	0.5-
740628	675	1.3+	2.2+	930728	596	1.4+	0.1+	930823	675	0.6+	0.1-
740717	675	0.2-	1.2+	930728	596	0.2+	0.5-	930823	675	2.0+	1.6+
740723	675	0.7+	1.7-	930728	596	0.3+	0.3-	930824	786	0.8-	0.1-
930723	675	0.4+	0.5+	930814	675	0.1-	0.4-	930824	786	0.8+	1.4-
930723	675	0.0	0.5+	930814	675	0.9+	2.0+	930824	786	0.1+	0.3+
930724	675	1.2+	0.9+	930815	801	0.3+	0.7+	930828	587	0.2+	0.6+
930724	675	1.7+	0.7-	930815	801	0.3+	1.0+	930828	587	0.8+	0.7-
930724	675	0.4-	0.4-	930815	675	0.7+	0.5-	930828	587	0.7-	0.1-
930725	675	1.3+	1.0-	930816	801	0.6-	1.0+	930828	587	0.1-	0.8-
930725	675	0.5-	1.4-	930816	801	0.7-	1.0+	930831	786	0.0	1.0+
930726	675	0.5+	0.2-	930816	675	1.6-	0.6+	930831	786	0.5+	0.6+
930726	675	0.8-	0.3-	930817	675	1.7-	1.1+	930901	587	0.0	0.5+
930727	675	1.0+	0.4-	930818	675	0.6+	1.7-	930901	587	1.5+	1.2-
930727	675	1.4-	0.3-	930819	801	0.1-	0.8-	930904	587	0.1+	0.7+
930728	474	1.6-	0.3-	930819	801	0.1-	0.4+	930904	587	0.3+	0.8+
930728	474	0.9-	0.2-	930822	801	0.3-	0.6-	930904	587	0.5-	0.5+

**(5661)\* 1977 PO<sub>1</sub> = 1986 XN<sub>3</sub> = 1990 EW**

Discovered 1977 Aug. 14 by N. S. Chernykh at the Crimean Astrophysical

Observatory.

Id. C. M. Bardwell (*MPC* 16421), S. Nakano (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bardwell

<i>M</i>	22.13124		(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.12534913	$\omega$	2.56274	+0.76599734	+0.62374080
<i>a</i>	3.9541684	$\Omega$	317.50546	-0.59381743	+0.59386995
<i>e</i>	0.2403290	<i>i</i>	13.31271	-0.24622942	+0.50819868
<i>P</i>	7.86	<i>H</i>	10.5	<i>G</i>	0.15

Residuals in seconds of arc

770814	095	0.1-	1.1-	900224	809	2.1+	2.4-	930717	801	0.4+	0.2+
770821	095	0.4+	0.0	900302	809	0.9+	0.1-	930724	801	0.1-	0.1+
770909	095	0.6+	0.4-	900302	809	0.0	0.3+	930724	801	0.0	0.2+
861204	010	1.3+	0.5+	900302	809	0.6-	0.2+	930815	801	0.0	0.1-
861204	010	0.5-	1.0-	900304	809	0.8-	0.6-	930815	801	0.5-	1.7-
861204	010	0.6-	0.2+	900304	809	1.7-	0.2-	930822	801	0.0	0.3+

900224	809	(4.2+	2.7-)	900304	809	1.5-	0.5+	930822	801	0.1+	0.3+
900224	809	(3.0+	2.4-)	930717	801	0.5+	0.0				

**(5662)\* 1981 EL<sub>4</sub> = 1991 DP<sub>1</sub>**

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

Id. G. V. Williams (*MPC* 20497)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	121.03840		(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.19039808	$\omega$	251.83366	-0.92965714	+0.34956475
<i>a</i>	2.9924553	$\Omega$	308.46134	-0.25604127	-0.84011728
<i>e</i>	0.0181797	<i>i</i>	8.54673	-0.26491599	-0.41473780
<i>P</i>	5.18	<i>H</i>	12.3	<i>G</i>	0.15

Residuals in seconds of arc

550418	675	0.3+	0.4-	810312	413	(2.8+	0.4+)	910208	675	(1.4+	3.4-)
550418	675	0.1+	0.4-	810407	413	1.5-	0.1+	910210	675	0.7-	0.3-
810202	413	0.6+	0.4-	810407	413	0.1-	1.0-	910210	675	0.7-	0.9-
810214	413	0.3+	0.2-	810408	413	1.7-	0.2-	910217	046	0.2-	1.9-
810302	413	0.6-	0.0	810408	413	0.2-	0.6-	910217	046	(1.4+	4.7+)
810302	413	1.2+	0.4-	810409	413	0.5-	0.3+	930718	801	0.4+	0.5-
810307	413	0.7-	1.1+	810409	413	0.8+	0.2+	930718	801	1.1-	0.5-
810307	413	1.2+	0.8+	810429	413	0.1+	1.8-	930722	801	0.9+	0.1+
810310	413	0.5-	1.6+	880912	675	0.4-	1.0-	930722	801	0.0	0.2-
810310	413	1.0+	0.7+	880912	675	0.1-	0.9-	930815	801	1.0+	0.2+
810312	413	0.6-	1.3+	910208	675	0.7+	0.5-	930815	801	0.8+	0.1+

**(5663)\* 1981 EQ<sub>12</sub>**

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

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	346.66128		(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.26662833	$\omega$	95.28215	+0.90649938	+0.41069943
<i>a</i>	2.3907373	$\Omega$	240.50103	-0.41804143	+0.84059850
<i>e</i>	0.2673648	<i>i</i>	6.45854	-0.05916280	+0.35315737
<i>P</i>	3.70	<i>H</i>	14.3	<i>G</i>	0.15

Residuals in seconds of arc

780610	675	0.3+	0.1+	810308	413	1.6-	0.8+	930718	801	0.3+	0.3+
780611	675	0.1-	0.0	810308	413	0.6+	0.3-	930718	801	0.3-	0.1-
810209	413	1.1-	0.2+	810312	413	(3.3-	2.4+)	930721	801	0.6+	0.9+
810212	413	2.1+	0.2-	810312	413	0.5+	0.4-	930721	801	0.5+	0.8+
810214	413	0.4+	1.0-	810409	413	(3.2-	1.0+)	930815	801	0.3-	0.6-
810301	413	0.6+	0.4-	810409	413	0.2-	1.0-	930815	801	0.0	0.3-
810301	413	(4.0+	0.8-)	810503	413	(1.7-	2.2-)	930820	801	0.0	0.8-
810306	413	1.0-	1.3+	810503	413	1.6-	0.7+	930820	801	0.8-	0.2-
810306	413	(4.4+	1.6-)	880213	809	0.9+	0.0				

**(5664)\* 1981 EX<sub>43</sub> = 1988 CL<sub>5</sub>**

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

Id. S. Nakano (*MPC* 13157)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q	
<i>n</i>	0.27072138	$\omega$	157.94368	+0.99854320	-0.03426556		
<i>a</i>	2.3665790	$\Omega$	204.13316	+0.01965962	+0.95042034		
<i>e</i>	0.1381908	<i>i</i>	5.85125	+0.05024918	+0.30907450		
<i>P</i>	3.64	<i>H</i>	14.4	<i>G</i>	0.15		

Residuals in seconds of arc

530906 675	1.1-	0.6-	810410 413	1.4+	1.4-	930717 658	0.0	0.5-
530906 675	1.2+	0.7+	810502 413	0.0	0.7-	930725 658	0.3+	0.1+
810212 413	0.9-	0.3-	810503 413	0.1-	1.0-	930725 658	0.4+	0.1+
810212 413	1.6+	0.2+	860911 095	0.3+	1.7-	930725 658	0.4+	0.2+
810214 413	1.3-	0.9-	880213 809	0.4+	2.0-	930726 658	0.9+	0.0
810306 413	1.2+	1.0+	880215 809	(0.9+	4.1-)	930726 658	0.7+	0.1+
810308 413	(4.4-	0.5+)	880216 809	(0.6+	4.6-)	930726 658	0.8+	0.8+
810308 413	0.3+	1.7-	880216 809	(0.8+	3.9-)	930814 801	0.7-	1.1-
810311 413	2.0-	1.2+	880216 809	(1.2+	4.3-)	930820 801	1.3-	0.3+
810315 413	2.3-	1.9+	930717 658	0.1+	0.4-	930820 801	1.6-	0.3+
810410 413	0.9+	0.7+	930717 658	0.2+	0.4-			

**(5665)\* 1982 BD<sub>13</sub> = 1982 DL<sub>5</sub> = 1990 RS<sub>4</sub>**

Discovered 1982 Jan. 30 by S. J. Bus at Palomar.

Id. S. Nakano (*MPC* 20142)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q	
<i>n</i>	0.29356272	$\omega$	260.34046	-0.81114327	+0.58140113		
<i>a</i>	2.2421712	$\Omega$	315.17494	-0.49511950	-0.74034811		
<i>e</i>	0.0925084	<i>i</i>	5.15978	-0.31129291	-0.33742763		
<i>P</i>	3.36	<i>H</i>	13.6	<i>G</i>	0.15		

Residuals in seconds of arc

820130 675	0.0	0.1+	900915 675	0.6+	1.1-	930718 801	0.3+	0.1+
820131 675	0.6-	0.1-	900920 675	0.2-	1.1-	930718 801	0.0	0.0
820224 010	0.2+	0.9-	900920 675	1.4-	0.6-	930721 801	0.1+	0.2-
871112 327	1.3+	1.2+	920101 691	0.3-	0.1+	930721 801	0.2+	0.1-
871112 327	0.4-	1.4+	920101 691	0.0	0.2-	930822 801	0.3-	1.1+
900915 675	0.4+	0.8-	920101 691	0.2-	0.3-	930822 801	0.4+	0.0

**(5666)\* 1982 TP<sub>1</sub> = 1951 YK<sub>1</sub> = 1988 GG<sub>1</sub> = 1989 PG<sub>1</sub>**

Discovered 1982 Oct. 14 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. K. Ichikawa (k, *MPC* 17200), B. G. Marsden (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q	
<i>n</i>	0.25167865	$\omega$	249.82736	-0.67021741	-0.74029796		
<i>a</i>	2.4844969	$\Omega$	242.36987	+0.70117076	-0.60837241		
<i>e</i>	0.1222496	<i>i</i>	3.40418	+0.24324512	-0.28608030		
<i>P</i>	3.92	<i>H</i>	13.3	<i>G</i>	0.15		

Residuals in seconds of arc

511227 711	(7.0+	5.2-)	901116 875	1.1-	0.9+	920504 809	0.4-	0.5-
821014 095	1.2-	0.3+	901120 801	0.0	0.7+	920504 809	0.2-	0.4-
821020 095	0.7+	0.7+	901120 801	0.1-	0.8+	920504 809	0.3+	0.9-
821022 095	0.4+	0.1-	901123 095	1.0+	1.1+	930724 801	0.1+	0.1+
821024 095	0.5+	1.3-	901123 095	(2.0+	4.7+)	930724 801	0.2+	0.3+
821108 095	0.9-	1.0-	901215 801	0.3-	0.4+	930813 691	0.9-	0.5+

880408 372	1.3+	1.5-	901215 801	0.4-	0.5+	930813 691	0.7-	0.6+
880408 372	0.1-	0.9+	901220 801	0.1+	0.1+	930813 691	0.9-	0.5+
890801 675	(4.2+	1.2-)	901220 801	0.3-	0.1+	930814 010	(4.2+	0.6+)
890801 675	0.7+	1.0-	920425 809	(0.8+	2.1+)	930814 010	(4.7+	1.1+)
901115 801	0.7+	1.0-	920425 809	0.4+	1.9+	930814 010	(3.7+	0.6+)
901115 801	0.1+	0.1-	920425 809	0.7+	1.8+	930815 801	0.4+	0.3+
901115 875	(0.5-	2.3-)	920503 809	0.5-	0.7+	930815 801	0.3+	0.1+
901115 875	(0.9-	3.6-)	920503 809	0.4-	0.9+	930822 801	0.4+	0.4+
901116 875	0.2-	1.3+	920503 809	0.1-	0.8+	930822 801	0.3+	0.3+

**(5667)\* 1983 QH<sub>1</sub> = 1959 RP = 1990 RM<sub>4</sub>**

Discovered 1983 Aug. 16 by T. M. Smirnova at the Crimean Astrophysical

Observatory.

Id. H. Kaneda (*MPC* 17818), R. Nagata (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q	
<i>n</i>	0.28678306	$\omega$	174.35521	+0.86743522	+0.49668650		
<i>a</i>	2.2773707	$\Omega$	155.79487	-0.45924405	+0.82192317		
<i>e</i>	0.1873814	<i>i</i>	4.09840	-0.19144460	+0.27882760		
<i>P</i>	3.44	<i>H</i>	13.7	<i>G</i>	0.15		

Residuals in seconds of arc

491119 675	0.9-	0.8-	900914 675	0.1+	0.4-	920207 303	0.1+	2.4-
491119 675	0.5-	0.2-	900914 675	0.6+	0.1+	930527 801	1.2-	0.1+
590901 024	1.5+	2.4+	900918 675	0.8+	0.5-	930527 894	0.0	0.7+
801129 675	0.2-	0.5+	900918 675	0.7+	0.1-	930527 894	1.1+	0.2-
801201 675	0.4-	0.9+	900926 095	0.3+	0.2-	930618 801	0.1+	0.6-
830816 095	0.6-	0.7-	900926 095	(0.8+	3.6-)	930618 801	0.1+	0.3-
830902 095	(2.5-	5.7-)	901014 095	1.2+	0.6-	930624 801	0.0	0.9-
830904 095	1.6-	0.9-	901014 095	0.4-	1.6-	930624 801	0.0	0.5-
830906 095	1.2-	1.3+	920206 303	(2.7+	3.5-)			

**(5668)\* 1984 FU = 1986 XD<sub>3</sub> = 1989 RY<sub>2</sub>**

Discovered 1984 Mar. 22 by A. Mrkos at Kleť.

Id. C. M. Bardwell (*MPC* 15554)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q	
<i>n</i>	0.28750109	$\omega$	157.54724	-0.99907389	+0.01009193		
<i>a</i>	2.2735773	$\Omega$	23.14917	-0.02914381	-0.87387502		
<i>e</i>	0.1076313	<i>i</i>	6.10762	+0.03165435	-0.48604589		
<i>P</i>	3.43	<i>H</i>	13.8	<i>G</i>	0.15		

Residuals in seconds of arc

540729 675	0.8-	0.2+	890907 033	0.4+	0.7-	910419 801	0.1-	1.4+
540729 675	0.0	1.6+	890907 033	0.0	0.4-	920902 809	0.6+	2.1-
840227 095	0.0	0.4-	910320 801	0.6-	0.6+	920902 809	0.3-	1.4-
840322 046	0.0	0.1+	910320 801	0.4-	0.5+	920902 809	0.1+	1.1-
840322 046	2.2-	1.1-	910321 801	0.7-	0.6+	920903 809	0.4-	2.2-
840331 046	0.2+	1.5-	910321 801	0.5-	0.5+	920922 809	1.0+	0.7+
840331 046	(6.0+	0.8+)	910409 046	(3.9-	0.0 )	920922 809	0.6+	0.3+
840405 046	0.9-	1.9-	910409 046	1.0-	1.4-	920922 809	0.6+	0.0
840405 046	(1.3-	2.9-)	910415 046	2.1+	1.6-	920923 809	0.6+	0.6-
861204 010	(7.2+	1.1-)	910415 046	0.1-	1.9-	920923 809	0.6+	0.3-
861204 010	(9.4+	4.7-)	910416 376	1.1+	0.2-	920923 809	0.2+	0.2-
861204 010	(8.0+	3.9-)	910419 801	0.1-	1.4+			

**(5669)\* 1985 CC<sub>2</sub> = 1985 DM = 1980 WL<sub>5</sub> = 1988 AP<sub>3</sub>**

Discovered 1985 Feb. 12 by H. Debehogne at the European Southern Observatory.  
 Id. L. D. Schmadel (d, *MPC* 10291), E. Bowell (k, *MPC* 18809), D. W. E. Green (*ibid.*), G. V. Williams (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5				Williams			
<i>M</i>	122.65635	(2000.0)		<b>P</b>	<b>Q</b>		
<i>n</i>	0.28787217	$\omega$	80.31300	-0.93527066	+0.34938740		
<i>a</i>	2.2716230	$\Omega$	120.11782	-0.34493204	-0.86397691		
<i>e</i>	0.0341177	<i>i</i>	3.74805	-0.07931377	-0.36259116		
<i>P</i>	3.42	<i>H</i>	13.6	<i>G</i>	0.15		

Residuals in seconds of arc

801129 675	1.4-	0.3-	850219 809	0.0	0.7+	850226 809	0.6-	1.0-
801201 675	0.1+	0.3-	850219 809	0.2-	0.5+	850227 809	0.6-	0.6-
850212 809	0.7+	0.9+	850220 809	1.1+	0.5-	850227 809	0.3-	0.7-
850212 809	1.2+	0.8+	850220 809	1.0+	0.4-	850227 809	0.4-	0.8-
850212 809	1.4+	0.7+	850220 809	1.1+	0.3-	850228 809	0.5+	0.7-
850214 809	0.2+	0.9+	850220 675	0.3-	0.1-	850228 809	0.7+	0.8-
850214 809	0.2+	0.8+	850220 046	(2.7-	0.9+)	850228 809	1.0+	0.8-
850214 809	0.5+	0.6+	850220 046	0.4+	1.5-	880112 033	1.3+	0.5+
850216 809	0.2-	1.0+	850221 809	0.3+	0.7+	880112 033	0.5-	0.3+
850216 809	0.1+	0.7+	850221 809	0.3+	0.7+	920307 399	0.3+	0.1+
850216 809	0.3+	0.5+	850221 809	0.0	0.7+	920307 399	0.1+	1.2+
850216 046	1.5-	2.1-	850222 675	2.2+	0.7+	920308 399	0.1-	0.8+
850216 046	0.6-	1.6-	850224 809	1.4-	0.2-	920308 399	0.8-	0.6+
850217 809	0.9-	0.2+	850224 809	0.7-	0.4-	930724 801	1.3+	0.0
850217 809	0.6-	0.2+	850224 809	0.0	0.6-	930724 801	0.1-	0.3-
850217 809	0.5-	0.1+	850225 809	0.9-	1.1-	930814 801	0.1-	0.2+
850218 809	0.1-	0.5+	850225 809	0.6-	1.0-	930822 801	0.2-	0.0
850218 809	0.1+	0.2+	850225 809	0.5-	1.0-	930822 801	0.1-	0.3-
850218 809	0.3+	0.4+	850226 809	1.3-	0.2-			
850219 809	0.0	0.8+	850226 809	0.9-	0.6-			

**(5670)\* 1985 VF<sub>2</sub> = 1981 BU**

Discovered 1985 Nov. 7 by C. S. Shoemaker at Palomar.  
 Id. G. V. Williams (*MPC* 19674)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5				Williams			
<i>M</i>	67.95943	(2000.0)		<b>P</b>	<b>Q</b>		
<i>n</i>	0.17333102	$\omega$	199.94971	-0.33889724	-0.87782426		
<i>a</i>	3.1858001	$\Omega$	271.09163	+0.90260564	-0.20185819		
<i>e</i>	0.1003381	<i>i</i>	19.78844	+0.26542743	-0.43437063		
<i>P</i>	5.69	<i>H</i>	11.4	<i>G</i>	0.15		

Residuals in seconds of arc

810130 095	0.5+	1.4+	911107 675	(0.0	3.4-)	930225 801	0.3+	0.5-
851011 675	0.7-	1.6+	911107 675	0.0	0.9-	930225 801	0.5+	0.1+
851011 675	1.4+	0.7-	911109 675	0.6+	1.2-	930226 801	0.1-	0.3+
851107 675	0.6-	1.3+	911201 675	0.1+	1.2-	930226 801	0.4+	0.8-
851107 675	0.6+	1.3+	911201 675	0.5-	0.5+	930324 675	0.4+	0.6+
851108 675	1.1-	0.1-	911203 675	1.1-	1.2-	930324 675	1.1-	0.6+

**(5671)\* 1985 XR = 1989 UE<sub>3</sub> = 1992 LN<sub>1</sub>**

Discovered 1985 Dec. 13 at Caussols.  
 Id. D. W. E. Green (*MPC* 15556), S. Nakano

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5				Nakano			
<i>M</i>	308.85432	(2000.0)		<b>P</b>	<b>Q</b>		
<i>n</i>	0.22958934	$\omega$	280.24696	+0.73443557	-0.67649974		
<i>a</i>	2.6414044	$\Omega$	122.34797	+0.64513782	+0.67104035		
<i>e</i>	0.0880837	<i>i</i>	3.68770	+0.21071684	+0.30340228		
<i>P</i>	4.29	<i>H</i>	12.8	<i>G</i>	0.15		

Residuals in seconds of arc

540731 675	0.3+	0.8-	891026 046	0.9-	0.7+	920609 809	1.4-	1.7+
540731 675	0.1+	1.1-	891029 872	1.1+	0.8+	920609 809	(4.1-	2.5+)
851213 010	0.7-	0.3+	891029 872	1.3+	1.5+	930815 801	0.2+	0.6-
851217 010	0.9-	2.0-	891102 872	1.0-	1.2+	930815 801	0.2+	0.6-
851217 010	(4.6+	0.8-)	891102 872	0.5-	0.7+	930822 801	0.1-	1.0-
851219 010	(9.4+	1.9-)	891102 046	2.2-	0.9-	930822 801	0.6+	0.9-
891025 046	0.1+	0.8+	891102 046	(0.5-	3.9+)	930912 400	1.2+	1.2+
891025 046	1.8+	0.5+	920603 809	0.8+	1.2+	930912 400	2.5-	0.3+
891025 046	1.8+	2.0+	920603 809	0.1+	1.0+	930913 400	0.8-	0.3+
891025 046	(4.0+	2.1+)	920603 809	0.6+	0.8+	930913 400	0.4-	1.9-
891026 046	(5.8-	0.9+)	920609 809	1.5+	0.0			

**(5672)\* 1986 EE<sub>2</sub> = 1956 EW = 1980 RP<sub>4</sub> = 1984 UW<sub>4</sub> = 1991 PM<sub>18</sub>**

Discovered 1986 Mar. 6 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. H. Kaneda (*MPC* 20144)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5				Williams			
<i>M</i>	0.97073	(2000.0)		<b>P</b>	<b>Q</b>		
<i>n</i>	0.26338651	$\omega$	352.49507	-0.96366338	-0.26596104		
<i>a</i>	2.4103144	$\Omega$	171.94984	+0.25337296	-0.93956754		
<i>e</i>	0.0524409	<i>i</i>	10.22196	+0.08458739	-0.21558657		
<i>P</i>	3.74	<i>H</i>	12.9	<i>G</i>	0.15		

Residuals in seconds of arc

560309 760	0.6-	2.4+	860310 413	(4.7-	2.3-)	910916 675	0.3+	0.4-
560309 760	0.9+	1.6-	860310 413	(3.6-	3.3-)	910916 675	0.5+	1.0+
800907 095	(5.3+	2.3-)	910808 675	1.2-	2.2-	921227 596	0.0	1.9-
841020 095	0.5-	1.4+	910808 675	0.4+	1.0-	921227 596	1.1+	0.6-
860304 809	0.7-	1.1+	910910 675	0.2+	0.3-	930120 801	0.2-	0.5+
860304 809	0.2-	0.9+	910910 675	1.1-	2.3+	930120 801	0.2-	0.1-
860306 688	1.2+	0.1+	910916 675	0.2+	1.2-	930127 801	0.1-	0.1+
860306 688	0.6-	2.0-	910916 675	1.0+	1.0+	930127 801	0.4-	0.4+

**(5673)\* 1986 RT<sub>2</sub> = 1986 TM<sub>18</sub> = 1961 TT<sub>1</sub> = 1979 VO = 1979 WD<sub>5</sub>**

Discovered 1986 Sept. 6 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (*MPC* 11349), G. V. Williams (d, *MPC* 20332)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5				Nakano			
<i>M</i>	7.50778	(2000.0)		<b>P</b>	<b>Q</b>		
<i>n</i>	0.27468366	$\omega$	335.31473	+0.69749876	+0.71651514		
<i>a</i>	2.3437655	$\Omega$	338.90723	-0.65271585	+0.62946388		
<i>e</i>	0.0621389	<i>i</i>	1.60446	-0.29573214	+0.30063479		
<i>P</i>	3.59	<i>H</i>	13.4	<i>G</i>	0.15		

Residuals in seconds of arc

611013 760	0.2+	1.6+	861005 688	(4.0+	2.5+)	930724 801	0.7+	0.3+
791111 095	1.0-	2.5-	901014 033	(0.1-	4.9-)	930815 801	0.5+	0.0
791116 095	0.4-	0.8-	901015 033	0.5+	0.2+	930815 801	0.3+	0.1-

791117 095 (1.0- 3.3-)	901015 033 0.3+ 0.5+	930815 691 0.7- 0.1+
860906 688 (4.8- 2.5-)	901018 033 0.3+ 0.8+	930815 691 0.8- 0.1+
860906 688 0.3+ 1.9-	901018 033 0.1- 0.3+	930815 691 0.8- 0.2+
860912 688 1.4+ 0.1+	920407 691 0.3- 0.5-	930822 801 0.2+ 0.1+
860912 688 0.0 0.5+	920407 691 0.2- 0.5-	930822 801 0.2+ 0.2+
861002 095 (3.8- 0.8+)	920407 691 0.5- 0.6-	
861005 688 0.4- 1.0-	930724 801 0.5+ 0.1+	

**(5674)\* 1986 RW<sub>2</sub> = 1975 RC<sub>1</sub>**

Discovered 1986 Sept. 6 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory

Id. C. M. Bardwell (*MPC* 11519)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Bardwell	
<i>M</i>	327.76807 (2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.27225633 $\omega$ 311.72924	+0.98946658	+0.14348498
<i>a</i>	2.3576757 $\Omega$ 40.03223	-0.12238411	+0.89991000
<i>e</i>	0.1654935 <i>i</i> 1.70891	-0.07731763	+0.41179370
<i>P</i>	3.62 <i>H</i> 13.3	<i>G</i> 0.15	

Residuals in seconds of arc

750903 095 0.1+ 0.2-	861010 095 0.1- 1.9-	901123 403 0.5+ 0.3+ Y
750906 095 0.2+ 1.4-	861011 095 1.6- 0.7-	901208 046 (3.1- 1.0+)
840108 675 0.9- 2.3+	901112 675 0.4+ 0.5-	901208 046 (3.5- 0.9-)
840108 675 1.7+ 0.9+	901112 675 0.4- 1.0-	901220 801 0.3+ 0.8+
860906 688 (4.6- 0.3+)	901114 675 0.5+ 0.3-	901220 801 0.1+ 0.7+
860906 688 1.3- 1.7+	901114 675 0.1+ 0.7-	930718 801 0.3+ 0.7+
860912 688 0.4- 0.2+	901114 095 0.3+ 1.4+	930718 801 0.3- 0.9+
860912 688 0.0 0.8+	901114 095 0.5- 0.4+	930721 801 0.2- 1.2+
860915 095 (3.4+ 5.9+)	901120 801 0.5+ 0.3+	930721 801 1.5- 0.4+
861002 095 1.3+ 0.2+	901120 801 0.5+ 0.4+	930815 801 0.2+ 0.5+
861005 688 1.9+ 1.0-	901122 403 2.4- 0.6+	930815 801 0.2+ 0.7+
861005 688 1.6+ 0.5-	901122 403 1.1- 1.3-	
861008 095 0.8- 0.8+	901123 403 (4.3- 2.2+)	Y

**(5675)\* 1986 RY<sub>5</sub> = 1978 JD<sub>2</sub> = 1990 WK<sub>7</sub>**

Discovered 1986 Sept. 7 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. H. Kaneda (*MPC* 18810)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	6.64334 (2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.27074086 $\omega$ 77.37292	+0.57285566	+0.81631260
<i>a</i>	2.3664655 $\Omega$ 227.82942	-0.78542863	+0.52089162
<i>e</i>	0.1381772 <i>i</i> 5.72716	-0.23438912	+0.24961101
<i>P</i>	3.64 <i>H</i> 13.2	<i>G</i> 0.15	

Residuals in seconds of arc

501209 675 1.1- 0.7+	901114 675 0.8+ 0.4+	930718 801 0.2- 0.0
501209 675 0.8+ 1.9+	901124 400 1.3- 0.9-	930719 801 0.1- 0.1+
780506 095 0.2- 2.1-	901124 400 0.4+ 2.0-	930719 801 0.5- 0.0
860907 095 0.3+ 1.0+	901208 400 0.5- 1.7-	930820 801 0.4+ 0.7+
860911 095 0.8+ 0.7+	901208 400 0.3- 1.0-	930820 801 0.4+ 0.6+
861005 095 0.8- 1.3-	930717 801 0.4- 0.1-	930822 801 1.1+ 0.5-
901113 675 0.4+ 0.4+	930717 801 0.5- 0.3-	930822 801 0.2+ 0.2+
901113 675 0.4+ 0.6-	930717 675 0.0 1.7-	
901114 675 0.6+ 0.1+	930718 801 0.4- 0.3+	

**(5676)\* 1986 RH<sub>12</sub> = A904 UC = 1989 GE<sub>5</sub>**

Discovered 1986 Sept. 9 by L. G. Karachkina at the Crimean Astrophysical Observatory.

Id. S. Nakano (*MPC* 14790), G. V. Williams (*MPC* 21935)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano	
<i>M</i>	264.57704 (2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.25153008 $\omega$ 148.31591	+0.99032069	+0.08205674
<i>a</i>	2.4854752 $\Omega$ 207.64747	-0.10237973	+0.97643856
<i>e</i>	0.1760918 <i>i</i> 13.96000	+0.09371934	+0.19958564
<i>P</i>	3.92 <i>H</i> 12.5	<i>G</i> 0.15	

Residuals in seconds of arc

041016 024 (2.5+ 7.5+)	890509 808 1.1- 0.3+	900918 675 0.6+ 1.0-
551116 675 0.3+ 0.4+	890509 808 0.4- 0.5-	901010 049 (4.3- 1.2+)
551116 675 0.6- 0.6+	900828 657 0.0 0.2-	901010 049 (4.5- 1.6-)
860909 095 (1.3+ 7.3+)	900828 657 0.2- 1.6-	901011 049 0.5- 0.3+
860913 095 (0.2- 5.3+)	900911 657 0.7- 0.6+	901011 049 0.6- 0.5+
861003 095 (3.6+ 1.7-)	900911 657 0.6+ 0.2+	920107 801 0.1- 0.5-
861006 095 0.5- 2.3+	900914 657 0.3- 0.1-	920107 801 0.1- 0.2-
890406 809 0.9+ 1.5+	900914 657 0.1+ 0.2+	930419 293 1.7- 0.5+
890406 809 1.8+ 1.0+	900916 801 0.1+ 0.6+	930419 293 0.2+ 2.8-
890406 809 2.1+ 1.6+	900916 801 0.0 0.6+	930524 801 0.4- 0.3-
890407 809 0.3- 0.6+	900917 675 0.1- 0.1-	930524 801 0.5- 0.2-
890407 809 0.4+ 0.8+	900917 675 0.5+ 0.3-	930526 801 0.7- 0.6-
890407 809 0.6+ 1.2+	900918 675 0.7+ 0.6-	930526 801 0.4- 0.4-

**(5677)\* 1987 SQ<sub>1</sub> = 1973 UL<sub>1</sub> = 1978 WN<sub>16</sub> = 1989 AK<sub>8</sub>**

Discovered 1987 Sept. 21 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. E. Bowell (k, *MPC* 19020), G. V. Williams (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	32.75160 (2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.20652602 $\omega$ 215.87648	+0.53846179	-0.84259565
<i>a</i>	2.8345636 $\Omega$ 201.54950	+0.77905949	+0.50212034
<i>e</i>	0.0598975 <i>i</i> 1.49210	+0.32113115	+0.19469908
<i>P</i>	4.77 <i>H</i> 12.4	<i>G</i> 0.15	

Residuals in seconds of arc

541221 675 0.2+ 0.4+	870921 046 0.4- 1.0-	910706 809 0.3+ 0.8+
541221 675 0.4- 0.6-	870921 046 (3.0- 2.4-)	910707 809 0.2- 0.6-
731026 095 1.4- 1.2+	870929 688 1.7+ 2.4-	910707 809 0.0 0.6-
781130 675 0.5+ 0.6+	890111 071 0.6- 0.7-	920930 801 0.4- 0.1+
781201 675 1.1+ 0.9+	890111 071 (2.9- 4.2+)	920930 801 0.3- 0.1+
870921 688 1.8+ 0.3+	910706 809 0.2- 0.7+	921029 801 0.3- 0.1-
870921 688 1.6- 0.8+	910706 809 0.0 0.8+	921029 801 0.1+ 0.1-

**(5678)\* 1989 TS = 1971 VJ**

Discovered 1989 Oct. 1 by E. F. Helin at Palomar.

Id. S. Nakano (*MPC* 15565)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano	
<i>M</i>	328.08627 (2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.21855132 $\omega$ 297.47457	+0.85538163	+0.30615471
<i>a</i>	2.7296089 $\Omega$ 48.22096	+0.06419056	+0.73777985
<i>e</i>	0.2756687 <i>i</i> 34.07792	-0.51400568	+0.60162296
<i>P</i>	4.51 <i>H</i> 12.9	<i>G</i> 0.15	

Residuals in seconds of arc

531010 675	0.5-	0.2-	891026 675	1.5-	0.3+	930630 413	0.4-	0.4-
531010 675	1.5+	1.6-	891026 675	1.7-	0.9+	930630 413	0.2-	0.4-
711110 029	0.4+	0.3+	891027 675	0.6+	0.1-	930630 413	0.2+	1.4-
711110 029	0.4+	0.7+	891028 675	0.6-	0.5+	930701 413	0.1-	0.1-
711119 029	1.1-	1.0+	891028 675	0.8-	0.2-	930701 413	0.0	0.1-
891001 675	0.4+	0.2-	891029 675	0.2-	0.6+	930825 413	0.4+	0.6+
891001 675	0.7-	0.4+	891029 675	0.1-	0.5-	930825 413	0.4+	0.7+
891005 675	1.6+	0.3-	891129 675	2.4+	0.3-	930825 413	0.3+	0.6+
891005 675	0.3-	1.0-	891201 675	1.4+	1.0-			

**(5679)\* 1989 VR = 1969 TF<sub>6</sub>**

Discovered 1989 Nov. 2 by K. Endate and K. Watanabe at Kitami.

Id. S. Nakano (*MPC* 15720), A. Lowe

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano			
<i>M</i>	5.49135	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.20002616	$\omega$ 128.75286	+0.66444208	+0.74733762	
<i>a</i>	2.8956419	$\Omega$ 182.88858	-0.69622384	+0.61812329	
<i>e</i>	0.0416227	<i>i</i> 2.03671	-0.27164145	+0.24374186	
<i>P</i>	4.93	<i>H</i> 12.7	<i>G</i> 0.15		

Residuals in seconds of arc

691015 095	1.3-	0.4+	891126 400	(6.8-	1.0+)	930718 801	0.3-	0.2+
691017 095	0.8+	1.0+	910122 675	0.2-	0.2-	930722 801	0.2-	0.5-
891102 400	0.7+	2.2-	910122 675	0.5-	1.1-	930722 801	0.6+	0.9-
891102 400	0.8+	0.4-	920424 691	0.1-	0.3-	930815 801	0.1+	0.3-
891117 400	0.5+	1.4+	920424 691	0.2-	0.7-	930815 801	0.4+	0.5-
891117 400	1.2-	1.2-	920424 691	0.1+	0.4-	930822 801	0.2+	0.3-
891126 400	(3.8-	2.0-)	930718 801	0.3-	0.1+			

**(5680)\* 1989 YZ<sub>1</sub> = 1932 YO = 1966 VH = 1972 YN = 1983 YG = 1988 UF<sub>1</sub>**

Discovered 1989 Dec. 30 by R. H. McNaught at Siding Spring.

