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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 BRIAN@CFAPS1.SPAN MARSDEN@CFAPS2.SPAN
Brian G. Marsden, Director Gareth V. Williams, Associate Director

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ERRATA.

MPC	Line	
15282	7	Add Note: this observation of (4225) is the discovery position of 1982 BC.
15842	1 to 8	The observations of (2120) and (2341) were accidentally repeated from MPC 15511.
15859	31	The orbit of 1989 YR6 should be removed.
16108	- 7 to - 5	For MPC15785 read MPC15786
16135	2 to 7	The observations of (4399) = 1984 UA were accidentally repeated from MPC 15957.
16594	-23	For 1982 Apr. 26 read 1982 Apr. 28
16637	- 2	For Karlsruhe read Karlsruhe
16638	2	For Konigstuhl read Konigstuhl
16638	19	For Innsbruck read Innsbruck
16641	20	For Simon Stetin read Simon Stevin

16642 7 For O'Gyalla read Hurbanovo, formerly O'Gyalla
16669 -22 Add D. Cruikshank as an observer.

* * * * *

CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Mag.	N	Obs.
1936 CB		1936 02	24.86534	08 19 02.55	+13 04 49.5	RI 1330		1	012
1936 CB		1936 04	08.85878	08 29 46.53	+14 45 43.7	RI 1330		1	012
1948 PK1	*	1948 08	06.29254	21 21 58.47	-20 03 19.3	MPC16478		2	839
1948 PK1		1948 08	06.32713	21 21 56.30	-20 03 12.3	MPC16478		2	839
1957 JO		1957 05	05.86389	15 18 26.66	-14 20 32.7	MPC 5173	16.6	3	076
1957 JO		1957 05	05.92749	15 18 23.62	-14 20 20.1	MPC 5173		3	076
1957 KL		1957 05	27.92940	16 24 10.13	-17 49 28.4	MPC11414		4	076
1957 KM		1957 05	27.92940	16 10 02.30	-19 50 42.0	MPC 2869		9	076
1957 KM		1957 05	28.03189	16 09 54.90	-19 50 45.1	MPC 2869		9	076
1957 KQ	*	1957 05	28.97025	16 56 55.93	-30 22 51.7	MPC 4354	17	J	076
1957 KQ		1957 05	29.07263	16 56 49.20	-30 22 52.0	MPC 4354		J	076
1965 UN		1965 10	28.28611	01 11 11.72	+18 44 35.5	MPC 3622		I	760
1979 ME		1979 06	18.21078	17 46 52.89	-09 40 10.9	MPC 4821		4	809
1986 AZ2		1985 12	15.39271	06 51 32.23	+24 08 14.9	MPC11707		A	675
1986 AZ2	*	1986 01	06.32795	06 27 32.47	+26 15 41.7	MPC11777		A	675
1986 AZ2		1986 01	07.30347	06 26 29.86	+26 20 29.0	MPC11707		A	675
1986 AZ2		1986 01	08.37569	06 25 21.82	+26 25 38.7	MPC11707		A	675
347		1983 06	07.25833	16 38 37.01	-17 40 12.9	MPC 8358			688
347		1983 06	07.29028	16 38 35.06	-17 40 21.7	MPC 8358			688
402		1948 02	28.85496	09 38 31.02	+21 08 41.8	MPC 2341		7	047
408		1966 05	13.79236	14 53 37.23	-28 47 49.2	MPC 2715	15.3		076
412		1961 03	07.9007	12 30 58.72	+18 35 06.3	MPC 3406			043
413		1973 06	06.67079	17 24 43.13	-08 41 02.5	MPC 4956			330
415		1971 05	21.84537	12 31 30.83	+07 14 54.5	MPC 3459		8	095
415		1971 05	22.85043	12 31 22.18	+07 13 19.1	MPC 3459		8	095
416		1956 03	14.50000	09 48 18.06	+33 01 33.5	MPC 1573			330
419		1971 07	17.91913	20 46 15.08	-10 09 24.4	MPC 5114			073
425		1962 05	05.00278	15 41 14.14	-18 37 49.9	MPC 2184	14.0		076
435		1947 06	15.95372	14 21 50.10	-15 36 02.0	MPC 57			020
437		1937 01	03.97638	08 35 58.22	+12 01 10.0	MPC 3213			020
438		1972 11	28.70735	06 49 21.18	+29 59 55.5	MPC 4956			330
442		1961 07	19.94653	20 01 56.71	-17 17 58.3	MPC 2161	13.8	B	076
443		1969 07	14.92535	18 16 39.49	-16 11 30.2	MPC 3404			022
445		1965 03	29.87847	13 07 47.00	-37 52 50.4	MPC 2556	15.5	8	076
445		1965 03	29.91910	13 07 45.01	-37 52 47.2	MPC 2556	15.5	8	076
460		1936 11	10.95500	03 00 19.99	+14 06 47.1	MPC 3214			020
461		1955 10	22.99439	01 44 00.29	+08 57 55.9	MPC 1755		C	020
465		1970 12	06.99375	04 57 12.65	+27 15 52.8	MPC 3194			056
465		1978 04	07.62167	13 30 00.83	-17 40 42.6	MPC 4688		D	885
465		1978 04	07.66114	13 29 58.98	-17 40 34.7	MPC 4688		D	885
466		1957 02	21.31722	09 42 30.78	-05 01 51.3	MPC 3785		E	760
469		1948 08	06.29254	21 15 12.35	-22 01 30.6	MPC 261		2	839
469		1948 08	06.32713	21 15 10.53	-22 01 34.2	MPC 261		2	839
471		1961 09	06.99667	02 07 48.04	-11 33 52.5	MPC 2539			073
471		1963 03	20.81875	10 17 07.44	+31 46 36.1	MPC 2607		C	075
478		1940 02	08.07308	08 53 58.12	-03 23 59.8	MPC 619			804
479		1977 10	04.87014	23 20 38.96	-14 43 03.5	MPC 4422	13.5		076
480		1976 12	22.11458	06 58 10.11	-00 53 10.9	MPC 4298			839
480		1976 12	22.13438	06 58 08.97	-00 53 20.4	MPC 4298			839

485	1968	11	17.47235	02 03 24	+02	03.6	MPC 3107	13.0		385
485	1968	11	17.53715	02 03 21	+02	03.2	MPC 3107			385
488	1963	03	20.81875	10 25 10.29	+28	08 18.9	MPC 2607		C	075
488	1972	10	31.83958	02 50 30.57	+04	19 41.0	MPC 3599			056
488	1972	10	31.90069	02 50 27.58	+04	19 17.1	MPC 3599			056
489	1975	09	05.95155	23 57 36.10	-02	31 04.6	MPC 4212			095
496	1966	04	23.11435	16 09 14.38	-18	29 09.1	MPC 3336			020
496	1966	04	23.12740	16 09 13.58	-18	29 03.1	MPC 3336			020
496	1966	04	23.14125	16 09 12.59	-18	28 56.3	MPC 3336			020
497	1937	01	20.05166	05 59 51.82	+30	53 03.4	MPC 3215		C	020
497	1937	01	20.08351	05 59 50.81	+30	52 53.2	MPC 3215		C	020
498	1953	07	01.04331	18 02 23.77	-22	23 05.0	MPC 1065			006
499	1977	05	15.97618	17 35 28.84	-23	13 47.0	MPC 4690		G	095
615	1948	08	06.29254	21 23 57.30	-19	30 12.4	MPC 261		2	839
615	1948	08	06.32713	21 23 55.29	-19	30 19.2	MPC 261		2	839
942	1979	03	22.90561	11 54 16.06	+16	09 42.5	MPC 4697		H	046
942	1979	03	22.92222	11 54 15.13	+16	09 46.0	MPC 4697		H	046
1107	1948	08	06.29254	21 19 35.49	-19	56 29.8	MPC 263		2	839
1107	1948	08	06.32713	21 19 33.98	-19	56 40.1	MPC 263		2	839
1360	1965	07	28.88472	22 07 28.72	-23	14 42.7	MPC 2558	14.5		076
1429	1957	05	05.86389	14 51 11.14	-15	39 37.3	MPC 3684	16.3		076
1429	1957	05	05.92749	14 51 06.81	-15	39 29.5	MPC 3684			076
1576	1957	05	05.86389	15 07 39.05	-16	24 31.3	MPC 2240	16.3		076
1576	1957	05	05.92749	15 07 36.38	-16	24 15.8	MPC 2240			076
1786	1957	05	05.98218	15 06 37.54	-26	06 37.1	MPC 2869	16.0		076
2888	1965	10	28.16042	01 12 05.72	+17	26 23.2	MPC 8015		4	760

Note 1: 1936 CB = (496). 2: time changed by +8 hours. 3: 1957 JO = (2209). 4: time originally slightly in error. 5: 1957 KM = (3166). 6: 1986 AZ2 = (4349). 7: date changed by +1 day. 8: observations originally interchanged. 9 = 5 + 4. A = 6 + 4. B: originally given as (422). C: date changed by -1 day. D: date changed by -1 month. E: originally given as (446). F: 1957 KQ = (1306). G: originally given as (449). H: originally given as (492). I: 1965 UN = (1958). J = F + 4.

* * * * *

DELETED OBSERVATIONS.

The following observations are to be deleted.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Obs.
1957 KN	*	1957 05	27.98	16 42.4	-21 22	MPC 1783	076
401		1953 11	07.53993	03 34 38.22	+21 39 02.4	MPC 2297	388
403		1955 01	26.99514	06 13.4	+14 30	MPC 1230	990
403		1971 07	30.87268	19 20 21.05	-11 37 12.7	MPC 5113	073
403		1971 07	30.88030	19 20 20.87	-11 37 13.7	MPC 5113	073
403		1971 08	16.79450	19 08 55.92	-12 09 27.7	MPC 5113	073
403		1971 08	16.80351	19 08 55.24	-12 09 32.0	MPC 5113	073
403		1971 08	16.82266	19 06 12.11	-12 14 45.5	MPC 6372	020
403		1971 08	16.83097	19 06 11.91	-12 14 51.9	MPC 6372	020
405		1952 01	25.54931	06 16 58.36	+13 42 39.3	MPC 2157	388
405		1952 01	25.54931	06 16 58.36	+13 42 39.3	MPC 2157	388
406		1969 06	19.96793	16 19 23.60	-26 54 08.6	MPC 3434	020
406		1969 06	19.98109	16 19 23.19	-26 54 04.7	MPC 3434	020
412		1956 02	02.58889	09 08 29.12	+26 07 32.1	MPC 2586	388
414		1966 10	21.92329	02 32 09.99	+01 02 08.1	MPC 3335	020
418		1937 05	14.06006	16 57 21.06	-23 00 05.5	MPC 3213	020

418	1969	01	22.09795	08	21	48.90	+10	12	58.3	MPC 3434 020
418	1969	01	22.10349	08	21	47.98	+10	12	59.8	MPC 3434 020
420	1956	01	10.65833	09	19	51.23	+06	58	44.5	MPC 2586 388
424	1942	12	28.76204	06	03	16.59	+21	22	13.8	RI 2523 028
424	1942	12	28.83924	06	03	12.47	+21	22	32.1	RI 2523 028
424	1972	06	07.86559	14	20	34.12	-04	30	15.3	MPC 5733 020
424	1972	06	07.87010	14	20	33.92	-04	30	16.4	MPC 5733 020
425	1971	05	12.84307	09	58	32.11	+16	33	40.8	MPC 6373 020
425	1971	05	12.85035	09	58	32.61	+16	33	39.1	MPC 6373 020
425	1971	05	14.84385	10	00	05.41	+16	16	54.1	MPC 6373 020
425	1971	05	14.85285	10	00	06.12	+16	16	54.2	MPC 6373 020
426	1977	12	18.13008	07	26	51.09	+37	51	53.6	MPC 6909 020
427	1971	01	06.87576	05	27	09.18	+26	36	52.2	MPC 6373 020
427	1971	01	06.88684	05	27	08.68	+26	36	51.9	MPC 6373 020
429	1956	12	23.45208	03	39	04.36	+11	50	36.0	MPC 2645 388
429	1956	12	29.45556	03	36	13.04	+11	37	31.2	MPC 2645 388
429	1962	03	02.47	10	03.6		-01	43		MPC 2550 388
431	1957	08	28.88333	21	47.8		-14	50		MPC 1697 990
431	1974	11	08.88827	01	13	21.89	+04	51	28.7	MPC 4873 020
431	1974	11	08.89139	01	13	21.86	+04	51	27.8	MPC 4873 020
434	1938	03	08.00274	13	00	51.84	-01	29	19.2	MPC 3213 020
436	1972	09	29.77436	22	15	06.66	-15	50	26.6	MPC 5164 073
436	1972	09	29.79686	22	15	06.45	-15	50	29.3	MPC 5164 073
437	1957	07	23.925	21	13.0		-04	14		MPC 1697 990
437	1957	08	26.93056	20	46.8		+03	33		MPC 1697 990
438	1951	10	26.90280	02	24	44.20	+11	34	30.0	MPC 763 990
439	1940	04	01.97512	13	54	11.33	-10	28	16.2	MPC 3213 020
439	1940	04	02.01840	13	54	09.84	-10	28	12.1	MPC 3213 020
440	1937	07	15.05862	21	46	41.62	-12	32	07.3	MPC 3213 020
440	1937	07	15.08766	21	46	39.88	-12	32	18.5	MPC 3213 020
440	1966	06	07.95400	16	14	53.63	-23	18	46.0	MPC 3335 020
440	1966	06	07.97478	16	14	52.14	-23	18	15.1	MPC 3335 020
440	1966	06	22.92031	16	00	44.39	-22	30	06.2	MPC 3335 020
440	1966	06	22.94456	16	00	43.43	-22	29	39.5	MPC 3335 020
443	1955	01	17.63611	09	53	37.99	+07	47	24.9	MPC 2298 388
444	1956	10	25.85556	01	45.0		+06	09		MPC 1562 990
444	1956	10	26.86458	01	44.1		+06	00		MPC 1562 990
444	1956	10	27.86806	01	43.5		+05	50		MPC 1562 990
445	1938	06	23.02026	20	32	18.55	-18	39	02.4	MPC 3213 020
445	1938	06	23.05870	20	32	17.29	-18	39	16.5	MPC 3213 020
445	1961	09	04.64410	21	42	12.11	+11	21	14.9	MPC 2316 334
448	1941	03	21.87473	11	15	48.83	+19	28	39.3	MPC 3214 020
449	1962	02	07.52	10	18.0		+16	47		MPC 2549 388
450	1972	10	28.71810	23	41	20.98	-03	49	11.0	MPC 5164 073
450	1972	10	28.73339	23	41	20.67	-03	49	09.8	MPC 5164 073
451	1958	12	05.66866	05	00	11	+16	51.9		MPC 2193 337
451	1960	03	04.85486	11	41	02.40	+25	36	08.6	MPC 2079 075
454	1955	02	16.48958	09	37	23.71	+24	23	41.0	MPC 2611 388
455	1970	11	03.87985	00	57	57.97	-13	00	23.2	MPC 6373 020
455	1970	11	03.88227	00	57	57.92	-13	00	21.0	MPC 6373 020
455	1974	07	10.97904	19	12	27.14	-34	01	23.6	MPC 3876 006
456	1942	07	05.02083	18	44	51.91	-03	06	59.5	RI 2399 028
456	1953	11	11.69583	04	32	11.71	+17	03	11.6	MPC 2367 388
459	1972	10	02.84940	00	21	53.53	-06	02	30.2	MPC 5164 073
459	1972	10	02.85979	00	21	52.99	-06	02	32.4	MPC 5164 073
459	1972	10	29.81141	23	59	26.69	-04	46	04.8	MPC 5734 020
459	1972	10	29.83491	23	59	25.53	-04	45	58.1	MPC 5734 020
461	1969	05	23.96029	14	49	14.72	-14	14	42.8	MPC 3436 020
461	1969	05	23.97137	14	49	13.61	-14	14	51.8	MPC 3436 020

466	1969	01	27.10289	08	06	18.56	+14	31	31.0	MPC 3436 020
466	1969	01	27.10774	08	06	17.97	+14	31	37.1	MPC 3436 020
468	1969	04	23.92549	12	34	03.19	-03	42	21.9	MPC 3436 020
468	1969	04	23.93449	12	34	02.53	-03	42	28.5	MPC 3436 020
470	1953	03	07.9500	11	41	23.38	+01	38	35.7	MPC 917 990
470	1953	03	10.8451	11	39	00.43	+02	04	03.7	MPC 917 990
470	1969	09	08.91319	00	42	11.03	+06	29	26.9	MPC 3405 048
470	1969	09	08.94097	00	42	11.09	+06	29	26.8	MPC 3405 048
471	1939	05	20.94	12	31.0		+15	41		RI 1991 012
471	1961	10	28.87131	01	43.1		-13	51		MPC 2191 006
471	1969	05	22.91389	14	28	14.86	-00	12	13.0	MPC 3404 022
471	1970	09	07.82374	18	06	02.59	-31	28	28.4	MPC 6374 020
471	1970	09	07.82703	18	06	02.61	-31	28	27.7	MPC 6374 020
471	1975	07	30.93513	18	51	06.81	-32	42	13.7	MPC 4874 020
471	1975	07	30.95798	18	51	06.70	-32	42	12.9	MPC 4874 020
472	1954	08	20.86944	22	19.8		-21	33		MPC 1207 990
474	1938	12	28.96179	08	24	17.06	+09	56	40.0	MPC 3214 020
475	1967	03	30.87053	13	03	29.76	+05	02	26.1	MPC 2846 021
475	1967	04	16.85142	12	48	34.38	+05	49	23.4	MPC 2846 021
476	1956	03	12.71	13	32.8		-26	56		MPC 1489 388
477	1950	11	17.92847	01	03	14.11	+10	39	12.7	MPC 561 990
477	1954	12	14.42986	03	43	13.90	+27	31	54.5	MPC 2298 388
478	1954	12	17.44097	03	51	54.42	+15	31	06.8	MPC 2298 388
480	1941	11	12.75706	01	39	57.75	+22	39	37.8	RI 2320 028
480	1941	11	12.82714	01	39	53.57	+22	38	46.4	RI 2320 028
480	1944	05	29.00012	17	13	51.20	-12	31	59.2	RI 2561 028
480	1944	05	29.04873	17	13	48.59	-12	31	32.0	RI 2561 028
480	1961	05	21.54	15	38.5		-18	36		MPC 2549 388
481	1968	09	29.89012	22	48	59.23	-23	48	14.4	MPC 3436 020
481	1968	09	29.89497	22	48	58.42	-23	48	16.3	MPC 3436 020
482	1974	02	20.84292	07	30	34.37	+05	37	43.0	MPC 4875 020
482	1974	02	20.84673	07	30	34.20	+05	37	45.5	MPC 4875 020
483	1967	07	04.92062	18	17	51.87	+02	32	08.1	MPC 3336 020
483	1967	07	04.93447	18	17	51.13	+02	32	00.6	MPC 3336 020
483	1979	05	25.89076	14	54	42.42	+04	57	16.9	MPC 4815 542
483	1979	05	25.90012	14	54	42.32	+04	57	17.3	MPC 4815 542
484	1968	07	31.89619	19	11	11.73	-18	16	46.7	MPC 3436 020
486	1971	08	17.00272	21	51	55.92	-28	17	02.3	MPC 6374 020
486	1971	08	17.01173	21	51	55.37	-28	17	01.0	MPC 6374 020
487	1968	09	27.08954	00	55	29.64	-11	35	57.4	MPC 3436 020
487	1968	09	27.09161	00	55	29.68	-11	35	56.9	MPC 3436 020
487	1968	09	27.09369	00	55	29.65	-11	35	56.8	MPC 3437 020
487	1968	09	29.95418	00	53	15.68	-11	56	16.6	MPC 3437 020
487	1968	09	29.95626	00	53	15.62	-11	56	17.8	MPC 3437 020
487	1968	10	01.92146	00	51	44.61	-12	09	52.2	MPC 3437 020
487	1968	10	01.93288	00	51	44.32	-12	09	45.6	MPC 3437 020
489	1974	07	17.96546	18	49	56.17	-06	33	49.5	MPC 4875 020
489	1974	07	17.96719	18	49	56.03	-06	33	51.2	MPC 4875 020
489	1974	07	26.88410	18	43	55.62	-07	08	08.7	MPC 4875 020
489	1974	07	26.88721	18	43	55.51	-07	08	09.7	MPC 4875 020
490	1961	02	09.88810	07	11	51.78	+11	11	20.0	MPC 2060 020
491	1954	11	22.51389	02	35	24.48	-06	10	37.6	MPC 2298 388
491	1957	04	23.92798	13	21	26.80	+04	33	23.1	MPC 1821 020
492	1961	05	13.90472	13	32	41.35	-09	11	53.2	MPC 2123 020
492	1966	03	20.00449	12	11	07.07	+00	38	45.0	MPC 3336 020
492	1966	03	20.02596	12	11	05.97	+00	38	46.0	MPC 3336 020
495	1967	05	09.92546	12	46	58.44	-03	52	49.8	MPC 3336 020
495	1971	03	30.07541	13	49	56.40	-10	20	47.5	MPC 6374 020
495	1971	03	30.08441	13	49	55.91	-10	20	39.6	MPC 6374 020

495	1975	04	09.03382	14	13	45.56	-12	01	39.2	MPC 4875 020
495	1975	04	09.04594	14	13	44.79	-12	01	31.4	MPC 4875 020
496	1966	05	17.02325	15	48	06.85	-16	33	44.0	MPC 3336 020
496	1966	05	17.05217	15	48	05.84	-16	33	36.1	MPC 3336 020
496	1966	05	21.01042	15	43	53.62	-16	13	35.5	MPC 3336 020
496	1966	05	21.04887	15	43	51.43	-16	13	34.6	MPC 3336 020
496	1966	06	07.91833	15	27	40.42	-14	54	05.7	MPC 3336 020
496	1966	06	07.93911	15	27	39.53	-14	53	51.0	MPC 3336 020
497	1967	04	05.89199	11	23	13.30	+05	14	32.3	MPC 3336 020
497	1967	04	05.90722	11	23	12.48	+05	14	39.7	MPC 3336 020
500	1939	08	14.92085	20	52	38.77	-09	35	12.3	RI 2014 028

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 16650-16651.

Object		Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	Obs.
A902 EF	*	1902 03	04.93052	11 04 08.22	+00 34 04.0	421		024
A904 AD	*	1904 01	11.77112	06 21 13.32	+24 49 08.1	492		024
A904 LB	*	1904 06	13.97882	17 29 06.44	-08 44 41.5	458		024
A905 WB	*	1905 11	28.96951	05 56 32.09	+03 31 02.8	482		024
A912 VP	*	1912 11	01.82020	02 05 23.74	+27 43 55.4	408		024
1927 SO	*	1927 09	22.03410	00 14 08.33	-05 47 33.8	1927 RC		024
1927 SO		1927 09	26.91812	00 09 17.47	-05 54 09.2	1927 RC		024
1929 JM	*	1929 05	12.94385	15 11 19.83	-25 06 30.5	1066	14	078
1929 JM		1929 05	12.96648	15 11 18.47	-25 06 20.3	1066		078
1929 JM		1929 05	13.95284	15 10 18.35	-25 00 36.0	1066		078
1929 JM		1929 05	13.97598	15 10 17.10	-25 00 30.2	1066		078
1929 OA	*	1929 07	29.85050	19 53 53.58	-23 22 59.9	492	12.2	078
1929 OA		1929 07	29.87358	19 53 52.36	-23 23 06.9	492		078
1929 PP	*	1929 08	09.94511	21 23 27.67	-19 50 55.0	591	14.0	078
1929 PP		1929 08	09.96796	21 23 26.11	-19 50 53.9	591		078
1930 SD1	*	1930 09	18.0081	21 16 03.98	-37 53 45.3	818		839
1930 SD1		1930 09	18.9936	21 15 33.09	-37 51 59.7	818		839
1932 BR	*	1932 01	31.07149	03 46 51.80	+23 41 22.6	207	11.5	754
1932 CL1	*	1932 02	05.07162	03 45 48.30	+23 48 40.9	593	13.5	754
1932 CL1		1932 02	05.09147	03 45 49.18	+23 48 43.0	593	13.5	754
1932 CM1	*	1932 02	06.06568	02 13 49.77	+06 44 56.3	196	11	754
1932 CM1		1932 02	06.07850	02 13 50.48	+06 45 00.7	196	11	754
1932 TC	*	1932 10	11.40156	08 26 16.00	+22 47 20.4	579	15	754
1932 TC		1932 10	12.43276	08 27 16.68	+22 44 35.2	579	15	754
1932 WO	*	1932 11	22.15866	02 38 45.09	+14 31 27.8	1091	14.5	754
1939 GW	*	1939 04	12.99375	13 54.7	-07 42	421	15.5	053
1939 GW		1939 04	14.95625	13 53.2	-07 30	421	15.5	053
1939 UT	*	1939 10	17.891	02 00 39	+07 07.4	462		057
1940 ET	*	1940 03	03.12	11 52.3	+14 30	402		045
1942 GE1	*	1942 04	15.877	13 50.8	-19 26	427	13.5	078
1942 PM	*	1942 08	04.823	20 11.3	-31 05	428	14.0	078
1943 XC	*	1943 12	01.872	01 35.0	+17 58	475	11.0	053
1947 WD	*	1947 11	16.1	05 23.1	+15 55	443		020
1948 JS	*	1948 05	01.0	15 46.2	-16 36	460		020
1948 JS		1948 05	27.802	15 25.5	-15 26	460	14.0	078
1948 PM1	*	1948 08	10.11024	17 06 01.77	-19 20 45.2	412		839
1948 RT1	*	1948 09	05.98701	23 33.8	+15 06	478	11.1	094
1948 RU1	*	1948 09	05.98701	23 38.6	+15 32	409	10.8	094

1949	BT	*	1949	01	28.94	10	34.4	+10	56	492	14.0	020
1949	QP2	*	1949	08	16.924	21	26.6	-26	02	422	11.0	119
1953	BF	*	1953	01	18.7731	06	50.0	+29	22	420	12.2	094
1953	FV1	*	1953	03	17.99	12	02.3	+11	55	446		056
1953	FW1	*	1953	03	17.99074	12	58 11.13	+00	14 58.0	459		012
1953	GC2	*	1953	04	01.82	11	50.1	+12	34	446		056
1953	NM	*	1953	07	06.93403	20	51 41.26	-22	51 26.8	302		078
1953	NN	*	1953	07	06.96875	20	55 55.38	-22	38 54.1	412		078
1953	NO	*	1953	07	07.75347	19	06 55.60	-12	12 45.2	405		330
1953	NP	*	1953	07	14.1	21	12.9	-06	45	456		020
1953	SM	*	1953	09	30.74479	23	15 45.98	+04	29 44.6	420		119
1954	EC1	*	1954	03	12.06786	12	27 51.55	-15	23 15.8	408		012
1954	UN3	*	1954	10	23.83681	00	11 14.00	+16	38 47.5	405		119
1957	KU	*	1957	05	27.93	16	06.7	-18	02	244	14.0	076
1961	OB	*	1961	07	19.96319	20	54 48.29	-32	56 44.6	450	15.0	076
1962	DD	*	1962	02	26.58	10	35.7	+24	33	446	14.5	388
1969	RR2	*	1969	09	14.09238	01	48 27.26	+07	12 52.7	494		012
1970	YV	*	1970	12	31.03570	05	08 21.29	+22	00 35.3	432		012
1973	UG6	*	1973	10	29.91644	01	27 36.14	+15	26 37.4	1973 UZ2	16.5	095
1976	YY7	*	1976	12	16.94398	06	18 19.48	+20	54 50.8	449		095
1979	KP1	*	1979	05	16.94400	14	19 07.09	-15	38 30.7	419		046
1979	KP1		1979	05	16.95523	14	19 06.61	-15	38 26.2	419		046
1979	KP1		1979	05	30.93551	14	10 24.28	-14	25 16.0	419		046
1979	KP1		1979	05	30.95044	14	10 23.61	-14	25 12.0	419		046
1979	KQ1	*	1979	05	29.95492	14	10 30.54	-14	20 54.4	419		046
1979	OU16	*	1979	07	21.14907	17	19 37.54	-13	10 25.2	1979 MF	17.5	809
1985	HW1	*	1985	04	19.87468	12	36 33.20	+06	21 28.7	1985 HP		046
1985	HW1		1985	04	19.88891	12	36 32.38	+06	21 37.8	1985 HP		046
1985	SC7	*	1985	09	16.20439	22	05 07.72	-13	36 43.9	1985 RF4		809
1985	SC7		1985	09	16.21204	22	05 07.33	-13	36 46.2	1985 RF4		809
1985	SC7		1985	09	16.21690	22	05 07.09	-13	36 47.5	1985 RF4		809
1989	UL8	*	1989	10	21.40278	00	13 25.29	+11	38 24.3	1989 ST	16.5	399
1989	UL8		1989	10	21.41910	00	13 24.86	+11	38 19.7	1989 ST		399
1989	VC2	*	1989	11	02.61285	01	49 22.75	+13	55 53.7	1989 UU2		877
1989	VC2		1989	11	02.63021	01	49 22.03	+13	55 53.2	1989 UU2		877
1989	YJ8	*	1989	12	29.89514	06	00 46.56	+24	21 34.6	1989 YM5		511
1989	YJ8		1989	12	29.91771	06	00 44.83	+24	21 38.3	1989 YM5	17.5	511
1989	YJ8		1989	12	29.93507	06	00 43.79	+24	21 42.3	1989 YM5		511

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IDENTIFICATIONS.

The following list of identifications with numbered minor planets, by G. V. Williams, continues that on MPC 16652.

A912 VP = (507)	1929 JM = (2259)	1929 OA = (767)
1929 PP = (2036)	1930 SD1 = (593)	1932 BR = (593)
1932 CL1 = (207)	1932 CM1 = (69)	1932 TC = (333)
1932 WO = (1058)	1939 GW = (4516)	1939 ND = (633)
1939 UT = (99)	1942 GE1 = (1152)	1947 WC = (443)
1947 WD = (505)	1948 JS = (1142)	1948 PK1 = (709)
1948 RT1 = (409)	1948 RU1 = (478)	1949 BT = (1171)
1953 BF = (207)	1953 FV1 = (535)	1953 GC2 = (600)
1953 NM = (412)	1953 NN = (302)	1953 NP = (466)
1957 KT = (244)	1957 KU = (1175)	1961 OB = (2243)
1962 DD = (1054)	1979 KP1 = (378)	

CRITICAL LIST OF MINOR PLANETS.

The following list updates and is in the same form as that on MPC 15283:

1. Objects observed at only one opposition:
719 878

2. Objects observed at only two oppositions:
2608 3270 3352 3360 3553 3671 3688 3757 3908 3988 4015 4055
4341 4401 4487 4503 4544

3. Objects accurately observed at only three oppositions:
1538 2059 2061 2062 2101 2135 2148 2198 2202 2340 2552 2671
2703 2937 3004 3040 3041 3087 3102 3144 3204 3217 3245 3254
3271 3287 3289 3343 3392 3402 3446 3468 3480 3551 3552 3556
3563 3579 3635 3677 3693 3712 3752 3792 3801 3833 3834 3838
3913 3954 4034 4134 4177 4179 4205 4257 4450 4483 4486

4. Objects observed at four or more oppositions, last during 1973-1977:
1134 1709 1816 1876

5. Objects observed at four or more oppositions, last during 1979-1980:
694 1108 1164 1221 1459 1510 1515 1622 1656 1702 1869 1886
1920 1966 1974 2048 2049 2075 2083 2089 2102 2215 2218 2221
2262 2272 2335 2337 2343 2355 2637 2651 2867

* * * * *

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

046 Klet. Observers A. Mrkos and Z. Vavrova.
076 Hartbeespoort. Observers J. A. Bruwer and T. Gehrels. Measured by B. A. Skiff.
095 Crimean Astrophysical Observatory. Observers L. V. Zhuravleva and L. G. Karachkina.
364 JCPM Kagoshima Station. 0.25-m f/4.2 Wright Schmidt. Observer M. Mukai. Measured by M. Takeishi.
372 Geisei. 0.60-m reflector. Observer T. Seki.
373 Oishi. Observer M. Tsumura. Measured by H. Kosai.
385 Oohira. 0.31-m f/5.6 reflector. Observers W. Kakei, M. Kizawa and T. Urata. Measured by T. Urata.
391 Sendai Observatory, Ayashi Station. 0.15-m f/5.5 reflector. Observer M. Koishikawa. Communicated by H. Kosai.
392 JCPM Sapporo Station. 0.30-m f/2.7 Schmidt. Observer K. Watanabe.
394 JCPM Hamatonbetsu Station. Observer M. Takeishi.
400 Kitami. Observer K. Endate. Measured by K. Watanabe.
402 Dynic. 0.25-m f/3.4 Schmidt. Observer A. Sugie.
413 Siding Spring. Uppsala Southern Schmidt. Observers S. J. Hutcheon and R. H. McNaught.
479 Sollies-Pont. Observer B. Candela. Long. and Parallax 6.05, -311, -290 (see MPC 16637).
494 Stakenbridge. Observer B. Manning.
503 Cambridge. Observer J. D. Shanklin.
540 Linz. 0.30-m f/5.2 Schmidt-Cassegrain. Observers E. Meyer and H. Raab.
657 Victoria. Observers J. Tatum, D. Balam and J. Belmas.
675 Palomar. 0.46-cm Schmidt. Observers E. Helin, K. Kawrence, J. Michaud

and B. Roman.
688 Lowell Observatory, Anderson Mesa Station. 1.8-m reflector + CCD. Observers B. A. Skiff and C. M. Olmstead. Measured by B. A. Skiff. Communicated by E. Bowell. Secondary net tied to AGK3 via POSS prints.
801 Oak Ridge Observatory. 1.5-m reflector + CCD. Observers R. E. McCrosky, C.-Y. Shao and J. M. Zajac.
871 Akou. 0.20-m f/4.0 reflector. Observer K. Kawanishi.
881 Toyota. 0.31-m f/5.7 reflector. Observers K. Suzuki and T. Urata.
896 Yatsugatake South Base Observatory. 0.20-m f/4.0 reflector. Observers Y. Kushida and R. Kushida. Measured by O. Muramatsu.
897 Chiyoda. 0.25-m f/3.4 Wright-Schmidt camera. Observer T. Kojima.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
		Periodic Comet Wirtanen (1957 VI)					
/1957 VI	1957	05 05.86389	15 09 31.41	-20 47 22.9			076
/1957 VI	1957	05 05.92749	15 09 29.82	-20 46 55.8			076
/1957 VI	1957	05 05.98218	15 09 28.44	-20 46 33.0			076
/1957 VI	1957	05 06.03872	15 09 27.33	-20 46 05.2			076
		Periodic Comet Schwassmann-Wachmann 1					
/1974 II	1989	10 25.78396	23 30 56.65	+05 56 55.6		1	095
/1974 II	1989	10 27.87782	23 30 24.06	+05 52 25.7			095
/1974 II	1989	10 27.89848	23 30 23.77	+05 52 22.5			095
/1974 II	1989	10 29.74417	23 29 56.86	+05 48 26.9			095
/1974 II	1989	10 29.76499	23 29 56.60	+05 48 25.4			095
/1974 II	1990	08 03.43167	01 46 45.89	+20 50 44.2			657
/1974 II	1990	08 04.71435	01 46 56.61	+20 54 08.9	15 T		897
/1974 II	1990	08 04.73333	01 46 56.65	+20 54 11.2			897
		Periodic Comet Howell					
/1987 VI	1987	09 24.97946	01 03 11.47	-03 26 08.3			095
		Periodic Comet Klemola					
/1987 XIV	1987	09 24.90455	00 25 40.70	-00 29 17.1			095
/1987 XIV	1987	09 27.88465	00 25 04.89	-01 08 14.4			095
		Periodic Comet Brooks 2					
/1987 XXIV	1987	09 27.88465	00 30 14.43	+01 10 03.2		1	095
		Periodic Comet Kopff					
/1988k	1990	07 29.41794	02 17 40.67	+08 34 29.1	15.5T	2	688
/1988k	1990	07 29.42524	02 17 41.05	+08 34 30.1		2	688
/1988k	1990	07 29.43701	02 17 41.59	+08 34 30.7		2	688
		Comet Austin (1989c1)					
/1989c1	1990	05 28.70087	18 55 46.78	-08 29 07.0			372
/1989c1	1990	06 11.53924	16 28 05.53	-30 14 54.2	10.5T		372
/1989c1	1990	06 11.54132	16 28 04.76	-30 14 58.7			372
/1989c1	1990	06 17.59826	15 58 41.77	-32 48 06.2	12 T		372
		Periodic Comet Schwassmann-Wachmann 3					
/1989d1	1990	05 21.77396	23 48 46.98	-09 27 51.2	15 T		372
		Periodic Comet Wild 4					
/1990a	1990	06 11.51771	10 24 58.74	+11 08 29.5	15 T		372
/1990a	1990	06 11.52257	10 24 59.22	+11 08 24.8			372
/1990a	1990	06 13.35457	10 28 13.71	+10 46 11.0			413
/1990a	1990	06 13.36539	10 28 14.91	+10 46 03.7			413

/1990a	1990	06	15.41431	10	31	54.45	+10	20	45.8		413
/1990a	1990	08	14.39322	12	28	43.36	-03	33	28.3		413
/1990a	1990	08	18.38183	12	36	57.37	-04	31	13.1		413

Comet Levy (1990c)

/1990c	1990	06	17.68177	00	06	06.23	+28	59	07.7		372
/1990c	1990	06	17.70243	00	06	06.43	+28	59	13.0		372
/1990c	1990	06	18.61806	00	06	16.04	+29	01	48.8	10 T	400
/1990c	1990	06	18.62917	00	06	16.12	+29	01	46.7		400
/1990c	1990	06	18.72760	00	06	17.16	+29	02	06.0		372
/1990c	1990	06	21.72622	00	06	40.22	+29	10	19.8		372
/1990c	1990	06	21.75556	00	06	40.33	+29	10	24.7	9.5T	385
/1990c	1990	06	21.75929	00	06	40.34	+29	10	25.8		385
/1990c	1990	06	21.76432	00	06	40.35	+29	10	25.8		385
/1990c	1990	06	21.78351	00	06	40.46	+29	10	29.9		372
/1990c	1990	06	22.64271	00	06	44.66	+29	12	41.5	3	881
/1990c	1990	06	22.67153	00	06	44.66	+29	12	48.5		897
/1990c	1990	06	22.68872	00	06	44.73	+29	12	50.8		897
/1990c	1990	06	22.74369	00	06	44.91	+29	12	59.8		897
/1990c	1990	06	22.74699	00	06	44.82	+29	13	00.2	9.3T	896
/1990c	1990	06	22.77448	00	06	44.98	+29	13	05.7		372
/1990c	1990	06	23.74236	00	06	47.79	+29	15	32.5		402
/1990c	1990	06	27.66806	00	06	42.65	+29	24	47.1		372
/1990c	1990	06	27.68333	00	06	42.52	+29	24	49.2		372
/1990c	1990	06	28.66331	00	06	36.36	+29	26	51.3	8.5T	392
/1990c	1990	06	29.61597	00	06	28.58	+29	28	49.0	8.5T	400
/1990c	1990	06	29.62431	00	06	28.54	+29	28	50.2		400
/1990c	1990	06	30.70694	00	06	17.44	+29	30	54.7	8.0T	392
/1990c	1990	07	02.62847	00	05	50.74	+29	34	10.7	8.5T	392
/1990c	1990	07	11.87049	00	01	17.80	+29	41	00.5		540
/1990c	1990	07	11.88056	00	01	17.40	+29	40	59.2		540
/1990c	1990	07	11.89097	00	01	16.92	+29	40	59.4		540
/1990c	1990	07	11.90139	00	01	16.50	+29	40	59.3		540
/1990c	1990	07	12.91389	00	00	28.32	+29	40	30.1		046
/1990c	1990	07	12.91557	00	00	28.31	+29	40	31.2		046
/1990c	1990	07	14.92914	23	58	40.11	+29	38	34.4		046
/1990c	1990	07	14.93123	23	58	39.93	+29	38	34.4		046
/1990c	1990	07	15.88021	23	57	42.50	+29	37	09.0		540
/1990c	1990	07	15.88437	23	57	42.23	+29	37	08.4		540
/1990c	1990	07	15.88854	23	57	42.00	+29	37	07.5		540
/1990c	1990	07	15.89689	23	57	41.48	+29	37	06.3		540
/1990c	1990	07	15.90521	23	57	40.92	+29	37	06.5		540
/1990c	1990	07	15.94581	23	57	38.35	+29	37	00.7		046
/1990c	1990	07	15.94789	23	57	38.29	+29	37	03.1		046
/1990c	1990	07	17.66129	23	55	42.29	+29	33	32.8	7.7T	896
/1990c	1990	07	18.31396	23	54	54.24	+29	31	47.4		657
/1990c	1990	07	18.33317	23	54	52.36	+29	31	47.8		801
/1990c	1990	07	18.33670	23	54	52.08	+29	31	47.1		801
/1990c	1990	07	18.33936	23	54	51.87	+29	31	46.8		801
/1990c	1990	07	19.41014	23	53	27.39	+29	28	28.8		657
/1990c	1990	07	19.60219	23	53	11.51	+29	27	51.2		372
/1990c	1990	07	19.76013	23	52	57.91	+29	27	20.9		896
/1990c	1990	07	20.42576	23	52	00.51	+29	24	48.6		657
/1990c	1990	07	20.57396	23	51	47.43	+29	24	12.4		402
/1990c	1990	07	20.61910	23	51	43.43	+29	24	02.3	6.5T	394
/1990c	1990	07	20.64618	23	51	40.86	+29	23	55.9		394
/1990c	1990	07	20.77373	23	51	28.94	+29	23	28.3		372
/1990c	1990	07	20.99407	23	51	08.92	+29	22	29.8		046
/1990c	1990	07	20.99546	23	51	08.84	+29	22	29.3		046

/1990c	1990	07	22.31166	23	49	00.93	+29	16	22.0		801
/1990c	1990	07	22.31468	23	49	00.62	+29	16	21.1		801
/1990c	1990	07	22.33524	23	48	58.75	+29	16	11.8		657
/1990c	1990	07	22.95240	23	47	54.47	+29	12	54.9		046
/1990c	1990	07	22.95378	23	47	54.30	+29	12	53.4		046
/1990c	1990	07	23.56632	23	46	47.66	+29	09	20.8		391
/1990c	1990	07	23.92361	23	46	07.26	+29	07	05.8		046
/1990c	1990	07	23.92523	23	46	07.05	+29	07	05.2		046
/1990c	1990	07	24.86979	23	44	15.44	+29	00	40.8		540
/1990c	1990	07	24.88021	23	44	14.17	+29	00	36.9		540
/1990c	1990	07	24.89063	23	44	12.92	+29	00	33.0		540
/1990c	1990	07	24.90104	23	44	11.66	+29	00	28.7		540
/1990c	1990	07	24.98872	23	44	00.83	+28	59	51.8		046
/1990c	1990	07	24.99010	23	44	00.60	+28	59	50.9		046
/1990c	1990	07	25.93418	23	42	00.49	+28	52	32.3		503
/1990c	1990	07	26.99753	23	39	35.21	+28	43	17.2		046
/1990c	1990	07	26.99904	23	39	34.94	+28	43	15.9		046
/1990c	1990	07	28.27378	23	36	25.61	+28	30	26.5		657
/1990c	1990	07	29.92847	23	31	54.16	+28	10	47.8		540
/1990c	1990	07	29.93542	23	31	52.98	+28	10	40.5		540
/1990c	1990	07	29.94236	23	31	51.71	+28	10	35.4		540
/1990c	1990	07	29.94931	23	31	50.47	+28	10	27.2		540
/1990c	1990	07	31.38635	23	27	27.17	+27	50	08.0		657
/1990c	1990	08	01.71557	23	22	58.73	+27	28	05.5	5.7T	896
/1990c	1990	08	02.06198	23	21	45.08	+27	21	48.1		479
/1990c	1990	08	02.08194	23	21	40.09	+27	21	25.5		479
/1990c	1990	08	02.09792	23	21	36.44	+27	21	04.7		479
/1990c	1990	08	02.10764	23	21	34.42	+27	20	55.4		479
/1990c	1990	08	02.67437	23	19	29.34	+27	10	01.6	6 T	372
/1990c	1990	08	03.72046	23	15	23.89	+26	47	57.7	5.5T	896
/1990c	1990	08	04.69792	23	11	17.97	+26	24	54.3		392
/1990c	1990	08	04.70174	23	11	16.80	+26	24	47.5		392
/1990c	1990	08	08.84688	22	50	23.63	+24	13	29.5		479
/1990c	1990	08	08.86649	22	50	17.01	+24	12	42.9		479
/1990c	1990	08	08.90350	22	50	03.94	+24	11	16.8		479
/1990c	1990	08	12.27031	22	27	57.70	+21	28	35.0		657
/1990c	1990	08	14.56111	22	09	44.87	+18	57	48.8	5.5T	871
/1990c	1990	08	14.58681	22	09	32.06	+18	55	55.9		871
/1990c	1990	08	15.57674	22	00	45.96	+17	38	12.3		871
/1990c	1990	08	15.61562	22	00	24.50	+17	34	59.9		871
/1990c	1990	08	18.46055	21	32	02.72	+13	02	26.5		413
/1990c	1990	08	20.64271	21	07	09.50	+08	40	25.0		402
/1990c	1990	08	20.64965	21	07	04.46	+08	39	30.8		402

Periodic Comet Peters-Hartley

/1990d	1990	06	11.47326	12	29	27.09	-31	44	24.4	15 T	372
/1990d	1990	06	27.54757	13	11	46.40	-25	04	39.7		372

Comet McNaught-Hughes (1990g)

/1990g	1990	06	19.55397	17	38	50.97	-65	32	04.5	17 T	372
/1990g	1990	06	20.61933	17	33	45.05	-65	23	29.6		372
/1990g	1990	08	14.50218	15	13	07.26	-46	35	17.7		413
/1990g	1990	08	18.39957	15	10	59.98	-45	12	48.3		413
/1990g	1990	08	18.41552	15	10	59.52	-45	12	28.0		413

Periodic Comet Johnson

/1990h	1990	06	17.63719	19	06	00.14	-15	17	07.6	18 T	373
/1990h	1990	07	25.56910	18	39	23.78	-19	49	48.6	18 T	373
/1990h	1990	07	25.57951	18	39	23.07	-19	49	53.7	18 T	373

Comet Tsuchiya-Kiuchi (1990i)

/1990i	1990	07	17.48438	12	22	42.41	+29	36	42.3	9.4T	4 896
/1990i	1990	07	18.19983	12	21	12.68	+29	19	21.8		675
/1990i	1990	07	19.21667	12	19	08.71	+28	54	49.7		675
/1990i	1990	07	19.47882	12	18	37.47	+28	48	33.8		372
/1990i	1990	07	19.48073	12	18	37.19	+28	48	28.5		372
/1990i	1990	07	19.49618	12	18	35.36	+28	48	06.6		372
/1990i	1990	07	19.51354	12	18	33.26	+28	47	41.2		372
/1990i	1990	07	19.52257	12	18	32.44	+28	47	26.9	9 T	364
/1990i	1990	07	20.48507	12	16	40.02	+28	24	27.4	9.0T	400
/1990i	1990	07	20.49826	12	16	38.73	+28	24	10.9		400
/1990i	1990	07	20.52969	12	16	34.76	+28	23	17.7		402
/1990i	1990	07	20.53738	12	16	33.57	+28	23	10.8		402
/1990i	1990	07	23.18385	12	11	44.58	+27	20	49.5		675
/1990i	1990	07	23.50764	12	11	10.93	+27	13	16.2		391
/1990i	1990	07	23.51736	12	11	09.98	+27	13	03.6		391
/1990i	1990	07	24.48455	12	09	30.92	+26	50	35.6	9 T	400
/1990i	1990	07	24.48958	12	09	30.37	+26	50	27.8		400
/1990i	1990	07	25.49861	12	07	51.2	+26	27	14	10 T	372
/1990i	1990	07	25.50359	12	07	50.8	+26	27	07		372
/1990i	1990	07	25.92457	12	07	10.15	+26	17	29.2	9.5T	503
/1990i	1990	07	28.26684	12	03	34.22	+25	24	27.4		657
/1990i	1990	07	30.51354	12	00	20.9	+24	34	40		372
/1990i	1990	07	30.92030	11	59	47.82	+24	25	40.1		494

Note 1: near edge of plate. 2: substantial coma and tail 1′.5 long to west-southwest. 3: dark plate. 4: weak solution.

* * * * *

OBSERVATIONS OF MINOR PLANETS.

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

A earlier approximate position inferior
a sense of motion ambiguous
B black or dark plate
b bad seeing
C correction to earlier position
c crowded star field
D declination uncertain
d diffuse image
E at or near edge of plate
F faint image
f involved with emulsion or plate flaw
G poor guiding
g no guiding
I involved with star
i inkdot measured
M measurement difficult
N near edge of plate, measurement uncertain
O image out of focus
o plate measured in one direction only
P position uncertain
p poor image
R right ascension uncertain

r poor distribution of reference stars
S poor sky
s streaked image
T time uncertain
t trailed image
U uncertain image
u unconfirmed image
V very faint image
W weak image
w weak solution

Object		Date	UT	R. A. (1950)	Decl.	Mag.	N	Obs.
033 Tautenburg								
S. Marx, Karl Schwarzschild Observatorium, DDR-6901 Tautenburg, Democratic Republic of Germany								
Observer F. Borngen								
1.3-m Schmidt telescope								
SAOC								
1932 CY		1976 03	01.88576	08 24 03.50	+19 41 57.9	17.3	N	033
1932 CY		1976 03	02.85417	08 23 37.83	+19 43 40.1			033
1932 CY		1976 03	03.88611	08 23 11.78	+19 45 25.8			033
1932 CY		1976 03	03.93819	08 23 10.74	+19 45 29.2			033
1976 DZ	*	1976 02	27.91528	08 14 39.44	+20 21 59.0			033
1976 DZ		1976 03	01.88576	08 13 09.39	+20 18 39.1	17.9		033
1976 DZ		1976 03	02.85417	08 12 44.29	+20 17 22.6			033
1976 DZ		1976 03	03.88611	08 12 19.61	+20 15 55.4			033
1976 DZ		1976 03	03.93819	08 12 18.71	+20 15 49.2			033
1976 DA1	*	1976 02	27.91528	08 15 15.02	+20 20 22.1		V	033
1976 DA1		1976 03	01.88576	08 13 58.79	+20 32 32.4	18.8		033
1976 DA1		1976 03	02.85417	08 13 38.15	+20 36 11.4			033
1976 DA1		1976 03	03.88611	08 13 18.18	+20 39 58.7			033
1976 DA1		1976 03	03.93819	08 13 17.37	+20 40 06.7			033
1976 DB1	*	1976 02	27.91528	08 15 42.15	+20 53 37.0			033
1976 DB1		1976 03	01.87361	08 13 34.10	+20 19 42.6	17.8		033
1976 DB1		1976 03	01.89792	08 13 33.30	+20 19 31.3			033
1976 DB1		1976 03	02.84375	08 12 57.82	+20 08 39.9			033
1976 DB1		1976 03	02.86458	08 12 57.12	+20 08 28.3			033
1976 DB1		1976 03	03.88611	08 12 21.63	+19 56 53.3			033
1976 DB1		1976 03	03.93819	08 12 20.17	+19 56 19.6			033
1976 DC1	*	1976 02	27.91528	08 17 49.74	+21 02 09.0		V	033
1976 DC1		1976 03	01.88576	08 15 59.47	+20 57 33.0	18.7		033
1976 DC1		1976 03	02.85417	08 15 27.44	+20 55 52.0		V	033
1976 DC1		1976 03	03.88611	08 14 54.84	+20 53 59.6			033
1976 DC1		1976 03	03.93819	08 14 53.35	+20 53 52.0			033
1976 DD1	*	1976 02	27.91528	08 18 51.98	+20 41 05.0			033
1976 DD1		1976 03	01.88576	08 17 09.72	+20 49 59.8	18.6		033
1976 DD1		1976 03	02.85417	08 16 39.79	+20 52 39.4			033
1976 DD1		1976 03	03.88611	08 16 09.72	+20 55 22.5			033
1976 DD1		1976 03	03.93819	08 16 09.02	+20 55 25.9			033
1976 DE1	*	1976 02	27.91528	08 20 32.73	+20 59 39.7			033
1976 DE1		1976 03	01.88576	08 19 25.81	+20 59 48.7	19.2		033
1976 DE1		1976 03	02.85417	08 19 05.31	+20 59 47.0		V	033
1976 DE1		1976 03	03.88611	08 18 44.29	+20 59 42.0			033
1976 DE1		1976 03	03.93819	08 18 43.48	+20 59 42.0			033
1976 DF1	*	1976 02	27.91528	08 22 15.86	+21 51 41.7			033
1976 DF1		1976 03	01.88576	08 20 42.03	+21 47 47.6	19.3		033
1976 DF1		1976 03	02.85417	08 20 15.97	+21 46 19.1			033
1976 DF1		1976 03	03.88611	08 19 50.01	+21 44 36.3			033

1976	DF1		1976	03	03.93819	08	19	49.45	+21	44	33.0		033
1976	DG1	*	1976	02	27.91528	08	22	16.98	+21	14	57.9		033
1976	DG1		1976	03	01.88576	08	20	52.76	+21	17	29.4	18.5	033
1976	DG1		1976	03	02.85417	08	20	28.22	+21	18	06.8		033
1976	DG1		1976	03	03.88611	08	20	03.63	+21	18	42.7		033
1976	DG1		1976	03	03.93819	08	20	02.57	+21	18	42.5		033
1976	DH1	*	1976	02	27.91528	08	22	32.12	+21	13	23.1		033
1976	DH1		1976	03	01.88576	08	21	05.06	+21	24	18.4	17.2	033
1976	DH1		1976	03	02.85417	08	20	40.62	+21	27	33.6		033
1976	DH1		1976	03	03.88611	08	20	16.57	+21	30	53.3		033
1976	DH1		1976	03	03.93819	08	20	15.59	+21	31	00.6		033
1976	DJ1	*	1976	02	27.91528	08	23	24.08	+21	48	06.7		033
1976	DJ1		1976	03	01.88576	08	22	06.80	+21	54	16.6	18.1	033
1976	DJ1		1976	03	02.85417	08	21	43.47	+21	56	08.5		033
1976	DJ1		1976	03	03.88611	08	21	19.53	+21	58	04.0		033
1976	DJ1		1976	03	03.93819	08	21	18.55	+21	58	07.4		033
1976	EQ	*	1976	03	01.87361	08	23	44.47	+19	37	00.2	16.2 N	033
1976	EQ		1976	03	01.89792	08	23	44.22	+19	37	36.2	N	033
1976	EQ		1976	03	02.84375	08	23	49.75	+20	01	52.4		033
1976	EQ		1976	03	02.86458	08	23	49.83	+20	02	25.1		033
1976	EQ		1976	03	02.86736	08	23	49.77	+20	02	28.6		033
1976	EQ		1976	03	02.88819	08	23	49.88	+20	02	55.6		033
1976	EQ		1976	03	03.88611	08	23	57.87	+20	28	03.1		033
1976	EQ		1976	03	03.93819	08	23	58.35	+20	29	16.0		033
1976	ER	*	1976	03	01.88576	08	10	54.97	+20	54	58.9	18.1	033
1976	ER		1976	03	02.85417	08	10	27.29	+20	54	24.8		033
1976	ES	*	1976	03	01.88576	08	15	01.01	+20	10	02.5	18.3	033
1976	ES		1976	03	02.85417	08	14	28.69	+20	08	29.8	I	033
1976	ES		1976	03	03.88611	08	13	56.24	+20	06	45.3		033
1976	ES		1976	03	03.93819	08	13	55.03	+20	06	38.7		033
1976	ET	*	1976	03	01.88576	08	15	20.41	+19	39	54.3	18.0	033
1976	ET		1976	03	02.85417	08	14	54.37	+19	39	42.3		033
1976	EU	*	1976	03	01.88576	08	19	09.87	+20	14	24.5	18.9	033
1976	EU		1976	03	02.85417	08	18	40.04	+20	19	29.0	V	033
1976	EU		1976	03	03.88611	08	18	09.84	+20	24	42.6	V	033
1976	EU		1976	03	03.93819	08	18	08.39	+20	24	59.1	V	033
1976	EV	*	1976	03	01.88576	08	23	46.65	+21	12	34.7	18.6	033
1976	EV		1976	03	02.85417	08	23	19.27	+21	14	25.7	V	033
1976	EV		1976	03	03.88611	08	22	51.12	+21	16	18.8		033
1976	EV		1976	03	03.93819	08	22	50.17	+21	16	22.3		033
1976	EW	*	1976	03	01.88576	08	23	51.76	+19	45	49.2	17.4	033
1976	EW		1976	03	02.85417	08	23	30.23	+19	50	42.3		033
1976	EW		1976	03	03.88611	08	23	09.46	+19	55	45.7		033
1976	EW		1976	03	03.93819	08	23	08.65	+19	55	57.2		033
1976	EX	*	1976	03	01.88576	08	24	16.02	+22	12	13.3	18.3	033
1976	EX		1976	03	02.85417	08	23	49.72	+22	14	08.0		033
1976	EX		1976	03	03.88611	08	23	23.34	+22	16	03.2		033
1976	EX		1976	03	03.93819	08	23	22.28	+22	16	05.7		033
1976	EY	*	1976	03	01.88576	08	24	18.51	+22	49	22.3	17.9 N	033
1976	EY		1976	03	02.85417	08	23	57.21	+22	48	48.7	N	033
1976	EY		1976	03	03.88611	08	23	35.93	+22	48	09.5		033
1976	EY		1976	03	03.93819	08	23	35.17	+22	48	06.2		033
1976	EZ	*	1976	03	01.88576	08	24	20.54	+22	12	58.8	18.2	033
1976	EZ		1976	03	02.85417	08	23	49.95	+22	12	53.5		033
1976	EZ		1976	03	03.88611	08	23	18.94	+22	12	41.7		033
1976	EZ		1976	03	03.93819	08	23	17.93	+22	12	38.8		033
1976	EA1	*	1976	03	02.85417	08	18	38.52	+19	41	02.0	18.2	033
1976	EA1		1976	03	03.88611	08	18	17.13	+19	48	36.0		033
1976	EA1		1976	03	03.93819	08	18	16.36	+19	48	52.8	I	033

222	1976	02	27.91528	08	16	13.38	+22	04	26.4	033
222	1976	03	01.88576	08	14	45.03	+22	08	32.2	16.1 033
222	1976	03	02.85417	08	14	18.63	+22	09	42.7	033
222	1976	03	03.88611	08	13	51.55	+22	10	54.6	033
222	1976	03	03.93819	08	13	50.39	+22	10	55.9	033
767	1976	02	27.91528	08	17	13.89	+22	14	49.4	033
767	1976	03	01.88576	08	15	48.38	+22	18	39.3	16.6 033
767	1976	03	02.85417	08	15	22.79	+22	19	44.6	033
767	1976	03	03.88611	08	14	56.55	+22	20	51.7	033
767	1976	03	03.93819	08	14	55.40	+22	20	52.6	033
1163	1976	02	27.91528	08	18	33.03	+20	31	17.4	033
1163	1976	03	01.88576	08	17	13.46	+20	40	44.6	16.9 033
1163	1976	03	02.85417	08	16	49.71	+20	43	39.4	033
1163	1976	03	03.88611	08	16	25.51	+20	46	42.0	033
1163	1976	03	03.93819	08	16	24.52	+20	46	48.2	033
4150	1976	02	27.91528	08	17	37.34	+20	44	18.3	033
4150	1976	03	01.88576	08	15	53.09	+20	52	09.2	17.0 033
4150	1976	03	02.85417	08	15	22.38	+20	54	29.3	033
4150	1976	03	03.88611	08	14	51.34	+20	56	52.6	033
4150	1976	03	03.93819	08	14	50.16	+20	56	57.0	033
4178	1976	02	27.91528	08	17	28.29	+21	11	21.4	033
4178	1976	03	01.88576	08	16	04.50	+21	14	39.0	17.7 033
4178	1976	03	02.85417	08	15	39.90	+21	15	33.3	033
4178	1976	03	03.88611	08	15	15.05	+21	16	26.5	033
4178	1976	03	03.93819	08	15	14.01	+21	16	26.9	033
4372	1976	02	27.91528	08	23	45.85	+21	16	48.8	033
4372	1976	03	01.88576	08	22	18.65	+21	19	40.7	17.8 033
4372	1976	03	02.85417	08	21	52.76	+21	20	26.0	033
4372	1976	03	03.88611	08	21	26.61	+21	21	10.1	033
4372	1976	03	03.93819	08	21	25.82	+21	21	10.3	033
4481	1976	02	27.91528	08	14	20.01	+21	28	58.7	033
4481	1976	03	01.88576	08	12	44.25	+21	33	31.3	18.0 033
4481	1976	03	02.85417	08	12	16.23	+21	34	47.9	033
4481	1976	03	03.88611	08	11	48.05	+21	36	04.6	033
4481	1976	03	03.93819	08	11	46.95	+21	36	05.2	033

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

1982 SO1	1990	07	20.96456	20	23	44.76	+02	31	07.7	046
1982 SO1	1990	07	20.97741	20	23	44.22	+02	31	04.4	046
1982 SO1	1990	07	22.88885	20	22	22.36	+02	21	06.8	046
1982 SO1	1990	07	22.90309	20	22	21.75	+02	21	01.7	046
85	1990	07	20.96456	20	29	39.56	+03	10	19.9	046
85	1990	07	20.97741	20	29	38.98	+03	10	18.8	046
85	1990	07	22.88885	20	28	14.43	+03	06	55.4	046
85	1990	07	22.90309	20	28	13.73	+03	06	54.2	046
466	1990	07	24.89028	20	29	03.94	-11	57	03.8	046
466	1990	07	24.90440	20	29	03.25	-11	57	03.1	046
1181	1990	07	20.92984	20	21	17.09	-13	31	38.2	046
1181	1990	07	20.94442	20	21	16.26	-13	31	39.5	046
1181	1990	07	22.92288	20	19	26.67	-13	34	19.9	046
1181	1990	07	22.93712	20	19	25.92	-13	34	21.2	046
1652	1990	07	15.89095	19	58	51.90	-15	55	07.3	046
1652	1990	07	15.90519	19	58	51.06	-15	55	08.3	046
1736	1990	07	24.92581	20	53	16.75	-12	56	12.3	046
1736	1990	07	24.93993	20	53	15.76	-12	56	18.4	046

4081	1990 07 20.92984	20 16 14.73	-17 14 04.1							046
4081	1990 07 20.94442	20 16 13.93	-17 14 06.5							046
4081	1990 07 22.92288	20 14 18.88	-17 18 36.5							046
4081	1990 07 22.93712	20 14 18.04	-17 18 34.2							046
4201	1990 07 18.93750	18 57 52.84	-11 12 48.3							046
4201	1990 07 18.95046	18 57 52.24	-11 12 51.0							046
4509	1990 07 18.90109	18 27 20.02	-05 06 46.6							046
4509	1990 07 18.91521	18 27 19.38	-05 06 49.4							046

076 Hartbeespoort
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observer T. Gehrels
Measurer B. A. Skiff

1957 HX	1957 05 05.86389	14 59 39.10	-18 59 49.8					16.7		076
1957 HX	1957 05 05.92749	14 59 35.49	-18 59 33.0							076
1957 JW	1957 05 05.86389	14 57 56.31	-16 59 49.3						A	076
1957 JY	1957 05 05.86389	15 06 48.52	-14 34 16.0						A	076
1957 JY	1957 05 05.92749	15 06 45.47	-14 34 06.7							076
1957 KL	1957 05 28.03189	16 24 09.37	-17 50 07.2							076
7	1957 05 27.92940	16 14 48.28	-23 17 00.4					10.0	D	076
7	1957 05 28.03189	16 14 41.65	-23 16 37.7							076
26	1957 05 05.86389	15 12 36.11	-18 10 37.3					11.0		076
26	1957 05 05.92749	15 12 32.50	-18 10 30.9							076
38	1957 05 29.02124	16 30 10.56	-29 30 56.3					13.6	A	076
61	1957 05 28.71117	14 26 24.39	-42 03 39.3					13.1		076
61	1957 05 28.81696	14 26 18.75	-42 03 03.6							076
78	1957 05 28.97025	16 54 49.28	-35 48 49.4					13.0		076
78	1957 05 29.07263	16 54 42.28	-35 48 38.9							076
106	1957 05 27.92940	16 20 24.96	-21 59 41.5					13.3		076
106	1957 05 28.03189	16 20 19.79	-21 59 34.9							076
111	1957 05 28.97025	16 57 19.30	-28 52 18.8					11.6	c	076
111	1957 05 29.07263	16 57 12.29	-28 52 05.0						c	076
144	1957 05 27.92940	15 53 55.85	-18 26 08.0					13.0	p	076
144	1957 05 28.03189	15 53 49.55	-18 26 00.4						I	076
151	1957 05 28.97025	16 39 19.82	-27 44 33.1					13.2	p	076
151	1957 05 29.07263	16 39 13.19	-27 44 36.7						p	076
167	1957 05 05.86389	15 23 57.36	-15 27 29.4					13.9		076
167	1957 05 05.92749	15 23 54.45	-15 27 14.4							076
175	1957 05 05.86389	14 45 07.07	-17 47 09.1					13.7		076
175	1957 05 05.92749	14 45 03.98	-17 46 58.1							076
240	1957 05 27.98079	16 46 24.60	-20 12 02.3					14.2		076
240	1957 05 28.08368	16 46 18.61	-20 11 51.7							076
244	1957 05 27.92940	16 06 50.70	-17 55 44.4							076
297	1957 05 28.91904	16 12 24.93	-32 28 50.3					13.8		076
297	1957 05 29.02124	16 12 19.06	-32 28 37.5							076
333	1957 05 05.86389	15 10 21.00	-22 16 57.9					14.9	p	076
333	1957 05 05.92749	15 10 17.93	-22 16 44.2						p	076
333	1957 05 05.98218	15 10 15.12	-22 16 36.4					14.9		076
333	1957 05 06.03872	15 10 12.73	-22 16 22.8							076
359	1957 05 28.91904	16 03 33.48	-30 14 00.3					13.7		076
359	1957 05 29.02124	16 03 26.97	-30 13 52.3							076
361	1957 05 05.98218	15 15 09.30	-27 17 10.4					15.5		076
361	1957 05 06.03872	15 15 07.12	-27 17 08.6							076
380	1957 05 28.08368	17 12 47.12	-19 21 24.0					13.4		076
383	1957 05 27.92940	16 20 19.46	-19 48 33.7					15.9		076
383	1957 05 28.03189	16 20 14.50	-19 48 25.3							076
385	1957 05 28.76539	15 24 32.55	-40 22 25.1					12.3		076
385	1957 05 28.86748	15 24 26.01	-40 22 04.2							076

401	1957	05	28.97025	16	55	10.69	-27	44	29.3	14.3	R 076
401	1957	05	29.07263	16	55	05.12	-27	44	33.8		076
425	1957	05	05.86389	14	52	53.97	-14	40	02.2	14.5	076
425	1957	05	05.92749	14	52	50.65	-14	39	53.1		076
494	1957	05	05.86389	15	00	25.89	-18	44	42.4	13.1	076
494	1957	05	05.92749	15	00	22.39	-18	44	37.5		076
506	1957	05	28.71117	14	46	41.18	-40	30	48.8	14.1	076
506	1957	05	28.76539	14	46	38.48	-40	30	29.5		076
506	1957	05	28.81696	14	46	35.84	-40	30	10.4		076
506	1957	05	28.86748	14	46	33.35	-40	29	51.8		076
517	1957	05	05.86389	15	22	19.84	-21	38	06.0	14.5	p 076
517	1957	05	05.92749	15	22	16.84	-21	37	52.5		p 076
517	1957	05	05.98218	15	22	14.45	-21	37	43.8	15.4	076
517	1957	05	06.03872	15	22	11.55	-21	37	31.8		076
529	1957	05	05.86389	15	12	19.70	-12	52	04.9	15.7	076
529	1957	05	05.92749	15	12	16.40	-12	51	59.6		076
769	1957	05	05.86389	14	48	44.03	-17	12	19.1	13.5	076
769	1957	05	05.92749	14	48	40.65	-17	12	14.0		076
772	1957	05	27.92940	15	55	33.09	-19	22	12.1	12.9	p 076
772	1957	05	28.03189	15	55	25.74	-19	22	54.6		f 076
775	1957	05	05.98218	14	51	57.56	-29	57	35.8	15.4	076
775	1957	05	06.03872	14	51	54.44	-29	57	21.2		076
775	1957	05	27.71406	14	34	33.76	-28	07	00.4	16.0	076
775	1957	05	27.81921	14	34	29.32	-28	06	26.7		076
926	1957	05	28.97025	16	51	42.48	-33	21	10.4	14.3	c 076
926	1957	05	29.07263	16	51	35.39	-33	21	47.4		076
1103	1957	05	28.97025	17	08	48.16	-32	34	46.5	15.1	076
1103	1957	05	29.07263	17	08	39.74	-32	33	26.2		R 076
1175	1957	05	27.92940	16	06	35.69	-18	02	47.5		076
1175	1957	05	28.03189	16	06	30.87	-18	02	07.9		076
1193	1957	05	28.91904	16	17	52.33	-29	15	18.5	15.8	076
1193	1957	05	29.02124	16	17	44.91	-29	15	48.5		076
1244	1957	05	05.98218	14	51	46.68	-29	20	17.8	13.3	076
1280	1957	05	28.91904	16	10	12.43	-28	00	29.7	15.2	076
1280	1957	05	29.02124	16	10	07.36	-28	00	10.9		D 076
1332	1957	05	05.86389	14	53	21.40	-18	31	58.3	15.3	076
1332	1957	05	05.92749	14	53	18.26	-18	31	47.4		076
1602	1957	05	27.92940	16	13	52.32	-19	57	43.0	13.6	076
1602	1957	05	28.03189	16	13	45.64	-19	57	39.8		076
1624	1957	05	05.86389	15	17	09.75	-15	09	16.9	15.8	076
1624	1957	05	05.92749	15	17	06.93	-15	09	06.5		076
1659	1957	05	28.76539	15	13	21.06	-42	46	34.5	14.8	R 076
1659	1957	05	28.86748	15	13	14.56	-42	46	14.9		076
1670	1957	05	05.86389	15	14	50.22	-15	00	57.6	16.4	076
1670	1957	05	05.92749	15	14	46.97	-15	00	53.5		076
2157	1957	05	05.98218	14	54	59.29	-29	30	06.0	15.7	076
2157	1957	05	06.03872	14	54	55.76	-29	30	04.3		076
2632	1957	05	05.98218	14	51	31.18	-24	07	43.8		076
2632	1957	05	06.03872	14	51	27.71	-24	07	40.9		076
3182	1957	05	05.98218	14	58	57.62	-24	00	29.2		076
3182	1957	05	06.03872	14	58	54.90	-24	00	07.7		076
3548	1957	05	05.86389	15	05	35.72	-18	23	09.9		076
3548	1957	05	05.92749	15	05	33.67	-18	23	04.8		D 076
3860	1957	05	05.98218	15	06	51.53	-28	51	45.5		076
3860	1957	05	06.03872	15	06	48.33	-28	51	31.5		076

095 Crimean Astrophysical Observatory
N. S. Chernykh, Crimean Astrophysical Observatory, P.O. Nauchnyj,
Crimea 334413, U.S.S.R.

Yu. V. Batrakov, Institute for Theoretical Astronomy,
Naberezhnaya Kutuzova 10, Leningrad 191187, U.S.S.R.
Observers L. G. Karachkina, L. V. Zhuravleva

1950	HJ		1989	10	23.92748	02	21	23.04	+19	36	15.5		095
1950	HJ		1989	10	23.94133	02	21	22.62	+19	36	08.9	E	095
1978	OK		1989	11	25.03788	06	04	06.90	+20	53	33.0		095
1978	RK1		1989	09	09.87646	23	27	34.24	-08	00	18.0	16.0V	095
1978	RK1		1989	09	09.88653	23	27	33.81	-08	00	21.1	16.0V	095
1978	RK1		1989	10	05.80830	23	10	10.90	-09	44	31.4	16.0V	095
1978	RK1		1989	10	05.82219	23	10	10.59	-09	44	31.9	16.0V	095
1978	SP6		1989	09	09.87646	23	35	24.93	-04	54	11.7		095
1978	SP6		1989	09	09.88653	23	35	24.69	-04	54	15.2		095
1978	TV8		1989	10	21.84336	01	14	51.38	+07	22	00.6		095
1978	TV8		1989	10	25.85545	01	11	48.11	+07	06	05.6		095
1978	TV8		1989	10	25.86934	01	11	47.52	+07	06	01.2		095
1979	UQ		1989	10	21.84336	01	10	10.90	+11	33	24.4	E	095
1979	UQ		1989	10	25.85545	01	07	05.72	+11	03	30.7	E	095
1979	UQ		1989	10	25.86934	01	07	05.00	+11	03	25.2	E	095
1979	XQ		1989	10	21.84336	01	12	05.32	+06	00	32.6		095
1979	XQ		1989	10	25.85545	01	08	21.36	+05	50	39.9		095
1979	XQ		1989	10	25.86934	01	08	20.69	+05	50	37.8		095
1980	TL13		1989	10	23.84132	01	47	05.43	+20	27	16.2	16.0V	095
1980	TL13		1989	10	23.85521	01	47	04.75	+20	26	50.9	16.0V	095
1980	TL13		1989	10	23.94133	01	47	00.36	+20	25	44.5	16.0V E	095
1980	TL13		1989	11	04.81697	01	37	28.15	+17	46	55.3	15.5V	095
1980	TL13		1989	11	04.83364	01	37	27.57	+17	46	42.9	15.5V	095
1980	TL13		1989	11	04.90667	01	37	24.53	+17	45	22.2	16.0V M	095
1980	TL13		1989	11	04.92385	01	37	23.48	+17	45	19.6	16.0V E	095
1982	RW1		1989	09	09.87646	23	06	27.78	-10	50	28.1	16.5V E	095
1982	RW1		1989	09	09.88653	23	06	27.32	-10	50	29.3	16.5V E	095
1982	UP6		1989	10	23.94133	02	06	54.38	+18	20	07.9		095
1982	UP6		1989	11	04.90667	01	55	51.25	+15	30	40.6		095
1982	UP6		1989	11	04.92385	01	55	50.40	+15	30	13.5		095
1983	RY3		1989	11	04.90667	02	05	43.47	+21	18	14.6		095
1983	RY3		1989	11	04.92385	02	05	42.58	+21	18	14.4		095
1985	TM1		1989	11	20.78192	01	07	34.66	+14	09	53.5	15.5V	095
1985	TM1		1989	11	20.80274	01	07	34.32	+14	09	59.7	15.5V	095
1985	TM1		1989	11	24.74626	01	06	10.26	+14	26	02.5	15.5V	095
1985	VN		1989	10	21.84336	01	15	11.98	+10	43	24.8		095
1985	VN		1989	10	25.85545	01	12	43.30	+09	46	40.3		095
1985	VN		1989	10	25.86934	01	12	42.84	+09	46	27.0		095
1986	UQ		1989	10	21.84336	00	56	04.43	+08	39	03.0	E	095
1988	RT		1989	11	04.83364	01	14	12.83	+16	45	58.7	16.5V M	095
1989	QG		1989	10	05.80830	22	58	01.64	-06	18	23.4	17.0V	095
1989	QG		1989	10	05.82219	22	58	01.35	-06	18	25.7	17.0V	095
1989	RE1		1989	09	09.87646	23	15	31.55	-05	02	48.9	16.0V	095
1989	RE1		1989	09	09.88653	23	15	31.29	-05	02	51.3	16.0V	095
1989	RU4	*	1989	09	09.87646	23	01	55.81	-10	33	03.6	16.0V E	095
1989	RU4		1989	09	09.88653	23	01	55.31	-10	33	08.9	16.0V E	095
1989	RV4	*	1989	09	09.87646	23	08	59.15	-09	35	45.4	16.5V I	095
1989	RV4		1989	09	09.88653	23	08	58.73	-09	35	51.5	16.5V I	095
1989	RW4	*	1989	09	09.87646	23	11	30.11	-08	30	25.9	16.0V	095
1989	RW4		1989	09	09.88653	23	11	29.58	-08	30	29.1	16.0V	095
1989	RX4	*	1989	09	09.87646	23	13	22.34	-05	44	00.1	16.5V	095
1989	RX4		1989	09	09.88653	23	13	22.24	-05	44	01.6	16.5V	095
1989	RY4	*	1989	09	09.87646	23	13	34.52	-09	45	02.2	17.0V I	095
1989	RY4		1989	09	09.88653	23	13	33.81	-09	45	16.2	17.0V I	095
1989	RZ4	*	1989	09	09.87646	23	14	55.23	-08	10	33.1	15.5V	095
1989	RZ4		1989	09	09.88653	23	14	54.87	-08	10	40.5	15.5V	095

1989	RA5	*	1989	09	09.87646	23	16	00.37	-08	47	11.8		16.5V	095
1989	RA5		1989	09	09.88653	23	15	59.80	-08	47	13.5		16.5V	095
1989	RB5	*	1989	09	09.87646	23	25	53.70	-09	08	08.7		16.5V	095
1989	RB5		1989	09	09.88653	23	25	53.31	-09	08	14.2		16.5V	095
1989	RC5	*	1989	09	09.87646	23	27	40.27	-04	34	50.9		17.0V	095
1989	RC5		1989	09	09.88653	23	27	40.21	-04	34	49.5		17.0V	095
1989	RD5	*	1989	09	09.87646	23	28	46.13	-04	51	19.4		17.0V	095
1989	RD5		1989	09	09.88653	23	28	45.83	-04	51	23.8		17.0V	095
1989	RE5	*	1989	09	09.87646	23	29	45.78	-08	56	01.8		16.5V	095
1989	RE5		1989	09	09.88653	23	29	45.65	-08	56	01.7		16.5V	095
1989	RF5	*	1989	09	09.87646	23	34	56.49	-07	34	45.9		16.5V	M 095
1989	RG5	*	1989	09	09.88653	23	05	53.80	-10	28	59.5		16.5V	E 095
1989	RH5	*	1989	09	09.88653	23	19	27.21	-06	54	59.0		16.5V	095
1989	RJ5	*	1989	09	09.88653	23	19	47.28	-09	07	52.1		16.5V	095
1989	RK5	*	1989	09	09.88653	23	39	00.92	-06	36	07.4		16.5V	E 095
1989	SB		1989	10	07.88800	23	50	26.00	+01	18	41.1		15.8V	095
1989	SB		1989	10	21.77043	23	42	59.16	+00	57	32.0		15.8V	095
1989	SH		1989	10	05.89579	01	15	22.76	+19	40	46.1		15.0V	095
1989	SH		1989	10	05.90970	01	15	22.03	+19	40	43.9		15.0V	095
1989	SJ		1989	10	21.84336	00	53	06.28	+09	06	10.6			E 095
1989	SK		1989	10	23.84132	01	44	01.35	+21	59	22.8		16.0V	095
1989	SK		1989	10	23.85521	01	44	00.66	+21	59	20.0		16.0V	095
1989	SK		1989	11	04.81697	01	32	50.13	+21	11	28.9		15.0V	095
1989	SK		1989	11	04.83364	01	32	49.18	+21	11	24.1		15.0V	095
1989	SK		1989	11	06.87362	01	31	07.10	+21	01	38.1		15.5V	095
1989	SK		1989	11	06.89028	01	31	06.36	+21	01	34.3			095
1989	SK		1989	11	20.78192	01	22	33.25	+19	53	28.5		16.0V	E 095
1989	SK		1989	11	20.80274	01	22	32.44	+19	53	28.9		16.0V	E 095
1989	SL		1989	10	23.85521	01	44	37.71	+18	21	37.4		16.0V	095
1989	SX		1989	10	23.92748	02	07	00.10	+14	07	11.8		15.5V	E 095
1989	SX		1989	10	23.94133	02	06	59.15	+14	07	15.8		15.5V	E 095
1989	SX		1989	11	04.90667	01	55	57.08	+14	37	57.4		15.0V	095
1989	SX		1989	11	04.92385	01	55	56.09	+14	37	59.9		15.0V	095
1989	SY		1989	10	23.92748	02	11	01.94	+16	51	48.0		15.5V	095
1989	SY		1989	10	23.94133	02	11	01.30	+16	51	51.4		15.5V	095
1989	SY		1989	11	04.90667	01	56	35.14	+18	01	49.5		15.0V	095
1989	SY		1989	11	04.92385	01	56	33.82	+18	01	54.4		15.0V	095
1989	SC8		1989	10	05.89579	01	18	29.37	+17	07	11.9		16.0V	095
1989	SC8		1989	10	05.90970	01	18	28.66	+17	07	09.5		16.0V	095
1989	SL8		1989	09	09.87646	23	19	56.09	-07	15	33.2		16.0V	095
1989	SL8		1989	09	09.88653	23	19	55.78	-07	15	35.2		16.0V	095
1989	SM8		1989	09	09.87646	23	19	49.99	-07	07	49.4		16.5V	095
1989	SM8		1989	09	09.88653	23	19	49.54	-07	07	50.5		16.5V	095
1989	SO8		1989	09	09.87646	23	24	44.23	-07	58	31.9		16.5V	095
1989	SO8		1989	09	09.88653	23	24	43.68	-07	58	31.7		16.5V	095
1989	TW		1989	10	05.89579	01	20	48.54	+19	01	44.5		16.5V	095
1989	TW		1989	10	05.90970	01	20	48.05	+19	01	38.9		16.5V	095
1989	TH1		1989	10	05.89579	01	43	07.87	+21	36	13.5		15.0V	E 095
1989	TH1		1989	10	05.90970	01	43	07.33	+21	36	16.8		15.0V	E 095
1989	TH1		1989	10	23.84132	01	27	00.90	+22	08	32.0		15.0V	095
1989	TH1		1989	10	23.85521	01	26	59.87	+22	08	33.7		15.0V	095
1989	TH1		1989	11	04.81697	01	17	01.89	+21	54	48.8		15.0V	095
1989	TH1		1989	11	04.83364	01	17	01.22	+21	54	47.1		15.0V	095
1989	TH1		1989	11	06.87362	01	15	38.46	+21	50	47.5		15.0V	095
1989	TH1		1989	11	06.89028	01	15	37.69	+21	50	45.0			095
1989	TP1		1989	10	21.84336	01	26	57.78	+08	38	01.0			E 095
1989	TP1		1989	10	25.85545	01	24	01.52	+08	19	26.0			095
1989	TP1		1989	10	25.86934	01	24	00.98	+08	19	18.7			095