Id. H. Kaneda (*MPC* 16238)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	273.93261	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.17555108	$\omega$ 14.77312	+0.47652777	-0.87890812	
<i>a</i>	3.1588842	$\Omega$ 46.77305	+0.80365884	+0.42578663	
<i>e</i>	0.1560067	<i>i</i> 1.65302	+0.35644600	+0.21500294	
<i>P</i>	5.61	<i>H</i> 12.3	<i>G</i> 0.15		

Residuals in seconds of arc

321223 024	0.7-	0.8+	891231 413	1.4+	0.0	910410 809	0.5-	0.7+
661112 095	1.5+	0.5+	900103 372	2.1-	0.7-	910410 809	0.2-	0.2+
721229 095	(0.7+	6.4+)	900103 372	(5.6-	2.6-)	910410 809	0.0	0.3-
831228 046	0.9-	0.5-	900121 372	(2.9-	6.6-)	910419 809	0.2+	0.4-
831228 046	0.5-	1.0-	900121 372	(0.0	4.7-)	910419 809	(2.5-	0.4-)
881017 071	0.6-	1.0+	900124 372	(0.5-	3.1-)	910419 809	0.1+	1.3-
881017 071	(0.6-	13.5+)	900124 372	(0.4-	3.5-)	930724 801	0.4-	0.4-
891220 372	0.1+	0.1+	900201 372	1.1+	0.5-	930724 801	0.0	0.4-
891220 372	2.0+	2.0+	900201 372	0.1+	1.2+	930815 801	0.1-	0.1+
891230 413	1.1-	0.1+	910408 809	0.2+	0.7+	930815 801	0.3-	0.6+
891230 413	0.5+	0.2+	910408 809	0.6+	1.4+	930822 801	0.4+	0.7+
891231 413	0.8-	1.7-	910408 809	0.4+	0.7+			

**(5681)\* 1990 RS<sub>17</sub> = 1954 SC = 1967 RB**

Discovered 1990 Sept. 15 by L. V. Zhuravleva at the Crimean Astrophysical

Observatory.

Id. G. V. Williams (*MPC* 19305)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	343.25912	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.30207595	$\omega$ 6.85091	+0.86575975	+0.49750273	
<i>a</i>	2.1998443	$\Omega$ 323.15235	-0.46335418	+0.75581572	
<i>e</i>	0.1893053	<i>i</i> 5.19737	-0.18911099	+0.42571543	
<i>P</i>	3.26	<i>H</i> 13.6	<i>G</i> 0.15		

Residuals in seconds of arc

540919 760	2.3-	1.2+	900915 095	0.4-	0.3-	930718 801	0.1+	0.3+
540919 760	1.1-	1.3+	900923 095	0.6-	0.1+	930815 801	0.3+	0.1+
670903 095	3.0+	1.4-	901023 095	1.2+	0.1-	930815 801	0.3+	0.0
670909 095	1.1+	0.7-	930717 801	0.0	0.6+	930822 801	0.5-	0.6-
820130 675	1.4-	0.2-	930717 801	0.1-	0.5+	930822 801	0.7-	1.8-
820131 675	1.1+	0.6-	930718 801	0.5-	0.5+			

**(5682)\* 1990 TB = 1969 PP = 1983 RV<sub>5</sub>**

Discovered 1990 Oct. 9 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 17217)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	295.63282	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.28318364	$\omega$ 138.20112	+0.98493581	+0.15558581	
<i>a</i>	2.2966277	$\Omega$ 213.07472	-0.17089957	+0.94236534	
<i>e</i>	0.2990485	<i>i</i> 7.94813	+0.02635895	+0.29621042	
<i>P</i>	3.48	<i>H</i> 13.7	<i>G</i> 0.15		

Residuals in seconds of arc

690813 095	0.6-	0.5-	900918 675	1.7-	1.1+	901027 413	0.5-	0.1-
830903 095	(0.3-	7.1+)	901009 413	0.4+	1.2-	930510 413	0.2-	0.2+
831007 413	1.5+	0.1-	901009 413	0.5-	1.2+	930510 413	0.1-	0.1+
831007 413	0.7+	0.3-	901011 413	1.1+	1.4-	930731 413	1.4+	0.1+
890528 413	0.2-	0.4+	901011 413	0.4+	0.2-	930823 413	0.6-	0.2+
900620 413	0.5+	0.5-	901011 413	0.3-	0.8+	930823 413	0.5+	0.4-
900620 413	0.1-	0.0	901012 413	0.6-	0.0			
900918 675	0.5-	0.5+	901027 413	0.6+	0.3+			

**(5683)\* 1990 UD = 1934 TC = 1967 UJ = 1980 TL<sub>8</sub>**

Discovered 1990 Oct. 19 by T. Urata at the Oohira Station of the Nihondaira

Observatory.

Id. S. Nakano (*MPC* 17454)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano			
<i>M</i>	321.43538	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.29962031	$\omega$ 296.89015	+0.99601003	-0.04643101	
<i>a</i>	2.2118477	$\Omega$ 65.85381	+0.07472184	+0.90081140	
<i>e</i>	0.2165404	<i>i</i> 4.79086	-0.04879201	+0.43172096	
<i>P</i>	3.29	<i>H</i> 13.6	<i>G</i> 0.15		

Residuals in seconds of arc

341009 024	0.9-	1.1+	901026 385	1.8+	0.5+	901111 385	2.5-	1.5+
671031 095	2.2+	0.1-	901026 894	0.6+	0.6-	901111 385	0.2-	0.0
771207 675	0.6-	0.8+	901026 894	(0.4+	3.5+)	901122 385	1.0-	0.1-
771208 675	0.9-	0.1+	901027 385	(3.3+	0.3+)	901122 385	0.9-	0.7-
801012 095	1.3-	0.9-	901028 881	1.6+	0.5-	930811 385	0.1+	0.3+



901019 385 1.5+	1.3-	Y	901028 881 0.3-	0.4-	930811 385 0.1-	0.3+
901019 385 2.3-	1.0+	Y	901028 881 0.5+	0.4-	930811 385 0.4-	0.4+
901020 385 0.2+	0.8+		901107 385 1.9+	0.7+	930914 385 0.1-	0.1-
901020 385 0.3-	0.3-		901107 385 0.7+	0.2+	930914 385 0.8+	0.2+
901020 894 0.9-	0.7-		901110 385 0.1+	1.9-	930914 385 0.7+	0.7-
901026 385 1.0+	1.0+		901110 385 1.4-	0.1+		

**(5684)\* 1990 UB<sub>2</sub> = 1977 XD<sub>3</sub>**

Discovered 1990 Oct. 21 by T. Urata at the Oohira Station of the Nihondaira

Observatory.

Id. S. J. Bus (*MPC* 20819)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano	
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.29783022	$\omega$ 221.48416	+0.67762911 +0.72900148
<i>a</i>	2.2207016	$\Omega$ 91.41755	-0.64662585 +0.65335182
<i>e</i>	0.2169060	<i>i</i> 5.55824	-0.35027675 +0.20417698
<i>P</i>	3.31	<i>H</i> 14.0	<i>G</i> 0.15

Residuals in seconds of arc

771207 675 0.1+	0.7+	901024 809 0.4-	0.5-	920223 691 0.4-	0.3-
771208 675 0.4-	0.6+	901024 809 0.8-	0.8-	920223 691 0.5-	0.0
901016 809 0.6+	0.2+	901024 809 1.4-	0.0	930724 801 0.6-	0.4-
901016 809 0.3-	0.2+	901026 385 0.8+	1.0+	930724 801 0.4-	0.4-
901016 809 0.4-	0.6+	901026 385 0.7+	1.6+	930811 385 0.4+	0.4-
901019 809 0.0	1.0-	901110 385 0.4+	0.2+	930811 385 0.4+	0.2+
901019 809 0.7-	1.3-	901110 385 1.6-	1.0+	930811 385 0.1+	0.1+
901019 809 0.8-	1.0-	901122 385 (3.3+	0.8+)	930914 385 0.2+	0.5+
901021 385 0.2+	2.7-	901122 385 2.6+	1.7+	930914 385 0.1-	0.4+
901021 385 1.8+	0.5-	920223 691 0.5+	0.7-	930914 385 0.2+	0.4+

**(5685)\* 1990 XA = 1935 CA = 1938 YM = 1952 UB<sub>1</sub> = 1977 BM**

Discovered 1990 Dec. 8 by T. Nomura and K. Kawanishi at the Minami-Oda

Observatory.

Id. T. Nomura (k, *MPC* 17647), S. Nakano (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano	
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.21034773	$\omega$ 264.86405	-0.99010759 +0.04480388
<i>a</i>	2.8001255	$\Omega$ 277.65788	+0.01388196 -0.91171719
<i>e</i>	0.0927566	<i>i</i> 7.71011	-0.13962183 -0.40836794
<i>P</i>	4.69	<i>H</i> 11.7	<i>G</i> 0.15

Residuals in seconds of arc

350202 012 2.2+	0.9+	920422 374 0.3+	0.4-	930722 691 0.6-	1.0+
350207 012 2.0+	1.8+	920426 374 1.0-	0.5+	930722 691 0.8-	0.9+
381217 024 3.0-	0.3-	920426 374 0.2+	2.3+	Y 930722 691 1.4-	0.6+
521024 760 (4.1-	0.8+)	920426 374 1.5-	0.1+	930811 410 0.8+	0.3-
521024 760 2.7-	0.8-	920530 903 0.4+	0.3-	Y 930811 410 1.2-	0.3-
770120 095 1.5+	0.3+	930717 801 0.1-	0.5+	930815 801 0.4+	0.3+
901208 374 (2.9-	0.7-)	930717 801 0.0	0.5+	930815 801 0.5+	0.2+
901208 374 0.3+	0.1+	930717 595 0.2-	0.6+	930816 596 1.8+	1.0+
901210 374 0.2-	0.2+	930718 595 0.4-	0.1+	930816 596 1.4+	1.2-
901210 374 0.2+	0.6-	930718 801 0.1+	0.3+	930820 801 0.6+	0.2+
901216 871 1.0+	1.1-	930718 801 0.0	0.3+	930820 801 1.2+	0.3+
901222 871 1.0-	0.0	930718 595 0.2-	1.1-		
920422 374 1.0-	1.4-	930718 595 0.0	0.1+		

**(5686)\* 1990 YQ = 1953 VF<sub>2</sub> = 1975 VC<sub>3</sub> = 1986 TM<sub>10</sub>**

Discovered 1990 Dec. 20 by M. Matsuyama and K. Watanabe at Kushiro.

Id. H. Kaneda (*MPC* 17650)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Nakano	
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.26794427	$\omega$ 195.05897	+0.73433335 -0.67868683
<i>a</i>	2.3829032	$\Omega$ 207.69339	+0.62536665 +0.68318501
<i>e</i>	0.2113295	<i>i</i> 1.45223	+0.26395282 +0.26952260
<i>P</i>	3.68	<i>H</i> 13.8	<i>G</i> 0.15

Residuals in seconds of arc

531114 760 2.3+	1.3-	901223 399 0.4+	1.2+	920406 809 0.3+	0.9-
531114 760 1.5-	1.5-	901225 399 0.0	0.3+	920406 809 0.3+	0.7-
751102 095 (6.1-	3.8-)	901225 399 0.2-	0.9-	920406 809 0.7+	0.4-
751107 095 (2.3-	5.3-)	910105 400 0.0	0.2-	930723 801 0.4+	0.1+
861003 095 1.4-	0.4-	910105 400 1.2-	0.5-	930723 801 0.7+	0.3+
861008 095 0.1-	0.6-	910106 400 1.6+	0.0	930815 801 0.1-	0.3+
901220 399 1.0-	0.2-	910106 400 1.2+	0.6+	930815 801 0.1-	0.3+
901220 399 0.6+	1.7+	920404 809 0.4-	0.6-	930820 801 0.0	0.6+
901223 399 0.5-	1.2+	920404 809 1.1-	0.3+	930820 801 0.2+	0.8+
901223 399 0.4+	0.1-	920404 809 1.8-	0.7+		

**(5687)\* 1991 AB<sub>1</sub> = 1932 YS = 1952 OE<sub>1</sub> = 1957 OH = 1968 TJ = 1978 NP<sub>2</sub> = 1978 PM<sub>1</sub> = 1981 AG = 1983 PO<sub>2</sub> = 1992 GE**

Discovered 1991 Jan. 13 by Y. Kushida and O. Muramatsu at the Yatsugatake

South Base Observatory.

Id. G. V. Williams (*MPC* 22404)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18900522	$\omega$ 241.23182	+0.96305439 -0.21414404
<i>a</i>	3.0071391	$\Omega$ 130.63209	+0.25138493 +0.93234168
<i>e</i>	0.1743979	<i>i</i> 12.42637	-0.09660159 +0.29134399
<i>P</i>	5.21	<i>H</i> 10.9	<i>G</i> 0.15

Residuals in seconds of arc

321223 012 0.9+	0.6+	910114 399 1.0-	1.1+	920407 402 0.0	0.7-
520724 760 1.1-	0.7+	910114 399 0.9-	1.1-	930622 675 0.8-	1.0-
570725 760 0.2-	0.7+	910115 896 1.8+	0.5-	930622 675 0.1-	1.2-
570725 760 0.2-	0.9+	910115 896 1.7+	1.0-	930624 670 0.1-	0.4+
681015 095 0.1+	1.5-	910120 896 0.3+	0.4-	930624 670 0.3+	0.5+
780707 095 1.5-	1.3+	910120 896 0.3-	0.8-	930624 670 1.0+	0.8-
780808 095 0.8+	0.8-	910209 896 0.4-	1.4+	930625 675 0.6-	0.1-
810103 688 (0.5+	3.9-)	910211 675 1.2-	0.9-	930625 675 1.6-	0.0
810103 688 (0.9-	3.2-)	910211 675 1.2-	0.6-	930822 674 1.2+	1.2+
830804 808 2.0+	0.9-	920307 402 0.1-	0.9+	930822 674 0.3+	0.3-
830804 808 0.4+	0.1-	920307 402 1.4+	1.6+	930823 413 0.2+	0.1-
910113 896 1.3+	0.5+	920405 402 0.5+	0.8+	930823 413 0.3+	0.2-
910113 896 0.6-	1.4+	920405 402 0.6-	1.0-		
910114 399 0.3-	0.9+	920407 402 1.0-	1.1-		

**(5688)\* 1991 AD<sub>2</sub> = 1981 WT<sub>7</sub> = 1985 UP<sub>6</sub> = 1989 TX<sub>13</sub>**

Discovered 1991 Jan. 12 by E. F. Helin at Palomar.

Id. H. Kaneda (*MPC* 18125)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q		Williams	
<i>n</i>	0.23279577	$\omega$	245.27093		+0.88897021		-0.45589767		
<i>a</i>	2.6170940	$\Omega$	141.81058		+0.44147059		+0.82784116		
<i>e</i>	0.1603518	<i>i</i>	4.03139		+0.12180180		+0.32685826		
<i>P</i>	4.23	<i>H</i>	13.0	<i>G</i>	0.15				

Residuals in seconds of arc

811125 095	1.7+	0.4+	910115 033	0.3-	0.2+	910310 809	0.3-	0.3-
851018 095	0.3-	2.1-	910116 033	0.3-	0.6+	910310 809	0.1+	0.4-
891002 809	1.2-	0.2+	910117 033	0.2-	0.3+	920428 691	0.8-	0.5-
891002 809	0.7-	0.1-	910122 675	(4.2+	2.2-)	920428 691	0.6-	0.2+
891002 809	0.7-	0.0	910122 675	0.2+	0.3-	920428 691	0.5-	0.0
891003 809	1.3-	0.1-	910209 675	0.7-	0.3+	930717 801	0.1+	2.0-
891003 809	0.9-	0.2-	910209 675	0.5-	0.1-	930717 801	1.2+	0.6-
891003 809	1.4+	0.6+	910218 675	0.5-	0.8-	930718 801	1.1+	0.2+
910112 675	2.1+	0.2-	910218 675	1.1+	0.3-	930718 801	0.9+	0.1+
910112 675	0.2+	0.2-	910308 809	0.7-	0.9+	930815 801	0.1+	0.3-
910114 675	1.3-	0.8-	910308 809	0.4+	0.5+	930815 801	0.2+	0.2+
910114 675	1.3-	1.4-	910308 809	1.4+	0.1-	930822 801	0.4+	0.1+
910115 033	0.2+	0.8-	910310 809	0.4-	0.3-	930822 801	0.6+	0.5-

**(5689)\* 1991 RZ<sub>2</sub> = 1964 WU = 1989 GZ<sub>4</sub>**

Discovered 1991 Sept. 9 by F. Börngen and L. D. Schmadel at Tautenburg.

Id. B. G. Marsden (*MPC* 19313)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q		Marsden	
<i>n</i>	0.21518796	$\omega$	217.65672		-0.04058745		-0.99663487		
<i>a</i>	2.7579776	$\Omega$	234.77837		+0.93660747		-0.01312379		
<i>e</i>	0.1100458	<i>i</i>	5.00107		+0.34802171		-0.08091169		
<i>P</i>	4.58	<i>H</i>	13.7	<i>G</i>	0.15				

Residuals in seconds of arc

641127 330	0.1-	1.1+	910909 033	0.2+	0.1+	911004 033	0.0	0.2-
890408 809	2.0+	0.2+	910910 033	0.0	0.2+	911005 033	0.8-	0.2-
890408 809	0.6-	0.3+	910912 033	0.0	0.2-	930101 033	0.1+	0.1+
890408 809	0.9+	0.9+	910912 033	0.5+	0.3+	930101 033	0.2-	0.3-
890411 809	1.4-	0.3+	910913 033	0.4+	0.4-	930102 033	0.0	0.2-
890411 809	0.0	0.3-	910914 033	0.4-	1.2+	930222 033	0.1-	0.3-
890411 809	0.3-	0.5+	911004 033	0.0	0.0			

**(5690)\* 1992 EU = 1987 DR**

Discovered 1992 Mar. 7 by S. Ueda and H. Kaneda at Kushiro.

Id. C. M. Bardwell (*MPC* 21580)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q		Bardwell	
<i>n</i>	0.21042741	$\omega$	81.53102		+0.12709625		-0.99182611		
<i>a</i>	2.7994186	$\Omega$	1.33406		+0.60568973		+0.06858977		
<i>e</i>	0.3801487	<i>i</i>	29.01428		+0.78548488		+0.10759375		
<i>P</i>	4.68	<i>H</i>	12.8	<i>G</i>	0.15				

Residuals in seconds of arc

740618 413	0.8+	0.3+	920307 399	1.7-	0.7-	920429 801	1.0+	0.6+
750610 413	1.5+	0.1-	920307 399	0.3-	0.4+	920429 801	0.8+	1.3+
750709 413	0.6-	0.6-	920308 399	2.1+	0.5-	930510 413	0.4+	0.2+
750709 413	1.4-	0.5+	920308 399	0.3+	0.5-	930510 413	0.3+	0.1-

790327 413	0.4+	0.9+	920324 399	2.5-	0.7-	930823 413	0.4+	0.5-
790327 413	(1.5+	3.7+)	920324 399	0.4+	1.0+	930823 413	0.5-	0.4-
870227 675	0.4+	0.1-	920326 399	0.8-	0.3-	930823 413	0.5-	0.7-
870227 675	0.2+	0.8+	920326 399	0.2-	0.4-			

**(5691)\* 1992 FD = 1953 FX**

Discovered 1992 Mar. 26 by R. H. McNaught at Siding Spring.

Id. G. V. Williams (*MPC* 20154)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q		Williams	
<i>n</i>	0.27646426	$\omega$	34.28308		-0.85926510		+0.51061577		
<i>a</i>	2.3336912	$\Omega$	176.03055		-0.50903154		-0.85943981		
<i>e</i>	0.1168871	<i>i</i>	26.21392		+0.05050120		+0.02519420		
<i>P</i>	3.57	<i>H</i>	14.1	<i>G</i>	0.15				

Residuals in seconds of arc

510908 675	0.0	0.5-	920430 413	0.6-	0.8+	930725 658	0.1-	0.1-
530316 024	1.2+	2.6-	920524 413	0.1+	1.1+	930725 658	0.0	0.1-
530320 024	1.2-	0.6+	920524 413	0.3+	0.3+	930809 596	1.5-	1.4+
861021 413	1.2+	0.9-	920619 413	0.3+	0.3+	930809 596	1.0-	0.0
861021 413	0.3-	0.1+	920619 413	0.2+	0.5+	930814 801	0.3-	0.1-
920326 413	0.6+	0.7+	930717 801	0.3+	0.5-	930814 801	0.7-	0.8-
920326 413	0.5+	0.5-	930717 801	0.4+	0.3-	930820 801	0.6+	0.5-
920329 413	0.5-	0.3-	930721 801	0.5+	0.9+	930820 801	0.6+	0.4-
920330 413	0.6-	0.4+	930721 801	0.5+	0.1-			
920404 413	0.2-	1.7-	930725 658	0.0	0.1-			

**(5692)\* 1992 FR = 1949 KK = 1966 FO = 1966 FS = 1970 CH = 1976 SN<sub>2</sub> = 1979 HV<sub>1</sub> = 1979 HT<sub>2</sub> = 1985 UW<sub>2</sub> = 1989 SO<sub>9</sub>**

Discovered 1992 Mar. 23 by K. Endate and K. Watanabe at Kitami.

Id. S. Nakano (*MPC* 20342)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

M		(2000.0)		P		Q		Nakano	
<i>n</i>	0.22745908	$\omega$	42.31144		-0.71446913		+0.69962457		
<i>a</i>	2.6578708	$\Omega$	182.13324		-0.68448814		-0.70120738		
<i>e</i>	0.1774177	<i>i</i>	11.94161		-0.14494773		-0.13723586		
<i>P</i>	4.33	<i>H</i>	12.2	<i>G</i>	0.15				

Residuals in seconds of arc

490529 760	0.2+	1.2+	890925 809	0.6+	0.8-	920326 399	0.2-	0.3+
490529 760	1.2+	1.1+	890925 809	0.8+	0.7-	920328 400	1.0+	0.7-
551116 675	0.2+	0.1+	890929 809	0.4+	0.7-	920328 400	0.4-	0.6-
551116 675	1.4+	1.1+	890929 809	0.4+	0.7-	920419 400	0.4+	1.2-
660316 330	0.4-	0.0	890929 809	0.6+	0.7-	920419 400	(3.5+	3.8+)
660326 330	(4.5-	4.2+)	890930 809	0.9-	0.8-	930723 801	0.4-	0.4-
700210 805	2.1-	2.0+	890930 809	0.6-	0.9-	930723 801	0.3-	0.0
700210 805	0.2+	0.1-	890930 809	0.5-	0.7-	930815 801	0.5-	0.3+
700210 805	0.5+	0.5+	891001 809	1.4+	2.1+	930815 801	0.2-	0.3+
760924 095	2.0-	0.6+	891001 809	1.5+	2.0+	930822 801	0.2-	0.1+
790420 095	1.0-	1.8+	920323 400	0.9+	1.6-	930822 801	0.1-	0.0
790425 095	1.6-	1.1-	920323 400	0.3+	0.5+	930912 596	0.5-	1.4-
851017 010	(11.3-	2.4-)	920324 400	1.0+	0.1+	930912 596	0.9-	1.3+
851018 010	(8.3-	2.4-)	920324 400	0.7-	1.6-	930912 596	0.4-	0.4-
890925 809	0.5+	0.8-	920326 399	0.2+	0.5+			

**(5693)\* 1993 EA = 1984 AJ**

Discovered 1993 Mar. 3 by Spacewatch at Kitt Peak.

Id. B. G. Marsden (*MPC* 22060)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	284.81470	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.68703159	$\omega$ 258.60945	+0.99360789	+0.07144495
<i>a</i>	1.2719936	$\Omega$ 97.24980	-0.03233376	+0.92191972
<i>e</i>	0.5854749	<i>i</i> 5.05463	-0.10815676	+0.38073566
<i>P</i>	1.43	<i>H</i> 17.0	<i>G</i> 0.15	

Residuals in seconds of arc

840110 675	0.8-	1.4+	890513 413	(1.7+	3.8-)	930413 691	0.1-	0.6-
840110 675	1.1+	0.1-	890513 413	0.8-	0.1+	930413 691	0.4-	0.1-
860408 413	1.3-	0.2+	930303 691	0.1+	0.4-	930427 691	0.3-	0.5-
860413 413	1.7+	1.1-	930303 691	0.1+	0.6-	930427 691	0.4-	0.4-
860413 413	0.3+	0.9+	930303 691	0.2+	0.5-	930511 413	1.3+	0.6+
860413 413	0.1+	1.0-	930303 691	0.2+	0.6-	930514 691	0.6-	0.2-
860413 413	0.5+	0.4-	930303 691	0.2+	0.5-	930514 691	0.6-	0.3-
890414 413	0.5+	0.9-	930303 691	0.0	0.3-	930514 691	0.1+	0.4+
890414 413	0.5-	0.9+	930304 691	0.0	0.2-	930526 691	0.8-	0.4+
890502 675	(3.7+	3.6-)	930304 691	0.1+	0.3-	930526 691	0.7-	0.5+
890502 675	(1.8+	3.6-)	930304 691	0.1-	0.3-	930526 691	0.4-	0.0
890503 675	(0.2-	3.6-)	930319 691	0.2+	0.4+	930617 691	0.7-	0.6-
890503 675	(8.8+	9.3-)	930319 691	0.0	0.2+	930617 691	1.1-	0.9-
890504 675	1.4+	1.7+	930319 691	0.0	0.3+	930617 691	1.3-	0.6-
890504 675	0.0	1.4+	930413 691	0.2-	0.7-			

**(5694)\* 3051 P-L = 1976 JT<sub>6</sub> = 1989 NG**

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld

on Palomar Schmidt plates taken by T. Gehrels.

Id. T. Kobayashi (*MPC* 15074)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Nakano

<i>M</i>	333.92699	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.23412056	$\omega$ 79.87055	+0.59464238	+0.78853904
<i>a</i>	2.6072120	$\Omega$ 227.80417	-0.79533732	+0.54838946
<i>e</i>	0.1686956	<i>i</i> 12.22408	-0.11763921	+0.27834365
<i>P</i>	4.21	<i>H</i> 13.2	<i>G</i> 0.15	

Residuals in seconds of arc

600924 675	0.1+	0.6+	601017 675	0.1+	0.7-	930523 801	1.0-	0.3+
600924 675	0.6+	0.0	601017 675	0.3-	2.0+	930523 801	0.5-	2.0+
600925 675	0.4+	0.3+	601022 675	0.4-	0.2+	930526 801	1.0-	1.2+
600925 675	0.1-	0.6+	601024 675	1.4+	0.3-	930526 801	0.9-	0.7+
600926 675	0.2-	0.7+	601026 675	0.3+	0.9-	930527 894	0.4+	2.2+
600926 675	0.9+	0.2-	760503 809	0.1+	0.5+	930527 894	(3.3+	1.0-)
600927 675	1.1-	0.1-	890702 675	0.2-	1.0-	930618 801	0.4+	0.4+
600928 675	0.1-	0.6+	890702 675	(0.6+	4.1-)	930618 801	0.3+	0.6+
600928 675	1.3-	1.2+	890704 675	1.3+	1.2-	930624 801	0.5-	1.3-
600929 675	0.9-	0.6-	890704 675	0.4+	2.0-	930624 801	1.9+	1.4-

**(5695)\* 4577 P-L = 1990 QK<sub>1</sub>**

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld

on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 17025), E. Bowell (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bowell

<i>M</i>	157.38808	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.22888391	$\omega$ 272.69299	+0.04623619	-0.99870938
<i>a</i>	2.6468289	$\Omega$ 174.52269	+0.98150114	+0.04150597
<i>e</i>	0.1376817	<i>i</i> 12.72098	+0.18578944	+0.02927164
<i>P</i>	4.31	<i>H</i> 12.9	<i>G</i> 0.15	

Residuals in seconds of arc

500618 675	0.1-	1.1+	900828 675	(0.4+	3.6-)	920102 801	0.2-	0.5-
500618 675	0.0	0.9+	900828 675	0.1+	1.8-	920102 801	0.2-	0.3-
600924 675	0.0	0.7+	900914 675	(0.3+	3.1-)	920108 801	0.4-	1.6-
600926 675	0.4-	0.5+	900914 675	0.4+	2.3-	920108 801	0.3-	1.6-
600927 675	0.6+	0.5+	900919 675	(0.2-	5.1-)	920207 801	0.3+	0.1+
600928 675	0.8+	0.0	900919 675	(1.3+	4.1-)	920207 801	0.4+	0.2+
601017 675	0.7-	0.6-	900925 809	1.0-	0.3+	930514 691	0.1-	0.8-
601022 675	0.1+	0.9-	900925 809	0.5-	0.2+	930514 691	0.1+	0.9-
601025 675	0.1-	1.3-	900925 809	0.1-	0.1+	930514 691	0.5+	0.8-
601026 675	0.3+	1.4-	900926 809	0.4+	0.5+	930614 691	0.1-	1.4-
900822 675	(0.6+	4.1-)	900926 809	0.5+	0.6+	930614 691	0.6-	1.1-
900822 675	(0.1-	3.7-)	900926 809	0.5+	0.6+	930614 691	0.4-	1.1-

**(5696)\* 4582 P-L = 1977 RG<sub>13</sub>**

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld

on Palomar Schmidt plates taken by T. Gehrels.

Id. G. V. Williams (*MPC* 17974)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	323.97377	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.17235235	$\omega$ 278.44883	+0.48365088	+0.87502169
<i>a</i>	3.1978487	$\Omega$ 20.51403	-0.77830635	+0.44065510
<i>e</i>	0.1549400	<i>i</i> 3.34810	-0.40040111	+0.20039992
<i>P</i>	5.72	<i>H</i> 12.3	<i>G</i> 0.15	

Residuals in seconds of arc

600924 675	0.2+	0.5-	601026 675	0.4+	0.2+	920311 691	0.6-	0.7-
600926 675	0.1-	0.7-	770909 675	0.2-	1.7-	920311 691	0.3-	0.6-
600927 675	0.4+	0.4-	770910 675	1.1+	0.1-	930517 675	0.5-	1.8-
600928 675	0.1-	0.4-	920229 691	0.1-	0.6-	930517 675	1.4-	1.1-
601017 675	0.1-	0.1-	920229 691	0.1-	0.5-	930519 675	0.5+	1.3-
601022 675	0.4+	0.5-	920229 691	0.1-	0.7-	930622 675	1.2+	1.4+
601025 675	0.3+	0.3-	920311 691	0.7-	0.8-	930624 675	0.2-	1.3+

**(5697)\* 6766 P-L = 4243 T-3**

Discovered 1960 Sept. 24 by C. J. van Houten and I. van Houten-Groeneveld

on Palomar Schmidt plates taken by T. Gehrels.

Id. S. Nakano (*MPC* 12700)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Nakano

<i>M</i>	31.19302	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.17658531	$\omega$ 110.16763	+0.20183519	+0.97875383
<i>a</i>	3.1465381	$\Omega$ 171.23841	-0.96360837	+0.20503879
<i>e</i>	0.0573084	<i>i</i> 13.71082	-0.17527543	-0.00017191
<i>P</i>	5.58	<i>H</i> 12.0	<i>G</i> 0.15	

Residuals in seconds of arc

600924 675	0.1+	0.7-	771016 675	0.3-	0.3+	820727 095	(3.4-	0.4+)
600926 675	0.8-	0.3-	771017 675	0.1+	1.3-	910208 675	0.8+	0.9-
600927 675	0.2+	0.2-	771017 675	0.3-	1.0+	910208 675	0.6+	1.2-

600928 675	0.1+	0.6+	771017 675	0.7+	1.3-	910210 675	0.9-	0.9+
601017 675	0.5-	0.6+	771017 675	0.5-	1.3+	910210 675	0.8-	0.6-
601022 675	(0.1-	2.9+)	771021 675	1.6+	0.5+	930717 801	0.0	0.4-
601026 675	0.8+	1.0+	771021 675	0.5+	1.7-	930717 801	0.5-	0.2-
771007 675	1.0+	1.1-	771021 675	0.6+	0.1+	930721 801	0.7-	0.2-
771011 675	0.5-	0.7+	771021 675	0.2+	0.5-	930814 801	1.2+	0.0
771011 675	0.1-	0.1-	771022 675	0.9-	2.4+	930814 801	0.6+	0.1+
771012 675	1.2-	0.6+	771022 675	1.6+	2.2-	930822 801	0.1-	0.6-
771012 675	0.7-	0.2+	771022 675	0.7+	0.8-	930822 801	0.4-	0.5-
771016 675	1.5-	0.4+	771022 675	0.6-	0.1+			

**(5698)\* 4121 T-1 = 1977 KP<sub>1</sub> = 1978 RT<sub>8</sub> = 1985 YX<sub>1</sub> = 1990 WA<sub>3</sub>**

Discovered 1971 Mar. 26 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. D. W. E. Green (k, *MPC* 19326), G. V. Williams (*ibid.*)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>	355.04484		(2000.0)		<b>P</b>		<b>Q</b>
<i>n</i>	0.17964417	$\omega$	154.74959		-0.65587894		+0.75440869
<i>a</i>	3.1107180	$\Omega$	74.25247		-0.69712584		-0.59199222
<i>e</i>	0.1260118	<i>i</i>	1.56432		-0.28954859		-0.28357140
<i>P</i>	5.49	<i>H</i>	12.3	<i>G</i>	0.15		

Residuals in seconds of arc

710324 675	1.5+	1.2-	710514 675	0.3-	1.4+	851219 010	(1.7-	8.0+)
710326 675	0.2-	0.8-	710516 675	0.8+	2.2+	901117 372	2.3+	0.5-
710326 675	0.2-	1.1-	770518 675	0.3-	0.1+	901117 372	0.1+	0.8+
710327 675	0.1-	0.5-	770519 675	0.2-	0.4+	901121 372	2.0-	0.6-
710402 675	(5.2+	3.0-)	780902 809	0.4+	0.8+	901121 372	1.0-	0.6+
710402 675	0.9-	0.5+	780902 809	0.1+	0.5-	930323 801	0.1-	0.2+
710416 675	(4.4+	3.2-)	780902 809	0.3+	1.3-	930323 801	0.5-	0.0
710416 675	0.8-	0.7-	780902 809	0.3+	0.5+	930327 801	0.3-	0.1+
710416 675	(4.1+	1.4-)	780902 809	0.1+	0.9-	930327 801	0.2-	0.1+
710416 675	0.7-	2.0-	851217 010	(3.2+	3.8-)	930419 801	0.9+	0.3+
710513 675	(1.1-	2.8+)	851217 010	(5.0+	2.7-)	930419 801	1.1+	0.5+

**(5699)\* 2141 T-3 = 1981 WX<sub>6</sub> = 1986 CW<sub>1</sub>**

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

Id. C. M. Bardwell (*MPC* 12573)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>	67.72066		(2000.0)		<b>P</b>		<b>Q</b>
<i>n</i>	0.26446977	$\omega$	147.38765		+0.70107643		-0.70927394
<i>a</i>	2.4037282	$\Omega$	257.97859		+0.63704334		+0.66936682
<i>e</i>	0.1731575	<i>i</i>	4.31774		+0.32041788		+0.22108493
<i>P</i>	3.73	<i>H</i>	13.9	<i>G</i>	0.15		

Residuals in seconds of arc

771007 675	0.1-	2.7-	860210 809	0.7-	0.4+	860217 809	1.3-	0.1-
771011 675	0.7-	0.7-	860210 809	0.5-	0.2+	860217 809	1.2-	0.0
771011 675	0.2-	0.3+	860212 809	0.3+	0.1+	880916 675	1.0+	1.1-
771012 675	0.3-	0.1+	860212 809	0.4+	0.1+	880916 675	0.7+	0.7-
771012 675	0.6+	0.1-	860212 809	0.4+	0.1+	921001 801	0.5+	0.7+
771016 675	0.0	2.2-	860213 809	0.7+	0.3-	921001 801	0.7+	0.4+
771016 675	0.6+	2.4-	860213 809	0.7+	0.1-	921020 596	0.7-	0.3-
771017 675	0.8-	0.3-	860213 809	0.6+	0.2-	921020 596	0.4-	0.1-

771017 675	0.1+	0.1-	860214 809	1.3+	0.1-	921021 403	1.5-	1.3+ Y
771021 675	2.1+	0.0	860214 809	0.6+	0.1-	921021 403	1.7-	1.0- Y
771021 675	(3.1+	1.6-)	860214 809	0.0	0.1-	921026 403	0.1+	0.8+ Y
771022 675	0.1+	2.4+	860215 809	0.2-	0.2+	921026 403	0.6-	1.0+ Y
771022 675	1.1-	1.9+	860215 809	0.1-	0.1+	921026 894	0.3+	0.7-
811124 095	2.0+	1.3+	860215 809	0.0	0.2+	921026 894	0.2-	0.2-
860209 809	0.1-	0.9-	860216 809	0.5-	0.6-	921028 801	0.4+	0.2+
860209 809	0.0	0.9-	860216 809	0.4-	0.6-	921028 801	0.5+	0.1+
860209 809	0.1+	0.9-	860216 809	0.3-	0.6-	921029 801	0.6+	0.4+
860210 809	0.7-	0.4+	860217 809	1.5-	0.1-	921029 801	0.6+	0.5+

**(5700)\* 5166 T-3 = 1985 QA**

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

Id. H. Kaneda (*MPC* 15910)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>	354.37685		(2000.0)		<b>P</b>		<b>Q</b>
<i>n</i>	0.23553682	$\omega$	124.67330		+0.32384151		+0.94406408
<i>a</i>	2.5967502	$\Omega$	163.87112		-0.92469179		+0.32973647
<i>e</i>	0.1634170	<i>i</i>	12.93984		-0.20017937		+0.00410898
<i>P</i>	4.18	<i>H</i>	13.4	<i>G</i>	0.15		

Residuals in seconds of arc

771011 675	1.0-	0.5+	850820 688	0.2-	0.7+	930610 657	0.2-	0.6-
771011 675	1.0-	0.1+	850820 688	1.2+	1.8+	930610 657	0.0	0.7-
771012 675	0.2+	1.4-	850822 688	1.6+	1.3+	930610 657	0.1-	0.7-
771012 675	0.1+	1.7-	850822 688	1.4-	1.3-	930617 801	0.2+	0.7-
771016 675	(1.1+	2.4-)	850912 688	(5.6-	1.8-)	930617 801	0.3-	0.8-
771016 675	1.5+	1.2-	850912 688	0.5-	0.9+	930624 801	0.2+	0.8-
771017 675	1.1+	1.5-	901120 413	0.8-	1.7-	930624 801	0.1+	0.1-
771017 675	0.7+	1.7-	901120 413	1.3+	0.6-	930706 657	0.3-	0.0
771021 675	0.4-	1.3+	930522 801	0.3-	0.1+	930706 657	0.2+	0.3-
771021 675	1.0-	1.4+	930522 801	0.0	0.2+	930706 657	0.0	0.2-
771022 675	0.4-	1.0+	930524 801	0.2-	0.3+			
771022 675	0.0	0.5+	930524 801	0.2-	0.3+			

**1957 JP = 1957 KD = 1971 UR<sub>2</sub> = 1993 PV<sub>2</sub>**

Id. S. Kanda (d, *MPC* 1740), G. V. Williams, L. D. Schmadel

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>	140.90301		(2000.0)		<b>P</b>		<b>Q</b>
<i>n</i>	0.23027270	$\omega$	212.56082		-0.06248235		+0.97807812
<i>a</i>	2.6361760	$\Omega$	54.61570		-0.85559078		+0.04998417
<i>e</i>	0.1389635	<i>i</i>	14.10197		-0.51386805		-0.20215036
<i>P</i>	4.28	<i>H</i>	12.0	<i>G</i>	0.15		

Residuals in seconds of arc

570424 076	2.0-	0.6-	570529 760	(1.1-	4.0-)	930816 691	0.4+	0.5+
570425 076	2.2-	1.4-	711021 095	0.2+	0.3-	930816 691	0.2+	0.3+
570506 760	2.2+	0.4+	930815 691	0.6-	0.5+	930816 691	0.6+	0.2+
570506 760	0.9+	2.2+	930815 691	0.8-	0.4+			
570529 760	1.3+	0.1+	930815 691	0.6-	0.4+			

**1977 QQ<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	270.26581	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.29677001	$\omega$	247.78702	+0.86231765	-0.40535049
<i>a</i>	2.2259874	$\Omega$	134.52874	+0.44847660	+0.88964349
<i>e</i>	0.4661403	<i>i</i>	25.19476	-0.23511063	+0.21029846
<i>P</i>	3.32	<i>H</i>	15.0	<i>G</i>	0.15

From 8 observations 1977 Aug. 21–1978 Jan. 6, mean residual 0<sup>u</sup>.71.**1978 RL<sub>7</sub> = 1993 QL<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	322.22348	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.19844190	$\omega$	162.22415	+0.92853392	-0.37105735
<i>a</i>	2.9110330	$\Omega$	219.56320	+0.33830726	+0.85889391
<i>e</i>	0.0746672	<i>i</i>	1.06901	+0.15288217	+0.35301232
<i>P</i>	4.97	<i>H</i>	13.5	<i>G</i>	0.15

Residuals in seconds of arc

780902 809	0.1+	0.3-	780906 809	0.1+	0.2+	930819 010	0.5+	0.3-
780902 809	0.1+	0.7-	780910 809	0.8-	1.7+	930819 010	0.1+	0.4-
780902 809	0.4-	0.2+	780910 809	0.2-	1.4-	930819 010	0.3-	0.2+
780902 809	0.3+	1.0+	780910 809	0.8+	0.1-			
780902 809	0.1-	0.4-	930818 010	0.3-	0.4+			

**1978 UK<sub>7</sub> = 1978 TA<sub>6</sub> = 1980 FT<sub>4</sub>**Id. G. V. Williams (*MPC* 20808)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	306.98430	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.25928073	$\omega$	199.22430	+0.75225845	-0.65878005
<i>a</i>	2.4356931	$\Omega$	201.99375	+0.60820499	+0.70060916
<i>e</i>	0.1756969	<i>i</i>	1.64846	+0.25336517	+0.27414530
<i>P</i>	3.80	<i>H</i>	15.0	<i>G</i>	0.15

Residuals in seconds of arc

781007 095	0.9+	1.2+	800316 809	0.1+	0.4+	930815 010	1.1+	0.7+
781027 675	0.7-	0.5-	800316 809	0.3-	0.2+	930815 010	0.0	0.4-
781028 675	0.2-	0.5-	800317 809	0.0	0.1-	930815 010	0.4-	0.0
781029 675	0.3-	0.3+	800317 809	0.4+	0.2-	930817 010	0.9-	0.4+
781128 675	0.1+	0.1-	800317 809	0.2+	1.3+			
781129 675	0.1+	0.1+	800317 809	0.3+	0.2-			

**1979 MN<sub>3</sub> = 1954 DH = 1980 XL<sub>3</sub> = 1993 PY<sub>4</sub>**

Id. B. G. Marsden, E. Bowell

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	186.25983	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.28736509	$\omega$	265.26996	-0.77557679	-0.63061154
<i>a</i>	2.2742946	$\Omega$	235.63180	+0.59197127	-0.71092102
<i>e</i>	0.0682979	<i>i</i>	1.97559	+0.21920460	-0.31132040
<i>P</i>	3.43	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

540226 675	0.1+	0.6-	790724 675	0.6+	0.0	930815 010	0.9+	0.8-
540226 675	0.7-	1.3-	790724 413	1.0-	0.4+	930815 010	0.7-	1.3-
790623 413	1.1-	0.8-	790725 675	1.1-	0.6+	930816 010	0.3-	0.4-
790624 413	1.1+	0.3+	790727 675	2.0+	0.4-	930816 010	0.0	0.2+
790625 413	0.3+	0.2-	790823 675	1.4+	1.1+	930816 010	1.1+	0.1-
790629 413	2.1-	0.7-	801210 095	(15.2+	9.5+)			

**1981 EO<sub>4</sub> = 1993 PK**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	332.40159	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.19033557	$\omega$	56.79917	+0.97521187	+0.16139928
<i>a</i>	2.9931105	$\Omega$	293.51256	-0.21354585	+0.86569224
<i>e</i>	0.1175911	<i>i</i>	9.50147	+0.05796538	+0.47384302
<i>P</i>	5.18	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

810214 413	0.5+	1.5-	810312 413	1.2+	0.1-	930813 691	0.1-	0.7-
810302 413	0.7-	0.0	810409 413	1.8-	0.1+	930813 691	0.2-	0.0
810307 413	1.1-	1.3+	810430 413	1.8+	0.7-	930813 691	0.1-	0.3-
810307 413	1.5+	0.6+	810502 413	0.9+	2.2-	930817 691	0.5+	0.5+
810310 413	1.5-	1.4+	930722 691	0.3-	0.4+	930817 691	0.2+	0.2+
810310 413	(3.1+	0.7+)	930722 691	0.3+	0.2+	930817 691	0.2+	0.4+
810312 413	0.4-	0.8+	930722 691	0.7-	0.5-			

**1981 ET<sub>7</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	252.31881	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.27681594	$\omega$	149.53683	+0.10142908	-0.99262846
<i>a</i>	2.3317142	$\Omega$	294.57096	+0.89740903	+0.12007256
<i>e</i>	0.0924817	<i>i</i>	4.18313	+0.42938231	-0.01647207
<i>P</i>	3.56	<i>H</i>	15.0	<i>G</i>	0.15

Residuals in seconds of arc

790920 675	0.4-	0.1-	810311 413	0.3-	0.3-	810502 413	1.7+	0.1-
790921 675	0.5+	0.0	810315 413	(2.2-	1.0+)	930815 010	0.6-	0.4+
810209 413	0.5+	0.8-	810315 413	0.6+	0.0	930815 010	0.3-	0.6-
810213 413	1.6+	1.1-	810405 413	0.6-	0.3+	930816 010	0.3-	0.3-
810301 413	0.8-	1.0+	810405 413	1.4-	0.1+	930816 010	0.5+	0.7-
810301 413	0.7+	1.1-	810412 413	2.0-	1.5+	930816 010	0.9+	0.9+
810307 413	0.9-	0.8+	810412 413	(3.3+	1.5-)			
810307 413	0.8+	0.1-	810430 413	0.2+	0.8-			

**1981 EU<sub>7</sub> = 1993 OS<sub>6</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	299.87553	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.27090734	$\omega$	84.62905	+0.95629805	-0.27543809
<i>a</i>	2.3654959	$\Omega$	291.33016	+0.20869906	+0.87802430
<i>e</i>	0.1218114	<i>i</i>	6.04661	+0.20478950	+0.39141688
<i>P</i>	3.64	<i>H</i>	15.5	<i>G</i>	0.15

Residuals in seconds of arc

810202 413	0.2+	0.3-	810311 413	(4.6+	1.0-)	930720 809	0.4+	0.3+
810214 413	1.6-	0.2+	810315 413	0.9-	0.8+	930720 809	0.6-	0.0
810301 413	1.8+	1.0-	810412 413	1.6-	1.4+	930720 809	0.3-	0.2+
810307 413	0.6+	0.0	810412 413	1.4+	1.2-	930724 809	0.5+	0.6-

**1981 EH<sub>13</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	355.20125	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.26516354	$\omega$	65.24359	+0.78714266	+0.61467884
<i>a</i>	2.3995337	$\Omega$	256.78753	-0.58303978	+0.71472710
<i>e</i>	0.2142393	<i>i</i>	2.98864	-0.20117416	+0.33366913
<i>P</i>	3.72	<i>H</i>	15.5	<i>G</i>	0.15

## Residuals in seconds of arc

780707 675	0.6+	0.1-	810312 413	0.6+	0.2+	930814 691	0.7-	0.1+
780708 675	0.7-	0.3+	810408 413	0.1-	0.7-	930814 691	0.5-	0.1-
810212 413	1.0+	0.4-	810408 413	(0.6+	4.3-)	930814 691	0.4-	0.1+
810212 413	1.3-	0.0	810409 413	0.5-	1.2-	930814 010	2.2+	0.3-
810301 413	0.9-	0.3+	810503 413	(3.1-	2.1+)	930814 010	0.2+	0.1-
810308 413	0.9-	1.3+	930813 691	0.5-	0.1+	930814 010	1.1+	0.5+
810308 413	0.9+	0.2-	930813 691	0.4-	0.0	930815 010	0.3-	0.4-
810312 413	1.1+	0.6+	930813 691	0.6-	0.0			

**1981 EU<sub>18</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.18201487	$\omega$	199.45665	+0.31297320	+0.94975456
<i>a</i>	3.0836480	$\Omega$	88.78199	-0.87089212	+0.28855555
<i>e</i>	0.1580930	<i>i</i>	0.21478	-0.37893890	+0.12125166
<i>P</i>	5.41	<i>H</i>	13.5	<i>G</i>	0.15

## Residuals in seconds of arc

810202 413	0.1+	0.8-	810329 413	1.1-	0.0	881007 675	0.5-	1.7-
810213 413	0.0	0.2+	810329 413	0.5+	0.5-	881007 675	0.5+	1.9-
810302 413	0.6-	0.9+	810407 413	0.1-	0.2-	881009 675	0.5+	0.7+
810303 413	0.5-	0.7-	810407 413	0.4+	0.3-	881009 675	1.3+	1.4-
810307 413	1.6-	0.5+	810408 413	0.9+	0.3-	930720 809	0.0	1.0+
810307 413	0.6-	0.3-	810408 413	1.0-	0.4-	930720 809	0.4-	0.7+
810311 413	0.7-	0.2+	810411 413	(2.1-	1.4+)	930720 809	1.0-	0.4-
810311 413	0.2-	0.2+	810411 413	1.5+	0.3-	930724 809	1.3+	1.0-
810316 413	0.8-	0.4-	810502 413	1.6+	1.5-			
810316 413	(2.7+	1.3-)	810503 413	0.7+	0.9-			

**1981 EX<sub>26</sub> = 1993 QJ<sub>2</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.26122353	$\omega$	79.06251	+0.14519678	+0.98925325
<i>a</i>	2.4236013	$\Omega$	199.31162	-0.92686415	+0.12991530
<i>e</i>	0.2499432	<i>i</i>	2.98165	-0.34618022	+0.06708226
<i>P</i>	3.77	<i>H</i>	15.0	<i>G</i>	0.15

## Residuals in seconds of arc

810212 413	0.7-	0.6+	810315 413	0.3+	0.3-	810410 413	1.1+	0.8-
810212 413	0.9-	0.1+	810315 413	(3.0+	1.2-)	810426 413	1.1+	1.7-
810213 413	0.6+	0.5+	810405 413	(3.2+	2.3-)	810501 413	1.0-	0.1+
810302 413	1.2+	0.2+	810405 413	(3.0+	1.0-)	810503 413	(1.4-	2.4-)
810306 413	0.8-	0.4+	810406 413	1.4-	1.0+	930816 010	0.6+	0.0
810306 413	0.3-	0.7+	810406 413	1.0+	0.6-	930816 010	0.0	0.2+
810311 413	0.4+	0.5-	810407 413	0.3-	0.4+	930816 010	0.1-	0.2-
810311 413	0.2+	0.5-	810410 413	0.3-	1.3+	930817 010	0.8-	0.6+

**1981 EQ<sub>33</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.26706552	$\omega$	1.85533	+0.44879449	+0.88985691
<i>a</i>	2.3881274	$\Omega$	294.81876	-0.82105439	+0.37433811
<i>e</i>	0.1330876	<i>i</i>	5.18889	-0.35277924	+0.26081729
<i>P</i>	3.69	<i>H</i>	16.0	<i>G</i>	0.15

## Residuals in seconds of arc

780707 675	0.4-	0.3+	810307 413	1.5+	0.4-	930815 010	0.0	1.4+
780708 675	0.3-	0.1+	810311 413	0.5-	1.6+	930816 010	0.7-	0.3-
780709 675	0.7+	0.3-	810311 413	2.3-	1.3-	930816 010	0.4+	0.1+
810202 413	0.9+	0.7+	810315 413	(4.6+	1.7-)	930816 010	0.7-	0.7-
810301 413	0.5+	0.5-	930815 010	1.0+	0.6-			

**1981 EL<sub>36</sub> = 1993 OK<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.26047972	$\omega$	351.96857	+0.07174235	+0.99650381
<i>a</i>	2.4282130	$\Omega$	282.13797	-0.91266673	+0.04826903
<i>e</i>	0.1710579	<i>i</i>	2.51007	-0.40235865	+0.06819287
<i>P</i>	3.78	<i>H</i>	16.5	<i>G</i>	0.15

## Residuals in seconds of arc

810307 413	0.0	0.2-	810315 413	2.8+	0.9-	930720 809	0.1-	0.7-
810311 413	3.0-	1.6+	930720 809	0.0	0.0	930724 809	0.2+	0.9+
810315 413	0.2+	0.5-	930720 809	0.1-	0.2-			

**1981 ER<sub>47</sub> = 1993 FZ<sub>3</sub>**

Id. E. Bowell (1951 observations), G. V. Williams

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.24683010	$\omega$	343.74656	+0.93977724	-0.34082819
<i>a</i>	2.5169271	$\Omega$	36.21323	+0.31820909	+0.84516270
<i>e</i>	0.1742041	<i>i</i>	2.48260	+0.12474660	+0.41174768
<i>P</i>	3.99	<i>H</i>	14.5	<i>G</i>	0.15

## Residuals in seconds of arc

511130 675	0.0	0.3-	810306 413	2.0-	0.5-	810426 413	(4.8+	1.6-)
511130 675	0.0	0.1+	810311 413	(6.1+	2.9-)	810501 413	2.3+	1.1-
810212 413	1.2+	0.3-	810315 413	0.8-	0.6+	930324 691	0.1+	0.1-
810213 413	1.3+	1.0+	810405 413	0.5-	0.2+	930324 691	0.3-	0.3-
810302 413	(6.1+	1.9-)	810410 413	0.9-	0.4+	930324 691	0.0	0.0

**1982 FX<sub>3</sub> = 1987 CM**Id. T. Kobayashi (*MPC* 13856)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Bowell			
<i>M</i>	(2000.0)	<b>P</b>	<b>Q</b>		
<i>n</i>	0.17442429	$\omega$	226.59126	-0.51446531	+0.85727265
<i>a</i>	3.1724740	$\Omega$	12.49300	-0.75726143	-0.44312747
<i>e</i>	0.1152784	<i>i</i>	5.36476	-0.40234385	-0.26214814
<i>P</i>	5.65	<i>H</i>	12.0	<i>G</i>	0.15

## Residuals in seconds of arc

511130 675	0.2-	0.4+	820330 809	0.3-	0.5-	820401 809	0.3+	0.1+
511130 675	0.2+	0.3-	820330 809	0.1-	0.5-	870131 046	0.3-	0.5+
820328 809	0.4+	0.4+	820330 809	0.3-	0.8-	870201 046	0.2+	0.7-
820328 809	0.0	0.6+	820331 809	0.4-	0.1+	870201 046	1.5+	0.4+
820328 809	0.1-	0.1+	820331 809	0.4-	0.1-	870202 046	0.1-	2.3-
820329 809	0.1-	0.5+	820331 809	0.5-	0.1+	870202 046	1.5-	0.4-
820329 809	0.4+	0.4+	820401 809	0.6+	0.2-	870203 046	0.5+	1.1+
820329 809	0.1+	0.3+	820401 809	0.5+	0.1-	870203 046	0.4-	1.3+

**1982 SM<sub>6</sub> = 1971 TQ<sub>1</sub> = 1986 XS = 1993 RJ**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	326.59743	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.26679549	$\omega$ 15.90974	+0.92480761	-0.38019046
<i>a</i>	2.3897386	$\Omega$ 6.48501	+0.33454736	+0.79566181
<i>e</i>	0.1298275	<i>i</i> 6.93752	+0.18113242	+0.47156919
<i>P</i>	3.69	<i>H</i> 14.0	<i>G</i> 0.15	

Residuals in seconds of arc

711012 095	0.7-	1.7+	820928 095	1.3-	1.4-	930912 400	0.4-	0.8+
820916 095	1.2+	0.0	861202 688	0.1+	0.3-	930913 400	0.6-	0.2+
820919 095	1.5+	1.2-	861202 688	(3.4+	0.3+)	930913 400	(1.0+	3.2+)
820927 095	(1.1-	3.1+)	930912 400	0.4+	0.3+			

**1983 RB**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

(M-N) Williams

<i>M</i>	14.27402	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.29750032	$\omega$ 114.77121	+0.25605553	+0.96476340
<i>a</i>	2.2223430	$\Omega$ 169.50787	-0.96262593	+0.26020427
<i>e</i>	0.5060338	<i>i</i> 19.42346	-0.08824331	-0.03905536
<i>P</i>	3.31	<i>H</i> 15.5	<i>G</i> 0.15	

Residuals in seconds of arc

830907 675	1.0-	0.8+	830914 675	0.0	1.2+	930816 675	0.6+	1.3-
830907 675	0.2-	0.3-	830916 474	0.1+	1.1+	930817 675	0.5+	1.7-
830909 675	1.2-	0.6-	830916 474	0.5+	1.3+	930817 675	0.4-	1.3-
830909 675	0.4-	0.9-	830928 474	0.3+	0.7-	930818 675	1.1+	0.1-
830909 675	0.5-	0.9-	830928 474	0.7+	0.2-	930902 413	0.8-	0.6+
830911 688	0.5+	0.6-	831004 801	0.1+	1.2-	930902 413	0.7-	0.3+
830911 688	1.1-	1.3+	831005 474	(3.0+	0.8-)	930912 670	0.2-	0.8-
830912 688	1.1+	1.7+	831005 474	2.5+	0.3+	930912 670	(0.5-	2.4-)
830914 688	(2.8+	4.4-)	831101 801	1.0-	0.9-	930912 670	0.5-	0.9+
830914 688	(2.1+	4.3-)	930814 675	0.1-	1.5+	930912 670	0.2+	1.2+
830914 675	0.7+	1.7-	930814 675	0.4-	0.1-			

**1983 RM<sub>3</sub> = 1988 AM<sub>1</sub>**Id. B. G. Marsden (*MPC* 12964)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	263.81341	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.29640910	$\omega$ 129.08534	+0.06577895	-0.99460851
<i>a</i>	2.2277940	$\Omega$ 316.93258	+0.87542048	+0.09607957
<i>e</i>	0.1451240	<i>i</i> 6.74218	+0.47886544	-0.03902082
<i>P</i>	3.33	<i>H</i> 13.5	<i>G</i> 0.15	

Residuals in seconds of arc

830901 809	(2.1+	3.2-)	830912 809	0.4+	1.1-	880120 046	0.5-	0.1+
830901 809	(2.1+	3.3-)	830912 809	0.4+	1.2-	880120 046	0.1+	1.4+
830901 809	(2.1+	3.1-)	830912 809	0.3+	1.2-	880120 046	0.4-	1.9-
830902 809	0.3+	0.2+	830914 809	0.2+	0.4-	880120 046	0.8-	1.8-
830902 809	0.7+	0.2-	830914 809	0.8+	0.3-	880211 809	0.0	1.2+
830902 809	1.0+	0.2-	830916 809	0.2-	0.2-	880215 809	0.6+	0.8+
830903 809	1.0-	0.5-	830916 809	0.4+	0.7-	880216 809	0.1+	0.2-
830903 809	(2.4+	0.7+)	871224 010	(2.3-	0.1-)	880216 809	0.0	0.4+
830903 809	0.6-	0.3-	871224 010	0.3+	0.8+	880216 809	0.8-	0.7+
830904 809	0.1+	0.0	871224 010	0.4-	0.9+	880217 809	0.0	0.1+
830904 809	0.2+	0.0	880110 046	1.4+	1.5+	880217 809	0.5-	0.4-

830904 809	0.5+	0.2-	880110 046	2.0+	1.5+	880217 809	0.9-	0.1-
830906 809	0.3+	0.4+	880112 046	(3.4+	0.8+)	880221 809	0.7-	0.1-
830906 809	0.3+	0.1+	880112 046	(2.6+	0.3+)	880221 809	0.9-	0.5-
830906 809	0.5+	0.1-	880113 046	0.3+	0.0	880221 809	1.7-	0.1+
830907 809	1.5-	0.1+	880113 046	0.8+	1.7-	880223 809	0.4-	0.9-
830907 809	0.4-	0.0	880114 046	1.0-	0.5-	880223 809	(1.9-	0.8-)
830907 809	(0.3-	3.1+)	880114 046	0.3+	0.5-	880223 809	(2.3-	1.0-)
830908 809	0.7+	0.0	880115 046	1.4+	1.1-	930816 010	0.1-	2.0+
830908 809	0.9+	0.1-	880115 046	0.9+	0.5-	930816 010	1.0-	1.3+
830908 809	0.7+	0.2-	880116 046	(2.8+	0.6+)	930816 010	0.9-	1.9+
830909 809	1.4-	0.7-	880116 046	0.1+	0.7+	930817 010	1.0-	0.4+
830909 809	0.6-	1.1+	880119 046	(2.5+	0.2+)			
830909 809	0.1+	0.0	880119 046	(3.5+	0.6-)			

**1983 YK = 1985 FS<sub>1</sub> = 1993 PF<sub>7</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	179.73344	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.16938243	$\omega$ 354.32528	-0.91031770	-0.41015473
<i>a</i>	3.2351207	$\Omega$ 161.15802	+0.38620869	-0.89002942
<i>e</i>	0.0349332	<i>i</i> 9.91885	+0.14887755	-0.19904956
<i>P</i>	5.82	<i>H</i> 12.5	<i>G</i> 0.15	

Residuals in seconds of arc

831229 022	(4.3-	2.0+)	840111 022	(2.7+	2.4-)	930815 010	0.3-	0.0
831229 022	1.5-	2.5+	850322 688	0.4-	0.2-	930815 010	0.3-	1.4-
840110 022	1.0+	1.6-	850322 688	0.0	1.3-	930817 010	0.4-	0.2-
840111 022	0.6+	1.6-	930815 010	1.4+	0.3-			

**1984 CM = 1993 HH<sub>6</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	135.44807	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.23489566	$\omega$ 62.60448	+0.01849453	-0.99687063
<i>a</i>	2.6014734	$\Omega$ 26.67302	+0.84619512	-0.02533766
<i>e</i>	0.0819248	<i>i</i> 9.85824	+0.53255213	+0.07487953
<i>P</i>	4.20	<i>H</i> 12.5	<i>G</i> 0.15	

Residuals in seconds of arc

840128 688	1.8+	0.3+	840226 688	1.0+	0.5+	930501 809	0.5-	0.2+
840128 688	(5.2+	0.7-)	840226 688	0.2+	0.4-	930501 809	0.7-	0.4-
840205 688	1.5-	0.4+	930429 809	0.7+	0.2+	930501 809	0.8-	0.6-
840205 688	1.4-	0.8-	930429 809	1.3+	0.7+			

**1984 HL<sub>1</sub> = 1970 EF = 1989 VK<sub>5</sub>**Id. E. Bowell (*MPC* 18624), G. V. Williams

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bowell

<i>M</i>	302.51775	(2000.0)	<i>P</i>	<i>Q</i>
<i>n</i>	0.28785825	$\omega$ 123.08876	-0.79326201	-0.60872044
<i>a</i>	2.2716963	$\Omega$ 19.42575	+0.54371855	-0.71849921
<i>e</i>	0.1555808	<i>i</i> 2.40521	+0.27405387	-0.33647929
<i>P</i>	3.42	<i>H</i> 13.1	<i>G</i> 0.15	

Residuals in seconds of arc

510811 675	0.4+	0.3-	840427 809	0.4-	0.5-	840505 809	0.0	0.0
510811 675	0.4-	0.1+	840427 809	0.2-	0.7-	891103 675	0.1-	0.8-
551025 675	0.1+	0.2+	840428 809	0.2-	0.1+	891103 675	0.7+	1.4-
551025 675	0.1-	0.7+	840428 809	0.2-	0.2-	891104 675	0.6+	0.7-
700307 095	0.1-	0.2-	840501 809	0.4+	0.5-	891104 675	(1.1+	2.2-)

840329 095 (4.5+ 4.5-) 840501 809 0.3+ 0.3-  
 840404 095 (5.8+ 2.7-) 840505 809 0.5- 0.1+

**1985 TU = 1964 WE<sub>1</sub> = 1993 OK<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	294.03610	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.23228976	$\omega$ 153.02660	+0.84017806	-0.54180215
<i>a</i>	2.6208933	$\Omega$ 239.79919	+0.49253044	+0.78045980
<i>e</i>	0.2209332	<i>i</i> 1.55670	+0.22696825	+0.31198226
<i>P</i>	4.24	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

641130 330	0.3-	2.9+	851015 688	2.3-	0.1-	930720 809	0.1-	0.2-
850920 095	1.7+	2.1+	851018 095	(4.5-	1.8+)	930720 809	0.2-	0.8+
850922 095	1.5-	1.6+	851020 688	0.9+	1.0-	930720 809	0.6-	0.3+
851011 010	0.3-	0.9+	851020 688	1.3+	2.2-	930724 809	0.8+	0.4+
851011 010	0.6-	1.3-	851107 688	2.3+	0.4-			
851015 688	1.6-	0.8-	851107 688	1.2+	0.5-			

**1987 RC<sub>1</sub> = 1988 VU<sub>3</sub>**Id. T. Kobayashi (*MPC* 14197)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bowell

<i>M</i>	46.14288	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.17190989	$\omega$ 254.28028	+0.35373058	+0.93525747
<i>a</i>	3.2033334	$\Omega$ 36.44373	-0.84958953	+0.32706664
<i>e</i>	0.1341557	<i>i</i> 1.25081	-0.39124457	+0.13535465
<i>P</i>	5.73	<i>H</i> 11.5	<i>G</i> 0.15	

Residuals in seconds of arc

531031 675	0.2-	0.1+	870918 809	0.2+	0.3+	881114 399	1.6+	0.2-
531031 675	0.1-	0.6+	870924 809	0.3+	0.6+	881114 399	0.0	0.5+
870913 809	1.3-	0.2-	870924 809	0.9+	0.6+	881117 399	1.2-	1.0+
870913 809	1.8-	0.2-	870924 809	0.4+	0.5+	881117 399	1.2-	0.3+
870913 809	0.6-	0.5-	870924 071	(4.7-	2.7-)	881117 399	0.4+	0.1-
870914 809	1.8-	1.1-	870924 071	(5.0-	3.7-)	881117 399	1.9-	0.3-
870914 809	(2.1-	1.2-)	870925 809	0.6+	0.6+	910320 809	0.0	1.1+
870914 809	1.1-	0.1-	870925 809	0.9+	0.7+	910320 809	0.3+	1.1+
870916 809	0.3-	0.1-	870925 809	1.0+	0.6+	910320 809	0.5+	0.9+
870916 809	0.3-	0.0	870926 809	0.5+	0.7+	910321 809	0.4-	0.3+
870916 809	0.2-	0.2-	870926 809	0.6+	0.7+	910321 809	0.1-	0.5+
870917 809	0.3-	0.1+	870926 809	0.7+	0.6+	910321 809	0.0	0.7+
870917 809	0.4-	0.0	870927 809	0.3+	0.3+	910322 809	0.5+	0.1+
870917 809	0.3-	0.1+	870927 809	0.3+	0.1+	910322 809	0.8+	0.3+
870918 809	0.0	0.4+	870927 809	0.4+	0.0	910322 809	1.0+	0.7+
870918 809	0.1+	0.5+	881114 399	2.1+	0.4-			

**1988 RD<sub>1</sub> = 1993 PW<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	331.69158	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18989923	$\omega$ 43.30544	+0.99282405	-0.04347960
<i>a</i>	2.9976936	$\Omega$ 318.79068	-0.01939269	+0.86068908
<i>e</i>	0.1070247	<i>i</i> 9.73503	+0.11800136	+0.50727096
<i>P</i>	5.19	<i>H</i> 12.5	<i>G</i> 0.15	

Residuals in seconds of arc

880907 400	0.2+	1.8+	880910 675	1.1+	1.2-	930815 010	0.3+	0.5-
880907 400	1.7-	0.2-	880916 675	0.1-	0.6-	930815 010	0.0	0.4-

880907 400	0.1-	0.7+	880916 675	0.7+	0.9-	930816 010	0.3+	0.6-
880909 054	0.1+	1.5+	880916 054	0.5-	0.4+	930816 010	0.7-	0.9+
880909 054	0.5+	1.1-	880920 054	0.7-	0.6+	930816 010	0.1+	0.6+
880910 675	0.9+	1.2-	880920 054	0.4-	0.2+			

**1988 RO<sub>2</sub> = 1993 PQ<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	322.59653	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18814401	$\omega$ 56.71850	+0.95558490	-0.27256977
<i>a</i>	3.0163087	$\Omega$ 318.78515	+0.18026386	+0.84144495
<i>e</i>	0.1192821	<i>i</i> 9.79447	+0.23315753	+0.46655773
<i>P</i>	5.24	<i>H</i> 13.5	<i>G</i> 0.15	

Residuals in seconds of arc

880908 054	0.6+	1.0+	880916 054	0.4+	0.3+	930816 010	0.3-	0.7-
880908 054	0.3+	0.4-	930815 010	0.3+	0.2-	930816 010	0.4-	0.1+
880909 054	1.4+	0.5+	930815 010	0.8+	0.8+	930816 010	0.3-	0.0

**1988 RO<sub>4</sub> = 1993 PZ<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	287.34861	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18997148	$\omega$ 243.79248	+0.69063104	-0.72079864
<i>a</i>	2.9969335	$\Omega$ 162.11967	+0.71296691	+0.66491007
<i>e</i>	0.1231146	<i>i</i> 11.07437	+0.12127223	+0.19581601
<i>P</i>	5.19	<i>H</i> 13.0	<i>G</i> 0.15	

Residuals in seconds of arc

880901 809	0.4-	0.2-	880912 809	0.3+	0.2-	880920 809	0.2+	1.5+
880901 809	0.4-	0.0	880912 809	0.3+	0.1-	881004 807	0.2-	0.0
880901 809	0.4-	0.1-	880912 809	0.3+	0.2+	881007 807	0.2-	0.5-
880903 809	0.5-	1.1-	880915 809	0.8+	0.5+	881103 807	0.3+	1.0-
880903 809	0.2-	1.1-	880915 809	0.7+	0.1+	881105 807	0.4+	1.5-
880903 809	0.1-	1.3-	880915 809	0.8+	0.2+	930814 010	0.4+	0.5+
880906 809	0.4-	0.3-	880918 809	0.3+	1.2+	930814 010	0.7-	0.3-
880906 809	0.4-	0.4-	880918 809	0.2+	1.1+	930814 010	0.2+	0.3-
880908 809	0.3-	0.3-	880918 809	0.6+	1.2+	930815 010	0.2+	0.2-
880908 809	0.1-	0.4-	880920 809	0.9-	1.2+			
880908 809	0.1-	0.3-	880920 809	0.4-	1.4+			

**1988 RW<sub>10</sub> = 1993 OJ<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	304.87798	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18274883	$\omega$ 35.16765	+0.98121310	-0.19289894
<i>a</i>	3.0753861	$\Omega$ 335.95373	+0.17510391	+0.89760203
<i>e</i>	0.1507363	<i>i</i> 0.46307	+0.08099054	+0.39635917
<i>P</i>	5.39	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

880914 807	0.4-	0.1+	881007 807	0.2-	0.1-	930720 809	0.3-	0.2+
880915 807	0.4+	0.1+	881008 807	0.4-	0.3+	930720 809	1.5-	0.1-
880916 807	0.2+	0.6+	881008 807	0.4+	0.4+	930720 809	0.5-	0.1-
881004 807	0.8-	0.1+	881103 807	0.5-	2.1-	930724 809	2.4+	0.4-
881005 807	0.2-	1.0+	881105 807	1.6+	0.6-			

**1988 RX<sub>12</sub> = 1992 JF<sub>4</sub>**

Id. E. Bowell (1951 observations), G. V. Williams



Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	325.35954	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.18847582	$\omega$ 168.18766	+0.99813176 -0.04369664
<i>a</i>	3.0127676	$\Omega$ 194.52241	+0.03216925 +0.97006284
<i>e</i>	0.1082426	<i>i</i> 9.80511	+0.05194351 +0.23889056
<i>P</i>	5.23	<i>H</i> 13.5	<i>G</i> 0.15

Residuals in seconds of arc

510807 675	2.0-	0.1+	880914 807	0.3-	1.5+	881103 807	0.7+	0.1+
510807 675	1.7+	1.0+	880915 807	0.3-	1.6+	881105 807	0.4-	1.0+
510922 675	0.7+	0.8-	880916 675	0.1+	0.4-	920506 691	0.1-	0.1+
510922 675	0.4-	0.7-	880916 675	0.7+	0.2-	920506 691	0.2+	0.1-
880911 675	1.0-	1.5-	881005 807	0.2+	0.4-			
880911 675	0.2-	1.5-	881007 807	0.5+	0.2+			

**1989 EJ<sub>1</sub> = 1993 PR<sub>7</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden	
<i>M</i>	73.37604	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.30866770	$\omega$ 76.57934	-0.44382301 +0.89596661
<i>a</i>	2.1684126	$\Omega$ 167.03581	-0.84768919 -0.41387930
<i>e</i>	0.1158721	<i>i</i> 4.16099	-0.29059280 -0.16108310
<i>P</i>	3.19	<i>H</i> 14.5	<i>G</i> 0.15