1989	TU1		1989	11	04.90667	02	06	59.41	+22	18	14.4	15.5V	E 095
1989	TU1		1989	11	04.92385	02	06	58.56	+22	18	05.2	15.5V	E 095
1989	TB11		1989	10	21.84336	00	54	08.10	+11	12	35.0		E 095
1989	TT17	*	1989	10	05.82219	23	02	30.95	-12	44	22.9	17.0V	095
1989	TU17	*	1989	10	05.89579	01	13	06.35	+24	42	53.3	15.5V	E 095
1989	TU17		1989	10	05.90970	01	13	05.81	+24	42	48.0	15.5V	E 095
1989	TV17	*	1989	10	05.89579	01	13	50.25	+20	50	00.2	16.0V	095
1989	TV17		1989	10	05.90970	01	13	49.22	+20	50	05.2	16.0V	095
1989	TW17	*	1989	10	05.89579	01	36	35.65	+22	23	17.0	16.5V	M 095
1989	TW17		1989	10	05.90970	01	36	35.43	+22	23	29.0	16.5V	M 095
1989	TX17	*	1989	10	05.89579	01	44	42.09	+21	13	00.1	16.5V	E 095
1989	TX17		1989	10	05.90970	01	44	41.16	+21	13	06.5	16.5V	E 095
1989	TY17	*	1989	10	07.88800	00	09	03.64	-00	46	50.7		095
1989	TY17		1989	10	21.77043	00	02	06.95	-02	27	01.8	16.5V	E 095
1989	TZ17	*	1989	10	07.88800	23	52	06.08	+00	07	38.5	16.5V	M 095
1989	UF		1989	10	21.84336	01	09	57.52	+08	02	07.9		095
1989	UF		1989	10	25.85545	01	06	59.74	+07	20	46.5		095
1989	UF		1989	10	25.86934	01	06	59.16	+07	20	41.0		095
1989	UN		1989	10	23.92748	02	09	43.83	+15	44	48.1	15.5V	095
1989	UN		1989	10	23.94133	02	09	42.76	+15	44	44.2	15.5V	095
1989	UN		1989	11	04.90667	01	56	58.23	+15	11	09.7	16.0V	095
1989	UN		1989	11	04.92385	01	56	57.10	+15	11	05.6	16.0V	095
1989	UT		1989	11	04.90667	01	53	15.23	+12	53	53.7	15.5V	E 095
1989	UT		1989	11	04.92385	01	53	14.18	+12	53	52.5	15.5V	E 095
1989	UA1		1989	10	21.84336	01	08	29.86	+11	41	07.1		E 095
1989	UP1		1989	11	20.87447	02	39	52.88	+07	55	20.7	16.0V	E 095
1989	UU2		1989	10	23.92748	01	58	01.69	+14	46	33.8	16.0	095
1989	UU2		1989	10	23.94133	01	58	01.02	+14	46	27.4	16.0	095
1989	UB4		1989	10	23.94133	01	56	47.52	+16	13	32.0	16.0V	095
1989	UG8	*	1989	10	21.77043	23	34	33.62	+02	36	00.7	16.5V	095
1989	UG8		1989	10	25.78396	23	30	13.19	+03	19	40.7	16.2V	095
1989	UG8		1989	10	29.76499	23	26	36.99	+04	03	20.9	16.2V	095
1989	UH8	*	1989	10	21.84336	01	12	32.66	+06	27	15.0	16.2V	095
1989	UH8		1989	10	25.85545	01	09	41.27	+06	08	55.6	16.2V	095
1989	UH8		1989	10	25.86934	01	09	40.67	+06	08	50.4	16.2V	095
1989	UJ8	*	1989	10	21.84336	01	21	04.10	+06	55	12.0	16.0V	095
1989	UJ8		1989	10	25.86934	01	18	27.63	+06	17	28.2	16.0V	095
1989	UK8	*	1989	10	25.94089	03	00	28.53	+06	50	58.7	15.5V	095
1989	UK8		1989	11	20.87447	02	39	35.74	+06	19	33.2	15.5V	095
1989	UK8		1989	11	24.81153	02	36	44.02	+06	20	11.7	15.8V	095
1989	UM8		1989	10	30.80208	01	29	44.90	+06	50	08.2		095
1989	UM8		1989	10	30.82293	01	29	43.99	+06	50	01.6		095
1989	VX1	*	1989	11	04.81697	01	33	10.23	+22	38	26.5	16.0V	I 095
1989	VX1		1989	11	04.83364	01	33	09.56	+22	38	15.1	16.0V	I 095
1989	VX1		1989	11	06.89028	01	31	55.27	+22	15	21.5	16.0V	095
1989	VY1	*	1989	11	06.96319	03	57	28.69	+06	03	15.9	15.5V	095
1989	VY1		1989	11	06.97708	03	57	28.02	+06	03	14.2	15.5V	095
1989	VY1		1989	11	24.88513	03	41	44.62	+06	22	56.8	15.5V	095
1989	VZ1	*	1989	11	06.96319	04	05	10.75	+08	43	33.4	15.5V	095
1989	VZ1		1989	11	06.97708	04	05	10.12	+08	43	31.2	15.5V	095
1989	VZ1		1989	11	24.88513	03	48	42.70	+07	49	59.0	15.5V	095
1989	VA2	*	1989	11	06.96319	04	21	56.06	+09	25	03.1	15.2V	095
1989	VA2		1989	11	06.97708	04	21	55.38	+09	25	02.3	15.2V	095
1989	VA2		1989	11	24.88513	04	06	55.68	+09	41	05.6	15.2V	E 095
1989	VB2	*	1989	11	07.04862	05	18	29.42	+15	20	46.4	16.3V	095
1989	VB2		1989	11	24.95735	05	05	26.16	+13	28	12.0	15.8V	095
1989	WE		1989	10	26.01241	04	18	35.54	+10	13	57.1	15.8V	095
1989	WE		1989	11	06.96319	04	12	14.63	+09	17	19.8	15.5V	095
1989	WE		1989	11	06.97708	04	12	14.01	+09	17	16.0	15.5V	095

1989	WE		1989	11	24.88513	03	57	33.60	+08	14	49.2	15.2V	095
1989	WR1		1989	11	24.95735	04	55	05.08	+14	34	15.4	15.8V	095
1989	WM3		1989	11	04.99427	04	23	51.47	+24	50	35.9	15.5V E	095
1989	WM3		1989	11	05.00816	04	23	50.85	+24	50	41.0	15.5V E	095
1989	WZ4	*	1989	11	20.87447	02	09	01.90	+00	42	38.7	16.5V N	095
1989	WZ4		1989	11	24.81153	02	06	44.82	+01	08	58.4	16.5V E	095
1989	WA5	*	1989	11	20.87447	02	17	37.60	+04	01	01.6	16.0V	095
1989	WA5		1989	11	24.81153	02	14	18.16	+04	34	50.8	16.0V	095
1989	WB5	*	1989	11	20.87447	02	22	17.73	+02	19	42.7	15.5V	095
1989	WB5		1989	11	24.81153	02	19	31.83	+02	33	00.1	15.8V	095
1989	XC1		1989	10	25.94089	02	56	27.86	+02	58	22.0	15.0V	095
1989	XC1		1989	11	20.87447	02	33	35.73	+02	24	22.0	15.0V	095
1989	XC1		1989	11	24.81153	02	30	41.34	+02	29	21.8	15.0V	095
1			1989	11	25.03788	06	13	06.66	+23	59	41.7	E	095
5			1989	09	09.87646	23	22	20.04	-08	00	23.7		095
5			1989	09	09.88653	23	22	19.50	-08	00	26.7		095
5			1989	10	05.80830	23	02	19.41	-10	31	32.0		095
5			1989	10	05.82219	23	02	18.84	-10	31	36.6		095
11			1989	09	09.87646	23	31	25.89	-09	21	55.6		095
11			1989	09	09.88653	23	31	25.42	-09	22	00.7		095
11			1989	10	05.80830	23	11	53.79	-11	51	01.9		095
11			1989	10	05.82219	23	11	53.30	-11	51	03.7		095
21			1989	11	04.99427	04	53	54.61	+20	58	53.1	E	095
21			1989	11	05.00816	04	53	53.91	+20	58	52.7	E	095
24			1989	10	07.88800	00	13	16.68	+00	52	23.6		095
24			1989	10	21.77043	00	04	19.03	-00	02	50.0	E	095
24			1989	10	25.78396	00	02	09.27	-00	15	55.6	E	095
34			1989	10	21.84336	00	59	38.90	+03	57	08.7		095
34			1989	10	25.85545	00	56	38.60	+03	32	22.1	E	095
34			1989	10	25.86934	00	56	38.14	+03	32	19.1	E	095
45			1989	11	07.04862	05	16	21.53	+13	51	06.3		095
45			1989	11	24.95735	05	03	28.48	+13	13	15.3		095
47			1989	10	07.88800	23	54	04.04	-00	25	00.6		095
47			1989	10	21.77043	23	45	21.58	-00	52	57.7		095
47			1989	10	25.78396	23	43	35.75	-00	56	58.0		095
48			1989	10	23.75109	23	18	49.78	-04	03	10.1		095
48			1989	10	23.76563	23	18	49.76	-04	03	15.8		095
79			1989	10	23.75109	22	54	22.58	-03	48	21.0		095
79			1989	10	23.76563	22	54	22.45	-03	48	23.6		095
90			1989	10	21.84336	01	20	46.54	+05	51	06.0		095
90			1989	10	25.85545	01	17	46.00	+05	35	58.2		095
90			1989	10	25.86934	01	17	45.37	+05	35	54.9		095
98			1989	10	25.78396	23	51	44.85	+06	12	17.8	E	095
100			1989	11	07.04862	05	05	00.16	+15	13	49.6		095
100			1989	11	24.95735	04	52	02.85	+14	50	41.4		095
110			1989	10	05.80830	23	10	18.88	-14	22	42.6	E	095
110			1989	10	05.82219	23	10	18.27	-14	22	44.1	E	095
150			1989	11	25.03788	06	17	52.50	+20	43	04.0		095
168			1989	12	01.00340	06	46	53.90	+17	20	10.5		095
180			1989	11	25.03788	05	51	22.28	+24	35	34.2	E	095
184			1989	10	23.92748	02	25	37.92	+15	58	16.3	E	095
184			1989	10	23.94133	02	25	37.32	+15	58	12.8	E	095
195			1989	11	04.99427	04	48	39.20	+31	00	28.6	E	095
195			1989	11	05.00816	04	48	38.75	+31	00	27.8	E	095
201			1989	10	25.94089	02	30	38.50	+05	58	36.4	E	095
201			1989	11	20.87447	02	10	13.47	+04	07	32.3	E	095
201			1989	11	24.81153	02	08	03.01	+04	00	56.4	E	095
204			1989	12	01.00340	06	31	15.29	+12	50	49.0	E	095
218			1989	10	23.75109	23	22	25.73	-08	38	57.8		095

218	1989	10	23.76563	23	22	25.79	-08	39	05.2		095
225	1989	10	21.84336	01	03	30.88	+04	36	18.1		095
225	1989	10	25.85545	01	01	08.64	+03	55	24.5		095
225	1989	10	25.86934	01	01	08.22	+03	55	16.6		095
227	1989	10	23.84132	01	37	25.04	+22	02	32.4		095
227	1989	10	23.85521	01	37	24.44	+22	02	29.9		095
227	1989	11	04.81697	01	28	15.86	+21	13	47.2		095
227	1989	11	04.83364	01	28	15.08	+21	13	41.5		095
227	1989	11	06.87362	01	26	48.72	+21	04	45.9		095
227	1989	11	06.89028	01	26	48.02	+21	04	42.1		095
227	1989	11	20.78192	01	18	30.08	+20	03	42.4	E	095
227	1989	11	20.80274	01	18	29.23	+20	03	39.0	E	095
233	1989	11	25.03788	06	17	27.90	+15	48	27.0	E	095
236	1989	11	24.88513	04	07	43.94	+10	11	08.8	E	095
258	1989	11	07.04862	05	09	06.36	+09	02	11.5	E	095
260	1989	10	25.94089	03	01	03.56	+09	12	37.3	E	095
260	1989	11	20.87447	02	42	38.36	+07	30	36.8	E	095
260	1989	11	24.81153	02	40	09.32	+07	19	54.9	E	095
263	1989	10	23.92748	02	20	05.03	+14	02	24.6	E	095
263	1989	10	23.94133	02	20	04.48	+14	02	19.7	E	095
263	1989	11	04.90667	02	10	05.81	+13	05	02.0	E	095
269	1989	11	20.87447	02	39	38.94	+07	31	06.2	E	095
269	1989	11	24.81153	02	36	36.32	+07	19	36.1	E	095
280	1989	10	23.92748	02	02	27.00	+17	17	14.2		095
280	1989	10	23.94133	02	02	26.17	+17	17	11.9		095
280	1989	11	04.90667	01	51	33.47	+16	48	57.4		095
280	1989	11	04.92385	01	51	32.52	+16	48	53.4		095
295	1989	11	25.03788	06	18	41.38	+24	29	39.4	E	095
298	1989	10	23.92748	02	03	23.57	+17	28	26.8		095
298	1989	10	23.94133	02	03	22.58	+17	28	24.0		095
298	1989	11	04.90667	01	50	00.35	+16	52	05.6		095
298	1989	11	04.92385	01	49	59.18	+16	52	01.9		095
298	1989	11	24.74626	01	32	50.39	+15	49	37.6	E	095
299	1989	11	04.99427	04	58	20.57	+22	38	38.3		095
299	1989	11	05.00816	04	58	19.98	+22	38	36.6		095
299	1989	11	30.92431	04	35	13.50	+21	36	02.3	E	095
310	1989	11	24.74626	01	18	07.47	+09	30	26.3	E	095
310	1989	11	30.78592	01	16	15.03	+09	12	21.4		095
312	1989	10	27.95346	03	17	42.43	+27	10	13.1	E	095
312	1989	10	27.96031	03	17	41.91	+27	10	16.0	E	095
318	1989	10	23.75109	23	27	53.63	-08	42	11.8	E	095
318	1989	10	23.76563	23	27	53.65	-08	42	18.5	E	095
321	1989	11	24.74626	01	24	19.85	+08	33	45.5	E	095
321	1989	11	30.78592	01	22	27.97	+08	28	24.8		095
331	1989	11	04.99427	04	41	31.61	+27	59	47.2		095
331	1989	11	05.00816	04	41	31.01	+27	59	47.5		095
331	1989	11	30.92431	04	18	37.46	+28	04	52.3		095
348	1989	10	25.94089	02	35	19.68	+02	26	05.1		095
348	1989	11	20.87447	02	14	09.90	+01	53	52.9		095
348	1989	11	24.81153	02	11	33.02	+01	57	17.6		095
352	1989	10	25.78396	00	02	10.72	+05	47	15.6	E	095
358	1989	11	25.03788	06	20	01.90	+17	47	54.6		095
369	1989	10	26.01241	04	12	02.36	+06	55	25.8		095
369	1989	11	06.96319	04	02	42.24	+06	48	51.0		095
369	1989	11	06.97708	04	02	41.51	+06	48	52.3		095
369	1989	11	24.88513	03	45	00.50	+07	06	51.0		095
370	1989	10	27.87782	23	23	34.05	+10	26	21.4		095
370	1989	10	27.89848	23	23	33.76	+10	26	14.8		095
370	1989	10	29.74417	23	23	19.06	+10	16	28.6	E	095

370		1989	10	29.76499	23	23	18.94	+10	16	21.8	E 095
380		1989	11	07.04862	04	57	52.60	+17	50	56.3	E 095
396		1989	10	27.95346	03	16	26.91	+19	42	47.8	095
396		1989	10	27.96031	03	16	26.49	+19	42	44.2	095
410		1989	11	07.04862	05	22	35.28	+16	37	59.6	E 095
410		1989	11	24.95735	05	09	03.28	+16	41	41.6	E 095
419		1989	11	25.03788	05	51	46.79	+20	35	08.5	E 095
514		1989	11	04.99427	04	28	27.38	+24	29	18.4	095
514		1989	11	05.00816	04	28	26.77	+24	29	16.6	095
514		1989	11	30.92431	04	06	53.31	+23	14	25.1	095
526		1989	10	05.80830	22	40	49.25	-09	54	47.6	E 095
526		1989	10	05.82219	22	40	48.92	-09	54	51.1	E 095
545		1989	10	05.89579	01	32	07.90	+23	03	23.7	095
545		1989	10	05.90970	01	32	07.38	+23	03	22.4	095
545		1989	10	23.84132	01	16	35.90	+22	17	43.0	E 095
545		1989	10	23.85521	01	16	34.88	+22	17	41.1	E 095
545		1989	11	04.81697	01	07	18.56	+21	29	15.5	E 095
545		1989	11	04.83364	01	07	17.93	+21	29	12.1	E 095
545		1989	11	06.87362	01	05	55.57	+21	20	20.9	095
545		1989	11	06.89028	01	05	54.87	+21	20	14.4	095
545		1989	11	20.78192	00	58	46.08	+20	21	24.6	E 095
545		1989	11	20.80274	00	58	45.46	+20	21	19.8	E 095
568		1989	11	04.99427	04	57	50.13	+26	18	02.4	095
568		1989	11	05.00816	04	57	49.65	+26	17	56.4	095
568		1989	11	30.92431	04	37	02.84	+21	57	52.7	E 095
570		1989	11	25.03788	05	51	09.25	+22	01	39.3	E 095
573		1989	10	05.89579	01	30	08.46	+20	02	35.8	095
573		1989	10	05.90970	01	30	08.00	+20	02	35.6	095
573		1989	10	23.84132	01	14	03.18	+19	30	18.7	095
573		1989	10	23.85521	01	14	02.24	+19	30	13.5	E 095
573		1989	11	04.81697	01	04	26.47	+18	51	33.5	E 095
573		1989	11	04.83364	01	04	25.74	+18	51	27.5	E 095
573		1989	11	06.87362	01	03	02.17	+18	44	24.2	095
573		1989	11	06.89028	01	03	01.30	+18	44	19.3	095
573		1989	11	20.78192	00	56	05.28	+17	59	17.9	095
573		1989	11	20.80274	00	56	04.80	+17	59	12.5	095
573		1989	11	24.74626	00	55	00.60	+17	48	36.6	E 095
579		1989	11	25.03788	06	03	36.33	+23	21	00.8	095
627		1989	11	24.88513	03	55	10.86	+10	29	33.2	E 095
636		1989	11	24.74626	01	25	33.82	+09	27	33.2	E 095
636		1989	11	30.78592	01	23	44.65	+09	34	01.2	095
664		1989	11	07.04862	05	26	02.68	+12	38	01.6	E 095
673		1989	11	04.99427	04	49	15.47	+21	15	52.6	E 095
673		1989	11	05.00816	04	49	14.99	+21	15	48.7	E 095
684		1989	10	07.88800	23	46	10.12	+03	16	25.7	095
684		1989	10	21.77043	23	36	32.36	+02	30	04.5	095
684		1989	10	25.78396	23	34	38.03	+02	20	16.6	095
684		1989	10	27.87782	23	33	48.95	+02	15	55.5	E 095
684		1989	10	27.89848	23	33	48.32	+02	15	53.5	E 095
684		1989	10	29.74417	23	33	11.55	+02	12	39.0	095
684		1989	10	29.76499	23	33	11.09	+02	12	36.4	095
723		1989	11	07.04862	04	51	43.08	+15	14	20.7	095
723		1989	11	24.95735	04	38	26.67	+14	27	38.2	095
726		1989	11	06.87362	01	32	15.01	+23	51	39.7	095
726		1989	11	06.89028	01	32	14.59	+23	51	22.4	095
744		1989	09	09.87646	23	06	16.02	-10	12	20.3	E 095
744		1989	09	09.88653	23	06	15.59	-10	12	24.2	095
744		1989	10	05.80830	22	50	30.34	-12	14	20.3	095
744		1989	10	05.82219	22	50	29.73	-12	14	24.8	095

748		1989	11	25.03788	05	51	26.50	+23	42	21.6	E 095
810		1989	09	09.87646	23	21	19.87	-05	53	17.9	095
810		1989	09	09.88653	23	21	19.39	-05	53	23.1	095
810		1989	10	05.80830	23	04	46.67	-08	37	18.7	095
810		1989	10	05.82219	23	04	46.47	-08	37	21.6	095
811		1989	09	09.87646	23	15	38.96	-07	57	01.0	095
811		1989	09	09.88653	23	15	38.54	-07	57	03.1	095
811		1989	10	05.80830	22	58	12.09	-09	59	17.5	095
811		1989	10	05.82219	22	58	11.58	-09	59	19.3	095
826		1989	10	23.92748	02	17	04.06	+16	39	58.5	095
826		1989	10	23.94133	02	17	03.45	+16	39	52.2	095
826		1989	11	04.90667	02	06	44.55	+15	22	25.8	095
826		1989	11	04.92385	02	06	43.75	+15	22	17.8	095
832		1989	10	23.92748	01	57	01.00	+13	08	21.0	E 095
832		1989	10	23.94133	01	57	00.31	+13	08	15.8	E 095
832		1989	11	30.78592	01	33	31.92	+10	38	29.1	095
833		1989	09	09.87646	23	16	55.55	-06	16	42.3	095
833		1989	09	09.88653	23	16	54.91	-06	16	41.5	095
833		1989	10	05.80830	22	56	16.20	-06	42	57.2	095
833		1989	10	05.82219	22	56	15.62	-06	42	54.4	095
834		1989	09	09.87646	23	05	00.41	-03	55	46.6	E 095
834		1989	09	09.88653	23	04	59.88	-03	55	48.7	E 095
834		1989	10	05.80830	22	49	21.71	-06	13	57.5	095
834		1989	10	05.82219	22	49	21.35	-06	14	00.2	095
869		1989	10	25.94089	02	44	31.44	+05	08	04.1	095
869		1989	11	20.87447	02	23	09.00	+03	19	01.8	095
869		1989	11	24.81153	02	20	28.04	+03	09	59.1	095
890		1989	10	25.94089	02	38	40.14	+01	48	46.5	095
890		1989	11	20.87447	02	19	52.84	-00	01	57.9	095
890		1989	11	24.81153	02	17	31.78	-00	10	13.6	095
895		1989	12	01.00340	06	29	36.34	+21	17	54.8	095
903		1989	10	26.01241	04	15	09.96	+05	22	37.6	095
903		1989	11	06.96319	04	08	11.55	+04	25	10.4	095
903		1989	11	06.97708	04	08	10.95	+04	25	08.9	095
903		1989	11	24.88513	03	54	54.92	+03	21	22.7	095
903		1989	11	30.85124	03	50	22.51	+03	09	00.7	095
914		1989	11	30.92431	04	19	17.88	+27	09	21.9	095
974		1989	11	25.03788	06	25	05.63	+22	43	21.6	E 095
988		1989	10	21.77043	23	28	51.52	-04	56	58.8	E 095
988		1989	10	23.75109	23	28	18.49	-04	58	22.0	E 095
988		1989	10	23.76563	23	28	18.21	-04	58	26.0	E 095
994		1989	10	23.84132	01	27	10.02	+22	31	04.2	095
994		1989	10	23.85521	01	27	08.87	+22	31	06.1	095
994		1989	11	04.81697	01	13	55.04	+22	25	09.0	095
994		1989	11	04.83364	01	13	53.97	+22	25	08.7	095
994		1989	11	06.87362	01	11	56.24	+22	22	36.4	095
994		1989	11	06.89028	01	11	55.23	+22	22	34.3	095
997		1989	10	05.89579	01	35	08.53	+22	34	40.4	095
997		1989	10	05.90970	01	35	08.01	+22	34	36.5	095
997		1989	10	23.84132	01	19	49.45	+20	11	14.9	095
997		1989	10	23.85521	01	19	48.72	+20	11	07.5	095
997		1989	11	04.81697	01	11	00.32	+18	19	43.7	095
997		1989	11	04.83364	01	10	59.57	+18	19	34.1	095
997		1989	11	20.80274	01	03	54.85	+16	02	36.7	095
1056		1989	11	25.03788	05	56	15.87	+19	38	35.8	095
1075		1989	10	25.94089	02	59	38.53	+00	37	32.8	095
1075		1989	11	20.87447	02	38	09.04	+00	12	43.2	095
1075		1989	11	24.81153	02	35	19.06	+00	18	23.9	095
1077		1989	10	27.95346	02	53	51.97	+25	39	06.6	E 095

1077	1989	10	27.96031	02	53	51.16	+25	39	08.0	E	095
1088	1989	11	30.78592	01	31	33.46	+07	25	57.2		095
1094	1989	09	09.87646	23	02	41.42	-12	36	15.6	E	095
1094	1989	09	09.88653	23	02	40.89	-12	36	28.0	E	095
1097	1989	11	25.03788	06	09	25.32	+21	45	32.6		095
1107	1989	10	25.94089	02	49	25.94	+05	48	45.3		095
1107	1989	11	20.87447	02	29	22.14	+04	41	35.2		095
1107	1989	11	24.81153	02	26	42.94	+04	37	54.8		095
1109	1989	10	27.95346	02	51	15.45	+20	44	35.8	E	095
1109	1989	10	27.96031	02	51	15.04	+20	44	31.7	E	095
1126	1989	10	23.75109	23	23	24.87	-03	04	29.9		095
1126	1989	10	23.76563	23	23	24.36	-03	04	32.2		095
1130	1989	10	21.84336	01	19	05.54	+09	15	37.8		095
1130	1989	10	25.85545	01	15	41.48	+08	47	01.2		095
1130	1989	10	25.86934	01	15	40.91	+08	46	55.3		095
1142	1989	10	07.88800	23	56	19.92	-02	37	56.2		095
1142	1989	10	21.77043	23	48	29.67	-03	29	05.2		095
1142	1989	10	25.78396	23	46	44.83	-03	39	56.2	E	095
1162	1989	10	07.88800	00	16	49.81	+00	19	33.7	E	095
1173	1989	10	27.95346	03	13	52.84	+25	05	26.9		095
1173	1989	10	27.96031	03	13	52.51	+25	05	26.6		095
1222	1989	11	04.99427	04	34	42.00	+24	21	12.5		095
1222	1989	11	05.00816	04	34	41.18	+24	21	11.3		095
1222	1989	11	30.92431	04	10	27.28	+21	08	36.8		095
1229	1989	10	07.88800	00	00	32.83	+00	28	16.6		095
1229	1989	10	21.77043	23	52	52.88	-00	27	40.6		095
1229	1989	10	25.78396	23	51	17.34	-00	39	49.2		095
1230	1989	11	24.88513	04	07	49.12	+08	02	41.6		095
1235	1989	10	07.88800	00	13	24.92	-02	37	48.6	E	095
1235	1989	10	21.77043	23	47	10.64	+01	43	42.1		095
1235	1989	10	25.78396	23	41	12.74	+02	59	12.4		095
1235	1989	10	27.87782	23	38	27.02	+03	38	14.3		095
1235	1989	10	27.89848	23	38	25.56	+03	38	38.0		095
1235	1989	10	29.74417	23	36	13.77	+04	12	16.3		095
1235	1989	10	29.76499	23	36	11.86	+04	12	57.4		095
1255	1989	10	27.95346	02	56	36.04	+20	27	20.0		095
1255	1989	10	27.96031	02	56	35.74	+20	27	16.2		095
1267	1989	10	21.84336	01	09	36.99	+07	05	39.2		095
1267	1989	10	25.85545	01	05	55.36	+06	52	46.9		095
1267	1989	10	25.86934	01	05	54.61	+06	52	44.1		095
1275	1989	10	26.01241	04	15	37.66	+06	41	32.6		095
1275	1989	11	06.96319	04	08	34.71	+04	45	45.3		095
1275	1989	11	06.97708	04	08	34.08	+04	45	37.4		095
1275	1989	11	24.88513	03	53	54.94	+02	26	17.0		095
1275	1989	11	30.85124	03	48	57.82	+01	55	24.9		095
1296	1989	10	25.78396	00	03	12.74	+04	15	31.0	E	095
1299	1989	10	26.01241	04	24	48.47	+09	39	25.1		095
1299	1989	11	06.96319	04	18	51.92	+08	30	35.6		095
1299	1989	11	06.97708	04	18	51.26	+08	30	31.7		095
1299	1989	11	24.88513	04	04	50.12	+07	07	44.7		095
1309	1989	11	07.04862	05	16	28.60	+13	01	48.2		095
1309	1989	11	24.95735	05	05	58.21	+11	25	00.8		095
1331	1989	11	25.03788	05	57	43.50	+20	48	26.5		095
1365	1989	10	05.89579	01	40	38.97	+17	49	26.5		095
1365	1989	10	05.90970	01	40	38.37	+17	49	22.5		095
1365	1989	10	23.84132	01	22	55.22	+15	49	04.7		095
1365	1989	10	23.85521	01	22	54.63	+15	49	00.5	E	095
1365	1989	11	04.83364	01	12	12.79	+14	17	52.9	E	095
1365	1989	11	20.78192	01	02	49.69	+12	32	18.0		095

1365		1989	11	20.80274	01	02	49.30	+12	32	09.3	095
1365		1989	11	24.74626	01	01	34.57	+12	11	32.3	095
1374		1989	10	05.89579	01	10	49.39	+21	24	06.7	095
1374		1989	10	05.90970	01	10	48.65	+21	24	04.6	095
1377		1989	12	01.00340	06	38	05.25	+16	24	41.8	095
1381		1989	10	07.88800	23	52	39.14	+01	41	23.2	095
1381		1989	10	21.77043	23	43	36.63	+01	21	34.7	095
1381		1989	10	25.78396	23	42	00.54	+01	20	14.1	095
1381		1989	10	29.74417	23	40	56.92	+01	21	14.7	E 095
1381		1989	10	29.76499	23	40	56.68	+01	21	15.3	E 095
1382		1989	09	09.87646	23	14	47.49	-05	09	21.1	095
1382		1989	09	09.88653	23	14	46.89	-05	09	24.0	095
1382		1989	10	05.80830	22	52	33.93	-07	05	29.8	095
1382		1989	10	05.82219	22	52	33.46	-07	05	30.5	095
1406		1989	10	27.87782	23	12	05.25	+06	14	52.2	E 095
1406		1989	10	27.89848	23	12	05.22	+06	14	51.1	E 095
1406		1989	10	29.74417	23	11	34.09	+06	12	59.4	095
1406		1989	10	29.76499	23	11	33.92	+06	12	59.1	095
1423		1989	09	09.87646	23	02	08.64	-11	03	06.7	E 095
1423		1989	09	09.88653	23	02	08.05	-11	03	13.4	E 095
1423		1989	10	05.80830	22	44	26.11	-12	22	20.1	095
1423		1989	10	05.82219	22	44	25.70	-12	22	21.7	095
1447		1989	11	04.99427	04	37	38.10	+25	18	39.2	095
1447		1989	11	05.00816	04	37	37.43	+25	18	39.3	095
1447		1989	11	30.92431	04	12	15.76	+25	23	28.3	095
1454		1989	10	27.95346	03	00	04.74	+24	12	38.3	095
1454		1989	10	27.96031	03	00	04.25	+24	12	38.4	095
1505		1989	12	01.00340	06	52	46.07	+14	25	27.4	E 095
1512		1989	10	23.92748	02	11	39.78	+17	03	58.2	095
1512		1989	10	23.94133	02	11	39.11	+17	03	54.1	095
1512		1989	11	04.90667	02	03	46.83	+16	32	58.2	095
1512		1989	11	04.92385	02	03	46.35	+16	32	54.6	095
1573		1989	10	27.87782	23	17	08.94	+03	35	45.7	M 095
1573		1989	10	27.89848	23	17	10.26	+03	35	06.6	095
1573		1989	10	29.76499	23	18	11.41	+02	53	23.7	095
1597		1989	09	09.87646	23	15	05.88	-07	37	35.7	095
1597		1989	09	09.88653	23	15	05.51	-07	37	41.3	095
1633		1989	11	25.03788	05	58	01.80	+21	21	23.8	095
1651		1989	11	25.03788	06	11	34.37	+15	05	21.6	E 095
1783		1989	10	07.88800	23	54	08.64	+01	02	15.2	095
1783		1989	10	21.77043	23	45	44.44	-00	45	24.3	095
1783		1989	10	25.78396	23	43	55.65	-01	12	04.2	M 095
1805		1989	10	25.85545	01	12	24.45	+04	30	20.7	095
1805		1989	10	25.86934	01	12	23.78	+04	30	16.2	095
1830		1989	11	07.04862	05	08	36.48	+16	04	24.8	095
1830		1989	11	24.95735	04	53	52.46	+15	19	50.8	095
1846		1989	11	04.99427	04	53	17.04	+26	19	51.3	095
1846		1989	11	05.00816	04	53	16.58	+26	19	52.2	095
1846		1989	11	30.92431	04	29	56.63	+26	39	50.9	095
1855		1989	10	07.88800	23	50	29.49	-00	24	56.1	095
1855		1989	10	21.77043	23	40	57.10	-01	47	45.5	095
1905		1989	10	05.80830	22	51	18.65	-05	10	23.8	E 095
1905		1989	10	05.82219	22	51	18.06	-05	10	24.7	E 095
1907		1989	12	01.00340	06	36	20.35	+18	46	02.6	095
1911		1989	10	27.95346	03	09	50.21	+19	43	50.9	095
1911		1989	10	27.96031	03	09	49.46	+19	43	48.1	095
1938		1989	12	01.00340	06	32	30.11	+18	03	21.3	095
1944		1989	11	24.95735	04	43	43.04	+16	23	11.4	E 095
1960		1989	10	23.92748	02	19	08.27	+17	08	56.6	E 095

1960	1989	10	23.94133	02	19	07.28	+17	08	55.3	E	095
1960	1989	11	04.90667	02	06	34.30	+16	44	14.6		095
1960	1989	11	04.92385	02	06	33.25	+16	44	12.6		095
1989	1989	10	07.88800	00	02	09.76	-04	39	39.8	E	095
1989	1989	10	21.77043	23	50	29.54	-04	52	10.0	E	095
2018	1989	10	07.88800	23	43	27.74	-01	47	56.2		095
2022	1989	09	09.87646	23	24	38.59	-06	18	08.8		095
2022	1989	09	09.88653	23	24	38.13	-06	18	10.5		095
2022	1989	10	05.80830	23	03	13.46	-07	17	34.0		095
2022	1989	10	05.82219	23	03	12.95	-07	17	33.7		095
2067	1989	12	01.00340	06	29	31.49	+19	32	02.9		095
2155	1989	10	07.88800	00	01	35.84	-02	15	09.4		095
2155	1989	10	21.77043	23	52	36.84	-02	55	18.0		095
2167	1989	10	27.95346	02	59	13.32	+21	46	19.9		095
2167	1989	10	27.96031	02	59	12.96	+21	46	17.0		095
2182	1989	11	30.92431	04	20	43.33	+22	23	00.6		095
2233	1989	11	04.99427	04	54	15.85	+23	18	03.3		095
2233	1989	11	05.00816	04	54	15.28	+23	17	58.7		095
2233	1989	11	30.92431	04	30	25.99	+21	38	09.8		095
2249	1989	09	09.87646	23	02	50.86	-08	01	58.2	E	095
2249	1989	09	09.88653	23	02	50.27	-08	02	03.6	E	095
2249	1989	10	05.80830	22	47	12.03	-09	59	23.6		095
2249	1989	10	05.82219	22	47	11.71	-09	59	26.6		095
2288	1989	10	25.94089	02	57	04.88	+03	43	33.9		095
2288	1989	11	20.87447	02	34	23.90	+03	23	08.3		095
2288	1989	11	24.81153	02	31	15.98	+03	26	26.2		095
2306	1989	10	25.85545	01	19	47.89	+12	06	41.0	E	095
2306	1989	10	25.86934	01	19	47.14	+12	06	37.1	E	095
2322	1989	11	25.03788	06	06	04.18	+19	45	56.5		095
2362	1989	10	07.88800	23	46	20.74	-01	54	30.3		095
2362	1989	10	21.77043	23	38	59.20	-01	41	47.0		095
2362	1989	10	25.78396	23	38	07.19	-01	31	58.8		095
2393	1989	10	27.87782	23	28	03.56	+06	25	56.3		095
2393	1989	10	27.89848	23	28	03.45	+06	25	47.0		095
2393	1989	10	29.74417	23	27	54.70	+06	13	42.6		095
2393	1989	10	29.76499	23	27	54.60	+06	13	35.2		095
2406	1989	10	27.95346	03	06	58.43	+19	56	55.4		095
2406	1989	10	27.96031	03	06	57.85	+19	56	53.6		095
2410	1989	10	25.85545	01	14	01.49	+03	30	08.0	E	095
2410	1989	10	25.86934	01	14	00.73	+03	30	02.5	E	095
2427	1989	10	21.77043	23	32	37.77	+01	41	36.0		095
2446	1989	10	07.88800	23	47	49.86	-03	16	21.0		095
2446	1989	10	21.77043	23	38	45.56	-03	44	58.6		095
2466	1989	10	07.88800	23	59	01.54	-04	26	29.8	E	095
2466	1989	10	21.77043	23	51	56.10	-05	36	57.0	E	095
2480	1989	10	21.84336	01	16	06.32	+06	52	10.0		095
2480	1989	10	25.85545	01	12	13.84	+06	38	54.6		095
2480	1989	10	25.86934	01	12	12.97	+06	38	51.5		095
2492	1989	10	21.84336	01	13	00.87	+07	45	56.3		095
2492	1989	10	25.85545	01	10	06.97	+07	29	13.1		095
2492	1989	10	25.86934	01	10	06.29	+07	29	09.9		095
2530	1989	10	07.88800	23	49	01.82	+03	05	59.5		095
2530	1989	10	21.77043	23	42	34.24	+01	16	51.0		095
2542	1989	11	24.95735	04	42	52.87	+15	42	39.4		095
2567	1989	10	25.94089	02	52	28.70	+01	50	44.1		095
2567	1989	11	20.87447	02	31	09.37	+00	17	32.4		095
2567	1989	11	24.81153	02	28	31.24	+00	14	32.3		095
2674	1989	10	21.84336	01	17	02.54	+07	12	02.4		095
2674	1989	10	25.85545	01	15	10.56	+07	00	14.0		095

2674	1989	10	25.86934	01	15	10.02	+07	00	11.1		095
2677	1989	10	07.88800	00	14	45.04	+03	33	47.0	N	095
2697	1989	10	23.75109	22	55	35.44	-01	47	48.8		095
2697	1989	10	23.76563	22	55	35.33	-01	47	50.1		095
2698	1989	12	01.00340	06	29	47.48	+13	56	46.9		095
2714	1989	09	09.87646	23	13	23.27	-12	04	01.1	E	095
2714	1989	09	09.88653	23	13	22.58	-12	04	11.5	E	095
2746	1989	10	21.77043	23	51	14.29	-02	30	17.3		095
2787	1989	11	04.99427	04	47	36.67	+30	46	04.8	E	095
2787	1989	11	05.00816	04	47	36.20	+30	46	06.4	E	095
2789	1989	10	25.78396	23	56	06.95	+05	27	07.4	N	095
2815	1989	11	07.04862	04	56	29.58	+13	34	51.4		095
2815	1989	11	24.95735	04	39	17.98	+13	18	43.3		095
2820	1989	11	25.03788	05	55	29.94	+19	55	46.5		095
2832	1989	11	07.04862	05	21	33.48	+16	41	56.0	E	095
2832	1989	11	24.95735	05	08	55.06	+15	58	11.2	E	095
2843	1989	12	01.00340	06	48	19.15	+21	10	59.7		095
2847	1989	10	21.84336	00	52	37.56	+08	58	20.4	E	095
2905	1989	10	21.84336	01	01	10.96	+09	22	10.8		095
2912	1989	11	24.95735	04	45	39.70	+14	15	07.6		095
2913	1989	10	27.95346	03	16	23.56	+25	54	30.4		095
2913	1989	10	27.96031	03	16	22.99	+25	54	37.0		095
2961	1989	12	01.00340	06	34	50.98	+17	24	25.6		095
2975	1989	12	01.00340	06	26	04.72	+17	49	16.5		095
2976	1989	10	25.78396	00	02	47.58	+04	20	39.6	E	095
3029	1989	10	23.92748	01	48	13.49	+17	06	37.0	E	095
3029	1989	10	23.94133	01	48	12.59	+17	06	26.9	E	095
3029	1989	11	04.83364	01	36	07.36	+15	57	41.0		095
3033	1989	11	24.95735	04	43	23.63	+14	24	08.1		095
3036	1989	10	23.92748	02	02	08.29	+18	32	19.3		095
3036	1989	10	23.94133	02	02	07.40	+18	32	21.0		095
3036	1989	11	04.90667	01	49	52.96	+18	46	03.0		095
3036	1989	11	04.92385	01	49	51.87	+18	46	05.2		095
3056	1989	10	07.88800	00	06	35.66	-00	03	04.6		095
3056	1989	10	21.77043	23	55	58.80	-00	18	01.3		095
3056	1989	10	25.78396	23	53	49.36	-00	17	36.8		095
3060	1989	10	27.87782	23	26	00.84	+06	50	53.6		095
3060	1989	10	27.89848	23	26	00.81	+06	50	51.6		095
3060	1989	10	29.74417	23	25	54.03	+06	49	02.7		095
3060	1989	10	29.76499	23	25	54.09	+06	49	02.8		095
3076	1989	11	07.04862	05	11	50.52	+12	39	36.0		095
3076	1989	11	24.95735	04	56	51.10	+10	38	20.4		095
3077	1989	10	27.95346	03	11	20.51	+20	31	34.6		095
3077	1989	10	27.96031	03	11	20.01	+20	31	32.6		095
3094	1989	09	09.87646	23	16	59.17	-02	52	08.7	E	095
3094	1989	09	09.88653	23	16	58.92	-02	52	15.3	E	095
3094	1989	10	05.80830	22	59	47.86	-06	58	53.2		095
3094	1989	10	05.82219	22	59	47.51	-06	58	54.1		095
3105	1989	11	20.87447	02	45	47.92	+03	15	57.2	E	095
3105	1989	11	24.81153	02	42	39.25	+03	14	11.4	E	095
3108	1989	11	07.04862	05	06	25.46	+16	40	00.0		095
3108	1989	11	24.95735	04	52	01.92	+15	48	45.0		095
3156	1989	09	09.87646	23	35	01.01	-10	30	31.7		095
3156	1989	09	09.88653	23	35	00.75	-10	30	33.6		095
3156	1989	10	05.80830	23	12	05.71	-11	00	46.5		095
3156	1989	10	05.82219	23	12	05.13	-11	00	47.7		095
3174	1989	09	09.87646	23	24	24.54	-07	39	18.7		095
3174	1989	09	09.88653	23	24	24.15	-07	39	21.2		095

3174	1989	10	05.80830	23	06	09.35	-09	23	34.2		095
3174	1989	10	05.82219	23	06	08.83	-09	23	36.6		095
3214	1989	11	07.04862	04	59	28.66	+13	34	34.8		095
3214	1989	11	24.95735	04	46	00.86	+13	34	12.0		095
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3234	1989	09	09.88653	23	21	10.50	-05	52	15.5		095
3234	1989	10	05.80830	23	03	25.69	-07	38	58.2		095
3234	1989	10	05.82219	23	03	25.41	-07	38	59.9		095
3301	1989	09	09.87646	23	19	55.74	-09	26	59.3		095
3301	1989	09	09.88653	23	19	55.09	-09	27	05.5		095
3301	1989	10	05.80830	22	59	26.69	-12	10	38.1		095
3301	1989	10	05.82219	22	59	26.08	-12	10	44.4		095
3310	1989	10	26.01241	04	08	19.86	+09	06	54.3		095
3310	1989	11	06.96319	04	00	03.44	+08	44	55.6		095
3310	1989	11	06.97708	04	00	02.84	+08	44	54.7		095
3310	1989	11	24.88513	03	44	59.66	+08	26	26.7		095
3407	1989	11	24.95735	04	34	38.74	+07	52	49.2	E	095
3430	1989	09	09.87646	23	28	12.16	-10	01	47.3		095
3430	1989	09	09.88653	23	28	11.73	-10	01	49.5		095
3430	1989	10	05.80830	23	08	11.68	-11	14	09.1		095
3430	1989	10	05.82219	23	08	11.11	-11	14	11.1		095
3433	1989	10	27.95346	03	03	10.40	+25	48	33.9		095
3433	1989	10	27.96031	03	03	09.74	+25	48	36.4		095
3458	1989	10	25.85545	01	09	45.93	+04	37	38.3		095
3458	1989	10	25.86934	01	09	44.95	+04	37	30.0		095
3467	1989	11	25.03788	06	20	24.56	+20	15	43.8		095
3482	1989	11	07.04862	04	53	23.37	+15	37	04.1		095
3482	1989	11	24.95735	04	38	55.92	+15	10	41.1		095
3570	1989	10	25.94089	03	04	00.94	+05	07	49.1		095
3570	1989	11	20.87447	02	42	10.96	+04	41	17.3	E	095
3570	1989	11	24.81153	02	39	12.11	+04	43	28.4		095
3607	1989	11	30.92431	04	24	55.16	+26	31	22.0		095
3615	1989	12	01.00340	06	40	35.47	+21	08	45.7		095
3638	1989	11	06.96319	03	58	25.02	+06	57	16.4		095
3638	1989	11	06.97708	03	58	24.22	+06	57	12.3		095
3638	1989	11	24.88513	03	43	29.12	+06	34	41.3		095
3647	1989	10	26.01241	04	11	49.95	+09	15	51.2		095
3647	1989	11	06.96319	04	03	24.85	+08	38	51.7		095
3647	1989	11	06.97708	04	03	24.19	+08	38	48.6		095
3647	1989	11	24.88513	03	47	33.96	+08	01	59.4		095
3657	1989	11	25.03788	06	13	10.58	+19	37	28.6		095
3661	1989	10	21.84336	01	07	59.51	+07	26	36.5		095
3678	1989	11	24.95735	04	37	13.65	+09	39	21.2		095
3679	1989	10	23.84132	01	34	29.56	+19	27	19.8		095
3679	1989	10	23.85521	01	34	28.91	+19	27	15.2		095
3679	1989	11	04.81697	01	25	05.84	+18	21	51.8		095
3679	1989	11	04.83364	01	25	05.16	+18	21	44.4		095
3679	1989	11	06.87362	01	23	50.54	+18	10	03.8		095
3679	1989	11	06.89028	01	23	49.92	+18	09	56.2		095
3679	1989	11	24.74626	01	19	24.83	+16	43	25.1		095
3687	1989	10	29.74417	23	07	17.16	+10	01	00.7	N	095
3687	1989	10	29.76499	23	07	16.73	+10	00	54.1	N	095
3863	1989	11	06.96319	04	12	03.30	+06	42	50.2		095
3863	1989	11	06.97708	04	12	02.60	+06	42	46.2		095
3863	1989	11	24.88513	03	54	25.24	+04	58	59.2		095
3863	1989	11	30.85124	03	48	32.18	+04	37	16.0		095
3976	1989	10	23.92748	01	58	56.69	+16	01	53.0		095
3976	1989	11	04.90667	01	49	35.75	+14	09	22.9		095
3976	1989	11	04.92385	01	49	35.12	+14	09	08.3		095

3976		1989	11	30.78592	01	36	43.57	+10	43	57.0	E	095
4169		1989	09	09.87646	23	07	38.83	-09	01	39.1		095
4169		1989	09	09.88653	23	07	38.37	-09	01	42.1		095
4169		1989	10	05.80830	22	48	55.96	-09	12	18.8		095
4169		1989	10	05.82219	22	48	55.43	-09	12	19.7		095
4250		1989	09	09.87646	23	15	15.00	-08	54	31.3		095
4250		1989	09	09.88653	23	15	14.49	-08	54	35.8		095
4250		1989	10	05.80830	22	58	08.79	-10	19	55.4		095
4250		1989	10	05.82219	22	58	08.22	-10	19	56.5		095
4274		1989	10	23.92748	02	04	50.18	+19	14	05.9		095
4274		1989	10	23.94133	02	04	49.27	+19	14	05.9		095
4274		1989	11	04.90667	01	53	11.11	+19	08	43.8		095
4274		1989	11	04.92385	01	53	10.13	+19	08	42.7		095
4278		1989	10	25.94089	02	43	29.09	+04	29	30.1		095
4278		1989	11	20.87447	02	22	05.36	+02	46	46.8		095
4278		1989	11	24.81153	02	19	51.54	+02	46	14.2		095
4290		1989	10	05.89579	01	05	43.83	+17	09	09.4	E	095
4290		1989	10	05.90970	01	05	43.03	+17	09	03.4	E	095
4296		1989	11	20.78192	01	07	26.53	+12	46	20.9		095
4296		1989	11	20.80274	01	07	26.28	+12	46	22.0		095
4303		1989	10	21.84336	01	23	22.82	+08	07	28.3		095
4303		1989	10	25.85545	01	19	25.75	+07	53	08.3		095
4303		1989	10	25.86934	01	19	24.95	+07	53	03.8		095
4312		1989	10	25.08678	04	26	11.30	+16	39	29.6	15.0V	095
4329		1989	10	23.94133	02	05	10.96	+18	00	17.6	M	095
4349		1989	10	26.01241	04	32	18.42	+10	04	50.9		095
4349		1989	11	06.96319	04	24	13.25	+10	21	31.6	E	095
4349		1989	11	06.97708	04	24	12.54	+10	21	34.8	E	095
4358		1989	10	07.88800	00	08	32.42	-02	41	46.2		095
4358		1989	10	21.77043	23	56	45.50	-02	31	00.3		095
4358		1989	10	25.78396	23	54	09.05	-02	23	57.9	E	095
4363		1989	10	25.94089	02	48	50.58	+01	45	26.9		095
4363		1989	11	20.87447	02	24	31.91	+03	10	29.5		095
4363		1989	11	24.81153	02	21	52.19	+03	35	56.4		095
4400		1989	11	04.90667	02	03	01.27	+19	01	46.2		095
4400		1989	11	04.92385	02	03	00.28	+19	01	43.4		095
4422		1989	10	25.94089	03	06	39.67	+07	50	58.5	15.0V E	095
4422		1989	11	20.87447	02	42	57.31	+05	54	24.7	15.0V E	095
4422		1989	11	24.81153	02	40	03.38	+05	48	36.6	15.0V E	095
4434		1989	11	07.04862	05	06	56.50	+13	27	44.6		095
4434		1989	11	24.95735	04	52	41.40	+12	24	35.5		095
4475		1989	11	30.92431	04	21	39.08	+25	36	30.7	E	095
4483		1989	11	05.06995	05	06	46.75	-18	46	43.3		095
4483		1989	11	05.08454	05	06	46.26	-18	47	05.4		095

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

1975	VZ	1990	08	18.71215	21	22	44.76	-15	22	33.6	17	372
1975	VZ	1990	08	18.72257	21	22	44.28	-15	22	36.6		372
1975	VZ	1990	08	20.58299	21	21	02.63	-15	33	53.9	17	372
1975	VZ	1990	08	20.59549	21	21	01.93	-15	33	56.1		372
1988	XL1	1990	04	24.70764	16	15	52.78	-13	26	10.4	18.5	372
1988	XL1	1990	04	24.73021	16	15	51.73	-13	26	04.7		372
1988	XL1	1990	05	26.66771	15	48	37.45	-12	06	00.7	18	372
1988	XL1	1990	05	26.67882	15	48	36.99	-12	05	58.6		372
1989	EO1	1990	07	20.61632	20	10	14.41	-26	08	37.5	18	372
1990	OD1 *	1990	07	20.67743	21	24	22.07	-15	29	45.6	18	372
1990	OD1	1990	07	20.68785	21	24	21.68	-15	29	51.5		372

1990	OD1		1990	07	31.64809	21	16	17.44	-17	11	39.1	17.5	372
1990	OD1		1990	07	31.65833	21	16	17.00	-17	11	44.8		372
1990	OD1		1990	08	01.68576	21	15	25.60	-17	21	38.7	17	372
1990	OD1		1990	08	01.69896	21	15	25.03	-17	21	46.6		372
1990	OD1		1990	08	15.55347	21	03	35.37	-19	31	05.7	16.5	372
1990	OD1		1990	08	15.56597	21	03	34.75	-19	31	10.3		372
1990	OD1		1990	08	20.56354	20	59	36.72	-20	12	57.4	17	372
1990	OD1		1990	08	20.57257	20	59	36.25	-20	12	59.4		372
1990	OE1	*	1990	07	30.61667	21	36	23.99	-14	58	41.1	16	372
1990	OE1		1990	07	30.62778	21	36	23.25	-14	58	41.2		372
1990	OE1		1990	07	31.70895	21	35	29.54	-15	03	21.5	15.5	372
1990	OE1		1990	07	31.72951	21	35	28.55	-15	03	26.1		372
1990	OE1		1990	08	15.52361	21	22	05.80	-16	09	36.3	16	372
1990	OE1		1990	08	15.54132	21	22	04.83	-16	09	38.6		372
1990	OE1		1990	08	18.73333	21	19	12.26	-16	23	00.5	16.5	372
1990	OE1		1990	08	18.74271	21	19	11.63	-16	23	03.1		372
1990	OE1		1990	08	20.60729	21	17	34.72	-16	30	26.5	16.5	372
1990	OE1		1990	08	20.62049	21	17	34.01	-16	30	29.4		372
1990	OX2	*	1990	07	30.61666	21	36	44.39	-14	36	43.5	18	372
1990	OX2		1990	07	30.62777	21	36	43.90	-14	36	48.0		372
1990	OX2		1990	07	31.72396	21	36	05.01	-14	43	31.5	18	372
1990	OX2		1990	07	31.73472	21	36	04.68	-14	43	34.0		372
1990	OX2		1990	08	01.65990	21	35	30.75	-14	49	17.8	18	372
1990	OX2		1990	08	01.67292	21	35	30.22	-14	49	23.4		372
1990	OX2		1990	08	15.58056	21	25	41.56	-16	21	39.5	18	372
1990	OX2		1990	08	15.59236	21	25	41.28	-16	21	41.9		372
1990	OX2		1990	08	18.69097	21	23	24.09	-16	42	05.4	17.5	372
1990	OX2		1990	08	18.70139	21	23	23.43	-16	42	09.9		372
1990	OX2		1990	08	20.63295	21	22	00.69	-16	54	33.8	18	372
1990	OX2		1990	08	20.64580	21	22	00.17	-16	54	37.7		372
1990	OY2	*	1990	07	30.61666	21	37	15.66	-14	06	48.5	18.5	372
1990	OY2		1990	07	30.62777	21	37	15.45	-14	06	51.8		372
1990	OY2		1990	07	31.72396	21	36	26.01	-14	13	45.7	18.5	372
1990	OY2		1990	07	31.73472	21	36	25.43	-14	13	48.9		372
1990	OY2		1990	08	15.62326	21	24	04.91	-15	52	28.7	17.5	372
1990	OY2		1990	08	15.63715	21	24	04.02	-15	52	32.4		372
1990	OY2		1990	08	18.69097	21	21	30.41	-16	12	08.4	18	372
1990	OY2		1990	08	18.70139	21	21	30.07	-16	12	09.4		372
1990	OK3		1990	08	15.58056	21	26	01.45	-16	41	40.0	18	372
1990	OK3		1990	08	15.59236	21	26	00.84	-16	41	42.6		372
1990	OK3		1990	08	18.69097	21	23	38.58	-17	01	41.2	17	372
1990	OK3		1990	08	18.70139	21	23	38.09	-17	01	46.0		372
1990	OK3		1990	08	20.63295	21	22	11.97	-17	13	49.6	17	372
1990	OK3		1990	08	20.64580	21	22	11.44	-17	13	54.3		372
1990	OP3		1990	08	15.62326	21	25	28.81	-15	13	12.7	18	372
1990	OP3		1990	08	15.63715	21	25	28.04	-15	13	18.1		372
1990	PB	*	1990	08	15.58056	21	25	27.90	-16	19	23.9	18	372
1990	PB		1990	08	15.59236	21	25	27.17	-16	19	27.3		372
1990	PB		1990	08	18.69097	21	22	37.95	-16	27	42.1	17.5	372
1990	PB		1990	08	18.70139	21	22	36.99	-16	27	43.6		372
1990	PC	*	1990	08	15.62326	21	27	52.51	-15	42	29.4	17	372
1990	PC		1990	08	15.63715	21	27	51.67	-15	42	27.1		372
1990	PC		1990	08	18.71215	21	24	36.10	-15	30	03.8	17.5	372
1990	PC		1990	08	18.72257	21	24	35.29	-15	30	01.6		372
1990	PC		1990	08	20.58299	21	22	41.77	-15	22	29.0	18	372
1990	PC		1990	08	20.59549	21	22	40.91	-15	22	28.1		372
1990	PD	*	1990	08	01.63889	21	10	12.64	-10	51	16.4	16	372
1990	PD		1990	08	01.64931	21	10	11.17	-10	51	40.3		372
1990	PD		1990	08	02.73125	21	07	44.39	-11	34	18.5	17	372

```
1990 PD    1990 08 02.73958  21 07 43.34  -11 34 33.1                 372
1990 PE  * 1990 08 15.62326  21 28 19.05  -15 38 41.6          17.5   372
1990 PE    1990 08 15.63715  21 28 18.18  -15 38 42.0                 372
1990 PE    1990 08 18.71215  21 25 11.64  -15 41 48.3          17     372
1990 PE    1990 08 18.72257  21 25 10.96  -15 41 48.4                 372
1990 QF  * 1990 08 20.67743  22 11 27.29  -11 40 09.9          16     372
1990 QF    1990 08 20.68924  22 11 26.72  -11 40 10.1                 372
1990 QF    1990 08 24.58889  22 07 12.53  -11 44 44.2          16.5   372
1990 QF    1990 08 24.59931  22 07 11.79  -11 44 44.7                 372
1990 QG  * 1990 08 20.72813  22 41 28.52  -07 22 19.0          16.5   372
1990 QG    1990 08 20.73993  22 41 27.88  -07 22 17.3                 372
1990 QG    1990 08 24.60972  22 38 30.93  -07 20 01.4          16.5   372
1990 QG    1990 08 24.62142  22 38 30.43  -07 19 58.3                 372
1990 QH  * 1990 08 20.75104  23 53 44.59  -06 08 00.9          16.5   372
1990 QH    1990 08 20.76146  23 53 44.13  -06 07 58.8                 372
1990 QH    1990 08 24.75521  23 50 46.31  -05 57 32.6          15.5   372
1990 QH    1990 08 24.76771  23 50 45.69  -05 57 30.4                 372
2392       1990 08 20.58299  21 24 08.99  -15 22 09.1          17.5   372
2392       1990 08 20.59549  21 24 08.20  -15 22 12.4                 372
2758       1990 07 31.64809  21 19 22.78  -17 36 43.8          18     372
2758       1990 07 31.65833  21 19 22.23  -17 36 43.8                 372
2758       1990 08 01.68576  21 18 24.40  -17 39 57.9          18     372
2758       1990 08 01.69896  21 18 23.78  -17 39 58.3                 372
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373 JCPM Oishi Station
T. Kojima, 45 Shimonakamori, Chiyoda-cyo, Ohra-gun, Gunma-ken 370-07, Japan
Observer M. Tsumura
Measurer T. Kojima
0.31-m f/4.2 reflector
AGK3C

```
2060       1990 01 04.60313  06 53 41.70  +15 31 32.2          17     373
2060       1990 01 04.61134  06 53 41.61  +15 31 31.8                 373
2060       1990 01 04.62037  06 53 41.32  +15 31 32.7                 373
2060       1990 01 17.53837  06 50 06.16  +15 36 35.4          17     373
2060       1990 01 17.54965  06 50 05.85  +15 36 35.7                 373
```

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

```
1990 OM  * 1990 07 22.69583  23 17 16.34  -05 09 32.2          15.5   392
1990 OM    1990 07 22.70174  23 17 16.38  -05 09 32.9                 392
1990 OM    1990 07 22.73872  23 17 16.84  -05 09 35.3                 392
1990 OM    1990 07 23.63843  23 17 31.55  -05 11 42.1          15.5   392
1990 OM    1990 07 23.64667  23 17 31.66  -05 11 43.5                 392
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399 Kushiro
H. Kaneda, Taiyo MS 2-H, 2 chome 2-15, kawazoe 8 jo, Minami-ku, Sapporo 005, Japan
Observer S. Ueda
Measurer H. Kaneda
0.16-m f/3.8 Wright-Schmidt camera
AGK3

```
1987 VG1 * 1987 11 15.53889  02 48 06.31  +24 30 46.8          16.5   399
1987 VG1   1987 11 15.55417  02 48 05.42  +24 30 39.5                 399
1988 BO5   1988 02 07.43785  09 43 44.73  +15 45 18.8          16.5   399
1988 BO5   1988 02 07.45434  09 43 43.73  +15 45 24.6                 399
1988 BO5   1988 03 13.49543  09 16 08.71  +17 15 04.1          17     399
```

1988	BO5		1988	03	13.51372	09	16	08.21	+17	15	06.5	399
1988	BO5		1988	03	13.54103	09	16	07.65	+17	15	07.1	399
1988	UV		1988	10	13.55799	00	56	00.58	+09	43	48.1	16.5 399
1988	UV		1988	10	15.58831	00	54	17.82	+09	21	53.7	16.5 399
1988	UV		1988	10	16.51736	00	53	31.55	+09	11	51.8	16.5 399
1989	WW		1989	12	06.71713	04	09	05.11	+14	25	18.0	16.5 399
1989	WW		1989	12	06.73194	04	09	03.97	+14	25	23.5	399
1989	WW		1989	12	06.74907	04	09	02.99	+14	25	27.5	399
1989	WU2		1989	12	23.55417	03	53	50.68	+19	19	13.2	17 399
1989	WU2		1989	12	23.57639	03	53	49.81	+19	19	12.6	399
1989	WU2		1989	12	23.59410	03	53	49.33	+19	19	13.6	399
1989	YK8	*	1989	12	23.68090	05	59	25.50	+18	41	58.2	16 399
1989	YK8		1989	12	23.69688	05	59	24.58	+18	42	00.4	399
1989	YK8		1989	12	23.71424	05	59	23.90	+18	42	01.6	399
1990	DM1		1990	02	28.62222	09	40	39.16	+12	47	45.0	16 399
1990	DM1		1990	02	28.63941	09	40	38.39	+12	47	46.4	399
1990	DM1		1990	02	28.65770	09	40	37.35	+12	47	49.0	399
1990	FA		1988	11	06.44965	00	57	30.48	+06	23	13.4	16.5 399
1990	FA		1988	11	06.46632	00	57	29.73	+06	23	12.0	399

400 Kitami
K. Watanabe, 3-8 Mason Hashimoto B-203, atsubetsu cyuo 3 jo 4 chome, Atsubetsu-ku, Sapporo 004, Japan
Observer K. Endate
Measurer K. Watanabe
0.20-m f/4.0 reflector

1989	UU2		1989	10	21.55243	02	00	10.44	+15	03	10.4	16.5 400
1989	UU2		1989	10	21.56771	02	00	09.51	+15	03	07.3	400
1989	UM8	*	1989	10	21.46597	01	33	31.96	+07	58	47.8	16.5 400
1989	UM8		1989	10	21.48681	01	33	31.15	+07	58	34.5	400
1990	KQ		1990	06	18.50833	16	35	18.36	-20	22	23.6	16.0 400
1990	KQ		1990	06	18.52778	16	35	17.48	-20	22	33.0	400
1990	KQ		1990	06	18.56111	16	35	15.67	-20	22	45.8	400
1990	KQ		1990	06	23.50486	16	31	21.94	-20	54	10.9	16.0 400
1990	KQ		1990	06	23.52361	16	31	21.06	-20	54	19.1	400

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers M. Hartley, S. M. Hughes, S. J. Hutcheon, R. H. McNaught, W. J. Zealey
Measurers R. H. McNaught, Y. Nakajima
1.2-m U. K. Schmidt Telescope and Uppsala Southern Schmidt

A923	RH		1981	04	23.75595	16	55	58.87	-41	19	42.8	413
1981	EB9		1990	06	13.45784	16	05	06.97	-43	48	51.3	413
1981	EB9		1990	06	13.47786	16	05	05.67	-43	48	45.8	413
1983	CF1		1981	12	19.46383	04	34	05.31	+02	40	01.4	16.5V p 413
1983	CF1		1981	12	19.51591	04	34	02.93	+02	40	12.2	413
1983	CF1		1981	12	19.52824	04	34	02.38	+02	40	16.7	D 413
1983	CF1		1981	12	19.59074	04	33	59.47	+02	40	28.3	D 413
1983	CF1		1990	06	20.53116	16	10	48.61	-00	58	35.6	16 V 413
1983	CF1		1990	06	20.57282	16	10	46.97	-00	58	44.8	413
1986	EJ		1979	03	09.71167	13	44	16.05	-36	33	01.0	15.5V 413
1986	EJ		1979	03	09.75333	13	44	14.67	-36	33	57.8	413
1986	EJ		1987	10	14.41878	21	48	21.97	-10	52	02.0	17.5V 413
1986	EJ		1987	10	14.48823	21	48	20.72	-10	51	45.1	413
1989	BQ		1979	07	13.37578	14	28	17.81	+07	10	03.4	18 V 413
1989	EV		1990	06	22.67234	16	06	51.86	-27	23	02.0	413
1989	EV		1990	06	22.69595	16	06	50.84	-27	23	00.7	413

1990	BG		1990	06	21.81323	02	41	58.46	-02	02	17.1	16	V	V 413
1990	HQ		1990	04	27.48676	12	07	48.08	+19	37	24.1	17	V	413
1990	HQ		1990	04	27.54926	12	07	47.09	+19	39	02.9			F 413
1990	HQ		1990	04	29.46536	12	07	29.06	+20	30	54.9			413
1990	HQ		1990	04	29.50703	12	07	28.67	+20	31	58.0			413
1990	KA		1990	07	21.46104	16	47	31.38	-22	51	24.1			413
1990	KA		1990	07	21.49576	16	47	36.30	-22	52	15.5			413
1990	KK		1990	04	24.72905	16	51	16.78	-01	44	22.4			413
1990	KK		1990	04	24.78113	16	51	14.56	-01	44	35.0			413
1990	KL		1990	05	02.66978	16	38	17.61	-10	29	21.3			413
1990	KL		1990	05	02.71145	16	38	16.88	-10	28	53.2			413
1990	KL		1990	06	20.53116	16	07	26.00	-02	31	39.3	16	V	413
1990	KL		1990	06	20.57282	16	07	24.57	-02	31	30.3			413
1990	LA		1982	07	24.52094	19	20	08.75	-02	21	59.9	17	V	413
1990	LA		1982	07	24.55913	19	20	06.97	-02	22	13.4			413
1990	LA		1987	10	29.45053	00	20	30.08	-04	27	09.1			G 413
1990	LA		1990	08	18.43117	15	57	13.44	-04	30	59.6			413
1990	MA		1989	01	09.44072	03	28	04.97	+08	19	13.6	18	V	V 413
1990	MA		1989	01	09.51016	03	28	02.36	+08	20	28.9			F 413
1990	MA		1990	07	21.39410	15	19	46.69	-30	28	01.3			413
1990	MA		1990	07	21.39767	15	19	46.51	-30	28	10.2			413
1990	MA		1990	07	21.40833	15	19	46.29	-30	28	21.6			413
1990	MA		1990	07	21.43934	15	19	45.45	-30	29	18.8			413
1990	MU		1990	07	25.60734	20	04	54.01	-52	33	53.5	17.5	V	413
1990	MU		1990	07	25.62977	20	04	50.10	-52	34	00.2			413
1990	MY	*	1990	06	22.54787	17	50	13.61	-60	25	56.1	17		413
1990	MY		1990	06	22.58259	17	50	09.19	-60	25	45.8			413
1990	MY		1990	06	23.77744	17	47	45.67	-60	19	53.9			V 413
1990	MZ	*	1990	06	22.54787	18	00	27.11	-61	50	42.2	16.5	V	413
1990	MZ		1990	06	22.58259	18	00	22.91	-61	50	30.3			413
1990	MZ		1990	06	23.77744	17	58	00.30	-61	43	10.0			413
1990	MZ		1990	06	29.63727	17	46	59.34	-60	57	18.2	16	V	413
1990	OA		1990	08	18.73675	21	09	05.96	-24	05	35.9	16.5	V	413
1990	OL		1990	08	18.70889	21	41	26.22	-09	01	20.0	16.0	V	413
1990	OR		1990	05	29.76574	21	52	59.01	-10	34	50.5	17.5	V	F 413
1990	OR		1990	05	29.80741	21	53	01.31	-10	34	09.4			t 413
1990	PA	*	1990	08	12.80198	02	51	12.10	+01	19	27.5	16	V	413
1990	PA		1990	08	13.78332	02	52	20.96	+01	20	53.5			413
1990	PA		1990	08	18.79322	02	57	53.90	+01	26	25.4			413
1990	QA		1990	08	11.44042	21	26	25.50	-47	31	53.2			V 413
1990	QA		1990	08	14.41906	21	22	57.12	-47	31	28.0			V 413
1990	QA	*	1990	08	19.51275	21	17	06.34	-47	23	44.3	16	V	413
1990	QA		1990	08	19.55442	21	17	03.56	-47	23	38.8			413
1990	QA		1990	08	19.56470	21	17	02.82	-47	23	37.4			413
461			1990	06	13.35457	10	27	55.38	+10	04	19.6			413
461			1990	06	13.36539	10	27	56.19	+10	04	15.9			413
1210			1990	08	12.80198	02	48	50.10	+03	07	11.9			413
1210			1990	08	13.78332	02	49	23.12	+03	06	14.3			413
1210			1990	08	18.79322	02	51	55.52	+02	59	44.8			413
2381			1990	06	20.53116	16	10	50.98	-01	28	49.6			413
2381			1990	06	20.57282	16	10	49.19	-01	28	54.3			413
3308			1990	08	12.80198	02	59	35.32	+02	41	02.6			V 413
3308			1990	08	13.78332	03	00	27.13	+02	35	28.7			F 413
4024			1990	06	22.67234	16	09	17.49	-25	44	24.1			413
4024			1990	06	22.69595	16	09	16.24	-25	44	23.3			413

474 Mount John
A. C. Gilmore, P.O. Box 57, Lake Tekapo, New Zealand
Observer A. C. Gilmore

Measurer P. M. Kilmartin
0.6-m f/14 Cassegrain reflector
AGK3, SAOC, CPZ, field plates from Carter Observatory

1990 OS	1990 07 29.51067	22 31 19.05	-22 02 06.8				16	E	474
1990 OS	1990 07 29.51484	22 31 22.59	-22 01 56.4					E	474
1990 OS	1990 07 29.60442	22 32 38.43	-21 58 12.5					t	474
1990 OS	1990 07 29.60894	22 32 42.34	-21 58 00.5					t	474
1990 OS	1990 07 31.40128	23 03 07.34	-20 17 07.6						474
1990 OS	1990 07 31.40962	23 03 16.79	-20 16 34.2						474
1990 OS	1990 07 31.73080	23 09 21.70	-19 53 12.7						474
1990 OS	1990 07 31.73453	23 09 26.13	-19 52 53.4						474
1990 OS	1990 08 01.41853	23 24 00.46	-18 54 34.6						474
1990 OS	1990 08 01.42403	23 24 07.70	-18 54 05.3						474
1990 OS	1990 08 02.75111	23 55 42.29	-16 28 30.2					E	474
1990 OS	1990 08 02.75719	23 55 51.47	-16 27 43.2					E	474

479 Sollies-Pont
B. Candela, 533 Chemin des Laugiers, F-83210 Sollies-Pont, France
Observer B. Candela
0.25-m f/8 Schmidt Cassegrain

3	1990 05 26.93403	14 59 47.85	-00 39 17.5	479
3	1990 05 28.93612	14 58 22.59	-00 34 14.0	479
8	1990 06 20.01980	18 40 32.60	-20 15 37.8	479
8	1990 06 21.05591	18 39 27.73	-20 19 06.0	479
32	1990 06 29.94098	17 14 00.24	-16 22 29.3	479
32	1990 06 29.94462	17 14 00.17	-16 22 31.2	479
41	1990 06 30.01459	18 53 07.42	+04 43 46.9	479
41	1990 07 01.96667	18 51 31.95	+04 37 25.1	479
41	1990 07 01.97848	18 51 31.15	+04 37 21.9	479
41	1990 07 08.88160	18 45 56.42	+04 05 15.5	479
41	1990 07 08.89619	18 45 55.81	+04 05 10.6	479
41	1990 07 11.86355	18 43 37.67	+03 46 59.1	479
41	1990 07 11.87593	18 43 36.89	+03 47 02.4	479
52	1990 06 28.90105	16 16 42.17	-12 51 13.4	479
52	1990 06 30.92466	16 15 37.60	-12 53 40.6	479
52	1990 06 30.92882	16 15 37.56	-12 53 41.0	479
52	1990 06 30.94619	16 15 36.75	-12 53 43.8	479
85	1990 07 27.91737	20 24 25.04	+02 52 47.1	479
85	1990 07 27.93334	20 24 24.31	+02 52 44.3	479
107	1990 06 30.03195	19 40 51.45	-09 19 13.8	479
107	1990 06 30.07657	19 40 49.65	-09 19 18.0	479
107	1990 07 10.02674	19 34 15.17	-09 36 18.2	479
107	1990 07 10.04896	19 34 14.25	-09 36 19.8	479
148	1990 07 10.01077	19 58 24.72	-00 38 19.9	479
148	1990 07 10.02674	19 58 24.04	-00 38 25.8	479
148	1990 07 11.90070	19 56 53.64	-00 52 18.4	479
148	1990 07 11.91389	19 56 52.83	-00 52 22.9	479
173	1990 06 17.03230	17 25 10.03	-03 12 42.2	479
173	1990 06 22.91251	17 19 58.75	-03 21 49.7	479
181	1990 06 22.96980	16 38 44.98	+01 35 48.3	479
194	1990 07 09.97257	20 48 46.33	+04 25 20.4	479
194	1990 07 09.98612	20 48 46.00	+04 25 18.3	479
194	1990 07 21.02049	20 43 32.73	+02 54 02.4	479
194	1990 07 21.02327	20 43 32.69	+02 54 00.1	479
241	1990 07 20.99167	20 34 21.50	-13 51 32.2	479
329	1990 06 24.94445	17 38 07.59	+03 18 16.1	479
329	1990 06 24.96112	17 38 06.65	+03 18 14.3	479
387	1990 05 25.91042	15 06 50.89	+13 41 18.0	479

387	1990 05 26.89653	15 06 04.56	+13 38 02.9				479
387	1990 05 31.89549	15 02 25.80	+13 16 20.0				479
434	1990 07 21.04098	20 40 30.18	+19 05 33.1				479
434	1990 07 21.06042	20 40 29.24	+19 05 23.8				479
585	1990 06 19.96910	17 16 20.02	-10 36 18.8				479
585	1990 06 20.98855	17 15 23.04	-10 36 04.0				479
618	1990 06 19.89966	17 09 34.00	-10 07 40.4				479
618	1990 06 21.04445	17 08 38.18	-10 12 00.3				479
618	1990 06 22.90070	17 07 09.76	-10 19 10.5				479
660	1990 07 22.92882	19 00 32.47	-03 35 09.6				479

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

1989 YH7	1990 01 03.08819	06 47 30.94	+20 07 08.5				511
1989 YH7	1990 01 03.11250	06 47 29.45	+20 07 15.8			17.2	511
1989 YK8	1990 01 01.93125	05 51 37.69	+18 54 57.1				511
1989 YK8	1990 01 02.02431	05 51 33.09	+18 55 04.5			17.3	511
168	1990 01 04.05764	06 21 49.69	+17 13 05.3				511
168	1990 01 04.08056	06 21 48.59	+17 13 06.8			15.0	511
4377	1990 01 04.05764	06 16 32.90	+20 01 53.1				511
4377	1990 01 04.08056	06 16 31.39	+20 01 52.9			17.4	511

552 San Vittore
E. Colombini, Via S. Vittore 44, I-40136 Bologna, Italy
Observers C. Vacchi, G. Sassi
Measurers C. Vacchi, V. Goretti, E. Colombini
AGK3, SAOC
0.45-m f/5 reflector and (1) 0.25-m f/2.5 Schmidt

4540	1990 05 17.83611	12 40 45.75	-10 42 58.9			16.8	552
4540	1990 05 17.86319	12 40 45.37	-10 42 50.8				552

553 Chorzow
I. Wlodarczyk, Planetarium and Astronomical Observatory,
PL-41501 Chorzow 1 s.p.10, Poland
Observers J. Desselberger, T. Firszt, J. Gasior, T. Modrzejowski, S. Mzyk, R. Smilowski, M. Szczepanski, I. Wlodarczyk
From Acta Astronomica

18	1990 02 23.00435	11 18 41.43	+08 09 15.3				553
18	1990 02 23.02727	11 18 40.26	+08 09 28.4				553
18	1990 03 16.92980	10 58 49.66	+11 29 46.4				553
18	1990 03 16.94608	10 58 48.85	+11 29 49.8				553
18	1990 03 16.96973	10 58 47.78	+11 30 08.5				553
18	1990 03 18.91016	10 57 07.89	+11 45 38.6				553
18	1990 03 18.92995	10 57 06.88	+11 45 48.9				553
18	1990 03 18.95252	10 57 05.75	+11 45 59.9				553
39	1990 03 17.00239	13 17 56.29	+00 50 04.5				553
39	1990 03 17.02264	13 17 55.60	+00 50 11.1				553
39	1990 03 17.04389	13 17 54.81	+00 50 25.7				553

568 Mauna Kea Observatory
D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive,
Honolulu, HI 96822, U.S.A.
Observers D. J. Tholen, J. Spencer
2.24-m and IRTF telescope encoders
AGK3, SAOC, PPM

1927	TC	1990	08	22.50607	23	26	24.56	-05	15	25.3	13.0V	568
944		1990	08	22.55686	01	52	57.90	-06	27	50.4	15.6V	568
951		1989	11	20.54201	09	13	27.56	+12	51	06.3		568
951		1990	01	18.53113	09	03	03.72	+10	44	41.2		568
951		1990	02	22.47569	08	27	05.51	+12	48	50.0		568
951		1990	03	12.34800	08	19	01.94	+13	40	12.8		568
951		1990	04	14.26597	08	29	43.42	+13	58	19.6		568
951		1990	05	18.32792	09	04	23.14	+12	27	32.4		568

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

434		1990	07	26.96842	20	35	39.20	+18	02	32.7		591
434		1990	07	26.98157	20	35	38.48	+18	02	22.6		591
702		1990	07	19.97394	21	45	23.65	+01	59	03.1		591
702		1990	07	19.98681	21	45	23.14	+01	59	06.5		591
790		1990	07	20.00334	23	11	44.20	+22	53	39.3		591
790		1990	07	20.01636	23	11	44.13	+22	53	45.2		591
1627		1990	05	18.95054	13	59	39.44	+14	48	25.1		591
1627		1990	05	18.96338	13	59	38.55	+14	48	28.7		591

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

1927	TC	1990	07	20.39035	23	01	06.54	-19	59	30.7		657
1927	TC	1990	07	20.41882	23	01	08.95	-19	58	57.8		657
1927	TC	1990	08	02.42889	23	16	18.51	-15	06	29.4		657
1927	TC	1990	08	02.45111	23	16	19.55	-15	05	56.6		657
1981	WM4	1990	07	20.29868	20	53	38.53	-02	18	32.5		657
1981	WM4	1990	07	20.34660	20	53	36.26	-02	18	23.5		657
1988	BW3	1990	07	19.37785	21	38	10.49	-01	35	21.5		657
1988	BW3	1990	07	20.30701	21	37	40.06	-01	35	51.1		657
1988	BW3	1990	07	20.35771	21	37	38.14	-01	35	52.2		657
1990	OS	1990	07	29.42812	22	30	02.94	-22	08	33.0		657
1990	OS	1990	07	31.35806	23	02	13.89	-20	24	04.2		657
1990	OS	1990	07	31.36361	23	02	19.75	-20	23	43.5		657
1990	OS	1990	08	01.41569	23	23	50.39	-18	59	07.5		657
1990	OS	1990	08	01.43514	23	24	15.20	-18	57	21.8		657
1990	OS	1990	08	02.41222	23	47	12.95	-17	14	33.6		657
1990	OS	1990	08	02.42125	23	47	26.07	-17	13	28.4		657
1990	OS	1990	08	03.40944	00	13	34.87	-15	01	40.9		657
1990	OS	1990	08	03.41569	00	13	44.98	-15	00	45.0		657
51		1990	07	19.33062	21	36	00.33	-02	55	56.5		657
51		1990	07	19.37785	21	35	58.49	-02	56	07.1		657
394		1990	08	02.42889	23	15	58.80	-16	24	43.7		657
394		1990	08	02.45111	23	15	58.53	-16	24	48.0		657
1436		1990	07	20.29868	20	50	51.57	-01	25	23.3		657
1436		1990	07	20.34660	20	50	49.39	-01	25	16.4		657
2193		1990	02	14.19868	06	42	09.89	+37	47	40.9		657
2433		1990	07	28.33403	21	31	07.64	+00	47	15.9		657
2433		1990	07	28.38681	21	31	05.42	+00	46	58.0		657
2433		1990	07	29.41562	21	30	21.63	+00	41	24.2		657
2433		1990	07	29.44479	21	30	20.13	+00	41	18.4		657
3051		1990	07	19.33062	21	38	36.06	-00	33	17.4		657
3051		1990	07	19.37785	21	38	34.32	-00	32	51.8		657
3051		1990	07	28.33403	21	32	09.46	+00	36	56.0		657
3051		1990	07	28.38681	21	32	06.63	+00	37	16.3		657
3051		1990	07	29.41562	21	31	15.19	+00	44	23.3		657
3051		1990	07	29.44479	21	31	13.56	+00	44	39.4		657

675 Palomar
J. Gibson, OAO Corporation and Jet Propulsion Laboratory, MS 238-332, Pasadena, CA 91109, U.S.A. (1)
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 T. Gehrels (4, L), J. Gibson (1, C), E. Helin (2, S), H. E. Holt (3, S), H. R. Holt (3, S), D. H. Levy (3, S), K. Lawrence (2, S), J. Michaud (3, S), B. Roman (2, S)
Measurers E. Bowell (6), J. Gibson (1), K. Lawrence (2), J. Michaud (2), C. M. Olmstead (6), B. Roman (2), C. J. van Houten (4), I. van Houten-Groeneveld (4), A. Wisse (4)
1.5-m reflector + CCD (C), 1.2-m (L) and 0.46-m (S) Schmidt telescopes

1969 TJ2	1990 07 27.35399	21 40 25.47	-15 45 21.0		17.8	9	675
1969 TJ2	1990 07 27.38003	21 40 24.31	-15 45 27.6			9	675
1974 VG	1990 07 30.37146	22 23 08.61	-25 48 19.9		18.0	9	675
1974 VG	1990 07 30.40573	22 23 07.25	-25 48 31.8			9	675
1975 SS	1990 07 26.41042	22 00 35.85	+00 32 22.9		18.0	9	675
1975 SS	1990 07 26.45261	22 00 34.39	+00 32 17.0			9	675
1975 SS	1990 07 28.39479	21 59 30.21	+00 27 08.8		17.8	9	675
1975 SS	1990 07 28.42639	21 59 28.94	+00 27 02.2			9	675
1975 VZ	1990 07 27.35399	21 41 31.71	-13 13 29.2		17.0	9	675
1975 VZ	1990 07 27.38003	21 41 30.65	-13 13 36.8			9	675
1975 VZ	1990 07 30.44080	21 39 22.23	-13 29 02.0		17.2	9	675
1975 VZ	1990 07 30.47014	21 39 20.85	-13 29 10.6			9	675
1976 GD2	1990 07 25.33056	20 38 32.66	-02 52 58.7		16.8	9	675
1976 GD2	1990 07 28.27674	20 35 43.76	-03 06 35.6		17.0	9	675
1976 GD2	1990 07 28.31007	20 35 41.97	-03 06 45.0			9	675
1976 GD2	1990 07 30.31500	20 33 46.36	-03 17 03.2		17.0	9	675
1976 GD2	1990 07 30.33958	20 33 44.85	-03 17 10.8			9	675
1976 GJ2	1990 07 22.36441	22 08 45.87	+05 36 54.9		16.0	2	675
1976 GJ2	1990 07 22.39913	22 08 44.88	+05 36 55.0			2	675
1976 GJ2	1990 07 23.42986	22 08 16.51	+05 36 08.1			2	675
1976 GJ2	1990 07 23.46059	22 08 15.49	+05 36 07.2			2	675
1977 RD3	1990 07 26.35677	21 47 14.69	-21 31 14.3		17.2	9	675
1977 RD3	1990 07 26.38785	21 47 13.42	-21 31 25.9			9	675
1978 RY5	1990 07 29.39149	22 38 29.92	-20 20 55.2		17.8	9	675
1978 RY5	1990 07 29.46441	22 38 27.13	-20 21 09.9			9	675
1978 RY5	1990 07 30.41354	22 37 51.96	-20 24 35.3			9	675
1980 FH5	1990 07 28.34149	22 06 34.10	-25 13 16.0		18.0	9	675
1980 FH5	1990 07 28.37465	22 06 32.26	-25 13 20.1			9	675
1980 FH5	1990 07 30.37146	22 04 48.56	-25 18 54.3		17.8	9	675
1980 FH5	1990 07 30.40573	22 04 46.70	-25 18 59.6			9	675
1981 EZ2	1990 07 28.27674	20 35 46.21	-04 01 29.7		17.5	9	675
1981 EZ2	1990 07 28.31007	20 35 44.43	-04 01 33.9			9	675
1981 EZ2	1990 07 30.31500	20 33 56.37	-04 08 10.1		17.8	9	675
1981 EZ2	1990 07 30.33958	20 33 54.96	-04 08 13.2			9	675
1982 VC3	1990 07 25.34618	22 05 21.89	-22 33 40.9			9	675
1982 VC3	1990 07 25.38021	22 05 21.09	-22 33 55.3			9	675
1982 VC3	1990 07 28.34149	22 04 25.12	-22 55 52.3		17.2	9	675
1982 VC3	1990 07 28.37465	22 04 24.21	-22 56 07.0			9	675
1982 VC3	1990 07 30.37146	22 03 37.53	-23 11 04.7		17.0	9	675
1982 VC3	1990 07 30.40573	22 03 36.61	-23 11 23.0			9	675
1983 HJ	1990 07 27.35399	21 34 58.36	-15 08 03.5		17.8	9	675