Residuals in seconds of arc

890310 881	0.9+	2.4-	890315 881	1.5-	1.5+	Y 930815 010	0.4+	0.2+
890310 881	0.4+	0.1+	890329 881	1.0+	0.1+	930815 010	0.3+	1.1-
890311 881	0.3+	0.4+	Y 890329 881	1.0-	0.3-	930817 010	0.8-	0.8+
890311 881	0.1-	0.4+	Y 930815 010	0.1+	0.0			

**1989 PK = 1993 QQ**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	348.60059	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.23538575	$\omega$ 5.80073	+0.89547198 +0.40593039
<i>a</i>	2.5978612	$\Omega$ 328.19641	-0.42105284 +0.63941025
<i>e</i>	0.3173962	<i>i</i> 20.27483	-0.14437601 +0.65297401
<i>P</i>	4.19	<i>H</i> 13.0	<i>G</i> 0.15

Residuals in seconds of arc

890809 675	0.2-	0.0	890905 675	0.0	0.4-	930822 675	0.9+	1.1+
890809 675	0.3-	0.0	890907 675	(5.4-	6.2+)	930822 675	0.4-	0.6+
890810 675	0.0	0.3+	890907 675	0.1-	0.6+			
890905 675	0.5+	0.4-	930820 675	0.4-	1.7-			

**1989 SR<sub>2</sub> = 1993 OG<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden	
<i>M</i>	219.75685	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.20020127	$\omega$ 342.65325	+0.13227194 -0.98951692
<i>a</i>	2.8939532	$\Omega$ 99.71645	+0.91625337 +0.09974937
<i>e</i>	0.0432818	<i>i</i> 3.37166	+0.37813212 +0.10443341
<i>P</i>	4.92	<i>H</i>	<i>G</i>

Residuals in seconds of arc

890926 809	0.4+	0.1+	891003 809	0.1+	1.4+	891008 809	1.2-	0.8-
890926 809	1.1-	0.8-	891003 809	0.3+	1.4+	930720 809	0.1+	0.1+
890926 809	0.8-	0.6-	891007 809	0.3-	0.1+	930720 809	1.0-	0.2+
890928 809	1.2+	0.5-	891007 809	0.1-	0.5+	930720 809	0.4+	0.2+
890928 809	0.2+	0.7-	891007 809	0.6-	0.9+	930724 809	0.5+	0.4-

890928 809	0.7+	1.1-	891008 809	1.0+	0.5-
891003 809	0.5+	1.0+	891008 809	0.2-	0.4-

**1989 TB<sub>5</sub> = 1989 SK<sub>8</sub> = 1993 QG<sub>1</sub>**

Id. S. Nakano (d, MPC 16003), B. G. Marsden

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden	
<i>M</i>	52.45969	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.22504646	$\omega$ 112.73337	+0.13611357 +0.99025868
<i>a</i>	2.6768329	$\Omega$ 165.00065	-0.94545808 +0.13868855
<i>e</i>	0.0375301	<i>i</i> 6.50942	-0.29594276 +0.01237887
<i>P</i>	4.38	<i>H</i> 14.0	<i>G</i> 0.15

Residuals in seconds of arc

890928 809	1.0+	0.6+	891007 809	0.4+	0.0	930816 010	1.4+	0.1-
890928 809	0.5+	0.9+	891007 809	0.2-	0.7+	930816 010	0.7+	0.7+
890928 809	0.6-	0.9-	891007 809	0.9-	0.1+	930816 010	0.2-	1.1+
891003 809	(3.2-	0.4-)	891008 809	1.1+	0.1+	930817 010	1.9-	1.7-
891003 809	(3.5-	0.6-)	891008 809	0.2+	0.5-			
891003 809	2.2-	1.0-	891008 809	0.7+	0.1-			

**1989 TA<sub>16</sub> = 1981 UV<sub>2</sub> = 1993 QO<sub>1</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden	
<i>M</i>	19.51459	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.23682221	$\omega$ 71.76874	+0.57236435 +0.81937437
<i>a</i>	2.5873455	$\Omega$ 233.18902	-0.76663340 +0.52085374
<i>e</i>	0.1633936	<i>i</i> 2.29146	-0.29098502 +0.23945151
<i>P</i>	4.16	<i>H</i> 14.5	<i>G</i> 0.15

Residuals in seconds of arc

811030 381	0.8-	0.6+	891005 809	0.2-	0.3+	891008 809	0.2+	0.0
811030 381	0.4+	1.5+	891005 809	0.1+	0.0	930816 010	0.1+	1.0+
891004 809	0.0	0.8-	891005 809	0.3+	0.1+	930816 010	1.0-	0.4+
891004 809	0.4+	0.8-	891008 809	0.3-	0.7-	930816 010	0.5-	0.8+
891004 809	0.8+	0.8-	891008 809	0.1-	0.3-	930817 010	0.8+	0.3-

**1989 WQ<sub>1</sub>**

Id. R. H. McNaught (1978, 1993 observations)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams	
<i>M</i>	225.69275	(2000.0)	
		<b>P</b>	<b>Q</b>
<i>n</i>	0.46324138	$\omega$ 41.37775	-0.32811031 -0.90924370
<i>a</i>	1.6542373	$\Omega$ 69.21726	+0.77856814 -0.41386221
<i>e</i>	0.1266462	<i>i</i> 15.90189	+0.53495353 +0.04465378
<i>P</i>	2.13	<i>H</i> 15.0	<i>G</i> 0.15

Residuals in seconds of arc

780809 413	1.5-	1.0-	891201 399	(3.2-	2.8+)	891217 399	0.9-	0.6-
780809 413	1.5+	1.1+	891201 399	0.2+	0.4+	891217 413	1.7+	0.6-
891125 399	2.7+	1.5-	891202 675	0.0	0.9+	891218 399	1.9+	0.5-
891125 399	1.0-	2.4-	891206 399	2.2-	0.8+	930812 413	0.3+	0.5-
891125 399	0.3-	0.7+	891206 399	(6.8-	4.4+)	930812 413	0.4-	0.6+
891129 675	1.5+	1.6+	891217 399	2.7-	0.7+			
891201 399	1.2-	0.6+	891217 413	0.4+	0.4-			

1990 DB = 1990 ER<sub>10</sub> = 1942 HG = 1958 GV = 1969 HD = 1971 VE  
 = 1975 NN = 1976 SU<sub>9</sub> = 1977 XR<sub>3</sub> = 1981 SA<sub>1</sub> = 1982 XP  
 = 1986 PH<sub>5</sub>

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Nakano

<i>M</i>	145.60909	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.18262151	$\omega$	94.33337	-0.30640158	+0.95176286
<i>a</i>	3.0768153	$\Omega$	157.80303	-0.88956952	-0.28020295
<i>e</i>	0.1348139	<i>i</i>	2.47208	-0.33879808	-0.12503504
<i>P</i>	5.40	<i>H</i>	11.5	<i>G</i>	0.15

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

420415 078(0.02+ 0.03+)X	771207 675	1.5-	0.6-	860808 095	0.4-	0.6+
420421 078(0.03- 0.00-)X	771208 675	0.3-	0.1+	900216 399	1.4+	0.2+
420506 078(92.9- 45.0-)X	810926 688	0.2-	3.1-	900216 399	0.9-	0.5+
580408 760 2.0- 1.0-	810926 688	0.4+	2.3-	900216 399	0.1-	1.4-
580408 760 1.2+ 0.5+	811004 688	(3.9+ 1.1-)		900218 399	0.9-	0.6+
690422 095 (3.3+ 5.9-)	811004 688	0.9+	2.9-	900218 399	1.8-	0.2+
711110 029 0.4+ 0.6+	821213 381	0.1+	0.9+	900218 399	1.2-	0.5+
711110 029 1.3+ 0.5+	821213 381	0.8-	0.6+	900301 095	3.1+	1.3-
750711 095 1.0+ 0.9+	821214 381	1.4+	0.1-	900317 095	0.8+	2.6-
760929 095 (7.2+ 0.7-)	821214 381	0.6-	0.4+	900317 095	1.4-	2.3-

1990 JN<sub>1</sub> = 1972 TN<sub>3</sub> = 1991 RD<sub>9</sub>

Id. A. Lowe (k), G. V. Williams

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams

<i>M</i>	236.25762	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.20712243	$\omega$	30.97991	+0.00620181	+0.99981410
<i>a</i>	2.8291195	$\Omega$	239.38114	-0.92175333	-0.00136306
<i>e</i>	0.0199056	<i>i</i>	1.21557	-0.38772715	+0.01923276
<i>P</i>	4.76	<i>H</i>	13.0	<i>G</i>	0.15

Residuals in seconds of arc

531031 675 0.3+ 1.1-	900502 413	0.7-	0.2-	910914 675	0.9+	0.3+
531031 675 0.1+ 0.5-	910911 675	0.4-	0.5-	911007 691	0.5-	1.0+
721005 095 0.6+ 0.1+	910911 675	0.4-	1.2-	911007 691	0.5-	0.8+
900501 413 0.7+ 0.0	910914 675	0.4+	0.2-	911007 691	0.3-	1.0+

1990 ON<sub>2</sub>

Id. H. E. Holt (1993 observations)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell

<i>M</i>	346.09241	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.29027246	$\omega$	281.34425	+0.23840062	+0.97116399
<i>a</i>	2.2590829	$\Omega$	2.45173	-0.86795910	+0.21416246
<i>e</i>	0.0760376	<i>i</i>	3.18468	-0.43567435	+0.10476138
<i>P</i>	3.40	<i>H</i>	13.9	<i>G</i>	0.15

Residuals in seconds of arc

501211 675 0.3+ 1.3-	900729 675	0.9-	0.1-	900730 675	0.8-	0.1-
531031 675 0.4+ 0.1-	900729 675	0.1+	0.5+	900915 675	1.0+	0.9-
531031 675 0.1+ 1.0-	900729 675	0.2-	0.1+	900915 675	0.7+	0.4-
900725 675 0.2+ 0.2+	900729 675	0.1+	0.0	930417 675	0.4+	1.2-
900725 675 0.1- 0.5+	900730 675	0.0	0.0	930417 675	0.8-	1.7-

1990 RK<sub>2</sub> = 1993 PN<sub>6</sub>

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	349.36336	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.31713201	$\omega$	162.17095	+0.93423460	+0.35665229
<i>a</i>	2.1296554	$\Omega$	176.93166	-0.33203629	+0.87197604
<i>e</i>	0.0690202	<i>i</i>	2.35866	-0.13022138	+0.33534598
<i>P</i>	3.11	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

900914 675 0.2- 0.4+	900918 675	0.1-	0.7-	930815 010	0.4-	0.6+
900914 675 0.2- 0.2-	901022 675	0.3-	0.1+	930815 010	0.7+	0.7+
900915 675 0.0 0.3+	901022 675	0.3+	0.0	930817 010	0.5+	0.8-
900918 675 0.5+ 0.1+	930815 010	0.8-	0.6-			

1990 TH<sub>12</sub> = 1993 PD<sub>5</sub>

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	222.76125	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.27024235	$\omega$	230.34065	-0.43173853	-0.89958529
<i>a</i>	2.3693749	$\Omega$	245.35448	+0.84819646	-0.38002944
<i>e</i>	0.1458780	<i>i</i>	4.16043	+0.30686254	-0.21522994
<i>P</i>	3.65	<i>H</i>	14.0	<i>G</i>	0.15

Residuals in seconds of arc

901014 033 0.1- 0.4-	901113 675	1.0+	0.8+	930815 010	1.1-	0.6+
901015 033 0.1- 0.1+	901113 675	0.6+	0.8+	930815 010	0.3+	0.5+
901015 033 0.1- 0.1+	901122 885	0.4-	0.4-	930816 010	0.7+	0.3+
901018 033 0.7+ 0.2-	901122 885	1.4-	0.8+	930816 010	0.9-	0.2+
901018 033 0.3- 0.1+	901122 885	0.1+	1.8-	930816 010	0.9+	1.6-

1990 VX<sub>1</sub> = 1993 PH<sub>4</sub>

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	325.47813	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.29972133	$\omega$	124.26362	+0.97045099	-0.23992128
<i>a</i>	2.2113507	$\Omega$	249.63003	+0.21137848	+0.89672110
<i>e</i>	0.2172090	<i>i</i>	1.57350	+0.11637876	+0.37192613
<i>P</i>	3.29	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

901111 898 (5.4- 2.5-)	901114 675	0.5+	0.4-	901207 898	0.8-	1.4-
901111 374 0.5+ 1.1-	901114 898 (5.0- 1.5-)Y			901207 898	1.7+	1.6+
901111 898 0.3- 1.3-	901114 898 (3.4- 1.5-)Y			930815 010	0.4+	0.1+
901111 374 (3.4+ 0.6+)	901117 898 (2.2- 2.5+)			930815 010	0.3+	0.6+
901113 675 0.1+ 0.4-	901117 898	1.3-	1.9+	930816 010	0.6-	0.0
901113 675 0.6+ 0.0	901122 898 (5.5- 1.2+)			930816 010	0.4-	0.6-
901114 675 0.5+ 0.4-	901122 898	1.5-	1.3+	930816 010	0.1+	0.2+

1990 WV<sub>4</sub> = 1993 QR<sub>1</sub>

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	227.02583	(2000.0)		<b>P</b>	<b>Q</b>
<i>n</i>	0.27242118	$\omega$	286.55544	-0.47720373	-0.87865063
<i>a</i>	2.3567244	$\Omega$	191.98512	+0.83250753	-0.44623845
<i>e</i>	0.1383382	<i>i</i>	4.36396	+0.28143882	-0.16983615
<i>P</i>	3.62	<i>H</i>	14.5	<i>G</i>	0.15

Residuals in seconds of arc

901116 809 0.7- 0.2+	901121 809	0.1-	0.2-	930816 010	0.5+	0.6+
901117 809 0.8+ 0.0	901122 809	0.2+	0.2+	930816 010	0.4+	0.2+

901121 809 0.5+ 0.7- 901122 809 0.2- 0.5+ 930816 010 0.4- 0.1+  
 901121 809 0.2- 0.4- 901122 809 0.2- 0.4+ 930817 010 0.5- 0.8-

**1990 WU<sub>5</sub> = 2197 T-1**

Id. G. V. Williams (*MPC* 19307)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden		Marsden	
<i>M</i>	185.24275	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.23596241	$\omega$ 343.16135	-0.45110388	-0.89092522	
<i>a</i>	2.5936269	$\Omega$ 133.61772	+0.82695757	-0.43939284	
<i>e</i>	0.0595550	<i>i</i> 4.15960	+0.33562847	-0.11483112	
<i>P</i>	4.18	<i>H</i> 14.5	<i>G</i> 0.15		

Residuals in seconds of arc

710324 675 0.9- 1.2- 901121 809 0.3+ 1.1+ 930720 809 0.4+ 0.3-  
 710325 675 0.0 0.3+ 901121 809 1.4- 0.8- 930720 809 0.3- 0.0  
 710325 675 1.3+ 0.4+ 901121 809 0.5- 0.3- 930720 809 0.3- 0.4-  
 710326 675 0.1+ 0.3+ 901122 809 1.3+ 0.2- 930724 809 0.2+ 0.7+  
 710327 675 0.6- 0.3+ 901122 809 0.6+ 0.3+  
 901116 809 0.8- 0.4+ 901122 809 0.5+ 0.6-

**1991 ES<sub>1</sub> = 1976 SL<sub>8</sub> = 1993 PM<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden		Marsden	
<i>M</i>	276.97388	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.22940221	$\omega$ 264.75037	+0.32771740	-0.94283950	
<i>a</i>	2.6428407	$\Omega$ 165.66608	+0.93433905	+0.31394780	
<i>e</i>	0.1815154	<i>i</i> 14.13437	+0.14004228	+0.11176069	
<i>P</i>	4.30	<i>H</i> 12.0	<i>G</i> 0.15		

Residuals in seconds of arc

760928 095 0.1+ 0.4- 910319 809 0.2- 0.6- 910323 809 1.1- 0.3+  
 910305 071 1.3- 0.5+ 910319 809 0.4+ 0.5- 910323 809 1.2- 0.3+  
 910305 071 0.3- 0.1- 910319 809 0.4+ 0.0 910323 809 1.4- 0.3+  
 910307 399 (0.8+ 2.9-) 910320 809 0.1+ 1.1+ 910324 809 0.4- 0.6-  
 910307 399 (2.5- 1.2-) 910320 809 0.6+ 1.2+ 910324 809 0.0 0.7-  
 910310 399 1.1+ 1.3- 910320 809 1.1+ 1.3+ 910324 809 0.6+ 0.5-  
 910310 399 0.3- 0.8- 910321 809 1.4- 0.6+ 930815 010 0.3+ 0.2+  
 910313 399 0.1+ 0.1+ 910321 809 0.8- 0.4+ 930815 010 0.3- 0.4+  
 910313 399 0.3+ 1.4- 910321 809 0.9- 0.5+ 930816 010 0.1- 0.6-  
 910317 809 0.6+ 0.1- 910323 809 0.5+ 0.4- 930816 010 0.2+ 0.1-  
 910317 809 1.0+ 0.1+ 910323 809 0.4+ 0.4- 930816 010 0.1- 0.3-  
 910317 809 1.4+ 0.3+ 910323 809 0.7+ 0.5-

**1991 GQ = 1988 VX<sub>4</sub> = 1993 QA<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams		Williams	
<i>M</i>	191.19610	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.17365861	$\omega$ 297.94558	-0.90306322	-0.39378149	
<i>a</i>	3.1817924	$\Omega$ 219.55003	+0.42271933	-0.88557231	
<i>e</i>	0.0668979	<i>i</i> 15.62494	-0.07606044	-0.24636926	
<i>P</i>	5.68	<i>H</i> 12.0	<i>G</i> 0.15		

Residuals in seconds of arc

881105 372 1.4- 2.2- 910408 675 0.6+ 0.4- 910509 675 0.4- 0.0  
 881106 372 (2.7+ 3.6+) 910408 675 0.8- 1.7+ 910509 675 0.4- 0.3-  
 881110 046 1.8+ 0.9+ 910410 675 1.3- 0.2+ 930822 675 0.2- 0.9+  
 881110 046 0.4+ 1.0- 910410 675 0.1+ 0.7- 930824 675 0.9- 0.1-  
 881111 046 0.2+ 2.4+ 910508 675 1.4+ 0.0 930824 675 1.0+ 0.5-  
 881111 046 1.0- 0.3+ 910508 675 0.9+ 0.1-

**1991 GB<sub>3</sub> = 1993 QB<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Marsden		Marsden	
<i>M</i>	158.84716	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.17087060	$\omega$ 159.78476	-0.99997006	-0.00610019	
<i>a</i>	3.2163094	$\Omega$ 19.86751	+0.00361287	-0.91215538	
<i>e</i>	0.1202365	<i>i</i> 0.80285	+0.00684363	-0.40979917	
<i>P</i>	5.77	<i>H</i> 13.5	<i>G</i> 0.15		

Residuals in seconds of arc

910322 809 0.5+ 1.6- 910325 809 0.6- 0.1+ 910410 809 0.9- 0.5+  
 910322 809 0.7+ 1.5- 910408 809 1.1+ 0.3- 910410 809 0.8- 0.2+  
 910322 809 1.2+ 1.8- 910408 809 0.6+ 1.0- 910419 809 0.6+ 0.3-  
 910323 809 1.3- 0.7+ 910408 809 0.3+ 1.4- 910419 809 (2.7- 0.2+)  
 910323 809 1.3- 0.6+ 910408 809 0.0 0.1+ 910419 809 0.7- 0.4-  
 910323 809 1.1- 0.5+ 910408 809 0.2- 0.1+ 930818 010 0.5+ 1.2+  
 910324 809 0.8+ 1.3+ 910408 809 0.1- 0.5- 930819 010 0.6+ 0.5+  
 910324 809 1.0+ 1.1+ 910410 809 (2.5+ 1.4+) 930819 010 1.0- 0.2-  
 910324 809 1.2+ 1.0+ 910410 809 0.3+ 1.6+ 930819 010 0.1- 1.4-  
 910325 809 0.8- 0.4+ 910410 809 0.1- 0.1+  
 910325 809 0.6- 0.2+ 910410 809 0.2+ 0.2+

**1991 RC**

Id. D. I. Steel (1993 observations), G. J. Garradd (1992 observations)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams		Williams	
<i>M</i>	7.35367	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.87633717	$\omega$ 8.26554	-0.97996779	-0.15417842	
<i>a</i>	1.0814885	$\Omega$ 161.37398	+0.15257765	-0.98803951	
<i>e</i>	0.8268374	<i>i</i> 23.24745	+0.12799683	-0.00263398	
<i>P</i>	1.12	<i>H</i> 17.0	<i>G</i> 0.15		

Residuals in seconds of arc

910903 413 1.7- 0.5- 910917 691 1.1- 0.5+ 930903 413 0.6- 0.1+  
 910903 413 (5.9- 3.4-) 911008 658 1.5+ 0.4+ 930903 413 0.0 0.8-  
 910905 413 1.4+ 0.3+ 911008 658 1.1+ 0.0 930903 413 1.0- 0.5+  
 910905 413 0.4+ 0.6- 921015 413 0.8+ 0.2+ 930903 413 0.2- 0.6+  
 910912 675 0.3- 0.8- 921015 413 0.7+ 0.4+ 930903 413 1.3+ 0.3-  
 910913 413 (3.2+ 2.4+) 930903 413 0.3+ 0.1+ 930907 413 0.4- 0.4+  
 910917 691 0.7- 0.0 930903 413 0.1+ 0.2-  
 910917 691 0.6- 0.3+ 930903 413 0.3+ 0.3-

**1991 TY**

Id. R. H. McNaught (1976, 1987 observations)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

		Williams		Williams	
<i>M</i>	179.42977	(2000.0)	<b>P</b>	<b>Q</b>	
<i>n</i>	0.26474381	$\omega$ 239.53991	+0.93775196	-0.14738297	
<i>a</i>	2.4020691	$\Omega$ 127.04368	+0.20174738	+0.96821692	
<i>e</i>	0.2911476	<i>i</i> 23.20373	-0.28269995	+0.20207489	
<i>P</i>	3.72	<i>H</i> 15.0	<i>G</i> 0.15		

Residuals in seconds of arc

760824 413 0.1- 1.5+ 911005 413 0.2+ 0.8- 911127 413 0.3- 0.1+  
 760824 413 0.7+ 1.0+ 911007 413 1.2+ 0.1- 911127 413 0.6- 1.0-  
 761024 413 0.4- 1.3- 911015 413 0.2+ 0.1- 911127 413 0.7- 0.3-  
 761024 413 0.7- 0.8- 911114 413 0.0 0.8+ 911127 413 0.5- 0.2-  
 870729 413 0.6- 1.2- 911126 413 0.6- 0.2+ 911221 413 0.8+ 0.8-

911002 413 0.3- 1.9- 91126 413 0.7- 0.5+ 911221 413 0.5+ 0.1+  
 911002 413 0.8+ 2.2+ 91126 413 0.3- 1.1+

**1991 TT<sub>13</sub> = 1993 BH<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	21.98509	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.18002620	$\omega$ 246.28064	-0.95317283	-0.22871488
<i>a</i>	3.1063156	$\Omega$ 280.02198	+0.29340987	-0.85792803
<i>e</i>	0.1378525	<i>i</i> 11.59148	-0.07329531	-0.46005326
<i>P</i>	5.47	<i>H</i> 12.0	<i>G</i> 0.15	

Residuals in seconds of arc

911008 033 1.2- 0.1+ 911211 033 0.5- 0.5+ 930128 372 1.4+ 0.4+
911008 033 0.3- 0.9+ 911211 033 0.7- 1.0- 930130 372 0.4+ 0.3+
911009 033 0.0 0.3+ 911212 033 0.0 0.2+ 930130 372 0.4+ 0.4+
911010 033 0.3- 0.3+ 920107 033 0.2- 0.4+ 930202 372 0.4- 0.7-
911030 033 0.8+ 0.6- 920107 033 0.3+ 0.4+ 930202 372 0.2- 0.0
911030 033 1.2+ 0.6- 930125 372 0.2+ 0.2-
911101 033 0.8+ 0.9- 930125 372 1.9- 0.3-

**1991 UE<sub>5</sub> = 1991 XJ<sub>3</sub> = 1980 PH<sub>2</sub> = 1984 YE<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	146.25534	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.27917212	$\omega$ 159.23639	-0.17802055	-0.97810857
<i>a</i>	2.3185761	$\Omega$ 300.87793	+0.88419717	-0.11093766
<i>e</i>	0.1898664	<i>i</i> 7.21289	+0.43186114	-0.17605812
<i>P</i>	3.53	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

800810 809 1.2+ 0.2- 911030 033 0.9+ 0.6+ 911204 367 0.4- 0.4-
800814 809 0.5- 1.2- 911101 033 1.0+ 0.6+ 911211 033 0.4- 0.4+
841227 095 0.1+ 3.0- 911204 367 0.2- 0.7+ 911211 033 0.7- 0.3-
911030 033 0.3- 0.3+ 911204 367 0.7- 0.5+ 911212 033 0.4+ 0.6+

**1991 XZ<sub>5</sub> = 1972 HJ<sub>1</sub> = 1984 WJ<sub>2</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	145.34469	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.28339300	$\omega$ 98.35375	-0.09417660	-0.99554133
<i>a</i>	2.2954965	$\Omega$ 357.03461	+0.86822349	-0.07951920
<i>e</i>	0.0683537	<i>i</i> 5.89380	+0.48715371	-0.05073606
<i>P</i>	3.48	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

720419 805 0.1- 0.0 841121 675 0.3+ 0.1- 911212 033 0.2+ 0.6+
720419 805 0.0 0.1- 911211 033 0.2+ 0.7+ 920107 033 0.3+ 0.4+
841120 675 0.1- 0.4- 911211 033 0.7- 0.8- 920107 033 0.1- 0.4-

**1992 HA<sub>4</sub> = 1993 PW<sub>1</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	58.99745	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.21604803	$\omega$ 340.05871	-0.23042940	+0.97308338
<i>a</i>	2.7506532	$\Omega$ 276.61883	-0.89233763	-0.21266711
<i>e</i>	0.0796141	<i>i</i> 0.19153	-0.38811834	-0.08877746
<i>P</i>	4.56	<i>H</i> 14.0	<i>G</i> 0.15	

Residuals in seconds of arc

920404 809 1.0+ 1.2+ 920423 809 2.4- 0.6+ 930814 691 0.8- 0.0
920404 809 0.7+ 1.1+ 920423 809 2.0- 0.2+ 930814 691 0.6- 0.2-

920404 809 0.5+ 0.1- 920423 809 1.2- 0.9- 930814 691 0.4- 0.2-
920406 809 0.2+ 0.3- 920425 809 1.0+ 0.3+ 930815 691 0.4+ 0.2+
920406 809 1.2- 0.3- 920425 809 1.9+ 0.4- 930815 691 0.6+ 0.1+
920406 809 (3.2- 0.9+) 920425 809 1.7+ 1.4- 930815 691 0.6+ 0.2+

**1992 QB<sub>1</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bowell

<i>M</i>	346.74074	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.00340433	$\omega$ 16.89418	+0.95977007	-0.28078687
<i>a</i>	43.7638298	$\Omega$ 359.41255	+0.25295094	+0.86523279
<i>e</i>	0.0682194	<i>i</i> 2.21151	+0.12189029	+0.41536845
<i>P</i>	289.52	<i>H</i> 7.6	<i>G</i> 0.15	

Residuals in seconds of arc

920830 568 0.1+ 0.4- 920925 568 0.1+ 0.4+ 921121 493 1.0+ 0.1+
920830 568 0.1+ 0.4- 920927 809 1.1- 0.1- 921123 809 0.1+ 0.6+
920831 568 0.1+ 0.3- 920927 809 1.4- 0.2- 921225 809 1.1+ 0.7+
920831 568 0.1+ 0.5- 920927 689 0.3+ 0.4+ 930625 809 0.2- 0.8+
920901 568 0.2+ 0.3- 921026 413 0.5- 0.3+ 930626 809 0.0 0.1-
920901 568 0.2+ 0.4- 921026 413 0.6- 0.6- 930714 809 0.1- 0.1-
920921 413 0.8- 0.8+ 921101 689 1.1- 0.9- 930715 809 0.1- 0.3-
920924 689 0.8+ 0.3+ 921115 689 0.8- 0.4- 930715 568 0.7+ 0.2+
920925 568 0.4+ 0.5+ 921116 689 0.8- 0.2+ 930715 568 0.8+ 0.1+
920925 568 0.5+ 0.3+ 921120 493 0.5+ 0.3- 930716 809 0.1- 0.3-

**1992 RO<sub>5</sub> = 1992 SW<sub>22</sub> = 1981 UW<sub>11</sub> = 1991 LK<sub>1</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Nakano

<i>M</i>	27.56207	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.26333051	$\omega$ 342.74327	+0.34921533	-0.93503261
<i>a</i>	2.4106561	$\Omega$ 86.78318	+0.86680680	+0.29748095
<i>e</i>	0.1770792	<i>i</i> 3.52232	+0.35594189	+0.19292253
<i>P</i>	3.74	<i>H</i> 14.4	<i>G</i> 0.15	

Residuals in seconds of arc

811022 095 1.6+ 2.0+ 910608 809 0.1- 0.1+ 920922 809 1.1+ 1.3+
811025 675 2.6- 1.4- 910608 809 0.3- 0.6- 920922 809 0.4+ 1.4+
811026 675 2.5- 1.6- 910608 809 0.7- 0.8- 920922 809 0.2+ 1.0+
811028 095 3.5+ 0.8+ 920902 809 0.2- 1.4- 920923 809 0.6- 0.4+
910606 809 0.2+ 0.2+ 920902 809 0.2- 1.7- 920923 809 0.2+ 0.7+
910606 809 0.4+ 1.2+ 920902 809 0.5- 1.4- 920923 809 0.3+ 0.3+
910606 809 0.6+ 0.2+ 920903 809 0.9- 0.5-

**1992 RC<sub>7</sub> = 1982 SD<sub>3</sub> = 1990 FU<sub>4</sub> = 1991 NZ<sub>7</sub>**

Id. B. G. Marsden, S. Nakano

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Nakano

<i>M</i>	44.70254	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.19609217	$\omega$ 244.49598	+0.95522605	-0.29369677
<i>a</i>	2.9342417	$\Omega$ 132.56090	+0.28592807	+0.88514586
<i>e</i>	0.1212874	<i>i</i> 2.79002	+0.07608113	+0.36091414
<i>P</i>	5.03	<i>H</i> 13.1	<i>G</i> 0.15	

Residuals in seconds of arc

820920 095 1.6+ 1.4- 910708 675 1.8- 0.3- 920922 809 0.5+ 1.8+
820924 033 0.3+ 1.7- 910710 675 1.3+ 0.3+ 920922 809 0.1- 1.6+
820924 033 0.3- 1.5- 910710 675 0.8- 2.1+ 920922 809 1.0- 0.4+
820926 095 1.1+ 2.1- 920902 809 0.4+ 0.6- 920923 809 0.5- 1.8+
900327 675 1.0- 1.1- 920902 809 0.6+ 1.0- 920923 809 1.0- 1.2+

900327 675 0.3- 1.9- 920902 809 0.1+ 1.3- 920923 809 1.5- 0.8+  
 910708 675 1.4+ 1.9- 920903 809 1.0+ 0.7-

**1992 TC**

Id. R. H. McNaught (1990 observation)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	154.29901	$\omega$	275.33756	+0.98980546	-0.07121157		
<i>a</i>	0.50287409	$\Omega$	88.78683	+0.11499713	+0.91052710		
<i>e</i>	1.5661375	<i>i</i>	7.08681	-0.08402868	+0.40727057		
<i>P</i>	0.2925567	<i>H</i>	17.5	<i>G</i>	0.15		

Residuals in seconds of arc

900819 413 0.1+ 0.2+	921012 413 0.3+ 0.7-	921120 657 0.5+ 1.1+
921001 413 0.1- 1.1+	921013 413 0.2- 0.5-	921120 657 0.3- 0.1+
921004 413 0.1- 1.0-	921014 413 0.5- 0.2-	921121 801 0.0 0.2-
921004 413 0.6+ 0.9-	921014 413 0.5- 0.2-	921121 801 0.3+ 0.2-
921004 413 0.6+ 1.4+	921015 413 0.7- 0.5-	921122 413 0.7+ 0.4-
921004 474 0.5- 0.0	921015 413 0.6- 0.4-	921129 801 0.5- 0.5-
921004 474 0.3- 0.2+	921022 413 0.4+ 0.9+	921129 801 0.6- 0.7-
921005 413 1.2+ 0.3+	921022 413 0.4+ 0.5+	921203 658 1.1- 0.4-
921005 413 1.0+ 0.5+	921022 413 0.2+ 0.8+	921203 658 0.8- 0.8-
921005 413 0.7+ 0.0	921027 413 0.1- 0.7+	921203 658 0.6- 0.5-
921006 413 0.5- 0.1-	921101 670 1.4+ 0.4+	921209 413 0.4+ 1.0+
921006 413 0.4- 0.1-	921101 670 (0.1+ 4.5+)	921209 413 0.5+ 0.4+
921007 413 0.5- 0.3-	921101 670 (0.1+ 2.1+)	921210 413 0.3- 0.4+
921007 413 0.4- 0.3-	921103 413 (0.4+ 3.1+)	921210 413 0.5- 0.2+
921009 413 0.3- 0.0	921113 413 0.9+ 0.6-	921222 801 0.7+ 0.1+
921009 413 0.4- 0.2-	921120 675 0.8- 0.4-	921222 801 0.1- 0.2+
921009 413 0.7- 0.2-	921120 675 (2.6+ 1.9-)	
921012 413 0.2+ 0.7-	921120 657 0.8+ 0.7+	

**1992 YC<sub>2</sub> = 1989 AH<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	93.20042	$\omega$	104.17880	+0.85024440	-0.52569673		
<i>a</i>	0.23254777	$\Omega$	287.54266	+0.47138707	+0.78320650		
<i>e</i>	2.6189544	<i>i</i>	1.62088	+0.23426202	+0.33200983		
<i>P</i>	0.2219926	<i>H</i>	14.4	<i>G</i>	0.15		

Residuals in seconds of arc

890104 413 1.0+ 0.2+	921219 010 0.4+ 0.6-	930116 010 0.2- 0.1+
890104 413 0.2- 0.2+	921219 010 0.1+ 0.5+	930117 010 0.3- 0.2+
890110 413 1.8- 0.1-	921219 010 1.0- 0.2+	930117 010 0.0 0.2-
890110 413 0.9+ 0.6-	921220 010 1.7- 0.1+	930117 010 0.9+ 0.2+
921218 010 0.9+ 0.5-	930116 010 0.8+ 0.5+	
921219 010 0.8+ 0.6-	930116 010 0.7- 0.4+	

**1993 BC = 1984 ST<sub>1</sub> = 1991 PK<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	104.33002	$\omega$	162.74127	+0.41639014	-0.90874328		
<i>a</i>	0.26705479	$\Omega$	262.64425	+0.83074957	+0.39296159		
<i>e</i>	2.3881914	<i>i</i>	1.63923	+0.36942441	+0.14059459		
<i>P</i>	0.1877736	<i>H</i>	14.4	<i>G</i>	0.15		

Residuals in seconds of arc

840927 046 1.7+ 0.2+	910803 809 1.1+ 0.5-	930116 372 0.7+ 1.8+
840927 046 2.0+ 0.3-	910803 809 1.2+ 0.5-	930119 372 0.3- 0.4-
840929 046 0.6+ 1.0-	910804 809 2.0- 1.1-	930119 372 1.4+ 1.1+
840929 046 1.2- 1.5-	910805 809 0.1+ 1.0+	930125 372 1.0+ 1.8-
840930 046 0.5- 1.0+	910805 809 0.6- 0.3+	930125 372 0.5- 1.8+
840930 046 2.6- 1.6+	910805 809 0.0 1.3+	930126 372 1.7- 1.5-
910803 809 0.1+ 0.1-	930116 372 1.0- 1.1-	930126 372 0.6+ 0.5+

**1993 CC = 1977 RA<sub>1</sub>**

Id. T. Kobayashi

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	339.34875	$\omega$	93.70534	-0.67561247	+0.71566962		
<i>a</i>	0.22619591	$\Omega$	132.10659	-0.73489425	-0.63451242		
<i>e</i>	2.6677567	<i>i</i>	13.81061	-0.05897652	-0.29190922		
<i>P</i>	0.1350013	<i>H</i>	12.1	<i>G</i>	0.15		

Residuals in seconds of arc

510808 675 0.1- 0.5+	930214 365 (2.8- 0.2-)	930314 411 0.5+ 0.3+
510808 675 0.2- 0.6+	930214 896 0.2+ 1.1-	930314 411 0.4+ 0.4+
770907 095 0.1+ 0.6-	930217 411 0.2+ 0.3+	930329 411 0.2- 0.4-
930212 411 0.4+ 0.1+	930217 411 0.1- 0.4+	930329 411 0.1- 0.1-
930212 411 0.5+ 0.0	930217 411 0.0 0.3+	930329 411 0.3- 0.3+
930213 411 0.5+ 0.4+	930223 411 0.3- 0.1+	930409 411 0.4+ 0.4-
930213 411 0.3- 0.5+	930223 411 0.1- 0.2-	930409 411 0.1+ 0.0
930213 411 1.0+ 0.7-	930223 411 0.1+ 0.1-	930409 411 0.8- 0.4+
930213 896 0.7+ 1.8-	930228 411 0.3- 0.2-	930410 411 0.1- 0.1-
930213 896 1.6- 0.2+	930228 411 0.8- 0.8+	930410 411 0.0 0.1-
930214 411 0.3- 0.1-	930228 411 0.0 0.7+	930410 411 0.2- 0.7-
930214 411 0.7+ 0.5-	930313 411 0.1- 0.2-	930522 801 0.1- 0.4+
930214 411 0.3- 0.4-	930313 411 0.4- 0.8+	930522 801 0.0 0.3-
930214 365 (2.9- 1.3+)	930313 411 0.5+ 0.8+	
930214 896 (2.2- 0.5-)	930314 411 0.2+ 0.2+	

**1993 GN<sub>1</sub> = 1978 WS<sub>5</sub> = 1991 VL<sub>16</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

<i>M</i>		(2000.0)		<i>P</i>		<i>Q</i>	
<i>n</i>	57.62906	$\omega$	285.85915	-0.99478769	+0.07383380		
<i>a</i>	0.29892181	$\Omega$	258.41476	-0.04136259	-0.92260456		
<i>e</i>	2.2152920	<i>i</i>	4.11684	-0.09320189	-0.37861510		
<i>P</i>	0.1232656	<i>H</i>	15.0	<i>G</i>	0.15		

Residuals in seconds of arc

781129 675 0.9+ 0.5+	930417 809 0.0 0.2-	930424 809 (1.7- 2.9-)
781130 675 0.9- 0.4-	930417 809 0.9+ 1.1-	930424 809 (0.5- 3.0-)
911109 691 0.0 0.0	930418 809 1.4- 0.6+	930424 809 (0.5+ 3.4-)
911109 691 0.0 0.1-	930418 809 0.5- 0.7+	930426 809 0.5+ 0.7-
930414 809 0.4+ 0.6-	930418 809 0.6+ 0.6+	930426 809 0.1- 0.9+
930414 809 0.0 0.0	930420 809 0.1- 0.4+	930426 809 1.2- 0.4+
930414 809 0.4- 0.2+	930420 809 0.6+ 0.3-	
930417 809 0.9- 0.1+	930420 809 1.6+ 0.9-	

**1993 HK = 1979 QA<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Ichikawa

<i>M</i>	59.64254	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.26284436	$\omega$ 34.49902	-0.96296928	-0.26558267
<i>a</i>	2.4136277	$\Omega$ 130.03037	+0.23168571	-0.90322372
<i>e</i>	0.1278288	<i>i</i> 3.47660	+0.13788367	-0.33712425
<i>P</i>	3.75	<i>H</i> 13.7	<i>G</i> 0.15	

Residuals in seconds of arc

790822 809	1.1-	0.1-	790826 809	0.4+	0.8+	930416 400	2.2+	0.1+
790822 809	0.8-	0.1-	790830 809	(5.4-	3.9+)	930416 400	(3.2+	0.4-)
790822 809	0.2-	0.4-	790830 809	(6.0-	3.3+)	930419 675	0.6-	0.4-
790823 809	0.1+	0.6-	930415 675	1.0-	0.7-	930419 675	1.0+	0.0
790823 809	1.0+	0.1+	930415 675	0.8-	0.1+	930420 400	0.5-	1.2+
790826 809	(4.0+	0.7-)	930416 675	0.5-	0.2-	930420 400	0.5+	0.7+
790826 809	0.7+	0.3+	930416 675	0.4-	0.7-			

**1993 KC**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	6.81217	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.30082899	$\omega$ 37.38863	-0.11389594	+0.94022404
<i>a</i>	2.2059192	$\Omega$ 228.59209	-0.98314219	-0.15317618
<i>e</i>	0.3569354	<i>i</i> 25.33544	-0.14303550	+0.30416412
<i>P</i>	3.28	<i>H</i> 16.0	<i>G</i> 0.15	

From 28 observations 1993 May 18-Aug. 21, mean residual 0''.65.

**1993 KH**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	335.04776	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.71902508	$\omega$ 293.60649	+0.96014097	+0.21334940
<i>a</i>	1.2339759	$\Omega$ 54.55038	-0.09536570	+0.85733832
<i>e</i>	0.3111960	<i>i</i> 12.80772	-0.26274456	+0.46845814
<i>P</i>	1.37	<i>H</i> 19.0	<i>G</i> 0.15	

From 17 observations 1993 May 24-July 31, mean residual 0''.70.

**1993 KM**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Bardwell

<i>M</i>	10.09663	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.17745032	$\omega$ 79.88912	-0.25377655	+0.96681447
<i>a</i>	3.1363043	$\Omega$ 175.10390	-0.96604134	-0.25180895
<i>e</i>	0.3489936	<i>i</i> 20.18433	-0.04859621	-0.04315129
<i>P</i>	5.55	<i>H</i> 13.0	<i>G</i> 0.15	

From 30 observations 1993 May 17-Aug. 20, mean residual 0''.99.

**1993 MO**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	11.03752	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.47535468	$\omega$ 167.06480	+0.16668782	+0.91880069
<i>a</i>	1.6260137	$\Omega$ 111.60036	-0.93545272	+0.26206711
<i>e</i>	0.2206656	<i>i</i> 22.63282	-0.31167834	-0.29517134
<i>P</i>	2.07	<i>H</i> 16.0	<i>G</i> 0.15	

From 62 observations 1993 June 24-Sept. 1, mean residual 0''.80.

**1993 NH = 1993 LB = 1983 XO = 1986 LK**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	340.49609	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.28168781	$\omega$ 80.97124	+0.77144911	+0.53381540
<i>a</i>	2.3047510	$\Omega$ 246.03757	-0.62099789	+0.75024853
<i>e</i>	0.3111465	<i>i</i> 22.26781	+0.13866463	+0.39008750
<i>P</i>	3.50	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

831206 801	0.7-	2.4-	930617 675	1.0+	1.1-	930717 675	0.5-	0.1+
860604 675	0.5+	0.4-	930617 675	0.3-	1.5-	930819 675	0.1-	0.9+
860604 675	0.6+	1.9+	930619 675	(42.1+	56.6-)	930819 675	0.5+	2.4+
860606 675	1.2-	0.5-	930715 675	0.1+	1.7-	930821 675	0.8-	0.5+
860606 675	0.1-	0.3-	930715 675	0.2+	1.4-	930821 675	0.7-	0.1-
930615 675	1.3-	0.3+	930717 675	2.1+	0.1+			

**1993 OV<sub>1</sub>**

Id. R. H. McNaught (1975 observations)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	14.27106	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.27559006	$\omega$ 323.31020	+0.08415237	+0.98565121
<i>a</i>	2.3386237	$\Omega$ 311.02509	-0.86192871	-0.00167982
<i>e</i>	0.4369988	<i>i</i> 11.18352	-0.49999727	+0.16878646
<i>P</i>	3.58	<i>H</i> 17.0	<i>G</i> 0.15	

Residuals in seconds of arc

750408 413	0.3-	0.6+	930724 675	(0.0	3.8-)	930814 010	1.7+	0.5-
750408 413	2.8+	1.0+	930725 675	0.4-	1.2-	930815 010	0.0	1.4+
750412 413	1.1-	0.5-	930811 657	0.6-	1.0+	930817 587	0.2-	0.1+
750412 413	0.1-	1.1-	930811 657	0.5-	0.1+	930817 587	0.1-	0.7-
750412 413	1.1-	0.5+	930811 657	0.4-	0.1-	930817 587	0.0	0.8-
750412 413	0.2+	0.2+	930811 657	0.5-	0.1+	930819 657	0.5+	0.7-
930427 413	0.4+	0.6-	930811 587	0.6-	0.5+	930819 657	0.1+	0.3-
930427 413	0.5+	0.7-	930811 587	0.7-	1.1-	930822 801	0.0	0.1+
930716 675	0.7-	1.4+	930811 587	1.9-	0.1-	930822 801	0.4+	0.1+
930720 675	(0.7-	3.6+)	930814 801	0.0	0.3-	930824 413	0.5+	0.0
930720 675	0.8-	2.6+	930814 801	0.4-	0.3-	930824 413	0.5+	0.0
930723 675	0.5+	1.2-	930814 010	0.8+	1.5+	930824 413	0.5+	0.1+
930724 675	1.1+	2.0-	930814 010	0.9+	0.8+			

**1993 PB**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Marsden

<i>M</i>	90.99499	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.57869783	$\omega$ 212.27649	-0.88831094	-0.05812282
<i>a</i>	1.4261597	$\Omega$ 316.05548	+0.41164054	-0.54056179
<i>e</i>	0.6077613	<i>i</i> 41.02953	-0.20360682	-0.83929416
<i>P</i>	1.70	<i>H</i> 16.5	<i>G</i> 0.15	

From 28 observations 1993 Aug. 13-Sept. 11, mean residual 0''.49.

**1993 PC**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	172.75512	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.79451470	$\omega$ 168.13929	-0.82673947	-0.56189898
<i>a</i>	1.1545199	$\Omega$ 337.60474	+0.51001864	-0.72774059
<i>e</i>	0.4761661	<i>i</i> 4.18046	+0.23745069	-0.39327239
<i>P</i>	1.24	<i>H</i> 18.0	<i>G</i> 0.15	

From 17 observations 1993 Aug. 15–Sept. 14, mean residual 0".50.

**1993 PV<sub>6</sub> = 1991 AA<sub>3</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams

<i>M</i>	332.82091	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.25282207	$\omega$ 50.96966	+0.98840655	-0.14516099
<i>a</i>	2.4770003	$\Omega$ 317.32361	+0.11091901	+0.89052455
<i>e</i>	0.1978023	<i>i</i> 3.76458	+0.10367967	+0.43115462
<i>P</i>	3.90	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

910115 033	0.1+	0.5+	930815 010	0.8+	0.1+	930905 596	1.0-	0.1-
910115 033	0.3-	0.3-	930815 010	0.6+	0.1+	930906 596	0.1+	1.3+
910115 033	0.8+	0.0	930815 010	0.0	0.1-	930906 596	0.9+	0.3+
910115 033	0.2-	0.4-	930817 010	1.3-	0.2-			
910116 033	0.4-	0.1+	930905 596	0.1-	1.4-			

**2096 P-L = 1993 PZ<sub>4</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	292.63306	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.26696567	$\omega$ 205.39847	+0.68927563	-0.72426939
<i>a</i>	2.3887229	$\Omega$ 201.04447	+0.67308361	+0.64947520
<i>e</i>	0.1200651	<i>i</i> 2.91268	+0.26806259	+0.23155088
<i>P</i>	3.69	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

600924 675	0.1+	0.3+	601017 675	0.1+	0.5-	930815 010	0.6-	0.1+
600926 675	0.8-	0.2-	601022 675	0.2+	0.8+	930816 010	0.1-	0.1-
600926 675	0.2+	0.3-	601025 675	0.0	0.3+	930816 010	0.7-	0.6-
600928 675	0.8+	1.2-	601026 675	0.2-	0.6-	930816 010	0.0	0.9-
600929 675	0.4-	1.4+	930815 010	1.3+	1.5+			

**4521 P-L = 1990 VW<sub>9</sub> = 1992 CD<sub>8</sub> = 1993 HK<sub>6</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams

<i>M</i>	252.07431	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.19912059	$\omega$ 6.76358	+0.93903034	+0.34369533
<i>a</i>	2.9044145	$\Omega$ 333.12784	-0.31646622	+0.85282280
<i>e</i>	0.0774156	<i>i</i> 1.23912	-0.13442900	+0.39314984
<i>P</i>	4.95	<i>H</i> 13.5	<i>G</i> 0.15	

Residuals in seconds of arc

600924 675	0.4+	0.1+	601026 675	0.4+	0.3-	930418 809	1.3+	0.7-
600926 675	0.3+	1.7-	901111 675	1.2-	2.8+	930418 809	1.7+	0.7-
600927 675	0.3+	0.6+	901111 675	0.1-	0.8+	930424 809	0.0	0.3+
600928 675	0.5+	0.8-	920209 691	0.3-	0.9-	930424 809	0.2-	0.2+
601017 675	0.2-	0.1+	920209 691	0.2-	0.7-	930425 809	0.8-	1.0+
601022 675	0.6-	0.3+	920209 691	0.0	0.4-	930425 809	0.7-	1.1+
601024 675	0.2-	0.1-	930418 809	0.5+	0.8-	930425 809	0.8-	1.6+

**2245 T-1 = 1992 RA<sub>6</sub>**

Id. G. V. Williams (*MPC* 21123)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Bowell

<i>M</i>	16.35085	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.25564098	$\omega$ 8.15378	+0.23672376	-0.97005623
<i>a</i>	2.4587577	$\Omega$ 68.16628	+0.88806936	+0.19335352
<i>e</i>	0.1474423	<i>i</i> 3.35593	+0.39407446	+0.14698750
<i>P</i>	3.86	<i>H</i> 14.9	<i>G</i> 0.15	

Residuals in seconds of arc

501211 675	0.5+	0.3+	710327 675	0.3+	0.7-	920922 809	0.4+	0.6+
501211 675	0.5-	0.3-	710402 675	(5.2+	0.1-)	920922 809	0.3-	1.0+
710324 675	0.5-	1.7-	920902 809	0.3+	0.3+	920922 809	0.0	0.7-
710325 675	0.3-	0.5+	920902 809	1.4-	1.1-	920923 809	0.7+	0.4+
710325 675	0.8+	1.4+	920902 809	1.2-	1.0-	920923 809	1.1+	0.8+
710326 675	0.1+	0.9+	920903 809	1.0-	0.5-	920923 809	1.1+	0.6+

**1001 T-2 = 1993 PA<sub>7</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	264.51148	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.19507748	$\omega$ 261.40527	+0.15814528	-0.98741580
<i>a</i>	2.9444078	$\Omega$ 179.49508	+0.92063571	+0.14732342
<i>e</i>	0.1028757	<i>i</i> 2.24334	+0.35695934	+0.05749659
<i>P</i>	5.05	<i>H</i> 13.5	<i>G</i> 0.15	

Residuals in seconds of arc

730919 675	1.5+	0.1+	730925 675	0.5+	0.2-	731004 675	0.3-	2.1+
730919 675	1.0-	0.4-	730929 675	0.6+	0.0	930815 010	0.3-	0.7+
730920 675	2.0-	1.2+	730929 675	0.1+	0.1-	930815 010	0.9+	0.3+
730924 675	1.0+	0.5-	731004 675	0.3+	1.3-	930815 010	0.3-	0.6-
730924 675	0.8+	0.2-	731004 675	1.1-	0.7+	930817 010	0.3-	0.4-
730925 675	0.8-	0.1+	731004 675	0.4+	1.2-			

**1296 T-2 = 1993 OM<sub>5</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Marsden

<i>M</i>	71.67445	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.23880825	$\omega$ 51.96623	-0.82812339	+0.56044023
<i>a</i>	2.5729806	$\Omega$ 162.11180	-0.52475208	-0.76827194
<i>e</i>	0.1406078	<i>i</i> 2.03011	-0.19709617	-0.30929755
<i>P</i>	4.13	<i>H</i> 14.5	<i>G</i> 0.15	

Residuals in seconds of arc

730919 675	1.1-	1.4-	730925 675	0.2-	0.4+	731004 675	0.9-	0.6-
730919 675	2.0+	1.6+	730925 675	1.7+	0.0	930720 809	0.5+	1.6-
730919 675	0.2+	0.1-	730929 675	0.1+	0.2-	930720 809	0.1-	0.6+
730920 675	1.6-	0.8-	730929 675	0.8-	0.1-	930720 809	1.1-	0.5+
730924 675	1.2+	1.4-	730930 675	0.6-	0.2+	930724 809	0.8+	0.5+
730924 675	0.7-	1.4+	730930 675	0.3-	0.1+			
730924 675	0.2-	0.1-	731004 675	1.2+	1.0+			

**2189 T-2 = 1993 HJ<sub>6</sub>**

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5 Williams

<i>M</i>	329.07737	(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.23260300	$\omega$ 356.35068	+0.02992871	+0.99935547
<i>a</i>	2.6185398	$\Omega$ 275.36364	-0.91656626	+0.01952716
<i>e</i>	0.1167682	<i>i</i> 1.14079	-0.39876130	+0.03012200
<i>P</i>	4.24	<i>H</i> 13.5	<i>G</i> 0.15	

## Residuals in seconds of arc

730919 675	0.8+	0.1+	730930 675	0.8-	0.6+	930425 809	0.6-	0.6-
730919 675	0.3+	0.2+	730930 675	0.1+	1.1-	930425 809	0.5-	0.3-
730920 675	0.2+	0.7-	731004 675	0.1+	0.4+	930425 809	0.1-	0.3-
730924 675	(2.2-	0.7+)	731004 675	0.2-	0.8-	930425 809	0.6+	0.5+
730925 675	1.0-	0.3-	731005 675	0.8+	0.4+	930425 809	0.3+	0.3+
730925 675	0.1-	0.5-	731005 675	0.4+	0.1+	930426 809	0.4+	0.0
730929 675	0.6-	1.5+	930424 809	0.1-	0.2+			
730929 675	(0.2+	3.1+)	930424 809	0.0	0.2+			

## Residuals in seconds of arc

730919 675	1.5+	0.6-	731004 675	0.1-	0.1-	930424 809	1.8+	1.0-
730919 675	0.9+	0.0	731004 675	0.7+	0.6+	930424 809	0.3-	0.3+
730920 675	1.4-	0.1+	731005 675	0.9+	1.2-	930425 809	0.5+	1.0+
730924 675	(2.6-	0.3+)	731005 675	0.3+	0.9-	930425 809	0.6+	0.6+
730924 675	1.5-	0.2-	860409 688	0.2-	1.3-	930425 809	0.9+	0.4+
730925 675	1.7-	0.7-	860409 688	1.1-	1.4-	930427 809	1.9-	0.2-
730925 675	0.6-	0.0	890201 033	0.4-	1.8-	930427 809	1.2-	0.1-
730929 675	1.8+	2.3-	890202 033	(3.8-	1.8-)	930427 809	1.0-	0.3-
730929 675	(1.4+	3.3-)	890202 033	0.2-	0.8-	930428 809	0.5-	0.7-
730930 675	1.6+	1.1-	930424 809	0.3-	0.9-	930428 809	0.6-	0.7-
730930 675	1.8+	1.1-	930424 809	0.4+	0.8-	930428 809	0.0	0.6-

4129 T-2 = 1986 GR = 1989 CL<sub>4</sub>Id. S. Nakano (*MPC* 15085)

Epoch 1993 Aug. 1.0 TT = JDT 2449200.5

Williams

<i>M</i>	11.63847		(2000.0)	<b>P</b>	<b>Q</b>
<i>n</i>	0.28248271	$\omega$	199.20764	-0.65615577	+0.75327362
<i>a</i>	2.3004253	$\Omega$	29.83627	-0.67993747	-0.56420247
<i>e</i>	0.1449307	<i>i</i>	5.20664	-0.32732956	-0.33801542
<i>P</i>	3.49	<i>H</i>	14.0	<i>G</i>	0.15

Object	<i>H</i>	Epoch	<i>M</i>	$\omega$	$\Omega$	<i>i</i>	<i>e</i>	<i>a</i>	Obs.	Opp.	Arc	rms	Computer	<i>MPC</i>	Object
1939 UB	12.0	930801	170.46489	269.26855	212.45637	12.18416	0.1325209	2.6177582	16	5	1939-1993	1.03	Williams	22482	1939 UB
1942 CG	12.0	930801	219.20384	357.76639	98.25161	9.16773	0.1613954	2.5650084	19	4	1942-1993	0.85	Williams	22491	1942 CG
1949 PN	11.0	930801	8.45267	7.28318	325.92738	11.97288	0.1743345	2.6761374	16	3	1949-1993	0.87	Williams	22491	1949 PN
1953 TA <sub>1</sub>	14.6	930801	183.31394	147.85828	214.88989	5.08687	0.2290780	2.2911533	20	2	1953-1991	0.97	Bowell	21963	1953 TA <sub>1</sub>
1965 UA	14.0	930801	342.59386	351.22062	2.43056	4.69188	0.2258095	2.3144632	19	6	1953-1993	0.94	Williams	22491	1965 UA
1971 UN <sub>1</sub>	13.0	930801	315.82144	208.83767	187.39168	1.36232	0.2140306	3.1559323	21	4	1971-1993	0.88	Marsden	14011	1971 UN <sub>1</sub>
1974 SJ <sub>3</sub>	12.1	930801	263.02490	141.52943	5.08887	16.96779	0.0832442	2.7604819	12	6	1951-1990	1.01	Bowell	17012	1974 SJ <sub>3</sub>
1976 AH	10.3	930801	3.04061	256.42042	258.17744	17.58571	0.1830277	3.2059046	25	4	1951-1993	0.49	Bowell	21964	1976 AH
1976 GY <sub>3</sub>	13.0	930801	184.24956	317.70305	190.67654	4.33749	0.0647647	2.1868702	19	4	1953-1993	1.02	Bardwell	21964	1976 GY <sub>3</sub>
1976 SZ <sub>9</sub>	13.0	930801	322.48686	20.42392	11.92822	3.78496	0.2067433	3.1935426	28	4	1976-1993	1.05	Marsden	22072	1976 SZ <sub>9</sub>
1976 UP <sub>18</sub>	16.0	930801	287.49327	214.16822	183.98401	6.41851	0.1851988	2.2971739	19	5	1971-1993	1.00	Williams	21964	1976 UP <sub>18</sub>
1977 EO <sub>1</sub>	12.5	930801	359.49709	182.19992	52.07510	2.89701	0.1552720	3.0356903	28	4	1972-1993	0.80	Williams	22491	1977 EO <sub>1</sub>
1977 EA <sub>6</sub>	14.5	930801	253.16831	111.59293	307.61574	4.10824	0.1060494	2.3974573	15	4	1977-1993	0.85	Marsden	19012	1977 EA <sub>6</sub>
1977 UO <sub>5</sub>	12.0	930801	291.38594	356.79141	68.59035	2.40342	0.2029614	3.1149987	19	6	1977-1993	0.63	Williams	22049	1977 UO <sub>5</sub>
1978 RR <sub>8</sub>	14.0	930801	195.92218	324.41080	164.67939	11.08595	0.2346736	2.4393615	24	4	1978-1993	0.85	Williams	22073	1978 RR <sub>8</sub>
1978 SO <sub>4</sub>	11.0	930801	10.77660	298.54766	14.83741	6.37549	0.1670493	3.9447444	29	5	1978-1993	0.78	Williams	21964	1978 SO <sub>4</sub>
1978 VV <sub>6</sub>	16.0	930801	211.32452	274.94268	47.67526	2.82357	0.2054963	2.2465970	15	4	1951-1981	0.80	Bowell	15701	1978 VV <sub>6</sub>
1978 VG <sub>8</sub>	15.1	930801	257.36599	284.81834	62.49026	4.25359	0.2727488	2.5673812	17	5	1949-1992	0.56	Bowell	22073	1978 VG <sub>8</sub>
1979 MC <sub>2</sub>	13.2	930801	340.47689	103.69492	195.28814	2.15875	0.0349537	2.8274958	14	4	1951-1992	0.65	Bowell	21965	1979 MC <sub>2</sub>
1979 MR <sub>3</sub>	14.0	930801	354.43454	174.01842	122.48966	7.65261	0.1374620	2.3159315	23	6	1950-1993	0.56	Williams	22491	1979 MR <sub>3</sub>
1979 SR	12.5	930801	14.98718	129.16328	206.62443	8.57335	0.1686844	2.7719649	23	6	1951-1993	0.98	Williams	21965	1979 SR
1980 GL	13.2	930801	4.70614	217.12031	15.42776	11.82361	0.1335656	2.6490334	13	3	1951-1993	0.96	Bowell	22223	1980 GL
1980 PX	14.5	930801	354.43038	176.06597	160.35379	2.21943	0.2381357	2.1875248	33	3	1980-1993	0.82	Marsden	22492	1980 PX
1980 RV <sub>2</sub>	14.7	930801	334.70731	11.74375	339.50175	2.69192	0.1882347	2.2114771	9	3	1980-1993	0.92	Nakano	17816	1980 RV <sub>2</sub>
1980 RL <sub>7</sub>	12.4	930801	18.93238	142.84959	247.58791	8.72679	0.0976466	2.5745627	16	5	1943-1992	0.43	Bowell	21966	1980 RL <sub>7</sub>
1980 SQ	14.0	930801	297.75080	159.25375	223.76711	4.76394	0.1322037	2.2256888	26	3	1980-1993	0.67	Williams	22492	1980 SQ
1981 CB <sub>1</sub>	13.5	930801	231.68606	67.91798	36.29604	5.66360	0.1458926	2.3116332	25	6	1955-1992	0.95	Bowell	21966	1981 CB <sub>1</sub>
1981 DF <sub>2</sub>	14.0	930801	336.39936	126.40425	256.09009	7.30163	0.2029441	2.3165824	19	3	1981-1993	1.06	Bardwell	22429	1981 DF <sub>2</sub>
1981 EK <sub>10</sub>	15.0	930801	225.56456	158.12776	309.79562	3.03629	0.1443289	2.3321597	30	4	1981-1993	0.89	Williams	21966	1981 EK <sub>10</sub>
1981 EX <sub>13</sub>	12.5	930801	24.68598	105.08438	210.71916	9.55393	0.0952919	2.9707063	25	5	1978-1993	0.91	Williams	20497	1981 EX <sub>13</sub>
1981 EO <sub>21</sub>	15.4	930801	233.61562	84.38009	316.90012	1.62049	0.2124969	2.4009372	15	4	1953-1981	0.78	Bowell	22074	1981 EO <sub>21</sub>
1981 EA <sub>22</sub>	14.0	930801	141.60168	131.62966	170.65136	12.69859	0.0267996	2.7351050	15	3	1951-1981	0.51	Bowell	22270	1981 EA <sub>22</sub>
1981 ED <sub>28</sub>	14.7	930801	164.36424	144.58495	153.63714	2.81735	0.0894032	2.7203848	14	3	1951-1981	0.84	Bowell	10026	1981 ED <sub>28</sub>



1981 EF <sub>30</sub>	14.5	930801	199.37100	332.57316	162.66017	6.08739	0.0651861	2.3419296	24	3	1981-1993	0.86	Marsden	21967	1981 EF <sub>30</sub>
1981 EL <sub>33</sub>	15.5	930801	91.86494	29.83624	294.33814	5.88516	0.3150190	2.2789561	15	3	1978-1992	0.47	Williams	21967	1981 EL <sub>33</sub>
1981 EV <sub>46</sub>	15.8	930801	170.75120	354.02892	329.26716	1.24199	0.1976662	2.1796811	14	4	1953-1991	0.79	Bowell	21968	1981 EV <sub>46</sub>
1981 UT	13.0	930801	197.51123	43.05567	353.37919	3.04244	0.0998914	2.2161100	24	4	1981-1993	0.74	Williams	22075	1981 UT
1982 TX	15.3	930801	209.08934	193.48080	218.72760	15.80974	0.4312394	2.5775456	26	4	1953-1990	0.71	Bowell	17015	1982 TX
1982 UD <sub>7</sub>	13.2	930801	268.43666	139.00889	204.22835	6.95118	0.2118296	2.5674278	23	4	1953-1990	0.90	Bowell	22075	1982 UD <sub>7</sub>
1983 EM <sub>1</sub>	13.5	930801	94.23994	117.34523	18.79530	4.25250	0.0829828	2.2157361	17	4	1978-1993	1.03	Williams	22075	1983 EM <sub>1</sub>
1983 JQ	12.4	930801	256.94137	156.62732	117.04148	2.79600	0.1677318	3.2047134	24	6	1951-1991	0.86	Bowell	22075	1983 JQ
1983 VS <sub>1</sub>	13.8	930801	69.33814	78.57199	16.51585	5.06815	0.2112955	2.6308805	12	5	1953-1993	0.77	Bowell	22051	1983 VS <sub>1</sub>
1983 VN <sub>7</sub>	13.0	930801	298.15188	236.66836	146.35200	1.64622	0.1856844	3.0796689	30	4	1983-1993	0.97	Marsden	21969	1983 VN <sub>7</sub>
1983 XE	14.0	930801	145.96605	193.06026	237.62130	6.23813	0.1804082	2.5249001	26	5	1951-1991	1.19	Williams	22076	1983 XE
1984 AR	12.4	930801	256.68042	88.36652	25.26266	1.10737	0.1385017	3.1332799	34	9	1954-1992	0.71	Bowell	22076	1984 AR
1984 BK	13.0	930801	302.39245	81.24276	304.65647	4.23931	0.1031448	2.3719398	38	6	1953-1993	1.11	Williams	22492	1984 BK
1984 FN	14.0	930801	284.45724	81.84498	48.12789	23.48662	0.3065371	2.2934430	35	4	1984-1993	0.58	Williams	22076	1984 FN
1984 OA	12.0	930801	10.43390	207.58637	133.71938	16.65806	0.2185055	2.6404485	28	5	1954-1993	0.79	Williams	21969	1984 OA
1984 SC <sub>1</sub>	13.6	930801	72.76046	341.21593	0.98940	13.65957	0.1865137	2.5668500	20	3	1951-1988	0.76	Bowell	22430	1984 SC <sub>1</sub>
1984 SQ <sub>3</sub>	13.4	930801	282.32860	297.63646	22.06998	4.89692	0.1440393	2.2261580	15	5	1951-1993	0.47	Bowell	22271	1984 SQ <sub>3</sub>
1985 CR <sub>2</sub>	14.0	930801	215.80652	188.98509	281.31583	0.56697	0.0575082	2.2634457	58	7	1963-1993	0.69	Williams	22076	1985 CR <sub>2</sub>
1985 PO	13.7	930801	332.22065	201.70548	145.57389	3.41465	0.1432409	2.5424252	34	6	1949-1993	1.02	Nakano	22492	1985 PO
1986 JS	13.4	930801	33.06438	141.40256	128.79776	6.38582	0.1542204	2.2194670	18	5	1933-1993	1.11	Nakano	22493	1986 JS
1986 QQ	13.5	930801	270.63440	84.73237	359.21113	4.32647	0.1490301	2.2805055	71	6	1976-1993	0.63	Williams	22077	1986 QQ
1986 QS <sub>1</sub>	14.1	930801	322.68911	230.03232	133.91534	5.58058	0.1503108	2.3175923	49	3	1986-1993	0.72	Nakano	22493	1986 QS <sub>1</sub>
1986 VY	14.5	930801	304.98849	73.34785	338.58102	3.99127	0.2225803	2.3584367	21	5	1962-1993	1.26	Marsden	21970	1986 VY
1986 WE	13.0	930801	218.13321	41.07608	100.54854	6.36339	0.1899522	2.4405167	37	4	1938-1993	1.06	Nakano	22078	1986 WE
1986 XF <sub>1</sub>	13.5	930801	325.00338	94.10516	287.61006	2.54331	0.1952886	2.3733931	16	5	1975-1993	0.80	Marsden	22078	1986 XF <sub>1</sub>
1987 DG <sub>6</sub>	13.3	930801	81.13550	328.23065	297.06974	1.13219	0.1612304	2.6716884	47	7	1950-1991	0.71	Bowell	21970	1987 DG <sub>6</sub>
1987 DW <sub>6</sub>	12.2	930801	29.36772	180.46130	22.23975	1.55871	0.1512112	3.1510341	44	5	1951-1992	0.42	Bowell	22493	1987 DW <sub>6</sub>
1987 EV	13.4	930801	276.21615	269.84386	308.08439	4.06944	0.1112014	2.2700012	48	9	1951-1992	0.60	Bowell	22493	1987 EV
1987 QS	14.5	930801	245.50028	7.18411	321.93799	6.58188	0.1432089	2.3472868	19	3	1987-1992	0.49	Williams	15414	1987 QS
1987 SO <sub>9</sub>	14.5	930801	225.07765	315.05401	136.85176	2.09950	0.0911959	2.1620691	11	4	1949-1992	0.70	Bowell	20014	1987 SO <sub>9</sub>
1987 UG	14.0	930801	192.52300	184.46890	210.35005	1.82010	0.2139547	2.4245530	23	4	1953-1993	0.91	Williams	22079	1987 UG
1988 BK <sub>2</sub>	12.5	930801	72.80277	79.34570	55.44006	22.56449	0.0567603	2.6815212	33	3	1988-1993	0.84	Williams	22272	1988 BK <sub>2</sub>
1988 CH <sub>2</sub>	13.5	930801	299.77421	238.77600	133.01665	7.18174	0.1321041	2.3119871	46	6	1969-1993	1.11	Bardwell	22493	1988 CH <sub>2</sub>
1988 CW <sub>4</sub>	12.5	930801	63.60116	214.24404	249.85047	6.91941	0.0442188	2.9946132	23	4	1955-1993	0.78	Bowell	21971	1988 CW <sub>4</sub>
1988 PX <sub>2</sub>	12.5	930801	295.09887	208.90274	181.75832	10.56889	0.0762976	3.0017268	27	4	1978-1993	0.95	Williams	22493	1988 PX <sub>2</sub>
1988 RX <sub>4</sub>	13.7	930801	101.64541	243.97509	104.05573	3.57114	0.2137325	2.4144631	46	3	1951-1992	0.75	Bowell	22079	1988 RX <sub>4</sub>
1988 RK <sub>9</sub>	11.5	930801	345.10401	177.10814	145.64320	14.28556	0.1389863	2.9732162	20	2	1988-1993	0.57	Bardwell	22485	1988 RK <sub>9</sub>
1988 UC	12.7	930801	16.64213	314.90289	39.39299	2.54080	0.0940163	2.9156321	20	5	1953-1991	0.93	Bowell	22080	1988 UC
1988 VZ <sub>3</sub>	13.9	930801	124.38822	150.42183	272.75347	6.17652	0.1775656	2.2878527	24	5	1950-1991	0.75	Bowell	22272	1988 VZ <sub>3</sub>
1988 WC	13.5	930801	115.07214	252.68386	241.10739	22.50039	0.4040395	2.2213837	39	6	1955-1993	0.96	Williams	22493	1988 WC
1989 CV	11.7	930801	95.50555	217.32154	26.41788	5.39764	0.0682299	3.9532947	15	6	1955-1992	0.83	Bowell	22080	1989 CV
1989 GH	12.6	930801	345.43146	82.03040	138.64628	12.00058	0.1438946	2.6675806	21	4	1951-1993	0.82	Bowell	22080	1989 GH
1989 GT <sub>4</sub>	14.0	930801	11.59504	120.19276	188.73453	3.15519	0.1812584	2.2557494	38	7	1949-1993	0.98	Marsden	22081	1989 GT <sub>4</sub>
1989 LW	13.5	930801	17.78573	90.84548	224.07051	21.61849	0.2741057	2.3764656	19	5	1978-1993	0.99	Bardwell	22493	1989 LW
1989 PU	13.5	930801	348.42474	194.09010	138.06231	29.66851	0.2447691	2.5388852	13	2	1989-1993	0.77	Williams	22485	1989 PU
1989 RZ	12.5	930801	343.10727	81.54220	341.18657	21.13757	0.3392103	2.4092704	22	4	1959-1993	0.75	Williams	21973	1989 RZ
1989 RO <sub>2</sub>	13.0	930801	351.34338	44.98159	354.92194	23.15923	0.2964765	2.4297052	15	3	1989-1993	0.90	Bardwell	21973	1989 RO <sub>2</sub>
1989 SP	12.5	930801	355.37789	135.26432	205.03129	11.20879	0.1879789	2.5699777	22	4	1972-1993	0.91	Williams	22493	1989 SP
1989 TB <sub>11</sub>	13.1	930801	320.94909	33.92568	336.59009	4.02898	0.1344855	2.6661386	16	3	1980-1993	1.00	Nakano	22493	1989 TB <sub>11</sub>
1989 UL	13.0	930801	282.15345	190.15813	218.12422	5.43409	0.1399349	2.7765272	27	3	1980-1993	1.03	Williams	22493	1989 UL
1989 UT <sub>2</sub>	12.8	930801	58.55529	58.25238	224.67209	12.17206	0.1692721	2.5756464	32	5	1984-1993	0.92	Nakano	22081	1989 UT <sub>2</sub>
1989 UY <sub>3</sub>	14.0	930801	266.43957	245.13878	240.44782	21.92038	0.4756866	2.7390780	12	3	1980-1993	0.66	Williams	18817	1989 UY <sub>3</sub>