1983	HJ	1990	07	27.38003	21	34	57.28	-15	08	11.5		9 675
1983	HJ	1990	07	30.47014	21	32	49.82	-15	20	10.1	17.8	9 675
1983	HB1	1990	07	29.39149	22	44	59.23	-19	30	32.3	16.5	9 675
1983	HB1	1990	07	29.46441	22	44	57.66	-19	31	10.1		9 675
1983	HB1	1990	07	30.37868	22	44	38.80	-19	39	15.1	16.5	9 675
1983	HB1	1990	07	30.41354	22	44	37.97	-19	39	34.1		9 675
1985	GW	1990	07	25.34618	22	12	20.50	-18	45	38.5		9 675
1985	GW	1990	07	25.38021	22	12	19.16	-18	45	52.3		9 675
1985	PG1	1990	07	27.41059	22	38	47.38	+01	56	15.0	17.5	9 675
1985	PG1	1990	07	27.45000	22	38	46.52	+01	56	08.1		9 675
1985	PG1	1990	07	30.45365	22	37	42.90	+01	49	29.2	17.5	9 675
1985	PG1	1990	07	30.47882	22	37	42.26	+01	49	26.9		9 675
1985	RE4	1990	07	27.35399	21	29	34.00	-13	28	13.6	16.5	9 675
1985	RE4	1990	07	27.38003	21	29	32.97	-13	28	25.1		9 675
1985	VP	1990	07	26.35677	21	49	58.37	-26	41	46.3	17.5	9 675
1985	VP	1990	07	26.38785	21	49	56.95	-26	41	50.4		9 675
1986	QZ2	1990	07	29.39149	22	40	58.14	-21	33	09.8	17.5	9 675
1986	QZ2	1990	07	29.46441	22	40	55.01	-21	33	23.1		9 675
1986	QZ2	1990	07	30.37868	22	40	17.76	-21	36	18.7	17.2	9 675
1986	QZ2	1990	07	30.41354	22	40	16.16	-21	36	25.6		9 675
1986	RF	1990	07	30.28837	21	46	14.26	+03	56	20.2	16.8	9 675
1986	RF	1990	07	30.42382	21	46	08.78	+03	55	44.4		9 675
1987	RM1	1990	07	25.26754	20	08	16.28	-17	15	41.2	16.5	9 675
1987	RM1	1990	07	25.30590	20	08	13.90	-17	15	53.1		9 675
1987	RM1	1990	07	27.29514	20	06	13.91	-17	26	17.4	17.0	9 675
1987	RM1	1990	07	27.32674	20	06	11.92	-17	26	27.1		9 675
1987	RM1	1990	07	28.26840	20	05	15.62	-17	31	21.0	17.0	9 675
1987	RM1	1990	07	28.30243	20	05	13.51	-17	31	32.2		9 675
1987	SK	1990	07	27.35399	21	40	35.92	-16	08	24.3	17.0	9 675
1987	SK	1990	07	27.38003	21	40	34.52	-16	08	29.5		9 675
1987	SK	1990	07	30.36257	21	38	12.03	-16	19	10.5		9 675
1987	SK	1990	07	30.39757	21	38	10.16	-16	19	18.9		9 675
1987	SW1	1990	08	18.18142	17	12	39.04	-09	51	03.8	17.0	2 675
1987	SW1	1990	08	18.20990	17	12	39.75	-09	51	09.4		2 675
1987	SW1	1990	08	21.17448	17	13	51.93	-10	02	32.1		2 675
1987	UU2	1989	03	04.36302	11	28	57.69	+01	51	52.1		2 675
1987	UU2	1989	03	06.29549	11	27	06.13	+02	04	23.2	17.0	2 675
1987	UU2	1989	03	06.34028	11	27	03.38	+02	04	42.3		2 675
1987	UU2	1990	07	19.33906	20	31	22.28	-16	21	39.4		2 675
1987	UU2	1990	07	20.35330	20	30	26.43	-16	24	42.0		2 675
1987	UU2	1990	07	20.45365	20	30	20.30	-16	25	03.7		2 675
1988	AF	1990	07	26.41042	21	56	45.95	-03	45	44.6	17.2	9 675
1988	AF	1990	07	26.45261	21	56	43.97	-03	45	41.5		9 675
1988	AF	1990	07	28.39479	21	55	14.99	-03	42	58.3	17.5	9 675
1988	AF	1990	07	28.42639	21	55	13.46	-03	42	57.9		9 675
1988	AW1	1990	07	27.35399	21	30	50.43	-13	59	47.6	16.2	9 675
1988	AW1	1990	07	27.38003	21	30	48.75	-13	59	43.9		9 675
1988	CD4	1990	07	24.34618	20	07	36.04	-10	36	02.0	16.8	9 675
1988	CD4	1990	07	24.37847	20	07	34.42	-10	36	02.1		9 675
1988	CD4	1990	07	25.26754	20	06	49.42	-10	36	12.2	16.8	9 675
1988	CD4	1990	07	25.30590	20	06	47.35	-10	36	14.0		9 675
1988	CD4	1990	07	27.30590	20	05	05.56	-10	36	44.2	16.8	9 675
1988	CD4	1990	07	28.25104	20	04	17.88	-10	37	08.3	16.8	9 675
1988	CD4	1990	07	28.26840	20	04	16.98	-10	37	10.7	16.8	9 675
1988	CD4	1990	07	28.28490	20	04	16.11	-10	37	09.7		9 675
1988	CD4	1990	07	28.30243	20	04	15.22	-10	37	12.0		9 675
1988	CD4	1990	07	29.26285	20	03	26.73	-10	37	36.1	17.0	9 675
1988	CD4	1990	07	29.29444	20	03	25.10	-10	37	37.3		9 675
1988	CD4	1990	07	30.30538	20	02	34.44	-10	38	10.5	16.8	9 675

1988	CD4	1990	07	30.33212	20	02	33.10	-10	38	12.2		9 675
1988	EG	1990	07	12.32178	18	53	30.66	-12	24	13.6		1 675
1988	EG	1990	07	12.32508	18	53	30.03	-12	24	13.5		1 675
1988	EG	1990	07	12.34255	18	53	26.86	-12	24	15.6		1 675
1988	EG	1990	07	13.29942	18	50	37.57	-12	25	29.7		1 675
1988	EG	1990	07	13.31034	18	50	35.60	-12	25	31.3		1 675
1988	EG	1990	07	13.31523	18	50	34.70	-12	25	31.7		1 675
1988	EG	1990	07	13.31940	18	50	33.92	-12	25	32.3		1 675
1988	EG	1990	07	13.33416	18	50	31.23	-12	25	33.4		1 675
1989	CT	1990	07	27.29514	20	04	47.89	-18	48	20.3	17.0	9 675
1989	CT	1990	07	27.32674	20	04	45.95	-18	48	25.3		9 675
1989	CY1	1990	07	27.35399	21	39	21.88	-11	52	51.3	17.8	9 675
1989	CY1	1990	07	27.38003	21	39	20.54	-11	52	59.9		9 675
1989	CY1	1990	07	30.44080	21	36	42.71	-12	08	18.3	17.8	9 675
1989	CY1	1990	07	30.47014	21	36	41.17	-12	08	26.9		9 675
1989	EF	1990	07	19.43194	21	26	59.30	-02	01	59.2		2 675
1989	EF	1990	07	19.46528	21	26	57.91	-02	02	08.5		2 675
1989	EF	1990	07	22.35764	21	25	05.04	-02	16	03.3		2 675
1989	EF	1990	07	22.39236	21	25	03.60	-02	16	15.5		2 675
1989	FC	1990	06	18.18708	12	20	32.70	+05	15	46.7		1 675
1989	FC	1990	06	18.19237	12	20	33.42	+05	15	41.8		1 675
1989	FC	1990	06	18.19758	12	20	34.16	+05	15	36.6		1 675
1989	FO	1990	07	27.35399	21	39	47.40	-15	59	40.8	16.8	9 675
1989	FO	1990	07	27.38003	21	39	45.82	-15	59	49.5		9 675
1989	FO	1990	07	30.36257	21	37	26.38	-16	17	51.9		9 675
1989	FO	1990	07	30.39757	21	37	24.59	-16	18	05.8		9 675
1989	FO	1990	07	30.44080	21	37	22.38	-16	18	22.9	17.5	9 675
1989	FO	1990	07	30.47014	21	37	20.85	-16	18	34.0		9 675
1989	FW	1990	07	26.35677	21	46	00.01	-22	48	07.8	17.2	9 675
1989	FW	1990	07	26.38785	21	45	58.57	-22	48	25.9		9 675
1989	FW	1990	07	29.39878	21	43	45.68	-23	16	40.1	17.0	9 675
1989	FW	1990	07	29.43403	21	43	43.96	-23	16	59.4		9 675
1989	FW	1990	07	30.36257	21	43	01.38	-23	25	38.3		9 675
1989	FW	1990	07	30.39757	21	42	59.71	-23	25	57.8		9 675
1989	GP6	1990	07	27.35399	21	54	38.46	-14	02	15.1	17.2	9 675
1989	GP6	1990	07	27.38003	21	54	37.58	-14	02	27.6		9 675
1989	GP6	1990	07	30.44080	21	52	50.72	-14	26	48.6	17.2	9 675
1989	GP6	1990	07	30.47014	21	52	49.70	-14	27	03.2		9 675
1989	JG	1990	07	29.39149	22	41	31.15	-18	03	55.5	17.8	9 675
1989	JG	1990	07	29.46441	22	41	28.69	-18	04	28.0		9 675
1989	JG	1990	07	30.37868	22	40	59.31	-18	11	06.9	17.8	9 675
1989	JG	1990	07	30.41354	22	40	58.09	-18	11	22.1		9 675
1990	HQ	1990	05	18.17326	12	12	50.28	+26	48	40.0	17.0	2 675
1990	HQ	1990	05	18.19688	12	12	51.02	+26	48	59.1		2 675
1990	KO	1990	07	18.20538	16	32	26.38	+05	15	02.8		2 675
1990	KO	1990	07	18.23056	16	32	26.43	+05	15	10.7		2 675
1990	KO	1990	07	21.19288	16	32	45.41	+05	28	31.7		2 675
1990	KO	1990	07	21.22014	16	32	45.57	+05	28	38.1		2 675
1990	KO	1990	07	24.21681	16	33	25.07	+05	38	45.5	16.8	9 675
1990	KO	1990	07	24.24688	16	33	25.48	+05	38	49.9		9 675
1990	KO	1990	07	26.18681	16	34	02.05	+05	43	41.5	17.0	9 675
1990	KO	1990	07	26.22309	16	34	02.69	+05	43	46.0		9 675
1990	MB	1990	07	24.21681	16	34	08.27	+06	51	53.6	17.8	9 675
1990	MB	1990	07	24.24688	16	34	08.69	+06	52	02.5		9 675
1990	MB	1990	07	26.18681	16	34	50.58	+07	01	15.9	18.0	9 675
1990	MB	1990	07	26.22309	16	34	51.24	+07	01	25.9		9 675
1990	ME	1990	08	18.18142	17	14	59.96	-09	51	59.4	16.7	2 675
1990	ME	1990	08	18.20990	17	15	00.83	-09	52	13.7		2 675
1990	ME	1990	08	21.17448	17	16	29.06	-10	14	32.1		2 675

1990	MG		1990	07	25.34618	21	58	43.41	-18	15	28.6	16.5	9	675
1990	MG		1990	07	25.38021	21	58	42.39	-18	15	42.1		9	675
1990	MG		1990	07	29.39878	21	56	40.04	-18	43	26.3	16.5	9	675
1990	MG		1990	07	29.42681	21	56	39.00	-18	43	36.0	16.5	9	675
1990	MG		1990	07	29.43403	21	56	38.72	-18	43	40.3		9	675
1990	MG		1990	07	29.45677	21	56	37.85	-18	43	49.4		9	675
1990	MG		1990	07	30.36257	21	56	06.32	-18	50	14.2	16.5	9	675
1990	MG		1990	07	30.39757	21	56	05.33	-18	50	27.6		9	675
1990	MJ		1990	07	18.30191	20	05	46.18	+19	53	37.2		2	675
1990	MJ		1990	07	18.33420	20	05	43.68	+19	54	33.0		2	675
1990	MJ		1990	07	21.34774	20	02	04.61	+21	17	07.0		2	675
1990	MJ		1990	07	21.37569	20	02	02.51	+21	17	51.6		2	675
1990	MN		1990	07	18.25625	18	40	24.68	-14	46	42.0		2	675
1990	MN		1990	07	18.28021	18	40	23.41	-14	46	56.8		2	675
1990	MN		1990	07	21.25729	18	37	59.82	-15	16	05.4		2	675
1990	MN		1990	07	21.28247	18	37	58.61	-15	16	19.8		2	675
1990	MV		1990	07	20.28681	18	38	14.28	-30	07	42.4		2	675
1990	MV		1990	07	20.32066	18	38	12.72	-30	08	03.4		2	675
1990	MV		1990	07	23.19774	18	36	20.19	-30	34	07.4		2	675
1990	MV		1990	07	23.22413	18	36	19.25	-30	34	22.8		2	675
1990	MX		1990	07	20.31233	18	25	32.29	-28	52	36.2		2	675
1990	MX		1990	07	20.34132	18	25	30.72	-28	52	40.1		2	675
1990	MX		1990	07	23.19167	18	23	19.95	-28	59	09.7		2	675
1990	MX		1990	07	23.21858	18	23	18.70	-28	59	13.2		2	675
1990	OA		1990	07	22.29479	20	40	49.55	-12	59	47.8	15.5	2	675
1990	OA		1990	07	22.31892	20	40	51.12	-13	00	29.9		2	675
1990	OA		1990	07	23.26250	20	42	04.20	-13	28	59.9		2	675
1990	OA		1990	07	23.40486	20	42	13.41	-13	33	28.9		2	675
1990	OA		1990	08	16.28524	21	06	57.33	-23	26	33.1	16.0	2	675
1990	OA		1990	08	16.31076	21	06	58.46	-23	26	59.3		2	675
1990	OA		1990	08	19.28472	21	09	36.27	-24	14	17.7		2	675
1990	OA		1990	08	19.31389	21	09	37.57	-24	14	42.0		2	675
1990	OB	*	1990	07	19.41510	20	41	27.78	+08	58	54.4	16.3	2	675
1990	OB		1990	07	19.44931	20	41	26.20	+08	58	52.7		2	675
1990	OB		1990	07	22.23142	20	39	25.03	+08	56	33.6		2	675
1990	OB		1990	07	22.30087	20	39	21.87	+08	56	27.9		2	675
1990	OC	*	1990	07	19.41510	20	49	01.66	+06	05	35.7	16.0	2	675
1990	OC		1990	07	19.44931	20	49	00.33	+06	05	30.7		2	675
1990	OC		1990	07	22.23142	20	47	10.49	+05	57	23.5		2	675
1990	OC		1990	07	22.32500	20	47	06.46	+05	57	02.8		2	675
1990	OD	*	1990	07	19.41510	20	51	03.73	+05	20	23.7	16.0	2	675
1990	OD		1990	07	19.44931	20	51	02.31	+05	20	30.8		2	675
1990	OD		1990	07	20.41701	20	50	22.45	+05	23	35.5	16.0	2	675
1990	OD		1990	07	20.44740	20	50	21.24	+05	23	43.5		2	675
1990	OD		1990	07	22.23142	20	49	05.70	+05	28	36.4		2	675
1990	OD		1990	07	22.32500	20	49	01.43	+05	28	48.4		2	675
1990	OD		1990	07	23.30295	20	48	18.87	+05	31	00.6		2	675
1990	OD		1990	07	23.33455	20	48	17.25	+05	31	03.7		2	675
1990	OE	*	1990	07	19.41510	20	53	32.23	+05	02	12.2	16.0	2	675
1990	OE		1990	07	19.44931	20	53	30.70	+05	02	18.2		2	675
1990	OE		1990	07	22.23142	20	51	25.83	+05	08	50.1		2	675
1990	OE		1990	07	22.32500	20	51	21.29	+05	08	59.9		2	675
1990	OF	*	1990	07	20.42847	21	08	27.05	+05	02	45.7	16.3	2	675
1990	OF		1990	07	20.46563	21	08	25.68	+05	03	06.2		2	675
1990	OF		1990	07	22.33750	21	07	18.87	+05	18	52.1		2	675
1990	OF		1990	07	22.37049	21	07	17.63	+05	19	11.8		2	675
1990	OG	*	1990	07	20.42847	21	18	13.61	+03	04	13.8	16.5	2	675
1990	OG		1990	07	20.46563	21	18	12.08	+03	04	29.4		2	675
1990	OG		1990	07	22.33750	21	16	58.34	+03	16	34.9		2	675

1990	OG		1990	07	22.37049	21	16	57.08	+03	16	49.1	2 675
1990	OH	*	1990	07	22.41181	21	02	58.72	+10	12	17.8	16.0 2 675
1990	OH		1990	07	22.44028	21	02	57.84	+10	12	23.2	2 675
1990	OH		1990	07	23.36233	21	02	28.14	+10	15	58.7	2 675
1990	OH		1990	07	23.38628	21	02	27.29	+10	16	04.2	2 675
1990	OJ	*	1990	07	18.37500	20	33	20.28	-06	24	34.6	16.5 2 675
1990	OJ		1990	07	18.40000	20	33	18.87	-06	24	27.6	2 675
1990	OJ		1990	07	21.40538	20	30	36.32	-06	11	58.5	2 675
1990	OJ		1990	07	21.42986	20	30	35.10	-06	11	52.0	2 675
1990	OK	*	1990	07	18.37500	20	36	52.12	-07	13	23.7	16.5 2 675
1990	OK		1990	07	18.40000	20	36	50.73	-07	13	20.3	2 675
1990	OK		1990	07	21.40538	20	34	17.42	-07	06	41.6	2 675
1990	OK		1990	07	21.42986	20	34	16.01	-07	06	38.1	2 675
1990	OK		1990	07	25.33056	20	30	46.25	-07	00	36.2	17.0 9 675
1990	OK		1990	07	25.36337	20	30	44.32	-07	00	34.2	9 675
1990	OK		1990	07	28.27674	20	28	02.39	-06	57	54.8	17.2 9 675
1990	OK		1990	07	30.31500	20	26	07.61	-06	56	58.8	16.8 9 675
1990	OK		1990	07	30.33958	20	26	06.11	-06	56	58.1	9 675
1990	OL	*	1990	07	22.42882	21	28	23.85	+03	30	06.1	16.0 2 675
1990	OL		1990	07	22.45764	21	28	24.84	+03	29	33.3	2 675
1990	OL		1990	07	23.36840	21	29	02.80	+03	11	08.8	2 675
1990	OL		1990	07	23.39219	21	29	03.61	+03	10	39.0	2 675
1990	OL		1990	07	27.36250	21	31	34.58	+01	43	05.9	9 675
1990	OL		1990	07	27.39340	21	31	35.56	+01	42	26.3	9 675
1990	OL		1990	07	29.34497	21	32	43.10	+00	55	20.7	17.0 9 675
1990	OL		1990	07	29.37857	21	32	43.94	+00	54	36.0	9 675
1990	OL		1990	07	30.42382	21	33	18.03	+00	28	14.0	17.0 9 675
1990	ON	*	1990	07	18.37500	20	37	56.39	-04	21	43.8	16.5 2 675
1990	ON		1990	07	18.40000	20	37	55.21	-04	21	42.9	2 675
1990	ON		1990	07	21.40538	20	35	43.02	-04	20	56.7	2 675
1990	ON		1990	07	21.42986	20	35	41.96	-04	20	57.1	2 675
1990	OO	*	1990	07	18.37500	20	39	58.85	-04	26	56.2	16.5 2 675
1990	OO		1990	07	18.40000	20	39	57.69	-04	27	00.4	2 675
1990	OO		1990	07	21.40538	20	37	49.69	-04	36	25.0	2 675
1990	OO		1990	07	21.42986	20	37	48.63	-04	36	29.9	2 675
1990	OP	*	1990	07	18.37500	20	40	07.28	-04	06	32.6	16.0 2 675
1990	OP		1990	07	18.40000	20	40	06.05	-04	06	44.4	2 675
1990	OP		1990	07	21.40538	20	37	49.26	-04	33	23.2	2 675
1990	OP		1990	07	21.42986	20	37	48.09	-04	33	36.6	2 675
1990	OP		1990	07	25.33056	20	34	42.40	-05	11	31.3	16.2 9 675
1990	OP		1990	07	25.36337	20	34	40.73	-05	11	51.8	9 675
1990	OP		1990	07	28.27674	20	32	18.74	-05	42	17.8	16.8 9 675
1990	OP		1990	07	28.31007	20	32	17.02	-05	42	39.9	9 675
1990	OP		1990	07	30.33958	20	30	36.86	-06	05	00.2	16.8 9 675
1990	OQ	*	1990	07	18.37500	20	41	33.43	-04	27	51.8	16.5 2 675
1990	OQ		1990	07	18.40000	20	41	32.10	-04	27	42.4	2 675
1990	OQ		1990	07	21.40538	20	39	01.43	-04	10	00.9	2 675
1990	OQ		1990	07	21.42986	20	39	00.09	-04	09	53.7	2 675
1990	OR	*	1990	07	22.42326	22	02	55.26	+03	41	12.2	16.0 2 675
1990	OR		1990	07	22.45191	22	02	53.88	+03	41	34.3	2 675
1990	OR		1990	07	23.43628	22	02	06.48	+03	56	09.2	2 675
1990	OR		1990	07	23.46667	22	02	04.77	+03	56	31.5	2 675
1990	OS	*	1990	07	21.41111	21	17	55.70	-24	22	57.9	16.0 2 675
1990	OS		1990	07	21.43889	21	18	03.75	-24	22	49.1	2 675
1990	OS		1990	07	26.35677	21	53	45.52	-23	33	57.1	16.3 3 675
1990	OS		1990	07	26.38785	21	54	02.25	-23	33	23.3	3 675
1990	OS		1990	07	28.34149	22	15	29.58	-22	46	54.9	9 675
1990	OS		1990	07	28.37465	22	15	53.00	-22	45	55.8	9 675
1990	OS		1990	07	29.39149	22	29	32.23	-22	09	46.9	9 675

1990	OS		1990	07	30.37868	22	44	48.66	-21	23	38.6	9 675
1990	OT	*	1990	07	22.41753	21	43	16.86	-06	01	15.1	16.3 2 675
1990	OT		1990	07	22.44618	21	43	15.64	-06	01	08.1	2 675
1990	OT		1990	07	23.42361	21	42	37.63	-05	57	59.6	2 675
1990	OT		1990	07	23.45486	21	42	36.26	-05	57	53.4	2 675
1990	OU	*	1990	07	22.41753	21	43	58.39	-05	21	41.8	16.3 2 675
1990	OU		1990	07	22.44618	21	43	57.41	-05	21	41.5	2 675
1990	OU		1990	07	23.42361	21	43	26.93	-05	22	47.1	2 675
1990	OU		1990	07	23.45486	21	43	25.89	-05	22	49.7	2 675
1990	OV	*	1990	07	19.42049	20	54	36.92	-04	27	25.4	16.2 2 675
1990	OV		1990	07	19.45469	20	54	35.15	-04	27	29.3	2 675
1990	OV		1990	07	22.30660	20	52	21.66	-04	32	55.5	2 675
1990	OV		1990	07	22.33073	20	52	20.33	-04	32	59.6	2 675
1990	OW	*	1990	07	19.42049	21	04	50.15	-05	40	41.5	16.0 2 675
1990	OW		1990	07	19.45469	21	04	48.51	-05	40	51.8	2 675
1990	OW		1990	07	22.30660	21	02	41.13	-05	55	30.0	2 675
1990	OW		1990	07	22.33073	21	02	39.92	-05	55	38.8	2 675
1990	OX	*	1990	07	19.42049	21	05	06.12	-05	14	12.4	16.0 2 675
1990	OX		1990	07	19.45469	21	05	04.51	-05	14	17.0	2 675
1990	OX		1990	07	22.30660	21	03	01.15	-05	21	23.0	2 675
1990	OX		1990	07	22.33073	21	03	00.06	-05	21	26.5	2 675
1990	OY	*	1990	07	19.42049	21	10	09.51	-03	56	41.0	16.2 2 675
1990	OY		1990	07	19.45469	21	10	08.25	-03	56	58.5	2 675
1990	OY		1990	07	22.30660	21	08	38.22	-04	21	32.3	2 675
1990	OY		1990	07	22.33073	21	08	37.15	-04	21	45.3	2 675
1990	OZ	*	1990	07	20.41701	20	35	35.51	+00	50	29.3	16.3 2 675
1990	OZ		1990	07	20.44740	20	35	34.12	+00	50	19.9	2 675
1990	OZ		1990	07	23.30295	20	33	27.24	+00	35	29.4	2 675
1990	OZ		1990	07	23.33455	20	33	25.61	+00	35	23.8	2 675
1990	OZ		1990	08	16.24028	20	16	09.70	-02	35	39.7	16.7 2 675
1990	OZ		1990	08	16.26441	20	16	08.80	-02	35	53.6	2 675
1990	OZ		1990	08	19.18229	20	14	30.76	-03	04	32.2	2 675
1990	OZ		1990	08	19.20642	20	14	29.99	-03	04	45.3	2 675
1990	OA1	*	1990	07	22.36441	21	52	15.91	+07	52	21.4	15.7 2 675
1990	OA1		1990	07	22.39913	21	52	14.36	+07	52	33.5	2 675
1990	OA1		1990	07	23.42986	21	51	32.94	+07	58	08.0	2 675
1990	OA1		1990	07	23.46059	21	51	31.60	+07	58	19.0	2 675
1990	OB1	*	1990	07	22.36441	21	54	53.01	+04	42	13.9	16.3 2 675
1990	OB1		1990	07	22.39913	21	54	51.82	+04	42	19.1	2 675
1990	OB1		1990	07	23.42986	21	54	17.69	+04	44	34.4	2 675
1990	OB1		1990	07	23.46059	21	54	16.62	+04	44	38.1	2 675
1990	OB1		1990	07	29.34497	21	50	31.50	+04	50	36.2	17.0 9 675
1990	OB1		1990	07	29.37857	21	50	29.93	+04	50	37.8	9 675
1990	OC1	*	1990	07	22.36441	22	04	19.49	+04	32	30.1	16.3 2 675
1990	OC1		1990	07	22.39913	22	04	18.42	+04	32	34.0	2 675
1990	OC1		1990	07	23.42986	22	03	47.44	+04	34	28.0	2 675
1990	OC1		1990	07	23.46059	22	03	46.38	+04	34	30.2	2 675
1990	OE1		1990	07	27.35399	21	38	56.79	-14	45	08.8	16.8 9 675
1990	OE1		1990	07	27.38003	21	38	55.56	-14	45	15.2	9 675
1990	OE1		1990	07	30.44080	21	36	31.98	-14	57	55.7	16.5 9 675
1990	OE1		1990	07	30.47014	21	36	30.51	-14	58	01.7	9 675
1990	OF1	*	1990	07	18.31788	19	58	12.00	-04	15	12.4	16.0 2 675
1990	OF1		1990	07	18.34844	19	58	10.59	-04	15	23.0	2 675
1990	OF1		1990	07	21.34115	19	56	02.06	-04	36	01.4	2 675
1990	OF1		1990	07	21.36892	19	56	00.80	-04	36	13.2	2 675
1990	OG1	*	1990	07	20.37517	20	08	38.41	-06	01	23.7	16.0 2 675
1990	OG1		1990	07	20.39809	20	08	36.27	-06	00	59.6	2 675
1990	OG1		1990	07	22.25000	20	05	51.92	-05	29	16.7	2 675
1990	OG1		1990	07	22.27778	20	05	49.61	-05	28	49.7	2 675

1990	OH1	*	1990	07	20.23247	16	51	52.29	+02	23	54.5	16.3	2 675
1990	OH1		1990	07	20.26146	16	51	52.02	+02	24	02.3		2 675
1990	OH1		1990	07	22.19306	16	51	41.95	+02	32	03.9		2 675
1990	OH1		1990	07	22.21875	16	51	41.64	+02	32	08.6		2 675
1990	OJ1	*	1990	07	20.23247	17	01	06.45	-00	39	10.5	16.7	2 675
1990	OJ1		1990	07	20.26146	17	01	06.24	-00	39	19.5		2 675
1990	OJ1		1990	07	22.19306	17	00	56.28	-00	48	24.2		2 675
1990	OJ1		1990	07	22.21875	17	00	56.19	-00	48	32.1		2 675
1990	OK1	*	1990	07	27.41059	22	34	08.33	+00	54	02.1	16.0	9 675
1990	OK1		1990	07	27.45000	22	34	06.12	+00	55	25.6		9 675
1990	OK1		1990	07	30.45365	22	31	17.53	+02	42	50.4		9 675
1990	OK1		1990	07	30.47882	22	31	15.94	+02	43	45.1		9 675
1990	OK1		1990	08	18.34115	22	04	11.58	+13	58	28.8	14.7	2 675
1990	OK1		1990	08	18.36493	22	04	08.96	+13	59	15.2		2 675
1990	OK1		1990	08	21.27535	21	58	57.06	+15	33	46.4		2 675
1990	OK1		1990	08	21.44010	21	58	38.35	+15	38	58.2		2 675
1990	OL1	*	1990	07	25.34618	22	13	26.30	-18	05	29.9		9 675
1990	OL1		1990	07	25.38021	22	13	25.28	-18	05	36.4		9 675
1990	OL1		1990	07	29.42681	22	11	10.77	-18	18	12.7	17.8	9 675
1990	OL1		1990	07	29.45677	22	11	09.69	-18	18	18.0		9 675
1990	OM1	*	1990	07	25.34618	22	22	33.51	-19	02	26.6		9 675
1990	OM1		1990	07	25.38021	22	22	32.34	-19	02	40.0		9 675
1990	OM1		1990	07	29.39149	22	20	03.53	-19	29	08.8	17.5	9 675
1990	OM1		1990	07	29.42681	22	20	01.97	-19	29	22.4		9 675
1990	OM1		1990	07	29.45677	22	20	00.75	-19	29	33.9		9 675
1990	OM1		1990	07	29.46441	22	20	00.41	-19	29	37.1		9 675
1990	OM1		1990	07	30.37868	22	19	23.27	-19	35	45.5	17.5	9 675
1990	OM1		1990	07	30.41354	22	19	21.89	-19	36	01.2		9 675
1990	OQ1	*	1990	07	28.34149	22	10	09.85	-26	28	08.2	18.0	9 675
1990	OQ1		1990	07	28.37465	22	10	08.37	-26	28	18.3		9 675
1990	OQ1		1990	07	30.37146	22	08	40.41	-26	38	48.3	18.0	9 675
1990	OQ1		1990	07	30.40573	22	08	38.77	-26	38	57.7		9 675
1990	OR1	*	1990	07	29.39149	22	16	09.81	-19	50	12.6	17.5	9 675
1990	OR1		1990	07	29.46441	22	16	07.92	-19	50	41.9		9 675
1990	OR1		1990	07	30.37868	22	15	50.23	-19	57	25.4	17.5	9 675
1990	OR1		1990	07	30.41354	22	15	49.50	-19	57	42.3		9 675
1990	OS1	*	1990	07	29.39149	22	26	43.08	-22	12	09.6	17.0	9 675
1990	OS1		1990	07	29.46441	22	26	39.07	-22	12	22.8		9 675
1990	OS1		1990	07	30.37868	22	25	51.20	-22	15	17.8	17.2	9 675
1990	OS1		1990	07	30.41354	22	25	49.23	-22	15	24.1		9 675
1990	OT1	*	1990	07	29.39149	22	26	54.26	-20	43	12.7	17.5	9 675
1990	OT1		1990	07	29.46441	22	26	51.24	-20	43	43.5		9 675
1990	OT1		1990	07	30.37868	22	26	15.68	-20	50	18.7	17.8	9 675
1990	OT1		1990	07	30.41354	22	26	14.37	-20	50	32.6		9 675
1990	OU1	*	1990	07	29.39149	22	29	35.14	-18	49	32.1	18.0	9 675
1990	OU1		1990	07	29.46441	22	29	33.13	-18	50	08.8		9 675
1990	OU1		1990	07	30.37868	22	29	11.05	-18	58	06.1		9 675
1990	OU1		1990	07	30.41354	22	29	10.00	-18	58	25.0		9 675
1990	OV1	*	1990	07	29.39149	22	31	34.68	-20	19	41.5	17.2	9 675
1990	OV1		1990	07	29.46441	22	31	32.10	-20	20	12.1		9 675
1990	OV1		1990	07	30.37868	22	31	02.15	-20	26	39.9	17.2	9 675
1990	OV1		1990	07	30.41354	22	31	00.89	-20	26	54.6		9 675
1990	OW1	*	1990	07	29.39149	22	33	38.97	-18	14	24.9	17.2	9 675
1990	OW1		1990	07	29.46441	22	33	36.50	-18	14	43.4		9 675
1990	OW1		1990	07	30.37868	22	33	08.30	-18	18	59.6	17.0	9 675
1990	OW1		1990	07	30.41354	22	33	07.04	-18	19	09.0		9 675
1990	OX1	*	1990	07	29.39149	22	37	25.15	-17	36	21.8	17.5	9 675
1990	OX1		1990	07	29.46441	22	37	23.14	-17	36	50.3		9 675
1990	OX1		1990	07	30.37868	22	37	00.38	-17	43	12.3	17.2	9 675

1990	OX1		1990	07	30.41354	22	36	59.33	-17	43	26.2	9 675
1990	OY1	*	1990	07	29.39149	22	39	06.21	-18	39	24.6	17.2 9 675
1990	OY1		1990	07	29.46441	22	39	03.93	-18	39	50.8	9 675
1990	OY1		1990	07	30.37868	22	38	37.81	-18	45	36.3	16.8 9 675
1990	OY1		1990	07	30.41354	22	38	36.66	-18	45	49.8	9 675
1990	OZ1	*	1990	07	29.39149	22	39	12.99	-19	53	45.0	17.5 9 675
1990	OZ1		1990	07	29.46441	22	39	10.20	-19	54	07.1	9 675
1990	OZ1		1990	07	30.37868	22	38	36.18	-19	58	45.1	17.2 9 675
1990	OZ1		1990	07	30.41354	22	38	34.78	-19	58	55.7	9 675
1990	OA2	*	1990	07	29.39149	22	40	14.96	-22	42	26.5	17.5 9 675
1990	OA2		1990	07	29.46441	22	40	11.98	-22	42	25.4	9 675
1990	OA2		1990	07	30.37868	22	39	37.27	-22	42	08.7	17.2 9 675
1990	OA2		1990	07	30.41354	22	39	35.84	-22	42	08.5	9 675
1990	OB2	*	1990	07	29.39149	22	40	40.93	-19	56	09.7	17.2 9 675
1990	OB2		1990	07	29.46441	22	40	38.91	-19	55	58.8	9 675
1990	OB2		1990	07	30.37868	22	40	15.33	-19	53	52.6	16.8 9 675
1990	OB2		1990	07	30.41354	22	40	14.26	-19	53	47.7	9 675
1990	OC2	*	1990	07	29.39149	22	41	56.50	-22	40	05.9	17.5 9 675
1990	OC2		1990	07	29.46441	22	41	54.72	-22	40	31.5	9 675
1990	OC2		1990	07	30.37868	22	41	34.38	-22	45	51.9	17.5 9 675
1990	OC2		1990	07	30.41354	22	41	33.43	-22	46	04.2	9 675
1990	OD2	*	1990	07	29.39149	22	47	11.67	-22	31	09.9	17.5 9 675
1990	OD2		1990	07	29.46441	22	47	10.20	-22	31	34.4	9 675
1990	OD2		1990	07	30.41354	22	46	53.65	-22	37	10.6	17.5 9 675
1990	OE2		1990	07	26.35677	21	31	39.76	-21	23	39.8	16.2 9 675
1990	OE2		1990	07	26.38785	21	31	38.45	-21	24	03.1	9 675
1990	OE2	*	1990	07	29.39878	21	29	37.62	-22	01	53.9	16.0 9 675
1990	OE2		1990	07	29.43403	21	29	36.10	-22	02	20.9	9 675
1990	OE2		1990	07	30.36257	21	28	57.05	-22	14	03.4	16.0 9 675
1990	OE2		1990	07	30.39757	21	28	55.34	-22	14	30.2	9 675
1990	OF2		1990	07	26.35677	21	33	06.54	-22	28	12.1	17.5 9 675
1990	OF2		1990	07	26.38785	21	33	05.04	-22	28	15.0	9 675
1990	OF2	*	1990	07	29.39878	21	30	50.03	-22	32	18.8	16.5 9 675
1990	OF2		1990	07	29.43403	21	30	48.22	-22	32	21.5	9 675
1990	OF2		1990	07	30.36257	21	30	04.20	-22	33	31.1	16.5 9 675
1990	OF2		1990	07	30.39757	21	30	02.29	-22	33	34.3	9 675
1990	OG2		1990	07	26.35677	21	35	45.04	-20	23	21.5	17.2 9 675
1990	OG2		1990	07	26.38785	21	35	43.13	-20	23	17.6	9 675
1990	OG2	*	1990	07	29.39878	21	32	52.36	-20	16	07.6	16.5 9 675
1990	OG2		1990	07	29.43403	21	32	50.25	-20	16	03.0	9 675
1990	OG2		1990	07	30.36257	21	31	55.65	-20	13	45.6	16.5 9 675
1990	OG2		1990	07	30.39757	21	31	53.46	-20	13	40.8	9 675
1990	OH2	*	1990	07	29.39878	21	40	11.57	-18	20	58.6	16.5 9 675
1990	OH2		1990	07	29.43403	21	40	09.94	-18	21	03.3	9 675
1990	OH2		1990	07	30.36257	21	39	28.02	-18	23	22.6	16.5 9 675
1990	OH2		1990	07	30.39757	21	39	26.38	-18	23	28.2	9 675
1990	OJ2		1990	07	26.35677	21	45	04.24	-21	15	00.9	17.5 9 675
1990	OJ2		1990	07	26.38785	21	45	02.70	-21	15	13.5	9 675
1990	OJ2	*	1990	07	29.39878	21	42	39.83	-21	35	22.7	16.8 9 675
1990	OJ2		1990	07	29.43403	21	42	38.04	-21	35	36.9	9 675
1990	OJ2		1990	07	30.36257	21	41	51.55	-21	41	51.9	16.8 9 675
1990	OJ2		1990	07	30.39757	21	41	49.66	-21	42	06.1	9 675
1990	OK2		1990	07	26.35677	21	49	16.31	-20	02	44.7	17.5 9 675
1990	OK2		1990	07	26.38785	21	49	15.04	-20	02	54.3	9 675
1990	OK2	*	1990	07	29.39878	21	47	19.06	-20	20	44.4	17.0 9 675
1990	OK2		1990	07	29.43403	21	47	17.59	-20	20	56.4	9 675
1990	OK2		1990	07	30.36257	21	46	39.80	-20	26	29.0	17.0 9 675
1990	OK2		1990	07	30.39757	21	46	38.27	-20	26	41.2	9 675
1990	OL2	*	1990	07	29.39878	21	47	48.93	-19	24	34.2	17.0 9 675

1990	OL2		1990	07	29.42681	21	47	47.27	-19	24	37.2	18.0	9 675
1990	OL2		1990	07	29.43403	21	47	46.82	-19	24	40.2		9 675
1990	OL2		1990	07	29.45677	21	47	45.53	-19	24	41.7		9 675
1990	OL2		1990	07	30.36257	21	46	41.62	-19	24	22.4	17.0	9 675
1990	OL2		1990	07	30.39757	21	46	39.57	-19	24	26.2		9 675
1990	OM2		1990	07	26.35677	21	50	51.16	-22	54	37.9	17.0	9 675
1990	OM2		1990	07	26.38785	21	50	49.71	-22	54	38.4		9 675
1990	OM2		1990	07	28.34149	21	49	25.05	-22	54	33.6	17.2	9 675
1990	OM2		1990	07	28.37465	21	49	23.40	-22	54	32.4		9 675
1990	OM2	*	1990	07	29.39878	21	48	35.77	-22	54	25.3	17.0	9 675
1990	OM2		1990	07	29.43403	21	48	34.04	-22	54	24.0		9 675
1990	OM2		1990	07	30.36257	21	47	49.69	-22	54	13.7	17.0	9 675
1990	OM2		1990	07	30.37146	21	47	49.43	-22	54	14.1	17.0	9 675
1990	OM2		1990	07	30.39757	21	47	47.88	-22	54	16.1		9 675
1990	OM2		1990	07	30.40573	21	47	47.52	-22	54	14.9		9 675
1990	ON2		1990	07	25.34618	21	51	57.27	-17	38	42.5	17.0	9 675
1990	ON2		1990	07	25.38021	21	51	55.61	-17	38	49.3		9 675
1990	ON2	*	1990	07	29.39878	21	48	40.34	-17	52	59.5	17.0	9 675
1990	ON2		1990	07	29.42681	21	48	38.89	-17	53	04.9	17.0	9 675
1990	ON2		1990	07	29.43403	21	48	38.48	-17	53	06.8		9 675
1990	ON2		1990	07	29.45677	21	48	37.26	-17	53	11.7		9 675
1990	ON2		1990	07	30.36257	21	47	50.39	-17	56	28.4	17.0	9 675
1990	ON2		1990	07	30.39757	21	47	48.39	-17	56	36.1		9 675
1990	OO2		1990	07	25.34618	21	59	02.28	-19	53	59.4	16.0	9 675
1990	OO2		1990	07	25.38021	21	59	00.46	-19	53	54.2		9 675
1990	OO2	*	1990	07	29.39878	21	55	18.77	-19	42	52.9	16.0	9 675
1990	OO2		1990	07	29.42681	21	55	17.14	-19	42	47.1	16.0	9 675
1990	OO2		1990	07	29.43403	21	55	16.67	-19	42	46.8		9 675
1990	OO2		1990	07	29.45677	21	55	15.28	-19	42	42.7		9 675
1990	OO2		1990	07	30.36257	21	54	22.43	-19	40	09.7	16.0	9 675
1990	OO2		1990	07	30.39757	21	54	20.28	-19	40	04.5		9 675
1990	OP2		1990	07	25.34618	22	01	34.09	-21	30	35.5	16.8	9 675
1990	OP2		1990	07	25.38021	22	01	32.78	-21	30	57.3		9 675
1990	OP2		1990	07	28.34149	21	59	40.45	-22	01	54.3	17.5	9 675
1990	OP2		1990	07	28.37465	21	59	39.00	-22	02	15.8		9 675
1990	OP2	*	1990	07	29.42681	21	58	55.58	-22	13	17.6	16.8	9 675
1990	OP2		1990	07	29.45677	21	58	54.21	-22	13	36.1		9 675
1990	OP2		1990	07	30.37146	21	58	15.60	-22	23	10.9	17.0	9 675
1990	OP2		1990	07	30.40573	21	58	13.98	-22	23	33.4		9 675
1990	OQ2		1990	07	25.34618	22	06	11.66	-19	29	45.5	17.0	9 675
1990	OQ2		1990	07	25.38021	22	06	10.37	-19	29	55.3		9 675
1990	OQ2		1990	07	28.34149	22	04	13.53	-19	43	44.0	17.5	9 675
1990	OQ2		1990	07	28.37465	22	04	12.16	-19	43	53.0		9 675
1990	OQ2	*	1990	07	29.42681	22	03	27.04	-19	48	48.5	17.5	9 675
1990	OQ2		1990	07	29.45677	22	03	25.65	-19	48	57.6		9 675
1990	OR2		1990	07	28.34149	22	03	53.09	-22	11	47.5	17.8	9 675
1990	OR2		1990	07	28.37465	22	03	51.79	-22	12	03.5		9 675
1990	OR2	*	1990	07	30.37146	22	02	21.26	-22	32	57.6	17.8	9 675
1990	OR2		1990	07	30.40573	22	02	20.12	-22	33	12.8		9 675
1990	OS2		1990	07	28.34149	22	04	20.43	-23	01	17.9	17.8	9 675
1990	OS2		1990	07	28.37465	22	04	18.95	-23	01	30.6		9 675
1990	OS2	*	1990	07	30.37146	22	02	52.75	-23	13	45.8	17.8	9 675
1990	OS2		1990	07	30.40573	22	02	51.12	-23	13	59.3		9 675
1990	OT2		1990	07	28.34149	22	12	27.92	-22	33	21.1	17.8	9 675
1990	OT2		1990	07	28.37465	22	12	26.51	-22	33	30.1		9 675
1990	OT2	*	1990	07	30.37146	22	11	11.65	-22	41	19.5	17.8	9 675
1990	OT2		1990	07	30.40573	22	11	10.06	-22	41	27.5		9 675
1990	OU2		1990	07	28.34149	22	13	27.30	-24	29	14.5	17.5	9 675
1990	OU2		1990	07	28.37465	22	13	26.21	-24	29	29.2		9 675

1990	OU2	*	1990	07	30.37146	22	12	25.03	-24	45	00.2	17.5	9	675
1990	OU2		1990	07	30.40573	22	12	23.81	-24	45	17.4		9	675
1990	OV2		1990	07	28.34149	22	13	59.15	-24	26	54.1	17.5	9	675
1990	OV2		1990	07	28.37465	22	13	57.91	-24	27	08.6		9	675
1990	OV2	*	1990	07	30.37146	22	12	48.67	-24	42	11.5	17.2	9	675
1990	OV2		1990	07	30.40573	22	12	47.35	-24	42	28.2		9	675
1990	OW2		1990	07	28.34149	22	17	52.24	-23	59	53.0	17.5	9	675
1990	OW2		1990	07	28.37465	22	17	51.02	-24	00	08.9		9	675
1990	OW2	*	1990	07	30.37146	22	16	43.62	-24	18	37.6	17.5	9	675
1990	OW2		1990	07	30.40573	22	16	42.21	-24	18	58.2		9	675
1990	OX2		1990	07	27.35399	21	38	30.65	-14	17	39.1	17.8	9	675
1990	OX2		1990	07	27.38003	21	38	29.82	-14	17	48.3		9	675
1990	OX2		1990	07	30.44080	21	36	50.15	-14	35	41.0	17.8	9	675
1990	OX2		1990	07	30.47014	21	36	49.11	-14	35	51.4		9	675
1990	OZ2		1990	07	25.40486	21	23	49.13	+00	09	18.5		9	675
1990	OZ2		1990	07	25.43704	21	23	48.01	+00	09	07.7	17.5	9	675
1990	OZ2	*	1990	07	27.36250	21	22	37.33	-00	01	51.5	17.5	9	675
1990	OZ2		1990	07	27.39340	21	22	36.20	-00	01	57.5		9	675
1990	OZ2		1990	07	29.35243	21	21	20.21	-00	14	20.5	17.5	9	675
1990	OZ2		1990	07	29.38385	21	21	18.82	-00	14	36.3		9	675
1990	OA3		1990	07	25.43704	21	25	53.04	-01	09	14.9	18.2	9	675
1990	OA3	*	1990	07	27.36250	21	24	32.40	-01	09	52.0		9	675
1990	OA3		1990	07	27.39340	21	24	31.10	-01	09	51.3		9	675
1990	OA3		1990	07	29.35243	21	23	06.41	-01	11	15.3	17.5	9	675
1990	OA3		1990	07	29.38385	21	23	04.85	-01	11	19.8		9	675
1990	OB3		1990	07	25.40486	21	27	41.61	-02	31	06.6		9	675
1990	OB3		1990	07	25.43704	21	27	40.16	-02	31	07.4	17.5	9	675
1990	OB3	*	1990	07	27.36250	21	26	17.15	-02	32	32.4	17.5	9	675
1990	OB3		1990	07	27.39340	21	26	15.61	-02	32	33.8		9	675
1990	OB3		1990	07	29.35243	21	24	46.52	-02	34	54.5		9	675
1990	OB3		1990	07	29.38385	21	24	45.31	-02	34	54.8	17.5	9	675
1990	OC3		1990	07	25.40486	21	31	30.21	-03	08	36.3		9	675
1990	OC3		1990	07	25.43704	21	31	28.68	-03	08	37.0	17.2	9	675
1990	OC3	*	1990	07	27.36250	21	29	58.82	-03	09	09.2		9	675
1990	OC3		1990	07	27.39340	21	29	57.09	-03	09	09.9		9	675
1990	OC3		1990	07	29.38385	21	28	20.57	-03	10	21.2	18.0	9	675
1990	OD3		1990	07	25.40486	21	32	37.61	-04	02	05.9		9	675
1990	OD3		1990	07	25.43704	21	32	36.01	-04	01	57.5	17.0	9	675
1990	OD3	*	1990	07	27.36250	21	31	02.84	-03	51	50.9	17.0	9	675
1990	OD3		1990	07	27.39340	21	31	01.02	-03	51	38.9		9	675
1990	OD3		1990	07	29.35243	21	29	21.55	-03	41	51.3	17.5	9	675
1990	OD3		1990	07	29.38385	21	29	20.11	-03	41	41.9		9	675
1990	OE3		1990	07	26.41042	21	50	25.04	+02	56	39.8	16.8	9	675
1990	OE3		1990	07	26.45261	21	50	23.70	+02	56	32.3		9	675
1990	OE3		1990	07	28.39479	21	49	22.06	+02	49	58.9	16.8	9	675
1990	OE3		1990	07	28.42639	21	49	21.01	+02	49	51.9		9	675
1990	OE3	*	1990	07	29.34497	21	48	50.74	+02	46	31.0	16.8	9	675
1990	OE3		1990	07	29.37857	21	48	49.57	+02	46	22.3		9	675
1990	OE3		1990	07	30.28837	21	48	18.96	+02	42	48.6	16.8	9	675
1990	OE3		1990	07	30.42382	21	48	14.14	+02	42	16.5		9	675
1990	OF3		1990	07	25.43704	21	30	17.91	-05	32	17.2	18.2	9	675
1990	OF3		1990	07	27.39340	21	28	53.05	-05	21	52.8		9	675
1990	OF3	*	1990	07	29.35243	21	27	23.83	-05	12	01.3	17.8	9	675
1990	OF3		1990	07	29.38385	21	27	22.67	-05	11	52.1		9	675
1990	OG3	*	1990	07	27.35399	21	36	07.38	-14	56	46.7	17.2	9	675
1990	OG3		1990	07	27.38003	21	36	06.24	-14	56	54.0		9	675
1990	OG3		1990	07	30.44080	21	33	57.08	-15	10	57.5	17.5	9	675
1990	OG3		1990	07	30.47014	21	33	55.81	-15	11	06.8		9	675
1990	OH3	*	1990	07	27.35399	21	37	16.77	-13	37	41.3	17.5	9	675

1990	OH3		1990	07	27.38003	21	37	15.67	-13	37	44.3	9 675
1990	OH3		1990	07	30.44080	21	34	59.79	-13	44	01.7	17.5 9 675
1990	OH3		1990	07	30.47014	21	34	58.37	-13	44	04.3	9 675
1990	OJ3	*	1990	07	27.35399	21	38	34.50	-12	41	28.0	17.5 9 675
1990	OJ3		1990	07	27.38003	21	38	33.20	-12	41	36.0	9 675
1990	OJ3		1990	07	30.44080	21	35	57.09	-12	58	56.3	17.5 9 675
1990	OJ3		1990	07	30.47014	21	35	55.49	-12	59	06.5	9 675
1990	OK3	*	1990	07	27.35399	21	39	27.53	-14	37	41.8	17.0 9 675
1990	OK3		1990	07	27.38003	21	39	26.65	-14	37	51.2	9 675
1990	OK3		1990	07	30.44080	21	37	40.32	-14	56	05.4	17.2 9 675
1990	OK3		1990	07	30.47014	21	37	39.18	-14	56	12.4	9 675
1990	OL3	*	1990	07	27.35399	21	40	01.65	-11	43	42.4	18.0 9 675
1990	OL3		1990	07	27.38003	21	40	00.55	-11	43	53.9	9 675
1990	OL3		1990	07	30.44080	21	37	55.44	-12	04	17.0	17.8 9 675
1990	OL3		1990	07	30.47014	21	37	54.01	-12	04	28.9	9 675
1990	OM3	*	1990	07	27.35399	21	40	35.87	-11	40	45.2	17.8 9 675
1990	OM3		1990	07	27.38003	21	40	34.77	-11	40	53.4	9 675
1990	OM3		1990	07	30.44080	21	38	12.65	-11	55	57.2	18.0 9 675
1990	OM3		1990	07	30.47014	21	38	11.21	-11	56	05.4	9 675
1990	ON3	*	1990	07	27.35399	21	41	31.23	-11	32	05.1	16.8 9 675
1990	ON3		1990	07	27.38003	21	41	30.81	-11	32	22.4	9 675
1990	ON3		1990	07	30.44080	21	40	44.52	-12	07	03.0	16.8 9 675
1990	ON3		1990	07	30.47014	21	40	43.88	-12	07	23.2	9 675
1990	OO3	*	1990	07	27.35399	21	43	17.02	-11	22	25.6	17.8 9 675
1990	OO3		1990	07	27.38003	21	43	15.87	-11	22	34.7	9 675
1990	OO3		1990	07	30.44080	21	40	59.86	-11	41	07.4	17.5 9 675
1990	OO3		1990	07	30.47014	21	40	58.45	-11	41	19.0	9 675
1990	OP3	*	1990	07	27.35399	21	43	56.62	-13	52	52.2	16.8 9 675
1990	OP3		1990	07	27.38003	21	43	55.30	-13	52	57.6	9 675
1990	OP3		1990	07	30.44080	21	41	16.49	-14	04	48.1	17.2 9 675
1990	OP3		1990	07	30.47014	21	41	14.89	-14	04	54.1	9 675
1990	OQ3	*	1990	07	27.35399	21	46	01.50	-09	49	19.8	16.5 9 675
1990	OQ3		1990	07	27.38003	21	46	00.30	-09	49	17.8	9 675
1990	OQ3		1990	07	30.44080	21	43	46.11	-09	45	16.4	16.5 9 675
1990	OQ3		1990	07	30.47014	21	43	44.73	-09	45	14.7	9 675
1990	OR3	*	1990	07	27.35399	21	46	51.29	-15	16	44.0	17.0 9 675
1990	OR3		1990	07	27.38003	21	46	49.95	-15	16	45.8	9 675
1990	OR3		1990	07	30.44080	21	44	12.70	-15	19	44.1	17.5 9 675
1990	OR3		1990	07	30.47014	21	44	11.11	-15	19	45.3	9 675
1990	OS3	*	1990	07	27.35399	21	49	54.89	-09	14	21.5	17.2 9 675
1990	OS3		1990	07	27.38003	21	49	53.61	-09	14	23.4	9 675
1990	OS3		1990	07	30.44080	21	47	43.44	-09	21	38.4	17.2 9 675
1990	OS3		1990	07	30.47014	21	47	42.14	-09	21	42.8	9 675
1990	OT3	*	1990	07	27.35399	21	51	17.07	-11	36	56.8	17.0 9 675
1990	OT3		1990	07	27.38003	21	51	15.93	-11	37	04.2	9 675
1990	OT3		1990	07	30.44080	21	48	32.77	-11	44	04.4	17.0 9 675
1990	OT3		1990	07	30.47014	21	48	31.19	-11	44	06.7	9 675
1990	OU3	*	1990	07	27.35399	21	55	57.87	-14	13	59.0	16.8 9 675
1990	OU3		1990	07	27.38003	21	55	56.91	-14	14	03.9	9 675
1990	OU3		1990	07	30.44080	21	54	04.12	-14	23	09.8	17.5 9 675
1990	OU3		1990	07	30.47014	21	54	02.90	-14	23	16.6	9 675
1990	OV3	*	1990	07	27.35399	21	58	35.74	-14	17	32.3	17.5 9 675
1990	OV3		1990	07	27.38003	21	58	34.82	-14	17	43.3	9 675
1990	OV3		1990	07	30.44080	21	56	52.84	-14	38	35.4	17.5 9 675
1990	OV3		1990	07	30.47014	21	56	51.93	-14	38	48.2	9 675
1990	OW3	*	1990	07	27.35399	21	59	09.51	-13	18	00.6	17.0 9 675
1990	OW3		1990	07	27.38003	21	59	08.47	-13	18	09.8	9 675
1990	OW3		1990	07	30.44080	21	57	08.90	-13	36	44.3	17.2 9 675
1990	OW3		1990	07	30.47014	21	57	07.73	-13	36	57.4	9 675

1990	OX3	*	1990	07	27.35399	21	59	25.18	-13	18	20.5	17.5	9	675
1990	OX3		1990	07	27.38003	21	59	24.09	-13	18	23.0		9	675
1990	OX3		1990	07	30.44080	21	57	18.10	-13	24	58.8	17.5	9	675
1990	OX3		1990	07	30.47014	21	57	16.76	-13	25	04.7		9	675
1990	OY3	*	1990	07	27.35399	22	02	44.59	-13	41	50.1	17.0	9	675
1990	OY3		1990	07	27.38003	22	02	43.42	-13	41	49.5		9	675
1990	OY3		1990	07	30.44080	22	00	28.31	-13	41	24.2	17.2	9	675
1990	OY3		1990	07	30.47014	22	00	26.92	-13	41	25.4		9	675
1990	OZ3		1990	07	27.35399	21	44	29.67	-13	30	14.8	17.5	9	675
1990	OZ3		1990	07	27.38003	21	44	28.64	-13	30	18.1		9	675
1990	OZ3	*	1990	07	30.44080	21	42	22.28	-13	35	58.9	17.5	9	675
1990	OZ3		1990	07	30.47014	21	42	21.01	-13	36	01.3		9	675
1990	OA4		1990	07	27.35399	21	48	34.49	-11	57	14.3	17.5	9	675
1990	OA4		1990	07	27.38003	21	48	33.29	-11	57	20.0		9	675
1990	OA4	*	1990	07	30.44080	21	45	53.16	-12	06	12.8	17.5	9	675
1990	OA4		1990	07	30.47014	21	45	51.59	-12	06	17.4		9	675
1990	OB4		1990	07	26.41042	21	51	35.48	+03	13	48.4	17.2	9	675
1990	OB4		1990	07	26.45261	21	51	33.92	+03	14	07.0		9	675
1990	OB4		1990	07	28.39479	21	50	22.70	+03	27	41.7	17.0	9	675
1990	OB4		1990	07	28.42639	21	50	21.45	+03	27	54.1		9	675
1990	OB4	*	1990	07	29.34497	21	49	45.96	+03	34	02.6	17.0	9	675
1990	OB4		1990	07	29.37857	21	49	44.60	+03	34	12.7		9	675
1990	OC4		1990	07	26.41042	21	44	35.42	+01	14	37.4	17.2	9	675
1990	OC4		1990	07	26.45261	21	44	33.86	+01	14	24.1		9	675
1990	OC4		1990	07	28.39479	21	43	24.63	+01	03	26.2	17.2	9	675
1990	OC4		1990	07	28.42639	21	43	23.44	+01	03	16.1		9	675
1990	OC4	*	1990	07	30.28837	21	42	14.03	+00	51	50.8	17.5	9	675
1990	OC4		1990	07	30.42382	21	42	08.45	+00	50	59.7		9	675
1990	OD4		1990	07	26.41042	21	51	32.31	+01	11	17.3	17.0	9	675
1990	OD4		1990	07	26.45261	21	51	30.85	+01	11	09.9		9	675
1990	OD4		1990	07	28.42639	21	50	23.05	+01	04	30.8	17.0	9	675
1990	OD4	*	1990	07	30.28837	21	49	15.71	+00	57	27.4	17.0	9	675
1990	OD4		1990	07	30.42382	21	49	10.48	+00	56	55.1		9	675
1990	OE4		1990	07	26.41042	22	01	13.21	+02	30	06.4	17.2	9	675
1990	OE4		1990	07	26.45261	22	01	12.52	+02	30	09.3		9	675
1990	OE4		1990	07	28.39479	22	00	40.48	+02	31	17.4	17.0	9	675
1990	OE4		1990	07	28.42639	22	00	39.83	+02	31	17.6		9	675
1990	OE4	*	1990	07	30.28837	22	00	04.24	+02	31	14.8	17.2	9	675
1990	OE4		1990	07	30.42382	22	00	01.03	+02	31	13.5		9	675
1990	OF4	*	1990	07	24.34618	19	55	50.93	-09	09	19.2	16.8	9	675
1990	OF4		1990	07	24.37847	19	55	48.96	-09	09	18.6		9	675
1990	OF4		1990	07	25.25799	19	55	00.18	-09	09	26.2	17.0	9	675
1990	OF4		1990	07	25.29670	19	54	58.00	-09	09	26.4		9	675
1990	OF4		1990	07	27.30590	19	53	07.77	-09	10	07.7	16.8	9	675
1990	OF4		1990	07	27.33733	19	53	06.04	-09	10	09.3		9	675
1990	OF4		1990	07	29.26285	19	51	23.84	-09	11	22.7	17.0	9	675
1990	OF4		1990	07	29.29444	19	51	22.15	-09	11	24.7		9	675
1990	OG4	*	1990	07	24.34618	20	02	45.98	-07	59	03.9	16.8	9	675
1990	OG4		1990	07	24.37847	20	02	44.13	-07	58	54.8		9	675
1990	OG4		1990	07	27.30590	19	59	55.58	-07	46	29.4	16.5	9	675
1990	OG4		1990	07	27.33733	19	59	53.70	-07	46	22.0		9	675
1990	OG4		1990	07	28.25104	19	59	01.51	-07	42	43.3	16.8	9	675
1990	OG4		1990	07	28.28490	19	58	59.49	-07	42	35.7		9	675
1990	OG4		1990	07	29.26285	19	58	03.55	-07	38	54.3	16.8	9	675
1990	OG4		1990	07	29.29444	19	58	01.76	-07	38	45.7		9	675
1990	OG4		1990	07	30.30538	19	57	04.38	-07	35	00.7	16.8	9	675
1990	OG4		1990	07	30.33212	19	57	02.92	-07	34	55.8		9	675
1990	OH4	*	1990	07	24.34618	20	08	00.81	-10	11	26.1	17.5	9	675
1990	OH4		1990	07	24.37847	20	07	59.21	-10	11	32.8		9	675

1990	OH4		1990	07	27.30590	20	05	45.41	-10	23	09.8	17.5	9	675
1990	OH4		1990	07	27.33733	20	05	43.92	-10	23	18.8		9	675
1990	OH4		1990	07	28.25104	20	05	02.55	-10	27	04.4	17.5	9	675
1990	OH4		1990	07	28.28490	20	05	01.05	-10	27	10.8		9	675
1990	OH4		1990	07	29.26285	20	04	16.90	-10	31	18.1	17.5	9	675
1990	OH4		1990	07	29.29444	20	04	15.38	-10	31	25.3		9	675
1990	OH4		1990	07	30.30538	20	03	30.16	-10	35	44.1	17.5	9	675
1990	OH4		1990	07	30.33212	20	03	28.80	-10	35	51.3		9	675
1990	OJ4	*	1990	07	24.34618	20	11	35.43	-06	14	30.0	16.5	9	675
1990	OJ4		1990	07	24.37847	20	11	33.69	-06	14	25.9		9	675
1990	OJ4		1990	07	28.25104	20	08	11.48	-06	07	16.1	16.5	9	675
1990	OJ4		1990	07	28.28490	20	08	09.68	-06	07	11.9		9	675
1990	OJ4		1990	07	30.33212	20	06	23.47	-06	04	02.2	16.8	9	675
1990	OK4		1990	07	25.25799	19	46	56.34	-11	32	57.7	16.5	9	675
1990	OK4	*	1990	07	25.26754	19	46	55.81	-11	33	01.1	16.8	9	675
1990	OK4		1990	07	25.29670	19	46	54.34	-11	33	11.0		9	675
1990	OK4		1990	07	25.30590	19	46	53.79	-11	33	14.7		9	675
1990	OK4		1990	07	27.30590	19	45	17.96	-11	45	09.2	16.5	9	675
1990	OK4		1990	07	27.33733	19	45	16.35	-11	45	21.0		9	675
1990	OK4		1990	07	28.26840	19	44	32.68	-11	51	04.8	16.8	9	675
1990	OK4		1990	07	28.30243	19	44	30.94	-11	51	17.0		9	675
1990	OK4		1990	07	29.26285	19	43	46.68	-11	57	19.4	16.8	9	675
1990	OK4		1990	07	29.29444	19	43	45.00	-11	57	32.4		9	675
1990	OL4	*	1990	07	25.26754	19	56	38.94	-17	00	50.3	17.0	9	675
1990	OL4		1990	07	25.30590	19	56	36.50	-17	00	43.3		9	675
1990	OL4		1990	07	27.29514	19	54	35.40	-16	56	39.7	16.8	9	675
1990	OL4		1990	07	27.32674	19	54	33.31	-16	56	36.3		9	675
1990	OL4		1990	07	28.26840	19	53	36.71	-16	54	41.1	17.0	9	675
1990	OL4		1990	07	28.30243	19	53	34.57	-16	54	36.2		9	675
1990	OM4	*	1990	07	25.26754	19	57	42.37	-14	55	48.4	16.8	9	675
1990	OM4		1990	07	25.30590	19	57	40.15	-14	55	44.0		9	675
1990	OM4		1990	07	27.29514	19	55	53.12	-14	52	17.0	16.5	9	675
1990	OM4		1990	07	27.32674	19	55	51.37	-14	52	14.8		9	675
1990	OM4		1990	07	28.26840	19	55	01.82	-14	50	40.3	16.8	9	675
1990	OM4		1990	07	28.30243	19	54	59.94	-14	50	37.8		9	675
1990	ON4		1990	07	24.34618	20	00	10.50	-10	42	21.3	17.2	9	675
1990	ON4		1990	07	24.37847	20	00	08.93	-10	42	39.5		9	675
1990	ON4	*	1990	07	25.26754	19	59	26.94	-10	51	25.8	17.2	9	675
1990	ON4		1990	07	25.30590	19	59	24.86	-10	51	49.8		9	675
1990	ON4		1990	07	27.30590	19	57	49.63	-11	11	59.2	17.0	9	675
1990	ON4		1990	07	27.33733	19	57	48.14	-11	12	17.1		9	675
1990	ON4		1990	07	28.26840	19	57	04.49	-11	21	56.2	17.2	9	675
1990	ON4		1990	07	28.30243	19	57	02.73	-11	22	17.6		9	675
1990	ON4		1990	07	29.26285	19	56	17.98	-11	32	17.0	17.2	9	675
1990	ON4		1990	07	29.29444	19	56	16.40	-11	32	37.5		9	675
1990	OO4	*	1990	07	25.26754	20	01	37.87	-16	00	00.8	17.0	9	675
1990	OO4		1990	07	25.30590	20	01	35.52	-15	59	58.5		9	675
1990	OO4		1990	07	27.29514	19	59	36.92	-15	58	18.1	17.0	9	675
1990	OO4		1990	07	27.32674	19	59	35.01	-15	58	16.9		9	675
1990	OO4		1990	07	28.26840	19	58	39.46	-15	57	28.9	17.0	9	675
1990	OO4		1990	07	28.30243	19	58	37.36	-15	57	28.2		9	675
1990	OP4	*	1990	07	25.26754	20	02	14.91	-15	39	43.8	17.0	9	675
1990	OP4		1990	07	25.30590	20	02	12.78	-15	39	51.6		9	675
1990	OP4		1990	07	27.29514	20	00	27.63	-15	46	26.8	17.2	9	675
1990	OP4		1990	07	27.32674	20	00	25.87	-15	46	32.8		9	675
1990	OP4		1990	07	28.26840	19	59	36.70	-15	49	40.6	17.5	9	675
1990	OP4		1990	07	28.30243	19	59	34.77	-15	49	47.3		9	675
1990	OQ4	*	1990	07	25.26754	20	04	47.11	-16	42	21.3	16.8	9	675
1990	OQ4		1990	07	25.30590	20	04	44.97	-16	42	19.5		9	675

1990	OQ4		1990	07	27.29514	20	02	59.62	-16	41	29.8	16.5	9 675
1990	OQ4		1990	07	27.32674	20	02	57.87	-16	41	28.6		9 675
1990	OQ4		1990	07	28.26840	20	02	08.39	-16	41	05.2	16.5	9 675
1990	OQ4		1990	07	28.30243	20	02	06.51	-16	41	03.5		9 675
1990	OR4		1990	07	24.34618	20	09	28.12	-12	39	48.9	17.5	9 675
1990	OR4		1990	07	24.37847	20	09	26.21	-12	39	52.7		9 675
1990	OR4	*	1990	07	25.26754	20	08	34.04	-12	41	51.0	17.5	9 675
1990	OR4		1990	07	25.30590	20	08	31.67	-12	41	57.5		9 675
1990	OR4		1990	07	27.29514	20	06	35.42	-12	46	27.2	17.8	9 675
1990	OR4		1990	07	27.32674	20	06	33.38	-12	46	33.7		9 675
1990	OS4	*	1990	07	25.33056	20	30	20.13	-04	52	34.5	17.5	9 675
1990	OS4		1990	07	25.36337	20	30	18.21	-04	52	32.7		9 675
1990	OS4		1990	07	28.27674	20	27	27.96	-04	49	55.4	17.2	9 675
1990	OS4		1990	07	28.31007	20	27	26.01	-04	49	55.4		9 675
1990	OS4		1990	07	30.31500	20	25	28.55	-04	48	48.8	17.2	9 675
1990	OS4		1990	07	30.33958	20	25	26.98	-04	48	47.5		9 675
1990	OT4	*	1990	07	25.33056	20	31	05.12	-08	15	50.1	16.8	9 675
1990	OT4		1990	07	25.36337	20	31	03.52	-08	16	07.5		9 675
1990	OT4		1990	07	28.27674	20	28	48.69	-08	42	41.6	16.8	9 675
1990	OT4		1990	07	28.31007	20	28	47.12	-08	43	00.4		9 675
1990	OT4		1990	07	30.31500	20	27	13.85	-09	01	55.5	16.5	9 675
1990	OT4		1990	07	30.33958	20	27	12.63	-09	02	09.8		9 675
1990	OU4	*	1990	07	25.33056	20	34	36.66	-06	42	59.1	17.5	9 675
1990	OU4		1990	07	25.36337	20	34	35.20	-06	43	01.4		9 675
1990	OU4		1990	07	28.27674	20	32	19.14	-06	47	49.6	17.5	9 675
1990	OU4		1990	07	28.31007	20	32	17.61	-06	47	54.7		9 675
1990	OU4		1990	07	30.31500	20	30	43.35	-06	51	40.4	17.5	9 675
1990	OU4		1990	07	30.33958	20	30	42.28	-06	51	42.5		9 675
1990	OV4	*	1990	07	25.33056	20	34	42.63	-06	18	28.7	17.0	9 675
1990	OV4		1990	07	25.36337	20	34	40.66	-06	18	17.7		9 675
1990	OV4		1990	07	28.27674	20	31	48.47	-06	02	43.6	17.5	9 675
1990	OV4		1990	07	28.31007	20	31	46.45	-06	02	33.9		9 675
1990	OV4		1990	07	30.31500	20	29	46.67	-05	52	30.1	17.0	9 675
1990	OV4		1990	07	30.33958	20	29	45.11	-05	52	23.5		9 675
1990	OW4	*	1990	07	25.33056	20	35	20.02	-09	07	46.4	17.2	9 675
1990	OW4		1990	07	25.36337	20	35	18.01	-09	07	47.6		9 675
1990	OW4		1990	07	28.27674	20	32	26.65	-09	11	04.9	17.0	9 675
1990	OW4		1990	07	28.31007	20	32	24.63	-09	11	06.7		9 675
1990	OW4		1990	07	30.33958	20	30	24.79	-09	13	59.6		9 675
1990	OX4	*	1990	07	25.33056	20	37	26.04	-09	16	29.4	17.0	9 675
1990	OX4		1990	07	25.36337	20	37	24.27	-09	16	38.9		9 675
1990	OX4		1990	07	28.27674	20	34	56.38	-09	31	55.8	16.8	9 675
1990	OX4		1990	07	28.31007	20	34	54.61	-09	32	07.0		9 675
1990	OX4		1990	07	30.31500	20	33	11.11	-09	43	19.7	16.8	9 675
1990	OX4		1990	07	30.33958	20	33	09.86	-09	43	29.1		9 675
1990	OY4	*	1990	07	25.33056	20	38	16.58	-03	00	38.0	17.0	9 675
1990	OY4		1990	07	25.36337	20	38	15.12	-03	00	55.4		9 675
1990	OY4		1990	07	28.27674	20	36	12.11	-03	25	04.3	17.0	9 675
1990	OY4		1990	07	28.31007	20	36	10.66	-03	25	22.1		9 675
1990	OY4		1990	07	30.31500	20	34	44.71	-03	43	05.0	17.0	9 675
1990	OY4		1990	07	30.33958	20	34	43.61	-03	43	18.3		9 675
1990	OZ4	*	1990	07	25.33056	20	41	23.13	-07	15	36.4	17.5	9 675
1990	OZ4		1990	07	25.36337	20	41	21.34	-07	15	39.1		9 675
1990	OZ4		1990	07	28.27674	20	38	52.51	-07	21	05.8	17.5	9 675
1990	OZ4		1990	07	28.31007	20	38	50.67	-07	21	10.9		9 675
1990	OZ4		1990	07	30.31500	20	37	07.00	-07	25	54.2	17.2	9 675
1990	OZ4		1990	07	30.33958	20	37	05.65	-07	25	58.6		9 675
1990	OA5		1990	07	25.30590	19	57	56.43	-14	49	25.3	17.2	9 675
1990	OA5	*	1990	07	27.29514	19	56	02.32	-14	39	01.3	17.5	9 675

1990	OA5		1990	07	27.32674	19	56	00.44	-14	38	51.0	9 675
1990	OA5		1990	07	28.26840	19	55	07.47	-14	34	07.9	17.5 9 675
1990	OA5		1990	07	28.30243	19	55	05.54	-14	33	58.7	9 675
1990	OB5		1990	07	25.25799	19	42	00.83	-07	22	22.8	16.8 9 675
1990	OB5		1990	07	25.29670	19	41	58.59	-07	22	16.3	9 675
1990	OB5	*	1990	07	27.30590	19	40	09.59	-07	17	11.6	16.8 9 675
1990	OB5		1990	07	27.33733	19	40	07.86	-07	17	06.9	9 675
1990	OB5		1990	07	29.29444	19	38	24.24	-07	12	46.0	16.8 9 675
1990	OC5		1990	07	25.25799	19	42	13.57	-08	51	33.6	17.2 9 675
1990	OC5		1990	07	25.29670	19	42	11.55	-08	51	26.9	9 675
1990	OC5	*	1990	07	27.30590	19	40	31.20	-08	47	08.5	17.0 9 675
1990	OC5		1990	07	27.33733	19	40	29.52	-08	47	05.7	9 675
1990	OC5		1990	07	29.29444	19	38	52.02	-08	43	05.7	17.0 9 675
1990	OD5		1990	07	25.25799	19	47	35.14	-09	40	36.5	17.2 9 675
1990	OD5		1990	07	25.29670	19	47	33.01	-09	40	41.2	9 675
1990	OD5	*	1990	07	27.30590	19	45	52.13	-09	43	45.4	16.8 9 675
1990	OD5		1990	07	27.33733	19	45	50.41	-09	43	49.2	9 675
1990	OD5		1990	07	29.26285	19	44	16.04	-09	47	07.6	17.2 9 675
1990	OD5		1990	07	29.29444	19	44	14.47	-09	47	11.9	9 675
1990	OE5		1990	07	24.37847	19	56	08.43	-10	07	44.0	9 675
1990	OE5		1990	07	25.25799	19	55	23.17	-10	08	22.9	17.2 9 675
1990	OE5		1990	07	25.29670	19	55	21.12	-10	08	25.1	9 675
1990	OE5	*	1990	07	27.30590	19	53	38.77	-10	10	09.8	16.5 9 675
1990	OE5		1990	07	27.33733	19	53	37.24	-10	10	11.4	9 675
1990	OE5		1990	07	29.26285	19	52	01.11	-10	12	15.3	17.2 9 675
1990	OE5		1990	07	29.29444	19	51	59.54	-10	12	18.4	9 675
1990	OF5	*	1990	07	27.30590	20	00	01.53	-11	08	18.2	17.2 9 675
1990	OF5		1990	07	27.33733	20	00	00.05	-11	08	23.6	9 675
1990	OF5		1990	07	29.26285	19	58	32.46	-11	15	15.1	17.5 9 675
1990	OF5		1990	07	29.29444	19	58	30.95	-11	15	22.0	9 675
1990	OG5		1990	07	25.25799	19	48	12.65	-09	19	56.2	16.8 9 675
1990	OG5		1990	07	25.29670	19	48	10.31	-09	19	52.5	9 675
1990	OG5		1990	07	27.33733	19	46	13.49	-09	17	07.8	16.8 9 675
1990	OG5	*	1990	07	29.26285	19	44	26.52	-09	15	09.2	16.8 9 675
1990	OG5		1990	07	29.29444	19	44	24.69	-09	15	07.9	9 675
1990	QB	*	1990	08	17.35642	22	24	28.28	-13	10	09.5	15.7 2 675
1990	QB		1990	08	17.38125	22	24	26.01	-13	09	53.6	2 675
1990	QB		1990	08	20.29392	22	20	02.67	-12	40	08.3	2 675
1990	QB		1990	08	20.31875	22	20	00.32	-12	39	52.3	2 675
1990	QC	*	1990	08	16.34861	21	28	16.35	+07	04	23.4	16.0 2 675
1990	QC		1990	08	16.37431	21	28	14.76	+07	03	55.3	2 675
1990	QC		1990	08	19.33177	21	25	20.63	+06	07	21.3	2 675
1990	QC		1990	08	19.35608	21	25	19.12	+06	06	52.7	2 675
1990	QD	*	1990	08	18.17396	17	29	04.38	-24	05	27.8	16.0 2 675
1990	QD		1990	08	18.20295	17	29	04.96	-24	05	19.7	2 675
1990	QD		1990	08	21.16545	17	30	13.63	-23	48	47.1	2 675
1990	QE	*	1990	08	18.34705	22	18	02.45	+04	09	35.9	16.0 2 675
1990	QE		1990	08	18.37083	22	18	00.79	+04	09	49.6	2 675
1990	QE		1990	08	20.30035	22	15	51.98	+04	26	51.3	2 675
1990	QE		1990	08	20.32483	22	15	50.27	+04	27	03.6	2 675
1990	QJ	*	1990	08	18.34115	22	05	23.59	+12	43	32.6	16.3 2 675
1990	QJ		1990	08	18.36493	22	05	22.27	+12	43	33.3	2 675
1990	QJ		1990	08	21.27535	22	02	37.23	+12	43	52.9	2 675
1990	QJ		1990	08	21.30295	22	02	35.68	+12	43	52.9	2 675
1990	QK	*	1990	08	18.34115	22	05	44.29	+12	41	57.8	16.7 2 675
1990	QK		1990	08	18.36493	22	05	42.24	+12	42	06.9	2 675
1990	QK		1990	08	21.27535	22	01	53.12	+13	05	29.7	2 675
1990	QK		1990	08	21.30295	22	01	50.86	+13	05	43.3	2 675
1990	QL	*	1990	08	18.39688	22	25	55.90	-04	11	04.6	16.5 2 675

1990	QL		1990	08	18.42760	22	25	54.58	-04	11	42.3		2 675
1990	QL		1990	08	20.33750	22	24	36.33	-04	52	01.6		2 675
1990	QL		1990	08	20.36233	22	24	35.21	-04	52	33.9		2 675
3074	P-L		1990	07	25.33056	20	39	38.81	-03	59	16.1	17.8	9 675
3074	P-L		1990	07	25.36337	20	39	37.20	-03	59	18.8		9 675
3074	P-L		1990	07	28.27674	20	37	20.42	-04	05	26.4	17.8	9 675
3074	P-L		1990	07	28.31007	20	37	18.86	-04	05	30.4		9 675
3074	P-L		1990	07	30.33958	20	35	42.72	-04	10	22.1	17.8	9 675
4015	P-L	*	1960	09	24.37573	00	15	47.79	+04	42	21.4	17.7	4 675
4015	P-L		1960	09	25.32502	00	14	56.44	+04	37	37.2		4 675
4015	P-L		1960	09	25.42780	00	14	50.58	+04	37	05.2		4 675
4015	P-L		1960	09	26.27573	00	14	04.97	+04	32	48.1		4 675
4015	P-L		1960	09	26.30558	00	14	03.31	+04	32	39.1		4 675
4015	P-L		1960	09	28.32780	00	12	14.02	+04	22	20.5		4 675
4015	P-L		1960	09	28.36808	00	12	11.85	+04	22	07.3		4 675
4015	P-L		1960	10	17.27085	23	57	42.76	+02	52	07.8		4 675
4015	P-L		1960	10	22.22293	23	55	13.49	+02	34	26.7		4 675
4015	P-L		1960	10	24.35836	23	54	22.01	+02	27	59.4		4 675
4015	P-L		1960	10	26.32573	23	53	42.25	+02	22	43.6		4 675
6035	P-L		1990	07	29.39149	22	28	53.04	-23	46	23.3	17.2	9 675
6035	P-L		1990	07	29.46441	22	28	49.59	-23	46	28.0		9 675
6035	P-L		1990	07	30.37868	22	28	10.32	-23	47	26.0	17.5	9 675
6035	P-L		1990	07	30.41354	22	28	08.69	-23	47	27.1		9 675
6378	P-L	*	1960	09	24.31111	00	10	35.28	+00	41	07.0	19.1	4 675
6378	P-L		1960	09	24.33613	00	10	33.87	+00	40	32.2		4 675
6378	P-L		1960	09	25.29097	00	09	41.88	+00	19	39.0		4 675
6378	P-L		1960	09	25.32502	00	09	39.94	+00	18	55.2		4 675
6378	P-L		1960	09	26.26528	00	08	49.24	-00	01	25.7		4 675
6378	P-L		1960	09	26.28543	00	08	48.14	-00	01	53.7		4 675
6378	P-L		1960	09	28.31736	00	07	00.37	-00	45	01.2		4 675
6378	P-L		1960	09	28.33822	00	06	59.32	-00	45	27.3		4 675
6626	P-L	*	1960	09	24.35002	23	58	58.24	-00	12	46.7	18.7	4 675
6626	P-L		1960	09	26.28543	23	57	05.08	-00	22	32.5		4 675
6626	P-L		1960	09	27.34237	23	56	03.60	-00	27	50.1		4 675
6626	P-L		1960	09	28.33822	23	55	06.03	-00	32	47.6		4 675
6626	P-L		1960	10	17.21390	23	39	33.09	-01	50	40.5		4 675
6626	P-L		1960	10	22.15559	23	36	43.61	-02	03	38.5		4 675
6626	P-L		1960	10	24.18787	23	35	45.13	-02	07	50.9		4 675
6626	P-L		1960	10	26.26113	23	34	52.63	-02	11	25.4		4 675
6743	P-L	*	1960	09	24.32431	00	07	07.61	-03	12	15.7	17.9	4 675
6743	P-L		1960	09	24.35002	00	07	04.25	-03	12	24.2		4 675
6743	P-L		1960	09	26.26528	00	02	52.25	-03	22	17.0		4 675
6743	P-L		1960	09	26.28543	00	02	49.53	-03	22	24.3		4 675
6743	P-L		1960	09	27.30972	00	00	29.73	-03	27	40.0		4 675
6743	P-L		1960	09	27.34237	00	00	25.21	-03	27	50.3		4 675
6743	P-L		1960	09	28.31736	23	58	09.70	-03	32	50.1		4 675
6743	P-L		1960	09	28.33822	23	58	06.77	-03	32	57.1		4 675
2181	T-2		1973	09	19.19948	00	40	09.39	+04	33	31.9		4 675
2181	T-2		1973	09	19.25006	00	40	07.00	+04	33	13.8		4 675
2181	T-2		1973	09	20.26458	00	39	21.31	+04	27	06.2		4 675
2181	T-2		1973	09	24.36181	00	36	10.85	+04	01	47.3		4 675
2181	T-2		1973	09	24.42847	00	36	07.57	+04	01	22.6		4 675
2181	T-2		1973	09	25.25642	00	35	28.57	+03	56	07.3		4 675
2181	T-2		1973	09	25.32031	00	35	25.45	+03	55	41.8		4 675
2181	T-2		1973	09	29.26632	00	32	14.93	+03	30	22.6		4 675
2181	T-2	*	1973	09	29.33073	00	32	11.74	+03	29	57.2	17.7	4 675
2181	T-2		1973	09	30.22257	00	31	28.44	+03	24	10.5		4 675
2181	T-2		1973	09	30.28785	00	31	25.21	+03	23	45.0		4 675
2181	T-2		1973	10	04.30208	00	28	10.03	+02	57	46.5		4 675

2181	T-2		1973	10	04.36476	00	28	06.88	+02	57	21.8		4 675
2181	T-2		1973	10	05.32917	00	27	20.52	+02	51	09.1		4 675
2181	T-2		1973	10	05.39132	00	27	17.43	+02	50	46.4		4 675
2315	T-2		1973	09	29.26632	00	44	35.20	+03	23	36.6		4 675
2315	T-2	*	1973	09	29.33073	00	44	32.14	+03	23	14.7	19.4	4 675
2315	T-2		1973	09	30.22257	00	43	51.33	+03	17	51.7		4 675
2315	T-2		1973	09	30.28785	00	43	48.23	+03	17	29.0		4 675
2315	T-2		1973	10	04.30208	00	40	40.71	+02	53	13.3		4 675
2315	T-2		1973	10	04.36476	00	40	37.65	+02	52	52.2		4 675
2315	T-2		1973	10	05.32917	00	39	52.25	+02	47	00.0		4 675
2315	T-2		1973	10	05.39132	00	39	49.19	+02	46	36.1		4 675
3239	T-2		1973	09	19.19948	00	25	11.18	+02	17	33.5		4 675
3239	T-2		1973	09	19.25006	00	25	08.28	+02	16	26.6		4 675
3239	T-2		1973	09	20.22847	00	24	12.61	+01	54	54.1		4 675
3239	T-2		1973	09	20.30278	00	24	08.14	+01	53	17.3		4 675
3239	T-2		1973	09	24.38750	00	20	16.17	+00	24	54.5		4 675
3239	T-2		1973	09	24.41597	00	20	14.57	+00	24	16.8		4 675
3239	T-2		1973	09	24.45434	00	20	12.31	+00	23	28.7		4 675
3239	T-2		1973	09	25.24375	00	19	28.21	+00	06	47.3		4 675
3239	T-2		1973	09	25.28125	00	19	26.12	+00	05	59.3		4 675
3239	T-2		1973	09	25.30729	00	19	24.53	+00	05	26.9		4 675
3239	T-2		1973	09	25.34601	00	19	22.39	+00	04	36.8		4 675
3239	T-2		1973	09	29.27986	00	15	46.12	-01	16	15.3		4 675
3239	T-2		1973	09	29.34375	00	15	42.54	-01	17	31.2		4 675
3239	T-2		1973	09	30.23524	00	14	55.01	-01	35	18.2		4 675
3239	T-2	*	1973	09	30.30174	00	14	51.34	-01	36	36.8	19.3	4 675
3239	T-2		1973	10	04.31493	00	11	25.36	-02	53	11.4		4 675
3239	T-2		1973	10	04.37674	00	11	22.06	-02	54	20.7		4 675
3239	T-2		1973	10	05.34167	00	10	35.05	-03	11	53.6		4 675
3239	T-2		1973	10	05.40347	00	10	32.03	-03	13	00.7		4 675
5187	T-2		1973	09	24.40035	00	24	49.19	+11	43	56.0		4 675
5187	T-2		1973	09	24.47986	00	24	46.89	+11	43	39.0		4 675
5187	T-2	*	1973	09	25.29375	00	24	23.37	+11	40	52.4	19.2	4 675
5187	T-2		1973	09	25.35903	00	24	21.44	+11	40	40.1		4 675
5187	T-2		1973	09	29.24062	00	22	29.29	+11	26	52.9		4 675
5187	T-2		1973	09	29.30486	00	22	27.27	+11	26	39.8		4 675
5187	T-2		1973	09	30.19722	00	22	01.49	+11	23	23.4		4 675
5187	T-2		1973	09	30.35295	00	21	56.85	+11	22	48.7		4 675
5493	T-2	*	1973	09	30.19722	00	26	24.48	+16	33	50.3	17.6	4 675
5493	T-2		1973	09	30.35295	00	26	19.12	+16	33	30.9		4 675
5493	T-2		1973	10	04.27708	00	24	08.27	+16	24	45.4		4 675
5493	T-2		1973	10	04.33906	00	24	06.16	+16	24	35.1		4 675
5493	T-2		1973	10	05.36632	00	23	32.10	+16	22	08.4		4 675
5493	T-2		1973	10	05.42847	00	23	30.03	+16	21	58.8		4 675
4250	T-3		1977	10	07.28125	01	32	45.00	+03	26	55.7		4 675
4250	T-3		1977	10	11.30000	01	29	35.39	+02	59	58.6		4 675
4250	T-3		1977	10	11.36771	01	29	31.92	+02	59	32.9		4 675
4250	T-3		1977	10	12.29826	01	28	46.89	+02	53	23.4		4 675
4250	T-3		1977	10	12.36441	01	28	43.52	+02	52	58.9		4 675
4250	T-3	*	1977	10	16.28368	01	25	31.66	+02	27	57.0	17.3	4 675
4250	T-3		1977	10	16.34931	01	25	28.21	+02	27	31.6		4 675
4250	T-3		1977	10	17.28628	01	24	42.49	+02	21	44.2		4 675
4250	T-3		1977	10	17.35313	01	24	39.04	+02	21	20.7		4 675
4250	T-3		1977	10	21.38698	01	21	23.93	+01	57	52.4		4 675
4250	T-3		1977	10	21.44705	01	21	20.87	+01	57	32.1		4 675
4250	T-3		1977	10	22.38542	01	20	36.67	+01	52	25.0		4 675
4250	T-3		1977	10	22.44878	01	20	33.69	+01	52	07.7		4 675
28			1990	07	30.44080	22	01	50.24	-11	28	03.7		9 675
28			1990	07	30.47014	22	01	49.08	-11	28	11.8		9 675

40	1990	07	25.34618	22	00	24.25	-17	32	45.7	9 675
40	1990	07	25.38021	22	00	22.86	-17	32	58.6	9 675
40	1990	07	29.42681	21	57	37.86	-18	00	04.7	9 675
40	1990	07	29.45677	21	57	36.45	-18	00	17.9	9 675
40	1990	07	30.36257	21	56	56.45	-18	06	31.5	9 675
40	1990	07	30.39757	21	56	54.75	-18	06	47.0	9 675
94	1990	07	25.34618	22	19	31.19	-18	29	47.3	9 675
94	1990	07	25.38021	22	19	30.06	-18	29	52.7	9 675
94	1990	07	29.39149	22	17	10.24	-18	41	25.7	9 675
94	1990	07	29.42681	22	17	08.88	-18	41	31.8	9 675
94	1990	07	29.45677	22	17	07.74	-18	41	36.9	9 675
94	1990	07	29.46441	22	17	07.49	-18	41	38.6	9 675
94	1990	07	30.37868	22	16	33.27	-18	44	18.1	9 675
94	1990	07	30.41354	22	16	32.07	-18	44	26.1	9 675
107	1990	07	25.25799	19	23	48.89	-10	15	55.4	9 675
107	1990	07	25.29670	19	23	47.31	-10	16	02.1	9 675
232	1990	07	25.26754	19	58	48.93	-15	05	19.3	9 675
232	1990	07	25.30590	19	58	46.71	-15	05	31.4	9 675
232	1990	07	27.29514	19	56	57.40	-15	15	59.2	9 675
232	1990	07	27.32674	19	56	55.61	-15	16	09.0	9 675
232	1990	07	28.26840	19	56	04.64	-15	21	05.9	9 675
232	1990	07	28.30243	19	56	02.72	-15	21	16.8	9 675
287	1990	07	27.35399	21	52	33.30	-11	12	10.3	9 675
287	1990	07	27.38003	21	52	32.25	-11	12	23.7	9 675
287	1990	07	30.44080	21	50	27.23	-11	38	52.4	9 675
287	1990	07	30.47014	21	50	25.97	-11	39	07.7	9 675
342	1990	07	25.33056	20	51	43.77	-06	10	28.2	9 675
342	1990	07	25.36337	20	51	42.03	-06	10	32.8	9 675
342	1990	07	28.27674	20	49	09.93	-06	17	02.4	9 675
342	1990	07	28.31007	20	49	08.23	-06	17	07.8	9 675
342	1990	07	30.31500	20	47	21.76	-06	22	11.0	9 675
342	1990	07	30.33958	20	47	20.38	-06	22	15.0	9 675
374	1990	07	27.41059	22	31	53.81	+04	11	40.0	9 675
374	1990	07	27.45000	22	31	52.74	+04	11	38.7	9 675
374	1990	07	30.45365	22	30	25.77	+04	09	02.3	9 675
374	1990	07	30.47882	22	30	24.94	+04	09	01.1	9 675
403	1990	07	24.34618	20	22	20.71	-07	16	42.8	9 675
403	1990	07	24.37847	20	22	19.06	-07	16	46.6	9 675
403	1990	07	25.33056	20	21	30.86	-07	18	07.6	9 675
403	1990	07	25.36337	20	21	29.14	-07	18	10.9	9 675
403	1990	07	28.25104	20	19	02.58	-07	22	52.4	9 675
403	1990	07	28.27674	20	19	01.25	-07	22	53.9	9 675
403	1990	07	28.28490	20	19	00.82	-07	22	55.7	9 675
403	1990	07	28.31007	20	18	59.53	-07	22	58.0	9 675
403	1990	07	30.30538	20	17	18.35	-07	26	37.6	9 675
403	1990	07	30.33212	20	17	16.99	-07	26	41.2	9 675
412	1990	07	29.39149	22	41	51.40	-21	57	01.4	9 675
412	1990	07	29.46441	22	41	49.22	-21	57	40.8	9 675
412	1990	07	30.37868	22	41	23.24	-22	05	56.6	9 675
412	1990	07	30.41354	22	41	22.12	-22	06	15.6	9 675
484	1990	07	30.36257	21	33	46.31	-17	25	59.2	9 675
484	1990	07	30.39757	21	33	44.77	-17	26	19.4	9 675
539	1990	07	25.26754	20	05	34.72	-15	00	03.4	9 675
539	1990	07	25.30590	20	05	32.42	-15	00	02.9	9 675
539	1990	07	27.29514	20	03	38.42	-14	59	46.3	9 675
539	1990	07	27.32674	20	03	36.55	-14	59	46.5	9 675
539	1990	07	28.26840	20	02	42.86	-14	59	41.4	9 675
539	1990	07	28.30243	20	02	40.83	-14	59	41.3	9 675
540	1990	07	26.41042	21	56	00.76	-03	44	15.4	9 675

540	1990	07	26.45261	21	55	58.83	-03	44	23.7	9 675
540	1990	07	28.39479	21	54	31.94	-03	51	02.5	9 675
540	1990	07	28.42639	21	54	30.41	-03	51	10.5	9 675
553	1990	07	25.34618	21	57	45.00	-21	14	36.6	9 675
553	1990	07	25.38021	21	57	43.47	-21	14	51.1	9 675
553	1990	07	28.34149	21	55	31.11	-21	35	38.9	9 675
553	1990	07	28.37465	21	55	29.47	-21	35	53.1	9 675
553	1990	07	29.42681	21	54	39.05	-21	43	18.4	9 675
553	1990	07	29.45677	21	54	37.43	-21	43	32.1	9 675
553	1990	07	30.36257	21	53	53.02	-21	49	57.1	9 675
553	1990	07	30.37146	21	53	52.76	-21	50	02.6	9 675
553	1990	07	30.39757	21	53	51.20	-21	50	12.3	9 675
553	1990	07	30.40573	21	53	50.90	-21	50	17.8	9 675
602	1990	07	26.35677	21	23	27.46	-24	54	07.9	9 675
602	1990	07	26.38785	21	23	25.68	-24	54	05.9	9 675
702	1990	07	30.28837	21	37	54.99	+02	37	17.5	9 675
702	1990	07	30.42382	21	37	48.43	+02	37	44.0	9 675
850	1990	07	25.34618	22	07	18.99	-19	05	59.7	9 675
850	1990	07	25.38021	22	07	17.91	-19	06	18.9	9 675
850	1990	07	28.34149	22	05	42.66	-19	34	19.9	9 675
850	1990	07	28.37465	22	05	41.58	-19	34	42.0	9 675
850	1990	07	29.42681	22	05	05.29	-19	44	37.3	9 675
850	1990	07	29.45677	22	05	04.20	-19	44	54.8	9 675
850	1990	07	30.37146	22	04	32.01	-19	53	42.1	9 675
850	1990	07	30.40573	22	04	30.70	-19	54	02.7	9 675
851	1990	07	27.35399	21	51	08.20	-12	42	51.9	9 675
851	1990	07	27.38003	21	51	06.94	-12	43	01.1	9 675
851	1990	07	30.44080	21	48	35.56	-12	59	22.5	9 675
851	1990	07	30.47014	21	48	34.04	-12	59	31.9	9 675
865	1990	07	26.41042	22	01	47.23	+00	00	30.6	9 675
865	1990	07	26.45261	22	01	45.59	+00	00	20.1	9 675
865	1990	07	28.39479	22	00	31.59	-00	08	14.4	9 675
865	1990	07	28.42639	22	00	30.30	-00	08	23.6	9 675
1049	1990	07	25.34618	22	09	48.19	-21	42	49.2	9 675
1049	1990	07	25.38021	22	09	46.72	-21	42	50.9	9 675
1049	1990	07	28.34149	22	07	38.61	-21	45	21.0	9 675
1049	1990	07	28.37465	22	07	37.01	-21	45	22.4	9 675
1049	1990	07	29.42681	22	06	48.95	-21	46	14.7	9 675
1049	1990	07	29.45677	22	06	47.53	-21	46	15.9	9 675
1049	1990	07	30.37146	22	06	04.92	-21	47	00.1	9 675
1049	1990	07	30.40573	22	06	03.17	-21	47	01.8	9 675
1068	1990	07	27.35399	22	02	25.42	-11	49	28.4	9 675
1068	1990	07	27.38003	22	02	24.35	-11	49	30.2	9 675
1068	1990	07	30.44080	22	00	15.68	-11	55	29.1	9 675
1068	1990	07	30.47014	22	00	14.39	-11	55	32.8	9 675
1069	1990	07	25.25799	19	46	18.62	-12	52	37.3	9 675
1069	1990	07	25.26754	19	46	18.07	-12	52	41.0	9 675
1069	1990	07	25.29670	19	46	16.95	-12	52	49.7	9 675
1069	1990	07	25.30590	19	46	16.33	-12	52	52.9	9 675
1069	1990	07	27.29514	19	44	47.15	-13	03	48.3	9 675
1069	1990	07	27.32674	19	44	45.65	-13	03	58.3	9 675
1069	1990	07	28.26840	19	44	03.89	-13	09	09.2	9 675
1069	1990	07	28.30243	19	44	02.27	-13	09	20.2	9 675
1164	1990	07	26.22309	16	42	08.37	+10	38	03.2	9 675
1181	1990	07	28.26840	20	14	26.11	-13	42	27.1	9 675
1181	1990	07	28.30243	20	14	24.09	-13	42	31.4	9 675
1189	1990	07	26.41042	21	55	46.25	-01	09	46.5	9 675
1189	1990	07	26.45261	21	55	44.53	-01	09	41.9	9 675
1189	1990	07	28.39479	21	54	29.90	-01	06	46.2	9 675

1189	1990	07	28.42639	21	54	28.60	-01	06	43.8		9 675
1189	1990	07	30.28837	21	53	13.33	-01	04	26.6		9 675
1189	1990	07	30.42382	21	53	07.51	-01	04	18.0		9 675
1244	1990	07	26.41042	21	57	11.37	-02	22	06.8		9 675
1244	1990	07	26.45261	21	57	09.32	-02	22	05.3		9 675
1244	1990	07	28.39479	21	55	36.45	-02	21	23.9		9 675
1244	1990	07	28.42639	21	55	34.85	-02	21	23.9		9 675
1248	1990	07	26.35677	21	28	58.08	-26	49	43.1		9 675
1248	1990	07	26.38785	21	28	56.66	-26	49	54.6		9 675
1356	1990	07	26.35677	21	43	37.14	-25	00	37.6		9 675
1356	1990	07	26.38785	21	43	35.79	-25	00	48.6		9 675
1414	1990	07	27.35399	21	59	16.60	-11	35	45.5		9 675
1414	1990	07	27.38003	21	59	15.63	-11	35	55.3		9 675
1414	1990	07	30.44080	21	57	17.80	-11	52	49.9		9 675
1414	1990	07	30.47014	21	57	16.68	-11	53	02.1		9 675
1516	1990	07	25.34618	22	03	42.38	-14	58	49.3		9 675
1516	1990	07	25.38021	22	03	41.04	-14	59	05.0		9 675
1516	1990	07	29.42681	22	00	58.11	-15	29	36.8		9 675
1516	1990	07	29.45677	22	00	56.74	-15	29	50.4		9 675
1516	1990	07	30.44080	22	00	14.30	-15	37	23.7		9 675
1516	1990	07	30.47014	22	00	13.13	-15	37	36.7		9 675
1582	1990	07	29.39149	22	34	41.02	-22	38	31.7		9 675
1582	1990	07	29.46441	22	34	38.67	-22	39	02.3		9 675
1582	1990	07	30.37868	22	34	10.29	-22	45	28.8	17.0	9 675
1582	1990	07	30.41354	22	34	09.15	-22	45	43.6		9 675
1605	1990	07	27.41059	22	30	10.61	-02	26	26.2		9 675
1605	1990	07	27.45000	22	30	09.55	-02	26	34.4		9 675
1605	1990	07	30.45365	22	28	49.51	-02	38	03.9		9 675
1605	1990	07	30.47882	22	28	48.71	-02	38	12.4		9 675
1643	1990	07	27.29514	19	51	10.18	-19	44	35.2		9 675
1643	1990	07	27.32674	19	51	08.13	-19	44	36.6		9 675
1652	1990	07	25.26754	19	49	37.95	-16	04	44.3		9 675
1652	1990	07	25.30590	19	49	35.61	-16	04	47.2		9 675
1652	1990	07	27.29514	19	47	42.36	-16	07	23.5		9 675
1652	1990	07	27.32674	19	47	40.51	-16	07	26.4		9 675
1652	1990	07	28.26840	19	46	48.29	-16	08	42.0		9 675
1652	1990	07	28.30243	19	46	46.29	-16	08	44.7		9 675
1658	1990	07	29.39149	22	42	39.94	-20	40	41.1		9 675
1658	1990	07	29.46441	22	42	38.07	-20	41	21.1		9 675
1658	1990	07	30.37868	22	42	16.52	-20	49	48.4		9 675
1658	1990	07	30.41354	22	42	15.55	-20	50	08.1		9 675
1672	1990	07	27.35399	21	37	15.32	-13	07	52.0	17.0	9 675
1672	1990	07	27.38003	21	37	14.27	-13	07	56.3		9 675
1672	1990	07	30.44080	21	35	10.48	-13	18	20.4		9 675
1672	1990	07	30.47014	21	35	09.18	-13	18	26.2		9 675
1711	1990	07	27.35399	21	45	55.13	-14	08	28.5		9 675
1711	1990	07	27.38003	21	45	54.22	-14	08	39.3		9 675
1711	1990	07	30.44080	21	44	02.42	-14	30	21.4		9 675
1711	1990	07	30.47014	21	44	01.32	-14	30	34.3		9 675
1723	1990	07	25.26754	19	54	33.09	-12	26	29.3		9 675
1723	1990	07	25.30590	19	54	31.28	-12	26	41.7		9 675
1723	1990	07	27.29514	19	52	58.95	-12	36	56.7		9 675
1723	1990	07	27.30590	19	52	58.39	-12	36	59.0		9 675
1723	1990	07	27.32674	19	52	57.40	-12	37	07.1		9 675
1723	1990	07	27.33733	19	52	57.06	-12	37	08.2		9 675
1723	1990	07	28.26840	19	52	14.08	-12	41	59.0	15.8	9 675
1723	1990	07	28.30243	19	52	12.50	-12	42	10.0		9 675
1723	1990	07	29.26285	19	51	28.66	-12	47	12.2		9 675
1723	1990	07	29.29444	19	51	27.20	-12	47	22.7		9 675

1834	1990	07	26.41042	21	44	02.25	-02	00	01.7		9 675
1834	1990	07	26.45261	21	44	00.52	-02	00	01.0		9 675
1861	1990	07	28.34149	22	22	10.87	-25	24	39.4		9 675
1861	1990	07	30.37146	22	20	50.75	-25	33	11.6		9 675
1861	1990	07	30.40573	22	20	49.25	-25	33	21.7		9 675
1918	1990	07	25.33056	20	40	12.81	-05	52	43.4		9 675
1918	1990	07	25.36337	20	40	11.40	-05	52	48.5		9 675
1918	1990	07	28.27674	20	38	05.86	-06	01	50.9	17.2	9 675
1918	1990	07	28.31007	20	38	04.30	-06	01	57.3		9 675
1918	1990	07	30.31500	20	36	36.98	-06	08	39.0		9 675
1918	1990	07	30.33958	20	36	35.87	-06	08	44.1		9 675
1923	1990	07	25.34618	21	53	59.86	-17	52	04.0		9 675
1923	1990	07	25.38021	21	53	58.23	-17	52	10.3		9 675
1923	1990	07	29.42681	21	50	42.99	-18	05	35.8		9 675
1923	1990	07	29.45677	21	50	41.55	-18	05	44.1		9 675
1923	1990	07	30.36257	21	49	55.39	-18	08	47.3		9 675
1923	1990	07	30.39757	21	49	53.43	-18	08	54.5		9 675
1951	1990	07	28.27674	20	40	07.38	-03	36	17.4		9 675
1951	1990	07	28.31007	20	40	03.68	-03	40	04.2		9 675
1951	1990	07	30.31500	20	36	27.75	-07	33	04.6		9 675
2020	1990	07	25.25799	19	41	50.31	-12	42	42.1		9 675
2020	1990	07	25.29670	19	41	48.58	-12	42	52.3		9 675
2020	1990	07	25.30590	19	41	47.87	-12	42	55.2		9 675
2043	1990	07	27.35399	21	38	33.91	-14	36	35.7	16.5	9 675
2043	1990	07	27.38003	21	38	32.83	-14	36	39.5		9 675
2043	1990	07	30.44080	21	36	23.42	-14	44	17.3		9 675
2043	1990	07	30.47014	21	36	22.15	-14	44	21.2		9 675
2052	1990	07	26.41042	21	42	21.27	+00	15	44.7		9 675
2052	1990	07	26.45261	21	42	19.70	+00	15	40.9		9 675
2052	1990	07	28.39479	21	41	07.68	+00	12	09.4		9 675
2052	1990	07	28.42639	21	41	06.51	+00	12	06.1		9 675
2052	1990	07	30.28837	21	39	54.94	+00	08	06.9		9 675
2052	1990	07	30.42382	21	39	49.45	+00	07	48.8		9 675
2054	1990	07	30.44080	21	29	48.76	-12	32	31.7		9 675
2054	1990	07	30.47014	21	29	47.59	-12	32	35.9		9 675
2079	1990	07	28.34149	21	59	31.10	-25	17	05.5		9 675
2079	1990	07	28.37465	21	59	29.21	-25	17	11.2		9 675
2079	1990	07	30.37146	21	57	41.11	-25	22	20.3		9 675
2079	1990	07	30.40573	21	57	38.99	-25	22	25.7		9 675
2080	1990	07	25.34618	22	18	48.15	-17	01	33.3		9 675
2080	1990	07	25.38021	22	18	46.80	-17	01	42.2		9 675
2080	1990	07	29.42681	22	16	02.31	-17	19	52.2		9 675
2080	1990	07	29.45677	22	16	00.91	-17	20	00.7		9 675
2149	1990	07	26.35677	21	44	55.19	-27	00	09.8		9 675
2149	1990	07	26.38785	21	44	53.69	-27	00	22.3		9 675
2186	1990	07	27.35399	21	51	49.94	-10	50	47.0		9 675
2186	1990	07	27.38003	21	51	48.83	-10	50	52.1		9 675
2186	1990	07	30.44080	21	49	37.74	-10	58	52.3		9 675
2186	1990	07	30.47014	21	49	36.47	-10	58	56.8		9 675
2189	1990	07	29.42681	22	17	39.87	-15	32	48.4		9 675
2189	1990	07	29.45677	22	17	39.50	-15	33	17.2		9 675
2251	1990	07	27.41059	22	19	15.03	-00	43	38.4		9 675
2251	1990	07	27.45000	22	19	14.01	-00	43	43.3		9 675
2251	1990	07	30.45365	22	17	54.52	-00	50	59.9	16.2	9 675
2251	1990	07	30.47882	22	17	53.72	-00	51	03.6		9 675
2252	1990	07	25.34618	22	00	38.30	-16	59	37.5		9 675
2252	1990	07	25.38021	22	00	36.90	-16	59	43.6		9 675
2252	1990	07	29.42681	21	57	47.18	-17	12	28.5		9 675
2252	1990	07	29.45677	21	57	45.78	-17	12	34.3		9 675

2257	1990	07	27.41059	22	33	20.76	+00	53	52.8		9 675
2257	1990	07	27.45000	22	33	20.21	+00	53	57.5		9 675
2257	1990	07	30.45365	22	32	39.94	+01	01	00.1		9 675
2257	1990	07	30.47882	22	32	39.58	+01	01	04.2		9 675
2307	1990	07	25.25799	19	40	43.14	-12	52	08.2		9 675
2307	1990	07	25.29670	19	40	41.27	-12	52	09.6		9 675
2310	1990	07	27.35399	22	03	41.54	-13	03	51.3	17.5	9 675
2310	1990	07	27.38003	22	03	40.63	-13	03	56.0		9 675
2310	1990	07	30.44080	22	01	52.88	-13	15	55.0		9 675
2310	1990	07	30.47014	22	01	51.87	-13	16	01.3		9 675
2314	1990	07	25.34618	22	19	41.03	-20	38	58.8		9 675
2314	1990	07	25.38021	22	19	39.67	-20	39	09.2		9 675
2314	1990	07	28.34149	22	17	38.06	-20	54	53.5		9 675
2314	1990	07	28.37465	22	17	36.56	-20	55	04.7		9 675
2314	1990	07	29.39149	22	16	51.48	-21	00	30.9		9 675
2314	1990	07	29.42681	22	16	49.75	-21	00	40.3		9 675
2314	1990	07	29.45677	22	16	48.33	-21	00	49.6		9 675
2314	1990	07	29.46441	22	16	48.00	-21	00	53.6		9 675
2314	1990	07	30.37146	22	16	06.42	-21	05	48.3		9 675
2314	1990	07	30.40573	22	16	04.62	-21	05	59.1		9 675
2314	1990	07	30.41354	22	16	04.47	-21	05	58.8		9 675
2347	1990	07	27.41059	22	18	44.18	+01	19	58.5		9 675
2347	1990	07	27.45000	22	18	42.84	+01	20	06.1		9 675
2347	1990	07	30.45365	22	16	58.38	+01	29	57.8		9 675
2347	1990	07	30.47882	22	16	57.47	+01	30	02.6		9 675
2392	1990	07	27.35399	21	46	07.52	-12	58	45.5		9 675
2392	1990	07	27.38003	21	46	06.27	-12	58	53.1		9 675
2392	1990	07	30.44080	21	43	41.92	-13	15	19.4		9 675
2392	1990	07	30.47014	21	43	40.44	-13	15	29.8		9 675
2433	1990	07	30.28837	21	29	44.14	+00	36	36.9		9 675
2433	1990	07	30.42382	21	29	37.88	+00	35	50.6		9 675
2468	1990	07	26.41042	22	06	40.98	-00	11	16.3		9 675
2468	1990	07	26.45261	22	06	39.72	-00	11	16.7		9 675
2468	1990	07	27.41059	22	06	13.21	-00	11	34.9		9 675
2468	1990	07	27.45000	22	06	11.97	-00	11	35.8		9 675
2468	1990	07	28.39479	22	05	44.49	-00	12	11.6		9 675
2468	1990	07	28.42639	22	05	43.46	-00	12	13.1		9 675
2470	1990	07	25.34618	21	54	20.46	-16	54	51.9		9 675
2470	1990	07	25.38021	21	54	19.13	-16	55	01.3		9 675
2470	1990	07	27.35399	21	53	02.92	-17	03	56.3	17.2	9 675
2470	1990	07	27.38003	21	53	01.88	-17	04	02.4		9 675
2470	1990	07	29.42681	21	51	38.99	-17	13	27.6		9 675
2470	1990	07	29.45677	21	51	37.69	-17	13	36.1		9 675
2470	1990	07	30.36257	21	50	59.90	-17	17	48.2		9 675
2470	1990	07	30.39757	21	50	58.30	-17	17	58.5		9 675
2521	1990	07	27.41059	22	34	27.51	-00	19	52.4		9 675
2521	1990	07	27.45000	22	34	26.22	-00	19	51.0		9 675
2562	1990	07	26.35677	21	22	31.82	-23	07	08.5		9 675
2562	1990	07	26.38785	21	22	30.23	-23	07	11.2		9 675
2605	1990	07	24.34618	20	19	01.64	-08	29	51.9		9 675
2605	1990	07	24.37847	20	19	00.16	-08	30	00.0		9 675
2605	1990	07	28.25104	20	16	05.06	-08	47	39.4		9 675
2605	1990	07	28.28490	20	16	03.38	-08	47	50.9		9 675
2605	1990	07	30.30538	20	14	31.93	-08	57	35.6		9 675
2605	1990	07	30.33212	20	14	30.74	-08	57	44.5		9 675
2623	1990	07	25.34618	21	55	04.22	-17	55	21.9		9 675
2623	1990	07	25.38021	21	55	02.92	-17	55	25.5		9 675
2623	1990	07	29.42681	21	52	28.09	-18	02	36.0		9 675
2623	1990	07	29.45677	21	52	26.71	-18	02	39.8		9 675

2623	1990	07	30.36257	21	51	48.36	-18	04	22.7		9 675
2623	1990	07	30.39757	21	51	46.60	-18	04	27.3		9 675
2637	1990	07	26.35677	21	41	21.55	-22	23	38.0		9 675
2637	1990	07	26.38785	21	41	20.20	-22	23	40.1		9 675
2637	1990	07	30.36257	21	38	34.10	-22	28	18.3		9 675
2637	1990	07	30.39757	21	38	32.36	-22	28	20.8		9 675
2666	1990	07	30.28837	21	32	38.21	+03	44	07.9		9 675
2666	1990	07	30.42382	21	32	33.04	+03	43	47.6		9 675
2737	1990	07	26.35677	21	25	11.34	-21	31	25.5		9 675
2737	1990	07	26.38785	21	25	09.64	-21	31	30.1		9 675
2907	1990	07	25.33056	20	33	21.78	-07	03	25.0		9 675
2907	1990	07	25.36337	20	33	20.28	-07	03	33.8		9 675
2907	1990	07	28.27674	20	31	08.59	-07	17	30.1	16.8	9 675
2907	1990	07	28.31007	20	31	07.05	-07	17	40.9		9 675
2907	1990	07	30.31500	20	29	35.68	-07	27	48.8		9 675
2907	1990	07	30.33958	20	29	34.32	-07	27	53.9		9 675
2995	1990	07	25.33056	20	31	16.61	-03	01	18.7		9 675
2995	1990	07	25.36337	20	31	14.68	-03	01	32.3		9 675
2995	1990	07	28.27674	20	28	49.76	-03	18	25.2		9 675
2995	1990	07	28.31007	20	28	48.15	-03	18	37.7		9 675
2995	1990	07	30.31500	20	27	07.81	-03	30	57.4		9 675
2995	1990	07	30.33958	20	27	06.60	-03	31	03.9		9 675
3020	1990	07	27.29514	19	37	53.10	-17	17	07.2		9 675
3020	1990	07	27.32674	19	37	51.48	-17	17	18.7		9 675
3040	1990	07	27.41059	22	13	51.20	-02	07	13.1		9 675
3040	1990	07	27.45000	22	13	49.27	-02	08	29.9		9 675
3051	1990	07	30.28837	21	30	30.63	+00	50	21.9		9 675
3051	1990	07	30.42382	21	30	23.25	+00	51	16.5		9 675
3065	1990	07	27.35399	21	44	40.97	-11	51	54.8		9 675
3065	1990	07	27.38003	21	44	39.79	-11	51	59.0		9 675
3065	1990	07	30.44080	21	42	18.33	-11	59	10.0		9 675
3065	1990	07	30.47014	21	42	16.88	-11	59	14.2		9 675
3086	1990	07	26.41042	21	54	46.26	-01	23	37.4		9 675
3086	1990	07	26.45261	21	54	43.13	-01	23	09.7		9 675
3086	1990	07	28.39479	21	52	22.65	-01	02	08.5		9 675
3086	1990	07	28.42639	21	52	20.20	-01	01	49.0		9 675
3086	1990	07	30.28837	21	49	59.44	-00	42	18.8		9 675
3086	1990	07	30.42382	21	49	48.62	-00	40	55.8		9 675
3233	1990	07	25.34618	21	56	03.05	-16	12	29.2		9 675
3233	1990	07	25.38021	21	56	01.40	-16	12	35.6		9 675
3233	1990	07	27.35399	21	54	30.43	-16	18	41.7		9 675
3233	1990	07	27.38003	21	54	29.13	-16	18	46.4		9 675
3233	1990	07	29.42681	21	52	48.43	-16	25	24.4		9 675
3233	1990	07	29.45677	21	52	46.85	-16	25	30.1		9 675
3233	1990	07	30.44080	21	51	56.27	-16	28	44.8		9 675
3233	1990	07	30.47014	21	51	54.70	-16	28	50.7		9 675
3286	1990	07	26.35677	21	49	14.42	-23	28	07.8		9 675
3286	1990	07	26.38785	21	49	12.98	-23	28	23.9		9 675
3286	1990	07	28.34149	21	47	48.27	-23	45	48.6		9 675
3286	1990	07	28.37465	21	47	46.56	-23	46	08.2		9 675
3286	1990	07	30.36257	21	46	15.97	-24	03	48.0		9 675
3299	1990	07	27.41059	22	24	29.61	-01	03	14.8		9 675
3299	1990	07	27.45000	22	24	28.13	-01	03	15.5		9 675
3299	1990	07	30.45365	22	22	34.48	-01	05	23.2		9 675
3299	1990	07	30.47882	22	22	33.42	-01	05	24.5		9 675
3313	1990	07	27.45000	22	19	15.87	+04	47	15.5		9 675
3313	1990	07	30.45365	22	17	19.25	+04	55	33.5	17.0	9 675
3313	1990	07	30.47882	22	17	18.13	+04	55	38.4		9 675
3331	1990	07	27.29514	19	39	14.67	-16	59	07.1		9 675

3331	1990	07	27.32674	19	39	12.87	-16	59	13.0	9 675
3459	1990	07	26.35677	21	46	39.49	-19	53	48.3	9 675
3459	1990	07	26.38785	21	46	38.18	-19	54	03.7	9 675
3459	1990	07	30.36257	21	44	05.03	-20	28	03.6	9 675
3459	1990	07	30.39757	21	44	03.44	-20	28	21.7	9 675
3479	1990	07	26.41042	22	06	16.56	+04	11	45.8	9 675
3479	1990	07	26.45261	22	06	15.35	+04	11	41.0	9 675
3479	1990	07	28.39479	22	05	18.16	+04	07	05.6	9 675
3479	1990	07	28.42639	22	05	17.17	+04	07	00.9	9 675
3481	1990	07	24.34618	20	08	56.68	-11	20	05.3	17.0 9 675
3481	1990	07	24.37847	20	08	54.59	-11	20	12.6	9 675
3481	1990	07	25.26754	20	08	00.15	-11	23	55.2	9 675
3481	1990	07	25.30590	20	07	57.69	-11	24	04.8	9 675
3481	1990	07	28.25104	20	04	56.52	-11	36	45.4	9 675
3481	1990	07	28.26840	20	04	55.31	-11	36	52.0	9 675
3481	1990	07	28.28490	20	04	54.42	-11	36	54.8	9 675
3481	1990	07	28.30243	20	04	53.16	-11	37	01.0	9 675
3481	1990	07	29.26285	20	03	54.39	-11	41	14.3	9 675
3481	1990	07	29.29444	20	03	52.38	-11	41	23.2	9 675
3481	1990	07	30.30538	20	02	50.74	-11	46	00.4	9 675
3494	1990	07	25.25799	19	31	50.11	-11	23	24.7	9 675
3494	1990	07	25.29670	19	31	47.94	-11	23	27.2	9 675
3497	1990	07	25.25799	19	37	17.72	-08	08	29.2	9 675
3497	1990	07	25.29670	19	37	15.74	-08	08	44.5	9 675
3497	1990	07	27.30590	19	35	38.91	-08	22	34.5	9 675
3497	1990	07	27.33733	19	35	37.36	-08	22	48.2	9 675
3497	1990	07	29.26285	19	34	07.24	-08	36	21.5	9 675
3511	1990	07	24.34618	20	17	43.03	-07	15	05.7	17.2 9 675
3511	1990	07	24.37847	20	17	41.36	-07	15	10.0	9 675
3511	1990	07	28.25104	20	14	25.73	-07	23	37.0	9 675
3511	1990	07	28.28490	20	14	23.96	-07	23	43.1	9 675
3511	1990	07	30.30538	20	12	41.89	-07	28	36.9	9 675
3511	1990	07	30.33212	20	12	40.54	-07	28	42.4	9 675
3518	1990	07	25.25799	19	29	49.62	-08	30	32.0	9 675
3518	1990	07	25.29670	19	29	47.69	-08	30	56.0	9 675
3528	1990	07	30.31500	20	41	53.06	-10	29	51.0	9 675
3528	1990	07	30.33958	20	41	51.64	-10	29	49.0	9 675
3534	1990	07	26.41042	22	03	43.96	-00	26	52.6	9 675
3534	1990	07	26.45261	22	03	42.38	-00	26	53.6	9 675
3534	1990	07	28.39479	22	02	30.85	-00	28	02.1	9 675
3534	1990	07	28.42639	22	02	29.62	-00	28	03.4	9 675
3608	1990	07	28.34149	22	10	25.98	-26	41	13.1	9 675
3608	1990	07	28.37465	22	10	24.80	-26	41	26.9	9 675
3608	1990	07	30.37146	22	09	18.73	-26	55	17.4	9 675
3608	1990	07	30.40573	22	09	17.45	-26	55	32.7	9 675
3609	1990	07	26.35677	21	39	38.06	-20	37	07.6	9 675
3609	1990	07	26.38785	21	39	36.77	-20	37	15.2	9 675
3728	1990	07	24.21681	16	48	50.14	+06	38	31.1	9 675
3728	1990	07	24.24688	16	48	49.60	+06	38	18.1	9 675
3728	1990	07	26.18681	16	48	18.97	+06	24	01.5	9 675
3728	1990	07	26.22309	16	48	18.38	+06	23	44.6	9 675
3739	1990	07	30.36257	21	29	52.01	-18	14	00.3	9 675
3739	1990	07	30.39757	21	29	50.24	-18	14	18.2	9 675
3748	1990	07	25.34618	21	55	50.84	-21	51	50.4	9 675
3748	1990	07	26.35677	21	55	04.14	-21	56	47.1	9 675
3748	1990	07	26.38785	21	55	02.55	-21	56	57.0	9 675
3748	1990	07	28.34149	21	53	29.81	-22	06	27.6	9 675
3748	1990	07	28.37465	21	53	28.21	-22	06	37.1	9 675
3748	1990	07	30.36257	21	51	49.67	-22	16	15.5	9 675

3748	1990	07	30.37146	21	51	49.46	-22	16	19.2		9 675
3748	1990	07	30.39757	21	51	47.96	-22	16	26.1		9 675
3748	1990	07	30.40573	21	51	47.63	-22	16	29.6		9 675
3791	1990	07	27.35399	21	54	38.47	-13	09	10.7		9 675
3791	1990	07	27.38003	21	54	37.45	-13	09	16.0		9 675
3791	1990	07	30.44080	21	52	34.38	-13	18	41.0		9 675
3791	1990	07	30.47014	21	52	33.15	-13	18	47.5		9 675
3812	1990	07	26.38785	21	38	35.09	-20	09	32.9		9 675
3812	1990	07	30.36257	21	36	00.18	-20	39	41.3		9 675
3812	1990	07	30.39757	21	35	58.74	-20	39	57.6		9 675
3828	1990	07	25.33056	20	27	48.25	-09	56	40.4		9 675
3828	1990	07	25.36337	20	27	46.73	-09	56	45.5		9 675
3828	1990	07	30.30538	20	24	01.29	-10	09	01.7		9 675
3828	1990	07	30.33212	20	24	00.01	-10	09	05.6		9 675
3847	1990	07	25.34618	22	05	49.86	-16	46	45.6		9 675
3847	1990	07	25.38021	22	05	48.72	-16	46	54.4		9 675
3847	1990	07	29.42681	22	03	30.47	-17	03	53.8		9 675
3847	1990	07	29.45677	22	03	29.36	-17	04	02.0		9 675
3884	1990	07	27.35399	21	59	02.35	-13	36	37.3		9 675
3884	1990	07	27.38003	21	59	01.25	-13	36	41.4		9 675
3884	1990	07	30.44080	21	57	06.20	-13	46	52.1		9 675
3884	1990	07	30.47014	21	57	05.19	-13	46	59.9		9 675
3887	1990	07	26.41042	21	41	13.60	-00	49	15.4		9 675
3887	1990	07	26.45261	21	41	12.15	-00	49	23.4		9 675
3887	1990	07	30.28837	21	38	54.95	-01	02	34.5	17.5	9 675
4070	1990	07	27.41059	22	28	13.93	-02	35	11.9		9 675
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4070	1990	07	30.45365	22	26	59.92	-02	31	46.4	16.8	9 675
4070	1990	07	30.47882	22	26	59.18	-02	31	47.3		9 675
4081	1990	07	27.29514	20	10	03.14	-17	28	42.2	16.2	9 675
4081	1990	07	27.32674	20	10	01.16	-17	28	46.4		9 675
4106	1990	07	29.39149	22	38	47.65	-24	49	58.8		9 675
4106	1990	07	29.46441	22	38	44.74	-24	50	25.9		9 675
4107	1990	07	30.31500	20	50	18.78	-08	50	44.2		9 675
4107	1990	07	30.33958	20	50	17.55	-08	50	56.1		9 675
4114	1990	07	30.44080	22	03	00.84	-13	05	32.6		9 675
4114	1990	07	30.47014	22	02	59.55	-13	05	31.2		9 675
4120	1990	07	25.26754	20	15	22.14	-14	18	57.8		9 675
4120	1990	07	25.30590	20	15	20.31	-14	19	08.4		9 675
4120	1990	07	28.30243	20	13	02.70	-14	31	55.0		9 675
4122	1990	07	24.34618	19	56	18.61	-06	42	16.7		9 675
4122	1990	07	24.37847	19	56	16.65	-06	42	13.9		9 675
4122	1990	07	27.30590	19	53	26.25	-06	39	18.1		9 675
4122	1990	07	27.33733	19	53	24.40	-06	39	16.8		9 675
4122	1990	07	29.26285	19	51	34.32	-06	37	56.3		9 675
4122	1990	07	29.29444	19	51	32.46	-06	37	54.8		9 675
4127	1990	07	27.35399	21	34	21.67	-13	16	35.0		9 675
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4127	1990	07	30.44080	21	32	08.77	-13	29	24.8		9 675
4127	1990	07	30.47014	21	32	07.40	-13	29	32.4		9 675
4159	1990	07	19.43767	21	32	27.58	-30	19	00.7		2 675
4159	1990	07	19.47101	21	32	26.16	-30	19	22.4		2 675
4159	1990	07	23.37413	21	29	39.60	-31	01	10.5		2 675
4159	1990	07	23.39861	21	29	38.41	-31	01	26.4		2 675
4183	1990	07	30.44080	21	38	21.37	-09	46	01.2		9 675
4183	1990	07	30.47014	21	38	18.91	-09	46	12.4		9 675
4186	1990	07	18.31788	19	49	36.04	-03	58	08.3	16.0	2 675
4186	1990	07	18.34844	19	49	34.68	-03	58	21.9		2 675

4186		1990	07	21.34115	19	47	17.55	-04	20	33.4		2 675
4186		1990	07	21.36892	19	47	16.26	-04	20	46.7		2 675
4186		1990	07	27.30590	19	42	46.60	-05	08	02.5		9 675
4186		1990	07	27.33733	19	42	45.19	-05	08	17.4		9 675
4186		1990	07	29.26285	19	41	19.73	-05	24	26.3		9 675
4186		1990	07	29.29444	19	41	18.29	-05	24	42.2		9 675
4215		1990	07	25.26754	19	54	55.68	-12	59	39.4		9 675
4215		1990	07	25.30590	19	54	53.36	-12	59	44.9		9 675
4215		1990	07	27.29514	19	52	56.96	-13	03	09.0		9 675
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4215		1990	07	27.32674	19	52	55.04	-13	03	11.7		9 675
4215		1990	07	27.33733	19	52	54.53	-13	03	11.8		9 675
4215		1990	07	28.26840	19	52	00.56	-13	04	52.3	17.0	9 675
4215		1990	07	28.30243	19	51	58.67	-13	04	56.2		9 675
4215		1990	07	29.26285	19	51	03.69	-13	06	42.9		9 675
4215		1990	07	29.29444	19	51	01.92	-13	06	46.4		9 675
4220		1990	07	25.33056	20	38	49.02	-07	57	24.6	17.8	9 675
4220		1990	07	25.36337	20	38	47.45	-07	57	26.4		9 675
4220		1990	07	28.27674	20	36	24.31	-08	04	57.8		9 675
4220		1990	07	28.31007	20	36	22.57	-08	05	04.9		9 675
4220		1990	07	30.31500	20	34	42.96	-08	10	39.8		9 675
4220		1990	07	30.33958	20	34	41.63	-08	10	45.3		9 675
4502		1990	07	26.41042	21	53	25.77	-02	31	17.3		9 675
4502		1990	07	26.45261	21	53	24.16	-02	31	29.9		9 675
4502		1990	07	28.39479	21	52	11.42	-02	41	37.6		9 675
4502		1990	07	28.42639	21	52	10.14	-02	41	47.6		9 675

688 Lowell Observatory, Anderson Mesa Station
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observers B. A. Skiff, C. M. Olmstead
Measurer B. A. Skiff
1.8-m reflector + CCD

1982	TX	1990	07	29.28115	20	29	52.52	+09	15	15.0	18.0R	688
1982	TX	1990	07	29.28735	20	29	52.11	+09	15	14.9		688
1988	EF	1990	07	29.35547	22	10	01.71	+13	10	28.8	17.5R	688
1988	EF	1990	07	29.36695	22	10	01.25	+13	10	27.7		688
1988	WC	1990	07	29.25636	19	14	18.52	+05	25	11.1	18.0	688
1988	WC	1990	07	29.26410	19	14	18.06	+05	25	10.0		688
1990	MB	1990	07	29.20771	16	36	15.23	+07	12	13.0	17.4	688
1990	MB	1990	07	29.21653	16	36	15.49	+07	12	14.7		688
1990	MB	1990	07	30.15608	16	36	46.98	+07	14	50.8	16.9	688
1990	MB	1990	07	30.16269	16	36	47.19	+07	14	52.0		688
3040		1990	07	29.38008	22	12	20.52	-03	11	12.4	16.3R	688
3040		1990	07	29.38557	22	12	20.23	-03	11	22.8		688
3392		1990	07	29.22825	17	23	57.81	-14	27	45.9	17.2R	688
3392		1990	07	29.24133	17	23	57.45	-14	27	40.9		688
3752		1990	07	30.30816	22	09	00.93	+13	06	14.6	16.8R	688
3752		1990	07	30.31471	22	09	00.35	+13	06	00.6		688
4183		1990	07	29.33862	21	39	55.31	-09	40	34.3	17.6R	688
4183		1990	07	29.34527	21	39	54.69	-09	40	37.0		688
4183		1990	07	30.29404	21	38	34.12	-09	45	17.5	17.4R	688
4183		1990	07	30.30038	21	38	33.52	-09	45	19.6		688

690 Lowell Observatory
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observer C. W. Tombaugh
Measurer C. M. Olmstead

0.33-m photographic telescope and 0.12-m f/7 Brashear camera
PDS scanning microdensitometer
AGK3 and Perth 70 secondary nets, global solutions

123	1930	10	16.27083	00	53	21.09	+16 47 11.6		690
123	1930	10	18.23958	00	51	36.44	+16 37 35.4		690
385	1930	10	16.27083	01	13	48.41	+21 21 06.8	R	690
385	1930	10	18.23958	01	11	56.83	+21 16 11.8	R	690
640	1930	10	16.27083	01	08	03.55	+18 50 21.5		690
640	1930	10	18.23958	01	06	39.60	+18 35 53.6		690
647	1930	10	16.27083	00	58	03.72	+18 22 35.3		690
647	1930	10	18.23958	00	56	23.39	+18 05 44.0		690
771	1930	10	16.27083	01	02	19.87	+15 33 36.8	D	690
771	1930	10	18.23958	01	00	50.97	+15 07 15.1		690

760 Goethe Link
E. Bowell, Lowell Observatory, 1400 West Mars Hill Road,
Flagstaff, AZ 86001, U.S.A.
Observers H. L. Cohen, P. J. Guyer, W. T. Hughes, M. S. Kalish,
G. J. Nozicka, E. C. Olson, C. L. Perry, S. F. Strother, H. S. Yun
Measurer C. M. Olmstead
0.25-m refractor
PDS scanning microdensitometer
AGK3 and Perth 70 secondary nets, global solutions

39	1963	06	23.16042	16	11	12.37	-05 35 10.2	11.0	D	760
39	1963	06	23.20313	16	11	10.63	-05 35 08.2		D	760
112	1965	10	28.16042	01	18	52.70	+12 52 39.1			760
112	1965	10	28.28611	01	18	46.06	+12 52 00.8			760
236	1955	06	19.13129	16	43	33.44	-11 03 26.1	14.3	D	760
236	1955	06	19.17363	16	43	31.31	-11 03 21.4			760
236	1956	10	11.28553	02	28	39.40	+09 14 25.1	12.0		760
236	1956	10	11.36324	02	28	36.42	+09 13 47.6			760
411	1961	01	10.03705	05	14	38.39	+15 44 49.5	14.8	D	760
411	1961	01	10.08080	05	14	36.53	+15 44 58.5			760
411	1963	06	23.16042	16	03	52.79	-06 31 41.7	13.5	D	760
411	1963	06	23.20313	16	03	51.18	-06 31 52.0		D	760
516	1956	10	06.29934	02	05	59.93	+29 36 52.3	14.9		760
516	1956	10	06.34240	02	05	57.88	+29 36 52.9			760
518	1961	01	10.03705	05	16	46.60	+14 02 26.5	16.0		760
518	1961	01	10.08080	05	16	44.82	+14 02 28.1			760
526	1956	10	05.07851	23	19	06.17	-06 20 33.8	15.7	D	760
526	1956	10	05.12226	23	19	04.58	-06 20 47.1			760
834	1956	10	11.28553	02	32	48.32	+12 07 30.8	14.4		760
834	1956	10	11.36324	02	32	45.17	+12 07 09.8			760
961	1956	10	05.07851	23	26	29.03	-13 21 23.0	15.5		760
961	1956	10	05.12226	23	26	26.71	-13 21 22.2		D	760
1277	1965	10	28.16042	01	07	01.35	+15 12 46.5			760
1277	1965	10	28.28611	01	06	55.70	+15 11 47.8			760
2715	1955	06	19.13129	16	40	54.23	-13 14 29.2		D	760
2715	1955	06	19.17363	16	40	52.12	-13 14 18.1			760
2715	1956	10	11.28553	02	30	57.33	+12 52 20.5			760
2715	1956	10	11.36324	02	30	54.07	+12 51 48.3			760

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

1927 TC	1990	07	18.30637	22	58	07.50	-20 39 39.4	801
1927 TC	1990	07	18.31041	22	58	07.84	-20 39 34.8	801

1927	TC	1990	07	22.30616	23	03	43.00	-19	20	55.9	801
1927	TC	1990	07	22.32822	23	03	44.62	-19	20	28.7	801
1936	QE1	1990	07	18.29945	21	36	21.16	-00	18	32.4	801
1936	QE1	1990	07	18.32701	21	36	20.43	-00	18	39.8	801
1936	QE1	1990	07	20.26136	21	35	30.57	-00	27	50.5	801
1976	YD2	1990	07	19.17931	19	57	18.50	-17	50	16.9	801
1976	YD2	1990	07	19.20288	19	57	17.25	-17	50	17.2	801
1976	YD2	1990	07	22.16533	19	54	38.88	-17	48	53.6	801
1976	YD2	1990	07	22.18246	19	54	37.94	-17	48	53.1	801
1977	DS2	1990	07	20.11098	17	56	45.13	-07	36	34.1	801
1979	MS6	1990	06	25.15285	17	16	11.10	-19	37	18.8	801
1979	MS6	1990	06	25.17187	17	16	10.07	-19	37	15.7	801
1979	UD2	1990	07	18.18461	19	18	37.74	-19	09	21.6	801
1979	UD2	1990	07	18.20871	19	18	36.33	-19	09	21.4	801
1979	UD2	1990	07	20.15274	19	16	47.83	-19	09	11.4	801
1979	UD2	1990	07	20.16001	19	16	47.40	-19	09	11.7	801
1980	KR1	1990	07	19.25917	21	10	19.22	-11	02	23.2	801
1980	KR1	1990	07	22.24229	21	07	52.34	-11	19	28.7	801
1980	KR1	1990	07	22.26454	21	07	51.15	-11	19	36.5	801
1980	OG	1990	06	26.26679	20	36	38.75	-15	34	15.8	801
1980	OG	1990	06	26.29878	20	36	38.00	-15	34	21.9	801
1980	OG	1990	07	18.25891	20	22	33.86	-17	21	34.3	801
1980	OG	1990	07	18.27340	20	22	33.04	-17	21	39.9	801
1980	OG	1990	07	19.22121	20	21	41.83	-17	27	39.6	801
1980	OG	1990	07	19.24100	20	21	40.68	-17	27	47.0	801
1981	DQ	1990	06	25.14144	16	33	24.25	-09	37	33.4	801
1981	DQ	1990	06	25.16174	16	33	23.37	-09	37	30.4	801
1981	DQ	1990	06	26.11422	16	32	42.82	-09	34	35.3	801
1981	DQ	1990	06	26.14528	16	32	41.49	-09	34	30.0	801
1981	EZ2	1990	07	22.21099	20	41	08.60	-03	45	32.0	t 801
1981	EZ2	1990	07	22.23287	20	41	07.41	-03	45	34.9	801
1981	EZ17	1990	06	25.23914	19	46	27.67	+01	06	06.9	801
1981	EZ17	1990	06	25.28304	19	46	25.80	+01	06	05.6	801
1981	EZ17	1990	07	18.21991	19	27	39.45	-00	10	14.8	801
1981	EZ17	1990	07	18.24071	19	27	38.35	-00	10	22.3	801
1981	EZ17	1990	07	19.19087	19	26	49.69	-00	16	09.8	801
1981	WM4	1990	07	19.25576	20	54	25.59	-02	20	56.1	801
1981	WM4	1990	07	19.27676	20	54	24.62	-02	20	52.9	801
1981	WM4	1990	07	20.22676	20	53	41.78	-02	18	38.6	801
1981	WM4	1990	07	20.24526	20	53	40.89	-02	18	35.9	801
1982	SO1	1990	06	25.26226	20	36	09.06	+02	47	38.2	801
1982	SO1	1990	06	25.30723	20	36	08.48	+02	47	46.1	801
1982	SO1	1990	07	18.26366	20	25	36.94	+02	43	07.1	801
1982	SO1	1990	07	18.27961	20	25	36.25	+02	43	03.3	801
1982	SO1	1990	07	19.21245	20	24	58.17	+02	39	12.3	801
1982	SO1	1990	07	19.23693	20	24	57.10	+02	39	05.8	801
1983	OD	1990	07	19.13665	17	14	41.16	-08	40	36.5	801
1983	OD	1990	07	20.09601	17	14	10.68	-08	50	31.9	801
1984	GR	1990	07	20.07223	14	26	05.37	-17	14	04.2	801
1984	GR	1990	07	20.08951	14	26	05.99	-17	14	05.7	801
1985	GV1	1990	07	18.25214	20	19	05.93	+04	34	31.0	801
1985	GV1	1990	07	18.26858	20	19	05.10	+04	34	29.3	801
1985	GV1	1990	07	19.20875	20	18	18.50	+04	32	50.4	801
1985	GV1	1990	07	19.22629	20	18	17.62	+04	32	48.6	801
1985	RY3	1990	07	18.21450	19	19	52.07	-20	11	20.0	801
1985	RY3	1990	07	18.23561	19	19	50.98	-20	11	22.4	801
1985	RY3	1990	07	19.16223	19	19	05.41	-20	13	12.9	801
1985	RY3	1990	07	19.19541	19	19	03.72	-20	13	16.9	801
1985	RE4	1990	07	20.25716	21	33	41.04	-12	39	03.9	801

1985	RE4	1990	07	20.31408	21	33	39.11	-12	39	26.7	801
1986	RF	1990	07	22.32366	21	50	50.92	+04	23	19.6	801
1986	RP1	1990	07	20.11523	18	28	39.51	-15	43	15.2	801
1986	RP1	1990	07	20.14098	18	28	38.30	-15	43	18.9	801
1986	TP6	1990	07	20.21141	21	20	08.38	-12	26	02.2	801
1986	TP6	1990	07	20.23467	21	20	07.35	-12	26	03.1	801
1986	TP6	1990	07	22.25147	21	18	38.16	-12	27	03.9	801
1986	TP6	1990	07	22.28356	21	18	36.67	-12	27	04.8	801
1986	UD3	1990	07	20.18356	20	51	24.00	+01	59	02.8	801
1986	UD3	1990	07	20.20088	20	51	23.16	+01	59	04.4	801
1987	RM1	1990	07	19.23130	20	14	20.68	-16	44	31.3	801
1987	RM1	1990	07	20.16670	20	13	25.42	-16	49	17.2	801
1987	SV17	1990	07	22.23754	20	42	39.32	-16	46	12.6	801
1987	SV17	1990	07	22.25977	20	42	37.94	-16	46	15.7	801
1987	UX1	1990	06	26.22634	19	29	19.81	-17	39	19.5	801
1987	UX1	1990	06	26.24996	19	29	18.53	-17	39	16.3	801
1988	BW3	1990	07	20.25155	21	37	41.78	-01	35	45.6	801
1988	BW3	1990	07	20.29851	21	37	40.12	-01	35	47.3	801
1988	CC	1989	05	09.21585	13	33	11.68	+00	35	01.4	801
1988	CC	1990	06	25.18113	18	30	42.10	-08	30	38.6	801
1988	CC	1990	06	25.20036	18	30	41.19	-08	30	39.7	801
1988	CC	1990	06	26.18548	18	29	53.59	-08	31	35.4	801
1988	CC	1990	06	26.20935	18	29	52.44	-08	31	37.1	801
1988	CC	1990	07	18.16318	18	12	48.14	-09	18	58.8	w 801
1988	CC	1990	07	18.19571	18	12	46.76	-09	19	05.1	w 801
1988	CC	1990	07	19.13094	18	12	08.61	-09	22	07.3	w 801
1988	CC	1990	07	19.15861	18	12	07.46	-09	22	12.9	w 801
1989	AT6	1990	06	26.27096	20	36	07.48	-18	39	26.3	801
1989	AT6	1990	06	26.29517	20	36	06.73	-18	39	30.9	801
1989	CT	1990	07	22.17232	20	09	56.65	-18	36	27.6	801
1989	CT	1990	07	22.18685	20	09	55.73	-18	36	29.6	801
1989	GR6	1990	07	20.22185	21	18	30.37	-20	41	34.0	801
1989	GR6	1990	07	20.24143	21	18	29.57	-20	41	46.2	801
1989	GR6	1990	07	22.24654	21	17	09.88	-21	02	34.9	801
1989	GR6	1990	07	22.26914	21	17	08.92	-21	02	49.0	801
1990	KA	1990	07	22.11108	16	49	10.54	-23	07	47.3	801
1990	KA	1990	07	22.11455	16	49	11.01	-23	07	54.0	801
1990	MB	1990	07	19.09968	16	33	09.59	+06	18	06.5	801
1990	MB	1990	07	19.12373	16	33	09.58	+06	18	17.9	801
1990	MB	1990	07	20.07660	16	33	15.11	+06	25	40.3	801
1990	MB	1990	07	20.09286	16	33	15.15	+06	25	47.5	801
4009	P-L	1990	07	22.20080	20	06	01.94	-22	28	30.6	801
4009	P-L	1990	07	22.22276	20	06	00.66	-22	28	32.3	801

809 European Southern Observatory
E. Elst, Observatoire Royal de Belgique, Avenue Circulaire 3, B-1180 Brussels, Belgium (4)
R. M. West, European Southern Observatory, Karl Schwarzschild Strasse 2, D-8046 Garching bei Munchen, Federal Republic of Germany (5)
Observers E. W. Elst, G. Pizarro, O. Pizarro, R. M. West
Measurers E. W. Elst, R. M. West
GPO 0.4-m astrograph and Danish 1.5-m reflector

1989	UK8	1989	11	03.25556	02	53	50.53	+06	35	33.5	16.9 3 809
1989	UK8	1989	11	03.26875	02	53	49.81	+06	35	32.4	3 809
1989	UK8	1989	11	03.28194	02	53	49.04	+06	35	31.0	3 809
2060		1990	02	21.03494	06	42	48.89	+15	55	53.8	16.5V 5 809
2060		1990	02	21.04409	06	42	48.82	+15	55	54.0	5 809
2060		1990	02	22.04125	06	42	41.13	+15	56	30.4	16.5V 5 809
2060		1990	02	22.07753	06	42	40.84	+15	56	31.7	5 809

2060		1990 02 23.03706	06 42 33.78	+15 57 07.0			16.5V	5	809
2060		1990 02 23.06767	06 42 33.56	+15 57 08.3				5	809
2060		1990 02 24.03082	06 42 26.77	+15 57 43.4			16.5V	5	809
2060		1990 02 24.06875	06 42 26.49	+15 57 44.8				5	809

871 Akou
K. Kawanishi, 2045-1, Kariya, Akou, Hyogo-Ken 678-02, Japan
0.20-m f/4.8 reflector

1990 OA		1990 07 29.62847	20 49 38.85	-16 36 37.8			15.5			871
1990 OA		1990 07 29.64236	20 49 39.24	-16 37 01.1						871

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

1989 UU2		1989 11 02.61285	01 49 28.05	+13 36 32.4			17			877
1989 UU2		1989 11 02.63021	01 49 27.25	+13 36 21.1						877

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

1988 WG		1990 06 23.56319	16 08 40.3	-24 48 53			17		w	896

The following discoveries were observed on one night only:

1989 UN8	*	1989 10 27.88889	02 42 54.80	+15 51 04.4			17.0			017
1989 UN8		1989 10 27.93472	02 42 50.08	+15 52 14.3						017
1989 UO8	*	1989 10 23.94873	03 49 49.96	+22 07 29.2			19.6			033
1989 UO8		1989 10 23.99595	03 49 48.25	+22 07 18.7						033
1989 UP8	*	1989 10 23.94873	03 57 05.02	+23 03 51.4			18.3			033
1989 UP8		1989 10 23.99595	03 57 03.16	+23 03 56.5						033
1989 UQ8	*	1989 10 23.94873	03 57 51.90	+22 43 05.2			19.0			033
1989 UQ8		1989 10 23.99595	03 57 50.43	+22 43 26.4						033
1989 UR8	*	1989 10 22.82639	00 38 48.76	+13 05 24.6					p	046
1989 UR8		1989 10 22.84051	00 38 48.35	+13 05 15.1					p	046
1989 US8	*	1989 10 22.86053	01 13 21.10	+12 10 52.2			17.0			046
1989 US8		1989 10 22.87465	01 13 20.53	+12 10 50.0						046
1989 UT8	*	1989 10 22.89450	02 09 50.24	+13 11 08.4			17.0			046
1989 UT8		1989 10 22.90868	02 09 49.43	+13 11 07.7						046
1989 UU8	*	1989 10 21.77043	23 33 52.72	-01 50 31.4			16.5V			095
1989 UV8	*	1989 10 23.84132	01 14 23.58	+16 44 25.4			16.5V			095
1989 UV8		1989 10 23.85521	01 14 23.49	+16 44 25.5			16.5V		E	095
1989 UW8	*	1989 10 23.84132	01 31 09.48	+20 06 32.3			16.0V			095
1989 UW8		1989 10 23.85521	01 31 09.27	+20 06 28.1			16.0V			095
1989 UX8	*	1989 10 23.85521	01 49 21.34	+18 12 37.3			16.0V		M	095
1989 UY8	*	1989 10 23.92748	02 11 26.67	+19 13 27.1						095
1989 UZ8	*	1989 10 23.92748	02 11 27.92	+19 11 21.2			17.0V			095
1989 UZ8		1989 10 23.94133	02 11 27.35	+19 11 21.7			17.0V			095
1989 UA9	*	1989 10 24.87326	02 40 51.47	+18 27 07.2			16.3V			095
1989 UA9		1989 10 24.89236	02 40 50.26	+18 26 56.2			16.3V			095
1989 UB9	*	1989 10 25.94089	02 45 06.33	+01 31 42.6			15.2V			095
1989 UC9	*	1989 10 26.86978	02 47 17.33	+19 16 06.3			16.0V			095
1989 UC9		1989 10 26.88889	02 47 16.35	+19 16 00.9			16.0V			095
1989 UD9	*	1989 10 30.80208	01 36 59.42	+04 41 16.2			16.0V			095
1989 UD9		1989 10 30.82293	01 36 58.30	+04 41 12.6			16.0V			095
1989 UE9	*	1989 10 30.80208	01 53 09.33	+07 06 11.5			16.0V			095

1989	UE9		1989	10	30.82293	01	53	08.25	+07	06	05.3	16.0V	095
1989	UF9	*	1989	10	30.80208	01	56	04.75	+08	37	55.1	16.3V	095
1989	UF9		1989	10	30.82293	01	56	03.75	+08	37	45.8	16.3V	095
1989	UG9	*	1989	10	30.80208	02	03	12.60	+08	21	37.5	16.0V E	095
1989	UG9		1989	10	30.82293	02	03	10.66	+08	21	51.1	16.0V E	095
1989	UH9	*	1989	10	30.89583	03	10	31.15	+09	59	57.1	16.0V	095
1989	UH9		1989	10	30.92014	03	10	30.02	+09	59	53.4	16.0V	095
1989	UJ9	*	1989	10	30.99304	03	59	34.98	+23	54	35.5	16.3V	095
1989	UJ9		1989	10	31.01388	03	59	33.90	+23	54	31.0	16.3V	095
1989	UK9	*	1989	10	26.61875	01	48	15.50	+10	22	20.6	19	372
1989	UK9		1989	10	26.63125	01	48	14.59	+10	22	21.7		372
1989	UL9	*	1989	10	26.61875	01	48	51.99	+10	49	30.2	18	372
1989	UL9		1989	10	26.63125	01	48	51.96	+10	49	25.4		372
1989	UM9	*	1989	10	26.61875	01	51	06.34	+10	29	37.2	19	372
1989	UM9		1989	10	26.63125	01	51	05.49	+10	29	33.7		372
1989	UN9	*	1989	10	26.64375	02	46	11.12	+11	42	45.2	17.5	372
1989	UN9		1989	10	26.65972	02	46	10.48	+11	42	44.4		372
1989	UO9	*	1989	10	26.69816	03	19	27.61	+16	32	02.1	17	372
1989	UO9		1989	10	26.71458	03	19	26.77	+16	32	00.5		372
1989	UP9	*	1989	10	29.47269	00	17	33.31	+10	04	00.5	16.5	399
1989	UP9		1989	10	29.49688	00	17	32.32	+10	03	55.3		399
1989	UP9		1989	10	29.51701	00	17	31.45	+10	03	52.9		399
1989	UQ9	*	1989	10	29.54097	02	26	14.77	+15	52	30.3	16.5	399
1989	UQ9		1989	10	29.55660	02	26	13.90	+15	52	20.1		399
1989	UQ9		1989	10	29.57326	02	26	13.12	+15	52	12.0		399
1989	UR9	*	1989	10	29.59861	02	45	19.15	+16	10	08.8	16.5	399
1989	UR9		1989	10	29.61389	02	45	18.20	+16	10	03.1		399
1989	UR9		1989	10	29.63403	02	45	17.26	+16	09	57.5		399
1989	US9	*	1989	10	25.57500	03	04	37.23	+23	01	07.5	16.5	400
1989	US9		1989	10	25.59444	03	04	35.96	+23	01	07.0		400
1989	US9		1989	10	25.60833	03	04	34.93	+23	01	00.1		400
1989	UT9	*	1989	10	20.59757	02	27	46.62	+13	29	30.6	16.5	403
1989	UT9		1989	10	20.60868	02	27	45.9	+13	29	27		403
1989	UU9	*	1989	10	28.68160	03	11	28.57	+15	51	20.6	16.5	403
1989	UU9		1989	10	28.69271	03	11	27.6	+15	51	23		403
1989	UV9	*	1989	10	25.42404	22	59	17.04	-00	21	13.0	16.5V	413
1989	UV9		1989	10	25.47265	22	59	16.76	-00	20	58.9		413
1989	UW9	*	1989	10	23.57269	01	38	53.27	+03	50	55.7	16.0	872
1989	UW9		1989	10	23.58698	01	38	52.50	+03	50	57.4		872
1989	UX9	*	1989	10	29.55168	02	30	06.67	+09	41	46.6	16.0	872
1989	UX9		1989	10	29.56771	02	30	05.78	+09	41	43.6		872
1989	UY9	*	1989	10	30.52957	02	42	24.03	+21	06	09.6	16.0	872
1989	UY9		1989	10	30.54392	02	42	23.32	+21	06	09.3		872
1989	VD2	*	1989	11	02.85694	01	00	55.19	+05	29	12.8	16.9	046
1989	VD2		1989	11	02.87118	01	00	54.51	+05	29	16.3		046
1989	VE2	*	1989	11	02.89549	02	06	49.17	+11	30	45.1		046
1989	VE2		1989	11	02.90972	02	06	48.60	+11	30	42.3		046
1989	VF2	*	1989	11	02.92986	02	09	00.54	+06	02	41.8	16.7	046
1989	VF2		1989	11	02.94410	02	08	59.85	+06	02	34.7		046
1989	VG2	*	1989	11	02.92986	02	09	52.75	+09	08	27.4	16.5	046
1989	VG2		1989	11	02.94410	02	09	51.94	+09	08	20.6		046
1989	VH2	*	1989	11	02.92986	02	21	39.68	+08	42	20.3	16.7	046
1989	VH2		1989	11	02.94410	02	21	38.92	+08	42	16.1		046
1989	VJ2	*	1989	11	04.81697	01	05	18.18	+17	10	07.4	16.5V E	095
1989	VJ2		1989	11	04.83364	01	05	17.10	+17	09	57.3	16.5V M	095
1989	VK2	*	1989	11	04.81697	01	18	09.22	+20	31	09.8	16.5V	095
1989	VK2		1989	11	04.83364	01	18	08.61	+20	31	04.0	16.5V	095
1989	VL2	*	1989	11	04.81697	01	20	35.64	+18	01	50.5	16.0V	095
1989	VL2		1989	11	04.83364	01	20	34.90	+18	01	44.3	16.0V	095

1989	VM2	*	1989	11	04.81697	01	40	33.69	+18	14	52.0	16.5V	E 095
1989	VM2		1989	11	04.83364	01	40	32.98	+18	14	41.5	16.5V	E 095
1989	VN2	*	1989	11	04.83364	01	25	38.79	+20	47	00.6	16.5V	095
1989	VO2	*	1989	11	04.90667	01	43	19.84	+18	05	21.7	16.0V	M 095
1989	VO2		1989	11	04.92385	01	43	18.58	+18	05	22.8	16.0V	M 095
1989	VP2	*	1989	11	06.96319	04	17	00.73	+05	33	48.8	16.2V	095
1989	VQ2	*	1989	11	02.70454	03	39	00.66	+20	13	11.9	16.0	374
1989	VQ2		1989	11	02.72606	03	38	59.58	+20	13	02.3		374
1989	VQ2		1989	11	02.75141	03	38	58.38	+20	12	59.3		374
1989	VR2	*	1989	11	02.47257	02	09	43.43	+26	19	04.4	16.5	399
1989	VR2		1989	11	02.48796	02	09	42.14	+26	19	03.8		399
1989	VR2		1989	11	02.50498	02	09	40.90	+26	19	04.2		399
1989	VS2	*	1989	11	02.62049	03	14	08.92	+11	29	32.8	16.5	400
1989	VS2		1989	11	02.63854	03	14	08.00	+11	29	32.4		400
1989	VT2	*	1989	11	03.25556	02	47	01.81	+05	35	39.2	18.9	809
1989	VT2		1989	11	03.26875	02	47	01.00	+05	35	33.6		809
1989	VT2		1989	11	03.28194	02	47	00.15	+05	35	28.2		809
1989	VU2	*	1989	11	03.25556	02	47	17.25	+08	27	56.4	18.6	809
1989	VU2		1989	11	03.26875	02	47	16.39	+08	27	54.9		809
1989	VU2		1989	11	03.28194	02	47	15.66	+08	27	52.6		809
1989	VV2	*	1989	11	03.25556	02	47	52.66	+07	02	33.8	19.0	809
1989	VV2		1989	11	03.26875	02	47	52.03	+07	02	31.1		809
1989	VV2		1989	11	03.28194	02	47	51.35	+07	02	28.8		809
1989	VW2	*	1989	11	03.25556	02	47	57.38	+05	44	15.4	17.4	809
1989	VW2		1989	11	03.26875	02	47	56.57	+05	44	13.4		809
1989	VW2		1989	11	03.28194	02	47	55.76	+05	44	10.4		809
1989	VX2	*	1989	11	03.25556	02	48	26.79	+08	29	37.3	17.0	809
1989	VX2		1989	11	03.26875	02	48	26.06	+08	29	33.7		809
1989	VX2		1989	11	03.28194	02	48	25.34	+08	29	28.9		809
1989	VY2	*	1989	11	03.25556	02	48	35.53	+08	30	41.9	18.8	809
1989	VY2		1989	11	03.26875	02	48	34.89	+08	30	37.1		809
1989	VY2		1989	11	03.28194	02	48	34.17	+08	30	32.3		809
1989	VZ2	*	1989	11	03.25556	02	48	54.09	+07	05	19.7	19.0	809
1989	VZ2		1989	11	03.26875	02	48	53.73	+07	05	14.2		809
1989	VZ2		1989	11	03.28194	02	48	52.97	+07	05	08.8		809
1989	VA3	*	1989	11	03.25556	02	49	21.52	+06	07	50.6	19.0	809
1989	VA3		1989	11	03.26875	02	49	20.52	+06	07	49.5		809
1989	VA3		1989	11	03.28194	02	49	19.71	+06	07	48.3		809
1989	VB3	*	1989	11	03.25556	02	49	23.85	+07	44	48.2	18.3	809
1989	VB3		1989	11	03.26875	02	49	23.08	+07	44	43.2		809
1989	VB3		1989	11	03.28194	02	49	22.36	+07	44	37.0		809
1989	VC3	*	1989	11	03.25556	02	51	06.03	+07	57	51.6	18.5	809
1989	VC3		1989	11	03.26875	02	51	05.26	+07	57	47.0		809
1989	VC3		1989	11	03.28194	02	51	04.49	+07	57	43.5		809
1989	VD3	*	1989	11	03.25556	02	51	16.31	+08	21	45.4	18.6	809
1989	VD3		1989	11	03.26875	02	51	15.49	+08	21	44.2		809
1989	VD3		1989	11	03.28194	02	51	14.72	+08	21	42.4		809
1989	VE3	*	1989	11	03.25556	02	51	24.82	+08	40	34.2	16.8	809
1989	VE3		1989	11	03.26875	02	51	24.14	+08	40	29.5		809
1989	VE3		1989	11	03.28194	02	51	23.55	+08	40	23.9		809
1989	VF3	*	1989	11	03.25556	02	53	26.96	+09	25	00.2	18.5	809
1989	VF3		1989	11	03.26875	02	53	26.19	+09	24	56.5		809
1989	VF3		1989	11	03.28194	02	53	25.42	+09	24	53.7		809
1989	VG3	*	1989	11	03.25556	02	53	46.95	+07	42	51.4	18.0	809
1989	VG3		1989	11	03.26875	02	53	46.27	+07	42	48.8		809
1989	VG3		1989	11	03.28194	02	53	45.59	+07	42	44.5		809
1989	VH3	*	1989	11	03.25556	02	54	37.41	+07	11	26.6	19.0	809
1989	VH3		1989	11	03.26875	02	54	36.55	+07	11	23.7		809
1989	VH3		1989	11	03.28194	02	54	35.69	+07	11	18.3		809

1989	VJ3	*	1989	11	03.25556	02	54	51.18	+06	53	50.7	18.5	809
1989	VJ3		1989	11	03.26875	02	54	50.50	+06	53	42.0		809
1989	VJ3		1989	11	03.28194	02	54	49.87	+06	53	32.7		809
1989	VK3	*	1989	11	03.25556	02	56	17.20	+08	54	00.0	18.8	809
1989	VK3		1989	11	03.26875	02	56	16.38	+08	53	53.6		809
1989	VK3		1989	11	03.28194	02	56	15.70	+08	53	48.1		809
1989	VL3	*	1989	11	03.25556	02	56	17.89	+05	31	36.3	17.5	809
1989	VL3		1989	11	03.26875	02	56	17.21	+05	31	11.7		809
1989	VL3		1989	11	03.28194	02	56	16.48	+05	30	48.9		809
1989	VM3	*	1989	11	03.25556	02	56	22.04	+08	57	57.7	19.0	809
1989	VM3		1989	11	03.26875	02	56	21.04	+08	57	53.3		809
1989	VM3		1989	11	03.28194	02	56	20.13	+08	57	46.8		809
1989	VN3	*	1989	11	03.25556	02	58	48.28	+06	56	54.9	18.0	809
1989	VN3		1989	11	03.26875	02	58	47.38	+06	56	52.2		809
1989	VN3		1989	11	03.28194	02	58	46.51	+06	56	49.3		809
1989	VO3	*	1989	11	03.25556	02	59	09.49	+05	59	04.3	18.0	809
1989	VO3		1989	11	03.26875	02	59	08.63	+05	58	59.8		809
1989	VO3		1989	11	03.28194	02	59	07.86	+05	58	56.5		809
1989	VP3	*	1989	11	03.25556	02	59	39.48	+08	03	53.1	18.7	809
1989	VP3		1989	11	03.26875	02	59	38.62	+08	03	51.4		809
1989	VP3		1989	11	03.28194	02	59	37.80	+08	03	48.8		809
1989	VQ3	*	1989	11	03.25556	03	00	58.98	+06	36	54.6	18.8	809
1989	VQ3		1989	11	03.26875	03	00	58.07	+06	36	53.4		809
1989	VQ3		1989	11	03.28194	03	00	57.26	+06	36	52.6		809
1989	VR3	*	1989	11	03.25556	03	01	09.70	+09	05	19.8	18.7	809
1989	VR3		1989	11	03.26875	03	01	08.74	+09	05	16.6		809
1989	VR3		1989	11	03.28194	03	01	07.78	+09	05	14.4		809
1989	VS3	*	1989	11	03.25556	03	04	31.56	+07	32	42.9	17.7	809
1989	VS3		1989	11	03.26875	03	04	30.70	+07	32	38.4		809
1989	VS3		1989	11	03.28194	03	04	29.84	+07	32	33.3		809
1989	VT3	*	1989	11	03.25556	03	05	04.65	+07	00	14.9	18.5	809
1989	VT3		1989	11	03.26875	03	05	03.74	+07	00	09.2		809
1989	VT3		1989	11	03.28194	03	05	02.97	+07	00	04.5		809
1989	VU3	*	1989	11	03.25556	03	05	13.01	+06	03	59.0	18.0	809
1989	VU3		1989	11	03.26875	03	05	12.47	+06	03	56.8		809
1989	VU3		1989	11	03.28194	03	05	11.97	+06	03	55.1		809
1989	VV3	*	1989	11	03.25556	03	05	38.78	+05	54	44.4	18.5	809
1989	VV3		1989	11	03.26875	03	05	38.01	+05	54	40.6		809
1989	VV3		1989	11	03.28194	03	05	37.20	+05	54	36.1		809
1989	VW3	*	1989	11	03.25556	03	05	56.16	+07	06	05.3	18.0	809
1989	VW3		1989	11	03.26875	03	05	55.25	+07	06	03.6		809
1989	VW3		1989	11	03.28194	03	05	54.39	+07	06	01.6		809
1989	VX3	*	1989	11	03.25556	03	06	40.41	+06	37	49.2	16.8	809
1989	VX3		1989	11	03.26875	03	06	39.46	+06	37	50.2		809
1989	VX3		1989	11	03.28194	03	06	38.55	+06	37	51.6		809
1989	VY3	*	1989	11	03.25556	03	07	38.60	+06	32	57.3	18.4	809
1989	VY3		1989	11	03.26875	03	07	37.83	+06	32	55.3		809
1989	VY3		1989	11	03.28194	03	07	36.93	+06	32	54.5		809
1989	VZ3	*	1989	11	06.24931	02	46	36.39	+02	49	07.4	20.0	809
1989	VZ3		1989	11	06.26250	02	46	35.53	+02	49	06.3		809
1989	VZ3		1989	11	06.27569	02	46	34.63	+02	49	04.3		809
1989	VA4	*	1989	11	06.24931	02	47	34.31	+02	49	38.6	18.6	809
1989	VA4		1989	11	06.26250	02	47	33.41	+02	49	36.9		809
1989	VA4		1989	11	06.27569	02	47	32.60	+02	49	34.1		809
1989	VB4	*	1989	11	06.24931	02	47	50.14	+03	34	20.8	17.8	809
1989	VB4		1989	11	06.26250	02	47	49.37	+03	34	27.4		809
1989	VB4		1989	11	06.27569	02	47	48.61	+03	34	32.2		809
1989	VC4	*	1989	11	06.24931	02	48	29.94	+02	41	16.6	18.7	809
1989	VC4		1989	11	06.26250	02	48	29.08	+02	41	15.2		809

1989	VC4		1989	11	06.27569	02	48	28.18	+02	41	11.6		809
1989	VD4	*	1989	11	06.24931	02	48	43.36	+03	16	08.6	18.9	809
1989	VD4		1989	11	06.26250	02	48	42.60	+03	16	06.7		809
1989	VD4		1989	11	06.27569	02	48	41.65	+03	16	04.2		809
1989	VE4	*	1989	11	06.24931	02	49	08.88	+02	42	34.4	19.8	809
1989	VE4		1989	11	06.26250	02	49	08.11	+02	42	34.4		809
1989	VE4		1989	11	06.27569	02	49	07.08	+02	42	34.5		809
1989	VF4	*	1989	11	06.24931	02	50	10.79	+03	24	44.7	18.8	809
1989	VF4		1989	11	06.26250	02	50	10.11	+03	24	42.8		809
1989	VF4		1989	11	06.27569	02	50	09.43	+03	24	39.9		809
1989	VG4	*	1989	11	06.24931	02	50	28.91	+01	13	32.2	18.2	809
1989	VG4		1989	11	06.26250	02	50	27.83	+01	13	38.3		809
1989	VG4		1989	11	06.27569	02	50	26.30	+01	13	45.6		809
1989	VH4	*	1989	11	06.24931	02	50	58.03	+00	19	14.6	19.0	809
1989	VH4		1989	11	06.26250	02	50	57.31	+00	19	12.8		809
1989	VH4		1989	11	06.27569	02	50	56.64	+00	19	09.8		809
1989	VJ4	*	1989	11	06.24931	02	52	11.66	+02	11	43.8	19.5	809
1989	VJ4		1989	11	06.26250	02	52	10.98	+02	11	41.1		809
1989	VJ4		1989	11	06.27569	02	52	10.26	+02	11	36.9		809
1989	VK4	*	1989	11	06.24931	02	52	50.56	+03	09	39.7	19.5	809
1989	VK4		1989	11	06.26250	02	52	49.84	+03	09	39.1		809
1989	VK4		1989	11	06.27569	02	52	49.03	+03	09	39.1		809
1989	VL4	*	1989	11	06.24931	02	53	59.59	+03	53	00.2	18.0	809
1989	VL4		1989	11	06.26250	02	53	58.65	+03	52	55.6		809
1989	VL4		1989	11	06.27569	02	53	57.88	+03	52	51.7		809
1989	VM4	*	1989	11	06.24931	02	54	34.47	+00	38	11.9	18.0	809
1989	VM4		1989	11	06.26250	02	54	33.75	+00	38	08.1		809
1989	VM4		1989	11	06.27569	02	54	33.03	+00	38	04.4		809
1989	VN4	*	1989	11	06.24931	02	54	53.80	+00	32	54.8	18.5	809
1989	VN4		1989	11	06.26250	02	54	53.21	+00	32	52.8		809
1989	VN4		1989	11	06.27569	02	54	52.49	+00	32	51.4		809
1989	VO4	*	1989	11	06.24931	02	55	37.31	+00	26	41.7	18.6	809
1989	VO4		1989	11	06.26250	02	55	36.55	+00	26	43.5		809
1989	VO4		1989	11	06.27569	02	55	35.69	+00	26	45.4		809
1989	VP4	*	1989	11	06.24931	02	55	53.91	+03	50	23.6	18.5	809
1989	VP4		1989	11	06.26250	02	55	53.23	+03	50	23.3		809
1989	VP4		1989	11	06.27569	02	55	52.46	+03	50	22.8		809
1989	VQ4	*	1989	11	06.24931	02	56	06.25	+04	02	58.0	18.0	809
1989	VQ4		1989	11	06.26250	02	56	05.35	+04	02	53.5		809
1989	VQ4		1989	11	06.27569	02	56	04.49	+04	02	50.8		809
1989	VR4	*	1989	11	06.24931	02	56	13.10	+00	51	33.0	19.5	809
1989	VR4		1989	11	06.26250	02	56	12.60	+00	51	33.4		809
1989	VR4		1989	11	06.27569	02	56	11.97	+00	51	32.8		809
1989	VS4	*	1989	11	06.24931	02	56	40.16	+03	48	10.7	19.5	809
1989	VS4		1989	11	06.26250	02	56	39.44	+03	48	06.3		809
1989	VS4		1989	11	06.27569	02	56	38.81	+03	48	01.9		809
1989	VT4	*	1989	11	06.24931	02	58	05.98	+03	30	13.4	18.8	809
1989	VT4		1989	11	06.26250	02	58	05.16	+03	30	10.6		809
1989	VT4		1989	11	06.27569	02	58	04.53	+03	30	08.6		809
1989	VU4	*	1989	11	06.24931	03	00	19.13	+02	20	38.9	19.6	809
1989	VU4		1989	11	06.26250	03	00	18.50	+02	20	33.8		809
1989	VU4		1989	11	06.27569	03	00	17.78	+02	20	29.2		809
1989	VV4	*	1989	11	06.24931	03	00	44.09	+00	26	50.6	18.7	809
1989	VV4		1989	11	06.26250	03	00	43.33	+00	26	50.4		809
1989	VV4		1989	11	06.27569	03	00	42.47	+00	26	50.0		809
1989	VW4	*	1989	11	06.24931	03	01	59.79	+01	17	10.2	18.3	809
1989	VW4		1989	11	06.26250	03	01	59.12	+01	17	07.6		809
1989	VW4		1989	11	06.27569	03	01	58.35	+01	17	03.9		809
1989	VX4	*	1989	11	06.24931	03	03	00.74	+04	21	24.1	17.7	809