1989 WB <sub>2</sub>	13.3	930801	296.56503	172.83506	292.72642	5.05258	0.2399274	2.6060259	16	3	1951-1989	0.87	Bowell	15725	1989 WB <sub>2</sub>
1989 XC	12.3	930801	317.77137	300.45139	83.62033	3.23283	0.1073952	2.8630741	26	4	1954-1993	0.96	Nakano	21939	1989 XC
1990 BH <sub>1</sub>	13.1	930801	273.56143	87.22753	71.17601	5.63194	0.1514081	2.6395752	17	4	1950-1990	0.97	Bowell	21973	1990 BH <sub>1</sub>
1990 OQ <sub>3</sub>	13.5	930801	323.96648	16.95435	292.94086	4.38757	0.1892233	2.2509013	17	6	1970-1993	0.85	Bowell	20926	1990 OQ <sub>3</sub>
1990 QM <sub>4</sub>	13.8	930801	7.44944	123.57609	138.24632	5.22828	0.1408042	2.2858423	16	3	1979-1993	1.25	Nakano	22082	1990 QM <sub>4</sub>
1990 RR <sub>2</sub>	13.2	930801	261.89765	173.67128	193.65608	6.65029	0.1374904	2.4574623	24	4	1975-1993	0.80	Bowell	19504	1990 RR <sub>2</sub>
1990 RH <sub>4</sub>	14.0	930801	245.91307	282.58151	157.43446	4.11053	0.0700864	2.1836019	15	3	1982-1993	0.80	Williams	17964	1990 RH <sub>4</sub>
1990 SK <sub>3</sub>	14.0	930801	355.74152	244.05579	68.34791	3.81180	0.1693342	2.2033702	13	4	1951-1993	0.69	Williams	22494	1990 SK <sub>3</sub>
1990 UW	13.1	930801	258.67013	107.23760	334.15530	3.05299	0.1018406	2.2358405	36	6	1980-1993	1.01	Nakano	22494	1990 UW
1990 UK <sub>1</sub>	14.5	930801	311.21707	114.33631	254.79244	4.22754	0.1715334	2.2545040	23	5	1951-1993	0.97	Bardwell	22494	1990 UK <sub>1</sub>
1990 VQ <sub>1</sub>	12.0	930801	328.97218	56.36374	222.98390	12.12487	0.1367058	2.6395403	19	4	1971-1993	0.85	Williams	22231	1990 VQ <sub>1</sub>
1990 VD <sub>4</sub>	14.1	930801	280.79219	222.49808	171.55889	1.77641	0.1915430	2.3969334	15	5	1949-1990	0.87	Bowell	21975	1990 VD <sub>4</sub>
1990 WW <sub>2</sub>	12.5	930801	203.41112	285.18062	89.47279	15.72656	0.4510971	3.0643006	47	3	1979-1991	0.96	Williams	22431	1990 WW <sub>2</sub>
1991 AP <sub>1</sub>	14.0	930801	287.15556	84.32452	332.48478	1.50170	0.2151203	2.3618817	15	4	1968-1993	1.13	Williams	17967	1991 AP <sub>1</sub>
1991 BJ	13.1	930801	315.18506	356.92743	60.24109	4.55967	0.0303965	2.3498655	14	4	1950-1991	0.60	Bowell	22083	1991 BJ
1991 BV	12.1	930801	249.80935	307.58464	143.78371	12.97659	0.1372152	2.6117595	40	4	1951-1993	0.75	Bowell	22494	1991 BV
1991 CY	12.5	930801	202.50569	226.74802	290.51480	9.45887	0.1210050	2.6420733	13	4	1978-1993	0.60	Nakano	21975	1991 CY
1991 CU <sub>1</sub>	13.6	930801	260.21912	227.95347	276.89996	3.87419	0.1324005	2.2864479	19	5	1955-1991	0.91	Bowell	21975	1991 CU <sub>1</sub>
1991 FV	11.0	930801	34.59946	41.89025	265.66659	9.58324	0.0771819	3.0086653	24	6	1973-1993	0.91	Williams	22083	1991 FV
1991 GA	13.0	930801	184.70932	190.30396	38.65520	8.43002	0.1136061	2.4294048	16	5	1954-1992	0.64	Bowell	22083	1991 GA
1991 GG <sub>1</sub>	11.3	930801	244.80973	138.72827	333.60574	9.91667	0.0534756	2.9897264	25	7	1970-1993	1.14	Nakano	21975	1991 GG <sub>1</sub>
1991 PY <sub>11</sub>	13.2	930801	281.28162	25.03282	214.99575	4.69837	0.1362745	2.2986081	12	4	1953-1991	0.89	Bowell	21795	1991 PY <sub>11</sub>
1991 QC	12.9	930801	204.82580	58.39102	229.58053	3.62207	0.1605149	2.5578494	19	4	1951-1992	0.60	Bowell	21976	1991 QC
1991 QG	14.5	930801	122.28548	162.20669	200.03703	7.40767	0.4014274	3.0071259	30	4	1981-1993	1.00	Williams	22233	1991 QG
1991 RX <sub>2</sub>	13.7	930801	44.81354	223.52706	280.57853	3.97284	0.0866514	2.4256951	26	4	1950-1993	0.51	Bowell	21976	1991 RX <sub>2</sub>
1991 SX <sub>1</sub>	14.1	930801	66.31895	155.53225	327.22467	1.85823	0.0299993	2.2285024	22	4	1955-1993	1.10	Bowell	22234	1991 SX <sub>1</sub>
1991 TQ	13.3	930801	178.17545	242.16236	68.60045	6.76738	0.1231548	2.9979314	11	3	1950-1991	0.76	Bowell	20509	1991 TQ
1991 TD <sub>1</sub>	14.5	930801	250.83723	193.88221	190.97710	22.91982	0.1184292	1.9170494	26	5	1975-1993	0.85	Williams	22431	1991 TD <sub>1</sub>
1991 VO	13.0	930801	110.53640	268.25715	208.18225	6.19554	0.0593258	2.3640839	16	3	1990-1993	0.59	Williams	19517	1991 VO
1991 VX <sub>1</sub>	13.0	930801	109.20378	298.76684	226.71900	19.78265	0.0712217	1.9325589	17	3	1983-1993	0.87	Bardwell	22487	1991 VX <sub>1</sub>
1992 BW	13.5	930801	276.27241	86.17403	315.47941	21.78703	0.0864491	1.9375271	17	3	1985-1993	0.94	Bardwell	22495	1992 BW
1992 CA	13.5	930801	306.00245	240.65842	142.51082	24.71967	0.0834115	1.9491383	13	2	1992-1993	1.01	Bardwell	22487	1992 CA
1992 CJ	13.5	930801	84.48573	39.48205	204.01083	5.51043	0.1230420	2.2441006	18	4	1952-1993	1.01	Williams	20511	1992 CJ
1992 DK	11.0	930801	215.86228	350.02369	41.29973	16.32820	0.2071869	3.0902342	24	5	1946-1993	0.99	Williams	22085	1992 DK
1992 EM	13.0	930801	65.89118	305.27928	327.63688	8.60867	0.1636954	2.2669109	15	5	1959-1993	0.96	Bardwell	20034	1992 EM
1992 FP	12.5	930801	55.45064	174.71352	52.85685	1.92517	0.1687424	3.1956996	17	4	1978-1993	0.95	Marsden	20155	1992 FP
1992 FM <sub>1</sub>	14.0	930801	157.40258	201.26901	345.30795	24.71224	0.1149564	2.2632758	26	4	1979-1992	0.87	Williams	21580	1992 FM <sub>1</sub>
1992 FW <sub>1</sub>	15.0	930801	183.17065	267.72825	191.82125	22.61276	0.2678533	2.3331475	22	6	1981-1993	1.18	Williams	22495	1992 FW <sub>1</sub>
1992 FZ <sub>1</sub>	13.0	930801	13.84825	189.57339	129.72928	7.75126	0.1329193	2.3584892	16	3	1979-1993	0.83	Williams	22495	1992 FZ <sub>1</sub>
1992 JB	18.0	930801	259.19692	306.74495	218.53398	16.06493	0.3599199	1.5568182	49	1	225 days	0.78	Williams	21582	1992 JB
1992 JP	11.5	930801	107.55585	67.02838	128.48114	16.98325	0.0652185	3.1848395	19	3	1955-1993	0.90	Bardwell	22487	1992 JP
1992 NJ	12.2	930801	325.15612	24.59457	27.02647	22.81313	0.0707009	3.1957355	26	4	1953-1992	0.50	Bowell	22406	1992 NJ
1992 OJ	12.0	930801	92.71084	310.04625	314.95351	18.20460	0.2631186	2.8464068	27	5	1973-1992	0.87	Williams	22432	1992 OJ
1992 PF <sub>2</sub>	13.4	930801	148.52400	49.72016	210.17044	5.08277	0.1528352	2.2662029	15	5	1951-1992	0.76	Bowell	22495	1992 PF <sub>2</sub>
1992 QA	15.0	930801	224.92827	148.91635	54.00865	26.23137	0.1118655	1.8697280	24	4	1974-1992	0.88	Williams	22236	1992 QA
1992 TD <sub>1</sub>	13.2	930801	99.37082	149.91858	198.48377	14.87946	0.1485650	2.5522570	18	3	1951-1992	0.84	Bowell	22085	1992 TD <sub>1</sub>
1993 FC <sub>1</sub>	12.5	930801	15.41430	5.86211	210.99261	12.99026	0.1128006	2.5932707	22	3	1986-1993	0.80	Williams	22432	1993 FC <sub>1</sub>
1993 HQ <sub>1</sub>	15.5	930801	28.84698	198.84113	6.47314	19.11628	0.0702305	1.9765814	19	3	1977-1993	0.81	Williams	22489	1993 HQ <sub>1</sub>
1993 KL	13.5	930801	36.65019	149.72823	44.58542	25.62405	0.2186560	2.3538838	24	3	1953-1993	1.02	Williams	22489	1993 KL
1993 MF	14.0	930801	359.90347	74.75294	241.18340	8.03130	0.5317397	2.4445327	227	1	82 days	0.68	Williams	22489	1993 MF
1993 ME <sub>1</sub>	15.5	930801	13.05879	359.52484	252.24871	23.02130	0.4850593	2.6373341	41	1	59 days	0.71	Williams	22490	1993 ME <sub>1</sub>
1993 MS <sub>1</sub>	12.0	930801	81.58201	350.19132	229.10145	11.33441	0.1325433	2.4756715	14	5	1974-1993	1.22	Williams	22490	1993 MS <sub>1</sub>

2548 P-L	12.5	930801	71.31729	150.51291	105.55979	2.17386	0.1257373	3.1389963	19	4	1960-1993	0.75	Marsden	22086	2548 P-L
2604 P-L	14.6	930801	195.71095	226.48818	8.16581	3.04209	0.1902036	2.3323395	22	4	1950-1991	0.83	Bowell	22086	2604 P-L
2642 P-L	14.5	930801	63.59956	53.66127	181.68507	6.73902	0.1308878	2.2342865	23	5	1960-1993	1.01	Williams	22086	2642 P-L
2777 P-L	14.0	930801	19.18104	99.88405	159.69801	2.91717	0.1678415	2.4058128	20	5	1949-1993	0.97	Williams	22495	2777 P-L
4017 P-L	14.5	930801	105.65388	22.31803	359.86969	13.23439	0.2583236	2.7192314	11	3	1951-1978	0.62	Williams	22274	4017 P-L
4600 P-L	13.1	930801	190.30785	341.08191	136.93139	1.89261	0.1647370	3.1769329	27	6	1949-1993	0.72	Bowell	22432	4600 P-L
5568 P-L	13.5	930801	247.36860	321.85337	30.69828	8.08807	0.1229053	2.6414456	24	7	1960-1993	0.94	Williams	22086	5568 P-L
6034 P-L	14.0	930801	342.56207	142.87334	198.34164	7.56198	0.2278110	2.5808022	32	5	1960-1993	1.06	Bardwell	22086	6034 P-L
6555 P-L	12.5	930801	162.43691	28.25144	124.80389	3.01021	0.0057417	2.8348170	27	6	1960-1993	0.78	Bardwell	22087	6555 P-L
9511 P-L	13.0	930801	29.86463	100.95058	160.64743	0.85221	0.1292566	3.1617099	29	6	1954-1993	1.02	Marsden	22087	9511 P-L
1210 T-2	14.0	930801	103.96391	233.58382	348.35739	3.55267	0.0778749	2.2426069	30	3	1973-1993	0.85	Marsden	22087	1210 T-2
2170 T-2	13.5	930801	60.08552	60.20080	186.69797	14.33354	0.1349293	2.5507235	26	4	1973-1993	1.00	Bardwell	22088	2170 T-2
2232 T-2	14.8	930801	166.17252	178.47936	174.95705	3.88792	0.0946360	2.3726286	28	3	1951-1991	0.88	Bowell	22088	2232 T-2
3070 T-2	13.5	930801	173.27428	4.49071	133.22014	4.05099	0.0822563	2.2598736	38	5	1973-1993	1.16	Williams	21978	3070 T-2
3104 T-3	10.4	930801	241.43854	55.74263	195.36083	19.09516	0.1008540	5.1973430	28	4	1953-1989	0.70	Bowell	22432	3104 T-3
3395 T-3	14.4	930801	28.98884	344.94614	179.12463	4.68384	0.0504551	2.3199220	25	5	1949-1993	0.65	Bowell	21978	3395 T-3
3422 T-3	12.5	930801	225.11247	298.30466	28.94547	10.88199	0.0296654	2.7384309	23	3	1977-1993	0.87	Williams	21809	3422 T-3
4391 T-3	15.9	930801	203.77751	240.33442	96.62795	5.09797	0.2854922	2.3112095	20	3	1949-1991	0.86	Bowell	20038	4391 T-3

EPHEMERIDES

1991 RC

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$
1993 09 20	17 37.19	-09 12.9	0.721	1.207	87.1	56.2	18.7
1993 09 30	18 20.03	-12 58.1	0.897	1.321	88.1	49.2	19.2
1993 10 10	18 52.71	-15 09.2	1.085	1.423	86.1	44.4	19.6
1993 10 20	19 19.58	-16 23.9	1.278	1.514	82.5	40.7	20.0
1993 10 30	19 42.98	-17 02.0	1.472	1.595	78.0	37.5	20.4

(5646) 1990 TR

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$
1993 09 20	17 44.87	-34 02.4	0.758	1.255	89.7	53.2	16.2
1993 09 30	18 19.23	-32 29.1	0.765	1.230	87.2	54.4	16.3
1993 10 10	18 56.19	-30 18.8	0.774	1.214	85.4	55.1	16.3
1993 10 20	19 34.71	-27 26.7	0.786	1.206	84.3	55.3	16.3
1993 10 30	20 13.75	-23 53.0	0.804	1.207	83.7	54.9	16.3
1993 11 09	20 52.38	-19 43.6	0.830	1.216	83.4	54.0	16.4
1993 11 19	21 30.00	-15 08.1	0.866	1.235	83.2	52.6	16.5
1993 11 29	22 06.26	-10 19.1	0.913	1.261	83.1	51.0	16.6
1993 12 09	22 41.00	-05 28.9	0.973	1.294	82.7	49.0	16.7
1993 12 19	23 14.29	-00 47.5	1.046	1.333	82.0	47.0	16.9
1993 12 29	23 46.25	+03 37.6	1.130	1.377	81.0	44.9	17.1
1994 01 08	00 17.03	+07 41.9	1.226	1.425	79.5	42.7	17.3

1993 ME<sub>1</sub>

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	Variation	$V$	
1993 09 20	18 38.33	+08 14.8	1.197	1.714	-2.56	-20.7	18.5
1993 09 30	18 58.02	+07 27.3	1.320	1.770	-2.27	-18.3	18.8
1993 10 10	19 18.03	+06 46.7	1.449	1.826	-2.03	-16.2	19.0
1993 10 20	19 38.23	+06 15.7	1.584	1.884	-1.82	-14.4	19.2
1993 10 30	19 58.52	+05 56.1	1.725	1.943	-1.64	-12.8	19.4
1993 11 09	20 18.77	+05 48.6	1.871	2.001	-1.48	-11.4	19.6

1993 11 19	20 38.91	+05 53.3	2.021	2.060	-1.35	-10.2	19.8
1993 11 29	20 58.86	+06 10.0	2.174	2.119	-1.23	-9.1	20.0

1993 PB

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	Variation	$V$	
1993 09 20	20 07.87	-07 00.8	1.367	2.105	-0.89	-16.5	18.9
1993 09 30	20 04.25	-06 27.1	1.525	2.140	-0.76	-14.7	19.2
1993 10 10	20 04.58	-05 54.8	1.690	2.171	-0.65	-13.2	19.5
1993 10 20	20 08.02	-05 21.2	1.857	2.199	-0.56	-11.9	19.8
1993 10 30	20 13.89	-04 44.3	2.023	2.223	-0.48	-10.9	20.0
1993 11 09	20 21.65	-04 02.6	2.184	2.243	-0.42	-10.0	20.1
1993 11 19	20 30.91	-03 14.9	2.339	2.260	-0.37	-9.2	20.3

1993 OV<sub>1</sub>

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$
1993 09 20	21 15.19	-01 56.1	0.720	1.630	141.4	22.6	18.4
1993 09 30	21 20.68	-01 11.4	0.826	1.681	133.6	25.5	18.9
1993 10 10	21 28.91	-00 32.0	0.944	1.734	126.4	27.6	19.3
1993 10 20	21 39.31	+00 07.6	1.073	1.788	119.5	29.0	19.7
1993 10 30	21 51.41	+00 51.0	1.212	1.843	113.0	29.7	20.0
1993 11 09	22 04.76	+01 39.9	1.358	1.897	106.7	30.0	20.4
1993 11 19	22 19.06	+02 35.2	1.511	1.952	100.6	29.9	20.6

1993 OZ<sub>2</sub>

Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$
1993 09 20	23 22.84	-44 02.9	0.841	1.716	136.7	23.7	16.4
1993 09 30	23 22.54	-44 58.3	0.877	1.705	130.3	26.6	16.6
1993 10 10	23 24.49	-44 46.7	0.923	1.698	124.2	29.1	16.8
1993 10 20	23 29.31	-43 36.0	0.977	1.696	118.6	31.0	16.9
1993 10 30	23 37.11	-41 36.5	1.037	1.698	113.5	32.4	17.1
1993 11 09	23 47.53	-38 58.1	1.104	1.704	108.8	33.4	17.3
1993 11 19	00 00.08	-35 49.5	1.176	1.715	104.5	33.9	17.4
1993 11 29	00 14.32	-32 18.6	1.255	1.730	100.4	34.1	17.6
1993 12 09	00 29.79	-28 32.5	1.339	1.749	96.5	34.0	17.8

1993 12 19	00 46.18	-24 37.3	1.430	1.772	92.6	33.7	17.9
1993 12 29	01 03.29	-20 38.5	1.528	1.798	88.7	33.1	18.1
1994 01 08	01 20.90	-16 41.1	1.632	1.828	84.8	32.4	18.2
1994 01 18	01 38.94	-12 48.8	1.743	1.860	80.8	31.5	18.4
1994 01 28	01 57.33	-09 04.9	1.860	1.896	76.8	30.4	18.5
1994 02 07	02 16.00	-05 32.1	1.982	1.933	72.7	29.1	18.7

**1993 QP**

		$a, e, i = 2.26, 0.46, 7$				Elements MPC 22572		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$	
1993 09 20	23 32.53	+31 02.7	0.263	1.234	147.6	25.9	17.2	
1993 09 30	23 42.26	+32 10.9	0.285	1.254	148.9	24.4	17.4	
1993 10 10	23 52.78	+31 49.7	0.315	1.282	150.1	22.9	17.6	
1993 10 20	00 04.47	+30 28.4	0.356	1.316	150.2	22.1	17.9	
1993 10 30	00 17.60	+28 38.5	0.407	1.357	148.5	22.5	18.3	
1993 11 09	00 31.99	+26 45.1	0.470	1.402	145.1	23.9	18.7	
1993 11 19	00 47.45	+25 04.5	0.547	1.452	140.3	25.8	19.2	
1993 11 29	01 03.84	+23 45.7	0.637	1.505	134.9	27.7	19.6	
1993 12 09	01 20.89	+22 50.5	0.739	1.560	129.0	29.4	20.1	

**Comet Mueller (1993p)**

						Elements MPC 22571		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$m_1$	
1993 09 20	01 02.12	+48 44.8	2.212	2.936	127.7	15.7	12.9	
1993 09 30	00 39.92	+46 38.3	2.011	2.819	136.0	14.3	12.5	
1993 10 10	00 15.51	+43 10.6	1.843	2.701	142.0	13.1	12.1	
1993 10 20	23 51.44	+38 13.1	1.715	2.582	143.1	13.4	11.8	
1993 10 30	23 30.21	+31 56.1	1.634	2.462	137.8	15.7	11.5	
1993 11 09	23 13.38	+24 50.1	1.601	2.340	127.5	19.6	11.2	
1993 11 19	23 01.48	+17 35.2	1.612	2.218	114.9	23.8	11.0	
1993 11 29	22 54.29	+10 46.1	1.658	2.095	101.8	27.4	10.8	
1993 12 09	22 51.19	+04 41.6	1.725	1.971	89.0	30.0	10.6	
1993 12 19	22 51.50	-00 33.6	1.803	1.848	76.9	31.2	10.4	
1993 12 29	22 54.61	-05 04.0	1.879	1.724	65.6	31.3	10.2	
1994 01 08	23 00.00	-08 58.8	1.945	1.602	55.2	30.3	10.0	
1994 01 18	23 07.30	-12 27.5	1.993	1.483	45.6	28.3	9.7	
1994 01 28	23 16.27	-15 40.3	2.018	1.367	37.1	25.7	9.4	

**1983 RB**

		$a, e, i = 2.22, 0.51, 19$				Elements MPC 22589		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$	
1993 09 20	01 26.31	-06 13.4	0.559	1.530	155.3	15.9	16.0	
1993 09 30	01 16.01	-11 14.5	0.616	1.597	161.2	11.7	16.2	
1993 10 10	01 05.86	-14 49.4	0.695	1.665	158.6	12.7	16.6	
1993 10 20	00 57.64	-16 58.3	0.793	1.732	150.9	16.2	17.1	
1993 10 30	00 52.42	-17 54.6	0.910	1.799	142.0	19.8	17.6	
1993 11 09	00 50.44	-17 55.9	1.041	1.866	133.4	22.7	18.0	
1993 11 19	00 51.52	-17 17.9	1.186	1.931	125.1	24.8	18.4	
1993 11 29	00 55.28	-16 12.7	1.341	1.996	117.2	26.1	18.8	
1993 12 09	01 01.24	-14 49.8	1.505	2.059	109.8	26.8	19.2	
1993 12 19	01 09.02	-13 15.3	1.675	2.120	102.7	26.9	19.5	
1993 12 29	01 18.25	-11 34.0	1.849	2.181	95.8	26.7	19.7	
1994 01 08	01 28.65	-09 49.2	2.026	2.239	89.2	26.0	20.0	

**Periodic Comet Forbes (1993f)**

						Elements MPC 16379		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$m_2$	
1993 09 20	01 48.93	+19 45.2	1.455	2.343	144.0	14.6	19.0	
1993 09 30	01 39.06	+19 28.1	1.461	2.408	155.5	9.9	18.9	
1993 10 10	01 28.08	+18 52.3	1.491	2.472	166.2	5.5	18.8	
1993 10 20	01 17.32	+18 03.2	1.548	2.536	170.6	3.7	18.8	
1993 10 30	01 07.99	+17 08.7	1.634	2.600	163.0	6.4	19.1	
1993 11 09	01 00.92	+16 16.7	1.746	2.663	152.2	10.0	19.5	
1993 11 19	00 56.49	+15 33.2	1.882	2.725	141.4	13.1	19.8	
1993 11 29	00 54.77	+15 01.9	2.038	2.787	131.0	15.5	20.1	
1993 12 09	00 55.57	+14 44.5	2.210	2.847	121.1	17.2	20.4	
1993 12 19	00 58.60	+14 40.6	2.395	2.908	111.8	18.3	20.7	
1993 12 29	01 03.53	+14 49.2	2.589	2.967	102.9	18.9	20.9	
1994 01 08	01 10.05	+15 08.8	2.788	3.026	94.3	18.9	21.1	
1994 01 18	01 17.90	+15 37.5	2.989	3.084	86.1	18.6	21.3	
1994 01 28	01 26.83	+16 13.8	3.189	3.141	78.3	17.9	21.4	

**1992 JB**

		$a, e, i = 1.56, 0.36, 16$				Elements MPC 22600		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	Variation		$V$	
1993 10 10	06 33.81	+15 08.9	1.004	1.516	-3.08	+10.7	20.5	
1993 10 20	06 57.59	+11 41.1	0.886	1.465	-3.52	+12.6	20.2	
1993 10 30	07 21.57	+07 16.9	0.777	1.412	-4.05	+14.3	19.9	
1993 11 09	07 46.00	+01 47.3	0.680	1.359	-4.72	+15.3	19.5	
1993 11 19	08 11.20	-04 54.7	0.596	1.306	-5.55	+15.0	19.2	
1993 11 29	08 37.86	-12 49.5	0.526	1.254	-6.59	+12.2	18.9	
1993 12 09	09 07.13	-21 46.1	0.472	1.203	-7.88	+5.8	18.7	
1993 12 19	09 40.72	-31 15.4	0.434	1.155	-9.47	-5.5	18.5	
1993 12 29	10 21.36	-40 31.3	0.410	1.110	-11.27	-22.1	18.5	
1994 01 08	11 12.72	-48 39.0	0.397	1.071	-12.94	-44.3	18.5	
1994 01 18	12 17.89	-54 40.1	0.392	1.039	-13.54	-70.5	18.5	
1994 01 28	13 35.49	-57 42.7	0.393	1.015	-11.81	-95.1	18.6	
1994 02 07	14 55.63	-57 25.9	0.396	1.001	-8.09	-109.6	18.7	

**(5590) 1990 VA**

		$a, e, i = 0.99, 0.28, 14$				Elements MPC 22212		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$	
1993 09 20	05 58.54	+27 30.4	0.589	1.142	87.5	61.5	21.0	
1993 09 30	06 14.40	+24 13.5	0.552	1.174	93.7	58.4	20.9	
1993 10 10	06 26.50	+20 21.8	0.509	1.201	100.6	54.8	20.6	
1993 10 20	06 33.81	+15 48.2	0.463	1.223	108.3	50.6	20.3	
1993 10 30	06 35.09	+10 25.0	0.418	1.240	117.1	45.5	20.0	
1993 11 09	06 28.91	+04 08.4	0.377	1.252	126.5	39.5	19.6	
1993 11 19	06 13.79	-02 50.5	0.345	1.259	135.7	33.3	19.3	
1993 11 29	05 49.64	-09 50.0	0.328	1.260	141.8	29.0	19.1	
1993 12 09	05 19.08	-15 41.0	0.327	1.257	141.3	29.3	19.0	
1993 12 19	04 47.61	-19 23.0	0.341	1.248	134.8	34.0	19.3	
1993 12 29	04 21.32	-20 47.0	0.367	1.234	125.7	40.4	19.6	
1994 01 08	04 03.24	-20 25.9	0.399	1.215	116.4	46.5	19.9	
1994 01 18	03 53.58	-18 58.6	0.432	1.190	108.0	51.8	20.2	

**1993 KH**

		$a, e, i = 1.23, 0.31, 13$				Elements MPC 22596		
Date TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$V$	
1993 09 20	08 15.22	-07 53.1	0.297	0.865	54.2	109.7	20.2	
1993 09 30	08 23.31	+00 24.3	0.322	0.889	60.6	101.0	20.0	
1993 10 10	08 37.59	+07 25.5	0.346	0.923	67.4	92.4	19.8	

1993 10 20	08 55.10	+13 21.8	0.366	0.964	74.3	84.3	19.7
1993 10 30	09 13.53	+18 34.6	0.380	1.009	81.5	76.6	19.6
1993 11 09	09 31.12	+23 25.9	0.389	1.058	89.1	69.3	19.5
1993 11 19	09 46.08	+28 17.7	0.392	1.109	97.3	62.1	19.4
1993 11 29	09 56.57	+33 25.9	0.392	1.160	106.3	54.7	19.3
1993 12 09	10 00.47	+38 58.0	0.392	1.209	116.0	47.1	19.2
1993 12 19	09 54.87	+44 44.8	0.395	1.257	126.0	39.3	19.0
1993 12 29	09 37.05	+50 10.4	0.406	1.304	135.2	32.1	19.0
1994 01 08	09 06.51	+54 18.6	0.429	1.347	141.9	26.8	19.0
1994 01 18	08 28.56	+56 18.6	0.466	1.388	143.9	24.7	19.2
1994 01 28	07 53.92	+56 05.5	0.518	1.426	141.2	25.7	19.5
1994 02 07	07 30.28	+54 20.6	0.583	1.460	135.4	28.3	19.9

## Periodic Comet Swift-Tuttle (1992t)

Date	TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$m_2$
1993 10 20	11 31.66	-58 59.0	4.697	4.194	54.3	11.1	18.7	
1993 10 30	11 39.47	-60 01.8	4.792	4.293	54.5	10.9	18.7	
1993 11 09	11 45.75	-61 11.9	4.872	4.390	55.7	10.7	18.8	
1993 11 19	11 50.22	-62 28.0	4.935	4.487	57.8	10.7	18.9	
1993 11 29	11 52.52	-63 48.3	4.985	4.583	60.7	10.8	19.0	
1993 12 09	11 52.22	-65 10.5	5.020	4.678	64.3	10.9	19.0	
1993 12 19	11 48.79	-66 32.0	5.044	4.773	68.5	11.1	19.1	
1993 12 29	11 41.68	-67 48.8	5.059	4.866	73.2	11.2	19.1	
1994 01 08	11 30.42	-68 56.5	5.067	4.959	78.1	11.2	19.2	
1994 01 18	11 14.82	-69 49.4	5.072	5.051	83.2	11.2	19.2	
1994 01 28	10 55.3	-70 21.1	5.076	5.143	88.3	11.0	19.3	
1994 02 07	10 33.1	-70 26.4	5.084	5.233	93.3	10.8	19.3	
1994 02 17	10 10.2	-70 01.5	5.097	5.323	97.9	10.6	19.3	
1994 02 27	09 48.67	-69 06.5	5.121	5.412	101.9	10.3	19.4	
1994 03 09	09 30.26	-67 44.3	5.156	5.501	105.2	10.0	19.4	
1994 03 19	09 15.83	-66 00.5	5.206	5.589	107.6	9.8	19.5	
1994 03 29	09 05.50	-64 01.6	5.273	5.676	109.0	9.6	19.5	
1994 04 08	08 58.91	-61 54.0	5.356	5.763	109.2	9.4	19.6	
1994 04 18	08 55.51	-59 43.4	5.456	5.849	108.3	9.4	19.6	
1994 04 28	08 54.73	-57 34.7	5.572	5.935	106.3	9.4	19.7	
1994 05 08	08 56.04	-55 31.7	5.704	6.020	103.5	9.4	19.8	
1994 05 18	08 58.99	-53 37.3	5.848	6.104	99.9	9.4	19.9	
1994 05 28	09 03.21	-51 53.6	6.003	6.188	95.8	9.4	20.0	
1994 06 07	09 08.41	-50 21.9	6.165	6.271	91.3	9.3	20.1	
1994 06 17	09 14.33	-49 03.0	6.333	6.354	86.6	9.2	20.1	

## Comet Mueller (1993d)

Date	TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$m_1$
1993 11 09	14 20.71	+36 27.8	7.266	6.732	54.0	6.8	19.1	
1993 11 19	14 29.05	+35 56.2	7.241	6.765	57.7	7.1	19.1	
1993 11 29	14 37.04	+35 33.9	7.205	6.799	62.0	7.4	19.1	
1993 12 09	14 44.57	+35 20.7	7.161	6.833	66.8	7.6	19.1	
1993 12 19	14 51.55	+35 16.9	7.108	6.868	72.0	7.8	19.1	
1993 12 29	14 57.87	+35 22.0	7.049	6.903	77.5	8.0	19.1	
1994 01 08	15 03.42	+35 35.7	6.987	6.939	83.2	8.1	19.1	
1994 01 18	15 08.08	+35 57.1	6.922	6.975	89.0	8.1	19.1	
1994 01 28	15 11.75	+36 25.2	6.858	7.011	94.9	8.0	19.1	
1994 02 07	15 14.33	+36 58.5	6.798	7.048	100.7	7.9	19.1	

## Elements MPC 21235

1994 02 17	15 15.75	+37 35.3	6.744	7.086	106.3	7.7	19.1
1994 02 27	15 15.95	+38 13.3	6.699	7.123	111.6	7.4	19.2
1994 03 09	15 14.93	+38 50.1	6.665	7.162	116.4	7.1	19.2
1994 03 19	15 12.75	+39 23.2	6.644	7.200	120.4	6.8	19.2
1994 03 29	15 09.50	+39 50.1	6.640	7.239	123.5	6.6	19.2
1994 04 08	15 05.37	+40 08.3	6.652	7.278	125.4	6.4	19.2
1994 04 18	15 00.59	+40 16.0	6.682	7.318	126.0	6.4	19.3
1994 04 28	14 55.44	+40 11.7	6.731	7.358	125.2	6.4	19.3
1994 05 08	14 50.22	+39 54.8	6.799	7.398	123.1	6.6	19.4
1994 05 18	14 45.21	+39 25.4	6.884	7.438	119.8	6.8	19.4
1994 05 28	14 40.68	+38 44.1	6.985	7.479	115.6	7.0	19.5
1994 06 07	14 36.84	+37 52.3	7.101	7.520	110.7	7.3	19.5
1994 06 17	14 33.83	+36 51.4	7.229	7.562	105.3	7.4	19.6
1994 06 27	14 31.75	+35 43.3	7.368	7.604	99.6	7.6	19.6

## Comet Helin-Lawrence (1992q)

Date	TT	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\epsilon$	$\phi$	$m_1$
1993 11 19	13 24.98	-18 03.6	4.245	3.441	31.4	8.6	19.0	
1993 11 29	13 31.75	-17 34.8	4.224	3.523	39.7	10.3	19.1	
1993 12 09	13 37.52	-17 01.4	4.181	3.605	48.5	11.8	19.2	
1993 12 19	13 42.16	-16 21.6	4.117	3.687	57.8	13.0	19.2	
1993 12 29	13 45.51	-15 33.5	4.037	3.770	67.4	13.9	19.3	
1994 01 08	13 47.40	-14 35.4	3.945	3.853	77.4	14.4	19.3	
1994 01 18	13 47.69	-13 25.2	3.846	3.936	88.0	14.5	19.4	
1994 01 28	13 46.23	-12 01.6	3.746	4.019	99.0	14.0	19.4	
1994 02 07	13 42.95	-10 23.5	3.652	4.102	110.4	13.0	19.4	
1994 02 17	13 37.84	-08 30.7	3.571	4.185	122.4	11.5	19.5	
1994 02 27	13 31.03	-06 24.5	3.512	4.268	134.7	9.5	19.5	
1994 03 09	13 22.79	-04 08.0	3.481	4.350	147.3	7.1	19.6	
1994 03 19	13 13.51	-01 45.9	3.485	4.433	159.9	4.4	19.7	
1994 03 29	13 03.73	+00 35.7	3.527	4.515	170.7	2.0	19.8	
1994 04 08	12 54.00	+02 50.5	3.609	4.598	169.6	2.2	19.9	
1994 04 18	12 44.86	+04 53.1	3.730	4.680	158.7	4.5	20.1	
1994 04 28	12 36.76	+06 39.7	3.886	4.762	146.9	6.6	20.2	
1994 05 08	12 29.98	+08 08.6	4.073	4.843	135.4	8.4	20.4	
1994 05 18	12 24.70	+09 19.8	4.284	4.925	124.3	9.8	20.6	
1994 05 28	12 20.95	+10 14.4	4.513	5.006	113.6	10.7	20.8	
1994 06 07	12 18.67	+10 54.4	4.754	5.087	103.5	11.2	21.0	
1994 06 17	12 17.76	+11 21.9	5.002	5.168	93.7	11.3	21.1	