1989	VX4		1989	11	06.26250	03	02	59.84	+04	21	24.1		809
1989	VX4		1989	11	06.27569	03	02	58.99	+04	21	23.4		809
1989	VY4	*	1989	11	06.24931	03	04	24.46	+04	12	35.4	18.3	809
1989	VY4		1989	11	06.26250	03	04	23.61	+04	12	31.4		809
1989	VY4		1989	11	06.27569	03	04	22.75	+04	12	26.3		809
1989	VZ4	*	1989	11	06.24931	03	04	59.75	+01	53	18.4	17.5	809
1989	VZ4		1989	11	06.26250	03	04	59.16	+01	53	04.8		809
1989	VZ4		1989	11	06.27569	03	04	58.62	+01	52	52.4		809
1989	WC5	*	1989	11	28.99201	04	18	52.29	+15	40	59.6	17.9	033
1989	WC5		1989	11	29.01910	04	18	50.89	+15	40	59.4		033
1989	WD5	*	1989	11	29.10000	08	09	28.83	+17	08	48.4	18.4	033
1989	WD5		1989	11	29.16146	08	09	28.40	+17	08	50.6		033
1989	WE5	*	1989	11	29.90347	03	39	56.38	+23	47	55.8	17.9	033
1989	WE5		1989	11	29.98576	03	39	51.25	+23	47	19.4		033
1989	WF5	*	1989	11	18.79083	02	05	19.65	+19	21	54.8	16.9	046
1989	WF5		1989	11	18.80640	02	05	18.88	+19	22	04.8		046
1989	WG5	*	1989	11	23.84062	02	57	05.94	+08	54	22.8	17.0	046
1989	WG5		1989	11	23.85475	02	57	05.11	+08	54	20.1		046
1989	WH5	*	1989	11	29.79120	02	01	33.30	+17	13	47.2		046
1989	WH5		1989	11	29.80532	02	01	32.78	+17	13	50.1		046
1989	WJ5	*	1989	11	20.78192	01	21	27.18	+20	10	01.2	16.5V E	095
1989	WJ5		1989	11	20.80274	01	21	26.95	+20	10	07.3	16.5V E	095
1989	WK5	*	1989	11	20.80274	00	55	19.36	+15	57	43.6	15.5V	095
1989	WL5	*	1989	11	20.87447	02	41	25.20	+04	14	53.0	16.5V E	095
1989	WM5	*	1989	11	21.75693	01	42	43.13	+06	40	21.6	16.0V	095
1989	WM5		1989	11	21.77777	01	42	42.20	+06	40	23.8	16.0V	095
1989	WN5	*	1989	11	21.85417	02	47	02.13	+07	23	41.1	16.0V	095
1989	WN5		1989	11	21.86528	02	47	01.29	+07	23	49.4	16.0V	095
1989	WO5	*	1989	11	21.85417	02	49	39.38	+08	52	38.8	16.0V	095
1989	WO5		1989	11	21.86528	02	49	38.67	+08	52	33.7	16.0V	095
1989	WP5	*	1989	11	21.85417	03	08	42.14	+10	39	14.8	16.3V	095
1989	WP5		1989	11	21.86528	03	08	41.43	+10	39	13.3	16.3V	095
1989	WQ5	*	1989	11	21.85417	03	15	56.48	+09	14	13.7	16.3V E	095
1989	WQ5		1989	11	21.86528	03	15	55.54	+09	14	09.6	16.3V E	095
1989	WR5	*	1989	11	24.81153	02	14	07.04	+00	56	04.8	16.5V	095
1989	WS5	*	1989	11	24.81153	02	15	14.56	+05	52	52.8	16.5V M	095
1989	WT5	*	1989	11	24.88513	03	41	54.28	+07	23	52.0	16.2V	095
1989	WU5	*	1989	11	24.88513	03	42	10.17	+07	05	43.1	16.2V	095
1989	WV5	*	1989	11	24.88513	03	45	55.84	+04	13	20.4	16.2V	095
1989	WW5	*	1989	11	24.88513	03	48	01.48	+02	54	51.4	16.2V	095
1989	WX5	*	1989	11	24.88513	03	55	02.64	+09	13	51.7	16.2V	095
1989	WY5	*	1989	11	24.88513	03	59	30.49	+09	04	04.6	16.2V	095
1989	WZ5	*	1989	11	24.88513	04	00	45.10	+08	42	49.0	16.2V	095
1989	WA6	*	1989	11	24.95735	04	33	34.71	+16	02	43.8	16.5V E	095
1989	WB6	*	1989	11	24.95735	04	40	14.26	+11	13	59.8	16.2V	095
1989	WC6	*	1989	11	24.95735	04	41	27.01	+12	43	37.5	16.2V	095
1989	WD6	*	1989	11	24.95735	04	42	22.32	+12	30	34.2	16.0V	095
1989	WE6	*	1989	11	24.95735	04	46	50.48	+11	42	27.4	16.2V	095
1989	WF6	*	1989	11	24.95735	04	46	59.56	+09	08	19.4	16.4V	095
1989	WG6	*	1989	11	24.95735	04	47	09.68	+13	40	16.6	16.2V	095
1989	WH6	*	1989	11	24.95735	05	04	44.30	+14	39	43.4	16.0V	095
1989	WJ6	*	1989	11	25.03788	06	01	43.84	+20	42	39.2	16.0V	095
1989	WK6	*	1989	11	30.78592	01	22	19.10	+10	33	27.4	16.0V	095
1989	WL6	*	1989	11	30.85124	03	47	07.70	-00	25	00.1	16.2V	095
1989	WM6	*	1989	11	30.85124	03	53	07.00	-01	49	21.0	15.8V	095
1989	WN6	*	1989	11	19.53542	01	52	41.98	+06	44	39.7	17	364
1989	WN6		1989	11	19.55278	01	52	41.13	+06	44	37.1		364
1989	WO6	*	1989	11	20.51597	03	19	22.04	+13	05	31.6	16	364
1989	WO6		1989	11	20.53333	03	19	20.84	+13	05	33.7		364

1989	WP6	*	1989	11	20.40006	02	06	17.56	+16	41	50.1	17	399
1989	WP6		1989	11	20.41528	02	06	16.72	+16	41	48.5		399
1989	WP6		1989	11	20.42986	02	06	15.82	+16	41	44.8		399
1989	WQ6	*	1989	11	20.45069	02	24	46.90	+10	55	26.6	16.5	399
1989	WQ6		1989	11	20.46667	02	24	46.11	+10	55	30.2		399
1989	WQ6		1989	11	20.48125	02	24	45.21	+10	55	32.0		399
1989	WR6	*	1989	11	25.57847	03	55	52.47	+16	07	33.7	16	399
1989	WR6		1989	11	25.59340	03	55	51.72	+16	07	32.3		399
1989	WR6		1989	11	25.61007	03	55	50.83	+16	07	33.6		399
1989	WS6	*	1989	11	28.65903	05	11	20.17	+12	58	18.6	16.5	402
1989	WS6		1989	11	28.68785	05	11	18.62	+12	58	20.4	16.5	402
1989	WT6	*	1989	11	22.87211	02	52	17.69	+12	57	57.5	17 V	494
1989	WT6		1989	11	22.89446	02	52	15.23	+12	57	34.7		494
1989	WU6	*	1989	11	22.95253	03	02	49.80	+12	45	37.0		494
1989	WV6	*	1989	11	28.85938	02	46	33.12	+05	43	22.8	17.5	511
1989	WV6		1989	11	28.87674	02	46	32.24	+05	43	29.3		511
1989	WV6		1989	11	28.89132	02	46	31.38	+05	43	34.2		511
1989	WV6		1989	11	28.90868	02	46	30.54	+05	43	39.4		511
1989	WW6	*	1989	11	28.85938	02	46	55.83	+05	04	06.7	17.2	511
1989	WW6		1989	11	28.87674	02	46	55.09	+05	04	05.7		511
1989	WW6		1989	11	28.89132	02	46	54.43	+05	04	06.2		511
1989	WW6		1989	11	28.90868	02	46	53.79	+05	04	05.3		511
1989	WX6	*	1989	11	28.85938	02	48	47.08	+06	24	02.8	17.7	511
1989	WX6		1989	11	28.87674	02	48	46.32	+06	24	02.3		511
1989	WX6		1989	11	28.89132	02	48	45.72	+06	24	01.2		511
1989	WX6		1989	11	28.90868	02	48	45.03	+06	24	00.3		511
1989	WY6	*	1989	11	28.85938	02	51	28.13	+04	43	43.4	18.0	511
1989	WY6		1989	11	28.87674	02	51	27.58	+04	43	44.5		511
1989	WY6		1989	11	28.89132	02	51	27.51	+04	43	45.6		511
1989	WY6		1989	11	28.90868	02	51	26.93	+04	43	45.9		511
1989	WZ6	*	1989	11	28.85938	02	52	50.61	+05	08	12.8	18.0	511
1989	WZ6		1989	11	28.87674	02	52	50.05	+05	08	11.7		511
1989	WZ6		1989	11	28.89132	02	52	49.33	+05	08	10.8		511
1989	WZ6		1989	11	28.90868	02	52	48.83	+05	08	09.7		511
1989	WA7	*	1989	11	28.85938	02	52	51.56	+05	02	33.5	17.5	511
1989	WA7		1989	11	28.87674	02	52	51.30	+05	02	32.7		511
1989	WA7		1989	11	28.89132	02	52	50.74	+05	02	31.3		511
1989	WA7		1989	11	28.90868	02	52	50.56	+05	02	29.1		511
1989	WB7	*	1989	11	28.85938	02	55	58.08	+03	29	34.1	18.0	511
1989	WB7		1989	11	28.87674	02	55	57.56	+03	29	33.5		511
1989	WB7		1989	11	28.89132	02	55	56.74	+03	29	34.0		511
1989	WB7		1989	11	28.90868	02	55	55.98	+03	29	32.7		511
1989	WC7	*	1989	11	28.85938	02	57	45.00	+03	17	06.2	17.6	511
1989	WC7		1989	11	28.87674	02	57	44.42	+03	17	06.6		511
1989	WC7		1989	11	28.89132	02	57	43.50	+03	17	06.7		511
1989	WC7		1989	11	28.90868	02	57	42.89	+03	17	07.5		511
1989	WD7	*	1989	11	29.56910	03	43	07.49	+18	12	21.6	17.5	877
1989	WD7		1989	11	29.59002	03	43	06.31	+18	12	12.6		877
1989	WE7	*	1989	11	20.55382	04	22	16.22	+16	56	52.6	16.5	881
1989	WE7		1989	11	20.57743	04	22	14.81	+16	56	45.8		881
1989	WF7	*	1989	11	25.54063	04	33	04.84	+15	46	30.0		881
1989	WF7		1989	11	25.56424	04	33	03.77	+15	46	28.7		881
1989	XH2	*	1989	12	01.83872	04	15	43.97	+12	19	34.4	16.8	046
1989	XH2		1989	12	01.85278	04	15	42.72	+12	19	33.9		046
1989	XJ2	*	1989	12	01.83872	04	21	14.69	+12	16	51.7	17.0	046
1989	XJ2		1989	12	01.85278	04	21	13.88	+12	16	59.9		046
1989	XK2	*	1989	12	01.87222	04	13	12.04	+00	39	51.4	16.4	046
1989	XK2		1989	12	01.88628	04	13	11.37	+00	39	59.1		046
1989	XL2	*	1989	12	01.87222	04	13	35.53	+00	32	05.1	16.7	046

1989	XL2		1989	12	01.88628	04	13	34.80	+00	32	09.9		046
1989	XM2	*	1989	12	01.87222	04	14	16.87	+00	56	43.4	17.0 F	046
1989	XM2		1989	12	01.88628	04	14	16.25	+00	56	54.1	F	046
1989	XN2	*	1989	12	01.00340	06	41	54.92	+22	17	19.0	16.0V M	095
1989	XO2	*	1989	12	01.54028	04	05	12.01	+17	46	02.0	16.5	364
1989	XO2		1989	12	01.55764	04	05	10.67	+17	46	07.4		364
1989	XP2	*	1989	12	02.67535	04	01	35.07	+13	47	04.5	19	372
1989	XP2		1989	12	02.68924	04	01	34.06	+13	47	03.1		372
1989	XQ2	*	1989	12	02.67535	04	03	52.48	+13	50	59.1	19	372
1989	XQ2		1989	12	02.68924	04	03	51.90	+13	50	59.4		372
1989	XR2	*	1989	12	04.55833	04	47	42.1	+25	15	19	17 F	385
1989	XR2		1989	12	04.58958	04	47	39.4	+25	15	22	F	385
1989	XS2	*	1989	12	03.57222	04	41	19.5	+18	51	49	16.5	403
1989	XS2		1989	12	03.58299	04	41	19.0	+18	51	51		403
1989	XT2	*	1989	12	01.48299	01	24	37.53	-27	10	53.0	18.0V	413
1989	XT2		1989	12	01.50382	01	24	36.98	-27	10	55.6		413
1989	XU2	*	1989	12	01.48299	01	29	27.79	-28	02	05.0	17.5V	413
1989	XU2		1989	12	01.50382	01	29	28.20	-28	01	57.6		413
1989	XV2	*	1989	12	02.10833	02	28	23.21	+05	04	36.2		809
1989	XV2		1989	12	02.12153	02	28	22.81	+05	04	36.7		809
1989	XV2		1989	12	02.13472	02	28	22.42	+05	04	37.4		809
1989	XW2	*	1989	12	02.10833	02	30	30.53	+04	59	21.4	20.0	809
1989	XW2		1989	12	02.12153	02	30	30.12	+04	59	18.3		809
1989	XW2		1989	12	02.13472	02	30	29.65	+04	59	15.9		809
1989	XX2	*	1989	12	02.10833	02	31	17.49	+01	04	51.4	20.0	809
1989	XX2		1989	12	02.12153	02	31	17.06	+01	04	53.5		809
1989	XX2		1989	12	02.13472	02	31	16.61	+01	04	55.7		809
1989	XY2	*	1989	12	02.10833	02	40	53.18	+04	47	20.9		809
1989	XY2		1989	12	02.12153	02	40	52.65	+04	47	19.5		809
1989	XY2		1989	12	02.13472	02	40	52.18	+04	47	18.1		809
1989	XZ2	*	1989	12	03.13611	02	24	03.86	+04	16	45.3	19.7	809
1989	XZ2		1989	12	03.14931	02	24	03.51	+04	16	45.2		809
1989	XZ2		1989	12	03.16250	02	24	03.21	+04	16	44.8		809
1989	XA3	*	1989	12	03.13611	02	24	36.28	+03	23	30.0	19.5	809
1989	XA3		1989	12	03.14931	02	24	35.92	+03	23	32.8		809
1989	XA3		1989	12	03.16250	02	24	35.46	+03	23	36.4		809
1989	XB3	*	1989	12	03.13611	02	25	45.73	+00	24	18.3	20.0	809
1989	XB3		1989	12	03.14931	02	25	45.26	+00	24	24.7		809
1989	XB3		1989	12	03.16250	02	25	44.74	+00	24	28.0		809
1989	XC3	*	1989	12	03.13611	02	26	04.98	+00	03	50.2	19.6	809
1989	XC3		1989	12	03.14931	02	26	04.54	+00	03	49.6		809
1989	XC3		1989	12	03.16250	02	26	04.12	+00	03	47.2		809
1989	XD3	*	1989	12	03.13611	02	26	16.74	+00	10	21.6	20.5	809
1989	XD3		1989	12	03.14931	02	26	16.29	+00	10	23.3		809
1989	XD3		1989	12	03.16250	02	26	15.73	+00	10	23.5		809
1989	XE3	*	1989	12	03.13611	02	29	06.89	+00	38	14.6	20.0	809
1989	XE3		1989	12	03.14931	02	29	06.36	+00	38	13.7		809
1989	XE3		1989	12	03.16250	02	29	05.65	+00	38	13.3		809
1989	XF3	*	1989	12	03.13611	02	37	07.23	+01	49	36.1	19.8	809
1989	XF3		1989	12	03.14931	02	37	06.65	+01	49	30.7		809
1989	XF3		1989	12	03.16250	02	37	06.18	+01	49	26.8		809
1989	XG3	*	1989	12	01.55521	05	05	58.02	+17	50	34.0	17	881
1989	XG3		1989	12	01.57882	05	05	57.24	+17	50	35.5		881
1989	YL8	*	1989	12	25.76528	03	38	13.92	+25	11	34.3	18.2	033
1989	YL8		1989	12	25.83750	03	38	11.29	+25	11	42.4		033
1989	YM8	*	1989	12	25.76528	03	38	55.17	+24	13	43.4	18.4	033
1989	YM8		1989	12	25.83750	03	38	53.15	+24	13	20.2		033
1989	YN8	*	1989	12	25.76528	03	39	45.75	+22	49	42.4	18.1	033
1989	YN8		1989	12	25.83750	03	39	43.08	+22	49	29.7		033

1989	YO8	*	1989	12	25.76528	03	46	18.87	+24	06	40.1	18.8	033
1989	YO8		1989	12	25.83750	03	46	15.87	+24	06	58.8		033
1989	YP8	*	1989	12	25.76528	03	47	08.33	+25	18	57.1	18.3	033
1989	YP8		1989	12	25.83750	03	47	06.03	+25	18	33.7		033
1989	YQ8	*	1989	12	25.95000	06	43	47.96	+18	28	25.3	19.4	033
1989	YQ8		1989	12	26.00833	06	43	43.58	+18	28	24.7		033
1989	YR8	*	1989	12	25.95000	06	46	54.34	+17	48	59.9	18.1	033
1989	YR8		1989	12	26.00833	06	46	51.53	+17	49	06.7		033
1989	YS8	*	1989	12	25.95000	06	49	31.38	+18	52	30.2	20.0	033
1989	YS8		1989	12	26.00833	06	49	27.33	+18	52	42.0		033
1989	YT8	*	1989	12	25.95000	06	52	56.38	+20	06	44.1	19.2	033
1989	YT8		1989	12	26.00833	06	52	52.64	+20	06	53.0		033
1989	YU8	*	1989	12	25.95000	06	56	19.71	+20	12	11.2	19.1	033
1989	YU8		1989	12	26.00833	06	56	16.14	+20	12	42.3		033
1989	YV8	*	1989	12	26.03333	07	18	25.73	+16	46	41.5	19.9	033
1989	YV8		1989	12	26.09167	07	18	22.28	+16	46	32.6		033
1989	YW8	*	1989	12	26.03333	07	26	27.18	+15	39	50.3	18.8	033
1989	YW8		1989	12	26.09167	07	26	24.07	+15	39	39.9		033
1989	YX8	*	1989	12	29.76322	05	00	01.32	+21	12	33.4	17.0	046
1989	YX8		1989	12	29.77734	05	00	00.71	+21	12	42.0		046
1989	YY8	*	1989	12	29.81137	05	02	33.66	+14	24	54.9	16.8	046
1989	YY8		1989	12	29.82560	05	02	33.09	+14	24	55.8		046
1989	YZ8	*	1989	12	31.81575	04	52	09.36	+16	21	00.8	16.9	046
1989	YZ8		1989	12	31.82848	04	52	08.61	+16	21	05.4		046
1989	YA9	*	1989	12	31.67222	05	45	24.81	+19	08	50.3	16.5	399
1989	YA9		1989	12	31.68756	05	45	24.02	+19	08	43.5		399
1989	YA9		1989	12	31.70417	05	45	22.89	+19	08	40.6		399
1989	YB9	*	1989	12	19.51250	04	38	39.97	+16	48	45.5	16.5	400
1989	YB9		1989	12	19.53333	04	38	37.64	+16	49	22.6		400
1989	YB9		1989	12	19.54722	04	38	36.51	+16	49	39.0		400
1989	YC9	*	1989	12	20.50730	04	29	39.78	+18	01	11.2	18 V	413
1989	YC9		1989	12	20.53777	04	29	37.98	+18	01	11.4		413
1989	YC9		1989	12	20.57735	04	29	36.24	+18	01	10.3		413
1989	YD9	*	1989	12	20.53777	04	30	33.10	+18	09	34.7	19 V F	413
1989	YD9		1989	12	20.57735	04	30	31.37	+18	09	34.6		413
1989	YE9	*	1989	12	31.63238	08	42	55.12	+14	23	48.5	17.5	413
1989	YE9		1989	12	31.66002	08	42	54.20	+14	23	56.9		413
1989	YF9	*	1989	12	31.63238	09	06	00.46	+15	52	44.9	17.5	413
1989	YF9		1989	12	31.66002	09	05	59.73	+15	52	48.8		413
1989	YG9	*	1989	12	28.77847	04	46	58.17	+30	05	10.1		511
1989	YG9		1989	12	28.80347	04	46	56.98	+30	05	05.6	17.8	511
1989	YH9	*	1989	12	28.77847	04	56	11.09	+30	58	17.8		511
1989	YH9		1989	12	28.80347	04	56	09.71	+30	58	08.8	18.0	511
1989	YJ9	*	1989	12	28.77847	04	56	53.97	+29	53	29.4		511
1989	YJ9		1989	12	28.80347	04	56	52.65	+29	53	27.4	18.0	511
1989	YK9	*	1989	12	28.88264	05	52	26.66	+24	48	55.5	17.7	511
1989	YK9		1989	12	28.90278	05	52	25.71	+24	48	55.7		511
1989	YL9	*	1989	12	28.93785	04	57	02.25	+09	25	22.6	17.3	511
1989	YL9		1989	12	28.95521	04	57	01.54	+09	25	24.1		511
1989	YL9		1989	12	28.98819	04	57	00.06	+09	25	26.4		511
1989	YM9	*	1989	12	28.93785	05	00	14.75	+08	25	20.0	17.8	511
1989	YM9		1989	12	28.95521	05	00	14.21	+08	25	25.8		511
1989	YM9		1989	12	28.98819	05	00	12.67	+08	25	33.7		511
1989	YN9	*	1989	12	29.01354	06	32	51.39	+19	46	15.7		511
1989	YN9		1989	12	29.03472	06	32	49.69	+19	46	17.9	17.7	511
1989	YO9	*	1989	12	29.05625	07	01	08.47	+19	46	11.4	17.8	511
1989	YO9		1989	12	29.07569	07	01	07.13	+19	46	08.4		511
1989	YP9	*	1989	12	29.85069	06	30	43.37	+37	24	55.2	17.6	511
1989	YP9		1989	12	29.87292	06	30	41.92	+37	24	56.9		511

1989	YQ9	*	1989	12	30.88750	05	55	31.70	+21	28	29.9	17.0	511
1989	YQ9		1989	12	30.92500	05	55	29.09	+21	28	34.8		511
1989	YR9	*	1989	12	30.88750	06	00	29.45	+20	47	46.8	18.0	511
1989	YR9		1989	12	30.92500	06	00	27.18	+20	47	56.0		511
1989	YS9	*	1989	12	19.58646	07	17	05.60	+15	01	46.0	14	881
1989	YS9		1989	12	19.61007	07	17	05.61	+15	01	35.5		881
1989	YT9	*	1989	12	21.52361	04	53	10.88	+27	48	14.5	18.0	888
1989	YT9		1989	12	21.56389	04	53	08.46	+27	48	16.1		888
1990	AL	*	1990	01	14.74125	05	23	19.79	+23	28	25.1	16.8	046
1990	AL		1990	01	14.75531	05	23	19.05	+23	28	28.5		046
1990	AM	*	1990	01	04.63854	07	04	05.80	+25	58	15.3	16.5	403
1990	AM		1990	01	04.64861	07	04	04.99	+25	58	15.8		403
1990	AN	*	1990	01	01.88264	06	11	47.74	+36	12	35.3	18.0	511
1990	AN		1990	01	01.90347	06	11	46.59	+36	12	32.6		511
1990	AO	*	1990	01	01.88264	06	15	02.45	+38	20	35.3	17.7	511
1990	AO		1990	01	01.90347	06	15	01.25	+38	20	35.6		511
1990	AP	*	1990	01	01.88264	06	16	34.77	+36	27	46.4		511
1990	AP		1990	01	01.90347	06	16	33.26	+36	27	41.0		511
1990	AQ		1990	01	01.93125	05	46	33.85	+20	20	54.4		511
1990	AQ	*	1990	01	02.02431	05	46	29.07	+20	20	54.2	17.5	511
1990	AR		1990	01	01.93125	05	53	58.21	+17	36	16.7		511
1990	AR	*	1990	01	02.02431	05	53	52.10	+17	36	32.1	17.6	511
1990	AS	*	1990	01	02.04653	07	28	14.49	+15	08	06.1		511
1990	AS		1990	01	02.06944	07	28	13.04	+15	08	11.9		511
1990	AT	*	1990	01	02.04653	07	32	38.51	+14	03	41.8	17.5	511
1990	AT		1990	01	02.06944	07	32	37.00	+14	03	35.9		511
1990	AU	*	1990	01	02.09097	07	33	29.92	+26	05	16.8		511
1990	AU		1990	01	02.11806	07	33	28.25	+26	05	19.1	18.2	511
1990	AV	*	1990	01	03.03819	05	48	32.11	+25	44	48.6	18.0	511
1990	AV		1990	01	03.06250	05	48	30.55	+25	44	49.5		511
1990	AW	*	1990	01	03.08819	06	50	41.19	+21	44	23.8		511
1990	AW		1990	01	03.11250	06	50	39.71	+21	44	22.0	18.0	511
1990	AX	*	1990	01	03.08819	06	56	12.96	+20	22	02.1		511
1990	AX		1990	01	03.11250	06	56	11.26	+20	21	56.3	18.2	511
1990	AY	*	1990	01	03.08819	06	56	18.11	+22	08	05.6		511
1990	AY		1990	01	03.11250	06	56	16.37	+22	08	11.5		511
1990	AZ	*	1990	01	04.05764	06	23	58.01	+18	14	25.8		511
1990	AZ		1990	01	04.08056	06	23	56.66	+18	14	27.6	17.7	511
1990	AA1	*	1990	01	04.05764	06	25	51.64	+17	30	21.3		511
1990	AA1		1990	01	04.08056	06	25	50.26	+17	30	20.4	17.3	511
1990	AB1	*	1990	01	04.05764	06	26	39.56	+16	48	42.9		511
1990	AB1		1990	01	04.08056	06	26	38.29	+16	48	47.4	16.8	511
1990	AC1	*	1990	01	04.05764	06	29	00.18	+17	41	31.4		511
1990	AC1		1990	01	04.08056	06	28	58.70	+17	41	45.1	17.4	511
1990	AD1	*	1990	01	04.05764	06	30	53.14	+19	02	02.4		511
1990	AD1		1990	01	04.08056	06	30	51.71	+19	02	06.0		511
1990	AE1	*	1990	01	04.62014	07	43	22.81	+25	37	15.4	17.0	886
1990	AE1		1990	01	04.63108	07	43	22.3	+25	37	14		886
1990	AF1	*	1990	01	01.76424	07	03	41.35	+33	15	22.4	17.5	877
1990	AF1		1990	01	01.78715	07	03	39.05	+33	15	17.0		877

* * * * *

ORBITAL ELEMENTS.

Orbital elements have been computed by the following contributors:

D. D. Balam, Dept. of Physics and Astronomy, University of Victoria, Victoria, BC V8W 2Y2, Canada

E. Bowell, Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, AZ 86001, U.S.A. (E)
L. L. Filenko, Institute for Theoretical Astronomy, Naberezhnaya Kutuzova 10, Leningrad 191187, U.S.S.R.
I. A. Filippova, Institute for Theoretical Astronomy, Naberezhnaya Kutuzova 10, Leningrad 191187, U.S.S.R. (F)
E. Goffin, Agfa-Gevaert N.V., Mortsel, Belgium
D. W. E. Green, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A.
H. Kaneda, 2-15-2H, Kawazoe 8 Jo 2 Chome, Minami-ku, Sapporo 005, Japan
B. G. Marsden, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. (M)
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
S. Nakano, 3-19, 1 chome, Takenokuchi, Sumoto, Hyogo-ken 656, Japan (N)
H. Oishi, 5-3-14 Ikeda, Niiza, Saitama 352, Japan
N. K. Sumzina, Institute for Theoretical Astronomy, Naberezhnaya Kutuzova 10, Leningrad 191187, U.S.S.R.
T. Urata, 6-1, Muramatsubara 1 Chome, Shimizu, Shizuoka-Ken 424, Japan
G. V. Williams, Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA 02138, U.S.A. (W)

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

Comet Tsuchiya-Kiuchi (1990i)

T 1990 Sept 28.59573 ET					Nakano
q 1.0966755		(1950.0)		P	Q
	Peri.	180.69167		-0.86184814	+0.41261306
	Node	330.08501		+0.46808733	+0.87096798
e 1.0	Incl.	143.74871		+0.19522303	-0.26676813

From 33 observations 1990 July 13-30.

Comet Levy (1990c)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5					
T 1990 Oct. 24.69545 ET					Nakano
q 0.9385811		(1950.0)		P	Q
z -0.0002881	Peri.	242.67972		-0.04487243	-0.86829530
+/-0.0000648	Node	138.66374		-0.41992000	+0.46509709
e 1.0002704	Incl.	131.58556		-0.90645113	-0.17247598

From 179 observations 1990 May 21-Aug. 20, mean residual 0".82.

Comet McNaught-Hughes (1990g)
T 1991 Feb. 27.83825 ET Marsden
q 2.6808734 (1950.0) P Q
Peri. 18.23753 -0.74661119 -0.32143668
Node 232.51809 -0.66419305 +0.31058296
e 1.0 Incl. 132.77833 -0.03767396 +0.89454831
From 15 observations 1990 June 20-Aug. 18.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1976 DZ	14.0	760212	312.59	233.34	321.83	4.14	0.1594	2.3322	5	4		W
1976 DA1	15.0	760212	308.09	55.60	134.30	4.88	0.0574	2.1830	5	4	E	M
1976 DB1	14.5	760212	73.26	87.73	321.15	18.54	0.0992	1.9311	5	6		W
1976 DC1	14.5	760212	304.02	251.33	323.47	6.68	0.2444	2.6085	5	4		W
1976 DD1	14.5	760212	291.23	100.39	124.48	2.98	0.2069	2.4111	5	4		W
1976 DE1	11.5	760212	58.65	89.05	317.61	8.15	0.2044	5.1908	5	4	E	W
1976 DF1	16.0	760212	318.42	205.60	342.38	3.34	0.1453	2.2052	5	4	E	W
1976 DG1	13.5	760212	347.92	130.85	14.16	1.40	0.0587	2.8745	5	4		W
1976 DH1	13.5	760212	102.37	260.56	126.11	5.13	0.0375	2.1771	5	4		W
1976 DJ1	12.5	760212	298.10	94.61	113.51	5.83	0.1517	3.9744	5	4	E	M
1976 EQ	14.0	760303	18.42	334.07	144.82	22.41	0.1827	1.9776	2	7	E	W
1976 ES	15.0	760303	311.64	250.92	322.49	4.60	0.2372	2.2253	2	3	E	M
1976 EU	14.0	760303	149.64	203.42	133.97	11.32	0.1957	2.2259	2	3	E	M
1976 EV	13.5	760303	295.97	106.40	107.70	2.65	0.1269	2.8853	2	3	E	M
1976 EW	14.5	760303	327.25	52.99	140.16	4.39	0.2161	2.1747	2	3	E	M
1976 EX	14.5	760303	320.51	94.26	102.98	2.93	0.2068	2.5895	2	3	E	M
1976 EY	13.5	760303	40.22	72.14	10.46	2.79	0.1683	2.8060	2	3	E	M
1979 MF	16.0	790616	19.29	75.76	159.87	5.99	0.1998	2.1925	2	3		W
1988 UV	13.7	881026	330.32	206.58	212.34	7.24	0.1059	2.2430	6	8		N
1989 RE1	11.5	890822	238.85	138.91	348.71	7.57	0.2674	2.8029	7	6		W
1989 SX	13.5	891001	359.28	355.20	27.41	6.69	0.3013	2.5601	35	0		W
1989 SY	13.0	891021	338.54	45.40	25.61	12.76	0.2870	2.5638	50	0		W
1989 SC8	14.0	891001	347.81	99.66	294.73	3.83	0.2029	2.2928	9	7		W
1989 SL8	14.0	890911	347.79	0.97	4.92	4.04	0.1917	2.2644	15	0		W
1989 SM8	14.0	890911	2.87	313.45	29.91	1.86	0.1944	2.4369	15	0		W
1989 TW	14.5	891001	1.67	90.50	283.71	4.67	0.1543	2.2235	9	8		W
1989 TU1	13.5	891021	345.36	160.46	260.02	6.68	0.2872	2.6672	53	0		W
1989 UF	14.0	891021	341.11	203.78	206.20	6.16	0.1683	2.2640	13	0	D	W
1989 UN	13.5	891001	3.14	6.91	12.58	3.48	0.1229	2.1637	34	0		W
1989 UT	13.5	891021	356.83	2.55	32.57	7.14	0.1942	2.2421	29	0		W
1989 UA1	14.0	891001	7.36	0.63	3.77	5.21	0.1854	2.1978	26	8		W
1989 UP1	13.5	891021	6.70	304.71	81.28	6.72	0.2005	2.3279	25	0		W
1989 UU2	14.0	891021	3.64	147.96	237.18	2.86	0.1483	2.2945	12	8		W
1989 UB4	13.0	891021	16.05	341.44	25.11	19.33	0.2029	2.8050	7	3		W
1989 UG8	13.8	891031	328.40	57.03	5.74	24.14	0.2047	2.2573	8	3		F
1989 WE	12.0	891110	1.49	261.92	150.97	6.46	0.2076	2.6842	37	8		W
1989 WR1	12.0	891110	304.87	284.96	215.56	8.90	0.1801	2.8525	7	6		W
1990 KK	13.5	900509	130.97	22.16	80.00	23.57	0.0313	1.9129	64	9		W
1990 KL	13.5	900529	331.69	102.40	199.08	9.88	0.3297	2.4425	57	0		W
1990 KO	13.5	900618	333.63	69.29	235.02	23.11	0.2472	2.2938	65	0		M
1990 MG	14.5	900708	358.64	218.07	88.27	3.61	0.1873	2.1898	39	0		E
1990 MJ	13.5	900708	343.02	75.32	264.84	28.75	0.3999	2.7310	23	7		M
1990 MV	13.0	900708	8.08	178.09	91.96	11.28	0.2312	2.3786	26	8		W
1990 OD	13.0	900708	1.06	69.88	230.90	12.08	0.2240	2.6367	4	8		W
1990 OK	14.0	900708	328.74	94.95	249.35	6.77	0.1983	2.3373	12	9		W
1990 OP	14.0	900708	25.49	104.05	158.73	12.08	0.1731	2.3784	10	8		W
1990 OZ	13.0	900728	22.20	94.65	181.41	12.87	0.1587	2.6838	30	8		W
1990 OB1	14.0	900708	26.46	37.15	231.20	8.58	0.2216	2.3339	7	6		W

1990 OD1	14.3	900728	21.00	156.16	127.10	7.53	0.1327	2.3180	31	0		N
1990 OK1	14.0	900728	345.86	38.63	309.68	24.96	0.3307	2.3100	25	8		M
1990 OE2	12.7	900728	341.94	218.87	116.78	13.91	0.1309	2.5238	4	6		E
1990 OF2	14.7	900728	342.83	343.90	354.20	4.82	0.2319	2.3117	4	6		E
1990 OG2	13.8	900728	1.87	341.24	327.61	10.48	0.1844	2.5256	4	6		E
1990 OJ2	13.6	900728	290.62	329.55	70.01	4.51	0.1488	2.2632	4	6		E
1990 OK2	13.3	900728	346.31	252.64	80.61	4.69	0.1474	2.7358	4	6		E
1990 OM2	14.8	900728	344.19	348.25	348.29	7.01	0.2146	2.2692	4	0		E
1990 ON2	13.7	900728	16.11	295.47	0.86	3.26	0.0577	2.2550	5	8		E
1990 OO2	12.5	900728	6.74	335.47	330.06	14.62	0.1539	2.6187	5	8		E
1990 OQ2	14.0	900708	22.79	222.27	42.87	3.74	0.2945	2.5770	4	6	E	W
1990 OX2	15.0	900728	345.76	205.36	130.54	3.06	0.2365	2.4018	24	0		W
1990 OY2	15.8	900817	20.03	157.65	134.66	2.77	0.1738	2.2694	19	8		N
1990 OZ2	14.5	900728	356.20	139.93	178.23	10.45	0.1526	2.3544	4	6		E
1990 OA3	13.5	900708	22.95	25.61	242.26	8.32	0.2863	3.1286	4	5	E	W
1990 OB3	14.2	900728	325.59	133.54	225.20	6.41	0.1375	2.3697	4	6		E
1990 OC3	13.1	900728	253.11	173.27	256.62	8.02	0.0621	2.5429	4	5		E
1990 OD3	13.2	900728	321.20	91.58	291.11	14.57	0.2905	2.8943	4	6		E
1990 OE3	12.0	900728	310.37	196.76	185.38	14.35	0.1259	3.0550	4	8	E	M
1990 OK3	15.0	900728	349.27	202.33	127.28	3.08	0.2154	2.4042	24	0		W
1990 OB4	13.8	900728	341.55	77.93	270.96	11.32	0.2388	2.6245	3	6		E
1990 OD4	12.4	900728	300.33	201.73	187.36	11.55	0.0932	2.7198	4	5		E
1990 OE4	14.2	900728	0.49	105.18	211.85	7.25	0.3187	2.8087	4	6		E
1990 OF4	14.3	900728	34.07	356.11	249.91	7.23	0.2537	2.4184	5	8		E
1990 OG4	13.7	900728	333.47	83.52	266.85	11.18	0.2888	2.7150	6	9		E
1990 OJ4	11.5	900728	315.49	80.80	273.37	17.85	0.0598	3.1418	6	5		E
1990 OK4	14.7	900728	340.99	160.78	170.82	5.25	0.2368	2.2710	4	0		E
1990 OL4	13.8	900728	327.99	58.72	285.67	8.18	0.1627	2.5169	3	6		E
1990 OM4	13.9	900728	22.19	348.01	275.98	7.04	0.2500	2.6437	3	6	E	E
1990 ON4	14.9	900728	341.84	180.47	149.42	9.06	0.2148	2.3239	5	0		E
1990 OO4	11.7	900728	119.30	225.72	290.57	18.06	0.3100	2.6846	3	6	E	E
1990 OQ4	12.8	900728	332.14	62.41	282.13	6.68	0.2200	3.0219	3	6	E	E
1990 OS4	13.0	900728	171.12	229.37	266.41	13.05	0.0207	2.5424	5	6		E
1990 OT4	13.4	900728	16.35	128.83	153.44	11.77	0.1689	2.6471	5	6		E
1990 OV4	13.5	900728	333.44	68.47	281.20	15.91	0.2287	2.8590	5	6		E
1990 OY4	13.6	900728	359.79	141.84	165.36	12.97	0.1976	2.7476	5	6		E
1990 OZ4	15.3	900728	14.85	56.01	228.32	4.91	0.2002	2.2565	5	6		E
1990 OA5	15.0	900728	17.55	347.61	284.18	9.81	0.2500	2.5038	3	5	E	E
1990 OB5	13.4	900728	340.79	70.57	258.57	11.54	0.2012	2.6879	4	5		E
1990 OD5	13.1	900728	28.38	27.43	234.74	7.34	0.1445	2.7773	4	6		E
1990 OE5	13.2	900728	28.05	14.78	245.64	7.37	0.1869	2.8061	5	7		E
1990 OG5	14.5	900728	353.68	56.96	252.73	7.30	0.1556	2.2102	4	5		E
1990 PA	11.5	900728	2.20	274.58	87.40	11.98	0.2268	2.7041	6	3	E	M
1990 PC	14.9	900817	29.28	301.02	322.45	11.06	0.3380	2.7026	5	6		N
1990 QA	11.5	900728	324.62	334.63	25.62	20.09	0.2094	3.1019	8	5		M

1989 UF = 1989 UT4 (S. Nakano, MPC 15676)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(96) Aegle Obs. 45 M 349.56390 Peri. 203.40264
H 7.97 G 0.15 Opp. 21 n 0.18483979 Node 321.63294
rms res. 0".97 (M-P) 1911-1983 e 0.1384225 Incl. 16.01987

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(137) Meliboea Obs. 302 M 334.65953 Peri. 107.99200
H 8.04 G 0.10 Opp. 42 n 0.17954461 Node 201.86908
rms res. 1".0 (M-N) 1874-1989 e 0.2232110 Incl. 13.43975

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(151) Abundantia Obs. 58 M 77.18226 Peri. 135.34493
H 9.34 G 0.25 Opp. 15 n 0.23621126 Node 38.52356
rms res. 0".89 (M-P) 1902-1986 e 0.0341319 Incl. 6.45098

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(191) Kolga Obs. 140 M 247.67519 Peri. 225.32312
H 8.98 G 0.15 Opp. 39 n 0.20003947 Node 159.08592
rms res. 1".0 (M-N) 1878-1990 e 0.0895415 Incl. 11.50761

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(249) Ilse Obs. 39 M 218.04302 Peri. 41.26144
H 11.22 G 0.25 Opp. 14 n 0.26896936 Node 334.35690
rms res. 0".94 (M-P) 1950-1990 e 0.2172493 Incl. 9.64840

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(270) Anahita Obs. 379 M 257.15664 Peri. 80.06364
H 8.79 G 0.25 Opp. 53 n 0.30248265 Node 253.98012
rms res. 1".0 (M-N) 1887-1990 e 0.1509953 Incl. 2.36629

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(305) Gordonia Obs. 92 M 151.12326 Peri. 254.20102
H 9.02 G 0.25 Opp. 29 n 0.18065128 Node 208.70977
rms res. 1".89 (M-P) 1902-1986 e 0.1890025 Incl. 4.44604

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(339) Dorothea Obs. 51 M 304.13288 Peri. 159.96711
H 9.34 G 0.25 Opp. 20 n 0.18869489 Node 173.38531
rms res. 1".18 (M-P) 1892-1986 e 0.1021756 Incl. 9.94650

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
(347) Pariana Obs. 70 M 335.98085 Peri. 84.69920
H 9.03 G 0.25 Opp. 22 n 0.23310458 Node 85.33213
rms res. 1".21 (M-P) 1892-1989 e 0.1620303 Incl. 11.70805

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
(409) Aspasia Obs. 555 M 180.61281 Peri. 353.00745
H 7.60 G 0.28 Opp. 50 n 0.23837880 Node 241.97257
rms res. 0".81 (M-P) 1895-1988 e 0.0703337 Incl. 11.23748

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
(443) Photographica Obs. 84 M 279.49265 Peri. 349.46427
H 10.23 G 0.25 Opp. 30 n 0.29890104 Node 174.99435
rms res. 1".20 (M-P) 1899-1989 e 0.0406643 Incl. 4.23513

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(560) Delila Obs. 36 M 316.10554 Peri. 4.55119
H 10.60 G 0.15 Opp. 16 n 0.21621577 Node 105.05434
rms res. 1".11 (M-P) 1914-1983 e 0.1616204 Incl. 8.46877

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(569) Misa Obs. 80 M 155.23585 Peri. 140.87267
H 10.10 G 0.09 Opp. 24 n 0.22746313 Node 301.52935
rms res. 0".92 (M-P) 1914-1989 e 0.1811797 Incl. 1.28749

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(598) Octavia Obs. 84 M 307.33653 Peri. 290.15452
H 9.65 G 0.15 Opp. 29 n 0.21461963 Node 91.67872
rms res. 0".9 (M-N) 1906-1985 e 0.2486994 Incl. 12.20373

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(627) Charis Obs. 107 M 162.77904 Peri. 177.05289
H 10.10 G 0.15 Opp. 21 n 0.19913640 Node 142.15463
rms res. 0".9 (M-N) 1907-1989 e 0.0581290 Incl. 6.47715

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(665) Sabine Obs. 89 M 292.79770 Peri. 319.13131
H 8.52 G 0.15 Opp. 23 n 0.17574443 Node 298.38200
rms res. 0".88 (M-P) 1906-1989 e 0.1584134 Incl. 14.74140

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(688) Melanie Obs. 80 M 139.86881 Peri. 138.62585
H 10.51 G 0.15 Opp. 19 n 0.22217326 Node 170.59900
rms res. 1".1 (M-N) 1909-1989 e 0.1375895 Incl. 10.23344

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(731) Sorga Obs. 59 M 303.91414 Peri. 285.56252
H 9.50 G 0.15 Opp. 18 n 0.19100449 Node 46.17344
rms res. 0".97 (M-P) 1919-1990 e 0.1431524 Incl. 10.70211

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(775) Lumiere Obs. 26 M 256.02213 Peri. 172.90590
H 10.44 G 0.25 Opp. 15 n 0.18857359 Node 297.57048
rms res. 0".95 (M-P) 1957-1988 e 0.0699467 Incl. 9.28458

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(820) Adriana Obs. 67 M 61.75101 Peri. 182.09269
H 10.38 G 0.15 Opp. 25 n 0.17831221 Node 118.34125
rms res. 2".27 (M-P) 1916-1987 e 0.0609284 Incl. 5.95087

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(850) Altona Obs. 62 M 71.95168 Peri. 132.02981
H 9.53 G 0.15 Opp. 11 n 0.18997436 Node 120.98927
rms res. 1".00 (M-P) 1957-1990 e 0.1317188 Incl. 15.50618

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(873) Mechthild Obs. 85 M 70.58619 Peri. 107.57289
H 11.39 G 0.15 Opp. 22 n 0.23145763 Node 149.97564
rms res. 1".89 (M-P) 1917-1989 e 0.1482664 Incl. 5.27308

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(879) Ricarda Obs. 30 M 27.86362 Peri. 95.24364
H 11.6 G 0.25 Opp. 10 n 0.24481040 Node 269.80016
rms res. 0".74 (M-P) 1929-1989 e 0.1534499 Incl. 13.69656

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(890) Waltraut Obs. 52 M 220.94575 Peri. 82.27695
H 10.79 G 0.25 Opp. 17 n 0.18730453 Node 160.58868
rms res. 1".93 (M-P) 1929-1988 e 0.0544497 Incl. 10.85875

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1035) Amata Obs. 40 M 343.81399 Peri. 323.62129
H 10.6 G 0.25 Opp. 17 n 0.17743505 Node 1.62006
rms res. 1".44 (M-P) 1913-1989 e 0.2046759 Incl. 18.09680

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1039) Sonneberga Obs. 49 M 243.08568 Peri. 324.15872
H 11.22 G 0.15 Opp. 16 n 0.22475722 Node 221.45852
rms res. 1".92 (M-P) 1924-1988 e 0.0619058 Incl. 4.54266

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1060) Magnolia Obs. 26 M 187.52296 Peri. 84.14825
H 13.2 G 0.25 Opp. 12 n 0.29417037 Node 220.76131
rms res. 2".77 (M-P) 1925-1985 e 0.2012961 Incl. 5.91825

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1063) Aquilegia Obs. 54 M 20.71596 Peri. 106.45387
H 11.41 G 0.25 Opp. 23 n 0.28002077 Node 94.92988
rms res. 2".22 (M-P) 1923-1983 e 0.0389697 Incl. 5.97708

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1064) Aethusa Obs. 73 M 306.37523 Peri. 19.66777
H 11.1 G 0.25 Opp. 22 n 0.24284687 Node 280.14345
rms res. 1".44 (M-P) 1926-1988 e 0.1733388 Incl. 9.46527

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1069) Planckia Obs. 127 M 127.30053 Peri. 35.47201
H 9.6 G 0.25 Opp. 17 n 0.17774884 Node 142.08733
rms res. 0".88 (M-P) 1927-1990 e 0.1026194 Incl. 13.55318

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1071) Brita Obs. 80 M 160.90897 Peri. 26.04995
H 10.10 G 0.15 Opp. 27 n 0.21026133 Node 52.27227
rms res. 1".70 (M-P) 1910-1987 e 0.1103521 Incl. 5.38006

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1072) Malva Obs. 53 M 74.36915 Peri. 27.90085
H 10.87 G 0.15 Opp. 15 n 0.17536833 Node 36.53654
rms res. 1".47 (M-P) 1926-1986 e 0.2435947 Incl. 8.02767

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1078) Mentha Obs. 40 M 197.65171 Peri. 43.17923
H 11.61 G 0.25 Opp. 15 n 0.28817207 Node 93.43189
rms res. 1".94 (M-P) 1924-1987 e 0.1377437 Incl. 7.37517

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1081) Reseda Obs. 74 M 194.26039 Peri. 4.88278
H 11.65 G 0.15 Opp. 15 n 0.18177497 Node 30.45732
rms res. 1".34 (M-P) 1927-1989 e 0.1595532 Incl. 4.22865

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1084) Tamariwa Obs. 62 M 93.58370 Peri. 108.09163
H 10.69 G 0.15 Opp. 21 n 0.22363658 Node 186.65951
rms res. 1".95 (M-P) 1927-1986 e 0.1310351 Incl. 3.89254

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1093) Freda Obs. 71 M 232.33281 Peri. 252.43483
H 8.82 G 0.15 Opp. 16 n 0.17727739 Node 55.12612
rms res. 1".62 (M-P) 1929-1986 e 0.2660849 Incl. 25.16708

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1099) Figneria Obs. 34 M 18.12259 Peri. 339.71053
H 10.04 G 0.15 Opp. 17 n 0.17348706 Node 23.00396
rms res. 2".07 (M-P) 1928-1988 e 0.2743955 Incl. 11.70337

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1110) Jaroslawa Obs. 46 M 303.09217 Peri. 77.94561
H 12.16 G 0.25 Opp. 12 n 0.29841281 Node 241.44215
rms res. 1".25 (M-P) 1951-1986 e 0.2422314 Incl. 5.85503

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1119) Euboea Obs. 54 M 63.62123 Peri. 229.47132
H 11.51 G 0.15 Opp. 18 n 0.23339801 Node 56.97637
rms res. 1".87 (M-P) 1927-1986 e 0.1523465 Incl. 7.85447

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1140) Crimea Obs. 24 M 131.03595 Peri. 310.53354
H 10.33 G 0.25 Opp. 11 n 0.21360614 Node 71.81971
rms res. 1".57 (M-P) 1956-1987 e 0.1128685 Incl. 14.12765

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1144) Oda Obs. 79 M 242.71534 Peri. 222.43986
H 10.12 G 0.15 Opp. 21 n 0.13509272 Node 156.95916
rms res. 1".22 (M-P) 1930-1989 e 0.0786665 Incl. 9.65963

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1147) Stavropolis Obs. 52 M 329.27390 Peri. 15.35731
H 12.04 G 0.25 Opp. 16 n 0.28805747 Node 264.75525
rms res. 1".47 (M-P) 1939-1986 e 0.2318928 Incl. 3.88065

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1148) Rarahu Obs. 87 M 230.12092 Peri. 177.31141
H 10.10 G 0.25 Opp. 15 n 0.18844380 Node 145.08266
rms res. 1".50 (M-P) 1929-1986 e 0.1146073 Incl. 10.85065

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1155) Aenna Obs. 46 M 16.77040 Peri. 193.57035
H 11.81 G 0.25 Opp. 18 n 0.25473366 Node 38.63516
rms res. 2".20 (M-P) 1928-1984 e 0.1618100 Incl. 6.59960

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1158) Luda Obs. 39 M 272.29090 Peri. 55.50573
H 11.03 G 0.25 Opp. 16 n 0.23997855 Node 344.38972
rms res. 1".58 (M-P) 1929-1989 e 0.1116743 Incl. 14.87207

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1160) Illyria Obs. 30 M 329.65566 Peri. 3.94100
H 11.14 G 0.25 Opp. 9 n 0.24055479 Node 3.28566
rms res. 0".97 (M-P) 1929-1985 e 0.1182454 Incl. 14.99506

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1165) Imprinetta Obs. 56 M 270.82590 Peri. 98.89688
H 10.65 G 0.15 Opp. 14 n 0.17832796 Node 203.28641
rms res. 1".70 (M-P) 1909-1987 e 0.2110489 Incl. 12.80092

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1168) Brandia Obs. 31 M 271.55821 Peri. 123.17143
H 12.41 G 0.15 Opp. 9 n 0.24179605 Node 218.19351
rms res. 1".18 (M-P) 1967-1987 e 0.2182772 Incl. 12.75375

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Goffin
(1172) Aneas Obs. 124 M 125.57330 Peri. 48.38004
H 8.26 G 0.15 Opp. 24 n 0.08385767 Node 246.77696
rms res. 0".8 (M-N) 1930-1987 e 0.1023740 Incl. 16.71346

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1173) Anchises Obs. 88 M 100.80258 Peri. 39.41668
H 8.91 G 0.15 Opp. 17 n 0.08020254 Node 283.20167
rms res. 1".32 (M-P) 1930-1988 e 0.1369812 Incl. 6.90747

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1181) Lilith Obs. 62 M 292.25795 Peri. 155.01066
H 11.5 G 0.25 Opp. 16 n 0.22646885 Node 260.41530
rms res. 1".59 (M-P) 1930-1988 e 0.1935432 Incl. 5.57619

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1189) Terentia Obs. 61 M 340.27691 Peri. 94.46759
H 9.98 G 0.15 Opp. 18 n 0.19626883 Node 275.15666
rms res. 0".88 (M-P) 1945-1990 e 0.1121829 Incl. 9.85544

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1197) Rhodesia Obs. 42 M 108.38073 Peri. 276.93146
H 10.15 G 0.15 Opp. 13 n 0.20142677 Node 255.49524
rms res. 1".35 (M-P) 1925-1986 e 0.2351349 Incl. 12.95245

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1208) Troilus Obs. 48 M 84.02412 Peri. 295.86560
H 9.00 G 0.15 Opp. 13 n 0.08286856 Node 47.94118
rms res. 1".31 (M-P) 1931-1989 e 0.0920602 Incl. 33.61628

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1214) Richilde Obs. 67 M 202.14046 Peri. 33.05462
H 11.01 G 0.15 Opp. 20 n 0.22082855 Node 285.61403
rms res. 1".61 (M-P) 1930-1990 e 0.1185211 Incl. 9.84867

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1215) Boyer Obs. 45 M 152.45020 Peri. 265.73509
H 11.39 G 0.40 Opp. 19 n 0.23817884 Node 123.25710
rms res. 1".38 (M-P) 1932-1986 e 0.1337751 Incl. 15.90359

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1216) Askania Obs. 48 M 119.08090 Peri. 144.08870
H 12.73 G 0.25 Opp. 10 n 0.29563540 Node 121.15488
rms res. 0".80 (M-P) 1932-1982 e 0.1802017 Incl. 7.60120

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1219) Britta Obs. 100 M 17.68605 Peri. 23.35089
H 12.11 G 0.25 Opp. 18 n 0.29934212 Node 42.13796
rms res. 1".76 (M-P) 1904-1985 e 0.1244298 Incl. 4.41513

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1226) Golia Obs. 43 M 252.19418 Peri. 137.31562
H 12.1 G 0.25 Opp. 9 n 0.23767266 Node 17.04836
rms res. 1".36 (M-P) 1930-1989 e 0.1148469 Incl. 9.83229

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1233) Kobresia Obs. 55 M 273.12514 Peri. 334.43274
H 11.2 G 0.25 Opp. 21 n 0.24138455 Node 290.87401
rms res. 1".99 (M-P) 1927-1990 e 0.0578702 Incl. 5.60168

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Sumzina
(1238) Predappia Obs. 36 M 166.78689 Peri. 93.00679
H 11.9 G 0.25 Opp. 16 n 0.22624743 Node 51.50063
rms res. 1".60 (M-P) 1937-1989 e 0.1396279 Incl. 12.16806

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1239) Queteleta Obs. 34 M 208.01869 Peri. 35.24265
H 12.6 G 0.25 Opp. 12 n 0.22660492 Node 72.77195
rms res. 1".00 (M-P) 1932-1990 e 0.2290372 Incl. 1.66611

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1241) Dysona Obs. 43 M 26.42555 Peri. 324.06650
H 9.45 G 0.15 Opp. 15 n 0.17341869 Node 321.88011
rms res. 1".02 (M-P) 1931-1985 e 0.1082123 Incl. 23.54273

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1248) Jugurtha Obs. 63 M 272.56110 Peri. 343.53124
H 9.84 G 0.15 Opp. 22 n 0.21946131 Node 79.03369
rms res. 1".05 (M-P) 1932-1990 e 0.0134886 Incl. 9.14002

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1254) Erfordia Obs. 104 M 225.95988 Peri. 255.64491
H 10.92 G 0.15 Opp. 23 n 0.17791620 Node 287.78200
rms res. 1".65 (M-P) 1931-1987 e 0.0417704 Incl. 7.08473

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1255) Schilowa Obs. 44 M 87.05956 Peri. 134.91886
H 10.41 G 0.15 Opp. 12 n 0.17528500 Node 237.65677
rms res. 0".84 (M-P) 1905-1989 e 0.1590711 Incl. 8.53172

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1258) Sicilia Obs. 58 M 66.75911 Peri. 58.49125
H 10.53 G 0.15 Opp. 14 n 0.17334798 Node 299.50250
rms res. 1".29 (M-P) 1932-1989 e 0.0285991 Incl. 7.73790

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1259) Ogyalla Obs. 96 M 121.07856 Peri. 152.44492
H 10.83 G 0.25 Opp. 20 n 0.18081796 Node 74.67625
rms res. 1".60 (M-P) 1928-1988 e 0.1364792 Incl. 2.38608

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1263) Varsavia Obs. 74 M 155.71866 Peri. 286.58674
H 10.48 G 0.15 Opp. 15 n 0.22634054 Node 158.13137
rms res. 1".57 (M-P) 1933-1985 e 0.1888618 Incl. 29.21583

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1273) Helma Obs. 62 M 251.50512 Peri. 48.08672
H 13.05 G 0.25 Opp. 10 n 0.26627460 Node 296.28995
rms res. 0".92 (M-P) 1932-1990 e 0.1633300 Incl. 5.41363

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1278) Kenya Obs. 64 M 99.38355 Peri. 237.61789
H 11.05 G 0.25 Opp. 18 n 0.26402098 Node 89.98449
rms res. 1".58 (M-P) 1905-1986 e 0.2597670 Incl. 10.88401

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1281) Jeanne Obs. 65 M 32.43153 Peri. 72.65956
H 11.51 G 0.15 Opp. 18 n 0.24067759 Node 209.61029
rms res. 1".83 (M-P) 1904-1988 e 0.2037266 Incl. 7.44726

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1282) Utopia Obs. 62 M 63.06413 Peri. 83.88545
H 10.07 G 0.15 Opp. 13 n 0.17862242 Node 323.92854
rms res. 2".25 (M-P) 1933-1986 e 0.1215390 Incl. 18.03558

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1286) Banachiewicza Obs. 94 M 355.62361 Peri. 103.51640
H 10.67 G 0.25 Opp. 18 n 0.18769067 Node 200.44385
rms res. 1".63 (M-P) 1928-1988 e 0.0957241 Incl. 9.73987

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1291) Phryne Obs. 83 M 348.54874 Peri. 113.42886
H 10.36 G 0.25 Opp. 23 n 0.18849018 Node 215.36454
rms res. 1".54 (M-P) 1907-1986 e 0.0955787 Incl. 9.10220

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1294) Antwerpia Obs. 68 M 344.30561 Peri. 312.01589
H 10.51 G 0.15 Opp. 18 n 0.22362737 Node 80.93663
rms res. 2".26 (M-P) 1917-1986 e 0.2320191 Incl. 8.70322

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1300) Marcelle Obs. 43 M 167.81841 Peri. 330.18730
H 11.11 G 0.15 Opp. 18 n 0.21250603 Node 82.64126
rms res. 1".71 (M-P) 1934-1989 e 0.0085124 Incl. 9.54817

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1302) Werra Obs. 60 M 294.83771 Peri. 356.08094
H 10.8 G 0.25 Opp. 19 n 0.17864623 Node 89.85939
rms res. 1".59 (M-P) 1924-1988 e 0.1644830 Incl. 2.59518

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1303) Luthera Obs. 54 M 326.44834 Peri. 100.56893
H 9.3 G 0.25 Opp. 18 n 0.17089168 Node 71.74794
rms res. 1".85 (M-P) 1928-1989 e 0.1229077 Incl. 19.53270

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1314) Paula Obs. 34 M 115.35260 Peri. 143.41701
H 12.73 G 0.25 Opp. 11 n 0.28347300 Node 264.23301
rms res. 1".67 (M-P) 1933-1984 e 0.1747470 Incl. 5.23453

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1326) Losaka Obs. 36 M 283.78316 Peri. 277.80021
H 10.96 G 0.25 Opp. 11 n 0.22629080 Node 101.46409
rms res. 1".43 (M-P) 1934-1988 e 0.2257364 Incl. 15.96430

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Filenko
(1333) Cevenola Obs. 31 M 151.65631 Peri. 334.28777
H 11.71 G 0.15 Opp. 13 n 0.23055651 Node 114.67500
rms res. 1".43 (M-P) 1934-1985 e 0.1328807 Incl. 14.61389

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1348) Michel Obs. 27 M 181.20589 Peri. 16.78927
H 11.20 G 0.15 Opp. 14 n 0.21106528 Node 87.38284
rms res. 0".90 (M-P) 1908-1989 e 0.1356395 Incl. 6.58634

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1360) Tarka Obs. 16 M 5.68923 Peri. 287.14465
H 11.3 G 0.25 Opp. 8 n 0.23068792 Node 331.14233
rms res. 0".96 (M-P) 1935-1979 e 0.2174829 Incl. 22.77746

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1363) Herberta Obs. 52 M 71.94031 Peri. 107.99289
H 11.60 G 0.25 Opp. 14 n 0.19938697 Node 214.62918
rms res. 0".94 (M-P) 1935-1988 e 0.0666219 Incl. 1.09710

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1368) Numidia Obs. 40 M 259.02041 Peri. 262.35864
H 10.96 G 0.15 Opp. 14 n 0.24588340 Node 17.85876
rms res. 0".91 (M-P) 1931-1988 e 0.0631263 Incl. 14.83681

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1374) Isora Obs. 28 M 123.00897 Peri. 60.54572
H 13.6 G 0.25 Opp. 7 n 0.29180068 Node 302.20489
rms res. 0".88 (M-P) 1935-1981 e 0.2779255 Incl. 5.29952

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1378) Leonce Obs. 42 M 281.17978 Peri. 201.03125
H 12.25 G 0.25 Opp. 19 n 0.26919119 Node 43.11777
rms res. 1".02 (M-P) 1936-1989 e 0.1480819 Incl. 3.59466

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1385) Gelria Obs. 47 M 324.30574 Peri. 258.33738
H 10.92 G 0.15 Opp. 12 n 0.21713499 Node 114.71679
rms res. 1".00 (M-P) 1935-1986 e 0.1061304 Incl. 6.92342

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1390) Abastumani Obs. 47 M 215.37544 Peri. 2.55634
H 9.21 G 0.15 Opp. 16 n 0.15480396 Node 28.86510
rms res. 0".99 (M-P) 1929-1986 e 0.0256206 Incl. 19.97473

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1395) Aribeda Obs. 24 M 121.13009 Peri. 105.51672
H 11.6 G 0.25 Opp. 10 n 0.17130234 Node 244.97222
rms res. 0".88 (M-P) 1936-1988 e 0.0419280 Incl. 8.67591

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1428) Mombasa Obs. 66 M 57.21424 Peri. 251.02042
H 10.36 G 0.15 Opp. 18 n 0.20917288 Node 115.49432
rms res. 1".04 (M-P) 1933-1987 e 0.1376747 Incl. 17.33710

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1469) Linzia Obs. 52 M 90.83816 Peri. 218.10522
H 9.77 G 0.15 Opp. 14 n 0.17848670 Node 188.58079
rms res. 0".93 (M-P) 1931-1988 e 0.0685129 Incl. 13.39852

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1524) Joensuu Obs. 47 M 125.62062 Peri. 5.67124
H 10.74 G 0.15 Opp. 16 n 0.17873134 Node 347.48289
rms res. 1".06 (M-P) 1931-1988 e 0.1111400 Incl. 12.66856

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1533) Saimaa Obs. 63 M 310.47939 Peri. 359.59933
H 10.92 G 0.25 Opp. 14 n 0.18847206 Node 156.54183
rms res. 1".00 (M-P) 1936-1989 e 0.0424218 Incl. 10.69817

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1539) Borrelly Obs. 69 M 349.97488 Peri. 245.78124
H 11.12 G 0.15 Opp. 20 n 0.17561631 Node 142.55799
rms res. 1".11 (M-P) 1923-1987 e 0.1743775 Incl. 1.72276

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1542) Schalen Obs. 52 M 356.60220 Peri. 156.98856
H 10.40 G 0.15 Opp. 20 n 0.18081031 Node 211.88662
rms res. 0".97 (M-P) 1898-1987 e 0.1078787 Incl. 2.73883

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1556) Wingolfia Obs. 47 M 14.50403 Peri. 268.09119
H 10.57 G 0.15 Opp. 11 n 0.15629771 Node 91.52829
rms res. 0".84 (M-P) 1942-1982 e 0.1272402 Incl. 15.72075

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1577) Reiss	Obs. 46	M	253.85454	Peri.	265.68494
H 14.1 G 0.25	Opp. 12	n	0.29588187	Node	123.15531
rms res. 0".91 (M-P)	1931-1989	e	0.1661355	Incl.	4.35938
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1597) Laugier	Obs. 40	M	216.38541	Peri.	51.09528
H 12.2 G 0.25	Opp. 13	n	0.20557863	Node	158.43028
rms res. 1".07 (M-P)	1949-1989	e	0.0919632	Incl.	11.83220
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1602) Indiana	Obs. 37	M	65.79373	Peri.	72.64125
H 12.56 G 0.25	Opp. 15	n	0.29314009	Node	74.72018
rms res. 1".01 (M-P)	1943-1987	e	0.1043645	Incl.	4.16278
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1658) Innes	Obs. 43	M	49.92555	Peri.	188.76251
H 11.41 G 0.25	Opp. 11	n	0.24042790	Node	95.16373
rms res. 0".97 (M-P)	1940-1990	e	0.1807992	Incl.	9.07267
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1819) Laputa	Obs. 49	M	220.37477	Peri.	165.07282
H 10.7 G 0.25	Opp. 9	n	0.17537837	Node	121.99549
rms res. 0".86 (M-P)	1948-1987	e	0.2151627	Incl.	23.80007
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1834) 1969 QP	Obs. 38	M	68.86038	Peri.	354.34144
H 11.6 G 0.25	Opp. 9	n	0.18763046	Node	267.95038
rms res. 0".97 (M-P)	1969-1990	e	0.0777075	Incl.	9.44124
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1918) Aiguillon	Obs. 58	M	264.29013	Peri.	237.66346
H 11.2 G 0.25	Opp. 10	n	0.17208832	Node	195.10122
rms res. 0".72 (M-P)	1968-1990	e	0.1173077	Incl.	9.22220
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1934) Jeffers	Obs. 16	M	334.20804	Peri.	294.54119
H 12.7 G 0.25	Opp. 7	n	0.26669909	Node	86.17338
rms res. 0".99 (M-P)	1961-1986	e	0.2986648	Incl.	23.15989
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1945) Wesselink	Obs. 24	M	250.63794	Peri.	194.45854
H 12.2 G 0.25	Opp. 7	n	0.24149357	Node	142.32375
rms res. 0".87 (M-P)	1930-1986	e	0.1792564	Incl.	4.21760
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1949) Messina	Obs. 17	M	239.38205	Peri.	65.88796
H 13.5 G 0.25	Opp. 8	n	0.26804527	Node	264.80351
rms res. 0".89 (M-P)	1936-1988	e	0.2315143	Incl.	4.65039
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1958) Chandra	Obs. 50	M	262.79051	Peri.	321.81185
H 11.0 G 0.25	Opp. 10	n	0.18034396	Node	344.53315
rms res. 0".91 (M-P)	1965-1990	e	0.1666775	Incl.	10.55086
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Bowell	
(1960) Guisan	Obs. 38	M	189.31652	Peri.	262.49177
H 11.85 G 0.15	Opp. 9	n	0.24536639	Node	22.03351
rms res. 0".93 (M-P)	1961-1989	e	0.1249728	Incl.	8.45313

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(1961) Dufour Obs. 30 M 297.71985 Peri. 57.63825
H 11.2 G 0.25 Opp. 8 n 0.17200021 Node 29.29505
rms res. 0".67 (M-P) 1952-1984 e 0.1079089 Incl. 6.62939

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2079) Jacchia Obs. 51 M 199.47312 Peri. 146.38202
H 12.2 G 0.25 Opp. 7 n 0.23532590 Node 352.69356
rms res. 0".66 (M-P) 1976-1990 e 0.0800000 Incl. 13.29770

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2149) Schwambraniya Obs. 24 M 41.18647 Peri. 229.40026
H 11.8 G 0.25 Opp. 11 n 0.24201135 Node 62.18659
rms res. 1".02 (M-P) 1954-1990 e 0.1058308 Incl. 7.70491

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2290) 1932 CD1 Obs. 15 M 93.65270 Peri. 270.22444
H 12.16 G 0.15 Opp. 5 n 0.23664052 Node 155.62177
rms res. 1".20 (M-P) 1932-1982 e 0.2380675 Incl. 11.52261

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2307) 1957 HJ Obs. 35 M 73.72383 Peri. 345.28822
H 11.19 G 0.15 Opp. 9 n 0.18547017 Node 251.30492
rms res. 0".84 (M-P) 1957-1990 e 0.0625569 Incl. 7.71666

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2310) Olshaniya Obs. 40 M 257.37188 Peri. 330.76044
H 12.1 G 0.25 Opp. 8 n 0.17578481 Node 123.94960
rms res. 0".80 (M-P) 1959-1990 e 0.1464169 Incl. 2.64804

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2314) Field Obs. 30 M 129.91670 Peri. 180.59878
H 12.8 G 0.25 Opp. 6 n 0.28991869 Node 33.60378
rms res. 0".94 (M-P) 1977-1990 e 0.0248992 Incl. 5.72626

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2347) 1936 TK Obs. 32 M 328.27619 Peri. 105.66462
H 11.42 G 0.15 Opp. 7 n 0.18051076 Node 290.89599
rms res. 1".00 (M-P) 1936-1990 e 0.2019183 Incl. 13.06352

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2397) Lappajarvi Obs. 20 M 317.77474 Peri. 299.44178
H 11.25 G 0.15 Opp. 6 n 0.18159945 Node 145.37377
rms res. 0".92 (M-P) 1938-1989 e 0.1733655 Incl. 10.30757

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2419) Moldavia Obs. 18 M 165.61027 Peri. 260.44927
H 13.45 G 0.25 Opp. 8 n 0.28334294 Node 167.52904
rms res. 0".94 (M-P) 1952-1984 e 0.0920095 Incl. 6.39874

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2428) Kamenyar Obs. 19 M 121.66785 Peri. 356.38072
H 11.3 G 0.25 Opp. 6 n 0.17410811 Node 8.22721
rms res. 0".59 (M-P) 1966-1988 e 0.0822236 Incl. 9.31656

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2433) Sootiyo Obs. 24 M 61.91387 Peri. 69.09675
H 11.88 G 0.33 Opp. 6 n 0.23415646 Node 188.23811
rms res. 0".82 (M-P) 1960-1990 e 0.2196159 Incl. 10.40839

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2437) Amnestia Obs. 35 M 305.86510 Peri. 150.72606
H 13.5 G 0.25 Opp. 7 n 0.30434717 Node 218.52822
rms res. 0".94 (M-P) 1942-1989 e 0.1479624 Incl. 2.94226

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2468) Repin Obs. 27 M 31.60386 Peri. 97.28980
H 12.8 G 0.25 Opp. 5 n 0.27779318 Node 216.03334
rms res. 0".99 (M-P) 1969-1990 e 0.1566700 Incl. 5.72065

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2470) Agematsu Obs. 36 M 169.11382 Peri. 88.67870
H 11.7 G 0.25 Opp. 8 n 0.20081797 Node 79.19158
rms res. 0".93 (M-P) 1971-1990 e 0.0110521 Incl. 3.11058

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2564) Kayala Obs. 46 M 252.11524 Peri. 295.01727
H 13.53 G 0.25 Opp. 9 n 0.29450085 Node 153.03394
rms res. 0".85 (M-P) 1949-1987 e 0.1089337 Incl. 1.96383

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2580) Smilevskia Obs. 25 M 24.38099 Peri. 221.02142
H 13.49 G 0.25 Opp. 9 n 0.30571754 Node 118.89183
rms res. 1".02 (M-P) 1903-1987 e 0.1951923 Incl. 1.61578

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2605) Sahade Obs. 35 M 343.81451 Peri. 172.19095
H 12.7 G 0.25 Opp. 10 n 0.18124761 Node 171.68136
rms res. 0".90 (M-P) 1974-1990 e 0.0812319 Incl. 9.42073

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2623) A919 SA Obs. 34 M 352.33871 Peri. 22.08622
H 13.3 G 0.25 Opp. 7 n 0.29107054 Node 348.69761
rms res. 0".80 (M-P) 1919-1990 e 0.2340482 Incl. 4.05915

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2632) Guizhou Obs. 25 M 31.05622 Peri. 306.40948
H 11.5 G 0.25 Opp. 8 n 0.18609757 Node 18.33074
rms res. 1".04 (M-P) 1957-1985 e 0.1076204 Incl. 10.45491

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2637) Bobrovnikoff Obs. 16 M 12.20704 Peri. 342.76925
H 13.3 G 0.25 Opp. 5 n 0.29111735 Node 355.68764
rms res. 0".90 (M-P) 1919-1990 e 0.2351910 Incl. 4.93143

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2642) Vesale Obs. 24 M 247.97883 Peri. 164.53360
H 12.5 G 0.25 Opp. 5 n 0.26089886 Node 200.64445
rms res. 0".83 (M-P) 1961-1984 e 0.1854134 Incl. 14.47919

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2715) Mielikki Obs. 53 M 224.92423 Peri. 143.56266
H 12.24 G 0.15 Opp. 11 n 0.21806703 Node 200.37816
rms res. 0".72 (M-P) 1929-1989 e 0.1529241 Incl. 6.73453

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2751) Campbell Obs. 32 M 125.08699 Peri. 201.55009
H 12.9 G 0.25 Opp. 7 n 0.26397542 Node 245.83742
rms res. 0".83 (M-P) 1962-1990 e 0.1719772 Incl. 1.48191

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2812) Scaltriti Obs. 20 M 347.35354 Peri. 100.17175
H 13.51 G 0.25 Opp. 4 n 0.29706975 Node 67.73904
rms res. 0".91 (M-P) 1976-1984 e 0.0918848 Incl. 6.81385

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2890) Vilyujsk Obs. 42 M 177.93966 Peri. 50.37780
H 12.96 G 0.25 Opp. 6 n 0.29014169 Node 356.37086
rms res. 0".88 (M-P) 1944-1990 e 0.1606140 Incl. 6.62585

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2940) Bacon Obs. 38 M 157.72407 Peri. 116.34788
H 14.1 G 0.25 Opp. 4 n 0.21244388 Node 273.61833
rms res. 0".68 (M-P) 1960-1983 e 0.2349700 Incl. 6.44242

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(2984) Chaucer Obs. 35 M 69.17938 Peri. 46.91556
H 13.16 G 0.18 Opp. 8 n 0.25392768 Node 81.32872
rms res. 1".10 (M-P) 1963-1989 e 0.1335181 Incl. 3.05354

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3020) 1949 PR Obs. 18 M 348.21858 Peri. 193.05946
H 12.17 G 0.15 Opp. 6 n 0.21474144 Node 141.57965
rms res. 1".15 (M-P) 1931-1990 e 0.0610129 Incl. 6.27091

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3040) Kozai Obs. 22 M 305.51007 Peri. 290.30280
H 14.7 G 0.25 Opp. 4 n 0.39465924 Node 142.91557
rms res. 0".96 (M-P) 1979-1990 e 0.2006869 Incl. 46.64785

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3051) 1974 YP Obs. 10 M 349.46096 Peri. 91.98177
H 12.9 G 0.25 Opp. 5 n 0.23592859 Node 280.20201
rms res. 0".58 (M-P) 1961-1990 e 0.2575345 Incl. 13.34237

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3065) Sarahill Obs. 25 M 182.04505 Peri. 212.17489
H 12.09 G 0.15 Opp. 6 n 0.21990939 Node 302.77969
rms res. 0".83 (M-P) 1955-1990 e 0.0648920 Incl. 4.29761

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3071) Nesterov Obs. 50 M 42.97802 Peri. 30.19204
H 11.9 G 0.25 Opp. 9 n 0.17163109 Node 133.98019
rms res. 0".75 (M-P) 1910-1987 e 0.0832089 Incl. 2.20545

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3086) Kalbaugh Obs. 40 M 129.03597 Peri. 281.88469
H 13.6 G 0.25 Opp. 5 n 0.36596631 Node 300.23063
rms res. 0".93 (M-P) 1980-1990 e 0.0267992 Incl. 19.00557

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3166) 1940 FG Obs. 34 M 41.02728 Peri. 117.96548
H 12.8 G 0.25 Opp. 11 n 0.29442394 Node 71.54978
rms res. 0".87 (M-P) 1940-1988 e 0.1164155 Incl. 5.23873

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3182) Shimanto Obs. 23 M 150.91578 Peri. 161.03224
H 12.3 G 0.25 Opp. 5 n 0.23342858 Node 247.99398
rms res. 0".96 (M-P) 1946-1985 e 0.1450858 Incl. 12.59125

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3233) Krisbarons Obs. 36 M 304.87208 Peri. 65.01840
H 13.0 G 0.25 Opp. 10 n 0.29665144 Node 347.23163
rms res. 0".82 (M-P) 1942-1990 e 0.1031821 Incl. 3.60118

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3272) 1938 DB1 Obs. 16 M 288.88883 Peri. 13.07150
H 13.6 G 0.25 Opp. 7 n 0.29325279 Node 93.64066
rms res. 0".92 (M-P) 1938-1988 e 0.0914848 Incl. 3.92760

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3299) Hall Obs. 26 M 221.27702 Peri. 242.14004
H 13.4 G 0.25 Opp. 6 n 0.28621302 Node 251.29512
rms res. 0".82 (M-P) 1980-1990 e 0.0777619 Incl. 5.47296

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3313) 1980 DG Obs. 22 M 78.18213 Peri. 344.50295
H 12.2 G 0.25 Opp. 7 n 0.22790277 Node 272.03892
rms res. 0".85 (M-P) 1972-1990 e 0.1316592 Incl. 11.37446

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3331) Kvistaberg Obs. 59 M 213.21994 Peri. 303.75130
H 13.4 G 0.25 Opp. 6 n 0.26182037 Node 167.90589
rms res. 0".52 (M-P) 1976-1990 e 0.0888449 Incl. 3.56022

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3392) Setouchi Obs. 27 M 137.73048 Peri. 239.50339
H 14.3 G 0.25 Opp. 4 n 0.31483906 Node 266.36117
rms res. 0".80 (M-P) 1979-1990 e 0.2796342 Incl. 26.36573

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3459) Bodil Obs. 24 M 39.10793 Peri. 200.26868
H 13.0 G 0.25 Opp. 8 n 0.29301498 Node 98.18488
rms res. 0".82 (M-P) 1953-1990 e 0.1704236 Incl. 5.22523

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3479) Malaparte Obs. 23 M 48.14140 Peri. 90.53855
H 11.6 G 0.25 Opp. 9 n 0.18547459 Node 196.29654
rms res. 1".04 (M-P) 1957-1990 e 0.1072684 Incl. 12.50247

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3481) 1982 DS6 Obs. 25 M 277.39506 Peri. 241.68193
H 13.6 G 0.25 Opp. 8 n 0.29384933 Node 186.64027
rms res. 0".92 (M-P) 1967-1990 e 0.1432886 Incl. 5.48260

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3511) Tsvetaeva Obs. 39 M 227.72754 Peri. 236.94314
H 12.5 G 0.25 Opp. 5 n 0.21630652 Node 229.42942
rms res. 1".23 (M-P) 1952-1990 e 0.1976210 Incl. 8.68781

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3534) Sax Obs. 26 M 277.65722 Peri. 200.15282
H 12.5 G 0.25 Opp. 4 n 0.21555318 Node 246.78455
rms res. 0".81 (M-P) 1936-1990 e 0.1920279 Incl. 7.64091

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3548) 1973 SO Obs. 33 M 115.19008 Peri. 27.27989
H 9.7 G 0.25 Opp. 5 n 0.08490351 Node 42.87118
rms res. 0".72 (M-P) 1954-1986 e 0.0906545 Incl. 8.08347

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3609) 1980 VM1 Obs. 13 M 256.39115 Peri. 31.40547
H 11.9 G 0.25 Opp. 6 n 0.17740637 Node 65.01099
rms res. 0".82 (M-P) 1952-1990 e 0.2319000 Incl. 4.84253

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3748) Tatum Obs. 19 M 194.72922 Peri. 110.37551
H 12.8 G 0.25 Opp. 7 n 0.24462528 Node 33.28558
rms res. 0".67 (M-P) 1977-1990 e 0.1561199 Incl. 5.97582

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3791) 1981 WV1 Obs. 45 M 16.56534 Peri. 352.39937
H 12.5 G 0.25 Opp. 6 n 0.20132154 Node 329.71096
rms res. 0".97 (M-P) 1973-1990 e 0.0668155 Incl. 1.28685

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3828) Hoshino Obs. 35 M 184.42630 Peri. 276.42526
H 11.5 G 0.25 Opp. 5 n 0.17438577 Node 221.68710
rms res. 0".89 (M-P) 1951-1990 e 0.0220063 Incl. 6.17215

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3860) Plovdiv Obs. 25 M 319.27832 Peri. 43.50426
H 11.9 G 0.25 Opp. 6 n 0.20967240 Node 289.30342
rms res. 0".89 (M-P) 1930-1989 e 0.1553077 Incl. 8.13160

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(3884) 1977 EM1 Obs. 22 M 218.24563 Peri. 115.25590
H 12.4 G 0.25 Opp. 6 n 0.17891536 Node 9.37388
rms res. 0".98 (M-P) 1969-1990 e 0.1286302 Incl. 1.16567

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(4106) Nada Obs. 18 M 87.80765 Peri. 189.87562
H 12.0 G 0.25 Opp. 6 n 0.21611482 Node 44.54724
rms res. 1".60 (M-P) 1930-1990 e 0.1839162 Incl. 9.77081

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
(4215) 1987 VE1 Obs. 38 M 157.59748 Peri. 277.41762
H 12.2 G 0.25 Opp. 4 n 0.26220292 Node 246.53682
rms res. 0".81 (M-P) 1982-1990 e 0.0612782 Incl. 5.74934

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
(4372) 1984 TB Obs. 32 M 62.40811 Peri. 15.95875
H 12.9 G 0.25 Opp. 5 n 0.19624224 Node 14.61688
rms res. 0".78 (M-P) 1969-1989 e 0.1239829 Incl. 1.51538

(4560)* 1976 YD2 = 1988 BR3

Discovered 1976 Dec. 16 by L. I. Chernykh at the Crimean Astrophysical Observatory.

Id. B. G. Marsden (MPC 13454)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M 333.92846	(1950.0)	P	Q
n 0.18989392	Peri. 63.20115	+0.96987138	+0.19089885
a 2.9977495	Node 285.47872	-0.23857099	+0.87004662
e 0.0540439	Incl. 9.03555	+0.04932941	+0.45450688
P 5.19	H 12.0	G 0.25	

Residuals in seconds of arc

761216	095	1.3+	0.1-	880118	809	0.5+	0.6-	880119	809	0.6+	0.0
761218	095	0.9-	0.1+	880118	809	0.7+	0.6-	880119	809	0.7+	0.3+
761220	095	0.3-	0.7+	880118	809	0.7+	0.9-	880120	809	0.3-	0.3+

880120 809 0.2- 0.5+ 880128 809 0.7- 0.2+ 900427 413 0.6+ 0.7-
880122 809 0.2- 0.6- 880128 809 0.4- 0.2- 900430 413(37.8- 82.7-)
880122 809 0.3+ 0.5- 880130 809 0.7- 1.5- 900719 801 0.6- 0.0
880124 809 0.5- 0.4+ 890405 474 0.1+ 0.5+ 900719 801 0.0 0.9-
880124 809 0.1- 0.3+ 890405 474 0.2- 0.4+ 900722 801 0.2+ 0.3+
880126 809 0.4- 0.7+ 890406 474 1.5+ 0.2- 900722 801 0.3+ 0.4+
880126 809 0.5- 0.8+ 890406 474 1.2- 0.2+

(4561)* 1978 RY5 = 1970 WZ = 1980 DK5 = 1986 RH3

Discovered 1978 Sept. 13 by N. S. Chernykh at the Crimean Astrophysical Observatory.

Id. E. Bowell (k, MPC 11344), C. M. Bardwell (ibid.)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell

M	299.27437	(1950.0)	P	Q
n	0.23856433	Peri. 54.59789	+0.43538832	-0.89981121
a	2.5747340	Node 9.71231	+0.76304329	+0.35242869
e	0.1539779	Incl. 9.50942	+0.47770488	+0.25716493
P	4.13	H 13.4	G 0.25	

Residuals in seconds of arc

701126 095 0.2+ 1.3- 860828 809 0.6- 0.4- 860903 809 1.8+ 0.6+
780913 095 1.7- 1.6+ 860828 809 0.8- 0.3- 860907 095 1.0- 2.3-
780927 095 1.5- 2.1+ 860828 809 0.6- 0.4- 860911 688 (3.0- 1.1+)
781003 095 0.4+ 0.4- 860901 809 0.4- 0.3- 860911 688 0.5- 1.1+
781007 095 1.7+ 1.3- 860901 809 0.3- 0.3- 860912 095 (1.2+ 3.3-)
800221 095 0.6+ 0.8+ 860901 809 0.4- 0.5- 900729 675 0.4+ 0.6-
820926 095 2.6+ 0.0 860903 809 1.2+ 0.3+ 900729 675 0.4+ 0.4+
821022 095 2.6- 1.1+ 860903 809 1.3+ 0.5+ 900730 675 0.4- 0.5+

(4562)* 1979 UD2 = 1955 MN = 1955 MH1 = 1967 RU = 1973 AW1 = 1983 YU = 1987 WY4

Discovered 1979 Oct. 21 at the Purple Mountain Observatory.

Id. T. Kobayashi (MPC 15878)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	21.57297	(1950.0)	P	Q
n	0.25357229	Peri. 36.14973	+0.49899829	+0.86457386
a	2.4721123	Node 263.85300	-0.80839008	+0.43974551
e	0.1428524	Incl. 3.41750	-0.31225982	+0.24317881
P	3.89	H 13.1	G 0.25	

Residuals in seconds of arc

550623 076 (2.4- 7.7-) 791027 330(27.4+ 8.3+) 900626 801 0.1- 0.2-
550628 760 0.8- 0.7+ 831228 033 0.7+ 0.0 900718 801 0.2+ 0.6-
550628 760 0.9- 0.8+ 831229 033 0.6+ 0.4+ 900718 801 0.3+ 0.6-
670911 095 2.5+ 1.7+ 831229 033 1.0+ 0.2- 900720 801 0.2+ 0.5-
730101 095 0.8+ 1.4- 871119 054 0.4+ 0.2+ 900720 801 0.1+ 0.8-
791017 095 3.5- 0.4- 871119 054 0.8- 0.3+
791021 330 0.6- 1.3- 900626 801 0.1- 0.3-

(4563)* 1980 OG = 1980 RG3 = 1976 KF = 1987 UG1

Discovered 1980 July 17 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. B. G. Marsden (d, MPC 9203; MPC 12576), C. M. Bardwell (d, MPC 9203); L. D. Schmadel (MPC 12576)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M	346.72783	(1950.0)	P	Q
n	0.29133849	Peri. 228.18403	+0.99805394	+0.00356080
a	2.2535687	Node 131.51292	+0.01823218	+0.93807583
e	0.1619101	Incl. 4.76899	-0.05963148	+0.34641168
P	3.38	H 13.5	G 0.25	

Residuals in seconds of arc

760525	095	0.0	0.5-	800907	688	1.8+	1.6-	900626	801	0.6- 0.7+
800717	688	0.1-	0.2-	871027	054	0.1+	1.0+	900718	801	0.1+ 0.9+
800717	688	0.1+	2.0-	871027	054	0.3-	0.4+	900718	801	0.1+ 0.7+
800808	688	0.5-	1.7-	871030	054	0.7-	0.9+	900719	801	0.1- 0.9+
800904	095	(1.7-	3.1+)	900626	801	0.0	0.7+	900719	801	0.3- 1.1+

(4564)* 1981 ET16 = 1990 OC

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

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	37.22311	(1950.0)	P	Q	
n	0.23967417	Peri.	95.15829	+0.31585255	+0.94725820
a	2.5667795	Node	193.63445	-0.93586142	+0.30162673
e	0.1991610	Incl.	13.29608	-0.15620678	+0.10827378
P	4.11	H	13.4	G 0.25	

Residuals in seconds of arc

781003	675	0.3-	1.1-	810406	413	1.7-	1.3+	860810	801	1.1+ 0.4-
781004	675	0.1-	0.5-	810406	413	0.1+	0.1-	860902	801	0.3+ 1.0+
810209	413	1.4+	0.3-	810408	413	0.1+	0.3+	900719	675	0.8- 0.1+
810212	413	0.6-	0.1+	810408	413	1.5+	0.8-	900719	675	0.2+ 0.1+
810306	413	0.6+	0.6-	810409	413	1.4-	1.1+	900722	675	0.2- 0.6+
810308	413	0.8-	1.3+	810409	413	0.2+	0.7-	900722	675	0.1- 1.0-
810308	413	0.7+	0.3-	810501	413	0.1-	1.0-			
810312	413	0.9+	0.5-	810503	413	0.9-	1.1-			

(4565)* 1981 EZ17 = 1981 ED

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

Id. W. Landgraf (d, MPC 8530)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Green

M	94.84673	(1950.0)	P	Q	
n	0.23959479	Peri.	35.99162	-0.86257059	+0.50527418
a	2.5673464	Node	174.17772	-0.50297201	-0.85086268
e	0.1300433	Incl.	14.78288	-0.05469131	-0.14398162
P	4.11	H	13.2	G 0.25	

Residuals in seconds of arc

810209	413	0.5+	0.6-	820821	413	1.0-	2.5-	890210	809	0.2- 0.1-
810302	413	0.5-	0.9+	820821	413	1.2+	0.6-	890210	809	0.2- 0.2+
810302	413	0.3+	1.5-	890129	046	2.5+	0.2-	890211	809	0.2+ 0.2-
810303	413	0.2-	0.2-	890129	046	1.1+	1.5+	890211	809	0.3+ 0.2-
810303	413	0.6+	2.2-	890130	046	(3.4+	0.2-)	890211	809	0.2+ 0.7-
810307	511	0.6-	1.2+	890130	046	1.8+	0.1+	890303	809	2.1- 1.5+
810307	413	0.6-	0.7+	890131	046	1.8+	0.3-	890303	809	(2.5- 1.9+)
810309	704	(2.8-	5.6-)	890131	046	1.4-	0.3+	890303	809	2.4- 0.4+
810311	413	0.4-	0.6+	890208	809	0.4-	0.1-	900625	801	0.4+ 1.0+
810311	413	0.1-	0.7-	890208	809	0.0	0.1-	900625	801	0.9+ 1.0+
810316	413	1.3-	1.1+	890208	809	0.2+	0.0	900718	801	0.5- 0.1-
810316	413	2.2+	2.1-	890209	809	0.4-	0.5-	900718	801	0.4- 0.2-
810329	413	0.6-	1.0+	890209	809	0.3-	0.4-	900719	801	0.4- 0.4+
810502	413	1.6+	1.5+	890209	809	0.4-	0.6-			
810503	413	1.2-	2.1-	890210	809	0.4-	0.3-			

(4566)* 1981 WM4 = 1986 XC

Discovered 1981 Nov. 27 at the Purple Mountain Observatory.

Id. S. Nakano (MPC 11732)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	338.83491	(1950.0)	P	Q
n	0.20638426	Peri. 119.26356	+0.96413712	-0.19713438
a	2.8358614	Node 252.58319	+0.12789171	+0.93176995
e	0.2133231	Incl. 10.73342	+0.23255824	+0.30486522
P	4.78	H 12.2	G 0.25	

Residuals in seconds of arc

811124	095	(1.6- 6.3+)	861222	552	(5.2- 0.7+)	880223	413	1.5+ 0.1-
811127	330	0.9- 0.1+	861228	552	0.1+ 0.2-	880711	413	0.3- 0.1+
811201	330	0.4+ 2.2+	861228	552	0.2+ 0.6+	900719	801	0.2+ 0.3-
861204	552	0.2- 0.4-	870103	552	(3.5- 0.2+)	900719	801	0.3+ 0.2-
861204	552	0.2+ 0.7-	870103	552	0.5+ 1.0-	900720	801	0.5+ 0.3-
861205	552	0.5- 0.6-	880128	413	0.9- 0.4-	900720	801	0.4+ 0.2-
861205	552	0.5- 1.2-	880128	413	0.4+ 0.0	900720	657	(0.5- 3.7-)
861222	552	(5.0- 0.6-)	880223	413	1.2- 0.2-	900720	657	0.6- 1.1-

(4567)* 1982 SO1 = 1978 VN14 = 1986 RN2

Discovered 1982 Sept. 17 by M. Mahrova at Klet.

Id. S. Nakano (MPC 13685)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	12.36756	(1950.0)	P	Q
n	0.23723165	Peri. 141.31742	+0.79269200	+0.60960528
a	2.5843676	Node 181.15120	-0.60038062	+0.77935559
e	0.2019378	Incl. 13.11933	-0.10574733	+0.14486640
P	4.15	H 13.3	G 0.25	

Residuals in seconds of arc

781101	095	1.8- 2.5+	820924	095	0.0 2.3+	900718	801	0.1+ 0.1+
820917	095	(1.3- 9.5+)	820927	095	(0.8+ 5.4-)	900718	801	0.0 0.1+
820917	046	1.3+ 2.7-	860829	095	2.4- 2.2-	900719	801	0.2+ 0.6+
820917	046	0.6+ 0.8-	860905	688	(7.2+ 4.5+)	900719	801	0.2+ 0.4+
820918	046	1.3- 2.7-	860905	688	0.0 0.7-	900720	046	0.1- 0.5-
820918	046	0.0 0.1-	860911	688	0.3+ 0.5+	900720	046	0.4+ 0.0
820919	095	2.5+ 2.2+	860911	688	2.0- 2.2+	900722	046	0.0 0.5+
820919	046	1.3+ 0.9-	900625	801	0.0 0.6+	900722	046	0.6+ 0.1+
820919	046	(3.8+ 8.2+)	900625	801	0.2+ 0.3-			

(4568)* 1983 RY3 = 1973 UG6 = 1976 GR4 = 1978 RS2 = 1978 TV = 1978 TG3

Discovered 1983 Sept. 2 by N. G. Thomas at the Anderson Mesa Station of the Lowell Observatory.

Id. S. Nakano (MPC 13448; see the redesignation on MPC 16771)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	235.11101	(1950.0)	P	Q
n	0.18623412	Peri. 223.16652	-0.64187684	+0.76647451
a	3.0368957	Node 7.00943	-0.64340578	-0.52230909
e	0.0576553	Incl. 10.67454	-0.41716079	-0.37377806
P	5.29	H 11.8	G 0.25	

Residuals in seconds of arc

731029	095	1.5- 0.8-	830902	688	1.7+ 2.3-	830911	095	0.6- 0.1-
760402	095	0.6+ 0.8+	830904	095	2.3- 0.4-	891028	801	0.2+ 0.4+
780912	095	2.1+ 1.3+	830906	688	0.5- 2.3+	891028	801	0.7+ 0.5+
781004	095	1.5+ 0.7-	830906	688	0.7- 0.3-	891104	095	0.8- 1.5-
781009	095	1.0- 1.0+	830910	688	0.2+ 2.5+	891104	095	0.2- 0.8+
830902	688	1.2+ 2.5-	830910	688	0.5- 0.8+			

(4569)* 1985 GV1 = 1952 KR = 1956 JA = 1960 GA = 1986 NA1

Discovered 1985 Apr. 15 by C. S. Shoemaker at Palomar.

Id. B. G. Marsden (MPC 14474)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M	86.76707	(1950.0)	P	Q
n	0.23711546	Peri. 30.07531	-0.57751401	+0.80942256
a	2.5852118	Node 205.12358	-0.79001980	-0.58694284
e	0.0630552	Incl. 14.50791	-0.20578211	-0.01825430
P	4.16	H 11.7	G 0.25	

Residuals in seconds of arc

520520	711	0.1-	3.2-	Y	850425	675	0.6-	0.1+	900625	801	0.1+	0.2-
560504	760	0.7-	3.7+		860709	688	1.4+	0.4+	900626	801	0.1+	0.2-
600401	839	1.0+	0.6-		860709	688	1.9+	0.2-	900626	801	0.1+	0.1-
600401	839	0.3+	0.7-		860807	095	1.0-	0.1-	900718	801	0.2+	0.1+
850415	675	0.1-	0.5-		860814	095	1.2-	0.2-	900718	801	0.3+	0.0
850415	675	0.3-	1.0+		860831	095	0.1+	0.8+	900719	801	0.1+	0.2-
850423	675	0.8+	0.3-		860908	095	2.5-	1.4+	900719	801	0.5+	0.0
850424	675	0.4-	1.3+		900625	801	0.0	0.1-				

(4570)* 1985 PR = 1985 RF4 = 1969 TO = 1971 BU1 = 1982 SB11 = 1984 DY1 = 1986 XC3

Discovered 1985 Aug. 14 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	340.54242	(1950.0)	P	Q
n	0.30239614	Peri. 208.07941	-0.95668914	+0.29061311
a	2.1982912	Node 348.77584	-0.24800955	-0.84427327
e	0.1086124	Incl. 5.01828	-0.15243736	-0.45027400
P	3.26	H 13.4	G 0.25	

Residuals in seconds of arc

691007	095	0.8+	1.0+		850814	688	0.3+	0.9+	850911	809	1.5-	0.9+
691016	095	(8.4- | 11.4+)		850820	688	0.0	0.1+	850911	809	1.3-	0.2+
710128	095	0.9+	3.0+		850820	688	2.3+	0.0	850911	809	0.9-	0.5-
820927	095	2.6-	1.8+		850821	046	2.9+	1.2-	861204	010	(4.7- | 1.2+)
840226	095	0.5+	0.6-		850821	046	1.9+	1.0-	861204	010	1.0+	1.7-
840305	095	(5.3+ | 1.6+)		850821	046	1.5-	1.4-	861204	010	1.5-	1.2-
850814	688	2.3-	0.5+		850821	046	0.6+	0.5+				

(4571)* 1985 RY3 = 1974 SB2 = 1979 OC15

Discovered 1985 Sept. 8 by H. Debehogne at the European Southern Observatory.

Id. E. Goffin (MPC 11509), T. Kobayashi (ibid.)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M	345.73146	(1950.0)	P	Q
n	0.17578220	Peri. 171.97209	+0.93135077	+0.36407337
a	3.1561148	Node 166.67254	-0.33549622	+0.86444467
e	0.1826652	Incl. 1.49827	-0.14152044	+0.34667852
P	5.61	H 11.9	G 0.25	

Residuals in seconds of arc

740919	095	0.6+	0.6+		850911	809	0.3-	0.0	850918	809	0.3+	0.2+
780509	675	0.3-	0.9-		850914	809	0.1+	0.1+	850918	809	0.4+	0.2+
780510	675	0.4-	0.4-		850914	809	0.1+	0.1-	850918	809	0.5+	0.4+
790721	095	0.8-	0.3+		850914	809	0.2+	0.1-	850920	809	1.6-	0.1+
790730	095	0.0	0.9+		850915	809	0.8+	0.2+	850920	809	1.4-	0.3+
850908	809	0.2-	1.0-		850915	809	1.0+	0.1+	850920	809	1.2-	0.3+
850908	809	0.2-	1.0-		850915	809	1.1+	0.2+	850921	809	0.2+	0.1+
850908	809	0.6-	1.1-		850916	809	0.7+	0.1+	850921	809	0.3+	0.1+
850911	809	0.6-	0.2-		850916	809	1.1+	0.0	850921	809	0.3+	0.1+
850911	809	0.3-	0.1-		850916	809	1.1+	0.1-	850922	809	1.0-	0.8-

850922 809 0.7- 0.4- 900718 801 0.2+ 0.1+ 900719 801 0.1+ 0.0
900626 801 0.2+ 0.2- 900718 801 0.1+ 0.2+
900626 801 0.0 0.1- 900719 801 0.1+ 0.1+

(4572)* 1986 RF = 1956 LA = 1978 VB13 = 1982 SK6 = 1985 FL2 = 1988 AT4
Discovered 1986 Sept. 8 by P. Jensen at Brorfelde.
Id. S. Nakano (MPC 13606)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano
M 61.26771 (1950.0) P Q
n 0.23578350 Peri. 75.72360 -0.03914059 +0.99824900
a 2.5949388 Node 192.29275 -0.97815262 -0.04734596
e 0.1558650 Incl. 12.02324 -0.20417019 +0.03545828
P 4.18 H 12.9 G 0.25
Residuals in seconds of arc
560610 760 0.6- 1.4+ 860908 054 0.3+ 0.6+ 880113 033 0.8+ 0.6+
560610 760 1.0+ 0.8- 860911 054 1.0- 0.0 890311 054(22.2- 15.1+)
781102 095 0.9+ 0.6+ 860912 054 0.4+ 0.3- 890311 054(22.0- 13.7+)
820916 095 1.8- 0.7+ 860929 010(17.1+ 1.2+) 900722 801 0.8+ 0.7+
820927 095 0.3- 1.6- 860929 054 1.0- 0.8+ 900730 675 0.3- 1.5-
850324 688 0.5- 0.1+ 860929 010(17.8+ 1.8+) 900730 675 1.4+ 0.6-
850324 688 0.5- 0.5- 880113 033 0.5+ 1.3-

(4573)* 1986 TP6 = 1951 AD = 1951 CN
Discovered 1986 Oct. 5 by M. Antal at Piwnice.
Id. S. Nakano (MPC 11640)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano
M 132.45591 (1950.0) P Q
n 0.18602510 Peri. 253.14261 -0.96625106 +0.21430091
a 3.0391702 Node 299.03186 -0.12549012 -0.87620276
e 0.0703412 Incl. 9.40953 -0.22496915 -0.43167562
P 5.30 H 11.7 G 0.25
Residuals in seconds of arc
510109 024 0.8- 0.0 861010 092 0.2+ 0.0 880217 801 1.8+ 1.1+
510210 760 1.7- 1.7- 861010 092 0.3- 0.3- 880322 801 0.7- 0.9+
510210 760 0.2+ 2.7- 861011 092 0.4+ 0.9+ 900720 801 0.1- 0.1-
861005 092 0.2- 0.1- 861012 092 0.1- 0.3- 900720 801 0.0 0.4-
861005 092 0.4+ 0.6- 880116 877 0.4+ 0.3- 900722 801 0.4+ 0.5-
861009 092 0.5+ 0.2+ 880116 877 2.2+ 0.3- 900722 801 0.3+ 0.3-
861009 092 0.0 0.8- 880123 897 0.6- 1.0+
861009 092 0.7- 0.2+ 880123 897 1.7- 0.9+

(4574)* 1986 YB = 1977 BR = 1981 YT
Discovered 1986 Dec. 20 by T. Niijima and T. Urata at Ojima.
Id. T. Urata (MPC 11522)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Urata
M 306.81052 (1950.0) P Q
n 0.18945369 Peri. 100.66474 +0.92428699 -0.35150279
a 3.0023916 Node 280.04264 +0.26351143 +0.86963563
e 0.0951303 Incl. 8.69115 +0.27614360 +0.34666938
P 5.20 H 11.3 G 0.25
Residuals in seconds of arc
770120 095 1.4+ 0.1- 861224 887 0.4+ 0.2- 870130 887 1.6- 0.5+
811228 046 0.8- 0.2+ 870101 887 1.4+ 0.0 900427 413 0.3- 0.0
811228 046 1.7- 0.6+ 870101 887 (4.0+ 1.3-) 900430 413 0.6+ 0.3-
861220 887 0.7+ 2.1- 870103 887 0.6+ 0.4+ 900625 801 0.4- 0.3+
861220 887 0.8- 0.7+ 870120 887 0.7+ 0.1- 900625 801 0.1- 0.4+
861222 887 0.4+ 0.6- 870120 887 (0.7+ 2.7-)
861222 887 0.4- 1.3+ 870130 887 (1.4- 2.9-)

(4575)* 1987 ME1 = 1960 FC = 1976 GN6 = 1978 TN4 = 1984 WB2 = 1988 SN3 = 1989 WV2

Discovered 1987 June 26 by E. F. Helin at Palomar.

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M 297.76774	(1950.0)	P	Q
n 0.18939592	Peri. 53.61515	-0.91810892	+0.38384906
a 3.0030021	Node 148.61044	-0.39628815	-0.88557325
e 0.0424422	Incl. 10.92012	-0.00563157	-0.26157201
P 5.20	H 11.3	G 0.25	

Residuals in seconds of arc

600323 760	0.5+	0.5-	841203 561	0.2+	1.2+	880916 095	1.5-	0.4-
600323 760	0.8+	0.1+	841204 561	0.2-	0.5+	880916 095	1.0-	1.1-
760403 095	2.4-	0.1-	841204 561	0.4+	0.1-	891128 402	0.9+	0.7+
760407 095	1.0-	1.5+	841204 561	0.1+	0.3+	891128 402	0.1+	0.3+
781004 095	0.3+	0.3+	870626 675	(7.7-	13.1-)	891203 402	1.0+	0.4+
841130 561	0.4-	0.2+	870628 675	0.3+	0.5+	891203 402	1.2-	0.9-
841130 561	0.5-	1.3+	870726 675	0.3+	1.7+			
841203 561	0.1-	0.8+	870728 675	3.6+	1.9+			

(4576)* 1988 CC = 1981 UD20 = 1983 CV3

Discovered 1988 Feb. 10 by T. Kojima at the Chiyoda Observatory.

Id. S. Nakano (MPC 14355)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M 289.74221	(1950.0)	P	Q
n 0.19002452	Peri. 216.90520	+0.90644535	-0.42058141
a 2.9963759	Node 167.78950	+0.41766367	+0.87930774
e 0.1195391	Incl. 10.43728	+0.06256106	+0.22344835
P 5.19	H 11.4	G 0.25	

Residuals in seconds of arc

811027 095	0.7+	2.6+	880219 897	2.4-	1.4-	900626 801	0.5-	0.1+
830208 330	1.0-	6.6+	880310 897	0.1-	1.0-	900626 801	0.0	0.2-
880210 897	(5.1-	0.6+)	880312 897	0.1+	1.4+	900718 801	0.3-	0.2+
880210 897	1.6+	2.4-	880312 897	2.4+	0.9-	900718 801	0.2-	0.1+
880215 897	0.5-	1.4+	890509 801	3.5+	0.1-	900719 801	0.5-	0.3+
880215 897	2.0-	1.1-	900625 801	0.3-	0.4+	900719 801	0.4-	0.2+
880219 897	0.0	1.4-	900625 801	0.4+	0.3+			

(4577)* 1988 WG = 1947 GF = 1951 CJ1 = 1951 DK = 1975 XE7

Discovered 1988 Nov. 30 by Y. Kushida and M. Inoue at the Yatsugatake South Base Observatory.

Id. S. Nakano (MPC 14201)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M 135.52185	(1950.0)	P	Q
n 0.23143633	Peri. 63.56332	-0.51107202	-0.84830391
a 2.6273324	Node 57.85522	+0.71875314	-0.51015290
e 0.2853838	Incl. 9.41536	+0.47138023	-0.14186084
P 4.26	H 12.3	G 0.25	

Residuals in seconds of arc

470413 062	0.3+	1.1-	881205 896	(3.3+	0.5+)	881211 400	2.4-	1.1-
470413 062	0.8+	2.6+	881206 400	(1.5-	4.1-)	881215 888	0.4-	0.1+
510209 094	(81.3+	4.9-)X	881206 400	1.0+	2.2-	881215 888	1.2-	0.1-
510211 711	0.5-	1.1- Y	881206 400	(0.6-	3.8-)	881217 386	0.1-	0.4-
510226 094	(5.3-	13.9+)X	881209 386	1.1+	0.2+	881217 386	1.1+	0.7-
751201 095	0.0	0.9-	881209 386	0.5+	0.4+	881230 386	(0.1+	3.4+)
751203 095	(1.0-	5.5-)	881210 888	(3.7+	0.3+)	881230 386	0.1+	0.4-
881130 896	(0.2-	8.5+)Y	881210 386	0.2-	0.4+	900526 896	0.8-	0.6- Y
881202 888	(2.1-	4.5+)	881210 888	(4.2+	1.4-)	900526 896	0.7-	2.8-
881202 888	2.4+	1.8+	881211 400	0.9-	0.1-	900526 896	0.3-	0.8-
881205 896	(0.1-	3.6+)	881211 400	0.3+	1.4-	900623 896	0.6-	2.7- Y

(4578)* 1988 XL1 = 1979 WK3 = 1979 YS6 = 1985 FT
Discovered 1988 Dec. 7 by T. Seki at Geisei.
Id. T. Kobayashi (MPC 14203)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5			Nakano
M 115.39479	(1950.0)	P	Q
n 0.21986082	Peri. 3.38837	-0.67842023	-0.73124733
a 2.7187597	Node 129.34695	+0.67184354	-0.65654283
e 0.2416777	Incl. 5.25859	+0.29727471	-0.18501044
P 4.48	H 13.5	G 0.25	

Residuals in seconds of arc

791116 095 0.3- 0.2+	881209 372 (4.7+ 1.2+)	890104 372 1.7- 1.1-
791223 095 0.1- 1.7+	881212 372 0.5+ 0.4-	900424 372 0.8+ 1.7-
850321 688 0.8- 0.4-	881212 372 (3.8- 0.0)	900424 372 1.3- 0.1+
850321 688 0.9+ 1.0+	881215 372 (1.2+ 3.3-)	900526 372 1.0- 0.2+
881207 372 (0.7- 7.7-)	881227 372 1.4+ 2.3-	900526 372 1.4+ 1.1+
881207 372 (2.1- 9.0-)	881227 372 0.6+ 0.2+	
881209 372 1.9- 1.1+	890104 372 1.6+ 0.6+	

(4579)* 1989 AT6 = 1978 EW5 = 1979 QE3 = 1986 KH
Discovered 1989 Jan. 11 by F. Borngen at Tautenburg.
Id. T. Kobayashi (MPC 14955)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5			Nakano
M 64.66307	(1950.0)	P	Q
n 0.26509519	Peri. 140.32564	-0.32029475	+0.94662935
a 2.3999461	Node 110.96663	-0.87863299	-0.28260488
e 0.1533882	Incl. 2.21639	-0.35414027	-0.15500761
P 3.72	H 13.8	G 0.25	

Residuals in seconds of arc

780306 095 0.5- 0.1+	860529 095 0.3+ 0.8+	890205 033 0.5+ 0.2+
790822 809 0.0 0.9+	890111 033 0.0 0.3+	900427 413 1.0+ 0.8+
790822 809 0.7- 0.7+	890111 033 0.1+ 0.1-	900430 413 (2.7+ 0.4+)
790822 809 0.2- 0.4+	890114 033 0.2+ 0.3+	900430 413 0.4+ 0.1+
790823 809 0.0 0.4+	890202 033 0.1+ 0.9+	900626 801 0.4- 0.6-
790823 809 0.4+ 0.2+	890203 033 0.2+ 1.0+	900626 801 0.8- 0.6-

(4580)* 1989 EF = 1978 TW6 = 1978 VG14
Discovered 1989 Mar. 4 by E. Helin at Palomar.
Id. S. Nakano (MPC 14623)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5			Nakano
M 143.45876	(1950.0)	P	Q
n 0.23019410	Peri. 15.14817	-0.99563499	+0.08181283
a 2.6367761	Node 169.24034	-0.08829872	-0.98159486
e 0.1061033	Incl. 13.92208	+0.03023729	-0.17256357
P 4.28	H 11.8	G 0.25	

Residuals in seconds of arc

781002 095 1.5+ 3.5+	890406 675 0.6+ 0.2-	890501 675 1.2- 0.1+
781101 095 1.9- 0.2-	890406 402 (2.4- 3.6+)	890501 675 1.9- 1.7-
860829 095 (0.8+ 6.5+)	890406 402 (1.9- 3.7+)	900604 413 1.2+ 1.3+
860906 095 0.1- 0.1+	890408 402(10.5- 1.7+)	900604 413 1.3- 0.8+
890304 675 (6.0+ 2.0-)	890408 402(12.1- 0.7+)	900719 675 0.6+ 0.1+
890305 675 0.4- 0.7+	890409 402 1.0- 2.2+	900719 675 0.6- 0.2-
890405 675 2.5+ 1.1+	890409 402 0.6- 2.2+	900722 675 0.1- 0.5+
890405 675 1.1+ 1.5+	890429 675 0.3+ 0.8-	900722 675 0.2+ 1.1-
890406 675 0.7+ 0.2-	890429 675 0.3+ 1.9-	

(4581)* 1989 FC
Discovered 1989 Mar. 31 by H. E. Holt and N. G. Thomas at Palomar.

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M	269.81422	(1950.0)	P	Q
n	0.95297554	Peri. 254.99478	+0.26124732	-0.96527188
a	1.0226999	Node 179.86062	+0.91522936	+0.24763489
e	0.3571003	Incl. 4.91251	+0.30676548	+0.08322958
P	1.03	H 20.6	G 0.25	

Residuals in seconds of arc

890331	675	0.1+ 0.9+	890429	688	0.8+ 0.1+	890605	688	0.3- 0.2-
890331	675	0.7+ 0.1+	890429	675	0.1- 0.4+	900422	688	1.1+ 0.1-
890402	675	0.5- 1.2-	890502	695	0.4+ 0.2+	900422	688	1.2- 0.4+
890403	675	0.5- 0.1-	890502	695	0.1+ 0.7+	900422	688	1.1+ 0.0
890404	675	0.0 0.5-	890522	675	0.8- 0.4-	900422	688	0.3- 0.4-
890408	675	0.4+ 0.2+	890522	675	0.9+ 0.1-	900422	688	0.3- 0.4-
890408	675	0.8- 0.2+	890522	675	0.3+ 0.7+	900422	688	0.3- 0.3-
890409	801	(3.8+ 2.9+)	890523	675	0.0 0.6-	900618	675	1.2- 0.2+
890427	413	0.2- 0.4-	890523	675	0.3+ 0.2-	900618	675	0.4- 0.2+
890428	413	1.0- 0.0	890523	675	0.6+ 0.1-	900618	675	0.9+ 0.2-
890429	688	0.2- 0.1+	890523	675	0.0 0.1+			
890429	688	0.5+ 0.2+	890605	688	0.4- 0.5-			

(4582)* 1989 FW = 1972 LY = 1980 BF1 = 1980 DD2 = 1983 YO

Discovered 1989 Mar. 31 by C. S. Shoemaker at Palomar.

Id. T. Kobayashi (MPC 15253)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	91.96883	(1950.0)	P	Q
n	0.22533974	Peri. 120.15749	-0.64483608	+0.73628390
a	2.6745098	Node 108.22047	-0.75426148	-0.56961020
e	0.1501668	Incl. 12.47086	-0.12359631	-0.36528105
P	4.37	H 13.1	G 0.25	

Residuals in seconds of arc

720613	095	1.5- 1.5-	890329	675	0.5- 0.5+	900623	675	0.7+ 0.1-
800123	095	(0.1- 4.9-)	890331	675	0.1+ 0.1-	900726	675	0.5+ 0.3+
800220	095	3.6+ 3.5-	890331	675	0.5- 0.5-	900726	675	0.2- 0.2-
831229	033	0.4- 1.4-	890403	675	0.4+ 0.5-	900729	675	0.0 1.2-
831230	033	0.3- 1.3-	890403	675	0.1- 0.3+	900729	675	0.6- 0.8-
831230	675	0.6- 2.3-	900621	675	1.3+ 0.5-	900730	675	0.2- 0.3-
840108	675	1.1- 0.3+	900621	675	0.3+ 0.4-	900730	675	0.2+ 0.3-
890329	675	0.3- 1.3+	900623	675	0.3+ 1.4-			

(4583)* 1989 RL4 = 1989 TY16 = 1953 TR2 = 1964 VK = 1971 SH1 = 1974 HD1 = 1975 VM1 = 1982 UA1

Discovered 1989 Sept. 1 at the Bulgarian National Observatory.

Id. S. Nakano; 1953 TR2 = 1989 YF8 (MPC 16575) is invalid

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	150.19900	(1950.0)	P	Q
n	0.27286817	Peri. 141.51607	+0.58332589	+0.81204250
a	2.3541500	Node 164.14318	-0.76040189	+0.55368299
e	0.1907324	Incl. 3.74131	-0.28551684	+0.18445085
P	3.61	H 13.1	G 0.25	

Residuals in seconds of arc

531014	760	0.3- 0.8+	740422	805	0.7+ 0.4-	821022	046	0.5+ 0.1-
531014	760	1.1- 2.1+	740424	805	0.6- 0.7-	821022	046	0.9- 2.0-
531031	760	0.4- 0.7+	751102	095	3.0- 3.5-	890901	071	0.0 0.7-
531031	760	1.6+ 0.9+	821020	046	1.1+ 0.8-	890902	071	0.6- 0.9-
641104	760	1.8- 1.4+	821020	046	2.8+ 0.3-	890902	071	0.7+ 0.2-
641104	760	0.9+ 3.5+	821021	688	0.3+ 1.0-	890902	071	0.3+ 0.2-
641106	760	3.0- 0.5+	821021	688	0.6+ 1.7-	890903	071	0.1+ 0.4-
641106	760	2.5+ 0.2+	821021	046	0.3+ 0.5-	890903	071	0.4+ 0.3-
710916	095	2.2- 1.9-	821021	046	2.4+ 0.4-	890903	071	2.3+ 1.4+

890904 071 0.9+ 0.6- 891007 809 0.2- 0.6+ 891009 809 1.4- 0.3+
890904 071 1.0+ 0.7- 891008 809 (5.3- 1.8+) 891009 809 1.3- 0.2+
891007 809 1.1- 0.7+ 891008 809 (5.2- 1.7+) 891009 809 1.2- 0.1-
891007 809 0.7- 0.7+ 891008 809 (4.9- 1.9+)

(4584)* 1990 FA = 1951 WA1 = 1971 BR = 1979 VB2 = 1979 YG1 = 1985 BK2 = 1988 UR1

Discovered 1990 Mar. 16 by M. Matsuyama and K. Watanabe at Kushiro.

Id. N. S. Chernykh (d), H. Kaneda

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	111.29078	(1950.0)	P	Q
n	0.21153547	Peri. 62.82778	+0.03042576	-0.99785213
a	2.7896342	Node 25.62797	+0.86297886	-0.00305923
e	0.2020350	Incl. 7.70795	+0.50432307	+0.06543517
P	4.66	H 12.8	G 0.25	

Residuals in seconds of arc

511129 711 5.3+ 2.0- Y 850121 688 0.7- 1.6- 900316 399 2.7+ 2.7-
511129 711 4.8- 2.6+ Y 850121 688 0.0 1.5- 900317 399 0.6+ 3.2+
710125 095 2.2- 0.4+ 881016 046 2.8- 1.9+ 900317 399 1.1+ 0.2+
710130 095 (2.7- 10.1-) 881016 046 1.6- 0.8+ 900322 399 1.7- 2.5+
791114 095 2.7- 0.3- 881106 399 0.6+ 1.2+ 900322 399 2.0+ 2.8+
791217 095 3.7+ 0.5+ 881106 399 0.3+ 0.4+

(4585)* 1990 KQ = 1972 LU = 1978 WL12 = 1981 LC

Discovered 1990 May 16 by K. Endate and K. Watanabe at Kitami.

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	25.79975	(1950.0)	P	Q
n	0.21844273	Peri. 183.20964	-0.07361887	+0.98050809
a	2.7305134	Node 82.62277	-0.91080680	+0.00829774
e	0.2404298	Incl. 10.58451	-0.40621576	-0.19630340
P	4.51	H 13.2	G 0.25	

Residuals in seconds of arc

720609 095 1.9- 1.5- 810624 688 1.6+ 0.8- 900526 400 (5.3- 0.7+)
720615 095 1.1- 2.6+ 900516 400 2.2+ 0.3- 900526 400 (4.9- 0.4+)
781129 675 0.2- 1.8+ 900516 400 0.7+ 0.2- 900618 400 (2.0- 4.1+)
781130 675 0.9- 1.5+ 900516 400 0.0 0.0 900618 400 0.1+ 2.2+
810604 688 2.2+ 1.1- 900525 400 1.3- 0.2- 900618 400 0.6- 2.1+
810604 688 1.2+ 1.0- 900525 400 0.7- 1.2+ 900623 400 1.9- 0.3+
810624 688 0.7+ 1.2- 900525 392 1.9+ 1.1+ 900623 400 2.0- 0.7-

(4586)* 6047 P-L = 1978 YB2

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

Id. H. Oishi (JAM 2027)

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Oishi

M	79.27076	(1950.0)	P	Q
n	0.28151655	Peri. 304.13327	-0.80743804	-0.58916519
a	2.3056856	Node 199.82348	+0.56651460	-0.75991379
e	0.0779229	Incl. 5.15431	+0.16463604	-0.27461868
P	3.50	H 13.8	G 0.25	

Residuals in seconds of arc

600924 675 1.0- 0.9- 781229 808 0.9+ 0.5+ 900227 801 0.0 0.1-
600925 675 0.9+ 0.6+ 781229 808 0.1- 0.0 900322 801 0.3- 0.2-
600926 675 0.6- 0.8- 781231 808 0.2+ 0.6- 900322 801 0.3- 0.2-
600928 675 0.4+ 0.7+ 781231 808 1.1- 0.4+ 900327 801 0.0 0.7-
601017 675 0.4+ 0.2- 870430 801 1.1+ 0.3+ 900327 801 0.0 0.6-
601024 675 0.6+ 0.8- 870629 801 1.3- 0.4-
601026 675 0.4- 0.0 900227 801 0.1+ 0.6+

(4587)* 3239 T-2 = 6378 P-L = 1990 HQ

Discovered 1973 Sept. 30 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden

M	23.53513	(1950.0)		P	Q
n	0.22792395	Peri.	82.73093	-0.11250494	+0.99362991
a	2.6542556	Node	180.89075	-0.99342582	-0.11233773
e	0.5096861	Incl.	24.71085	+0.02116102	+0.00893473
P	4.32	H	15.5	G 0.25	

Residuals in seconds of arc

600924	675	0.6-	0.8+	730924	675	1.5+	1.6-	731005	675	0.7+	1.3-
600924	675	0.1-	0.9-	730924	675	1.3+	0.7-	900426	675	0.9-	1.1-
600925	675	0.8+	0.9+	730925	675	2.5-	0.4+	900426	675	0.5+	0.4-
600925	675	0.8+	1.6+	730925	675	0.9-	0.2-	900427	675	0.8-	1.4+
600926	675	0.1-	2.1+	730925	675	1.8-	0.3+	900427	675	0.4+	1.3-
600926	675	0.5+	0.1+	730925	675	0.2+	0.9-	900427	413	1.1-	2.9+
600928	675	1.3-	0.3-	730929	675	1.4+	1.7+	900427	413	0.5-	1.9-
600928	675	0.1+	0.2-	730929	675	1.8+	2.5+	900429	413	0.9-	2.1+
730919	675	0.3-	0.1+	730930	675	0.2-	0.8-	900429	413	0.6+	0.8-
730919	675	0.8+	0.1+	730930	675	0.2+	0.7-	900518	675	2.7+	0.2-
730920	675	0.3-	0.2-	731004	675	0.6+	0.8-	900518	675	0.6+	1.1-
730920	675	1.2-	0.9+	731004	675	0.9-	2.0-				
730924	675	0.4+	0.2-	731005	675	0.8-	1.0-				

1955 QN = 1955 RC = 1935 SX = 1972 QQ = 1979 WA = 1986 VY7 = 1989 UA8

Id. O. Kippes (d, MPC 1453), S. Kanda (d, ibid.), H. Oishi

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Oishi

M	116.24534	(1950.0)		P	Q
n	0.29210004	Peri.	124.60739	+0.96141444	-0.25171531
a	2.2496501	Node	250.19271	+0.19750673	+0.91242734
e	0.0939346	Incl.	6.77572	+0.19150291	+0.32266972
P	3.37	H	13.1	G 0.25	

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

350919	078(52.2-	1.8-)X	550919	760(0.04-	0.00+)	861108	033	0.4+	0.2+		
350927	078(52.4-	39.5+)X	550919	760(0.04-	0.00+)	861108	033	0.3-	0.0		
550823	760 (1.5+	3.4+)	720816	095	0.6+	0.9+	891024	095	0.0	1.4+	
550823	760	1.4+	0.6-	720818	095	0.3+	0.8+	891024	095	0.3+	0.8-
550913	760	0.7-	0.2-	791125	046(12.9+	10.8+)	891026	095	0.1-	1.0-	
550913	760	1.1-	0.3-	791125	046(14.3+	9.9+)	891026	095	0.7-	0.4-	

1976 GN2 = 1976 HB = 1980 FN9 = 1990 OC4

Id. C. M. Bardwell (d, MPC 5517), E. Bowell (k), G. V. Williams

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M	56.68329	(1950.0)		P	Q
n	0.22429253	Peri.	93.69869	+0.02449525	+0.99965772
a	2.6828281	Node	177.64541	-0.98281483	+0.02576266
e	0.1558949	Incl.	12.92371	-0.18296170	-0.00455321
P	4.39	H	13.0	G 0.25	

Residuals in seconds of arc

760401	095 (0.5-	5.6-)	800316	095	0.1+	0.3+	900728	675	0.9-	0.6+	
760404	095	1.3-	0.6-	900726	675	0.4+	0.2-	900730	675	1.5+	0.3-
760423	095 (0.1+	7.2-)	900726	675	0.2+	0.1+	900730	675	0.1+	0.4+	
760503	095	1.3+	0.4+	900728	675	1.4-	0.4-				

1977 QF1 = 1990 QH
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Nakano
M 19.68357 (1950.0) P Q
n 0.22695080 Peri. 344.10127 +0.93572531 +0.35218534
a 2.6618430 Node 355.14244 -0.29313240 +0.74553997
e 0.1791003 Incl. 13.37376 -0.19619261 +0.56580531
P 4.34 H 12.5 G 0.25
Residuals in seconds of arc

770819	095	1.6+	0.2-	770824	095	0.9+	1.3-	900820	372	0.7-	0.4-
770820	095	0.8-	1.7+	770908	095	2.3-	1.8+	900820	372	0.8-	0.0
770822	095	1.5+	0.9-	770910	095	0.7-	0.4+	900824	372	0.8+	0.1-
770823	095	2.8-	0.1-	770918	095	2.4+	1.1-	900824	372	0.9+	0.2+

1978 NS = 1989 SR9
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 88.58916 (1950.0) P Q
n 0.18710040 Peri. 275.00138 +0.96664204 +0.25602443
a 3.0275145 Node 70.16447 -0.23175918 +0.88658623
e 0.2018112 Incl. 0.45031 -0.10904516 +0.38524843
P 5.27 H 13.8 G 0.25
Residuals in seconds of arc

780710	675	0.2-	0.5+	780714	675	0.3-	0.1+	890928	809	0.4-	0.0
780711	675	0.3+	0.1+	890925	809	0.4-	0.1+	890928	809	0.0	0.0
780712	675	0.2-	0.5-	890925	809	0.0	0.1+	890928	809	0.5+	0.3-
780713	675	0.4+	0.1-	890925	809	0.2+	0.1+				

1978 RJ1 = 1978 SO1 = 1969 TT = 1987 SH19
Id. T. Furuta (d, MPC 10375), B. G. Marsden (d), F. N. Bowman (d), H. Kaneda
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 277.22892 (1950.0) P Q
n 0.21767978 Peri. 116.55619 +0.54538707 +0.83810438
a 2.7368899 Node 186.53105 -0.80065386 +0.51683082
e 0.2407859 Incl. 5.84133 -0.24800473 +0.17454787
P 4.53 H 13.7 G 0.25
Residuals in seconds of arc

691007	095	0.8+	0.1-	780907	095	1.7+	0.7-	870923	095	0.3+	0.8-
691016	095	0.3-	1.3-	780928	095	1.6-	2.7+				
780905	095	1.4-	1.0+	870917	095	0.4+	1.0-				

1978 WC = 1952 UH = 1989 WZ4
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 94.02944 (1950.0) P Q
n 0.26722222 Peri. 316.12530 +0.72243224 -0.67507245
a 2.3871985 Node 86.96827 +0.66846663 +0.62659674
e 0.2191653 Incl. 8.61370 +0.17675977 +0.38942741
P 3.69 H 14.5 G 0.25
Residuals in seconds of arc

521022	760	0.2+	0.4-	781124	046	0.3+	1.0-	781204	046	1.3-	0.3+
781118	046	1.7-	0.2+	781125	046	1.4+	0.7-	891120	095	1.1-	1.7+
781118	046	(4.2-	2.0+)	781125	046	1.4+	0.2-	891124	095	0.5+	0.2-
781124	046	0.4+	0.7-	781204	046	0.1-	1.0+				

1979 MX6 = 1987 UB4 = 1990 OW4
Id. E. Bowell (k), G. V. Williams

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M 70.35140	(1950.0)		P	Q
n 0.27052782	Peri.	2.22648	-0.24755567	+0.96297625
a 2.3677078	Node	253.45430	-0.89059282	-0.26955072
e 0.0883563	Incl.	6.39304	-0.38152406	+0.00437641
P 3.64	H 13.5		G 0.25	

Residuals in seconds of arc

790623	413	0.1+	0.8+	790725	675	1.4-	0.1+	900725	675	0.5+	0.4-
790624	413	0.4+	0.5+	790822	675	1.0+	1.7+	900725	675	0.4+	0.3+
790625	413	2.0+	0.0	871025	399	0.0	0.6+	900728	675	0.6-	1.0-
790724	675	1.8-	0.4+	871025	399	0.8+	0.4-	900728	675	0.1-	0.1-
790724	413	0.6-	1.0-	871025	399	0.9-	0.1+	900730	675	0.4+	0.9-

1979 OQ5 = 1986 WK10 = 1990 HN2

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M 44.76923	(1950.0)		P	Q
n 0.17860455	Peri.	326.22837	-0.03667181	+0.99673577
a 3.1227775	Node	301.57308	-0.89713680	-0.06454174
e 0.0779617	Incl.	4.84266	-0.44022806	+0.04849911
P 5.52	H 12.8		G 0.25	

Residuals in seconds of arc

790724	675	0.2+	0.1-	861201	381	0.9+	0.8+	900430	413	1.2+	0.3+
790725	675	0.2-	0.1+	861201	381	0.0	1.0-	900430	413	1.2-	0.1+
861130	381	0.4-	0.1-	900427	413	1.0+	0.0				
861130	381	0.6-	0.3+	900427	413	0.9-	0.4-				

1983 CF1 = 1958 UQ = 1975 VD6 = 1979 ML9 = 1990 KA1

Id. A. Lowe (k, MPC 16696), G. V. Williams

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M 287.87016	(1950.0)		P	Q
n 0.17639531	Peri.	225.97641	+0.96108389	+0.13742014
a 3.1487973	Node	124.68729	-0.08174997	+0.97012040
e 0.0518759	Incl.	16.94494	-0.26388387	+0.19995528
P 5.59	H 11.0		G 0.25	

Residuals in seconds of arc

581016	076	0.2+	1.9-	811219	413	0.7+	2.2-	900521	675	0.6-	0.8-
751105	095	0.3-	0.5+	830211	688	1.4-	0.1-	900523	675	0.5-	0.8-
790627	095	0.5+	2.0-	830211	688	0.4-	1.4-	900523	675	2.4-	2.1-
811219	413	0.0	0.7-	830219	688	2.2+	0.4-	900620	413	0.6+	0.7+
811219	413	0.5+	1.6-	830219	688	1.1-	1.2+	900620	413	0.7+	1.0+
811219	413	0.9+	0.2+	900521	675	0.6+	1.4-				

1983 GQ = 1989 CO7 = 1990 OE1

Id. S. Nakano, H. E. Holt

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Nakano

M 49.52602	(1950.0)		P	Q
n 0.29800912	Peri.	212.26984	+0.24847237	+0.96862123
a 2.2198172	Node	72.11786	-0.88735108	+0.23004414
e 0.1722468	Incl.	0.35305	-0.38841927	+0.09408828
P 3.31	H 14.0		G 0.25	

Residuals in seconds of arc

830406	809	0.2+	0.9+	830411	809	0.3+	0.1+	830420	809	(3.2-	1.1+)
830406	809	0.0	1.0+	830412	095	(3.3+	2.6-)	830420	809	1.7-	0.9+
830406	809	0.0	1.1+	830415	809	0.8-	0.3+	830422	809	0.5+	1.4-
830409	809	0.1-	0.8+	830415	809	0.0	0.5+	830422	809	1.6+	1.3-
830409	809	0.6+	0.6+	830415	809	0.7+	0.4+	830507	688	1.3-	1.5-
830409	809	0.7+	0.8+	830418	809	1.3-	0.6+	830507	688	1.2+	2.4-
830411	809	0.1+	0.2-	830418	809	0.8-	0.5+	830515	688	0.1+	1.2-
830411	809	0.2+	0.0	830418	809	0.3-	0.5+	890214	402	(7.9+	1.2-)

890214 402 0.1+ 0.1+ 900730 372 1.0+ 1.5- 900815 372 0.5+ 2.0+
900727 675 0.6- 0.5- 900730 372 1.3- 1.3+ 900818 372 (3.8+ 0.1+)
900727 675 0.2- 0.7- 900731 372 0.5+ 0.4+ 900818 372 2.2+ 0.3-
900730 675 1.1- 1.2- 900731 372 2.2+ 1.1+ 900820 372 1.6- 0.4+
900730 675 0.3- 0.1+ 900815 372 0.3- 0.4- 900820 372 1.4- 0.5+

1984 SZ1 = 1988 RG2
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 156.31705 (1950.0) P Q
n 0.23830146 Peri. 90.37197 +0.77057157 -0.63590437
a 2.5766271 Node 309.11570 +0.56049429 +0.70819129
e 0.1827189 Incl. 3.17367 +0.30342315 +0.30674213
P 4.14 H 13.2 G 0.25
Residuals in seconds of arc
840929 046 0.8+ 1.9- 841006 046 0.0 1.1+ 880909 046 1.9- 1.0-
840930 046 (4.3+ 0.8+) 841006 046 1.5- 1.5+ 880910 046 0.6- 1.2+
840930 046 0.2+ 1.0- 880909 046 2.1+ 0.5+ 880910 046 0.0 0.3+
841001 046 0.8+ 0.0 880909 046 0.4+ 0.6-

1984 SQ2 = 1927 SO
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 285.22208 (1950.0) P Q
n 0.29387020 Peri. 341.76966 +0.97117190 -0.23265546
a 2.2406114 Node 31.82725 +0.22912180 +0.85091398
e 0.1780512 Incl. 5.65102 +0.06579022 +0.47097435
P 3.35 H 14.5 G 0.25
Residuals in seconds of arc
270922 024 0.5+ 0.0 840925 688 0.7- 0.0 841026 688 0.0 0.5-
270926 024 0.4- 0.1- 840928 688 0.4- 0.6- 841026 688 0.0 0.6+
840925 688 0.3+ 0.7+ 840928 688 0.7+ 0.0

1985 GW = 1978 NC8
Id. E. Bowell (MPC 11154)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 208.22912 (1950.0) P Q
n 0.25383108 Peri. 36.22497 -0.73179627 -0.66860014
a 2.4704317 Node 101.25804 +0.58930826 -0.71813459
e 0.1345970 Incl. 7.74027 +0.34233025 -0.19301958
P 3.88 H 13.4 G 0.25
Residuals in seconds of arc
780707 675 0.6+ 0.5+ 850424 688 0.5- 1.0+ 900529 413 0.0 1.1+
780708 675 0.1- 0.2- 850424 688 0.0 0.8- 900725 675 0.1+ 0.8-
780709 675 0.5- 0.1+ 850515 688 1.1+ 0.1+ 900725 675 0.0 0.5-
850415 688 (2.7+ 0.3-) 850515 688 0.3+ 0.5-
850415 688 0.9- 0.2- 900529 413 (4.6+ 1.4-)

1985 JL = 1990 HO2
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 92.87967 (1950.0) P Q
n 0.21753299 Peri. 125.79472 -0.91803924 +0.36258232
a 2.7381209 Node 75.94527 -0.39567614 -0.81190254
e 0.2237007 Incl. 9.51940 -0.02538396 -0.45754598
P 4.53 H 13.6 G 0.25
Residuals in seconds of arc
850511 675 1.3- 0.5- 850518 688 2.2- 0.5+ 900427 413 0.4- 0.9+
850514 675 1.9- 2.2- 850518 688 0.5- 1.1+ 900427 413 1.1+ 0.3+
850515 688 0.8+ 0.2+ 850521 688 2.3+ 1.4- 900430 413 0.4+ 0.6-
850515 688 2.7+ 2.1+ 850521 688 0.4+ 0.3+ 900430 413 1.0- 0.8-

1985 TL = 1990 OU
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams

M	14.87753	(1950.0)	P	Q
n	0.18022009	Peri. 97.73782	+0.78310007	+0.61901841
a	3.1040934	Node 224.04296	-0.59906157	+0.72505970
e	0.1785571	Incl. 4.93077	-0.16697163	+0.30183546
P	5.47	H 12.5	G 0.25	

Residuals in seconds of arc

850920 095	0.4-	0.2-	851020 688	0.5-	0.2+	900723 675	0.7-	0.2-
850922 095	0.5+	0.2+	851020 688	0.9+	0.6-	900723 675	0.5-	0.6-
851015 688	0.4+	0.4+	900722 675	1.0+	0.6-			
851015 688	0.9-	0.1-	900722 675	0.2+	1.4+			

1985 VD1 = 1990 OL1
Id. H. E. Holt
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell

M	342.35925	(1950.0)	P	Q
n	0.17980341	Peri. 356.16167	+0.98815247	-0.15210815
a	3.1088811	Node 12.64278	+0.14317452	+0.86564842
e	0.1721183	Incl. 5.35861	+0.05527883	+0.47698629
P	5.48	H 12.8	G 0.25	

Residuals in seconds of arc

850921 095	0.5-	0.3-	851107 688	0.1-	1.7-	900725 675	0.4+	0.1-
851018 095	0.2-	1.3+	851112 095	0.8+	0.7+	900729 675	0.2-	0.3-
851107 688	(2.1-	2.6-)	900725 675	0.7-	0.1+	900729 675	0.5+	0.2+

1986 AJ = 1990 OR
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams

M	343.96480	(1950.0)	P	Q
n	0.36057345	Peri. 90.88412	+0.89328664	-0.35757502
a	1.9549745	Node 290.10544	+0.19968531	+0.85855087
e	0.1044691	Incl. 16.85990	+0.40269685	+0.36746498
P	2.73	H 14.0	G 0.25	

Residuals in seconds of arc

860110 675	0.5+	0.1+	860206 675	1.3+	0.3+	900722 675	1.2+	1.4-
860116 675	0.4-	0.2+	900529 413	0.1-	1.1-	900723 675	0.3+	1.9+
860205 675	0.0	0.6-	900529 413	1.0-	1.8+	900723 675	1.4-	2.6-
860205 675	1.2-	0.5+	900722 675	0.3+	2.0+			

1986 EJ = 1990 MZ
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams

M	103.10061	(1950.0)	P	Q
n	0.27522639	Peri. 200.97189	-0.98910282	+0.01945111
a	2.3406880	Node 338.51955	+0.09020993	-0.70329556
e	0.2046390	Incl. 23.48642	-0.11635200	-0.71063141
P	3.58	H 13.0	G 0.25	

Residuals in seconds of arc

790309 413	0.4-	0.1+	860404 675	0.1+	0.3-	900622 413	0.1+	0.5+
790309 413	0.6+	0.3+	860405 675	0.1-	0.4-	900623 413	0.8+	1.4-
860306 675	0.6-	0.0	871014 413	0.6+	0.5-	900629 413	0.4-	0.4+
860306 675	0.3+	0.1-	871014 413	1.0+	0.8-			
860306 675	0.8-	0.5-	900622 413	0.7-	0.6+			

1986 JD = 1986 LE = 1990 OP2
Id. S. Singer-Brewster (d, MPC 10936), S. Nakano

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Nakano
M 66.35446 (1950.0) P Q
n 0.27302008 Peri. 158.86534 -0.14888171 +0.97707543
a 2.3532814 Node 102.32332 -0.92809397 -0.08495590
e 0.1716179 Incl. 8.96123 -0.34128554 -0.19520781
P 3.61 H 14.0 G 0.25
Residuals in seconds of arc

860502	675	0.0	1.2+	860608	675	0.9+	1.5-	900728	675	0.2+	0.1-
860503	675	0.8-	0.4+	860608	675	0.1-	2.2+	900729	675	0.2-	0.1+
860503	675	0.1+	2.2-	900725	675	0.4+	0.6-	900729	675	0.6-	0.3+
860603	675(13.1+	1.2-)		900725	675	0.4+	1.0-	900730	675	0.0	0.9+
860603	675(10.9+	1.0-)		900728	675	0.4+	0.4+	900730	675	0.5-	0.1-

1986 PQ = 1988 BQ = 1990 OW3
Id. H. E. Holt (k), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 302.44028 (1950.0) P Q
n 0.24570004 Peri. 280.98275 +0.60039799 -0.79659151
a 2.5246387 Node 131.88347 +0.76567229 +0.54718680
e 0.1101667 Incl. 5.43039 +0.23079903 +0.25696023
P 4.01 H 12.5 G 0.25
Residuals in seconds of arc

860801	675	0.9+	2.0+	860902	809	0.3+	0.3+	860910	809	0.3-	0.3-
860801	675	1.2-	1.4+	860902	809	0.4+	0.2+	860910	809	0.1-	0.2-
860802	675(24.5-	0.5+)		860902	809	0.6+	0.3+	860910	809	0.0	0.4-
860802	675(23.3-	1.4+)		860904	809	0.2+	0.4+	860913	809	0.1-	0.0
860804	675(23.2-	0.0)		860904	809	0.3+	0.3+	860913	809	0.2-	0.0
860804	675(21.3-	1.5+)		860904	809	0.2+	0.3+	860913	809	0.1-	0.0
860829	809	1.3-	0.3+	860906	809	0.3+	0.1+	880123	552	1.0+	0.1+
860829	809	1.0-	0.3+	860906	809	0.4+	0.0	880123	552	1.0-	0.1-
860829	809	0.7-	0.3+	860906	809	0.3+	0.2-	900727	675	0.6+	0.6-
860901	809	0.4-	0.1+	860908	809	0.3+	0.7-	900727	675	0.3+	0.5-
860901	809	0.3-	0.3+	860908	809	0.1+	0.8-	900730	675	0.6-	0.0
860901	809	0.0	0.3+	860908	809	0.1+	0.9-	900730	675	0.6+	2.2-

1986 RD5 = 1982 YY
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 269.45305 (1950.0) P Q
n 0.18375942 Peri. 0.28308 +0.98057856 +0.19571750
a 3.0641002 Node 348.40695 -0.18005752 +0.87276451
e 0.1316482 Incl. 3.61264 -0.07774941 +0.44718763
P 5.36 H 12.3 G 0.25
Residuals in seconds of arc

821222	511	0.1-	0.3-	860903	809	0.9+	0.3+	860906	809	0.2-	0.7+
821223	511	0.1+	0.3+	860905	809	1.3-	0.7-	860906	809	0.2-	0.4+
860903	809	0.7+	0.3+	860905	809	1.1-	0.7-	860906	809	0.0	0.2+
860903	809	0.7+	0.4+	860905	809	0.9-	0.8-	860908	095	1.2+	0.1-

1986 RQ5 = 1982 UE1 = 1982 VH9 = 1988 DC = 1990 OS2
Id. E. Bowell (k), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 275.07174 (1950.0) P Q
n 0.22995808 Peri. 21.03290 +0.08117297 -0.99017200
a 2.6385800 Node 64.45998 +0.89543991 +0.02226710
e 0.1978570 Incl. 7.25129 +0.43771945 +0.13807098
P 4.29 H 13.0 G 0.25
Residuals in seconds of arc

821021	688	0.2+	0.5-	821110	095	0.4-	0.3+	860909	809	0.6-	0.9+
821021	688	0.3+	0.1+	860909	809	0.6-	0.9+	860909	809	0.7-	0.8+

860909 809 0.6- 0.7+ 860912 809 1.5+ 0.9- 880219 877 (1.0+ 3.8+)Y
860909 809 0.6- 0.6+ 860914 809 0.5- 0.7- 900728 675 0.2+ 0.5+
860909 809 0.6- 0.7+ 860914 809 0.5- 0.6- 900728 675 0.2- 0.0
860912 809 1.6+ 0.6- 860914 809 0.2- 0.7- 900730 675 0.4+ 0.1+
860912 809 1.7+ 0.7- 880219 877 (1.5+ 3.1+)Y 900730 675 0.3- 0.8-

1986 TB12 = 1988 JM1 = 1990 PB
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Nakano
M 298.91126 (1950.0) P Q
n 0.21507124 Peri. 87.19862 +0.54958175 -0.83459936
a 2.7589808 Node 329.36851 +0.73427234 +0.50393623
e 0.1582110 Incl. 4.21707 +0.39850223 +0.22246837
P 4.58 H 13.0 G 0.25
Residuals in seconds of arc
861003 095 2.6- 0.7+ 880511 413 1.2+ 0.5- 900815 372 0.7- 1.2-
861007 095 0.0 0.1- 880511 413 1.3- 0.4+ 900818 372 (5.9+ 0.7+)
861011 095 2.6+ 0.6- 900815 372 0.2+ 0.3+ 900818 372 0.5+ 0.8+

1986 VG1 = 1990 FN
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 120.38070 (1950.0) P Q
n 0.08251772 Peri. 341.55151 +0.51883269 -0.75746281
a 5.2252305 Node 75.37637 +0.82679817 +0.32677595
e 0.1191263 Incl. 24.17843 +0.21729571 +0.56521462
P 11.94 H 9.5 G 0.25
Residuals in seconds of arc
861107 511 0.7+ 1.2+ 861108 511 0.4+ 0.1+ 900323 675 0.1- 0.9+
861107 511 0.8+ 0.7+ 861108 511 0.6- 0.4- 900323 675 0.1- 0.6+
861107 511 0.4- 0.4- 861108 511 1.3+ 1.1- 900325 675 0.6+ 0.6+
861107 511 0.6- 0.6- 861108 511 1.6- 0.6+ 900325 675 0.4- 2.1-

1987 UU2
Id. E. Helin (1989, 1990 obs.), D. D. Balam (1990 obs.)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Balam
M 343.57693 (1950.0) P Q
n 0.294272521 Peri. 151.98745 +0.99969818 -0.02203235
a 2.2385643 Node 209.28112 +0.01625124 +0.92484361
e 0.1241004 Incl. 1.27334 +0.01842422 +0.37970893
P 3.35 H 13.5 G 0.25
Residuals in seconds of arc
870918 095 1.2+ 2.0- 871021 657 0.5+ 0.0 900719 657 0.8+ 1.1+
870918 095 1.5- 3.0+ 871021 657 0.3+ 0.9+ 900719 675(26.2- 5.5-)
870921 095 1.6- 1.0+ 890304 675 0.8+ 0.8+ 900719 657 0.0 1.2-
871002 095 1.9+ 0.6- 890306 675 0.2- 1.5- 900720 675 0.2- 1.5+
871020 657 1.6- 1.9+ 890306 675 1.0- 0.0 900720 675 1.6- 1.6-
871020 657 0.4+ 4.9- 900719 657 0.8+ 0.7-

1988 AW1
Id. H. E. Holt (1990 obs.)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 357.30019 (1950.0) P Q
n 0.23537689 Peri. 36.93783 +0.96780531 +0.18913952
a 2.5979264 Node 311.29165 -0.24899654 +0.81588701
e 0.1451302 Incl. 12.76926 +0.03679127 +0.54640152
P 4.19 H 12.3 G 0.25
Residuals in seconds of arc
871224 010 2.2- 0.0 871224 010 0.6+ 1.4+ 880114 046 0.7+ 1.4-
871224 010 0.5+ 1.2+ 880114 046 (3.1- 1.6-) 880115 046 0.8- 1.9-

880115 046 0.5+ 1.8- 880215 809 0.6+ 1.5+ 880217 809 0.2- 1.7+
880116 046 (2.4+ 1.8-) 880216 809 0.4+ 1.0- 880223 809 0.4- 1.3-
880116 046 1.5+ 0.9+ 880216 809 0.5- 0.1- 880223 809 0.3- 0.8-
880120 046 (2.3- 2.4-) 880216 809 0.5- 0.3+ 880223 809 1.3- 0.4-
880120 046 (2.9- 1.4-) 880217 809 0.2+ 1.2+ 900727 675 1.2+ 0.5+
880211 809 1.1+ 0.3- 880217 809 0.1- 0.7+ 900727 675 1.1- 0.7-

1988 AX4 = 1990 OX4
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 357.25143 (1950.0) P Q
n 0.25946157 Peri. 168.91296 +0.96492247 +0.26242041
a 2.4345612 Node 175.84903 -0.24831452 +0.92184901
e 0.1486571 Incl. 6.15092 -0.08523218 +0.28518403
P 3.80 H 13.5 G 0.25
Residuals in seconds of arc
880113 809 0.3- 0.3- 880118 809 0.1+ 0.1+ 880128 809 0.2+ 1.2-
880113 809 0.2+ 0.3- 880118 809 0.2+ 0.2+ 900725 675 0.4+ 0.2-
880113 809 0.5+ 0.1- 880120 809 0.1+ 0.2+ 900725 675 0.0 0.2+
880114 809 0.2+ 0.5- 880120 809 0.1+ 0.3+ 900728 675 0.4- 0.2+
880114 809 0.4+ 0.2- 880122 809 0.3+ 0.1- 900728 675 0.0 0.1-
880114 809 0.2+ 0.1- 880122 809 0.0 0.6+ 900730 675 0.7- 0.4+
880116 809 0.8- 0.4+ 880124 809 0.2- 0.1+ 900730 675 0.6+ 0.5-
880116 809 0.6- 0.0 880124 809 0.2- 0.6+
880116 809 0.3- 0.2+ 880126 809 0.1- 0.1-

1988 BO5 = 1957 WT = 1978 UQ3 = 1982 SM12
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 273.96738 (1950.0) P Q
n 0.23309529 Peri. 87.82082 +0.11845987 -0.99295494
a 2.6148516 Node 355.37318 +0.89670373 +0.10818059
e 0.1868725 Incl. 1.97806 +0.42648527 +0.04834720
P 4.23 H 13.5 G 0.25
Residuals in seconds of arc
571126 760 0.2- 1.0+ 880124 399 0.0 0.1+ 880207 399 0.6+ 2.1+
571126 760(12.6+ 1.6+) 880124 399 0.2- 1.2+ 880313 399 0.7- 2.4-
781028 675 0.0 0.2- 880125 399 0.1+ 0.1- 880313 399 1.2- 0.5-
781029 675 0.3+ 0.3- 880125 399 1.3- 0.2+ 880313 399 0.8+ 0.7-
820919 095 0.6+ 1.3- 880125 399 0.1- 0.2-
880124 399 0.3+ 1.7- 880207 399 1.1+ 0.3+

1988 DJ = 1990 OU4
Id. H. E. Holt; 1988 DJ = 1979 OO8 (MPC 12947) is invalid
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 235.93625 (1950.0) P Q
n 0.18336296 Peri. 213.36588 -0.06117300 -0.98938797
a 3.0685155 Node 240.45830 +0.94567252 -0.01520942
e 0.0590643 Incl. 8.71307 +0.31931387 -0.14449951
P 5.38 H 12.3 G 0.25
Residuals in seconds of arc
880219 413 (6.6- 2.3+) 880310 413 0.2- 0.3+ 900725 675 1.0- 0.3-
880219 413 0.4+ 0.5- 880310 413 0.7+ 0.0 900725 675 0.7+ 0.4+
880222 413 (2.5- 1.8+) 880412 413 0.6+ 0.0 900728 675 0.6- 0.9+
880222 413 0.3- 0.4- 880414 413 0.1- 1.0+ 900728 675 0.7+ 0.6-
880223 413 1.1- 0.2+ 880420 413 0.1- 1.0- 900730 675 0.8- 0.7-
880223 413 1.3+ 0.1- 880420 413 1.4- 0.5- 900730 675 1.0+ 0.1+
880225 413 1.8- 0.5+ 880420 413 0.6+ 0.2-
880225 413 1.1+ 0.3- 880420 413 0.3+ 0.9+

1988 EG
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Marsden
M 355.73771 (1950.0) P Q
n 0.68935612 Peri. 241.45588 +0.44248746 -0.89677141
a 1.2691325 Node 182.28556 +0.84252822 +0.41664589
e 0.4991867 Incl. 3.48644 +0.30716616 +0.14902091
P 1.43 H 19.0 G 0.25
Residuals in seconds of arc

880312 675	2.5-	1.0-	880323 675	0.3+	0.0	880419 691	0.3-	0.7+
880313 675	0.4-	0.7-	880323 675	0.3+	0.0	880519 688	0.8-	0.6+
880315 675	0.1+	1.2-	880323 474	2.1-	0.1+	880519 688	1.1-	1.0+
880318 801	0.4+	0.9+	880323 474	1.9-	2.1+	880519 688	1.4-	1.1+
880318 801	2.1+	1.9+	880325 809	0.2-	0.5-	880520 688	0.7-	0.1-
880319 801	(3.2+	1.5-)	880325 809	0.1-	0.2+	880520 688	0.1+	0.1-
880320 801	1.2-	0.9-	880326 809	0.3-	0.5+	900712 675	0.2+	0.5-
880320 801	0.9+	0.8-	880326 809	1.0-	1.5-	900712 675	0.2-	0.2-
880321 474	0.7+	0.7-	880412 691	0.4+	0.4+	900712 675	0.1-	1.0-
880321 474	0.5+	1.5-	880412 691	0.5+	0.7+	900713 675	0.6-	0.5+
880322 809	0.2-	1.6+	880412 691	0.3+	0.4+	900713 675	0.1+	0.2-
880322 809	(4.3-	0.6+)	880412 691	0.4+	0.4+	900713 675	0.2+	0.2-
880322 675	2.1+	0.8-	880412 691	0.0	0.5+	900713 675	0.1+	0.4-
880322 675	2.5+	0.0	880419 691	0.4+	0.4+	900713 675	0.7+	0.4-
880323 675	0.3+	0.1-	880419 691	0.5+	1.2+			

1988 WC
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 177.48062 (1950.0) P Q
n 0.29753301 Peri. 252.66197 -0.61985488 -0.71065555
a 2.2221802 Node 240.41965 +0.78251161 -0.59154494
e 0.4039504 Incl. 22.49879 -0.05878360 -0.38084548
P 3.31 H 13.8 G 0.25
Residuals in seconds of arc

881129 875	1.5+	1.3-	881207 054	0.5-	0.3-	890106 801	1.6-	0.7+
881129 875	1.0+	1.7+	881207 054	0.0	0.8-	890112 875	0.2+	1.3+
881129 875	1.0+	0.3+	881209 875	1.1+	0.6-	890112 875	0.5-	0.5-
881130 875	1.3+	0.8+	881210 894	1.0-	1.4-	890112 875	0.2-	1.7-
881130 875	0.9+	1.6+	881210 894	0.7+	1.1+	890127 875	1.5+	1.1+
881201 875	0.5+	1.6+	881210 894	0.2-	0.8-	890201 801	0.5+	0.0
881201 875	(0.1+	4.8+)	881212 875	0.6-	0.1+	890304 801	0.4-	0.1+
881201 054	0.1+	0.6-	881212 054	(2.0-	4.0-)	890310 801	1.2+	0.1-
881207 875	0.4-	1.7-	881212 054	(1.8-	4.0-)	900729 688	0.0	0.2+
881207 875	1.6-	1.9+	881216 875	2.4-	0.0	900729 688	0.3-	0.2+
881207 897	0.2-	1.9-	881216 875	(3.0-	2.9+)			
881207 897	0.1+	1.0-	890103 875	1.6-	1.1+			

1989 AY6 = 1990 OA4
Id. H. E. Holt
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell
M 103.56648 (1950.0) P Q
n 0.27572516 Peri. 284.36505 -0.70573999 +0.70733119
a 2.3378597 Node 300.67201 -0.63064896 -0.65304316
e 0.1313437 Incl. 2.67692 -0.32282032 -0.27058680
P 3.57 H 13.8 G 0.25
Residuals in seconds of arc

890110 033	0.1-	0.7+	890207 809	0.3-	0.5-	890210 809	0.4+	0.8-
890111 033	0.0	0.8+	890209 809	0.2-	0.1-	890210 809	0.5+	0.7-
890112 033	0.4+	0.6+	890209 809	0.0	0.1+	890212 809	0.2-	0.3-
890207 809	0.8-	0.3-	890209 809	0.3+	0.2+	890212 809	0.0	0.3-
890207 809	0.4-	0.4-	890210 809	0.1+	0.9-	890212 809	0.2+	0.2-

890213 809 0.5- 0.3- 890226 809 0.4+ 0.2+ 890303 809 0.9- 0.4+
890213 809 0.1- 0.3- 890226 809 0.6+ 0.5+ 890303 809 0.9- 0.5+
890213 809 0.2+ 0.6- 890226 809 0.8+ 0.5+ 900727 675 0.9- 0.7+
890225 809 0.7+ 0.4+ 890301 809 0.3- 0.3+ 900727 675 1.7+ 0.6-
890225 809 0.4+ 0.2+ 890301 809 0.2- 0.2+ 900730 675 0.8- 0.5-
890225 809 0.0 0.2+ 890301 809 0.2- 0.2+ 900730 675 0.2+ 0.2+

1989 CW = 1982 BL10 = 1990 OP3
Id. H. E. Holt (k), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 90.98533 (1950.0) P Q
n 0.28928136 Peri. 281.51043 -0.43668537 +0.89956634
a 2.2642398 Node 322.59255 -0.81926316 -0.40192622
e 0.0799915 Incl. 0.87616 -0.37163660 -0.17098456
P 3.41 H 13.5 G 0.25
Residuals in seconds of arc
820119 095 0.2+ 0.8+ 890212 809 0.2- 0.2+ 890214 372 1.3- 0.5+
890204 372 (6.2- 3.3-) 890213 049 0.2- 0.4- 890214 372 1.2+ 0.2+
890204 372 0.3+ 2.7- 890213 049 (0.1- 3.7+) 890227 399 (3.4- 0.1+)
890205 049 0.2- 1.9- 890213 049 0.8+ 0.3- 890227 399 1.6+ 1.5-
890205 049 0.3- 0.4- 890213 049 1.3+ 1.2+ 890227 399 2.0+ 0.1-
890206 875 0.5+ 0.4+ 890213 809 0.4+ 0.0 890306 372 0.6- 0.5+
890206 875 0.1- 1.6+ 890213 809 0.5+ 0.2- 890306 372 1.1+ 1.5+
890210 875 2.0- 1.0+ 890213 809 0.4+ 0.2- 900727 675 0.1+ 0.4-
890210 372 (4.0- 0.8-)Y 890213 875 2.3- 1.8+ 900727 675 0.8+ 0.1+
890210 875 (5.2- 2.9+) 890213 875 0.8- 0.0 900730 675 0.9- 1.0-
890211 372 0.8- 0.2- 890213 372 1.8+ 0.0 900730 675 0.3- 0.1-
890211 372 1.1- 0.2- 890213 372 2.2- 0.5+ 900815 372 1.0- 2.9+
890212 809 0.3- 0.2+ 890214 809 0.5+ 0.3- 900815 372 0.5+ 0.9+
890212 809 0.0 0.3+ 890214 809 0.7+ 0.3+

1989 EL = 1987 UG2 = 1990 OR4
Id. H. E. Holt (k), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 187.53080 (1950.0) P Q
n 0.26091076 Peri. 253.04889 -0.71873650 -0.69014035
a 2.4255378 Node 243.21751 +0.66844273 -0.65247695
e 0.1443954 Incl. 5.42526 +0.19131691 -0.31301778
P 3.78 H 13.2 G 0.25
Residuals in seconds of arc
871025 054 0.1+ 1.5- 890405 675 0.8- 0.2- 900725 675 0.5- 0.1+
871025 054 0.7+ 0.6- 890407 675 0.7- 0.5- 900725 675 1.3- 1.2-
890305 675 1.9+ 0.2+ 890407 675 1.6- 0.4- 900727 675 0.9- 0.5+
890306 675 1.1+ 1.0- 900724 675 2.5+ 0.7+ 900727 675 2.9- 1.6-
890405 675 0.7- 0.2- 900724 675 3.1+ 1.0+

1989 GF = 1978 JN1 = 1990 OM1
Id. H. E. Holt (k), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 210.82244 (1950.0) P Q
n 0.26650373 Peri. 56.84723 -0.71915521 -0.68706573
a 2.3914824 Node 79.51750 +0.59717729 -0.68745165
e 0.0619090 Incl. 6.05446 +0.35523944 -0.23526774
P 3.70 H 13.0 G 0.25
Residuals in seconds of arc
780506 095 0.2- 0.5- 890406 400 0.5- 0.0 890412 400 (8.5+ 4.8+)
890402 400 (3.5+ 0.6-) 890406 400 0.3- 0.8+ 890412 400 1.9+ 0.5+
890402 400 (3.0+ 0.7-) 890406 400 2.1- 0.3+ 890412 400 1.3+ 2.9-
890402 400 2.1- 0.5+ 890412 400 (6.7+ 5.9+) 890508 400 0.0 0.4-

890508 400 (2.2+ 3.2-) 900729 675 1.0+ 0.9- 900730 675 1.7- 1.1+
890508 400 2.1+ 1.6+ 900729 675 0.1- 0.3- 900730 675 0.2+ 0.5-
900725 675 0.5- 0.2+ 900729 675 0.5+ 0.2+
900725 675 0.4+ 0.1+ 900729 675 0.2+ 0.0

1989 GB1 = 1972 HN1 = 1986 TE10
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 183.32937 (1950.0) P Q
n 0.17440033 Peri. 246.56568 -0.32096577 -0.94485949
a 3.1727645 Node 222.33014 +0.90031506 -0.28310153
e 0.0967839 Incl. 5.53680 +0.29396217 -0.16460275
P 5.65 H 12.0 G 0.25
Residuals in seconds of arc
720419 805 0.4- 1.8+ 890403 809 0.7- 0.8- 890408 809 0.4- 0.8+
720419 805 1.1+ 0.1+ 890405 809 (5.0+ 2.1-) 890410 809 0.4+ 0.4-
861003 095 2.0- 0.8- 890405 809 (4.6+ 1.7-) 890410 809 0.5+ 0.6-
861008 095 1.8+ 1.2+ 890405 809 (5.0+ 2.2-) 890410 809 0.0 0.8-
890403 809 0.4- 0.9- 890408 809 0.6+ 0.8+
890403 809 0.9- 0.3- 890408 809 0.5+ 0.6+

1989 SL = 1972 RN1
Id. R. H. McNaught (1978 obs.), G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams
M 123.27233 (1950.0) P Q
n 0.29213382 Peri. 130.99975 +0.97025924 -0.21975869
a 2.2494766 Node 241.92094 +0.17275823 +0.92235739
e 0.1332015 Incl. 6.60623 +0.16956296 +0.31774669
P 3.37 H 13.5 G 0.25
Residuals in seconds of arc
720910 095 0.4+ 1.0- 891004 374 1.4- 0.5- 891029 807 1.0+ 0.3-
780609 413 0.9- 1.8+ 891007 374 0.5- 0.2- 891029 871 1.9- 0.8-
780609 413 1.1+ 0.6- 891007 374 1.8+ 1.3+ 891029 871 0.0 1.9+
890930 374 (3.5+ 0.6+) 891009 374 0.1+ 0.8+ 891031 807 1.5+ 0.2-
890930 374 (6.4+ 0.2+) 891009 374 0.2- 1.7+ 891102 374 0.5- 0.9-
890930 374 0.7+ 1.4- 891023 374 1.2- 0.2+
891004 374 0.3+ 0.3+ 891023 374 (0.3+ 4.6-)

1989 SO8 = 1977 LZ
Id. S. Nakano, K. Ichikawa
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Nakano
M 126.73758 (1950.0) P Q
n 0.17595506 Peri. 211.01766 +0.18114164 +0.98257962
a 3.1540536 Node 69.44628 -0.89292170 +0.18201846
e 0.1472612 Incl. 2.54228 -0.41216325 +0.03750420
P 5.60 H 12.5 G 0.25
Residuals in seconds of arc
770612 675 1.4- 0.4- 890923 809 0.1- 1.0- 890926 809 0.0 0.3-
770613 675 1.4+ 0.4+ 890923 809 1.1+ 1.0- 890926 809 0.2+ 0.6+
890909 095 0.5+ 1.3- 890925 809 0.2- 0.0 890926 809 0.3+ 0.8+
890909 095 0.7- 1.7+ 890925 809 1.0- 0.2+
890923 809 0.9+ 0.3+ 890925 809 1.0- 0.2+

1989 TG17 = 1979 YG6 = 1984 UO4
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda
M 82.85281 (1950.0) P Q
n 0.18862693 Peri. 182.04067 +0.99969153 -0.02475848
a 3.0111583 Node 179.36792 +0.02455414 +0.97333529
e 0.0998334 Incl. 10.26295 +0.00373358 +0.22804701
P 5.23 H 11.7 G 0.25

Residuals in seconds of arc

791223	095	0.1+	0.9+		890908	095	(0.6+ | 5.8-)	891010	809	1.1-	0.3-
841020	095	0.1-	1.4-		891009	809	0.1+	0.4+	891010	809	0.9-	0.3-
890904	095	0.3+	2.3+		891009	809	0.5+	0.3+	891010	809	0.5-	0.3-
890908	095	1.3+	1.2-		891009	809	0.7+	0.2+	891010	809	0.3-	0.4-

1989 UK8 = 1931 UL = 1933 BL = 1956 AB = 1980 EF1

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M	30.34438		(1950.0)	P	Q
n	0.17068026	Peri.	355.53875	+0.19375658	-0.96650441
a	3.2187001	Node	83.22388	+0.90521555	+0.10998993
e	0.0734488	Incl.	9.75829	+0.37821051	+0.23188671
P	5.77	H	11.5	G 0.25	

Residuals in seconds of arc

311017	690	(8.1+	0.1+)	560113	760	0.1-	0.7-	891103	809	1.9-	0.1+
311018	690	0.2-	1.1-	800315	095	0.3+	1.6+	891103	809	3.4-	0.0
330127	024	2.0+	1.5+	891025	095	2.3+	1.7+	891120	095	1.3+	1.7+
560113	760	1.5-	2.7-	891103	809	1.2-	0.2-	891124	095	2.8+	0.0

1989 WW = 1969 VB3 = 1979 WD3 = 1979 YP6 = 1986 YO

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	133.60406		(1950.0)	P	Q
n	0.29608513	Peri.	268.49319	+0.98855442	-0.10875769
a	2.2294187	Node	97.74213	+0.14092413	+0.91309542
e	0.3057427	Incl.	6.05699	-0.05385672	+0.39297394
P	3.33	H	14.5	G 0.25	

Residuals in seconds of arc

691115	095	(25.0+	9.2-)	891120	881	1.5-	0.6-	891127	881	1.4-	1.9+
791116	095	1.5+	0.2+	891121	881	0.5+	1.1-	891129	881	(5.1+	0.6-)
791223	095	2.1-	0.1-	891121	881	0.3-	2.2-	891129	881	(5.9+	1.5-)
861227	675	0.4+	0.5-	891124	881	0.9-	2.0+	891206	399	2.8+	0.6-
861227	675	0.5-	0.1-	891124	881	(2.9+	5.0+)	891206	399	0.6-	0.9+
891120	881	1.7-	2.7-	891127	881	2.8+	2.3+	891206	399	0.5+	0.2+

1989 WU2 = 1978 XV = 1983 RO4

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	75.52574		(1950.0)	P	Q
n	0.18084616	Peri.	321.16649	+0.71024457	-0.70202090
a	3.0969190	Node	83.50876	+0.65822256	+0.63601442
e	0.1898071	Incl.	3.00846	+0.24959111	+0.32039400
P	5.45	H	12.8	G 0.25	

Residuals in seconds of arc

781203	675	0.5-	0.4-	830910	688	0.6+	0.4-	891122	399	0.6+	0.1-
781203	675	0.3-	0.4-	891121	399	0.3-	1.4+	891223	399	0.6+	0.3+
781205	675	2.0+	0.7+	891121	399	0.1-	0.9+	891223	399	1.5-	0.2-
781206	675	0.6-	0.8-	891121	399	0.4+	0.4+	891223	399	0.2-	0.9+
781206	675	0.1-	0.7-	891122	399	(4.0+	2.5-)				
830910	688	0.7-	0.7+	891122	399	0.1+	2.0-				

1989 YP5 = 1982 BS9

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	165.87129		(1950.0)	P	Q
n	0.24075329	Peri.	225.04387	+0.98632935	+0.14455658
a	2.5591038	Node	126.48489	-0.10932089	+0.93321758
e	0.1272815	Incl.	5.64643	-0.12330193	+0.32895037
P	4.09	H	13.5	G 0.25	

Residuals in seconds of arc

820119 095	0.1+	0.8-	891229 511	0.2+	1.8-	900104 511	0.4-	0.6+
820120 095	0.1-	0.8+	891230 511	0.7-	1.4+	900104 511	0.2+	1.0-
891229 511	0.4-	0.4+	891230 511	1.2+	0.5+			

1989 YG8 = 1989 YJ8 = 1984 JQ

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M 69.66534		(1950.0)		P	Q
n 0.29465434	Peri.	33.96957	-0.52963975		-0.84447471
a 2.2366301	Node	88.13160	+0.75940073		-0.51391628
e 0.1304693	Incl.	4.57091	+0.37787864		-0.15083937
P 3.34	H	14.7	G	0.25	

Residuals in seconds of arc

840507 675 (6.2-	0.7+)		891228 511	1.1+	1.6-	900103 511	0.6-	0.2+
840508 675	0.8-	0.6-	891229 511	0.7-	1.3+	900103 511	0.7+	0.5+
840509 675	0.8+	0.6+	891229 511	2.2-	0.1+	900104 511	2.0-	0.6-
891228 511	1.0+	0.1-	891229 511	0.6+	0.4+	900104 511	2.1+	0.1-

1990 BG

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M 92.48879		(1950.0)		P	Q
n 0.54392243	Peri.	135.68679	-0.28597433		+0.77910734
a 1.4863169	Node	109.85526	-0.95754741		-0.25443474
e 0.5699693	Incl.	36.37882	+0.03635424		-0.57293517
P 1.81	H	14.0	G	0.25	

From 21 observations 1990 Jan. 21-Jun. 21, mean residual 0".96.