## OPPOSITION DATA

Planet	Opposition	$\alpha_{2000}$	$\delta_{2000}$	$V$	$\dot{\alpha}$	$\dot{\delta}$	$\phi_{\text{MIN}}$	MPC
5104 T-2	93 08 30.0	22 33.94	+03 26.0	19.2	-0.77	- 4.2	3.9/03.0	15087
1981 EH <sub>9</sub>	93 08 30.4	22 35.33	-03 15.1	19.7	-0.94	- 5.2	1.9/01.1	21930
(5222)	93 08 30.4	22 35.47	+34 37.6	15.9	-0.81	- 6.3	11.6/18.9	20318
1990 UW	93 08 30.4	22 35.53	-08 33.7	15.4	-1.03	- 4.3	0.1/30.5	22600
1991 GH <sub>11</sub>	93 08 30.6	22 36.32	-09 36.6	19.2	-0.72	- 4.7	0.2/30.4	20638
1990 RK <sub>2</sub>	93 08 30.6	22 36.48	-07 04.6	16.1	-0.93	- 7.4	0.8/31.2	22592
5137 T-2	93 08 30.8	22 36.83	+10 14.4	19.4	-0.81	- 7.6	6.3/06.6	20833
1989 GT <sub>4</sub>	93 08 31.0	22 37.84	-04 56.8	15.3	-0.81	- 7.7	1.8/01.3	22599
1990 UR <sub>4</sub>	93 08 31.0	22 37.89	-19 40.5	18.7	-0.97	- 5.9	4.1/27.6	22273
1971 UN <sub>1</sub>	93 08 31.4	22 39.19	-07 22.7	16.4	-0.75	- 5.0	0.4/31.8	22598
1993 PV <sub>6</sub>	93 08 31.9	22 40.99	-05 19.7	16.3	-0.90	- 2.5	1.4/01.8	22597

1978 SP <sub>4</sub>	93 08 31.9	22 41.14	-20 10.6	16.6	-0.87	- 2.4	3.6/28.4	22429	1988 TO <sub>1</sub>	93 09 07.2	23 03.64	-09 53.0	16.9	-0.78	- 5.4	1.3/05.9	22080
1991 DX	93 09 01.0	22 41.28	-01 39.2	16.3	-0.79	- 9.9	2.3/03.4	22083	(5321)	93 09 07.6	23 05.03	+13 38.1	15.1	-0.61	-11.1	8.4/15.9	20793
4327 T-3	93 09 01.0	22 41.36	-23 46.1	18.4	-0.94	- 4.0	5.2/27.3	13304	1986 VY	93 09 07.7	23 05.53	-04 49.4	16.3	-1.00	- 3.1	0.5/08.0	22599
1979 MP <sub>3</sub>	93 09 01.0	22 41.57	-02 47.0	17.6	-0.91	- 6.3	2.4/02.8	21965	1985 DC <sub>1</sub>	93 09 08.0	23 06.76	-05 51.4	17.9	-0.70	- 4.5	0.0/08.0	22076
1978 XW	93 09 01.5	22 42.95	-10 25.3	17.9	-0.76	- 4.8	0.6/31.8	20140	4722 P-L	93 09 08.2	23 07.33	-03 48.1	17.4	-0.91	- 6.2	0.6/09.0	22086
1985 CA <sub>2</sub>	93 09 01.5	22 43.16	-13 37.2	15.9	-0.94	- 8.2	2.3/30.7	22076	6643 P-L	93 09 08.3	23 07.51	-13 15.5	16.1	-1.04	- 3.9	3.5/06.0	17651
1981 EU <sub>13</sub>	93 09 01.6	22 43.39	+01 14.9	18.8	-0.90	- 7.9	3.4/04.7	21966	1989 XD <sub>2</sub>	93 09 08.7	23 09.31	-14 51.6	16.8	-0.74	- 8.6	4.0/05.3	21973
1978 UK <sub>7</sub>	93 09 01.8	22 44.25	-05 47.2	17.2	-0.88	- 6.1	1.0/02.6	22587	1978 RL <sub>7</sub>	93 09 09.4	23 11.60	-03 44.2	17.0	-0.77	- 5.2	0.5/09.9	22587
1001 T-2	93 09 02.0	22 44.78	-06 43.7	17.4	-0.76	- 5.3	0.4/02.4	22597	(5350)	93 09 09.4	23 11.88	-01 50.5	15.1	-0.99	- 5.0	1.5/10.5	20917
1989 VK	93 09 02.0	22 44.94	-01 35.7	16.8	-0.85	- 3.9	2.9/03.9	15720	4017 T-3	93 09 09.5	23 12.20	-14 36.2	16.9	-1.04	- 4.2	4.1/06.8	12702
1976 GY <sub>3</sub>	93 09 02.3	22 46.27	-03 41.3	15.7	-0.95	- 7.8	1.6/03.7	22598	1976 SZ <sub>9</sub>	93 09 09.7	23 12.75	-07 54.6	16.4	-0.78	- 3.4	1.0/08.9	22598
1991 FF	93 09 02.4	22 46.22	-06 56.0	17.6	-0.85	- 0.9	0.2/02.6	21975	1988 EB <sub>1</sub>	93 09 09.8	23 13.18	-09 58.8	18.0	-0.92	- 5.2	1.7/08.3	22484
1989 EJ <sub>1</sub>	93 09 02.5	22 46.69	-06 46.8	16.6	-0.95	- 8.5	0.4/02.8	22591	1980 XX	93 09 09.9	23 13.52	-16 04.5	16.3	-0.94	- 6.5	5.1/06.2	22074
1981 EF <sub>30</sub>	93 09 02.5	22 46.76	-07 17.3	17.4	-0.88	- 8.2	0.2/02.7	22599	1989 SE	93 09 10.2	23 14.50	-11 48.6	15.7	-0.92	+ 2.6	3.7/08.5	22081
1992 HD	93 09 02.6	22 47.08	-11 13.5	16.4	-0.83	- 5.8	1.1/01.5	22085	1980 PX	93 09 10.3	23 15.10	-05 35.4	14.8	-0.66	- 7.3	0.4/10.1	22598
4805 P-L	93 09 02.6	22 47.23	-10 28.2	18.6	-0.96	- 4.9	1.0/01.8	22086	1986 QR <sub>3</sub>	93 09 10.4	23 15.43	-11 11.0	15.9	-1.01	- 3.7	2.7/08.6	20013
1983 YK	93 09 02.7	22 47.56	-07 28.4	17.0	-0.67	- 6.6	0.1/02.8	22589	1992 LQ	93 09 10.7	23 16.51	-23 41.3	16.7	-0.82	- 3.9	6.1/04.4	20827
1981 ED <sub>24</sub>	93 09 02.8	22 47.80	-05 49.4	17.8	-0.71	- 7.6	0.6/03.5	21967	(5267)	93 09 11.0	23 17.50	-17 04.6	16.6	-0.90	- 7.4	4.4/06.8	20615
1989 SA	93 09 02.8	22 47.92	-34 11.3	15.9	-0.91	- 5.2	10.8/23.8	22081	1992 LU	93 09 11.1	23 17.74	-01 56.5	16.7	-0.77	- 9.7	0.8/12.1	20827
1991 FH	93 09 03.2	22 49.17	+11 58.3	18.3	-0.66	- 6.5	4.9/10.5	18826	1981 EO <sub>11</sub>	93 09 11.2	23 18.26	-01 43.1	19.0	-0.93	- 5.7	0.9/12.2	22270
1977 UO <sub>5</sub>	93 09 03.4	22 49.88	-11 23.6	16.0	-0.78	- 4.7	1.3/02.1	22598	1991 GB <sub>3</sub>	93 09 11.3	23 18.31	-05 07.0	18.4	-0.70	- 4.3	0.2/11.1	22593
1992 GE <sub>2</sub>	93 09 03.5	22 50.40	-10 51.2	16.3	-1.05	- 3.6	1.6/02.6	20824	1985 HS <sub>1</sub>	93 09 11.3	23 18.70	+03 41.3	16.9	-0.84	-14.3	2.7/14.6	21969
3151 T-2	93 09 03.9	22 51.76	-13 02.3	17.6	-1.02	- 4.8	2.4/02.2	17653	1981 EU <sub>33</sub>	93 09 11.4	23 18.66	+06 26.1	18.1	-0.82	- 7.1	4.9/15.2	11150
1989 TB <sub>5</sub>	93 09 03.9	22 51.80	-06 34.5	17.2	-0.78	- 7.6	0.2/04.2	22591	4848 P-L	93 09 11.5	23 19.14	-03 59.2	18.0	-0.90	- 7.2	0.2/11.7	14629
1990 XF	93 09 04.0	22 52.41	+06 54.4	16.4	-0.91	- 3.3	4.3/08.4	21975	1269 T-2	93 09 11.5	23 19.14	-03 08.2	17.9	-0.78	- 4.8	0.4/11.9	22087
1965 UA	93 09 04.1	22 52.52	-11 23.7	15.0	-0.92	- 0.5	2.2/03.0	22598	1939 VD	93 09 11.6	23 19.53	-26 47.6	15.0	-0.89	- 1.2	11.2/04.0	16227
1983 RM <sub>3</sub>	93 09 04.5	22 54.02	-01 07.9	16.0	-1.08	- 2.9	2.5/06.2	22589	1986 TN <sub>1</sub>	93 09 11.7	23 19.91	+14 39.0	16.5	-0.88	- 7.0	6.8/18.5	21970
1989 AM	93 09 04.6	22 54.47	-62 11.1	15.0	-1.49	+ 0.1	25.8/20.0	22080	1992 FN	93 09 11.9	23 20.85	-03 20.8	16.3	-0.97	- 6.8	0.3/12.3	22495
1990 WV <sub>4</sub>	93 09 04.6	22 54.58	-03 11.8	17.7	-0.90	- 7.1	1.4/05.9	22592	1952 SW <sub>1</sub>	93 09 12.0	23 21.03	-23 25.8	17.4	-1.02	- 1.5	6.6/06.5	21963
1989 XC	93 09 04.7	22 54.56	-12 30.0	15.7	-0.80	- 5.1	2.0/02.9	22600	1992 EU <sub>1</sub>	93 09 12.1	23 21.24	-14 49.9	16.4	-0.96	- 7.2	3.8/08.6	20643
1989 TA <sub>16</sub>	93 09 04.8	22 55.25	-02 38.8	16.9	-0.82	- 5.7	1.8/06.3	22591	(5205)	93 09 12.1	23 21.48	-06 13.6	15.3	-1.03	- 2.7	0.9/11.6	20134
1980 GO	93 09 04.8	22 55.30	-07 35.7	17.6	-0.71	- 4.8	0.2/04.7	22492	1981 EF <sub>47</sub>	93 09 12.5	23 22.99	-05 36.1	19.6	-0.80	- 4.2	0.5/12.1	18421
2558 P-L	93 09 04.9	22 55.50	-12 02.1	17.1	-0.80	- 3.5	1.6/03.3	22061	1976 QZ <sub>1</sub>	93 09 12.6	23 23.35	-17 27.8	16.0	-1.00	- 4.1	5.9/08.5	22072
1988 BB <sub>4</sub>	93 09 05.2	22 56.65	+04 05.0	16.3	-0.95	- 5.0	4.0/08.6	22430	1986 QQ	93 09 12.7	23 23.32	-05 21.4	15.9	-1.03	- 4.1	0.6/12.3	22599
1981 EG <sub>27</sub>	93 09 05.4	22 57.17	-04 55.5	19.1	-0.78	- 4.2	0.5/06.0	21967	1991 GQ	93 09 12.8	23 23.69	+13 12.4	17.0	-0.67	- 6.5	4.5/19.2	22593
(5160)	93 09 05.4	22 57.19	-15 07.3	15.5	-0.84	- 8.7	3.3/02.5	19993	2548 P-L	93 09 12.9	23 24.14	-07 00.0	16.7	-0.74	- 4.9	0.9/11.9	22601
1981 FL	93 09 05.4	22 57.45	-02 02.4	18.2	-0.87	- 8.0	1.5/07.1	22074	2190 T-1	93 09 13.2	23 25.16	-09 54.5	18.0	-0.92	- 4.4	2.2/11.3	22087
1982 BA	93 09 05.5	22 57.49	-14 22.3	16.4	-0.77	- 9.0	2.4/02.7	22271	1991 GQ <sub>2</sub>	93 09 13.2	23 25.50	-03 12.8	17.6	-0.72	- 5.1	0.1/13.5	21975
2224 T-2	93 09 05.5	22 57.50	-10 13.6	17.0	-0.80	- 4.3	1.2/04.4	22432	(5296)	93 09 13.3	23 25.78	-07 49.1	15.9	-0.73	- 4.8	1.2/12.0	20626
1986 XF <sub>1</sub>	93 09 05.7	22 58.48	-01 52.4	15.2	-0.88	- 4.1	2.2/07.2	22599	(5287)	93 09 13.5	23 26.56	-07 29.6	14.8	-0.77	- 8.5	1.5/12.2	20622
2078 T-3	93 09 06.0	22 59.24	-06 40.6	16.5	-0.94	- 3.2	0.1/05.9	22088	1217 T-1	93 09 13.8	23 27.67	-02 15.2	17.8	-0.90	- 4.6	0.5/14.3	19320
1981 EX <sub>26</sub>	93 09 06.0	22 59.65	-02 48.7	16.9	-0.86	- 7.5	1.6/07.3	22588	1981 EA <sub>39</sub>	93 09 14.0	23 27.99	-01 37.6	19.2	-0.95	- 5.6	0.7/14.6	16229
1988 TA <sub>1</sub>	93 09 06.1	22 59.87	+04 01.3	16.1	-0.69	- 6.9	3.3/09.9	22080	2168 T-2	93 09 14.0	23 28.00	-02 09.5	17.2	-0.76	- 5.5	0.5/14.4	22432
1985 UO <sub>3</sub>	93 09 06.1	22 59.98	-40 08.6	17.3	-1.27	+ 2.1	12.3/27.6	20813	1977 TS <sub>3</sub>	93 09 14.2	23 28.86	-10 00.1	14.8	-0.71	- 5.9	2.6/11.9	21964
(5277)	93 09 06.2	23 00.19	+04 57.5	17.6	-1.01	- 3.4	4.2/09.5	20619	3854 T-3	93 09 14.3	23 29.08	-05 20.1	18.2	-0.71	- 5.0	0.5/13.6	19332
1975 SJ	93 09 06.4	23 00.87	-11 12.7	15.9	-0.86	- 4.2	1.7/04.9	18280	1989 WQ <sub>1</sub>	93 09 14.3	23 29.43	-41 04.9	16.9	-1.60	- 2.4	18.9/31.7	22591
1988 BX <sub>3</sub>	93 09 06.4	23 01.02	+03 31.6	17.0	-0.90	- 6.7	3.8/09.8	22430	1992 DG <sub>1</sub>	93 09 14.5	23 30.04	-02 35.7	16.1	-1.00	- 4.1	0.2/14.8	22085
1989 SP	93 09 06.5	23 01.27	+08 12.8	14.8	-0.67	-10.4	6.1/12.3	22599	1181 T-1	93 09 14.7	23 30.48	-00 35.4	17.1	-0.78	- 4.2	0.8/15.5	22274
9515 P-L	93 09 06.7	23 02.14	-12 30.6	17.4	-0.89	- 4.7	2.4/04.8	13154	1981 ER <sub>27</sub>	93 09 14.9	23 31.21	-05 47.8	17.6	-1.06	- 1.7	1.2/14.2	22271
1988 JW	93 09 07.0	23 03.02	-25 11.7	16.9	-0.90	- 6.9	7.0/31.6	22079	2040 T-2	93 09 14.9	23 31.41	+00 07.5	18.4	-0.72	- 7.1	1.0/16.1	22432
1210 T-2	93 09 07.2	23 03.58	-06 28.7	16.5	-1.02	- 4.4	0.2/07.1	22601	1987 QW <sub>2</sub>	93 09 15.0	23 31.83	-04 46.3	16.2	-0.75	- 4.4	0.6/14.5	21936

1981 ER <sub>43</sub>	93 09 15.1	23 32.00	-01 28.7	17.3	-0.78	- 4.9	0.5/15.6	22430	1980 RE <sub>1</sub>	93 09 21.9	23 56.54	+00 17.6	16.6	-0.71	-10.6	0.3/22.2	16576
1987 RY	93 09 15.2	23 32.69	-03 34.8	15.5	-0.73	- 4.6	0.2/15.1	22078	(5293)	93 09 22.0	23 57.03	-21 09.8	15.6	-0.83	- 6.3	6.6/14.5	20625
1991 FV	93 09 15.9	23 35.07	+13 20.2	15.1	-0.77	- 4.6	5.1/21.6	22600	4118 T-3	93 09 22.2	23 57.75	-00 29.8	16.9	-0.66	- 9.1	0.1/22.2	15425
1992 HH	93 09 16.2	23 36.02	-21 43.0	16.6	-0.87	- 5.4	6.2/09.7	22085	1992 JA	93 09 22.2	23 57.77	+30 08.1	17.3	-0.93	- 8.7	9.3/04.6	20644
(5304)	93 09 16.3	23 36.52	-14 47.1	16.2	-0.75	- 6.1	3.8/12.0	20786	1984 DA	93 09 22.5	23 58.76	-15 43.7	16.7	-0.91	-20.7	6.4/16.0	22076
2272 T-2	93 09 16.5	23 37.07	-05 11.2	16.5	-1.06	- 3.6	1.0/15.7	18133	1990 VB <sub>15</sub>	93 09 22.6	23 59.21	-08 05.3	15.1	-0.91	- 6.7	3.8/20.0	21975
1985 RQ	93 09 16.6	23 37.58	-09 24.9	16.0	-0.87	+ 2.0	3.8/14.8	15884	1978 VO <sub>8</sub>	93 09 22.7	23 59.34	-03 40.7	17.7	-0.73	- 4.9	1.0/21.5	22270
1989 CV	93 09 16.8	23 38.15	-06 43.0	17.3	-0.63	- 3.1	1.0/15.4	22599	4614 P-L	93 09 22.9	00 00.25	-02 56.6	17.2	-0.86	- 3.4	1.0/22.1	19318
1992 CJ	93 09 17.0	23 39.01	+02 48.9	16.2	-0.92	- 8.7	2.0/19.0	22600	1987 RC <sub>1</sub>	93 09 23.0	00 00.58	-01 09.6	15.5	-0.74	- 4.5	0.4/22.7	22590
1991 GZ <sub>9</sub>	93 09 17.0	23 39.02	+09 06.6	18.2	-0.82	- 4.5	3.2/20.8	21975	1981 EE <sub>29</sub>	93 09 23.1	00 01.03	+07 35.9	19.3	-0.98	- 4.9	2.9/25.5	22271
1981 EX <sub>13</sub>	93 09 17.1	23 39.11	+06 58.8	16.2	-0.71	- 7.7	3.0/20.5	22598	1982 UR <sub>10</sub>	93 09 23.3	00 01.45	-00 47.7	16.7	-0.76	- 4.1	0.3/23.0	22075
1989 YO <sub>5</sub>	93 09 17.3	23 39.82	-06 08.1	16.7	-0.72	- 4.7	1.1/16.0	18119	1991 FG	93 09 23.7	00 02.89	+08 00.0	18.2	-0.74	- 6.9	1.9/26.5	22405
1981 EL <sub>24</sub>	93 09 17.6	23 41.08	-00 46.7	17.1	-0.79	- 4.8	0.4/18.1	22430	1991 CY	93 09 23.8	00 03.36	+15 26.5	16.7	-0.88	- 4.3	4.7/28.8	22600
1984 UT	93 09 17.7	23 41.47	+21 14.3	16.5	-0.77	- 7.3	8.3/26.5	18424	(5661)	93 09 24.5	00 05.75	+16 30.0	15.2	-0.75	- 1.8	4.6/29.8	22578
1987 DH <sub>6</sub>	93 09 17.7	23 41.49	+00 23.2	16.6	-0.83	- 5.4	0.8/18.5	22484	1986 WE	93 09 24.6	00 06.14	-09 57.5	16.8	-0.91	- 6.1	3.5/21.1	22599
1990 WB <sub>2</sub>	93 09 17.7	23 41.50	-13 07.2	17.7	-0.91	- 6.6	3.8/14.0	22083	1990 SM <sub>28</sub>	93 09 24.6	00 06.38	+06 10.6	15.0	-0.99	- 6.7	2.4/26.5	22273
1992 EE <sub>1</sub>	93 09 18.0	23 42.78	-33 06.0	17.7	-1.34	+ 1.9	10.5/10.2	21977	1988 BJ <sub>4</sub>	93 09 25.2	00 08.50	-03 08.5	14.9	-0.86	- 8.4	1.8/23.9	22079
1986 RQ	93 09 18.3	23 43.46	+09 49.7	15.7	-0.72	-12.0	5.3/23.0	20013	1989 UG <sub>3</sub>	93 09 25.4	00 08.92	-08 32.2	16.2	-0.85	- 5.2	3.8/22.2	15896
1992 FM <sub>1</sub>	93 09 18.7	23 45.01	+09 12.3	17.3	-1.34	+ 1.7	4.1/21.2	22600	1981 KJ	93 09 25.7	00 10.15	-14 37.1	16.6	-0.91	- 0.4	5.2/21.3	22074
1984 CP	93 09 18.8	23 45.27	-11 19.6	17.6	-0.87	- 7.1	3.3/15.5	22076	(5479)	93 09 25.8	00 10.39	+09 11.3	15.4	-0.65	-14.2	3.3/29.2	21776
1977 TC <sub>1</sub>	93 09 18.9	23 45.85	+04 36.9	15.3	-0.74	- 7.8	3.2/21.2	22491	1988 XC	93 09 25.9	00 11.10	+00 02.8	16.1	-0.84	- 3.6	0.4/25.6	14202
(5318)	93 09 18.9	23 45.87	-06 57.2	16.9	-0.94	- 6.5	1.9/17.2	20792	1992 MM	93 09 26.0	00 11.49	-04 27.4	16.1	-0.93	- 5.3	2.1/24.3	20828
(5089)	93 09 19.2	23 46.95	+03 14.6	16.4	-0.94	- 1.6	1.5/20.6	19829	2268 T-3	93 09 26.3	00 12.22	+12 17.2	17.2	-0.70	- 7.5	3.7/30.4	22274
7639 P-L	93 09 19.3	23 47.03	-08 27.1	18.3	-0.85	- 5.5	2.1/17.0	18131	1981 EP <sub>25</sub>	93 09 26.3	00 12.51	+03 11.6	19.2	-0.77	- 5.3	0.5/27.0	22271
1988 RQ <sub>5</sub>	93 09 19.5	23 48.13	+00 23.4	16.5	-0.76	- 6.3	0.6/20.2	21972	9540 P-L	93 09 26.4	00 12.85	+00 24.6	15.8	-0.88	- 4.3	0.4/26.2	22087
1982 SM <sub>6</sub>	93 09 19.6	23 48.43	-03 49.9	16.0	-1.02	- 1.5	1.2/19.0	22589	4260 T-1	93 09 26.5	00 13.17	-03 19.5	17.3	-0.77	- 5.3	1.5/25.0	21602
(5435)	93 09 19.7	23 48.69	-25 59.3	16.3	-0.75	- 5.6	6.7/10.3	21552	1989 LM	93 09 26.7	00 13.94	+11 29.7	16.1	-0.99	- 6.1	4.1/30.1	22081
1992 FZ <sub>1</sub>	93 09 19.8	23 49.22	-12 37.5	15.2	-0.82	- 8.4	4.9/15.8	22600	1980 KD	93 09 26.7	00 13.96	-07 48.9	16.9	-0.67	- 5.2	2.2/23.5	21965
(5671)	93 09 19.9	23 49.56	-06 34.1	15.9	-0.82	- 6.3	2.0/18.1	22580	2158 T-3	93 09 27.0	00 15.10	+05 14.3	16.6	-1.00	- 6.4	1.6/28.2	22088
1981 XM <sub>2</sub>	93 09 20.0	23 49.93	+18 04.2	16.4	-0.86	- 5.4	7.0/26.8	17956	1989 WD <sub>3</sub>	93 09 27.3	00 16.16	+08 59.0	17.6	-0.82	- 6.1	2.4/29.8	18632
1402 T-2	93 09 20.0	23 49.93	+00 32.2	18.6	-0.89	- 4.2	0.7/20.6	17976	1981 SC <sub>7</sub>	93 09 27.6	00 17.07	-10 11.6	15.3	-0.97	+ 0.4	5.8/24.3	21968
4100 P-L	93 09 20.0	23 49.96	+00 55.7	18.6	-1.00	- 2.0	0.7/20.7	19317	1990 WJ <sub>3</sub>	93 09 27.7	00 17.39	+03 16.4	16.8	-0.92	- 7.9	0.5/28.2	22083
1981 JM <sub>2</sub>	93 09 20.1	23 49.95	+00 53.3	16.9	-0.89	- 6.7	0.8/20.8	20811	1990 VF <sub>3</sub>	93 09 27.8	00 17.69	-07 39.6	15.2	-0.89	- 5.9	4.6/24.7	17644
6207 P-L	93 09 20.2	23 50.61	+03 05.6	18.3	-0.85	- 6.0	1.4/21.7	19318	1982 SO <sub>4</sub>	93 09 27.8	00 17.76	-01 09.7	15.0	-1.10	- 0.6	1.5/27.0	21968
1981 EK <sub>22</sub>	93 09 20.3	23 50.65	+00 11.1	18.7	-0.77	- 5.0	0.4/20.7	15407	1967 JN	93 09 27.8	00 17.96	-12 22.9	15.8	-0.94	- 0.8	4.9/23.9	20327
1981 EH <sub>34</sub>	93 09 20.3	23 50.92	-00 39.7	16.7	-0.79	- 4.5	0.1/20.5	22430	1986 PK <sub>6</sub>	93 09 28.0	00 18.28	+09 29.9	16.2	-0.98	- 7.1	2.9/30.5	22272
1989 UL <sub>3</sub>	93 09 20.4	23 51.34	-27 12.8	15.6	-0.94	- 4.8	9.4/10.7	15719	1983 RX	93 09 28.0	00 18.53	+08 49.8	15.4	-1.04	- 4.5	3.1/30.2	22492
1990 UF <sub>2</sub>	93 09 20.6	23 51.75	+04 38.8	17.3	-0.91	- 8.5	2.0/22.5	22082	1989 SS <sub>1</sub>	93 09 28.0	00 18.64	-04 55.0	17.2	-0.87	- 3.1	3.3/26.0	20504
1987 DF <sub>6</sub>	93 09 20.7	23 52.06	+09 47.1	17.0	-0.95	- 2.5	3.4/24.0	18286	4276 P-L	93 09 28.1	00 18.67	+03 44.3	18.6	-1.09	- 4.2	10.3/19.0	22086
1981 DM	93 09 20.8	23 52.58	+11 17.2	18.2	-0.93	- 6.3	4.5/24.9	22429	1982 UR <sub>6</sub>	93 09 28.1	00 18.99	-02 47.5	15.2	-0.85	- 2.9	2.4/26.7	19860
1949 PN	93 09 20.8	23 52.70	+12 48.3	13.7	-1.01	- 0.1	5.7/24.7	22598	1989 SG <sub>1</sub>	93 09 28.3	00 19.47	-01 56.0	17.7	-0.81	- 7.9	1.3/26.9	21973
3107 T-3	93 09 20.9	23 52.89	-03 10.3	16.0	-0.78	- 4.4	0.7/20.1	22088	1984 AR	93 09 28.3	00 19.61	+01 31.2	16.7	-0.75	- 4.6	0.2/28.2	22599
1992 HK	93 09 21.1	23 53.52	-03 24.2	17.3	-0.83	- 6.1	0.9/20.2	20345	1991 AO <sub>3</sub>	93 09 28.6	00 20.71	-12 36.7	15.9	-0.91	- 4.3	6.4/23.9	18125
4354 T-3	93 09 21.1	23 53.56	-06 43.1	16.9	-0.91	- 7.9	2.7/19.1	22274	(5217)	93 09 29.3	00 23.22	-01 56.0	17.4	-0.92	- 6.3	1.5/27.9	20316
1981 ET <sub>27</sub>	93 09 21.3	23 54.40	-01 15.8	18.9	-0.75	- 5.6	0.2/21.1	21932	1991 CO <sub>3</sub>	93 09 29.5	00 23.71	+49 23.4	15.7	-1.24	+ 1.6	19.1/16.2	21975
(5232)	93 09 21.3	23 54.48	-04 46.9	15.6	-0.73	- 8.9	1.3/19.8	20322	1983 PB	93 09 29.8	00 25.09	-11 01.8	16.4	-0.96	- 1.6	7.1/26.0	21969
4008 T-3	93 09 21.4	23 54.73	-09 29.0	17.0	-0.99	- 6.5	3.3/18.6	17221	1989 SJ <sub>1</sub>	93 09 30.0	00 25.87	-04 43.1	17.4	-0.84	- 3.7	3.5/27.7	20504
1988 FE	93 09 21.6	23 55.49	-14 17.3	17.5	-0.98	- 3.5	4.5/17.5	21569	(5148)	93 09 30.1	00 26.20	+03 23.8	18.3	-0.73	- 4.4	0.1/30.4	19852
1991 GG <sub>1</sub>	93 09 21.7	23 55.93	+06 59.8	15.5	-0.84	- 2.6	2.3/24.1	22600	1988 FS <sub>2</sub>	93 09 30.2	00 26.40	+02 46.3	16.8	-0.94	- 5.1	0.0/30.2	21569
1992 FT	93 09 21.7	23 56.01	-02 13.6	16.3	-0.96	- 7.5	0.7/21.2	21977	1989 SV <sub>5</sub>	93 10 01.0	00 29.34	-06 52.1	18.9	-0.91	- 4.8	3.4/27.8	20505
1990 UP <sub>3</sub>	93 09 21.9	23 56.35	-11 17.7	17.0	-0.97	- 6.1	4.2/18.4	21975	1979 MJ <sub>5</sub>	93 10 01.1	00 29.47	+00 55.1	17.0	-0.92	- 8.2	0.9/30.3	21965