1990 DM1 = 1973 EH

Epoch 1990 Mar. 10.0 ET = JDE 2447960.5 (J-P) Nakano

M 1.16521		(1950.0)		P	Q
n 0.29091672	Peri.	199.18435	-0.89047393		-0.45443741
a 2.2557508	Node	313.76407	+0.42156997		-0.80463187
e 0.1075198	Incl.	1.84874	+0.17127448		-0.38217038
P 3.39	H	13.5	G	0.25	

Residuals in seconds of arc

730307 029	0.4+	0.0	900220 046	0.3-	0.1+	900222 046	0.3+	0.4-
730307 029	0.7-	0.1+	900221 046	2.1-	0.8+	900228 399	2.1-	1.7+
730309 029	0.3+	0.1-	900221 046	1.2+	0.6-	900228 399	0.9+	0.3-
900220 046	0.2+	0.2-	900222 046	1.2+	0.2+	900228 399	0.8+	1.3-

1990 EJ2 = 1975 VT1 = 1975 XB7

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M 216.86744		(1950.0)		P	Q
n 0.16013337	Peri.	119.96290	+0.98464986		+0.12639663
a 3.3585216	Node	233.03864	-0.15825587		+0.93739258
e 0.1131948	Incl.	8.66408	+0.07361887		+0.32452894
P 6.15	H	12.2	G	0.25	

Residuals in seconds of arc

751102 095	0.2-	0.1-	900224 809	1.8-	0.0	900304 809	0.9+	0.1-
751202 330	0.2+	0.1+	900302 809	2.0+	0.0	900304 809	0.3+	0.5-
900224 809	0.6-	1.0+	900302 809	0.7+	0.7+	900304 809	0.1-	0.9-
900224 809	1.0-	0.0	900302 809	0.4-	0.1-			

1990 EX2 = 1971 SX2 = 1988 XZ5
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	225.82858	(1950.0)	P	Q
n	0.23866051	Peri. 172.70712	+0.99903148	+0.03986561
a	2.5740423	Node 185.11990	-0.04277251	+0.97918289
e	0.1950986	Incl. 12.04573	+0.01032585	+0.19902662
P	4.13	H 13.5	G 0.25	

Residuals in seconds of arc

710927	095	0.4-	1.8+	900302	809	0.8-	0.1-	900416 809	1.5+	0.4+
881208	808	0.5+	0.2+	900304	809	0.1-	0.1-	900416 809	0.4-	0.1+
881208	808	0.5-	0.3-	900304	809	0.8-	0.2+	900416 809	1.4+	0.3+
900302	809	1.1+	0.1-	900304	809	0.8-	0.0	900417 809	0.5+	0.2+
900302	809	1.1-	0.8+	900415	809	1.5+	0.7+	900417 809	1.1-	0.1-

1990 LA = 1952 HZ = 1987 SN10
Id. G. V. Williams (MPC 16700; unpublished)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams

M	70.24850	(1950.0)	P	Q
n	0.23446863	Peri. 24.90231	-0.93462989	+0.35518900
a	2.6046363	Node 175.78468	-0.35294740	-0.92043295
e	0.1105155	Incl. 13.80739	-0.04353274	-0.16322978
P	4.20	H 13.0	G 0.25	

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

520419	760(0.05+ 0.00-)X		871001	033	0.8+	0.0	900626 675	1.6+	0.9-
820724	413	1.0-	0.6+	871029	413	(4.7+	5.4+)	900628 675	1.1+	2.5-
820724	413	1.0+	1.5+	900614	413	1.8-	0.5-	900628 675	0.6-	0.6-
870929	033	0.4-	0.5-	900614	413	1.3+	0.9+	900629 413	0.8+	0.5+
870929	033	0.1+	0.4-	900615	413	0.5-	0.1-	900629 413	1.3-	1.2+
870930	033	0.2+	0.4-	900615	413	0.0	0.2-	900818 413	1.2+	0.1-
870930	033	0.4-	0.6-	900626	675	1.5-	0.2-			

1990 MA
Id. R. H. McNaught (1989 obs.)
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M	42.79890	(1950.0)	P	Q
n	0.36578878	Peri. 184.46368	-0.08557132	+0.75070642
a	1.9363438	Node 81.73584	-0.89235134	+0.23469282
e	0.1544941	Incl. 41.44832	-0.44315531	-0.61754283
P	2.69	H 14.5	G 0.25	

Residuals in seconds of arc

890109	413	0.5+	1.3+	900625	323	1.0-	0.5-	900721 413	0.4+	0.9+
890109	413	0.5-	1.4-	900626	323	0.1+	0.8-	900721 413	0.8-	1.9-
900622	413	1.1-	1.4-	900628	413	1.9+	0.4+	900721 413	(0.1-	5.0+)
900622	413	0.6-	0.5+	900629	413	1.6+	0.8-	900721 413	0.7-	0.7+
900624	323	1.2-	1.7+	900629	413	1.2+	1.2+			

1990 MB
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell

M	3.59209	(1950.0)	P	Q
n	0.52411918	Peri. 95.27273	+0.88238518	+0.35154839
a	1.5235242	Node 244.45949	-0.43071869	+0.87105310
e	0.0648199	Incl. 20.28055	+0.18941439	+0.34304553
P	1.88	H 16.0	G 0.25	

From 21 observations 1990 June 20-July 30, mean residual 0".5.

1990 ME = 1973 QU1 = 1976 GQ = 1985 HW1 = 1986 QS5
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M	359.73127	(1950.0)	P	Q
n	0.22536788	Peri. 142.52683	+0.56299410	+0.82408978
a	2.6742871	Node 161.47436	-0.79788085	+0.56169981
e	0.1149820	Incl. 11.35547	-0.21546180	+0.07327593
P	4.37	H 12.0	G 0.25	

Residuals in seconds of arc

730831 095	0.0	2.6+	850419 046	2.4+	1.7-	900623 675	0.7-	1.3-
730905 095	0.2-	0.6-	850419 046	1.1-	2.0+	900623 675	0.7-	1.3-
760401 095	0.2+	2.0+	860830 095	0.1+	1.7+	900818 675	0.9-	2.2+
760402 095	(6.3-	3.8+)	900622 675	0.4-	1.1-	900818 675	1.1+	0.7+
760404 095	0.3-	2.3+	900622 675	0.3-	0.6-	900821 675	1.7+	0.7+

1990 MN = 1950 NU = 1950 PC1 = 1979 ME = 1979 OU16
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Nakano

M	2.94953	(1950.0)	P	Q
n	0.27048175	Peri. 199.97064	+0.87889322	+0.46090393
a	2.3679766	Node 131.96118	-0.41209025	+0.86342801
e	0.2511672	Incl. 9.51649	-0.24026722	+0.20508448
P	3.64	H 14.0	G 0.25	

Residuals in seconds of arc

500715 760	1.4+	3.2+	790618 809	0.1+	0.2+	900629 675	1.4+	0.4+
500715 760	2.5+	0.7-	790721 809	1.4-	0.0	900718 675	1.1+	0.6-
500803 078	3.6-	1.3- Y	900627 675	0.2+	0.4-	900718 675	1.2+	1.5-
790616 809	0.3+	0.2+	900627 675	0.5-	0.1+	900721 675	1.9-	0.2+
790617 809	0.6+	0.2+	900629 675	0.2-	0.6-	900721 675	1.2-	0.8+

1990 MU
Epoch 1990 July 28.0 ET = JDE 2448100.5 McNaught

M	76.13939	(1950.0)	P	Q
n	0.47689022	Peri. 77.33730	-0.81970599	-0.40612727
a	1.6225214	Node 77.49290	+0.21220891	-0.87031516
e	0.6573660	Incl. 24.43920	+0.53202394	-0.27858959
P	2.07	H 15.0	G 0.25	

From 6 observations 1990 June 23-July 25.

1990 MX = 1962 JE
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Marsden

M	57.92069	(1950.0)	P	Q
n	0.28515458	Peri. 177.73921	-0.30425488	+0.94790129
a	2.2860375	Node 74.53645	-0.87547207	-0.23918507
e	0.1087404	Incl. 5.62112	-0.37546987	-0.21041302
P	3.46	H 13.5	G 0.25	

Residuals in seconds of arc

620504 760	4.0+	0.6+	900627 675	0.3-	0.2+	900720 675	0.4+	0.6+
620504 760	1.2+	0.1-	900627 675	0.1+	0.2-	900720 675	0.6-	0.8+
620507 760	2.5-	0.2+	900629 675	0.6-	1.6-	900723 675	0.3+	0.1-
620507 760	2.8-	0.5-	900629 675	0.4+	0.3+	900723 675	0.3+	0.1-

1990 OA
Epoch 1990 July 28.0 ET = JDE 2448100.5 Williams

M	8.97608	(1950.0)	P	Q
n	0.31086499	Peri. 152.97818	+0.19960745	+0.97401512
a	2.1581826	Node 128.34105	-0.92183730	+0.22368841
e	0.4228470	Incl. 7.84168	-0.33222412	-0.03546894
P	3.17	H 16.5	G 0.25	

From 23 observations 1990 July 19-Aug. 19.

1990 OL
Epoch 1990 July 28.0 ET = JDE 2448100.5 Marsden
M 1.57302 (1950.0) P Q
n 0.22347603 Peri. 155.25559 +0.58986371 +0.79757762
a 2.6893588 Node 150.40613 -0.77686744 +0.60315530
e 0.4537946 Incl. 14.80786 -0.22031293 +0.00858043
P 4.41 H 16.0 G 0.25
From 8 observations 1990 July 22-Aug. 18.

1990 OS
Epoch 1990 July 28.0 ET = JDE 2448100.5 Marsden
M 336.95675 (1950.0) P Q
n 0.45593412 Peri. 19.67297 +0.99188895 -0.12704085
a 1.6718654 Node 347.62351 +0.11389007 +0.90265783
e 0.4596777 Incl. 1.10029 +0.05643906 +0.41118057
P 2.16 H 20.0 G 0.25
From 29 observations 1990 July 21-Aug. 3.

1990 OH4 = 1979 OV8
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 37.30510 (1950.0) P Q
n 0.17965578 Peri. 95.51950 +0.12093982 +0.99265499
a 3.1105901 Node 181.43792 -0.95266236 +0.11518741
e 0.1301632 Incl. 7.10623 -0.27894083 +0.03698561
P 5.49 H 13.0 G 0.25
Residuals in seconds of arc

790724	413	1.1- 0.4-	900727	675	0.8- 0.4+	900729	675	0.3+ 1.0+
790726	675	0.6+ 0.7+	900727	675	0.8- 0.9-	900730	675	2.8+ 0.3+
790728	413	0.4+ 0.3+	900728	675	0.7- 0.5-	900730	675	1.1+ 0.0
900724	675	1.2- 1.7-	900728	675	0.7+ 1.6+			
900724	675	2.1- 1.0-	900729	675	0.9+ 0.1+			

4015 P-L = 1990 OZ3
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 23.77321 (1950.0) P Q
n 0.26120975 Peri. 5.15332 +0.73412015 +0.67860815
a 2.4236914 Node 312.08246 -0.62409022 +0.66061014
e 0.1932828 Incl. 1.82488 -0.26754254 +0.32106888
P 3.77 H 15.0 G 0.25
Residuals in seconds of arc

600924	675	0.5- 0.5+	600928	675	0.7- 0.3-	601026	675	0.1+ 0.0
600925	675	0.2+ 1.0+	600928	675	0.9+ 1.1-	900727	675	0.6- 0.6+
600925	675	0.1+ 0.2+	601017	675	0.1+ 0.5+	900727	675	0.4+ 0.0
600926	675	0.4- 0.2-	601022	675	0.4- 0.2-	900730	675	0.5- 0.8-
600926	675	0.2+ 0.2-	601024	675	0.3+ 0.3-	900730	675	0.7+ 0.2+

6626 P-L = 1976 EZ
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 (J-P) Williams
M 357.07191 (1950.0) P Q
n 0.28217115 Peri. 220.04588 -0.75292391 +0.65810701
a 2.3021229 Node 1.11092 -0.59167749 -0.67634237
e 0.0618534 Incl. 2.57720 -0.28813771 -0.33084161
P 3.49 H 14.5 G 0.25
Residuals in seconds of arc

600924	675	0.2- 0.3+	601017	675	0.6- 0.9+	760301	033	1.0+ 0.4+
600926	675	0.1+ 0.3+	601022	675	0.1+ 0.1+	760302	033	0.6- 0.0
600927	675	1.2+ 0.2-	601024	675	0.7- 0.2-	760303	033	(3.9- 1.5+)
600928	675	0.2- 1.3-	601026	675	0.2+ 0.1+	760303	033	0.4- 0.5-

6743 P-L = 1983 TF2
Id. E. Roemer, G. V. Williams
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Williams

M	90.70929	(1950.0)	P	Q
n	0.47143387	Peri. 105.32070	-0.43284977	-0.90116543
a	1.6350167	Node 10.42010	+0.76976657	-0.38292902
e	0.5000368	Incl. 7.39522	+0.46914870	-0.20314091
P	2.09	H 17.5	G 0.25	

Residuals in seconds of arc

600924	675	0.1-	0.1-	600928	675	0.7-	0.6+	831007	010	0.2+	0.7+
600924	675	1.3+	0.7-	600928	675	1.0+	0.0	831007	010	0.1+	0.5+
600926	675	0.9-	0.3+	831005	010	0.1-	0.2+	831008	010	(1.5-	14.1-)
600926	675	0.7+	0.7-	831005	010	(9.1+	2.2+)	831008	010	(0.5+	11.7-)
600927	675	1.9-	0.6+	831007	010	0.2-	1.7-	831009	010	(5.3-	7.0-)
600927	675	0.6+	0.3+	831007	010	0.2+	0.2+				

2181 T-2 = 1990 OP4
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Bowell

M	40.44751	(1950.0)	P	Q
n	0.22409026	Peri. 93.37071	+0.19137908	+0.98148985
a	2.6844422	Node 187.67386	-0.92051741	+0.17693795
e	0.0481420	Incl. 3.08702	-0.34061964	+0.07328456
P	4.40	H 13.3	G 0.25	

Residuals in seconds of arc

730919	675	1.3+	0.0	730929	675	0.2-	0.6+	731005	675	0.8+	0.3+
730919	675	0.2+	0.1-	730929	675	0.7+	0.2+	900725	675	0.1-	0.3+
730920	675	0.8-	1.9-	730930	675	0.4-	0.0	900725	675	0.3-	0.2+
730924	675	1.5-	0.7+	730930	675	0.5+	0.2-	900727	675	0.0	0.7-
730924	675	1.5-	1.3+	731004	675	0.2-	0.1+	900727	675	0.6-	0.3-
730925	675	0.1+	0.7+	731004	675	0.3-	0.4-	900728	675	1.1+	0.1+
730925	675	0.7+	0.5-	731005	675	0.7+	0.9-	900728	675	0.1-	0.4+

2315 T-2 = 1978 WU10
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	212.55297	(1950.0)	P	Q
n	0.21131883	Peri. 244.71656	+0.63405924	-0.77324367
a	2.7915404	Node 165.92450	+0.72067327	+0.58716481
e	0.2132792	Incl. 1.87180	+0.28035499	+0.23944040
P	4.66	H 16.2	G 0.25	

Residuals in seconds of arc

730929	675	0.1-	0.5-	731004	675	0.1+	0.4+	781129	675	0.1-	0.1-
730929	675	0.4+	0.7+	731004	675	0.6+	2.1+	781130	675	0.1-	0.3-
730930	675	0.6-	1.3-	731005	675	0.3-	0.3+	781130	675	0.2+	0.4+
730930	675	0.1+	0.6-	731005	675	0.2-	1.0-				

5187 T-2 = 1989 ER2 = 1990 EM
Epoch 1990 Nov. 5.0 ET = JDE 2448200.5 Kaneda

M	72.04337	(1950.0)	P	Q
n	0.08519652	Peri. 234.73313	-0.40145776	-0.90676343
a	5.1151082	Node 239.43266	+0.88137276	-0.34422594
e	0.0321771	Incl. 8.60887	+0.24902555	-0.24349247
P	11.57	H 11.3	G 0.25	

Residuals in seconds of arc

730924	675	1.7+	0.1-	730930	675	0.5-	0.2-	900302	809	1.1+	0.4-
730924	675	2.2+	0.8-	890302	809	0.7+	0.4+	900302	809	0.6+	0.5+
730925	675	1.3-	0.3-	890302	809	0.1-	0.8-	900302	809	0.9+	0.7+
730925	675	1.3-	0.9+	890302	809	1.0-	0.8-	900304	809	0.4-	0.1+
730929	675	0.6+	0.3-	890303	809	0.9+	0.1+	900304	809	1.6-	0.2-
730929	675	1.0-	0.6+	890303	809	0.2-	0.8+	900304	809	0.5-	0.6-
730930	675	0.4-	0.2+	890303	809	0.4-	0.3+				

5493 T-2 = 1989 CT6 = 1990 EE1

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5		(J-P)		Williams	
M 166.94021		(1950.0)		P	Q
n 0.08527761	Peri.	58.25551		+0.92189124	-0.36171182
a 5.1118750	Node	322.43267		+0.23080143	+0.80054681
e 0.0468436	Incl.	13.16452		+0.31120290	+0.47779636
P 11.56	H	10.5	G	0.25	

Residuals in seconds of arc

730930	675	1.3+	0.0	731005	675	0.1+	0.3-	900302	809	0.5+	1.7-
730930	675	0.7+	0.1+	890210	033	0.4-	0.3-	900304	809	1.1-	0.6+
731004	675	0.9-	0.8+	890210	033	0.3+	0.2+	900304	809	0.9-	1.1+
731004	675	0.9-	0.7-	900302	809	1.7+	0.7-	900304	809	1.2-	1.1+
731005	675	0.3-	0.1+	900302	809	1.1+	0.3-				

4250 T-3 = 1989 YR7

Epoch 1990 Nov. 5.0 ET = JDE 2448200.5				Kaneda	
M 149.67376		(1950.0)		P	Q
n 0.25674541	Peri.	229.40144		+0.97580014	-0.21542730
a 2.4517015	Node	142.99455		+0.21467859	+0.91124917
e 0.1889026	Incl.	3.57068		+0.04155959	+0.35102141
P 3.84	H	15.0	G	0.25	

Residuals in seconds of arc

771007	675	0.5-	0.2+	771016	675	0.8-	0.9+	771022	675	0.8+	2.3+
771011	675	1.1+	1.4-	771017	675	0.1-	0.8-	891226	033	0.4-	0.5-
771011	675	1.2+	0.2-	771017	675	0.3+	0.1+	891226	033	0.5-	0.6-
771012	675	0.8-	1.9-	771021	675	0.8+	0.3+	891226	033	0.9+	0.9+
771012	675	0.1-	0.3-	771021	675	0.3-	0.1-				
771016	675	0.4-	1.9+	771022	675	1.1-	0.9-				

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NEW NAMES OF MINOR PLANETS.

(3371) Giacconi = 1955 RZ

Discovered 1955 Sept. 14 at the Goethe Link Observatory.

Named in honor of Riccardo Giacconi, since 1981 the first director of the Space Telescope Science Institute. After serving as a research associate in the cosmic-ray physics group at Indiana University, and then briefly at Princeton, in 1959 he joined American Science and Engineering, where he began work on x-ray astronomy. His team there developed grazing-incidence x-ray telescopes, and in 1962 they discovered Sco X-1, the first known x-ray source outside the solar system. This was followed by the orbiting x-ray observatory UHURU, which made the first surveys of the x-ray sky. Joining the Harvard-Smithsonian Center for Astrophysics in 1973 as associate director for high-energy physics, Giacconi led the construction and successful operation of the powerful x-ray observatory HEAO-2, also known as Einstein, which made detailed images of x-ray sources. Name proposed by F. K. Edmondson. Citation prepared with the help of J. Tenn.

(3428) Roberts = 1952 JH

Discovered 1952 May 1 at the Goethe Link Observatory.

Named in memory of Walter Orr Roberts (1915-1990), from 1960 to 1970 the founding director of the National Center for Atmospheric Research. In the early 1940s he established the Harvard College Observatory's Fremont Pass Station (which later became the University of Colorado's High Altitude Observatory), where he made solar observations with the first coronagraph in the western hemisphere. His interests soon broadened from solar physics to climatic research in general, and he served as president (and later president emeritus) of the University Corporation for Atmospheric Research. His final major activity was the Greenhouse Glasnost project between scientists in the U.S. and the U.S.S.R. Name proposed by F. K. Edmondson.

(3604) Berkhuijsen = 5550 P-L

Discovered 1960 Oct. 17 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Named in honor of E. M. Berkhuijsen of the Max-Planck-Institut fur Radioastronomie, Bonn. Her fields of interest include continuum radio radiation of our Galaxy and other galaxies and the study of supernova remnants.

(4056) Timwarner = 1985 FZ1

Discovered 1985 Mar. 22 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named in memory of Timothy Warner (1961-1990), chief mission planner for the Cosmic Background Explorer's Diffuse Infrared Background Experiment (DIRBE). Tim skillfully integrated the science and engineering of DIRBE, translating the principal investigator's observing programs into command loads for the instrument that will perform an all-sky infrared survey and reveal the glow of the first stars and galaxies formed after the Big Bang. Prior to his work on COBE, he was an operations engineer for the Solar Maximum Mission's Coronagraph/Polarimeter experiment, scheduling the instrument and performing preliminary data analysis. He co-authored a paper on the instrument's observations of space debris, research that was consulted by Hubble Space Telescope engineers. Tim's artistic talents found expression in cartoons, paintings and contributions to Paramount Pictures' films, including special-effects work. He was also involved in rationalist causes, particularly in the exposure of flimflammery and fraudulent claims made in the name of science. Tim was found murdered on the night of 1990 Apr. 24, a day he had started with bright enthusiasm over the launch of the Space Telescope. Name suggested and citation provided by S. T. Snell.

(4459) Nusamaibashi = 1990 BP2

Discovered 1990 Jan. 30 by M. Matsuyama and K. Watanabe at Kushiro.

Named for the bridge spanning the Kushiro river and connecting the northern and southern parts of Kushiro city. When it was first built in 1889 the bridge was named Aihoku Bashi and was the longest in Hokkaido. The bridge has been rebuilt five times, most recently in 1976, and it now has a length of 124 m and a width of 34 m. The elegant Nusamai Bashi is known for its statues, by four well-known Japanese sculptors, of female representations of the seasons. Name suggested by the first discoverer.

(4486) Mithra = 1987 SB

Discovered 1987 Sept. 22 by E. W. Elst and V. G. Shkodrov at the Bulgarian National Observatory.

Named for the Indo-Iranian god of the heavenly light that led to mithraism, one of the last oriental mystery cults to reach the west, where it became the chief rival to and opponent of christianity. In Babylonia,

Chaldaean astrology was incorporated, while Greek art, religion and philosophy provided the models for mithraic iconography and the mithraic mysteries. The two religions have much in common: a divine lord by whom man was assured of elevation, a sacramental meal and a ritual of baptism. Many ruins of mithraic sanctuaries are still to be found in Europe, near Frankfurt and Heidelberg, for example. This minor planet is of Apollo type, and in Asia Minor around 330 B.C. the god Mithra was identified with the god Apollo. Citation prepared by E. W. Elst.

(4491) Otaru = 1988 RP

Discovered 1988 Sept. 7 by K. Endate and K. Watanabe at Kitami.

Named for a city of population 165 000, located in Hokkaido some 30 km west of Sapporo and overlooking the sea of Japan. Once a prosperous port, its trade has declined in recent years, but beautiful streets and houses, an old canal, warehouses and other stone buildings still remain. This combination makes Otaru a romantic city, and nowadays its main industry is artistic glassware. Name proposed by the second discoverer, following a suggestion by T. Hurukawa, president of the Otaru-Hoshiono-Kai group of amateur astronomers.

(4497) Taguchi = 1989 AE1

Discovered 1989 Jan. 4 by K. Endate and K. Watanabe at Kitami.

Named in honor of Takeo Taguchi (1950-), famous polisher of telescope mirrors and supporter of the development of amateur astronomy in Japan. He is chief of the optics polishing room at Takahashi Seisakujo, Ltd., which makes excellent mirrors, including the one in the astrocamera Ipusiron with which this discovery was made.

(4508) Takatsuki = 1990 FG1

Discovered 1990 Mar. 27 by K. Endate and K. Watanabe at Kitami.

Named in honor of Yukihiro Takatsuki (1952-), a member of the editorial staff of the astronomical periodical "Tenmon Guide". He continues to make excellent astronomical tools and materials and is an advocate of the use of the Schmidt telescope as an astrocamera. The discoverers have introduced such instruments to observing stations at Tsubetsu and Sapporo, and both were used to observe this minor planet.

(4527) Schoenberg = 1982 OK

Discovered 1982 July 24 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named for Arnold Schoenberg (1874-1951), Austrian composer. One of the twentieth century's seminal composers, Schoenberg developed the dodecaphonic system of composition. He was founder of the so-called Second Viennese School, whose followers included Alban Berg and Anton Webern.

(4528) Berg = 1983 PP

Discovered 1983 Aug. 13 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named for Alban Berg (1885-1935), Austrian composer. A pupil of Arnold Schoenberg, Berg did not produce a great quantity of music, but his two operas are pinnacles of twentieth-century music.

(4529) Webern = 1984 ED

Discovered 1984 Mar. 1 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named for Anton Webern (1883-1945), Austrian composer. Associated with Schoenberg and Berg, Webern refined the use of serialism in music. His mature compositions are terse and concentrated miniatures.

EPHEMERIDES.

1990 MU a,e,i = 1.62, 0.66, 24 Elements MPC 16881

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	08 17	19 16.27	-51 56.4	1.321	2.135	131.9	20.7	18.1
1990	08 27	19 06.54	-50 44.1					
1990	09 06	19 03.19	-49 22.1	1.619	2.246	115.6	23.9	18.8
1990	09 16	19 04.86	-47 58.2					
1990	09 26	19 10.38	-46 35.7	1.950	2.343	100.1	24.9	19.3
1990	10 06	19 18.80	-45 15.9					
1990	10 16	19 29.38	-43 58.3	2.290	2.427	85.7	24.2	19.7
1990	10 26	19 41.61	-42 42.1					
1990	11 05	19 55.04	-41 26.6	2.619	2.499	72.1	22.2	20.0

1990 OL a,e,i = 2.69, 0.45, 15 Elements MPC 16882

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	08 17	21 40.83	-08 08.1	0.480	1.491	174.4	3.8	15.6
1990	08 27	21 44.62	-13 11.5					
1990	09 06	21 49.46	-17 31.4	0.547	1.535	160.6	12.6	16.3
1990	09 16	21 55.99	-20 46.0					
1990	09 26	22 04.54	-22 50.7	0.685	1.598	141.8	22.8	17.2
1990	10 06	22 15.08	-23 52.4					
1990	10 16	22 27.27	-24 02.5	0.879	1.677	126.6	28.5	18.0
1990	10 26	22 40.78	-23 31.8					
1990	11 05	22 55.29	-22 30.4	1.117	1.768	113.8	30.9	18.6
1990	11 15	23 10.47	-21 06.2					
1990	11 25	23 26.15	-19 25.2	1.389	1.866	102.2	31.1	19.2
1990	12 05	23 42.15	-17 32.6					
1990	12 15	23 58.35	-15 32.4	1.687	1.969	91.1	30.0	19.8

1984 KB a,e,i = 2.22, 0.76, 5 Elements MPC 12959

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		V
1990	08 17	03 58.18	+17 23.3	1.378	1.596	-2.46	-6.8	18.6
1990	08 22	04 13.85	+17 50.2					
1990	08 27	04 31.05	+18 13.0	1.191	1.479	-3.10	-6.5	18.2
1990	09 01	04 50.08	+18 30.4					
1990	09 06	05 11.31	+18 40.1	1.018	1.358	-3.97	-4.9	17.8
1990	09 11	05 35.18	+18 39.2					
1990	09 16	06 02.11	+18 23.4	0.867	1.231	-5.08	-1.0	17.4
1990	09 21	06 32.48	+17 47.6					
1990	09 26	07 06.48	+16 45.4	0.749	1.099	-6.22	+5.8	17.1
1990	10 01	07 43.96	+15 11.1					
1990	10 06	08 24.26	+13 01.9	0.682	0.963	-6.67	+13.2	16.9
1990	10 11	09 06.18	+10 20.0					
1990	10 16	09 48.20	+07 14.8	0.682	0.827	-5.74	+15.5	16.9
1990	10 21	10 28.95	+03 59.4					
1990	10 26	11 07.55	+00 46.4	0.754	0.696	-4.20	+12.0	16.9
1990	10 31	11 43.73	-02 15.9					
1990	11 05	12 17.78	-05 04.3	0.890	0.586	-3.54	+9.0	16.7

Comet Shoemaker-Holt-Rodriquez (1988h) Elements MPC 14904

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m2
1990	08 17	07 59.93	-11 33.0	5.765	4.980	35.9	6.8	19.8
1990	08 27	08 05.49	-11 33.2					
1990	09 06	08 10.39	-11 38.9	5.796	5.134	45.1	8.0	19.9
1990	09 16	08 14.54	-11 48.9					
1990	09 26	08 17.84	-12 02.1	5.750	5.289	58.1	9.3	20.0
1990	10 06	08 20.17	-12 17.0					
1990	10 16	08 21.44	-12 32.2	5.643	5.443	73.4	10.1	20.1

1990 10 26	08 21.56	-12 46.2						
1990 11 05	08 20.44	-12 57.2	5.499	5.597	90.5	10.2	20.2	
1990 11 15	08 18.05	-13 03.2						
1990 11 25	08 14.38	-13 02.3	5.355	5.750	108.9	9.3	20.2	
1990 12 05	08 09.51	-12 52.7						
1990 12 15	08 03.56	-12 32.6	5.253	5.903	127.4	7.6	20.3	
1990 12 25	07 56.77	-12 00.9						
1991 01 04	07 49.43	-11 17.4	5.239	6.056	143.3	5.6	20.4	
1991 01 14	07 41.90	-10 22.5						
1991 01 24	07 34.54	-09 17.7	5.343	6.208	149.0	4.7	20.6	
1991 02 03	07 27.71	-08 05.2						
1991 02 13	07 21.67	-06 47.7	5.575	6.359	139.5	5.8	20.8	
1991 02 23	07 16.65	-05 27.9						
1991 03 05	07 12.78	-04 08.5	5.921	6.509	122.6	7.4	21.0	
1991 03 15	07 10.08	-02 51.4						
1991 03 25	07 08.56	-01 38.4	6.345	6.659	104.2	8.3	21.2	

1990 OA a,e,i = 2.16, 0.42, 8 Elements MPC 16881

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 09 06	21 25.91	-26 44.4	0.447	1.415	150.8	20.3	16.4
1990 09 16	21 36.30	-26 47.9					
1990 09 26	21 47.79	-26 09.2	0.613	1.509	136.8	27.1	17.4
1990 10 06	22 00.35	-25 00.0					
1990 10 16	22 13.77	-23 29.4	0.824	1.612	124.3	30.7	18.3
1990 10 26	22 27.92	-21 43.5					
1990 11 05	22 42.62	-19 47.1	1.077	1.720	112.5	32.2	19.0
1990 11 15	22 57.72	-17 43.8					
1990 11 25	23 13.13	-15 35.8	1.362	1.829	101.1	32.0	19.7

Comet Levy (1990c) Elements MPC 16841

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1990 10 16	15 07.33	-39 50.2	1.482	0.951	39.4	41.7	4.6
1990 10 26	14 52.65	-40 17.2					
1990 11 05	14 39.94	-40 29.6	1.760	0.960	25.1	26.0	5.0
1990 11 15	14 28.38	-40 33.9					
1990 11 25	14 17.16	-40 35.2	1.831	1.087	29.5	26.6	5.7
1990 12 05	14 05.21	-40 36.1					
1990 12 15	13 51.17	-40 35.8	1.720	1.288	48.0	34.6	6.3
1990 12 25	13 33.24	-40 28.6					
1991 01 04	13 09.24	-40 00.5	1.490	1.524	72.8	38.1	6.7
1991 01 14	12 36.97	-38 44.5					
1991 01 24	11 55.33	-35 55.8	1.243	1.772	104.9	32.5	7.0
1991 02 03	11 06.72	-30 44.8					
1991 02 13	10 17.70	-23 04.8	1.151	2.023	142.1	17.4	7.4
1991 02 23	09 35.47	-14 12.2					
1991 03 05	09 03.54	-05 56.3	1.366	2.272	148.7	13.1	8.2
1991 03 15	08 41.52	+00 43.8					
1991 03 25	08 27.48	+05 44.5	1.826	2.517	123.5	19.3	9.3
1991 04 04	08 19.38	+09 25.2					
1991 04 14	08 15.60	+12 06.8	2.396	2.758	100.3	21.0	10.3
1991 04 24	08 14.97	+14 05.9					
1991 05 04	08 16.62	+15 34.1	2.992	2.993	80.4	19.4	11.1
1991 05 14	08 19.94	+16 39.6					
1991 05 24	08 24.49	+17 28.1	3.564	3.224	62.5	16.2	11.8
1991 06 03	08 29.92	+18 03.6					
1991 06 13	08 35.98	+18 29.2	4.082	3.450	45.7	12.2	12.4
1991 06 23	08 42.48	+18 47.2					
1991 07 03	08 49.24	+18 59.4	4.521	3.671	29.5	7.8	12.9

Comet Austin (1989c1) Elements MPC 16551

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1990 10 16	16 36.99	-39 38.2	3.803	3.310	53.6	14.0	14.8
1990 10 26	16 49.38	-40 03.9					
1990 11 05	17 01.95	-40 29.3	4.259	3.559	40.2	10.4	15.3
1990 11 15	17 14.60	-40 54.1					
1990 11 25	17 27.26	-41 18.7	4.645	3.801	27.9	7.0	15.7

(3988) 1986 LA a,e,i = 1.54, 0.32, 11 Elements MPC 14176

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 10 16	06 14.42	+22 21.2	0.772	1.441	108.5	41.0	20.3
1990 10 26	06 16.69	+20 12.8					
1990 11 05	06 12.81	+17 56.9	0.703	1.532	128.5	30.5	19.9
1990 11 15	06 02.80	+15 37.5					
1990 11 25	05 47.57	+13 21.7	0.674	1.617	153.1	16.0	19.5
1990 12 05	05 29.40	+11 20.6					
1990 12 15	05 11.24	+09 45.7	0.725	1.697	166.1	8.0	19.5
1990 12 25	04 55.89	+08 44.9					
1991 01 04	04 45.10	+08 18.3	0.867	1.769	145.7	18.2	20.4
1991 01 14	04 39.30	+08 20.4					
1991 01 24	04 38.24	+08 43.7	1.079	1.833	125.2	26.0	21.1

Comet Tsuchiya-Kiuchi (1990i) Elements MPC 16841

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	m1
1990 10 16	10 52.92	-01 32.2	1.750	1.133	37.4	32.3	7.3
1990 10 26	10 39.84	-06 28.9					
1990 11 05	10 21.04	-12 43.5	1.363	1.253	62.0	44.3	7.2
1990 11 15	09 51.56	-20 48.2					
1990 11 25	09 01.97	-30 46.7	1.017	1.431	91.1	43.6	7.1
1990 12 05	07 39.64	-40 22.2					
1990 12 15	05 51.77	-44 16.7	0.990	1.640	112.3	33.8	7.6
1990 12 25	04 21.57	-41 22.2					
1991 01 04	03 27.06	-36 01.7	1.372	1.864	103.4	30.9	8.9
1991 01 14	02 57.06	-30 58.1					
1991 01 24	02 40.87	-26 46.3	1.926	2.095	85.6	27.9	10.1

1977 EO1 a,e,i = 3.03, 0.16, 3 Elements MPC 9476

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 09 26	03 38.16	+18 55.3	2.820	3.497	125.4	13.5	18.6
1990 10 06	03 35.36	+18 50.0					
1990 10 16	03 30.57	+18 38.1	2.624	3.502	146.9	8.9	18.2
1990 10 26	03 24.05	+18 19.9					
1990 11 05	03 16.30	+17 56.4	2.525	3.506	170.3	2.7	17.9
1990 11 15	03 08.01	+17 29.7					
1990 11 25	02 59.92	+17 02.5	2.543	3.508	165.6	4.0	18.0
1990 12 05	02 52.78	+16 37.8					
1990 12 15	02 47.14	+16 18.4	2.679	3.509	142.1	9.9	18.3

1984 BK a,e,i = 2.37, 0.10, 4 Elements MPC 14948

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 24.66	+29 10.1	1.329	2.178	139.1	17.3	16.1
1990 11 15	05 18.77	+29 09.7					
1990 11 25	05 09.63	+28 57.9	1.233	2.193	161.9	8.0	15.7
1990 12 05	04 58.53	+28 33.1					
1990 12 15	04 47.15	+27 56.4	1.235	2.211	170.1	4.4	15.5
1990 12 25	04 37.25	+27 12.5					
1991 01 04	04 30.19	+26 27.9	1.339	2.230	147.1	13.9	16.1
1991 01 14	04 26.63	+25 48.2					
1991 01 24	04 26.75	+25 17.0	1.526	2.250	126.0	20.7	16.6

(4315) 1979 SL11 a,e,i = 2.98, 0.29, 17 Elements MPC 15682

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 26.58	+38 18.5	2.727	3.511	136.3	11.2	17.9
1990	11 15	05 19.03	+39 01.9					
1990	11 25	05 09.43	+39 33.9	2.626	3.549	155.7	6.6	17.7
1990	12 05	04 58.59	+39 51.4					
1990	12 15	04 47.52	+39 53.4	2.638	3.585	161.5	5.0	17.6
1990	12 25	04 37.28	+39 41.0					
1991	01 04	04 28.78	+39 17.9	2.768	3.618	145.1	9.0	17.9
1991	01 14	04 22.58	+38 48.4					
1991	01 24	04 18.98	+38 17.1	2.996	3.649	124.9	12.8	18.3

1968 OA1 a,e,i = 2.33, 0.12, 6 Elements MPC 13038

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 23.44	+17 13.0	1.249	2.108	140.1	17.5	16.9
1990	11 15	05 17.94	+16 17.6					
1990	11 25	05 09.46	+15 22.9	1.167	2.129	162.5	8.0	16.5
1990	12 05	04 59.24	+14 33.2					
1990	12 15	04 48.82	+13 53.0	1.181	2.152	167.2	5.8	16.4
1990	12 25	04 39.78	+13 26.5					
1991	01 04	04 33.36	+13 15.3	1.296	2.177	145.2	14.9	17.0
1991	01 14	04 30.16	+13 19.1					
1991	01 24	04 30.37	+13 35.9	1.488	2.203	124.7	21.6	17.5

1976 SV10 a,e,i = 2.73, 0.07, 2 Elements MPC 15403

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 23.37	+25 14.2	2.019	2.850	140.0	12.9	17.2
1990	11 15	05 17.21	+25 08.7					
1990	11 25	05 08.85	+24 58.0	1.902	2.862	163.3	5.7	16.8
1990	12 05	04 59.17	+24 41.7					
1990	12 15	04 49.22	+24 20.8	1.896	2.873	171.5	2.9	16.6
1990	12 25	04 40.15	+23 57.4					
1991	01 04	04 32.93	+23 34.7	2.005	2.883	147.5	10.5	17.1
1991	01 14	04 28.14	+23 15.6					
1991	01 24	04 26.07	+23 01.9	2.207	2.892	125.6	16.1	17.5

1981 EP15 a,e,i = 2.34, 0.16, 5 Elements MPC 14345

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 23.55	+29 07.8	1.112	1.974	139.4	19.1	18.1
1990	11 15	05 18.74	+28 57.1					
1990	11 25	05 10.31	+28 33.2	1.025	1.987	162.0	8.8	17.6
1990	12 05	04 59.66	+27 55.1					
1990	12 15	04 48.70	+27 05.1	1.027	2.005	170.7	4.5	17.4
1990	12 25	04 39.38	+26 09.5					
1991	01 04	04 33.18	+25 16.0	1.126	2.027	147.7	15.0	18.0
1991	01 14	04 30.77	+24 30.5					
1991	01 24	04 32.25	+23 56.1	1.303	2.053	127.1	22.5	18.6

1981 EX43 a,e,i = 2.37, 0.14, 6 Elements MPC 13157

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 24.43	+16 51.7	1.336	2.189	139.9	17.0	17.6
1990	11 15	05 18.55	+16 04.3					
1990	11 25	05 09.85	+15 18.5	1.257	2.218	162.4	7.7	17.2
1990	12 05	04 59.53	+14 37.8					
1990	12 15	04 49.05	+14 05.8	1.276	2.247	167.4	5.5	17.2
1990	12 25	04 39.90	+13 45.9					
1991	01 04	04 33.26	+13 39.5	1.399	2.278	145.3	14.2	17.7
1991	01 14	04 29.71	+13 46.3					
1991	01 24	04 29.43	+14 04.6	1.603	2.308	124.6	20.5	18.2

2078 T-3 a,e,i = 2.57, 0.15, 7 Elements MPC 16243

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 28.21	+33 25.9	2.023	2.834	137.5	13.7	17.5
1990 11 15	05 21.75	+33 48.0					
1990 11 25	05 12.61	+33 59.7	1.870	2.813	158.9	7.3	17.1
1990 12 05	05 01.66	+33 57.7					
1990 12 15	04 50.12	+33 40.7	1.823	2.791	166.9	4.6	16.9
1990 12 25	04 39.37	+33 10.6					
1991 01 04	04 30.64	+32 31.8	1.891	2.768	146.9	11.2	17.2
1991 01 14	04 24.71	+31 50.0					
1991 01 24	04 21.98	+31 10.2	2.052	2.742	125.4	17.0	17.5

(4256) 1986 TX a,e,i = 2.35, 0.07, 3 Elements MPC 15397

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 28.79	+22 52.4	1.612	2.448	138.9	15.4	17.4
1990 11 15	05 22.45	+22 58.8					
1990 11 25	05 13.30	+23 02.4	1.500	2.460	162.6	6.9	17.0
1990 12 05	05 02.36	+23 02.0					
1990 12 15	04 50.96	+22 57.9	1.492	2.471	172.0	3.2	16.8
1990 12 25	04 40.59	+22 51.7					
1991 01 04	04 32.48	+22 46.2	1.595	2.480	147.4	12.3	17.3
1991 01 14	04 27.35	+22 44.2					
1991 01 24	04 25.51	+22 47.3	1.786	2.489	125.4	18.8	17.8

4327 T-3 a,e,i = 2.57, 0.11, 9 Elements MPC 13304

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 28.74	+26 22.3	1.888	2.713	138.7	14.0	18.7
1990 11 15	05 22.68	+26 56.0					
1990 11 25	05 13.93	+27 26.1	1.738	2.693	161.6	6.6	18.3
1990 12 05	05 03.28	+27 49.6					
1990 12 15	04 51.92	+28 04.9	1.696	2.672	170.9	3.3	18.1
1990 12 25	04 41.22	+28 12.0					
1991 01 04	04 32.43	+28 13.4	1.768	2.651	147.6	11.5	18.5
1991 01 14	04 26.41	+28 12.6					
1991 01 24	04 23.59	+28 12.8	1.931	2.629	125.6	17.7	18.8

1984 HR1 a,e,i = 2.60, 0.15, 5 Elements MPC 15709

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 29.29	+27 51.1	2.150	2.965	138.3	12.8	17.8
1990 11 15	05 22.75	+28 07.7					
1990 11 25	05 13.90	+28 18.3	2.021	2.973	161.3	6.1	17.4
1990 12 05	05 03.57	+28 21.3					
1990 12 15	04 52.81	+28 15.9	2.003	2.979	171.0	3.0	17.2
1990 12 25	04 42.79	+28 03.5					
1991 01 04	04 34.54	+27 47.2	2.103	2.983	148.1	10.0	17.7
1991 01 14	04 28.73	+27 30.3					
1991 01 24	04 25.70	+27 15.8	2.299	2.985	126.0	15.5	18.0

1986 QT a,e,i = 2.22, 0.16, 3 Elements MPC 14787

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 32.74	+19 52.2	1.658	2.486	138.0	15.5	17.8
1990 11 15	05 25.96	+19 44.3					
1990 11 25	05 16.46	+19 35.9	1.550	2.506	161.8	7.1	17.4
1990 12 05	05 05.23	+19 27.0					
1990 12 15	04 53.58	+19 18.5	1.547	2.525	171.5	3.3	17.2
1990 12 25	04 42.91	+19 12.3					
1991 01 04	04 34.41	+19 10.3	1.658	2.540	147.2	12.1	17.8
1991 01 14	04 28.78	+19 14.2					
1991 01 24	04 26.33	+19 24.8	1.858	2.553	125.0	18.4	18.2

1989 NO a,e,i = 2.25, 0.15, 5 Elements MPC 15071

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 34.21	+29 59.9	1.779	2.593	136.9	15.1	17.6
1990	11 15	05 27.27	+30 18.2					
1990	11 25	05 17.40	+30 27.7	1.649	2.598	159.8	7.5	17.1
1990	12 05	05 05.57	+30 25.5					
1990	12 15	04 53.15	+30 10.5	1.625	2.599	169.9	3.8	16.9
1990	12 25	04 41.66	+29 44.8					
1991	01 04	04 32.42	+29 13.1	1.715	2.599	147.6	11.7	17.4
1991	01 14	04 26.23	+28 40.7					
1991	01 24	04 23.42	+28 12.0	1.896	2.595	125.5	18.0	17.8

1978 SE3 a,e,i = 2.43, 0.11, 3 Elements MPC 10516

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 30.49	+20 28.1	1.724	2.553	138.6	14.9	17.6
1990	11 15	05 24.32	+20 07.0					
1990	11 25	05 15.62	+19 44.3	1.617	2.574	162.0	6.8	17.2
1990	12 05	05 05.33	+19 20.7					
1990	12 15	04 54.68	+18 58.1	1.616	2.594	171.6	3.2	17.1
1990	12 25	04 44.96	+18 38.8					
1991	01 04	04 37.25	+18 25.1	1.728	2.612	147.7	11.6	17.6
1991	01 14	04 32.22	+18 18.9					
1991	01 24	04 30.16	+18 20.7	1.930	2.629	125.7	17.7	18.0

1493 T-2 a,e,i = 3.07, 0.18, 2 Elements MPC 15081

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 25.69	+23 16.7	1.857	2.690	139.6	13.8	18.7
1990	11 15	05 21.19	+23 18.9					
1990	11 25	05 14.22	+23 18.3	1.703	2.660	162.4	6.4	18.2
1990	12 05	05 05.53	+23 14.6					
1990	12 15	04 56.18	+23 07.8	1.653	2.633	173.2	2.5	17.9
1990	12 25	04 47.38	+22 59.3					
1991	01 04	04 40.28	+22 51.4	1.713	2.607	149.1	11.2	18.4
1991	01 14	04 35.68	+22 46.6					
1991	01 24	04 34.02	+22 46.5	1.865	2.584	127.3	17.6	18.7

1309 T-2 a,e,i = 3.09, 0.16, 2 Elements MPC 14964

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 26.37	+23 53.5	1.761	2.595	139.4	14.4	16.5
1990	11 15	05 21.78	+23 59.5					
1990	11 25	05 14.69	+24 02.2	1.640	2.598	162.2	6.7	16.1
1990	12 05	05 05.96	+24 01.1					
1990	12 15	04 56.71	+23 56.2	1.623	2.603	173.3	2.5	15.9
1990	12 25	04 48.19	+23 48.9					
1991	01 04	04 41.52	+23 41.6	1.716	2.611	149.5	11.0	16.4
1991	01 14	04 37.40	+23 36.8					
1991	01 24	04 36.19	+23 36.0	1.899	2.622	127.9	17.2	16.8

(4550) 1977 HH1 a,e,i = 3.12, 0.21, 0 Elements MPC 16689

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 28.77	+23 33.6	2.365	3.180	138.9	11.8	17.8
1990	11 15	05 22.90	+23 29.8					
1990	11 25	05 15.19	+23 23.1	2.266	3.220	162.2	5.4	17.5
1990	12 05	05 06.36	+23 13.3					
1990	12 15	04 57.28	+23 01.0	2.279	3.259	173.4	2.0	17.4
1990	12 25	04 48.87	+22 47.6					
1991	01 04	04 41.94	+22 34.9	2.412	3.297	149.5	8.7	17.8
1991	01 14	04 37.00	+22 24.9					
1991	01 24	04 34.35	+22 18.9	2.644	3.335	127.3	13.6	18.2

1989 NE1 a,e,i = 2.57, 0.25, 13 Elements MPC 15254

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 38.66	+33 14.7	2.152	2.941	135.4	13.7	18.2
1990 11 15	05 31.37	+34 00.8					
1990 11 25	05 21.49	+34 38.0	2.045	2.979	157.0	7.4	17.9
1990 12 05	05 09.91	+35 02.2					
1990 12 15	04 57.81	+35 11.4	2.048	3.014	166.6	4.4	17.8
1990 12 25	04 46.50	+35 06.3					
1991 01 04	04 37.13	+34 50.4	2.169	3.047	147.8	9.9	18.2
1991 01 14	04 30.41	+34 28.6					
1991 01 24	04 26.68	+34 05.6	2.388	3.077	126.5	14.9	18.6

1985 RZ a,e,i = 2.86, 0.35, 12 Elements MPC 11428

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 24.48	+46 11.9	1.016	1.845	133.5	22.9	15.8
1990 11 15	05 23.75	+47 22.2					
1990 11 25	05 18.22	+48 02.3	0.930	1.844	148.2	16.4	15.4
1990 12 05	05 09.28	+48 02.3					
1990 12 15	04 59.25	+47 17.6	0.914	1.854	155.3	12.8	15.3
1990 12 25	04 50.83	+45 52.9					
1991 01 04	04 46.09	+44 01.0	0.979	1.877	146.2	16.9	15.6
1991 01 14	04 45.85	+41 57.2					
1991 01 24	04 50.12	+39 53.7	1.117	1.911	130.7	23.0	16.1

1981 EX30 a,e,i = 2.36, 0.22, 3 Elements MPC 14782

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 34.69	+18 10.9	1.128	1.976	137.5	19.8	18.1
1990 11 15	05 29.87	+17 54.1					
1990 11 25	05 21.62	+17 39.9	1.059	2.016	160.3	9.5	17.7
1990 12 05	05 11.19	+17 29.6					
1990 12 15	05 00.28	+17 24.7	1.081	2.060	171.7	4.0	17.6
1990 12 25	04 50.65	+17 26.7					
1991 01 04	04 43.71	+17 36.6	1.202	2.106	148.9	13.9	18.2
1991 01 14	04 40.15	+17 54.6					
1991 01 24	04 40.19	+18 19.8	1.403	2.154	128.0	21.1	18.8

1986 QA3 a,e,i = 2.23, 0.13, 2 Elements MPC 12134

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 38.50	+22 16.1	1.618	2.437	136.7	16.2	17.2
1990 11 15	05 32.19	+22 14.9					
1990 11 25	05 22.94	+22 11.4	1.502	2.455	160.4	7.7	16.8
1990 12 05	05 11.72	+22 04.9					
1990 12 15	04 59.85	+21 55.7	1.490	2.471	173.9	2.4	16.6
1990 12 25	04 48.84	+21 45.4					
1991 01 04	04 39.97	+21 36.7	1.591	2.485	148.9	11.8	17.1
1991 01 14	04 34.05	+21 32.2					
1991 01 24	04 31.41	+21 33.5	1.782	2.497	126.6	18.5	17.6

(4185) 1975 ED a,e,i = 2.22, 0.10, 2 Elements MPC 15221

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 37.87	+24 19.3	1.594	2.414	136.8	16.3	17.0
1990 11 15	05 32.15	+24 09.9					
1990 11 25	05 23.31	+23 55.7	1.452	2.405	160.2	8.0	16.5
1990 12 05	05 12.28	+23 35.8					
1990 12 15	05 00.38	+23 10.7	1.412	2.393	174.1	2.4	16.2
1990 12 25	04 49.18	+22 42.9					
1991 01 04	04 40.11	+22 16.3	1.482	2.380	149.0	12.3	16.7
1991 01 14	04 34.07	+21 54.7					
1991 01 24	04 31.49	+21 40.7	1.642	2.365	126.6	19.5	17.1

1982 WM a,e,i = 2.43, 0.16, 5 Elements MPC 13606

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 34.59	+18 37.7	1.263	2.104	137.6	18.5	16.0
1990	11 15	05 29.97	+18 44.1					
1990	11 25	05 22.05	+18 53.4	1.171	2.127	160.4	8.9	15.5
1990	12 05	05 11.92	+19 05.4					
1990	12 15	05 01.09	+19 19.6	1.173	2.153	173.0	3.2	15.3
1990	12 25	04 51.24	+19 36.6					
1991	01 04	04 43.82	+19 57.0	1.277	2.182	149.5	13.2	15.9
1991	01 14	04 39.64	+20 21.4					
1991	01 24	04 39.02	+20 50.0	1.465	2.213	128.2	20.5	16.4

1985 TH1 a,e,i = 2.74, 0.07, 2 Elements MPC 14194

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 33.45	+20 48.1	1.741	2.564	137.9	15.0	17.1
1990	11 15	05 28.80	+20 36.5					
1990	11 25	05 21.54	+20 23.8	1.608	2.561	160.7	7.3	16.6
1990	12 05	05 12.48	+20 10.4					
1990	12 15	05 02.73	+19 57.3	1.579	2.559	173.7	2.4	16.4
1990	12 25	04 53.55	+19 46.1					
1991	01 04	04 46.13	+19 38.9	1.659	2.559	150.0	11.1	16.8
1991	01 14	04 41.23	+19 37.3					
1991	01 24	04 39.28	+19 42.2	1.832	2.559	128.1	17.6	17.3

(4049) 1973 QD2 a,e,i = 3.07, 0.27, 2 Elements MPC 14464

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 35.24	+21 59.6	2.522	3.321	137.5	11.6	17.3
1990	11 15	05 29.42	+21 57.7					
1990	11 25	05 21.80	+21 54.4	2.419	3.366	160.7	5.6	17.0
1990	12 05	05 13.03	+21 49.4					
1990	12 15	05 03.94	+21 43.1	2.429	3.411	174.7	1.5	16.9
1990	12 25	04 55.38	+21 36.3					
1991	01 04	04 48.13	+21 30.6	2.562	3.453	150.8	8.0	17.3
1991	01 14	04 42.72	+21 27.1					
1991	01 24	04 39.45	+21 27.1	2.797	3.494	128.4	12.8	17.7

(4037) Ikeya a,e,i = 2.77, 0.16, 8 Elements MPC 14337

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 37.45	+34 01.0	1.537	2.349	135.5	17.2	16.0
1990	11 15	05 33.48	+34 54.7					
1990	11 25	05 26.06	+35 39.2	1.404	2.339	155.7	10.0	15.5
1990	12 05	05 16.04	+36 08.4					
1990	12 15	05 04.85	+36 18.4	1.365	2.333	166.1	5.8	15.3
1990	12 25	04 54.24	+36 08.8					
1991	01 04	04 45.87	+35 44.0	1.430	2.330	149.3	12.4	15.7
1991	01 14	04 40.80	+35 10.5					
1991	01 24	04 39.50	+34 34.7	1.581	2.331	129.1	19.1	16.1

1981 DG3 a,e,i = 3.20, 0.09, 15 Elements MPC 11837

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 41.92	+42 06.3	2.709	3.455	132.3	12.3	17.0
1990	11 15	05 36.16	+42 33.6					
1990	11 25	05 28.00	+42 49.1	2.549	3.446	151.0	8.0	16.7
1990	12 05	05 18.15	+42 49.2					
1990	12 15	05 07.59	+42 31.7	2.494	3.437	160.3	5.5	16.6
1990	12 25	04 57.45	+41 57.3					
1991	01 04	04 48.78	+41 09.4	2.553	3.427	147.9	8.8	16.7
1991	01 14	04 42.33	+40 12.9					
1991	01 24	04 38.53	+39 13.1	2.714	3.416	128.6	13.0	17.0

(4270) 1975 TJ6 a,e,i = 2.37, 0.18, 12 Elements MPC 15539

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 35.77	+04 30.8	1.129	1.959	134.8	21.0	16.2
1990	11 15	05 33.03	+04 07.5					
1990	11 25	05 26.81	+04 04.2	1.014	1.946	153.1	13.3	15.8
1990	12 05	05 17.97	+04 26.9					
1990	12 15	05 07.89	+05 18.2	0.979	1.938	161.6	9.2	15.5
1990	12 25	04 58.33	+06 36.6					
1991	01 04	04 50.94	+08 15.9	1.036	1.936	147.0	16.1	15.9
1991	01 14	04 46.80	+10 08.4					
1991	01 24	04 46.45	+12 06.8	1.171	1.940	128.1	23.5	16.4

1986 RV2 a,e,i = 2.27, 0.19, 4 Elements MPC 14789

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 44.43	+17 36.8	1.747	2.548	135.2	15.9	18.0
1990	11 15	05 38.40	+17 10.8					
1990	11 25	05 29.68	+16 46.1	1.633	2.576	158.2	8.2	17.6
1990	12 05	05 19.14	+16 23.9					
1990	12 15	05 07.93	+16 05.9	1.623	2.601	171.7	3.1	17.4
1990	12 25	04 57.37	+15 53.8					
1991	01 04	04 48.61	+15 49.1	1.727	2.623	149.5	11.0	17.9
1991	01 14	04 42.42	+15 52.5					
1991	01 24	04 39.18	+16 04.0	1.926	2.642	127.3	17.2	18.3

(4477) 1983 SB a,e,i = 2.22, 0.16, 3 Elements MPC 16409

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 44.73	+21 29.1	1.261	2.085	135.3	19.6	17.4
1990	11 15	05 39.52	+21 04.5					
1990	11 25	05 30.83	+20 38.1	1.173	2.122	158.6	9.8	16.9
1990	12 05	05 19.79	+20 10.5					
1990	12 15	05 07.99	+19 43.4	1.178	2.160	174.6	2.5	16.7
1990	12 25	04 57.21	+19 19.8					
1991	01 04	04 48.90	+19 02.9	1.288	2.197	150.5	12.7	17.3
1991	01 14	04 43.88	+18 54.6					
1991	01 24	04 42.45	+18 55.5	1.483	2.235	128.7	20.1	17.9

(4129) Richelen a,e,i = 2.56, 0.26, 7 Elements MPC 14777

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 45.51	+22 18.1	1.907	2.701	135.1	15.0	17.5
1990	11 15	05 39.38	+21 50.2					
1990	11 25	05 30.80	+21 19.5	1.809	2.751	158.6	7.5	17.2
1990	12 05	05 20.63	+20 46.8					
1990	12 15	05 09.96	+20 13.6	1.817	2.799	175.2	1.7	16.9
1990	12 25	05 00.00	+19 42.2					
1991	01 04	04 51.77	+19 15.2	1.944	2.845	151.2	9.6	17.5
1991	01 14	04 45.91	+18 54.8					
1991	01 24	04 42.76	+18 42.0	2.169	2.888	128.7	15.4	17.9

1981 EB1 a,e,i = 3.16, 0.08, 3 Elements MPC 12790

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 43.57	+20 31.3	2.586	3.365	135.5	11.9	18.3
1990	11 15	05 39.08	+20 25.8					
1990	11 25	05 32.64	+20 20.3	2.420	3.357	158.1	6.3	18.0
1990	12 05	05 24.78	+20 14.6					
1990	12 15	05 16.22	+20 09.1	2.364	3.347	176.2	1.1	17.6
1990	12 25	05 07.80	+20 04.4					
1991	01 04	05 00.36	+20 01.5	2.429	3.337	153.3	7.6	18.0
1991	01 14	04 54.55	+20 01.3					
1991	01 24	04 50.81	+20 04.8	2.598	3.326	130.8	12.9	18.3

(4010) 1977 QJ2 a,e,i = 2.55, 0.13, 5 Elements MPC 14327

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 52.62	+30 18.7	1.984	2.757	133.0	15.3	17.5
1990	11 15	05 47.28	+30 28.8					
1990	11 25	05 39.13	+30 32.3	1.848	2.776	155.4	8.5	17.2
1990	12 05	05 28.93	+30 26.4					
1990	12 15	05 17.77	+30 09.8	1.815	2.794	172.8	2.5	16.9
1990	12 25	05 06.97	+29 43.4					
1991	01 04	04 57.78	+29 10.5	1.898	2.810	153.1	9.1	17.3
1991	01 14	04 51.03	+28 35.4					
1991	01 24	04 47.21	+28 02.3	2.081	2.824	130.8	15.3	17.7

1981 EQ18 a,e,i = 3.13, 0.17, 2 Elements MPC 11042

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 45.99	+20 48.8	1.844	2.640	135.0	15.4	18.2
1990	11 15	05 42.32	+20 42.3					
1990	11 25	05 36.09	+20 36.1	1.720	2.658	157.3	8.2	17.8
1990	12 05	05 28.01	+20 30.0					
1990	12 15	05 19.04	+20 24.5	1.695	2.678	176.8	1.2	17.4
1990	12 25	05 10.35	+20 20.2					
1991	01 04	05 03.06	+20 18.4	1.783	2.701	154.0	9.2	18.0
1991	01 14	04 57.94	+20 20.3					
1991	01 24	04 55.46	+20 26.6	1.968	2.726	131.9	15.6	18.4

1983 AF2 a,e,i = 1.96, 0.14, 22 Elements MPC 12570

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 10.87	+61 32.6	0.950	1.685	120.4	30.5	15.7
1990	11 15	06 08.99	+62 29.7					
1990	11 25	05 57.66	+62 45.5	0.855	1.691	133.2	25.2	15.3
1990	12 05	05 38.91	+61 59.0					
1990	12 15	05 17.65	+59 54.9	0.809	1.703	143.3	20.2	15.1
1990	12 25	04 59.65	+56 35.3					
1991	01 04	04 48.48	+52 23.7	0.835	1.720	141.9	20.7	15.2
1991	01 14	04 44.61	+47 51.6					
1991	01 24	04 47.07	+43 26.1	0.940	1.741	129.6	25.8	15.6

2208 P-L a,e,i = 2.62, 0.25, 5 Elements MPC 12571

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 43.08	+20 37.2	1.128	1.963	135.6	20.7	18.6
1990	11 15	05 42.17	+19 54.3					
1990	11 25	05 37.60	+19 09.0	1.009	1.956	156.8	11.5	18.1
1990	12 05	05 30.19	+18 24.1					
1990	12 15	05 21.31	+17 43.1	0.974	1.956	174.4	2.8	17.7
1990	12 25	05 12.69	+17 10.0					
1991	01 04	05 06.05	+16 48.1	1.033	1.964	153.8	12.8	18.2
1991	01 14	05 02.47	+16 39.0					
1991	01 24	05 02.51	+16 42.2	1.173	1.979	133.0	21.3	18.7

5162 T-2 a,e,i = 3.06, 0.08, 9 Elements MPC 15907

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 52.97	+33 25.0	2.445	3.199	132.4	13.2	17.1
1990	11 15	05 48.18	+33 36.9					
1990	11 25	05 40.99	+33 41.6	2.295	3.211	153.9	7.8	16.8
1990	12 05	05 32.05	+33 36.5					
1990	12 15	05 22.24	+33 20.3	2.248	3.221	169.8	3.1	16.6
1990	12 25	05 12.61	+32 53.5					
1991	01 04	05 04.18	+32 18.5	2.320	3.232	153.9	7.7	16.9
1991	01 14	04 57.73	+31 39.3					
1991	01 24	04 53.72	+30 59.4	2.497	3.241	132.2	13.0	17.2

(4204) 1985 JG1 a,e,i = 2.27, 0.09, 4 Elements MPC 15229

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 53.80	+20 42.5	1.542	2.335	133.1	18.1	16.8
1990	11 15	05 50.06	+20 17.0					
1990	11 25	05 43.02	+19 50.4	1.381	2.317	155.6	10.1	16.3
1990	12 05	05 33.34	+19 23.0					
1990	12 15	05 22.15	+18 56.1	1.315	2.298	175.6	1.9	15.8
1990	12 25	05 11.00	+18 32.0					
1991	01 04	05 01.42	+18 13.2	1.358	2.279	153.2	11.2	16.3
1991	01 14	04 54.57	+18 02.2					
1991	01 24	04 51.10	+18 00.2	1.492	2.259	130.5	19.3	16.7

1251 T-2 a,e,i = 3.07, 0.16, 1 Elements MPC 15077

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 49.42	+21 40.6	1.843	2.632	134.2	15.7	17.7
1990	11 15	05 46.47	+21 35.5					
1990	11 25	05 40.82	+21 30.3	1.681	2.615	156.3	8.7	17.2
1990	12 05	05 33.06	+21 24.6					
1990	12 15	05 24.10	+21 18.5	1.616	2.600	178.1	0.7	16.7
1990	12 25	05 15.12	+21 12.6					
1991	01 04	05 07.36	+21 08.2	1.663	2.588	155.1	9.2	17.2
1991	01 14	05 01.73	+21 06.8					
1991	01 24	04 58.86	+21 09.7	1.807	2.579	132.8	16.3	17.6

1981 EA28 a,e,i = 2.36, 0.14, 8 Elements MPC 15880

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 00.99	+33 56.5	1.430	2.208	130.7	19.9	16.3
1990	11 15	05 56.98	+34 47.8					
1990	11 25	05 48.94	+35 30.8	1.319	2.237	151.7	12.1	15.9
1990	12 05	05 37.76	+35 58.6					
1990	12 15	05 24.94	+36 06.0	1.297	2.267	167.1	5.6	15.6
1990	12 25	05 12.44	+35 52.1					
1991	01 04	05 02.13	+35 21.2	1.380	2.297	152.6	11.4	16.0
1991	01 14	04 55.21	+34 40.7					
1991	01 24	04 52.20	+33 57.7	1.553	2.328	131.8	18.4	16.5

1985 GO a,e,i = 2.25, 0.10, 4 Elements MPC 10029

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 59.42	+20 22.7	1.673	2.449	131.8	17.6	18.1
1990	11 15	05 55.35	+20 27.7					
1990	11 25	05 48.06	+20 34.9	1.508	2.436	154.5	10.0	17.6
1990	12 05	05 38.14	+20 43.3					
1990	12 15	05 26.62	+20 52.1	1.438	2.422	177.7	1.0	17.0
1990	12 25	05 14.95	+21 00.8					
1991	01 04	05 04.65	+21 10.0	1.481	2.407	154.5	10.1	17.5
1991	01 14	04 56.88	+21 21.1					
1991	01 24	04 52.36	+21 35.4	1.621	2.389	131.4	18.0	18.0

1989 NM a,e,i = 2.56, 0.16, 8 Elements MPC 15071

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	05 59.29	+18 33.2	1.951	2.714	131.7	15.8	17.4
1990	11 15	05 54.55	+18 43.7					
1990	11 25	05 47.15	+18 57.4	1.819	2.744	154.6	8.9	17.0
1990	12 05	05 37.73	+19 13.7					
1990	12 15	05 27.22	+19 31.6	1.789	2.772	176.3	1.3	16.6
1990	12 25	05 16.82	+19 50.5					
1991	01 04	05 07.68	+20 10.4	1.877	2.799	155.0	8.5	17.1
1991	01 14	05 00.66	+20 31.6					
1991	01 24	04 56.31	+20 54.6	2.067	2.824	132.2	15.0	17.6

1981 EG36 a,e,i = 3.16, 0.05, 5 Elements MPC 10622

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 53.59	+16 28.2	2.328	3.089	132.9	13.6	18.0
1990 11 15	05 49.82	+16 09.0					
1990 11 25	05 43.91	+15 52.3	2.176	3.097	154.7	7.8	17.6
1990 12 05	05 36.40	+15 39.1					
1990 12 15	05 28.00	+15 30.2	2.128	3.106	172.3	2.4	17.3
1990 12 25	05 19.63	+15 26.5					
1991 01 04	05 12.17	+15 28.6	2.196	3.114	154.8	7.7	17.7
1991 01 14	05 06.34	+15 36.7					
1991 01 24	05 02.62	+15 50.5	2.369	3.123	132.8	13.4	18.0

1979 QJ1 a,e,i = 2.24, 0.10, 8 Elements MPC 13598

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 00.74	+12 04.0	1.519	2.292	130.6	19.2	17.6
1990 11 15	05 57.85	+11 31.8					
1990 11 25	05 51.68	+11 06.8	1.352	2.269	151.4	12.0	17.1
1990 12 05	05 42.73	+10 52.1					
1990 12 15	05 32.01	+10 50.6	1.274	2.246	167.5	5.4	16.7
1990 12 25	05 20.92	+11 03.8					
1991 01 04	05 11.05	+11 31.4	1.301	2.222	152.9	11.6	16.9
1991 01 14	05 03.61	+12 11.7					
1991 01 24	04 59.45	+13 02.0	1.420	2.199	131.4	19.6	17.3

(4402) 1987 DP a,e,i = 2.89, 0.02, 8 Elements MPC 16014

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 58.22	+13 11.9	2.085	2.839	131.4	15.2	16.8
1990 11 15	05 54.80	+12 38.8					
1990 11 25	05 48.99	+12 10.2	1.929	2.841	152.4	9.3	16.4
1990 12 05	05 41.32	+11 48.2					
1990 12 15	05 32.58	+11 34.6	1.873	2.844	168.3	4.0	16.2
1990 12 25	05 23.74	+11 30.7					
1991 01 04	05 15.82	+11 37.0	1.930	2.846	154.0	8.7	16.4
1991 01 14	05 09.65	+11 53.0					
1991 01 24	05 05.78	+12 17.4	2.088	2.849	132.7	14.7	16.8

(4457) van Gogh a,e,i = 2.66, 0.13, 14 Elements MPC 16225

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	05 58.12	+05 37.0	1.880	2.627	129.8	16.9	16.6
1990 11 15	05 55.19	+04 24.2					
1990 11 25	05 49.65	+03 18.8	1.709	2.600	148.1	11.6	16.2
1990 12 05	05 42.00	+02 26.1					
1990 12 15	05 33.01	+01 51.1	1.631	2.572	158.6	8.0	15.9
1990 12 25	05 23.77	+01 37.6					
1991 01 04	05 15.42	+01 46.4	1.657	2.545	148.0	11.8	16.1
1991 01 14	05 08.92	+02 15.5					
1991 01 24	05 04.94	+03 01.5	1.776	2.519	129.5	17.6	16.4

1986 RQ a,e,i = 2.31, 0.19, 9 Elements MPC 11342

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 05.86	+14 09.2	1.622	2.381	129.7	18.7	17.8
1990 11 15	06 01.48	+13 12.4					
1990 11 25	05 54.07	+12 19.6	1.508	2.421	151.3	11.3	17.4
1990 12 05	05 44.37	+11 34.3					
1990 12 15	05 33.48	+10 59.6	1.488	2.459	167.7	4.9	17.2
1990 12 25	05 22.73	+10 37.9					
1991 01 04	05 13.43	+10 30.3	1.579	2.495	152.9	10.3	17.6
1991 01 14	05 06.50	+10 36.2					
1991 01 24	05 02.47	+10 53.8	1.767	2.529	131.5	16.9	18.0

2086 T-2 a,e,i = 3.04, 0.25, 6 Elements MPC 15257

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 01.29	+31 31.5	2.090	2.840	131.0	15.3	17.6
1990	11 15	05 58.33	+31 56.8					
1990	11 25	05 52.44	+32 18.1	1.879	2.790	152.2	9.5	17.1
1990	12 05	05 44.05	+32 31.9					
1990	12 15	05 33.98	+32 34.8	1.764	2.740	170.5	3.4	16.7
1990	12 25	05 23.43	+32 25.4					
1991	01 04	05 13.77	+32 04.6	1.763	2.690	155.9	8.6	16.9
1991	01 14	05 06.16	+31 35.9					
1991	01 24	05 01.43	+31 03.8	1.862	2.642	133.9	15.6	17.2

(4169) Celsius a,e,i = 3.39, 0.17, 10 Elements MPC 15219

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 03.97	+36 43.9	2.304	3.034	129.6	14.6	15.9
1990	11 15	06 00.16	+37 21.2					
1990	11 25	05 53.61	+37 51.1	2.169	3.062	149.8	9.3	15.7
1990	12 05	05 44.94	+38 09.7					
1990	12 15	05 35.05	+38 14.0	2.131	3.092	164.8	4.8	15.5
1990	12 25	05 25.11	+38 02.8					
1991	01 04	05 16.30	+37 38.2	2.207	3.122	154.3	7.9	15.7
1991	01 14	05 09.52	+37 04.0					
1991	01 24	05 05.33	+36 24.9	2.386	3.153	134.2	12.9	16.0

1983 VM7 a,e,i = 2.26, 0.15, 4 Elements MPC 13158

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 07.24	+23 52.9	1.200	1.989	130.1	22.4	16.3
1990	11 15	06 05.28	+24 19.9					
1990	11 25	05 59.18	+24 48.7	1.087	2.013	152.0	13.3	15.9
1990	12 05	05 49.62	+25 16.0					
1990	12 15	05 37.98	+25 38.0	1.057	2.040	176.3	1.8	15.4
1990	12 25	05 26.17	+25 52.6					
1991	01 04	05 16.15	+26 00.3	1.127	2.070	157.4	10.5	15.9
1991	01 14	05 09.32	+26 04.1					
1991	01 24	05 06.38	+26 07.1	1.287	2.101	135.0	19.4	16.5

1981 EY45 a,e,i = 3.15, 0.18, 4 Elements MPC 10624

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 10.62	+28 33.6	1.864	2.607	129.2	17.1	17.7
1990	11 15	06 08.50	+28 41.4					
1990	11 25	06 03.37	+28 46.0	1.716	2.622	150.7	10.6	17.4
1990	12 05	05 55.76	+28 45.0					
1990	12 15	05 46.58	+28 36.7	1.660	2.640	172.9	2.7	17.0
1990	12 25	05 37.05	+28 20.4					
1991	01 04	05 28.48	+27 57.8	1.715	2.660	159.9	7.3	17.3
1991	01 14	05 21.89	+27 31.7					
1991	01 24	05 17.99	+27 05.4	1.873	2.683	137.6	14.3	17.7

1986 TB3 a,e,i = 2.27, 0.18, 5 Elements MPC 11733

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 20.13	+16 11.7	1.851	2.568	126.5	18.1	18.2
1990	11 15	06 16.51	+15 49.3					
1990	11 25	06 09.90	+15 31.3	1.698	2.592	148.6	11.5	17.8
1990	12 05	06 00.79	+15 18.4					
1990	12 15	05 50.07	+15 11.5	1.639	2.614	170.2	3.7	17.5
1990	12 25	05 38.92	+15 11.2					
1991	01 04	05 28.65	+15 17.4	1.694	2.633	158.4	7.9	17.7
1991	01 14	05 20.32	+15 30.3					
1991	01 24	05 14.65	+15 49.2	1.855	2.649	135.6	15.1	18.2

1989 LU a,e,i = 2.36, 0.18, 2 Elements MPC 14958

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 22.55	+25 28.2	1.660	2.388	126.6	19.5	17.4
1990	11 15	06 19.30	+25 29.7					
1990	11 25	06 12.59	+25 30.4	1.527	2.427	149.0	12.1	17.0
1990	12 05	06 03.00	+25 28.0					
1990	12 15	05 51.59	+25 20.6	1.484	2.465	173.8	2.5	16.6
1990	12 25	05 39.80	+25 07.5					
1991	01 04	05 29.16	+24 50.3	1.553	2.501	160.4	7.6	16.9
1991	01 14	05 20.85	+24 31.8					
1991	01 24	05 15.60	+24 14.8	1.726	2.536	137.0	15.4	17.4

1983 AJ a,e,i = 1.94, 0.11, 17 Elements MPC 12570

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 32.48	+45 44.2	0.997	1.744	122.6	28.6	16.3
1990	11 15	06 32.38	+45 41.4					
1990	11 25	06 25.67	+45 15.2	0.877	1.758	141.1	20.7	15.8
1990	12 05	06 13.13	+44 13.1					
1990	12 15	05 56.89	+42 25.5	0.818	1.775	159.7	11.1	15.4
1990	12 25	05 40.28	+39 52.7					
1991	01 04	05 26.59	+36 49.7	0.850	1.795	156.5	12.6	15.6
1991	01 14	05 17.74	+33 39.2					
1991	01 24	05 14.29	+30 40.7	0.971	1.817	136.6	21.8	16.2

1983 AH1 a,e,i = 2.55, 0.21, 17 Elements MPC 11732

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 14.11	+07 09.1	1.337	2.083	126.3	22.5	17.2
1990	11 15	06 14.16	+07 25.6					
1990	11 25	06 10.68	+08 02.1	1.166	2.059	145.9	15.6	16.7
1990	12 05	06 03.90	+09 02.7					
1990	12 15	05 54.56	+10 28.4	1.071	2.039	165.5	6.9	16.1
1990	12 25	05 44.02	+12 16.1					
1991	01 04	05 34.01	+14 18.8	1.076	2.026	159.1	10.0	16.3
1991	01 14	05 26.13	+16 27.6					
1991	01 24	05 21.59	+18 35.0	1.177	2.018	137.8	19.1	16.7

1981 EY26 a,e,i = 3.18, 0.10, 5 Elements MPC 11046

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 19.19	+29 47.2	2.796	3.487	127.3	13.1	16.6
1990	11 15	06 15.97	+30 01.8					
1990	11 25	06 10.48	+30 14.4	2.599	3.482	148.9	8.4	16.3
1990	12 05	06 03.07	+30 22.6					
1990	12 15	05 54.34	+30 24.8	2.501	3.476	170.4	2.7	15.9
1990	12 25	05 45.11	+30 19.6					
1991	01 04	05 36.32	+30 07.4	2.524	3.469	161.1	5.3	16.1
1991	01 14	05 28.79	+29 49.7					
1991	01 24	05 23.16	+29 29.0	2.660	3.461	138.6	10.8	16.4

1983 WH a,e,i = 2.28, 0.08, 5 Elements MPC 14348

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 19.54	+22 23.2	1.348	2.102	127.2	22.1	16.7
1990	11 15	06 19.06	+21 51.3					
1990	11 25	06 14.73	+21 18.3	1.191	2.096	148.4	14.3	16.2
1990	12 05	06 06.95	+20 44.5					
1990	12 15	05 56.68	+20 10.6	1.113	2.092	172.2	3.6	15.6
1990	12 25	05 45.47	+19 38.0					
1991	01 04	05 35.17	+19 09.3	1.136	2.091	161.1	8.7	15.9
1991	01 14	05 27.27	+18 47.3					
1991	01 24	05 22.80	+18 33.7	1.253	2.091	138.0	18.3	16.4

1964 YJ a,e,i = 3.01, 0.04, 11 Elements MPC 13480

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 18.56	+14 18.8	2.330	3.028	126.6	15.2	16.6
1990	11 15	06 16.06	+14 19.0					
1990	11 25	06 11.18	+14 25.3	2.137	3.020	148.0	10.0	16.2
1990	12 05	06 04.25	+14 38.4					
1990	12 15	05 55.86	+14 58.5	2.039	3.012	169.1	3.5	15.8
1990	12 25	05 46.84	+15 25.0					
1991	01 04	05 38.20	+15 56.8	2.058	3.004	160.7	6.2	16.0
1991	01 14	05 30.81	+16 32.8					
1991	01 24	05 25.40	+17 11.8	2.187	2.995	138.4	12.6	16.3

6575 P-L a,e,i = 3.22, 0.13, 5 Elements MPC 12583

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 19.43	+29 11.3	2.121	2.834	127.3	16.2	16.7
1990	11 15	06 17.79	+29 38.4					
1990	11 25	06 13.30	+30 04.8	1.935	2.823	148.3	10.6	16.3
1990	12 05	06 06.32	+30 27.5					
1990	12 15	05 57.52	+30 43.5	1.840	2.814	169.7	3.6	15.9
1990	12 25	05 47.95	+30 50.4					
1991	01 04	05 38.85	+30 48.0	1.857	2.807	161.4	6.4	16.0
1991	01 14	05 31.32	+30 37.7					
1991	01 24	05 26.22	+30 22.6	1.981	2.802	139.2	13.3	16.4

(4326) McNally a,e,i = 3.07, 0.21, 4 Elements MPC 15686

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 20.92	+20 55.3	3.034	3.714	126.8	12.3	18.5
1990	11 15	06 17.58	+20 57.5					
1990	11 25	06 12.27	+21 01.2	2.830	3.710	148.9	7.9	18.2
1990	12 05	06 05.30	+21 06.0					
1990	12 15	05 57.17	+21 11.3	2.727	3.705	172.5	2.0	17.8
1990	12 25	05 48.56	+21 16.5					
1991	01 04	05 40.24	+21 21.6	2.747	3.698	162.7	4.5	18.0
1991	01 14	05 32.92	+21 26.8					
1991	01 24	05 27.18	+21 32.6	2.885	3.688	139.4	10.0	18.3

1981 EC16 a,e,i = 2.36, 0.21, 4 Elements MPC 7768

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 28.00	+24 12.1	2.161	2.852	125.4	16.5	18.6
1990	11 15	06 24.68	+24 07.4					
1990	11 25	06 18.47	+24 02.7	1.968	2.852	147.7	10.7	18.2
1990	12 05	06 09.76	+23 56.5					
1990	12 15	05 59.25	+23 47.6	1.870	2.849	172.3	2.6	17.8
1990	12 25	05 48.01	+23 35.3					
1991	01 04	05 37.29	+23 20.1	1.890	2.843	162.2	6.1	18.0
1991	01 14	05 28.18	+23 03.9					
1991	01 24	05 21.49	+22 48.8	2.022	2.833	138.2	13.4	18.4

1988 DA a,e,i = 2.27, 0.10, 5 Elements MPC 12946

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 26.08	+30 02.8	1.554	2.281	125.8	20.7	17.1
1990	11 15	06 25.29	+30 36.8					
1990	11 25	06 20.59	+31 11.0	1.367	2.258	146.6	13.9	16.6
1990	12 05	06 12.20	+31 40.8					
1990	12 15	06 00.92	+32 00.4	1.262	2.235	168.3	5.1	16.1
1990	12 25	05 48.23	+32 05.3					
1991	01 04	05 36.09	+31 54.3	1.261	2.212	160.4	8.6	16.2
1991	01 14	05 26.26	+31 30.8					
1991	01 24	05 20.00	+31 00.4	1.358	2.190	137.8	17.6	16.7

3134 T-3 a,e,i = 2.15, 0.20, 4 Elements MPC 12574

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 32.52	+18 16.5	1.573	2.279	123.9	21.2	18.2
1990 11 15	06 29.81	+17 54.9					
1990 11 25	06 23.54	+17 37.7	1.435	2.319	145.8	13.8	17.8
1990 12 05	06 14.21	+17 25.3					
1990 12 15	06 02.76	+17 17.6	1.383	2.357	169.5	4.4	17.4
1990 12 25	05 50.61	+17 14.9					
1991 01 04	05 39.33	+17 17.1	1.439	2.392	161.5	7.5	17.7
1991 01 14	05 30.20	+17 24.4					
1991 01 24	05 24.08	+17 37.0	1.601	2.425	138.2	15.7	18.2