1985 JK	93 10 01.2	00 30.15	-06 41.3	17.7	-0.93	- 6.0	3.7/28.1	22076	1988 CX <sub>1</sub>	93 10 09.5	01 00.09	+11 05.9	17.0	-1.00	- 6.0	1.8/11.0	21568
1988 GL	93 10 01.3	00 30.50	-20 09.4	17.6	-1.01	- 2.3	7.7/24.4	22079	1992 MA	93 10 09.6	01 00.69	+06 32.4	15.7	-0.77	- 4.9	0.0/09.7	22495
1989 TL <sub>15</sub>	93 10 01.3	00 30.59	+05 20.3	16.2	-0.88	- 5.0	0.8/02.0	19026	1992 HL	93 10 09.9	01 01.56	+02 26.5	16.3	-0.79	-10.3	1.3/08.4	20644
(5238)	93 10 01.8	00 32.20	+10 20.1	15.5	-0.93	- 7.8	2.5/04.2	20324	1979 SR	93 10 10.2	01 02.78	+09 12.8	15.3	-0.74	- 9.3	0.9/11.1	22598
1992 ES <sub>1</sub>	93 10 01.8	00 32.39	-04 42.8	16.6	-1.05	- 2.6	3.1/29.6	20154	1988 BN <sub>2</sub>	93 10 10.5	01 04.18	-31 47.3	17.5	-1.22	+ 2.3	13.6/30.7	21971
1988 JP	93 10 01.9	00 32.61	-60 30.8	15.0	-1.16	+14.8	31.9/23.8	22079	1981 EK <sub>23</sub>	93 10 10.6	01 04.29	+05 34.1	16.9	-0.89	- 7.6	0.6/10.2	21931
1989 YB <sub>6</sub>	93 10 02.3	00 34.04	-15 29.7	18.4	-0.69	- 4.9	4.5/25.6	18817	1971 SS <sub>1</sub>	93 10 10.7	01 04.48	+04 42.7	15.7	-0.78	- 4.4	0.8/10.0	15401
1981 EC <sub>13</sub>	93 10 02.5	00 34.60	+13 12.3	18.7	-0.83	- 4.0	2.9/05.6	21966	1978 VK <sub>5</sub>	93 10 10.7	01 04.60	+08 59.1	16.1	-0.94	- 4.8	0.8/11.4	18415
1987 RZ	93 10 02.6	00 34.94	+00 32.1	16.9	-0.72	- 5.0	1.2/01.5	15887	(5237)	93 10 11.1	01 06.02	+03 36.3	15.7	-1.05	- 4.2	1.3/10.2	20324
(5354)	93 10 02.7	00 35.45	-02 19.5	16.1	-0.70	- 5.1	1.7/30.7	20919	1992 LN	93 10 11.2	01 06.60	-05 37.1	16.9	-0.96	- 4.4	4.6/07.5	20827
1981 EK <sub>8</sub>	93 10 02.7	00 35.46	+13 59.2	18.2	-0.97	- 6.1	4.0/06.1	15241	1990 VR <sub>8</sub>	93 10 11.6	01 08.02	+00 27.1	17.1	-1.04	- 5.6	2.7/09.7	20336
1984 ER <sub>1</sub>	93 10 02.7	00 35.57	+01 30.4	16.5	-0.74	- 5.3	0.7/02.0	22076	1975 RP	93 10 12.0	01 09.48	+07 16.8	15.9	-0.75	- 4.9	0.0/12.0	21963
1992 EP	93 10 02.8	00 35.94	-05 36.2	16.8	-0.98	- 4.4	3.5/30.0	20034	1973 EK	93 10 12.2	01 10.36	+07 24.3	16.1	-0.84	- 5.7	0.0/12.3	21963
1991 FU	93 10 03.6	00 38.92	+23 44.6	15.4	-0.99	- 2.8	6.6/09.7	18438	(5215)	93 10 12.3	01 10.49	-14 53.0	15.0	-0.83	- 5.2	7.6/05.0	20138
(5250)	93 10 03.7	00 39.07	-16 46.2	15.7	-0.71	- 7.9	8.5/25.7	20489	1981 ET <sub>42</sub>	93 10 12.4	01 10.75	+10 05.8	17.3	-0.99	- 5.4	1.1/13.2	22074
1992 GA <sub>1</sub>	93 10 03.7	00 39.30	+09 06.0	18.1	-0.85	-13.9	1.6/05.7	20344	1981 EG <sub>28</sub>	93 10 12.4	01 11.11	+06 18.1	15.8	-0.84	- 8.8	0.5/12.1	22050
6217 P-L	93 10 03.7	00 39.31	+06 36.9	19.4	-0.67	- 7.8	0.6/04.7	15905	1992 KF	93 10 12.6	01 11.63	-12 36.6	17.5	-0.98	- 1.3	6.8/07.1	21977
1988 UH	93 10 04.0	00 40.32	+05 32.4	16.7	-0.72	- 5.4	0.3/04.5	21972	1992 GZ	93 10 12.6	01 11.73	+09 06.7	16.3	-0.92	- 5.0	0.5/13.1	22085
1991 DO	93 10 04.0	00 40.40	+12 45.8	16.3	-0.89	- 3.4	2.6/06.7	18128	1988 XJ <sub>1</sub>	93 10 12.7	01 12.14	-11 16.8	16.9	-0.82	- 1.9	5.8/07.1	20816
1977 UP	93 10 04.3	00 41.11	+06 13.9	15.1	-1.00	- 3.0	0.9/04.8	21964	1981 ER <sub>15</sub>	93 10 12.9	01 12.68	+13 50.8	19.2	-0.96	- 6.7	2.2/14.9	22429
1981 EH <sub>24</sub>	93 10 04.4	00 41.48	+03 14.2	18.4	-0.82	- 4.3	0.4/04.0	22430	1988 CG	93 10 13.1	01 13.76	+02 30.4	17.7	-0.94	- 7.6	1.9/11.5	18429
1981 DF <sub>2</sub>	93 10 04.4	00 41.79	+19 37.4	15.6	-0.78	- 7.4	7.3/10.1	22598	1987 DG <sub>6</sub>	93 10 13.3	01 14.16	+09 44.2	16.9	-0.88	- 5.3	0.6/14.0	22599
(5207)	93 10 04.6	00 42.18	+24 51.7	16.4	-1.08	- 2.2	8.0/11.0	20135	1950 DE	93 10 13.7	01 15.72	-04 19.6	16.1	-0.68	- 5.6	3.2/09.6	20803
1989 KB	93 10 04.6	00 42.59	-43 59.0	15.5	-1.18	+ 8.7	23.4/23.0	22081	1978 PX <sub>2</sub>	93 10 13.8	01 16.02	+10 56.8	16.0	-0.91	- 4.0	1.4/14.7	22270
1989 LW	93 10 04.7	00 42.61	+27 51.2	15.6	-0.71	-20.7	9.5/15.9	22599	1978 RZ	93 10 13.8	01 16.04	+02 59.5	16.5	-0.79	- 5.0	1.7/12.2	20140
(5331)	93 10 04.8	00 43.04	-24 14.9	13.6	-0.52	- 5.0	14.2/21.2	20797	1982 UH	93 10 14.4	01 18.51	+12 27.6	15.1	-0.86	- 6.2	2.0/15.8	22075
(5450)	93 10 05.4	00 45.22	-01 25.4	15.8	-0.79	- 6.3	2.1/03.3	21558	(5271)	93 10 14.5	01 18.58	-12 14.8	17.5	-0.81	- 5.7	6.2/07.7	20616
1988 GD	93 10 05.5	00 45.43	-04 15.2	16.5	-0.91	- 5.4	3.2/02.6	20501	1982 UM <sub>6</sub>	93 10 14.5	01 18.93	+10 27.5	16.2	-0.96	- 4.2	1.0/15.2	21969
1933 FE <sub>1</sub>	93 10 05.7	00 46.39	+08 29.1	17.7	-0.96	- 6.4	1.2/06.9	22072	1978 VT <sub>8</sub>	93 10 15.0	01 20.38	+12 11.0	17.1	-0.77	- 5.8	1.1/16.2	18619
1991 AF	93 10 05.8	00 46.57	+14 02.0	16.4	-0.92	- 7.6	3.8/08.8	21975	1979 MF	93 10 15.1	01 20.93	+01 48.9	17.9	-0.97	- 7.4	2.4/13.1	21965
1991 DC	93 10 06.1	00 47.69	+04 26.0	16.1	-0.99	- 3.7	0.3/05.9	17972	1981 EE <sub>14</sub>	93 10 15.2	01 21.37	+10 40.1	18.0	-0.90	- 9.0	0.8/15.9	21966
1989 EN <sub>2</sub>	93 10 06.2	00 48.44	+06 49.2	16.3	-1.06	- 5.9	0.7/06.8	20016	1989 WC	93 10 15.3	01 21.59	+11 35.1	15.6	-0.88	- 5.3	1.2/16.2	18119
1295 T-1	93 10 06.3	00 48.70	+05 19.1	17.4	-0.75	- 6.8	0.0/06.4	19878	4018 P-L	93 10 15.4	01 22.17	+13 50.4	16.0	-0.97	- 1.9	2.4/16.9	22086
1981 ED <sub>14</sub>	93 10 06.3	00 48.77	+09 52.5	18.9	-0.98	- 5.2	1.6/07.8	22398	1989 SR <sub>4</sub>	93 10 16.0	01 24.41	+05 08.2	17.4	-0.94	- 2.2	1.7/15.1	18293
1929 TD <sub>1</sub>	93 10 06.6	00 49.51	+01 13.3	16.3	-0.93	- 3.3	1.9/05.4	21924	1985 CS <sub>1</sub>	93 10 16.1	01 24.67	+04 40.2	16.7	-0.97	- 7.4	1.5/14.8	22076
1967 HA	93 10 06.7	00 49.81	+22 57.4	16.8	-1.06	- 1.8	6.1/11.8	21963	1990 YM	93 10 16.3	01 25.39	-31 24.7	16.7	-1.05	- 2.8	13.0/01.4	18436
1982 VZ	93 10 06.8	00 50.18	+02 34.8	16.1	-0.75	- 5.0	0.9/05.9	9360	1990 XM	93 10 16.3	01 25.46	+03 17.1	14.6	-0.89	- 5.1	2.9/14.6	22494
1980 EB	93 10 06.8	00 50.29	+06 04.2	17.3	-0.93	- 5.1	0.2/07.0	22429	1298 T-2	93 10 16.3	01 25.60	+03 44.5	17.7	-0.95	- 8.3	2.1/14.7	18832
1992 EM	93 10 06.9	00 50.55	+17 51.4	15.8	-1.12	- 3.8	5.0/10.6	22600	1979 MR <sub>6</sub>	93 10 16.4	01 25.60	+04 33.7	19.1	-0.97	- 7.1	1.6/15.1	22073
1990 BC <sub>1</sub>	93 10 07.1	00 51.46	-06 35.9	16.2	-0.72	- 6.8	3.7/02.9	21973	1992 FP <sub>1</sub>	93 10 16.4	01 25.68	+01 27.5	16.6	-0.84	- 8.3	2.4/14.0	20156
4136 T-2	93 10 07.4	00 52.39	+00 56.5	16.3	-0.90	- 1.3	1.9/06.1	14969	1989 WM <sub>3</sub>	93 10 16.4	01 25.75	-03 53.1	15.2	-1.07	+ 1.1	5.5/13.4	22081
1981 EE <sub>12</sub>	93 10 07.6	00 53.21	+16 22.0	17.9	-0.97	- 5.7	4.6/11.0	12706	1986 AA <sub>2</sub>	93 10 16.6	01 26.58	-00 35.0	16.8	-0.84	- 4.9	3.2/13.7	21970
1983 RX <sub>3</sub>	93 10 07.7	00 53.84	-04 27.9	15.7	-0.70	-11.3	4.0/03.9	22430	(5356)	93 10 17.1	01 28.56	-03 23.8	14.9	-0.76	-11.2	4.8/12.5	20920
1982 SM <sub>7</sub>	93 10 07.8	00 53.94	+05 06.1	16.5	-0.78	- 4.1	0.2/07.6	22075	(5276)	93 10 17.2	01 28.77	-01 19.7	17.3	-0.81	- 7.4	3.2/13.8	20618
1981 EO <sub>26</sub>	93 10 07.8	00 54.24	+07 18.2	18.1	-0.81	- 5.0	0.5/08.4	21967	1981 EU <sub>15</sub>	93 10 17.5	01 29.89	+13 29.6	18.0	-0.96	- 7.8	1.7/18.8	21967
(5424)	93 10 08.1	00 55.00	+10 19.4	15.4	-0.94	- 7.4	1.9/09.6	21764	1989 AQ	93 10 17.6	01 30.20	+06 38.0	15.5	-0.77	- 4.1	1.0/16.8	22080
1976 UR <sub>15</sub>	93 10 08.1	00 55.21	-04 59.8	17.2	-0.96	- 1.8	4.1/05.1	22072	1988 TP <sub>1</sub>	93 10 17.6	01 30.23	+06 29.8	15.8	-0.82	- 4.4	1.0/16.8	22080
1990 VG <sub>3</sub>	93 10 08.3	00 55.86	-04 17.3	15.6	-0.88	- 6.2	5.1/05.0	17460	1985 JY	93 10 17.8	01 31.20	+06 55.1	17.4	-0.74	- 3.7	0.7/17.1	19295
1984 SO <sub>5</sub>	93 10 08.5	00 56.56	-00 50.4	15.8	-0.80	- 6.4	2.7/06.2	22076	1982 XQ <sub>1</sub>	93 10 18.0	01 31.73	+07 28.7	17.4	-0.72	- 4.4	0.6/17.4	22075
1989 UT <sub>2</sub>	93 10 08.6	00 57.11	+16 02.4	16.1	-0.83	-10.0	3.5/12.3	22599	1931 VS	93 10 18.1	01 32.10	+02 48.5	15.3	-1.14	+ 2.9	3.0/16.7	22491
1992 FR <sub>2</sub>	93 10 09.2	00 58.96	-05 33.9	14.5	-0.93	- 4.9	5.4/05.6	22495	3502 T-3	93 10 18.1	01 32.27	+08 28.3	18.9	-1.06	- 5.2	0.5/17.8	12802



1989 SK	93 10 18.4	01 33.36	+20 33.3	15.2	-0.97	- 2.7	4.9/21.4	22081	1988 UC	93 10 28.5	02 11.77	+12 57.0	16.1	-0.86	- 3.4	0.1/28.5	22599
1981 EP <sub>27</sub>	93 10 18.9	01 35.35	+03 24.9	17.8	-0.73	- 8.5	2.1/16.8	21967	1982 QK <sub>3</sub>	93 10 29.0	02 13.88	+18 20.2	15.8	-1.01	- 4.6	2.3/30.4	22075
(5291)	93 10 19.2	01 36.32	+10 15.3	16.7	-0.93	- 6.0	0.1/19.3	20624	1988 YB	93 10 29.1	02 14.03	+11 47.0	16.3	-0.79	- 3.6	0.5/28.7	20816
1985 QA <sub>1</sub>	93 10 19.6	01 37.74	+10 34.2	16.2	-0.90	- 8.4	0.1/19.8	20813	1985 GS	93 10 29.2	02 14.53	-10 04.0	16.4	-0.77	- 3.5	6.6/22.3	21565
4094 T-3	93 10 19.8	01 38.44	+04 56.0	17.8	-0.96	- 3.2	2.1/18.4	22088	1989 NO	93 10 29.3	02 15.12	+19 05.6	16.1	-1.12	- 4.1	2.1/30.8	21973
1986 RS <sub>1</sub>	93 10 19.8	01 38.48	+01 24.8	16.1	-0.84	- 8.1	4.2/17.0	14949	1987 SE <sub>13</sub>	93 10 29.6	02 16.26	+09 18.0	15.3	-0.80	- 3.4	1.6/28.5	21567
1988 LB	93 10 20.1	01 39.75	+29 25.6	16.2	-0.97	- 6.8	6.6/26.5	22079	1991 BJ	93 10 29.7	02 16.22	+10 05.6	15.6	-1.04	- 2.9	1.5/28.9	22600
1992 NJ	93 10 20.7	01 41.90	+10 53.2	16.1	-1.02	+ 1.6	0.1/20.8	22600	1981 EM <sub>19</sub>	93 10 29.7	02 16.58	+15 29.5	17.7	-0.87	- 4.2	0.6/30.3	22074
1991 EA <sub>1</sub>	93 10 20.8	01 42.17	+06 52.8	16.5	-0.89	- 2.7	1.1/19.8	22431	1972 RF <sub>2</sub>	93 10 30.1	02 17.85	+09 42.7	17.0	-0.93	- 7.3	2.0/29.0	21250
5041 T-3	93 10 20.8	01 42.24	-03 50.0	17.2	-0.73	- 5.6	4.2/16.2	16039	1981 EY <sub>19</sub>	93 10 30.3	02 18.85	+15 03.2	18.7	-0.85	- 4.5	0.4/30.7	11042
1981 QT <sub>3</sub>	93 10 20.9	01 42.55	+14 56.7	16.6	-0.80	- 3.2	1.2/22.2	22483	1978 NN <sub>1</sub>	93 10 30.4	02 19.03	+00 36.1	16.3	-0.86	- 4.5	5.0/26.9	21926
1992 FV	93 10 20.9	01 42.75	+03 40.3	16.2	-1.06	- 5.0	2.8/19.1	21977	(5253)	93 10 30.6	02 19.82	-24 39.7	16.6	-1.65	+ 6.3	17.1/23.2	20490
1988 RQ <sub>2</sub>	93 10 21.2	01 43.99	+27 59.7	16.8	-0.94	- 3.8	5.3/26.4	21570	1992 HJ	93 10 30.6	02 19.94	+05 39.7	16.7	-1.02	- 4.6	3.1/28.6	22273
(5214)	93 10 21.4	01 44.46	+14 58.1	16.0	-1.15	- 3.3	1.7/22.5	20137	1990 BG <sub>1</sub>	93 10 31.0	02 21.40	+08 00.3	16.7	-0.87	- 3.0	1.9/29.5	21973
1991 JB <sub>1</sub>	93 10 21.4	01 44.63	+04 44.7	17.0	-0.75	- 3.5	1.6/19.7	22494	1991 BR	93 10 31.1	02 21.88	+06 43.4	17.8	-0.87	- 5.8	2.2/29.1	21975
1981 EX <sub>28</sub>	93 10 21.4	01 44.69	+22 05.4	17.9	-1.04	- 5.6	4.2/24.8	15242	1978 UA <sub>7</sub>	93 10 31.2	02 22.32	+17 42.3	16.3	-1.08	- 2.4	1.3/01.1	20807
1988 DD <sub>5</sub>	93 10 21.6	01 45.33	+26 07.6	17.9	-1.03	- 6.3	5.0/26.4	21971	(5021)	93 10 31.3	02 22.86	+10 38.2	15.7	-0.80	- 3.6	1.2/30.5	19487
1981 ED <sub>21</sub>	93 10 21.6	01 45.62	+24 54.3	15.9	-1.06	+ 2.1	6.9/24.0	21967	1989 YH	93 10 31.4	02 23.06	+28 52.2	15.5	-0.94	- 4.0	5.9/04.5	21973
1981 EW <sub>24</sub>	93 10 21.7	01 45.70	+08 04.2	16.7	-0.81	- 5.2	1.0/20.9	22492	1989 WG <sub>7</sub>	93 10 31.4	02 23.19	+15 12.5	16.6	-0.92	- 5.3	0.4/31.7	21973
1986 RV <sub>2</sub>	93 10 21.8	01 46.28	+08 04.0	16.4	-0.98	- 7.8	1.2/21.0	22077	1986 QA <sub>3</sub>	93 10 31.5	02 23.25	+11 44.7	16.5	-1.07	- 4.8	1.0/30.9	22077
1981 EY <sub>14</sub>	93 10 22.2	01 47.46	+17 28.7	17.7	-1.02	- 6.1	2.6/24.0	21967	1979 QJ <sub>1</sub>	93 10 31.9	02 24.77	+01 36.9	17.1	-0.99	- 6.0	4.9/28.5	13598
1986 SF	93 10 22.2	01 47.71	+15 55.6	16.4	-1.09	- 4.7	1.9/24.0	22077	(5347)	93 11 01.0	02 25.37	+01 34.0	16.1	-0.75	- 5.6	3.9/28.3	20916
1990 XP	93 10 22.8	01 50.10	+07 40.2	15.0	-0.87	- 9.0	1.7/21.7	22494	(5316)	93 11 01.5	02 27.41	+18 57.3	15.9	-0.76	- 7.8	1.3/02.9	20791
3097 P-L	93 10 23.0	01 50.82	+22 54.1	17.9	-0.92	- 5.2	3.8/26.6	15423	1986 AJ	93 11 01.7	02 28.37	+50 00.9	15.9	-1.32	- 8.1	17.3/15.5	21970
1992 FA <sub>1</sub>	93 10 24.0	01 54.36	+15 46.6	16.2	-1.01	- 7.3	1.6/25.2	22273	1989 WB <sub>2</sub>	93 11 01.8	02 28.31	+23 45.0	15.9	-0.98	- 4.9	3.8/04.2	22600
(5329)	93 10 24.1	01 54.69	-14 23.5	14.6	-0.66	- 6.7	12.1/14.2	20796	1986 TB <sub>3</sub>	93 11 01.8	02 28.69	+07 38.8	15.7	-1.01	- 6.4	2.9/31.1	22078
1990 EJ <sub>2</sub>	93 10 24.3	01 55.41	+16 53.6	16.2	-0.72	- 6.4	1.5/25.9	22082	1987 BS <sub>2</sub>	93 11 01.9	02 29.10	+10 01.1	16.3	-0.97	- 5.3	2.0/31.8	21970
1988 RS <sub>4</sub>	93 10 24.3	01 55.79	+12 53.9	16.4	-0.88	- 4.4	0.4/24.7	19301	1988 ER <sub>1</sub>	93 11 02.0	02 29.14	+17 31.2	16.5	-1.11	- 2.2	1.1/02.6	13161
2055 P-L	93 10 25.3	01 59.70	+23 35.7	19.2	-1.10	- 3.3	4.0/28.4	22274	(5336)	93 11 02.0	02 29.40	+04 18.6	16.7	-0.73	- 5.3	2.8/30.1	20800
1985 JN <sub>1</sub>	93 10 25.4	02 00.01	+03 16.1	17.8	-1.02	- 3.5	3.3/23.2	22076	1981 EY <sub>9</sub>	93 11 02.4	02 30.76	+21 55.5	17.3	-1.08	- 5.2	3.1/04.2	21966
1980 PB <sub>3</sub>	93 10 25.7	02 00.84	-02 07.0	16.2	-0.84	- 0.5	3.8/22.1	21966	(5245)	93 11 02.5	02 31.28	+09 16.4	16.4	-1.06	- 5.5	2.2/01.2	20487
1983 RZ <sub>1</sub>	93 10 25.7	02 00.86	+14 36.5	16.3	-1.14	- 3.5	1.1/26.3	18109	1986 QT	93 11 02.6	02 31.44	+09 43.8	17.2	-1.07	- 4.8	2.1/01.4	22077
1989 UL <sub>1</sub>	93 10 25.7	02 00.99	+08 00.0	15.3	-1.05	- 0.2	1.7/24.8	19303	(5353)	93 11 02.7	02 31.94	+15 38.0	15.2	-1.03	- 2.2	11.0/23.0	20918
(5340)	93 10 25.7	02 01.12	+16 49.4	17.3	-0.78	- 4.5	1.2/27.1	20801	1978 RZ <sub>9</sub>	93 11 02.7	02 32.02	-15 43.5	17.7	-0.92	- 6.8	10.7/24.8	22073
1979 MK <sub>6</sub>	93 10 25.8	02 01.53	+08 44.5	17.5	-0.85	- 5.4	1.4/24.8	18804	1981 ES <sub>32</sub>	93 11 03.1	02 33.65	+29 18.2	18.7	-1.07	- 5.1	6.5/06.9	22271
1981 EC <sub>16</sub>	93 10 25.9	02 01.67	+17 40.6	17.4	-1.01	- 6.2	1.9/27.4	21967	1986 RB <sub>5</sub>	93 11 03.5	02 35.31	+03 39.4	15.1	-1.02	- 3.4	5.4/31.9	21970
1985 FE <sub>3</sub>	93 10 26.0	02 02.13	+00 28.1	16.6	-1.03	- 3.7	4.2/23.0	21969	4053 T-2	93 11 03.8	02 36.47	+10 48.0	16.3	-0.84	- 4.1	1.5/02.7	22088
1989 OA	93 10 26.1	02 02.55	+16 31.5	16.2	-0.99	- 7.3	1.6/27.3	22081	1991 EA	93 11 03.8	02 36.54	+24 02.5	16.7	-1.08	- 2.8	3.3/05.9	22494
1992 OJ	93 10 26.1	02 02.76	+39 54.3	17.0	-1.06	- 3.5	7.6/03.9	22600	1985 GO	93 11 03.9	02 36.84	+08 34.9	17.1	-1.05	- 4.0	2.6/02.4	21969
1989 AK	93 10 26.2	02 02.77	+05 49.5	15.5	-0.83	- 3.4	2.5/24.4	22080	1989 JF	93 11 04.4	02 38.75	+20 57.3	16.2	-1.19	- 3.9	2.2/05.7	21973
1987 SC <sub>6</sub>	93 10 26.3	02 03.36	+11 06.7	16.5	-0.78	- 4.4	0.4/26.0	22078	1991 CN <sub>1</sub>	93 11 04.5	02 39.02	+13 26.8	17.0	-0.98	- 5.5	0.8/04.0	22083
1984 OA	93 10 26.4	02 03.86	-17 45.6	15.0	-0.81	- 3.3	12.6/17.4	22599	1981 ET <sub>24</sub>	93 11 04.5	02 39.04	+07 48.4	17.7	-0.97	- 6.9	3.0/02.5	22492
1981 ES <sub>29</sub>	93 10 26.6	02 04.59	+11 49.5	17.6	-0.79	- 6.1	0.2/26.4	22074	1989 WL <sub>7</sub>	93 11 04.5	02 39.18	-12 17.4	15.1	-0.92	- 0.4	11.3/29.0	21973
1992 LG	93 10 26.8	02 05.46	+07 07.3	16.6	-1.05	- 5.2	2.3/25.4	21977	1991 CL <sub>1</sub>	93 11 04.8	02 40.41	+20 03.2	15.5	-1.02	- 5.2	2.0/06.0	17970
1989 UA	93 10 26.9	02 05.62	+08 09.1	15.3	-1.07	+ 0.4	1.9/26.0	22493	1929 VS	93 11 04.8	02 40.51	+17 08.3	14.4	-0.98	- 0.6	0.7/05.2	21963
1982 JE <sub>1</sub>	93 10 26.9	02 05.78	+05 01.0	16.0	-1.01	- 1.0	3.9/25.2	22075	1990 YK	93 11 05.3	02 42.22	+12 23.8	16.3	-1.05	- 5.8	1.4/04.5	17829
1989 UZ <sub>4</sub>	93 10 27.0	02 06.13	+03 17.3	15.9	-0.85	- 6.3	4.0/24.3	22081	6097 P-L	93 11 05.5	02 43.38	+17 42.6	17.9	-1.06	- 5.3	0.8/06.1	22087
(5541)	93 10 27.4	02 07.56	+05 45.9	15.9	-0.69	- 8.7	2.4/25.1	22039	1989 SM <sub>8</sub>	93 11 05.9	02 44.51	+16 44.0	16.4	-1.02	- 3.4	0.4/06.1	20505
1988 PM <sub>2</sub>	93 10 28.3	02 10.95	+04 50.2	17.4	-0.83	- 4.9	3.0/26.0	21971	1972 RU <sub>1</sub>	93 11 06.0	02 45.00	+13 44.3	16.8	-1.00	- 7.4	1.0/05.4	22072
1988 EN	93 10 28.3	02 11.23	+06 17.5	17.2	-0.95	- 5.7	2.4/26.5	22079	1981 EE <sub>38</sub>	93 11 06.0	02 45.19	+19 42.0	18.0	-0.90	- 4.0	1.4/07.0	21967
1991 CM <sub>3</sub>	93 10 28.5	02 11.56	+04 19.0	15.2	-0.92	- 4.9	3.9/26.1	18127	1992 OP <sub>7</sub>	93 11 06.4	02 46.67	+31 18.0	14.7	-0.93	- 4.0	5.3/10.4	21583

1992 JQ <sub>3</sub>	93 11 06.6	02 47.28	+19 08.1	16.9	-1.11	- 5.7	1.1/07.3	22057	3033 T-2	93 11 14.2	03 18.40	+16 21.0	17.2	-0.91	- 2.5	0.7/13.9	16243
(5337)	93 11 06.6	02 47.69	+18 27.6	16.4	-0.77	- 4.8	0.6/07.3	20800	1262 T-2	93 11 14.4	03 19.20	+24 25.7	19.3	-1.20	- 2.9	2.3/15.6	15078
1978 VP <sub>10</sub>	93 11 07.2	02 49.71	+12 08.0	17.4	-1.02	- 2.9	1.7/06.3	22073	1988 RN <sub>4</sub>	93 11 14.6	03 19.94	+34 45.0	17.7	-1.11	- 3.0	4.9/18.1	22079
1987 SZ <sub>6</sub>	93 11 07.2	02 49.99	+27 34.9	14.3	-0.86	- 5.7	3.8/10.4	15415	1981 SE	93 11 14.9	03 21.12	+15 48.8	16.4	-1.01	- 4.1	1.0/14.4	21968
1988 RU <sub>6</sub>	93 11 07.3	02 50.28	+15 06.1	17.5	-0.91	- 4.5	0.4/07.0	22079	1985 YH	93 11 14.9	03 21.21	+31 22.6	16.3	-1.04	- 6.4	4.5/18.0	21970
1990 EF <sub>7</sub>	93 11 07.4	02 50.75	+13 25.6	17.7	-0.77	- 3.4	0.8/06.7	20925	1982 BS	93 11 15.4	03 22.95	+39 32.3	15.7	-1.06	- 6.6	9.0/20.9	20812
1991 GA <sub>6</sub>	93 11 07.5	02 51.04	+17 42.3	17.4	-0.88	- 4.0	0.4/08.0	21942	1992 NR	93 11 15.5	03 23.40	-02 34.3	17.5	-0.88	- 2.9	6.6/11.1	21582
4031 P-L	93 11 07.8	02 52.48	+26 14.6	16.3	-1.06	- 2.1	4.7/10.0	22274	1988 XW <sub>1</sub>	93 11 15.5	03 23.73	+13 26.4	14.8	-0.94	+ 0.5	1.8/14.7	22493
(5216)	93 11 08.4	02 54.79	-07 40.2	14.9	-0.89	- 2.8	9.4/03.0	20315	1984 DY	93 11 15.6	03 23.78	+19 30.9	16.4	-0.86	- 3.0	0.3/15.8	14191
(5351)	93 11 08.5	02 55.17	+08 15.1	16.9	-0.96	- 4.7	2.9/06.6	20918	1990 HM <sub>1</sub>	93 11 15.7	03 24.24	+11 32.9	15.2	-0.88	- 0.4	2.2/14.5	22431
(5270)	93 11 08.5	02 55.28	+09 11.5	17.1	-0.88	- 6.9	2.4/06.6	20616	1969 TR <sub>1</sub>	93 11 15.7	03 24.40	+22 11.1	15.1	-1.17	- 3.7	1.7/16.4	21925
(5288)	93 11 08.8	02 56.28	+32 18.0	14.6	-0.99	- 7.5	6.1/13.0	20623	1987 SN <sub>11</sub>	93 11 15.8	03 24.70	+15 45.5	16.9	-0.84	- 3.4	1.0/15.2	13607
1992 OB	93 11 08.8	02 56.37	+15 12.2	18.6	-0.94	+ 0.1	0.5/08.6	22407	1989 RD <sub>2</sub>	93 11 16.4	03 27.36	+13 52.1	16.7	-1.06	- 4.2	2.2/15.5	21973
1982 UV <sub>1</sub>	93 11 08.9	02 56.75	+12 13.1	15.9	-0.84	- 3.0	1.7/07.9	22075	1989 SG	93 11 16.7	03 28.31	+30 13.0	15.2	-1.15	- 0.9	5.3/18.6	16434
1981 JS <sub>2</sub>	93 11 09.1	02 57.68	+19 36.6	17.5	-1.09	- 4.0	1.0/09.8	21968	4068 P-L	93 11 16.9	03 29.40	+25 02.9	16.5	-1.16	- 3.4	2.8/18.1	22086
1988 VD <sub>1</sub>	93 11 09.2	02 57.98	+34 08.6	15.6	-1.09	- 1.0	5.8/13.0	22080	2023 P-L	93 11 17.0	03 29.56	+19 54.1	17.5	-0.88	- 3.1	0.3/17.2	22086
1986 RR <sub>2</sub>	93 11 09.4	02 58.97	+05 50.8	15.5	-0.91	- 5.2	5.7/06.9	22077	1992 LE	93 11 17.0	03 29.67	-02 33.6	18.2	-0.85	- 2.8	6.5/12.9	20826
1992 FS <sub>1</sub>	93 11 09.5	02 59.12	+06 15.3	16.2	-1.08	- 2.6	4.2/07.4	21977	1973 SF <sub>6</sub>	93 11 17.2	03 30.77	+09 24.3	16.8	-1.07	- 5.5	4.4/15.4	22429
(5280)	93 11 09.7	02 59.74	+07 13.7	17.4	-0.87	- 6.4	3.0/07.2	20620	1991 AN	93 11 17.4	03 31.49	+24 53.8	14.8	-1.16	+ 0.1	3.1/18.3	22083
(5478)	93 11 09.7	02 59.75	+18 28.5	15.8	-0.94	- 7.8	0.6/10.1	21775	1987 SS <sub>9</sub>	93 11 17.4	03 31.58	+15 18.4	16.7	-0.84	- 2.3	1.4/16.8	14620
1992 KE	93 11 09.8	03 00.20	+05 48.3	16.4	-1.00	- 2.3	4.2/07.5	20645	1980 FH <sub>1</sub>	93 11 17.6	03 32.19	+36 37.2	17.3	-1.07	- 1.5	5.6/20.9	21965
1985 TM <sub>1</sub>	93 11 09.8	03 00.56	+28 26.7	15.3	-1.22	+ 4.6	5.7/11.4	22077	1988 PG <sub>1</sub>	93 11 17.7	03 32.46	+38 59.8	17.1	-1.15	- 4.6	7.3/22.3	18289
1981 EB <sub>24</sub>	93 11 09.9	03 00.79	+21 22.4	17.9	-0.96	- 2.4	1.5/10.9	21967	(5441)	93 11 17.7	03 32.46	+03 10.4	16.3	-0.81	- 2.0	4.7/14.7	21555
(5169)	93 11 10.0	03 01.22	+22 15.5	15.3	-1.06	- 3.4	2.5/11.2	19996	3181 T-2	93 11 18.1	03 34.31	+15 46.1	17.7	-0.91	- 2.2	1.2/17.5	21978
5193 T-3	93 11 10.3	03 02.30	+00 02.8	18.4	-0.76	- 3.6	4.5/06.2	16441	(5368)	93 11 18.3	03 35.11	+11 02.0	16.5	-0.67	- 2.6	2.0/16.7	21089
1980 TG <sub>4</sub>	93 11 10.4	03 02.64	+30 22.6	16.2	-1.20	+ 0.5	5.3/13.0	15702	1981 EO <sub>20</sub>	93 11 18.4	03 35.85	+15 09.0	18.4	-1.07	- 4.0	1.5/17.7	16228
1169 T-2	93 11 10.5	03 03.24	+20 24.7	18.3	-0.90	- 3.4	1.0/11.3	15906	1984 EY	93 11 18.7	03 36.82	+24 26.5	16.5	-1.16	- 1.2	1.9/19.5	22492
3020 T-2	93 11 10.6	03 03.68	+34 33.9	17.1	-1.17	- 0.1	6.4/14.2	15083	1992 PX <sub>2</sub>	93 11 18.8	03 37.51	+32 16.9	17.3	-1.05	- 5.1	4.1/21.6	21584
1990 TN <sub>1</sub>	93 11 10.8	03 04.41	+50 51.4	16.1	-1.67	- 2.8	15.3/19.0	17453	1991 GQ <sub>10</sub>	93 11 18.9	03 37.52	+11 58.1	15.8	-0.92	- 2.5	2.8/17.6	18826
3178 T-2	93 11 10.9	03 04.60	+19 02.3	17.4	-0.92	- 2.6	0.6/11.3	19329	1987 SS <sub>17</sub>	93 11 19.1	03 38.34	+28 25.7	16.8	-0.94	- 2.0	2.8/20.8	22079
(5403)	93 11 10.9	03 04.96	+02 00.8	16.0	-0.81	- 2.5	4.7/07.5	21248	5192 T-3	93 11 19.6	03 40.52	+15 47.8	16.3	-0.95	+ 0.6	1.3/19.1	21978
1981 JE <sub>2</sub>	93 11 10.9	03 05.00	+16 04.7	16.7	-1.09	- 3.0	0.5/10.7	16230	1984 UX <sub>2</sub>	93 11 19.6	03 40.53	+33 40.4	15.3	-1.21	+ 0.1	5.4/21.9	22271
1992 HR <sub>4</sub>	93 11 11.0	03 05.23	+08 15.7	17.8	-1.04	- 3.9	3.4/09.1	21582	1989 YB	93 11 20.0	03 42.22	+28 27.6	14.0	-0.92	- 8.4	4.4/22.2	22494
1981 EV <sub>10</sub>	93 11 11.1	03 05.43	+18 45.4	18.6	-1.02	- 7.2	0.6/11.4	22270	1988 QD <sub>1</sub>	93 11 20.0	03 42.38	+24 58.3	15.7	-1.06	-10.1	2.0/21.4	21972
1976 SA <sub>6</sub>	93 11 11.2	03 05.93	+18 44.8	16.8	-1.13	- 3.5	0.5/11.5	22072	1978 QC <sub>3</sub>	93 11 20.4	03 43.95	-01 39.7	14.8	-0.87	- 0.9	8.5/16.8	16575
4069 P-L	93 11 12.0	03 09.12	+11 46.4	17.9	-0.78	- 5.4	1.8/10.6	22274	1991 CK	93 11 20.5	03 44.19	+29 10.8	14.7	-1.15	- 1.9	4.7/22.1	21975
2532 P-L	93 11 12.2	03 10.13	+09 06.2	16.9	-0.83	- 5.2	2.9/10.2	21977	1984 DB	93 11 20.5	03 44.25	-19 48.3	17.1	-0.93	- 4.1	17.9/08.9	22271
1979 TY <sub>1</sub>	93 11 12.2	03 10.31	+23 07.2	16.1	-1.21	+ 2.3	2.7/13.1	22073	1990 FR <sub>1</sub>	93 11 20.5	03 44.39	-00 08.3	17.1	-0.84	+ 0.5	6.1/17.5	19303
1987 SV <sub>12</sub>	93 11 12.4	03 10.81	+16 01.2	16.4	-0.87	- 2.5	0.6/12.1	22078	5016 P-L	93 11 21.5	03 48.76	+26 06.6	19.0	-1.23	- 2.1	2.4/22.5	14960
(5305)	93 11 13.1	03 13.62	+18 01.2	16.9	-1.01	- 4.5	0.0/13.1	21764	1992 ME	93 11 21.7	03 49.24	-14 20.5	18.4	-1.07	+ 1.2	11.3/17.3	21112
6299 P-L	93 11 13.2	03 14.11	+05 37.4	18.0	-0.83	- 8.0	4.5/09.9	22087	1989 TN	93 11 21.8	03 49.85	+16 08.6	17.7	-1.09	- 1.9	1.6/21.3	19025
1984 FN	93 11 13.2	03 14.24	+20 55.1	15.6	-1.75	+12.2	1.5/13.3	22599	1980 SD	93 11 21.8	03 50.01	+33 36.8	16.9	-1.20	- 0.3	4.7/23.9	21966
1979 KG	93 11 13.2	03 14.26	-06 19.4	15.3	-0.91	+ 0.0	10.1/08.8	22073	1992 PD <sub>2</sub>	93 11 22.1	03 50.82	+14 33.7	17.0	-0.84	- 3.9	1.6/21.1	20934
(5408)	93 11 13.7	03 15.96	+15 18.2	16.8	-1.06	- 5.8	1.1/13.1	21250	(5299)	93 11 22.1	03 51.23	+27 42.7	15.9	-0.92	- 2.8	2.5/23.5	20785
1992 JN <sub>1</sub>	93 11 13.9	03 16.98	+03 01.2	16.6	-1.03	+ 0.8	5.6/11.6	21977	1978 NU <sub>3</sub>	93 11 22.2	03 51.42	+09 26.7	17.8	-1.08	- 2.0	4.5/20.7	21964
1992 HG <sub>4</sub>	93 11 13.9	03 17.21	+17 40.7	17.0	-1.07	- 4.5	0.2/13.9	22085	(5303)	93 11 22.2	03 51.71	+20 49.9	16.2	-0.94	- 2.0	0.2/22.4	20786
1971 UK	93 11 14.0	03 17.40	+16 39.0	16.4	-1.01	- 7.1	0.7/13.7	22072	1974 SJ <sub>3</sub>	93 11 22.5	03 52.96	+43 23.3	16.1	-1.29	+ 0.9	8.1/25.8	22598
1981 EF <sub>48</sub>	93 11 14.1	03 17.78	+17 55.4	18.3	-0.69	- 2.9	0.1/14.1	21968	1981 EN <sub>15</sub>	93 11 22.5	03 52.98	+23 26.9	18.0	-1.10	- 4.4	1.5/23.0	21967
1981 EV <sub>45</sub>	93 11 14.1	03 17.91	+21 44.0	20.0	-0.89	- 3.7	1.0/14.9	20811	1991 EG	93 11 22.6	03 53.01	+22 26.7	15.8	-1.21	+ 0.3	1.1/22.9	21975
1983 XN <sub>1</sub>	93 11 14.1	03 18.02	+31 43.8	16.9	-0.96	- 3.6	4.6/17.2	21969	1981 SN	93 11 22.6	03 53.36	+16 21.6	15.8	-0.97	- 5.8	1.7/21.9	21968
4047 P-L	93 11 14.2	03 18.02	+21 24.7	18.2	-0.94	- 3.3	1.1/14.9	21978	1988 EA <sub>2</sub>	93 11 22.8	03 54.19	+13 47.7	16.8	-1.08	- 3.5	2.7/21.8	21971