1976 SA a,e,i = 2.69, 0.06, 6 Elements MPC 15402

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 25.02	+15 13.4	1.923	2.623	125.2	18.0	17.6
1990 11 15	06 23.13	+14 52.0					
1990 11 25	06 18.41	+14 35.9	1.756	2.636	146.3	12.0	17.3
1990 12 05	06 11.23	+14 26.4					
1990 12 15	06 02.29	+14 24.4	1.678	2.648	167.7	4.5	16.9
1990 12 25	05 52.62	+14 30.3					
1991 01 04	05 43.41	+14 43.7	1.711	2.661	161.3	6.8	17.0
1991 01 14	05 35.73	+15 03.9					
1991 01 24	05 30.36	+15 29.7	1.850	2.674	139.3	13.9	17.5

1988 RV12 a,e,i = 3.99, 0.16, 16 Elements MPC 15715

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 17.86	+03 57.9	2.886	3.544	124.6	13.3	18.3
1990 11 15	06 15.95	+03 06.4					
1990 11 25	06 12.20	+02 21.5	2.684	3.522	142.8	9.8	18.0
1990 12 05	06 06.91	+01 46.2					
1990 12 15	06 00.51	+01 23.2	2.575	3.500	156.6	6.4	17.8
1990 12 25	05 53.59	+01 14.5					
1991 01 04	05 46.86	+01 20.8	2.575	3.479	152.9	7.4	17.8
1991 01 14	05 40.97	+01 41.3					
1991 01 24	05 36.47	+02 14.1	2.681	3.460	136.3	11.3	18.0

1989 KB a,e,i = 2.35, 0.24, 23 Elements MPC 15419

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 40.16	+23 13.3	1.833	2.509	122.5	19.5	17.2
1990 11 15	06 36.75	+24 35.5					
1990 11 25	06 29.82	+26 05.9	1.684	2.557	145.1	12.8	16.8
1990 12 05	06 19.68	+27 39.5					
1990 12 15	06 07.13	+29 09.4	1.629	2.602	169.0	4.1	16.5
1990 12 25	05 53.49	+30 28.5					
1991 01 04	05 40.37	+31 32.4	1.695	2.645	161.4	6.8	16.7
1991 01 14	05 29.22	+32 20.5					
1991 01 24	05 21.08	+32 55.5	1.873	2.685	137.9	14.2	17.2

1979 HE5 a,e,i = 2.17, 0.06, 5 Elements MPC 15877

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 30.85	+19 41.8	1.570	2.282	124.4	21.0	17.7
1990 11 15	06 29.76	+19 47.0					
1990 11 25	06 25.06	+19 58.1	1.389	2.274	145.8	14.1	17.2
1990 12 05	06 17.01	+20 14.7					
1990 12 15	06 06.32	+20 35.1	1.289	2.266	170.3	4.2	16.7
1990 12 25	05 54.29	+20 57.4					
1991 01 04	05 42.64	+21 19.7	1.296	2.256	163.3	7.2	16.8
1991 01 14	05 32.90	+21 41.6					
1991 01 24	05 26.26	+22 03.6	1.405	2.245	139.3	16.6	17.3

1985 XS a,e,i = 2.85, 0.08, 2 Elements MPC 16426

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 27.73	+20 05.2	2.296	2.980	125.2	15.8	18.2
1990 11 15	06 25.32	+19 58.5					
1990 11 25	06 20.37	+19 54.3	2.116	2.992	146.9	10.4	17.9
1990 12 05	06 13.23	+19 52.5					
1990 12 15	06 04.52	+19 52.4	2.028	3.003	170.4	3.1	17.5
1990 12 25	05 55.13	+19 53.8					
1991 01 04	05 46.08	+19 56.4	2.056	3.013	163.8	5.2	17.6
1991 01 14	05 38.31	+20 00.6					
1991 01 24	05 32.55	+20 06.7	2.198	3.023	140.5	11.9	18.0

2647 P-L a,e,i = 2.39, 0.18, 2 Elements MPC 16438

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 28.37	+25 16.5	1.261	2.004	125.3	23.8	17.6
1990 11 15	06 29.09	+25 29.2					
1990 11 25	06 25.65	+25 43.9	1.130	2.025	146.0	15.8	17.2
1990 12 05	06 18.42	+25 58.2					
1990 12 15	06 08.36	+26 08.7	1.074	2.051	169.9	4.8	16.7
1990 12 25	05 57.10	+26 12.5					
1991 01 04	05 46.62	+26 09.1	1.116	2.080	164.2	7.4	16.9
1991 01 14	05 38.55	+26 00.6					
1991 01 24	05 33.95	+25 50.3	1.253	2.112	141.2	17.0	17.5

1988 GS a,e,i = 2.46, 0.09, 8 Elements MPC 13598

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 36.54	+32 54.4	1.965	2.644	123.4	18.2	17.9
1990 11 15	06 34.91	+33 41.9					
1990 11 25	06 29.83	+34 29.7	1.772	2.636	144.1	12.7	17.5
1990 12 05	06 21.51	+35 12.7					
1990 12 15	06 10.60	+35 45.1	1.666	2.626	164.2	5.9	17.1
1990 12 25	05 58.34	+36 01.9					
1991 01 04	05 46.31	+36 01.0	1.669	2.615	160.2	7.3	17.2
1991 01 14	05 36.02	+35 44.6					
1991 01 24	05 28.60	+35 17.3	1.779	2.603	139.0	14.4	17.5

1986 EE5 a,e,i = 3.13, 0.16, 1 Elements MPC 12455

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 28.57	+21 45.6	2.036	2.729	125.1	17.3	17.0
1990 11 15	06 27.98	+21 42.4					
1990 11 25	06 24.59	+21 41.5	1.831	2.707	146.1	11.7	16.6
1990 12 05	06 18.66	+21 42.7					
1990 12 15	06 10.74	+21 45.0	1.713	2.687	169.5	3.8	16.1
1990 12 25	06 01.74	+21 47.8					
1991 01 04	05 52.86	+21 50.3	1.705	2.669	165.7	5.2	16.2
1991 01 14	05 45.22	+21 53.0					
1991 01 24	05 39.73	+21 56.5	1.805	2.654	142.4	13.1	16.6

1976 SA6 a,e,i = 2.25, 0.11, 3 Elements MPC 15875

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 05	06 39.87	+25 44.1	1.806	2.486	122.7	19.6	18.2
1990 11 15	06 38.34	+26 01.1					
1990 11 25	06 33.34	+26 20.6	1.619	2.488	144.3	13.4	17.8
1990 12 05	06 25.12	+26 40.0					
1990 12 15	06 14.34	+26 55.9	1.517	2.489	168.4	4.6	17.3
1990 12 25	06 02.23	+27 05.2					
1991 01 04	05 50.33	+27 06.6	1.525	2.488	164.9	5.9	17.4
1991 01 14	05 40.12	+27 01.0					
1991 01 24	05 32.70	+26 51.4	1.642	2.484	140.9	14.5	17.9

(4190) 1980 JH a,e,i = 2.61, 0.17, 13 Elements MPC 15222

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 35.56	+08 06.7	2.190	2.835	121.4	17.4	17.7
1990	11 15	06 33.20	+07 08.4					
1990	11 25	06 28.30	+06 16.7	2.026	2.863	141.2	12.5	17.4
1990	12 05	06 21.19	+05 35.0					
1990	12 15	06 12.48	+05 06.4	1.950	2.889	158.7	7.1	17.1
1990	12 25	06 03.03	+04 53.1					
1991	01 04	05 53.86	+04 55.7	1.984	2.914	156.9	7.6	17.2
1991	01 14	05 45.87	+05 13.1					
1991	01 24	05 39.80	+05 42.8	2.125	2.936	138.5	12.8	17.5

(4030) 1984 EO1 a,e,i = 2.46, 0.10, 7 Elements MPC 14335

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 40.81	+31 44.1	2.004	2.671	122.6	18.2	17.7
1990	11 15	06 38.98	+32 10.6					
1990	11 25	06 33.81	+32 36.3	1.819	2.679	143.6	12.6	17.3
1990	12 05	06 25.55	+32 57.0					
1990	12 15	06 14.90	+33 08.4	1.721	2.685	165.4	5.3	16.9
1990	12 25	06 03.05	+33 06.9					
1991	01 04	05 51.47	+32 51.6	1.734	2.689	162.9	6.2	17.0
1991	01 14	05 41.52	+32 24.9					
1991	01 24	05 34.25	+31 51.0	1.857	2.692	140.8	13.4	17.4

(4358) A909 TF a,e,i = 2.61, 0.17, 13 Elements MPC 15862

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 43.70	+38 31.3	2.403	3.042	121.6	16.1	16.8
1990	11 15	06 41.17	+39 28.8					
1990	11 25	06 35.41	+40 24.2	2.215	3.049	141.4	11.7	16.5
1990	12 05	06 26.66	+41 12.0					
1990	12 15	06 15.56	+41 46.3	2.116	3.054	158.7	6.7	16.2
1990	12 25	06 03.22	+42 02.2					
1991	01 04	05 51.06	+41 58.0	2.129	3.057	156.7	7.3	16.2
1991	01 14	05 40.40	+41 35.5					
1991	01 24	05 32.29	+40 59.6	2.251	3.057	138.3	12.4	16.5

1982 HB2 a,e,i = 2.19, 0.07, 5 Elements MPC 9766

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 39.16	+27 01.6	1.568	2.265	122.9	21.6	17.7
1990	11 15	06 39.15	+27 34.8					
1990	11 25	06 35.31	+28 12.2	1.377	2.250	143.8	15.0	17.2
1990	12 05	06 27.70	+28 50.6					
1990	12 15	06 16.94	+29 24.7	1.264	2.235	167.0	5.7	16.7
1990	12 25	06 04.31	+29 49.1					
1991	01 04	05 51.68	+30 00.7	1.256	2.218	164.2	6.9	16.7
1991	01 14	05 40.87	+30 00.1					
1991	01 24	05 33.31	+29 50.9	1.349	2.201	140.8	16.4	17.1

(4378) Voigt a,e,i = 2.68, 0.24, 11 Elements MPC 15869

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 05	06 38.94	+19 34.7	2.466	3.113	122.5	15.6	16.6
1990	11 15	06 36.93	+19 49.8					
1990	11 25	06 32.36	+20 10.1	2.224	3.079	144.2	10.8	16.2
1990	12 05	06 25.39	+20 35.2					
1990	12 15	06 16.46	+21 03.6	2.073	3.043	168.1	3.8	15.7
1990	12 25	06 06.34	+21 33.6					
1991	01 04	05 56.05	+22 03.3	2.040	3.005	166.5	4.4	15.7
1991	01 14	05 46.64	+22 31.6					
1991	01 24	05 39.05	+22 58.4	2.125	2.965	142.3	11.7	16.0

1981 EX28 a,e,i = 2.33, 0.10, 6 Elements MPC 15242

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	06 43.37	+28 02.4	1.701	2.552	142.0	13.8	18.6
1990 12 05	06 35.75	+28 01.7					
1990 12 15	06 25.49	+27 55.6	1.583	2.548	165.8	5.4	18.1
1990 12 25	06 13.70	+27 41.6					
1991 01 04	06 01.87	+27 19.1	1.574	2.543	167.3	4.9	18.1
1991 01 14	05 51.43	+26 49.9					
1991 01 24	05 43.56	+26 17.5	1.677	2.535	143.3	13.4	18.5
1991 02 03	05 38.90	+25 45.5					
1991 02 13	05 37.61	+25 16.4	1.863	2.526	121.7	19.4	18.9

1985 RU3 a,e,i = 2.67, 0.14, 13 Elements MPC 14020

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	06 36.17	+03 16.4	1.466	2.297	138.1	16.7	15.9
1990 12 05	06 31.12	+02 27.0					
1990 12 15	06 23.70	+01 57.9	1.366	2.294	154.6	10.6	15.6
1990 12 25	06 14.89	+01 53.6					
1991 01 04	06 05.97	+02 15.1	1.361	2.295	156.3	9.9	15.5
1991 01 14	05 58.20	+03 00.1					
1991 01 24	05 52.66	+04 03.7	1.451	2.299	140.7	15.7	15.9
1991 02 03	05 49.99	+05 19.4					
1991 02 13	05 50.42	+06 40.9	1.619	2.307	122.7	21.1	16.3

1978 RE3 a,e,i = 2.44, 0.19, 2 Elements MPC 12452

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	06 43.84	+24 40.7	1.291	2.155	141.9	16.4	18.4
1990 12 05	06 37.03	+24 44.0					
1990 12 15	06 27.31	+24 46.1	1.225	2.193	165.9	6.3	18.0
1990 12 25	06 16.05	+24 44.4					
1991 01 04	06 05.01	+24 38.0	1.260	2.232	168.5	5.0	18.0
1991 01 14	05 55.76	+24 27.9					
1991 01 24	05 49.47	+24 16.4	1.397	2.272	144.7	14.5	18.6
1991 02 03	05 46.68	+24 05.7					
1991 02 13	05 47.39	+23 56.9	1.613	2.313	123.9	20.7	19.2

1986 RB5 a,e,i = 2.24, 0.18, 6 Elements MPC 16427

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	06 46.56	+17 40.8	1.491	2.338	140.5	15.6	17.0
1990 12 05	06 39.02	+17 55.8					
1990 12 15	06 28.86	+18 17.6	1.413	2.376	164.5	6.4	16.6
1990 12 25	06 17.23	+18 44.2					
1991 01 04	06 05.65	+19 13.1	1.441	2.411	168.0	4.8	16.6
1991 01 14	05 55.55	+19 42.7					
1991 01 24	05 48.04	+20 12.0	1.578	2.445	144.2	13.6	17.1
1991 02 03	05 43.75	+20 40.7					
1991 02 13	05 42.77	+21 08.6	1.799	2.476	122.8	19.6	17.6

1989 OA a,e,i = 2.32, 0.13, 4 Elements MPC 15072

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	06 45.70	+20 26.5	1.753	2.597	141.1	13.8	17.4
1990 12 05	06 38.40	+20 13.4					
1990 12 15	06 28.72	+20 02.3	1.644	2.608	165.1	5.6	17.0
1990 12 25	06 17.65	+19 52.6					
1991 01 04	06 06.49	+19 44.1	1.646	2.616	168.4	4.3	16.9
1991 01 14	05 56.54	+19 37.1					
1991 01 24	05 48.84	+19 32.7	1.760	2.623	144.3	12.7	17.4
1991 02 03	05 44.02	+19 31.3					
1991 02 13	05 42.28	+19 33.3	1.961	2.627	122.5	18.5	17.8

(4218) Demottoni a,e,i = 2.25, 0.14, 5 Elements MPC 15235

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 45.10	+16 50.0	1.702	2.543	140.6	14.3	18.0
1990	12 05	06 38.18	+16 30.7					
1990	12 15	06 28.74	+16 16.9	1.570	2.530	163.7	6.3	17.5
1990	12 25	06 17.72	+16 08.8					
1991	01 04	06 06.42	+16 06.4	1.547	2.514	166.8	5.1	17.4
1991	01 14	05 56.19	+16 09.7					
1991	01 24	05 48.17	+16 18.7	1.634	2.496	143.6	13.5	17.8
1991	02 03	05 43.10	+16 32.6					
1991	02 13	05 41.25	+16 50.5	1.806	2.476	122.1	19.8	18.2

1981 ER27 a,e,i = 2.33, 0.11, 7 Elements MPC 15064

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 49.38	+35 02.9	1.294	2.146	140.0	17.2	18.5
1990	12 05	06 42.47	+35 48.3					
1990	12 15	06 31.98	+36 21.6	1.213	2.166	160.6	8.7	18.1
1990	12 25	06 19.35	+36 35.6					
1991	01 04	06 06.65	+36 26.7	1.228	2.187	162.9	7.6	18.1
1991	01 14	05 55.87	+35 57.4					
1991	01 24	05 48.50	+35 14.2	1.343	2.210	143.0	15.5	18.6
1991	02 03	05 45.21	+34 24.4					
1991	02 13	05 45.96	+33 33.7	1.534	2.233	123.2	21.7	19.1

1988 EN a,e,i = 2.43, 0.23, 5 Elements MPC 13153

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 44.82	+16 29.9	2.156	2.985	140.6	12.1	18.2
1990	12 05	06 38.00	+16 26.8					
1990	12 15	06 29.15	+16 29.1	2.017	2.975	163.7	5.3	17.8
1990	12 25	06 19.03	+16 36.3					
1991	01 04	06 08.67	+16 47.7	1.993	2.961	167.6	4.1	17.7
1991	01 14	05 59.09	+17 02.6					
1991	01 24	05 51.24	+17 20.5	2.088	2.945	144.5	11.2	18.1
1991	02 03	05 45.75	+17 40.9					
1991	02 13	05 42.93	+18 03.0	2.273	2.926	122.6	16.5	18.4

(4189) 1979 SV9 a,e,i = 2.30, 0.14, 5 Elements MPC 15222

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 47.48	+15 12.6	1.622	2.460	139.7	15.0	17.2
1990	12 05	06 40.50	+14 54.2					
1990	12 15	06 31.07	+14 43.6	1.527	2.484	162.4	6.9	16.8
1990	12 25	06 20.22	+14 41.2					
1991	01 04	06 09.28	+14 46.6	1.539	2.506	166.6	5.2	16.8
1991	01 14	05 59.57	+14 59.1					
1991	01 24	05 52.14	+15 17.6	1.660	2.526	144.4	13.1	17.3
1991	02 03	05 47.62	+15 40.7					
1991	02 13	05 46.19	+16 06.8	1.867	2.545	123.2	19.0	17.7

1973 SF6 a,e,i = 2.21, 0.20, 6 Elements MPC 14944

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 49.73	+13 21.2	1.532	2.365	138.7	16.0	18.1
1990	12 05	06 42.33	+13 03.5					
1990	12 15	06 32.41	+12 56.2	1.451	2.404	161.2	7.6	17.7
1990	12 25	06 21.06	+12 59.7					
1991	01 04	06 09.71	+13 13.3	1.476	2.441	165.7	5.7	17.7
1991	01 14	05 59.70	+13 35.6					
1991	01 24	05 52.13	+14 04.5	1.610	2.475	144.1	13.5	18.2
1991	02 03	05 47.57	+14 37.9					
1991	02 13	05 46.19	+15 13.7	1.828	2.507	123.1	19.3	18.7

1981 ER17 a,e,i = 3.11, 0.16, 5 Elements MPC 10617

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 43.10	+17 03.9	1.903	2.742	141.1	13.1	17.3
1990	12 05	06 37.54	+16 48.0					
1990	12 15	06 29.98	+16 37.4	1.809	2.767	163.6	5.8	16.9
1990	12 25	06 21.28	+16 32.3					
1991	01 04	06 12.49	+16 32.5	1.823	2.793	168.3	4.1	16.9
1991	01 14	06 04.65	+16 37.6					
1991	01 24	05 58.63	+16 47.1	1.949	2.821	146.2	11.2	17.3
1991	02 03	05 54.99	+17 00.1					
1991	02 13	05 53.94	+17 15.7	2.165	2.849	125.1	16.5	17.7

1985 RZ4 a,e,i = 2.68, 0.17, 13 Elements MPC 11830

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 56.98	+41 14.7	2.092	2.895	137.2	13.4	17.1
1990	12 05	06 49.12	+41 57.6					
1990	12 15	06 38.53	+42 27.4	1.999	2.923	155.6	8.0	16.8
1990	12 25	06 26.28	+42 38.4					
1991	01 04	06 13.83	+42 27.8	2.013	2.950	158.6	7.0	16.8
1991	01 14	06 02.64	+41 57.3					
1991	01 24	05 53.89	+41 11.3	2.137	2.976	142.0	11.7	17.1
1991	02 03	05 48.26	+40 16.1					
1991	02 13	05 45.91	+39 17.3	2.351	2.999	122.5	16.1	17.5

1978 RK1 a,e,i = 3.13, 0.17, 3 Elements MPC 16021

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 49.19	+22 41.7	2.210	3.038	140.5	11.9	17.8
1990	12 05	06 43.31	+22 54.9					
1990	12 15	06 35.53	+23 09.4	2.113	3.071	164.0	5.1	17.4
1990	12 25	06 26.58	+23 23.3					
1991	01 04	06 17.46	+23 35.3	2.128	3.104	171.5	2.7	17.4
1991	01 14	06 09.12	+23 44.7					
1991	01 24	06 02.41	+23 51.7	2.261	3.137	147.6	9.7	17.8
1991	02 03	05 57.90	+23 57.1					
1991	02 13	05 55.83	+24 01.5	2.488	3.169	125.8	14.6	18.2

1986 TL4 a,e,i = 2.40, 0.20, 3 Elements MPC 11436

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 54.24	+25 05.0	1.126	1.983	139.6	18.8	16.6
1990	12 05	06 49.37	+25 40.1					
1990	12 15	06 40.91	+26 16.5	1.051	2.012	162.7	8.4	16.1
1990	12 25	06 30.14	+26 48.8					
1991	01 04	06 18.97	+27 12.3	1.068	2.045	170.9	4.4	16.0
1991	01 14	06 09.29	+27 25.7					
1991	01 24	06 02.62	+27 30.5	1.183	2.081	147.4	14.7	16.7
1991	02 03	05 59.75	+27 29.4					
1991	02 13	06 00.76	+27 24.9	1.375	2.120	126.9	21.9	17.3

(4047) 1964 TT2 a,e,i = 2.62, 0.21, 3 Elements MPC 14463

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 56.86	+26 29.1	1.857	2.682	139.0	14.0	17.3
1990	12 05	06 50.09	+26 51.6					
1990	12 15	06 40.87	+27 12.6	1.769	2.724	162.6	6.2	16.9
1990	12 25	06 30.14	+27 28.6					
1991	01 04	06 19.18	+27 37.4	1.790	2.765	170.7	3.3	16.9
1991	01 14	06 09.25	+27 38.7					
1991	01 24	06 01.40	+27 34.0	1.926	2.804	147.2	11.0	17.4
1991	02 03	05 56.29	+27 25.5					
1991	02 13	05 54.14	+27 15.5	2.154	2.842	125.4	16.4	17.8

1980 TE4 a,e,i = 2.76, 0.25, 2 Elements MPC 13056

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 55.24	+25 54.6	2.331	3.146	139.4	11.8	18.5
1990	12 05	06 48.53	+26 09.3					
1990	12 15	06 39.83	+26 22.7	2.229	3.183	162.9	5.2	18.1
1990	12 25	06 29.92	+26 32.6					
1991	01 04	06 19.79	+26 37.3	2.242	3.217	171.3	2.7	18.0
1991	01 14	06 10.44	+26 36.7					
1991	01 24	06 02.73	+26 31.8	2.376	3.250	147.6	9.3	18.5
1991	02 03	05 57.25	+26 24.2					
1991	02 13	05 54.26	+26 15.4	2.607	3.280	125.5	14.2	18.9

1980 TM a,e,i = 2.79, 0.11, 4 Elements MPC 16694

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 55.21	+28 22.9	2.016	2.839	139.4	13.1	17.0
1990	12 05	06 49.04	+28 48.3					
1990	12 15	06 40.51	+29 11.1	1.908	2.861	162.3	6.0	16.6
1990	12 25	06 30.46	+29 27.8					
1991	01 04	06 20.07	+29 36.1	1.909	2.882	169.7	3.5	16.5
1991	01 14	06 10.52	+29 35.6					
1991	01 24	06 02.86	+29 27.8	2.025	2.902	147.2	10.6	16.9
1991	02 03	05 57.77	+29 15.1					
1991	02 13	05 55.52	+29 00.0	2.234	2.922	125.6	15.9	17.3

1986 RS1 a,e,i = 2.27, 0.20, 6 Elements MPC 14949

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 58.07	+13 46.6	1.511	2.331	136.9	16.8	18.0
1990	12 05	06 51.40	+13 38.2					
1990	12 15	06 42.04	+13 40.6	1.426	2.374	159.6	8.3	17.7
1990	12 25	06 31.00	+13 53.8					
1991	01 04	06 19.71	+14 16.1	1.444	2.415	168.1	4.8	17.6
1991	01 14	06 09.55	+14 45.5					
1991	01 24	06 01.68	+15 19.6	1.572	2.454	146.6	12.8	18.1
1991	02 03	05 56.80	+15 56.4					
1991	02 13	05 55.09	+16 34.0	1.787	2.492	125.3	18.9	18.6

1989 LW a,e,i = 2.38, 0.27, 22 Elements MPC 16029

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 57.43	+00 04.3	2.011	2.769	131.9	15.4	18.0
1990	12 05	06 50.48	-01 18.9					
1990	12 15	06 41.49	-02 25.3	1.923	2.810	148.4	10.6	17.8
1990	12 25	06 31.26	-03 10.3					
1991	01 04	06 20.83	-03 31.3	1.939	2.847	152.4	9.2	17.7
1991	01 14	06 11.21	-03 28.8					
1991	01 24	06 03.28	-03 05.6	2.061	2.881	139.4	12.9	18.0
1991	02 03	05 57.66	-02 26.6					
1991	02 13	05 54.57	-01 37.1	2.270	2.911	121.6	16.8	18.4

(4311) 1978 SY6 a,e,i = 2.44, 0.15, 5 Elements MPC 15681

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 58.10	+16 50.8	1.641	2.461	137.6	15.7	17.5
1990	12 05	06 51.91	+16 27.8					
1990	12 15	06 43.16	+16 11.3	1.543	2.492	160.5	7.6	17.1
1990	12 25	06 32.79	+16 01.4					
1991	01 04	06 22.09	+15 57.9	1.549	2.523	169.7	4.0	17.0
1991	01 14	06 12.36	+16 00.4					
1991	01 24	06 04.72	+16 08.2	1.667	2.553	147.5	12.0	17.5
1991	02 03	05 59.84	+16 20.3					
1991	02 13	05 57.98	+16 35.7	1.874	2.581	126.0	18.0	17.9

1979 KQ a,e,i = 2.68, 0.12, 5 Elements MPC 13151

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 55.76	+15 32.8	2.038	2.848	137.8	13.5	18.5
1990	12 05	06 49.99	+15 24.7					
1990	12 15	06 42.09	+15 23.3	1.921	2.867	160.4	6.6	18.1
1990	12 25	06 32.82	+15 28.7					
1991	01 04	06 23.18	+15 39.8	1.912	2.885	169.7	3.5	18.0
1991	01 14	06 14.20	+15 55.8					
1991	01 24	06 06.84	+16 15.5	2.020	2.902	148.0	10.4	18.4
1991	02 03	06 01.74	+16 37.8					
1991	02 13	05 59.20	+17 01.7	2.222	2.918	126.3	15.8	18.8

2563 P-L a,e,i = 3.20, 0.15, 2 Elements MPC 6207

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 53.93	+20 59.8	2.850	3.655	139.3	10.2	18.2
1990	12 05	06 48.61	+21 04.6					
1990	12 15	06 41.67	+21 11.5	2.699	3.649	162.4	4.7	17.8
1990	12 25	06 33.63	+21 19.4					
1991	01 04	06 25.23	+21 27.4	2.664	3.642	173.1	1.9	17.6
1991	01 14	06 17.21	+21 34.8					
1991	01 24	06 10.30	+21 41.5	2.751	3.633	149.4	7.9	18.0
1991	02 03	06 05.05	+21 47.7					
1991	02 13	06 01.79	+21 53.6	2.940	3.623	127.2	12.5	18.3

(4135) 1966 PG a,e,i = 2.79, 0.23, 8 Elements MPC 14933

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	06 57.31	+11 45.2	1.678	2.488	136.5	15.9	16.0
1990	12 05	06 51.79	+11 13.9					
1990	12 15	06 43.93	+10 53.9	1.597	2.536	157.7	8.5	15.6
1990	12 25	06 34.62	+10 46.4					
1991	01 04	06 25.05	+10 51.3	1.618	2.584	166.1	5.2	15.6
1991	01 14	06 16.37	+11 07.5					
1991	01 24	06 09.57	+11 32.6	1.749	2.632	147.5	11.6	16.0
1991	02 03	06 05.29	+12 04.0					
1991	02 13	06 03.75	+12 38.8	1.968	2.681	127.0	17.1	16.5

1986 QX1 a,e,i = 2.17, 0.10, 3 Elements MPC 12960

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 04.83	+27 12.1	1.558	2.379	137.3	16.4	17.6
1990	12 05	06 58.47	+27 39.5					
1990	12 15	06 48.85	+28 06.1	1.433	2.384	160.7	7.8	17.2
1990	12 25	06 36.91	+28 26.9					
1991	01 04	06 24.19	+28 38.0	1.411	2.387	171.1	3.7	16.9
1991	01 14	06 12.36	+28 38.2					
1991	01 24	06 02.92	+28 29.2	1.500	2.388	147.4	12.8	17.4
1991	02 03	05 56.83	+28 14.7					
1991	02 13	05 54.42	+27 57.8	1.675	2.387	125.4	19.7	17.9

1965 UA a,e,i = 2.31, 0.22, 5 Elements MPC 11430

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 07.66	+29 58.9	1.415	2.238	136.6	17.6	17.8
1990	12 05	07 00.73	+30 31.3					
1990	12 15	06 50.41	+30 59.0	1.341	2.290	159.7	8.6	17.5
1990	12 25	06 37.93	+31 16.0					
1991	01 04	06 25.05	+31 18.6	1.367	2.340	169.3	4.5	17.4
1991	01 14	06 13.55	+31 07.1					
1991	01 24	06 04.82	+30 45.1	1.501	2.390	147.4	12.8	17.9
1991	02 03	05 59.63	+30 17.3					
1991	02 13	05 58.10	+29 47.9	1.721	2.438	126.1	19.1	18.5

2050 P-L a,e,i = 2.39, 0.22, 1 Elements MPC 15570

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 04.46	+21 33.0	1.302	2.132	136.9	18.4	17.1
1990 12 05	06 58.62	+21 32.1					
1990 12 15	06 49.57	+21 35.2	1.229	2.182	160.6	8.6	16.7
1990 12 25	06 38.46	+21 40.0					
1991 01 04	06 26.95	+21 44.4	1.252	2.232	173.5	2.8	16.5
1991 01 14	06 16.69	+21 47.5					
1991 01 24	06 09.00	+21 49.8	1.382	2.283	149.1	12.8	17.2
1991 02 03	06 04.63	+21 52.1					
1991 02 13	06 03.73	+21 54.7	1.596	2.334	127.7	19.6	17.7

1931 TE4 a,e,i = 2.28, 0.25, 3 Elements MPC 9471

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 05.58	+21 01.8	1.120	1.959	136.6	20.3	17.1
1990 12 05	06 59.97	+21 26.9					
1990 12 15	06 50.74	+21 58.4	1.060	2.014	160.4	9.4	16.7
1990 12 25	06 39.17	+22 31.9					
1991 01 04	06 27.17	+23 02.8	1.091	2.072	173.7	3.0	16.5
1991 01 14	06 16.59	+23 28.4					
1991 01 24	06 08.93	+23 48.6	1.224	2.130	149.1	13.7	17.3
1991 02 03	06 04.95	+24 04.3					
1991 02 13	06 04.74	+24 16.5	1.439	2.188	127.9	20.9	17.9

(4168) 1979 EE a,e,i = 2.56, 0.24, 12 Elements MPC 15056

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 02.16	+41 57.2	1.191	2.022	136.1	19.8	16.8
1990 12 05	06 58.78	+42 28.9					
1990 12 15	06 50.86	+42 42.7	1.062	1.993	153.7	12.6	16.3
1990 12 25	06 39.53	+42 28.4					
1991 01 04	06 26.97	+41 39.5	1.016	1.970	160.3	9.7	16.1
1991 01 14	06 15.67	+40 17.6					
1991 01 24	06 07.75	+38 31.8	1.062	1.955	145.5	16.6	16.4
1991 02 03	06 04.35	+36 34.3					
1991 02 13	06 05.59	+34 35.4	1.184	1.946	127.1	23.9	16.8

1989 PC a,e,i = 2.86, 0.31, 25 Elements MPC 15254

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 01.34	+01 44.0	2.310	3.058	131.8	13.9	17.4
1990 12 05	06 55.20	+01 56.3					
1990 12 15	06 47.25	+02 24.9	2.214	3.114	151.4	8.7	17.2
1990 12 25	06 38.12	+03 10.5					
1991 01 04	06 28.70	+04 11.3	2.224	3.167	160.3	6.0	17.2
1991 01 14	06 19.84	+05 24.3					
1991 01 24	06 12.34	+06 45.0	2.353	3.219	146.3	9.8	17.5
1991 02 03	06 06.76	+08 09.3					
1991 02 13	06 03.40	+09 33.3	2.584	3.268	126.4	14.1	17.8

1973 SR6 a,e,i = 2.59, 0.18, 13 Elements MPC 13600

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 08.66	+41 36.1	1.370	2.182	135.0	18.7	17.2
1990 12 05	07 03.84	+43 09.3					
1990 12 15	06 54.77	+44 29.1	1.288	2.206	152.0	12.1	16.9
1990 12 25	06 42.59	+45 24.0					
1991 01 04	06 29.34	+45 46.0	1.297	2.234	156.5	10.1	16.9
1991 01 14	06 17.29	+45 34.3					
1991 01 24	06 08.38	+44 54.8	1.401	2.264	142.6	15.3	17.2
1991 02 03	06 03.67	+43 57.0					
1991 02 13	06 03.33	+42 49.5	1.583	2.297	125.0	20.6	17.7

1304 T-2 a,e,i = 3.07, 0.14, 1 Elements MPC 15079

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 01.68	+21 40.6	2.130	2.935	137.6	13.1	17.7
1990	12 05	06 56.51	+21 43.4					
1990	12 15	06 49.19	+21 48.6	2.016	2.963	160.7	6.3	17.3
1990	12 25	06 40.44	+21 55.0					
1991	01 04	06 31.23	+22 00.9	2.010	2.991	174.6	1.8	17.1
1991	01 14	06 22.58	+22 05.7					
1991	01 24	06 15.40	+22 09.3	2.122	3.018	150.6	9.2	17.6
1991	02 03	06 10.38	+22 12.1					
1991	02 13	06 07.81	+22 14.4	2.331	3.046	128.6	14.7	18.0

(4366) 1979 YV8 a,e,i = 3.15, 0.15, 2 Elements MPC 15865

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 02.29	+24 37.2	1.964	2.775	137.7	13.9	16.6
1990	12 05	06 58.16	+24 51.8					
1990	12 15	06 51.55	+25 08.0	1.810	2.757	160.4	6.9	16.1
1990	12 25	06 43.12	+25 23.3					
1991	01 04	06 33.89	+25 35.3	1.761	2.742	174.6	1.9	15.8
1991	01 14	06 25.01	+25 42.6					
1991	01 24	06 17.61	+25 45.1	1.825	2.728	151.0	10.1	16.3
1991	02 03	06 12.56	+25 43.8					
1991	02 13	06 10.29	+25 39.9	1.984	2.717	129.1	16.4	16.6

1937 TB a,e,i = 2.68, 0.19, 3 Elements MPC 10164

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 09.58	+26 40.3	1.592	2.403	136.2	16.5	16.7
1990	12 05	07 04.44	+27 05.6					
1990	12 15	06 56.30	+27 31.0	1.497	2.443	159.2	8.2	16.3
1990	12 25	06 46.08	+27 52.0					
1991	01 04	06 35.16	+28 05.2	1.504	2.483	173.2	2.7	16.1
1991	01 14	06 25.01	+28 09.2					
1991	01 24	06 16.93	+28 05.1	1.620	2.524	150.5	11.1	16.7
1991	02 03	06 11.77	+27 55.2					
1991	02 13	06 09.82	+27 42.2	1.828	2.566	128.9	17.4	17.2

(4242) 1981 FQ a,e,i = 3.11, 0.15, 0 Elements MPC 15391

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 05.65	+22 57.8	2.648	3.435	136.8	11.3	18.1
1990	12 05	07 00.78	+23 06.2					
1990	12 15	06 53.99	+23 16.4	2.474	3.415	159.8	5.7	17.7
1990	12 25	06 45.77	+23 26.8					
1991	01 04	06 36.89	+23 35.9	2.412	3.393	175.9	1.2	17.4
1991	01 14	06 28.21	+23 42.6					
1991	01 24	06 20.56	+23 46.7	2.471	3.371	151.8	7.9	17.8
1991	02 03	06 14.64	+23 48.6					
1991	02 13	06 10.88	+23 49.0	2.634	3.347	129.3	13.2	18.1

1981 PK a,e,i = 2.59, 0.27, 12 Elements MPC 12205

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 15.12	+23 44.3	1.636	2.434	134.7	16.8	16.8
1990	12 05	07 08.51	+23 10.4					
1990	12 15	06 59.09	+22 36.6	1.552	2.494	158.6	8.3	16.4
1990	12 25	06 47.85	+22 02.0					
1991	01 04	06 36.20	+21 26.6	1.572	2.554	175.5	1.7	16.2
1991	01 14	06 25.51	+20 51.8					
1991	01 24	06 16.94	+20 19.5	1.708	2.612	150.9	10.6	16.8
1991	02 03	06 11.19	+19 51.2					
1991	02 13	06 08.48	+19 27.7	1.938	2.669	128.7	16.8	17.4

1985 TY1 a,e,i = 2.64, 0.09, 8 Elements MPC 15245

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 11.66	+17 50.3	1.829	2.619	134.6	15.6	17.7
1990 12 05	07 06.68	+17 19.4					
1990 12 15	06 59.15	+16 53.4	1.702	2.637	157.2	8.3	17.3
1990 12 25	06 49.77	+16 32.7					
1991 01 04	06 39.66	+16 17.2	1.677	2.655	172.6	2.7	17.0
1991 01 14	06 29.99	+16 07.1					
1991 01 24	06 21.89	+16 02.1	1.767	2.673	151.5	10.1	17.4
1991 02 03	06 16.16	+16 01.7					
1991 02 13	06 13.21	+16 05.2	1.952	2.691	129.6	16.4	17.9

4059 T-3 a,e,i = 2.55, 0.07, 4 Elements MPC 12702

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 13.12	+25 40.3	1.914	2.706	135.3	14.9	17.3
1990 12 05	07 08.26	+26 09.6					
1990 12 15	07 00.60	+26 41.1	1.761	2.700	158.3	7.8	16.9
1990 12 25	06 50.79	+27 10.9					
1991 01 04	06 39.94	+27 35.2	1.713	2.693	174.2	2.1	16.5
1991 01 14	06 29.32	+27 51.5					
1991 01 24	06 20.23	+27 59.6	1.780	2.685	151.2	10.2	17.0
1991 02 03	06 13.65	+28 00.8					
1991 02 13	06 10.09	+27 57.3	1.943	2.676	128.9	16.7	17.4

1980 EB a,e,i = 2.45, 0.09, 2 Elements MPC 12714

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 13.43	+25 21.2	1.759	2.556	135.2	15.8	18.0
1990 12 05	07 08.78	+25 38.1					
1990 12 15	07 01.11	+25 56.9	1.598	2.538	158.2	8.3	17.5
1990 12 25	06 51.07	+26 14.1					
1991 01 04	06 39.84	+26 26.2	1.538	2.519	175.1	1.9	17.1
1991 01 14	06 28.83	+26 31.2					
1991 01 24	06 19.47	+26 29.2	1.591	2.500	151.3	10.9	17.6
1991 02 03	06 12.82	+26 21.8					
1991 02 13	06 09.43	+26 11.3	1.738	2.480	128.9	18.1	18.0

1985 QP5 a,e,i = 2.55, 0.10, 14 Elements MPC 16024

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 21.03	+42 06.5	1.981	2.747	132.6	15.3	17.9
1990 12 05	07 14.93	+43 03.5					
1990 12 15	07 05.38	+43 50.5	1.856	2.758	151.0	10.0	17.6
1990 12 25	06 53.23	+44 19.5					
1991 01 04	06 39.94	+44 24.5	1.830	2.767	158.2	7.6	17.5
1991 01 14	06 27.19	+44 04.3					
1991 01 24	06 16.57	+43 22.1	1.913	2.776	144.7	11.8	17.8
1991 02 03	06 09.15	+42 24.4					
1991 02 13	06 05.33	+41 18.3	2.088	2.783	125.7	16.7	18.1

1989 KD a,e,i = 2.38, 0.26, 10 Elements MPC 15069

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 22.53	+16 02.4	1.496	2.275	131.7	18.9	16.0
1990 12 05	07 17.48	+16 38.6					
1990 12 15	07 09.28	+17 27.0	1.403	2.333	155.1	10.2	15.7
1990 12 25	06 58.75	+18 24.3					
1991 01 04	06 47.21	+19 25.5	1.409	2.391	176.2	1.6	15.3
1991 01 14	06 36.15	+20 25.5					
1991 01 24	06 26.96	+21 20.8	1.527	2.447	153.3	10.4	15.9
1991 02 03	06 20.59	+22 09.5					
1991 02 13	06 17.46	+22 51.4	1.741	2.501	130.8	17.4	16.5

1961 BC a,e,i = 2.22, 0.19, 8 Elements MPC 16020

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 24.97	+21 52.6	1.867	2.634	132.2	16.1	17.3
1990	12 05	07 19.84	+22 29.8					
1990	12 15	07 11.73	+23 13.6	1.715	2.643	155.7	8.8	16.9
1990	12 25	07 01.24	+24 00.2					
1991	01 04	06 49.45	+24 45.1	1.666	2.649	177.8	0.8	16.4
1991	01 14	06 37.67	+25 24.2					
1991	01 24	06 27.29	+25 55.7	1.736	2.651	153.1	9.7	17.0
1991	02 03	06 19.39	+26 19.5					
1991	02 13	06 14.55	+26 36.9	1.906	2.651	130.0	16.6	17.4

1981 EX6 a,e,i = 3.21, 0.16, 17 Elements MPC 8676

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 26.77	+42 46.8	2.464	3.204	131.5	13.3	18.2
1990	12 05	07 21.15	+43 25.0					
1990	12 15	07 12.77	+43 54.3	2.345	3.234	149.9	8.8	17.9
1990	12 25	07 02.33	+44 09.0					
1991	01 04	06 50.96	+44 05.1	2.328	3.264	158.8	6.3	17.8
1991	01 14	06 39.92	+43 41.6					
1991	01 24	06 30.39	+43 00.5	2.424	3.294	147.0	9.4	18.1
1991	02 03	06 23.26	+42 06.5					
1991	02 13	06 18.95	+41 04.7	2.619	3.323	128.3	13.5	18.4

(4482) 1986 RB a,e,i = 2.34, 0.26, 25 Elements MPC 16411

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 59.76	+58 49.2	1.329	2.040	122.8	24.0	16.2
1990	12 05	07 51.36	+59 51.3					
1990	12 15	07 35.41	+60 25.9	1.271	2.098	136.5	18.8	16.0
1990	12 25	07 14.01	+60 15.4					
1991	01 04	06 51.25	+59 09.2	1.285	2.158	143.7	15.7	16.0
1991	01 14	06 31.42	+57 10.6					
1991	01 24	06 17.29	+54 34.6	1.387	2.218	137.8	17.3	16.2
1991	02 03	06 09.57	+51 40.2					
1991	02 13	06 07.58	+48 43.2	1.573	2.277	124.0	21.1	16.7

1982 UQ3 a,e,i = 2.42, 0.19, 1 Elements MPC 13594

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 25.41	+23 33.6	1.332	2.126	132.4	20.1	17.1
1990	12 05	07 21.80	+23 46.4					
1990	12 15	07 14.55	+24 04.0	1.232	2.165	155.1	11.0	16.7
1990	12 25	07 04.51	+24 22.7					
1991	01 04	06 53.14	+24 38.1	1.223	2.206	178.2	0.8	16.3
1991	01 14	06 42.14	+24 47.6					
1991	01 24	06 33.12	+24 50.7	1.319	2.248	154.6	10.8	17.0
1991	02 03	06 27.20	+24 48.7					
1991	02 13	06 24.80	+24 43.3	1.506	2.291	132.4	18.6	17.5

1979 QM1 a,e,i = 2.87, 0.12, 1 Elements MPC 11996

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 22.27	+20 44.9	2.259	3.017	132.7	13.9	17.9
1990	12 05	07 17.87	+20 49.6					
1990	12 15	07 11.18	+20 58.7	2.114	3.037	155.5	7.7	17.5
1990	12 25	07 02.74	+21 10.4					
1991	01 04	06 53.39	+21 22.9	2.073	3.057	178.5	0.5	17.1
1991	01 14	06 44.11	+21 34.7					
1991	01 24	06 35.88	+21 44.7	2.153	3.075	155.4	7.7	17.6
1991	02 03	06 29.50	+21 52.8					
1991	02 13	06 25.44	+21 59.2	2.337	3.092	132.7	13.6	18.0

1981 ER5 a,e,i = 2.39, 0.27, 7 Elements MPC 13038

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 31.01	+21 38.1	1.895	2.647	130.8	16.4	18.3
1990	12 05	07 25.36	+21 26.1					
1990	12 15	07 16.92	+21 17.4	1.774	2.695	154.3	9.1	17.9
1990	12 25	07 06.39	+21 10.4					
1991	01 04	06 54.87	+21 03.4	1.756	2.739	178.2	0.6	17.5
1991	01 14	06 43.63	+20 55.5					
1991	01 24	06 33.87	+20 46.8	1.858	2.781	154.9	8.6	18.1
1991	02 03	06 26.47	+20 37.9					
1991	02 13	06 21.88	+20 29.7	2.062	2.819	131.9	15.1	18.6

1979 SA8 a,e,i = 2.27, 0.20, 5 Elements MPC 11430

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 32.87	+28 56.7	1.936	2.690	131.1	16.0	17.3
1990	12 05	07 27.74	+29 33.7					
1990	12 15	07 19.49	+30 11.6	1.787	2.705	153.8	9.3	17.0
1990	12 25	07 08.71	+30 45.4					
1991	01 04	06 56.50	+31 09.7	1.740	2.717	171.7	3.0	16.6
1991	01 14	06 44.26	+31 21.4					
1991	01 24	06 33.40	+31 20.1	1.810	2.725	153.1	9.4	17.0
1991	02 03	06 25.05	+31 08.2					
1991	02 13	06 19.81	+30 49.3	1.982	2.730	130.7	15.9	17.4

(4290) Heisei a,e,i = 3.03, 0.09, 8 Elements MPC 15546

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 25.27	+15 51.9	2.432	3.168	131.0	13.6	16.8
1990	12 05	07 21.18	+15 28.1					
1990	12 15	07 14.99	+15 10.0	2.273	3.182	153.1	8.1	16.5
1990	12 25	07 07.19	+14 57.8					
1991	01 04	06 58.50	+14 51.2	2.219	3.196	171.9	2.5	16.2
1991	01 14	06 49.78	+14 49.7					
1991	01 24	06 41.90	+14 52.7	2.285	3.209	156.0	7.2	16.5
1991	02 03	06 35.61	+14 59.1					
1991	02 13	06 31.38	+15 08.0	2.457	3.221	133.9	12.8	16.9

1978 SP6 a,e,i = 3.18, 0.17, 2 Elements MPC 12131

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 24.96	+23 40.2	1.908	2.676	132.5	15.8	16.8
1990	12 05	07 21.99	+23 54.9					
1990	12 15	07 16.34	+24 13.4	1.769	2.692	154.7	9.0	16.4
1990	12 25	07 08.55	+24 33.3					
1991	01 04	06 59.57	+24 51.4	1.729	2.711	177.7	0.8	16.0
1991	01 14	06 50.54	+25 05.4					
1991	01 24	06 42.62	+25 14.0	1.801	2.732	156.6	8.2	16.5
1991	02 03	06 36.77	+25 17.5					
1991	02 13	06 33.53	+25 16.9	1.974	2.756	134.3	14.8	16.9

(4418) 1931 TR1 a,e,i = 2.58, 0.16, 13 Elements MPC 16211

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 27.46	+05 45.0	2.276	2.980	127.4	15.3	17.5
1990	12 05	07 23.33	+05 02.1					
1990	12 15	07 16.98	+04 30.6	2.108	2.984	147.3	10.3	17.2
1990	12 25	07 08.84	+04 13.2					
1991	01 04	06 59.67	+04 11.2	2.038	2.986	161.3	6.1	16.9
1991	01 14	06 50.36	+04 24.6					
1991	01 24	06 41.86	+04 51.7	2.082	2.986	151.8	9.0	17.1
1991	02 03	06 34.99	+05 29.5					
1991	02 13	06 30.28	+06 14.3	2.229	2.983	132.2	14.2	17.4

(4423) 1949 GH a,e,i = 3.39, 0.10, 19 Elements MPC 16213

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 26.21	-01 45.7	3.072	3.723	124.6	12.6	17.2
1990	12 05	07 22.74	-02 28.4					
1990	12 15	07 17.66	-02 59.2	2.900	3.727	142.2	9.3	17.0
1990	12 25	07 11.30	-03 15.6					
1991	01 04	07 04.19	-03 15.8	2.824	3.731	153.8	6.7	16.9
1991	01 14	06 56.92	-02 59.9					
1991	01 24	06 50.15	-02 29.1	2.858	3.734	148.7	7.9	16.9
1991	02 03	06 44.45	-01 46.0					
1991	02 13	06 40.24	-00 54.1	2.996	3.736	132.6	11.2	17.2

1981 ET24 a,e,i = 2.30, 0.04, 7 Elements MPC 11739

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 33.44	+11 52.5	1.584	2.326	128.0	19.5	18.2
1990	12 05	07 30.99	+11 25.2					
1990	12 15	07 25.37	+11 10.4	1.416	2.316	149.1	12.6	17.7
1990	12 25	07 17.01	+11 10.2					
1991	01 04	07 06.85	+11 24.7	1.335	2.306	168.2	5.0	17.3
1991	01 14	06 56.20	+11 52.5					
1991	01 24	06 46.53	+12 30.6	1.361	2.296	156.3	9.9	17.5
1991	02 03	06 39.11	+13 15.1					
1991	02 13	06 34.73	+14 02.3	1.482	2.286	134.6	17.9	18.0

4068 P-L a,e,i = 2.21, 0.07, 3 Elements MPC 12797

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 39.66	+26 11.9	1.349	2.119	129.4	21.1	17.7
1990	12 05	07 37.25	+26 28.1					
1990	12 15	07 30.86	+26 48.7	1.216	2.133	151.5	12.7	17.2
1990	12 25	07 21.03	+27 08.9					
1991	01 04	07 09.08	+27 22.9	1.168	2.149	174.4	2.6	16.7
1991	01 14	06 56.77	+27 26.7					
1991	01 24	06 46.00	+27 19.5	1.225	2.165	156.9	10.3	17.2
1991	02 03	06 38.25	+27 03.2					
1991	02 13	06 34.26	+26 41.4	1.374	2.181	134.4	18.9	17.7

1981 EM5 a,e,i = 3.09, 0.06, 8 Elements MPC 11837

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 33.91	+20 43.5	2.184	2.919	130.0	15.0	18.8
1990	12 05	07 30.73	+20 23.4					
1990	12 15	07 25.09	+20 07.0	2.010	2.917	152.2	9.1	18.4
1990	12 25	07 17.43	+19 53.4					
1991	01 04	07 08.52	+19 41.7	1.936	2.917	175.5	1.5	17.9
1991	01 14	06 59.35	+19 31.1					
1991	01 24	06 50.94	+19 21.2	1.978	2.917	158.8	7.0	18.3
1991	02 03	06 44.23	+19 11.9					
1991	02 13	06 39.78	+19 03.4	2.126	2.918	136.1	13.6	18.6

1979 VS2 a,e,i = 1.94, 0.11, 22 Elements MPC 12785

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 53.56	+42 55.6	1.231	1.984	126.6	23.5	16.9
1990	12 05	07 51.90	+46 08.6					
1990	12 15	07 44.25	+49 21.4	1.137	2.008	142.4	17.4	16.6
1990	12 25	07 30.46	+52 13.3					
1991	01 04	07 12.00	+54 22.0	1.128	2.031	148.3	14.7	16.5
1991	01 14	06 51.94	+55 33.5					
1991	01 24	06 34.24	+55 47.6	1.209	2.053	138.6	18.5	16.8
1991	02 03	06 21.96	+55 16.6					
1991	02 13	06 16.23	+54 16.7	1.360	2.072	123.1	23.5	17.2

1986 WE a,e,i = 2.44, 0.19, 6 Elements MPC 11512

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 30.41	+20 05.8	1.317	2.099	130.7	20.9	16.1
1990	12 05	07 30.31	+20 38.2					
1990	12 15	07 26.57	+21 24.3	1.146	2.067	152.1	12.9	15.5
1990	12 25	07 19.45	+22 22.1					
1991	01 04	07 09.90	+23 25.9	1.057	2.040	176.4	1.7	14.9
1991	01 14	06 59.42	+24 28.9					
1991	01 24	06 49.89	+25 24.7	1.069	2.016	158.2	10.4	15.3
1991	02 03	06 43.01	+26 09.8					
1991	02 13	06 39.84	+26 43.7	1.169	1.998	135.6	20.2	15.7

1986 RC7 a,e,i = 2.26, 0.11, 5 Elements MPC 14789

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 43.59	+28 49.0	1.496	2.251	128.8	20.0	17.0
1990	12 05	07 40.40	+29 16.4					
1990	12 15	07 33.38	+29 46.1	1.366	2.276	150.8	12.2	16.6
1990	12 25	07 23.09	+30 12.3					
1991	01 04	07 10.81	+30 28.7	1.324	2.301	171.5	3.6	16.2
1991	01 14	06 58.22	+30 31.1					
1991	01 24	06 47.12	+30 19.0	1.391	2.326	156.2	9.8	16.6
1991	02 03	06 38.90	+29 55.5					
1991	02 13	06 34.25	+29 25.0	1.554	2.350	134.0	17.6	17.1

1985 PO a,e,i = 2.54, 0.14, 3 Elements MPC 12580

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 40.37	+17 51.7	1.898	2.623	127.9	17.3	17.8
1990	12 05	07 37.05	+17 56.7					
1990	12 15	07 30.91	+18 10.3	1.751	2.651	150.4	10.6	17.4
1990	12 25	07 22.41	+18 31.2					
1991	01 04	07 12.45	+18 56.8	1.699	2.679	174.3	2.1	17.0
1991	01 14	07 02.16	+19 24.3					
1991	01 24	06 52.77	+19 51.2	1.762	2.705	159.3	7.4	17.4
1991	02 03	06 45.31	+20 15.8					
1991	02 13	06 40.44	+20 37.5	1.931	2.730	136.2	14.5	17.8

1980 TL13 a,e,i = 2.77, 0.14, 35 Elements MPC 15552

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 37.23	-18 45.9	2.144	2.697	113.7	19.6	15.7
1990	12 05	07 34.72	-21 24.5					
1990	12 15	07 29.61	-23 45.6	1.986	2.667	124.2	17.8	15.4
1990	12 25	07 22.18	-25 39.8					
1991	01 04	07 13.09	-26 59.0	1.895	2.637	130.0	16.6	15.3
1991	01 14	07 03.27	-27 37.7					
1991	01 24	06 53.87	-27 34.4	1.879	2.608	128.4	17.2	15.2
1991	02 03	06 46.01	-26 52.6					
1991	02 13	06 40.50	-25 39.1	1.931	2.579	120.8	19.2	15.3

1979 OK15 a,e,i = 2.22, 0.17, 5 Elements MPC 15406

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 44.24	+15 44.7	1.879	2.591	126.6	17.8	18.8
1990	12 05	07 40.84	+15 43.4					
1990	12 15	07 34.48	+15 52.3	1.703	2.596	148.9	11.3	18.3
1990	12 25	07 25.53	+16 11.0					
1991	01 04	07 14.84	+16 37.3	1.620	2.598	172.1	3.0	17.9
1991	01 14	07 03.57	+17 08.6					
1991	01 24	06 53.05	+17 41.9	1.653	2.597	159.1	7.8	18.1
1991	02 03	06 44.45	+18 14.7					
1991	02 13	06 38.56	+18 45.7	1.792	2.592	135.8	15.4	18.6

1979 OD15 a,e,i = 2.26, 0.12, 5 Elements MPC 14781

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 42.87	+14 09.0	1.458	2.194	126.5	21.2	17.4
1990 12 05	07 40.56	+13 56.3					
1990 12 15	07 34.81	+13 57.0	1.324	2.222	148.2	13.5	17.0
1990 12 25	07 26.11	+14 11.4					
1991 01 04	07 15.51	+14 37.9	1.275	2.251	170.4	4.2	16.6
1991 01 14	07 04.44	+15 13.1					
1991 01 24	06 54.46	+15 53.2	1.332	2.279	159.1	8.9	16.9
1991 02 03	06 46.86	+16 34.5					
1991 02 13	06 42.40	+17 14.2	1.487	2.306	136.7	17.1	17.5

1978 XQ a,e,i = 3.19, 0.14, 1 Elements MPC 12131

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 37.16	+20 19.2	2.181	2.908	129.2	15.3	16.8
1990 12 05	07 34.98	+20 20.8					
1990 12 15	07 30.30	+20 28.3	1.985	2.886	151.1	9.5	16.3
1990 12 25	07 23.46	+20 40.7					
1991 01 04	07 15.14	+20 55.7	1.885	2.866	174.8	1.8	15.9
1991 01 14	07 06.28	+21 11.4					
1991 01 24	06 57.95	+21 25.9	1.900	2.846	160.5	6.6	16.1
1991 02 03	06 51.13	+21 37.9					
1991 02 13	06 46.54	+21 47.2	2.020	2.829	137.6	13.6	16.5

1989 TG17 a,e,i = 3.01, 0.10, 10 Elements MPC 16877

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 38.32	+08 13.8	2.338	3.023	125.8	15.4	16.7
1990 12 05	07 35.41	+07 50.6					
1990 12 15	07 30.31	+07 38.6	2.174	3.043	146.3	10.3	16.4
1990 12 25	07 23.39	+07 39.2					
1991 01 04	07 15.31	+07 52.6	2.104	3.062	164.2	5.0	16.1
1991 01 14	07 06.89	+08 18.0					
1991 01 24	06 59.02	+08 53.2	2.149	3.081	157.5	7.0	16.3
1991 02 03	06 52.51	+09 35.0					
1991 02 13	06 47.92	+10 20.5	2.301	3.100	137.3	12.5	16.6

1989 SS a,e,i = 3.02, 0.08, 11 Elements MPC 15421

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 38.31	+09 55.0	2.067	2.768	126.3	16.7	16.4
1990 12 05	07 35.92	+09 01.7					
1990 12 15	07 31.06	+08 17.4	1.894	2.769	146.5	11.3	16.0
1990 12 25	07 24.13	+07 44.8					
1991 01 04	07 15.82	+07 25.5	1.812	2.770	163.7	5.7	15.7
1991 01 14	07 07.08	+07 19.9					
1991 01 24	06 58.92	+07 27.3	1.841	2.773	156.8	8.0	15.8
1991 02 03	06 52.30	+07 45.3					
1991 02 13	06 47.85	+08 10.9	1.973	2.777	136.9	14.1	16.2

1988 ER1 a,e,i = 2.35, 0.09, 7 Elements MPC 13161

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 48.11	+30 37.5	1.841	2.569	127.9	17.6	17.7
1990 12 05	07 45.25	+31 24.2					
1990 12 15	07 38.95	+32 14.4	1.668	2.564	149.3	11.3	17.3
1990 12 25	07 29.55	+33 02.0					
1991 01 04	07 17.99	+33 40.0	1.588	2.558	168.0	4.6	16.9
1991 01 14	07 05.62	+34 02.7					
1991 01 24	06 54.08	+34 07.8	1.620	2.550	155.8	9.1	17.1
1991 02 03	06 44.80	+33 56.7					
1991 02 13	06 38.69	+33 33.5	1.753	2.541	134.1	16.2	17.5

1981 EU15 a,e,i = 2.29, 0.11, 5 Elements MPC 10383

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 40.30	+16 37.5	1.293	2.051	127.7	22.4	19.1
1990	12 05	07 39.82	+15 56.7					
1990	12 15	07 35.63	+15 25.0	1.137	2.042	148.5	14.6	18.5
1990	12 25	07 28.07	+15 04.1					
1991	01 04	07 18.15	+14 54.3	1.060	2.036	170.3	4.7	18.0
1991	01 14	07 07.38	+14 54.7					
1991	01 24	06 57.55	+15 03.5	1.082	2.034	159.7	9.7	18.3
1991	02 03	06 50.24	+15 18.2					
1991	02 13	06 46.37	+15 36.4	1.194	2.035	137.5	19.1	18.8

1981 EG28 a,e,i = 2.34, 0.13, 5 Elements MPC 11150

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 45.99	+14 14.7	1.683	2.397	125.8	19.5	18.9
1990	12 05	07 43.18	+13 56.6					
1990	12 15	07 37.25	+13 49.8	1.537	2.426	147.6	12.6	18.5
1990	12 25	07 28.65	+13 54.7					
1991	01 04	07 18.31	+14 10.1	1.480	2.453	169.6	4.1	18.1
1991	01 14	07 07.48	+14 33.8					
1991	01 24	06 57.53	+15 02.9	1.533	2.479	159.6	7.9	18.4
1991	02 03	06 49.65	+15 34.5					
1991	02 13	06 44.54	+16 06.3	1.689	2.504	137.1	15.6	18.9

1981 EY14 a,e,i = 2.29, 0.12, 4 Elements MPC 10383

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 42.39	+21 57.8	1.316	2.078	128.3	21.9	18.6
1990	12 05	07 41.94	+21 38.7					
1990	12 15	07 37.64	+21 25.6	1.151	2.061	149.5	14.0	18.1
1990	12 25	07 29.80	+21 17.3					
1991	01 04	07 19.41	+21 11.3	1.067	2.047	174.0	2.9	17.5
1991	01 14	07 08.05	+21 05.3					
1991	01 24	06 57.61	+20 57.6	1.082	2.036	160.4	9.3	17.8
1991	02 03	06 49.77	+20 48.3					
1991	02 13	06 45.52	+20 38.0	1.189	2.029	137.4	19.2	18.3

(4285) Hulkower a,e,i = 2.65, 0.16, 13 Elements MPC 15544

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 41.88	+06 58.3	2.218	2.894	124.5	16.3	17.2
1990	12 05	07 39.34	+06 42.3					
1990	12 15	07 34.37	+06 39.3	2.007	2.869	145.0	11.4	16.8
1990	12 25	07 27.24	+06 51.4					
1991	01 04	07 18.57	+07 19.3	1.886	2.842	163.4	5.7	16.4
1991	01 14	07 09.21	+08 02.0					
1991	01 24	07 00.20	+08 56.7	1.878	2.814	157.8	7.6	16.5
1991	02 03	06 52.53	+09 59.3					
1991	02 13	06 46.94	+11 05.6	1.978	2.785	137.2	13.9	16.8

1982 JE1 a,e,i = 2.26, 0.18, 5 Elements MPC 10938

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 49.96	+23 59.9	1.447	2.187	126.9	21.2	17.9
1990	12 05	07 47.53	+24 41.7					
1990	12 15	07 41.29	+25 32.3	1.326	2.229	149.2	13.1	17.5
1990	12 25	07 31.73	+26 26.4					
1991	01 04	07 20.01	+27 16.8	1.292	2.271	172.7	3.1	17.1
1991	01 14	07 07.72	+27 57.2					
1991	01 24	06 56.64	+28 24.2	1.367	2.312	158.9	8.8	17.5
1991	02 03	06 48.20	+28 37.9					
1991	02 13	06 43.20	+28 41.0	1.539	2.352	136.0	16.9	18.1

(4393) 1978 VP8 a,e,i = 3.21, 0.14, 2 Elements MPC 16011

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 41.67	+20 12.0	2.597	3.299	128.1	13.6	17.9
1990	12 05	07 39.04	+20 19.8					
1990	12 15	07 34.20	+20 33.2	2.383	3.273	150.2	8.6	17.5
1990	12 25	07 27.45	+20 51.2					
1991	01 04	07 19.36	+21 11.6	2.267	3.247	174.0	1.8	17.0
1991	01 14	07 10.69	+21 32.4					
1991	01 24	07 02.36	+21 51.7	2.271	3.220	161.5	5.6	17.2
1991	02 03	06 55.23	+22 08.1					
1991	02 13	06 49.95	+22 21.3	2.387	3.193	138.3	11.9	17.5

1964 UP a,e,i = 2.16, 0.15, 3 Elements MPC 11241

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 52.39	+22 41.2	1.742	2.456	126.1	19.0	18.0
1990	12 05	07 49.24	+22 44.3					
1990	12 15	07 42.72	+22 53.6	1.572	2.466	148.6	12.0	17.6
1990	12 25	07 33.19	+23 06.5					
1991	01 04	07 21.59	+23 19.1	1.494	2.474	173.8	2.5	17.1
1991	01 14	07 09.26	+23 28.2					
1991	01 24	06 57.73	+23 31.7	1.529	2.478	160.3	7.7	17.4
1991	02 03	06 48.38	+23 29.6					
1991	02 13	06 42.06	+23 23.3	1.669	2.480	136.4	15.9	17.8

1977 DS4 a,e,i = 2.88, 0.11, 4 Elements MPC 15699

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 45.95	+25 22.2	2.477	3.181	127.9	14.2	18.4
1990	12 05	07 42.79	+25 45.2					
1990	12 15	07 37.19	+26 12.0	2.292	3.183	150.1	8.9	18.0
1990	12 25	07 29.50	+26 39.9					
1991	01 04	07 20.39	+27 05.4	2.207	3.185	172.8	2.2	17.7
1991	01 14	07 10.74	+27 25.7					
1991	01 24	07 01.57	+27 38.7	2.241	3.185	160.1	6.0	17.9
1991	02 03	06 53.82	+27 44.2					
1991	02 13	06 48.15	+27 43.1	2.387	3.184	137.3	12.1	18.2

1981 JX1 a,e,i = 2.35, 0.02, 4 Elements MPC 15706

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 50.30	+26 18.6	1.656	2.385	127.1	19.3	17.8
1990	12 05	07 48.57	+26 49.7					
1990	12 15	07 43.33	+27 27.3	1.486	2.383	148.8	12.4	17.4
1990	12 25	07 34.86	+28 06.9					
1991	01 04	07 24.07	+28 42.5	1.404	2.381	171.1	3.6	16.9
1991	01 14	07 12.30	+29 08.5					
1991	01 24	07 01.22	+29 21.6	1.431	2.378	159.4	8.4	17.2
1991	02 03	06 52.35	+29 21.8					
1991	02 13	06 46.63	+29 11.7	1.558	2.375	136.7	16.6	17.6

1981 EE12 a,e,i = 2.30, 0.10, 5 Elements MPC 12706

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	07 50.27	+22 12.8	1.347	2.091	126.5	22.3	18.7
1990	12 05	07 49.35	+21 48.5					
1990	12 15	07 44.55	+21 30.0	1.201	2.101	148.0	14.4	18.2
1990	12 25	07 36.26	+21 16.0					
1991	01 04	07 25.55	+21 04.1	1.136	2.114	172.6	3.4	17.7
1991	01 14	07 13.97	+20 52.1					
1991	01 24	07 03.33	+20 39.0	1.172	2.129	161.8	8.3	18.0
1991	02 03	06 55.21	+20 24.8					
1991	02 13	06 50.50	+20 10.4	1.304	2.146	138.6	17.7	18.5

1981 GN1 a,e,i = 2.33, 0.13, 10 Elements MPC 15242

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 51.36	+07 41.3	1.911	2.580	122.5	18.8	17.8
1990 12 05	07 48.87	+07 11.1					
1990 12 15	07 43.56	+06 54.6	1.737	2.593	143.1	13.2	17.4
1990 12 25	07 35.76	+06 54.1					
1991 01 04	07 26.20	+07 10.5	1.648	2.603	162.6	6.5	17.1
1991 01 14	07 15.88	+07 42.8					
1991 01 24	07 06.03	+08 28.1	1.669	2.611	158.8	7.8	17.2
1991 02 03	06 57.76	+09 22.0					
1991 02 13	06 51.87	+10 20.0	1.797	2.618	138.3	14.5	17.6

(4357) 2069 T-2 a,e,i = 3.01, 0.06, 11 Elements MPC 15697

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 46.75	+07 49.0	2.492	3.148	123.7	15.1	16.8
1990 12 05	07 44.36	+07 15.2					
1990 12 15	07 39.80	+06 51.3	2.291	3.140	143.9	10.6	16.5
1990 12 25	07 33.37	+06 39.1					
1991 01 04	07 25.60	+06 39.7	2.181	3.131	162.2	5.5	16.2
1991 01 14	07 17.23	+06 52.9					
1991 01 24	07 09.13	+07 17.4	2.184	3.122	158.7	6.6	16.2
1991 02 03	07 02.13	+07 50.6					
1991 02 13	06 56.87	+08 29.6	2.298	3.112	139.2	12.0	16.5

1010 T-2 a,e,i = 3.01, 0.09, 10 Elements MPC 15906

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 46.87	+08 50.8	2.196	2.867	124.0	16.6	15.9
1990 12 05	07 45.17	+08 12.2					
1990 12 15	07 41.05	+07 43.7	1.994	2.851	144.1	11.7	15.5
1990 12 25	07 34.80	+07 27.6					
1991 01 04	07 27.00	+07 25.3	1.881	2.835	162.7	5.9	15.1
1991 01 14	07 18.47	+07 36.6					
1991 01 24	07 10.20	+08 00.4	1.878	2.820	159.4	7.1	15.2
1991 02 03	07 03.15	+08 33.6					
1991 02 13	06 58.05	+09 13.1	1.981	2.806	139.6	13.2	15.5

6608 P-L a,e,i = 2.62, 0.31, 6 Elements MPC 12572

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 52.13	+31 07.4	1.113	1.881	127.1	24.7	18.6
1990 12 05	07 53.38	+31 51.4					
1990 12 15	07 49.99	+32 38.7	1.021	1.923	147.0	16.2	18.2
1990 12 25	07 42.42	+33 21.4					
1991 01 04	07 32.00	+33 50.3	1.003	1.972	166.3	6.8	17.9
1991 01 14	07 20.69	+33 58.5					
1991 01 24	07 10.65	+33 44.5	1.078	2.027	158.9	10.1	18.3
1991 02 03	07 03.60	+33 11.9					
1991 02 13	07 00.35	+32 27.0	1.241	2.087	138.7	18.2	18.9

1981 SA7 a,e,i = 2.62, 0.17, 7 Elements MPC 14188

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 55.68	+27 15.1	1.544	2.269	126.0	20.6	16.5
1990 12 05	07 55.14	+28 03.9					
1990 12 15	07 50.95	+29 00.2	1.408	2.297	147.1	13.5	16.1
1990 12 25	07 43.41	+29 58.5					
1991 01 04	07 33.45	+30 51.2	1.357	2.328	168.2	5.0	15.8
1991 01 14	07 22.45	+31 31.4					
1991 01 24	07 12.10	+31 54.9	1.411	2.361	160.2	8.1	16.0
1991 02 03	07 03.89	+32 01.5					
1991 02 13	06 58.78	+31 54.2	1.564	2.395	138.6	15.8	16.5

9508 P-L a,e,i = 3.17, 0.14, 2 Elements MPC 14630

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 52.33	+21 13.0	2.422	3.105	125.9	14.9	18.1
1990 12 05	07 50.61	+21 24.4					
1990 12 15	07 46.49	+21 42.4	2.202	3.078	147.6	9.9	17.7
1990 12 25	07 40.17	+22 05.5					
1991 01 04	07 32.21	+22 31.1	2.076	3.051	171.3	2.8	17.3
1991 01 14	07 23.39	+22 56.5					
1991 01 24	07 14.68	+23 19.0	2.066	3.025	164.2	5.1	17.4
1991 02 03	07 07.07	+23 36.9					
1991 02 13	07 01.34	+23 49.8	2.168	2.999	140.8	12.0	17.7

1950 HJ a,e,i = 3.02, 0.06, 9 Elements MPC 14342

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	07 54.14	+12 41.3	2.478	3.132	123.4	15.2	17.2
1990 12 05	07 51.95	+12 08.4					
1990 12 15	07 47.49	+11 42.8	2.269	3.123	144.4	10.6	16.8
1990 12 25	07 41.02	+11 25.7					
1991 01 04	07 33.08	+11 17.4	2.152	3.113	165.2	4.6	16.5
1991 01 14	07 24.41	+11 17.6					
1991 01 24	07 15.91	+11 25.4	2.150	3.102	162.4	5.5	16.5
1991 02 03	07 08.46	+11 39.0					
1991 02 13	07 02.73	+11 56.5	2.260	3.092	141.1	11.6	16.8

1986 RF7 a,e,i = 2.20, 0.16, 2 Elements MPC 15413

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	08 02.91	+18 05.3	1.765	2.444	122.8	19.9	18.5
1990 12 05	08 00.80	+18 08.3					
1990 12 15	07 55.44	+18 21.9	1.597	2.468	144.8	13.3	18.2
1990 12 25	07 47.10	+18 44.9					
1991 01 04	07 36.55	+19 14.1	1.515	2.488	169.6	4.1	17.7
1991 01 14	07 24.95	+19 45.9					
1991 01 24	07 13.75	+20 16.3	1.545	2.507	164.2	6.1	17.9
1991 02 03	07 04.29	+20 42.9					
1991 02 13	06 57.50	+21 04.6	1.683	2.522	140.2	14.5	18.4

3523 P-L a,e,i = 2.59, 0.05, 9 Elements MPC 15256

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	08 02.58	+30 15.4	1.866	2.561	124.8	18.5	16.7
1990 12 05	08 00.79	+30 31.6					
1990 12 15	07 55.62	+30 50.4	1.695	2.570	146.0	12.4	16.3
1990 12 25	07 47.37	+31 07.1					
1991 01 04	07 36.87	+31 16.4	1.612	2.580	167.4	4.8	16.0
1991 01 14	07 25.33	+31 13.7					
1991 01 24	07 14.27	+30 57.3	1.639	2.590	161.1	7.1	16.1
1991 02 03	07 05.06	+30 28.4					
1991 02 13	06 58.63	+29 50.4	1.772	2.600	139.1	14.4	16.5

1989 RM2 a,e,i = 2.68, 0.16, 5 Elements MPC 15420

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 11 25	08 01.61	+21 18.2	2.243	2.909	123.7	16.4	17.3
1990 12 05	07 58.98	+21 15.0					
1990 12 15	07 53.69	+21 17.7	2.067	2.934	145.8	10.9	17.0
1990 12 25	07 46.06	+21 24.6					
1991 01 04	07 36.74	+21 33.3	1.983	2.957	170.1	3.3	16.6
1991 01 14	07 26.65	+21 41.6					
1991 01 24	07 16.88	+21 47.3	2.017	2.979	164.9	4.9	16.8
1991 02 03	07 08.46	+21 49.7					
1991 02 13	07 02.12	+21 48.7	2.165	2.999	141.2	11.9	17.2

6600 P-L a,e,i = 2.19, 0.06, 2 Elements MPC 14961

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	08 00.39	+22 07.9	1.507	2.217	124.2	21.6	18.6
1990	12 05	08 00.38	+22 22.5					
1990	12 15	07 56.71	+22 47.7	1.320	2.203	145.4	14.7	18.1
1990	12 25	07 49.44	+23 21.5					
1991	01 04	07 39.27	+23 58.9	1.214	2.188	169.7	4.6	17.6
1991	01 14	07 27.47	+24 34.1					
1991	01 24	07 15.78	+25 01.9	1.210	2.173	164.0	7.2	17.7
1991	02 03	07 05.97	+25 19.6					
1991	02 13	06 59.33	+25 27.4	1.306	2.159	140.1	17.1	18.1

1986 RJ a,e,i = 2.17, 0.19, 3 Elements MPC 11241

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	08 07.40	+19 08.2	1.854	2.520	122.0	19.4	17.7
1990	12 05	08 05.04	+19 02.8					
1990	12 15	07 59.46	+19 06.2	1.678	2.541	144.1	13.1	17.3
1990	12 25	07 50.94	+19 17.2					
1991	01 04	07 40.19	+19 33.2	1.587	2.559	168.9	4.3	16.9
1991	01 14	07 28.35	+19 50.8					
1991	01 24	07 16.81	+20 07.1	1.610	2.573	164.9	5.7	17.0
1991	02 03	07 06.90	+20 20.4					
1991	02 13	06 59.57	+20 30.0	1.744	2.585	140.7	14.0	17.5

1989 UT2 a,e,i = 2.58, 0.17, 12 Elements MPC 15719

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	08 04.97	+06 37.4	2.407	3.012	119.0	16.7	18.1
1990	12 05	08 02.84	+05 48.7					
1990	12 15	07 58.33	+05 09.8	2.195	3.009	139.1	12.4	17.7
1990	12 25	07 51.64	+04 43.2					
1991	01 04	07 43.26	+04 30.6	2.067	3.003	158.2	7.0	17.4
1991	01 14	07 33.94	+04 32.8					
1991	01 24	07 24.59	+04 49.0	2.051	2.995	159.9	6.5	17.4
1991	02 03	07 16.16	+05 16.9					
1991	02 13	07 09.43	+05 53.0	2.147	2.985	141.6	11.9	17.7

1978 VG10 a,e,i = 3.20, 0.16, 1 Elements MPC 15701

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	11 25	08 03.89	+19 48.6	2.774	3.413	122.9	14.1	17.8
1990	12 05	08 01.64	+19 55.0					
1990	12 15	07 57.25	+20 07.5	2.587	3.439	144.8	9.5	17.5
1990	12 25	07 50.96	+20 25.1					
1991	01 04	07 43.28	+20 45.6	2.494	3.463	168.5	3.2	17.2
1991	01 14	07 34.87	+21 06.7					
1991	01 24	07 26.55	+21 26.5	2.521	3.487	167.2	3.6	17.2
1991	02 03	07 19.12	+21 43.2					
1991	02 13	07 13.20	+21 56.2	2.665	3.510	143.7	9.6	17.6

1969 TR1 a,e,i = 2.27, 0.27, 2 Elements MPC 11341

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 07.76	+22 59.4	1.648	2.505	142.9	13.7	17.8
1990	12 25	07 59.07	+23 27.8					
1991	01 04	07 48.08	+23 57.3	1.585	2.554	167.7	4.7	17.4
1991	01 14	07 35.97	+24 23.1					
1991	01 24	07 24.20	+24 41.8	1.635	2.601	165.9	5.3	17.5
1991	02 03	07 14.12	+24 51.7					
1991	02 13	07 06.69	+24 53.8	1.796	2.644	141.8	13.3	18.1
1991	02 23	07 02.38	+24 49.5					
1991	03 05	07 01.25	+24 40.4	2.040	2.683	120.5	18.6	18.5

1985 QH5 a,e,i = 2.68, 0.24, 2 Elements MPC 14350

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 01.34	+17 21.6	1.259	2.130	143.2	16.1	16.4
1990	12 25	07 55.60	+17 33.8					
1991	01 04	07 47.30	+17 55.9	1.195	2.164	166.7	6.0	16.0
1991	01 14	07 37.67	+18 24.2					
1991	01 24	07 28.27	+18 54.2	1.231	2.202	167.6	5.5	16.1
1991	02 03	07 20.59	+19 22.0					
1991	02 13	07 15.64	+19 45.5	1.366	2.244	144.5	14.8	16.7
1991	02 23	07 13.96	+20 03.3					
1991	03 05	07 15.57	+20 14.8	1.578	2.289	124.3	21.0	17.2

(4368) 1981 JC2 a,e,i = 3.19, 0.01, 21 Elements MPC 15866

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	07 59.64	-05 25.4	2.464	3.215	132.8	13.0	16.5
1990	12 25	07 54.07	-06 19.4					
1991	01 04	07 47.03	-06 54.8	2.342	3.215	147.6	9.4	16.2
1991	01 14	07 39.12	-07 09.3					
1991	01 24	07 31.13	-07 02.1	2.320	3.216	150.8	8.6	16.2
1991	02 03	07 23.86	-06 35.5					
1991	02 13	07 17.97	-05 53.1	2.403	3.216	139.2	11.6	16.4
1991	02 23	07 13.96	-04 59.6					
1991	03 05	07 12.11	-04 00.5	2.572	3.216	122.5	15.1	16.6

1989 RH a,e,i = 2.60, 0.11, 14 Elements MPC 16235

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 00.74	+00 13.4	1.512	2.323	135.9	17.1	16.5
1990	12 25	07 55.79	-00 03.1					
1991	01 04	07 48.55	+00 06.8	1.396	2.319	153.7	10.8	16.1
1991	01 14	07 39.91	+00 44.3					
1991	01 24	07 31.08	+01 47.6	1.373	2.317	158.5	9.0	16.0
1991	02 03	07 23.36	+03 10.4					
1991	02 13	07 17.80	+04 44.8	1.450	2.318	143.3	14.7	16.4
1991	02 23	07 15.08	+06 22.6					
1991	03 05	07 15.48	+07 56.7	1.609	2.321	124.7	20.6	16.8

1989 UD a,e,i = 3.16, 0.16, 3 Elements MPC 15566

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 02.74	+21 30.6	2.611	3.454	143.8	9.7	17.2
1990	12 25	07 56.59	+21 54.9					
1991	01 04	07 48.96	+22 21.5	2.512	3.478	167.4	3.5	16.9
1991	01 14	07 40.51	+22 47.8					
1991	01 24	07 32.04	+23 11.3	2.531	3.500	168.1	3.3	16.9
1991	02 03	07 24.38	+23 30.4					
1991	02 13	07 18.17	+23 44.3	2.670	3.521	144.6	9.3	17.3
1991	02 23	07 13.91	+23 53.0					
1991	03 05	07 11.80	+23 56.9	2.902	3.541	123.0	13.6	17.6

1979 VG a,e,i = 2.31, 0.11, 6 Elements MPC 11434

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 11.67	+30 03.6	1.287	2.153	142.5	16.1	16.5
1990	12 25	08 04.70	+30 56.3					
1991	01 04	07 54.51	+31 44.0	1.214	2.176	164.0	7.2	16.1
1991	01 14	07 42.45	+32 18.4					
1991	01 24	07 30.43	+32 33.4	1.240	2.199	162.8	7.6	16.2
1991	02 03	07 20.33	+32 28.1					
1991	02 13	07 13.44	+32 06.1	1.365	2.224	141.5	16.1	16.7
1991	02 23	07 10.39	+31 32.1					
1991	03 05	07 11.20	+30 50.6	1.564	2.249	121.7	22.0	17.2

1973 QG2 a,e,i = 3.05, 0.20, 3 Elements MPC 10829

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 07.35	+23 44.5	2.115	2.962	143.1	11.5	17.1
1990	12 25	08 00.95	+24 13.8					
1991	01 04	07 52.70	+24 44.2	2.036	3.001	166.6	4.4	16.8
1991	01 14	07 43.44	+25 12.1					
1991	01 24	07 34.19	+25 34.3	2.071	3.040	167.7	4.0	16.8
1991	02 03	07 25.99	+25 49.0					
1991	02 13	07 19.62	+25 55.9	2.221	3.079	144.5	10.7	17.3
1991	02 23	07 15.60	+25 55.9					
1991	03 05	07 14.12	+25 50.2	2.460	3.117	123.3	15.4	17.7

1985 PL a,e,i = 2.57, 0.22, 13 Elements MPC 15709

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 16.07	+30 25.2	1.856	2.698	141.6	13.1	17.7
1990	12 25	08 07.55	+30 36.5					
1991	01 04	07 56.71	+30 41.7	1.783	2.742	164.1	5.6	17.3
1991	01 14	07 44.68	+30 36.6					
1991	01 24	07 32.83	+30 18.9	1.822	2.784	164.7	5.4	17.4
1991	02 03	07 22.50	+29 49.2					
1991	02 13	07 14.62	+29 10.6	1.975	2.824	142.6	12.3	17.9
1991	02 23	07 09.71	+28 26.4					
1991	03 05	07 07.86	+27 39.5	2.215	2.862	121.6	17.2	18.3

(4301) 1966 PM a,e,i = 3.10, 0.13, 2 Elements MPC 15678

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 05.96	+23 03.3	1.944	2.796	143.3	12.1	16.6
1990	12 25	08 00.61	+23 29.6					
1991	01 04	07 53.15	+23 58.9	1.813	2.779	166.5	4.7	16.2
1991	01 14	07 44.33	+24 27.4					
1991	01 24	07 35.24	+24 51.5	1.792	2.763	168.2	4.2	16.1
1991	02 03	07 27.04	+25 08.5					
1991	02 13	07 20.70	+25 17.7	1.882	2.749	144.9	11.9	16.5
1991	02 23	07 16.90	+25 19.3					
1991	03 05	07 15.94	+25 14.3	2.058	2.736	123.8	17.5	16.9

1981 RQ a,e,i = 2.58, 0.18, 13 Elements MPC 12205

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 17.79	+35 10.3	1.746	2.586	141.0	13.9	17.0
1990	12 25	08 09.28	+35 35.5					
1991	01 04	07 58.12	+35 50.3	1.675	2.624	161.1	7.0	16.7
1991	01 14	07 45.57	+35 48.8					
1991	01 24	07 33.20	+35 28.3	1.712	2.662	160.9	7.0	16.7
1991	02 03	07 22.52	+34 50.0					
1991	02 13	07 14.58	+33 58.5	1.859	2.699	141.0	13.3	17.2
1991	02 23	07 09.91	+32 58.9					
1991	03 05	07 08.56	+31 55.7	2.089	2.734	120.9	18.1	17.6

1985 PE2 a,e,i = 2.36, 0.19, 7 Elements MPC 14020

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 12.44	+18 21.5	1.716	2.556	140.9	14.1	16.9
1990	12 25	08 06.54	+19 02.5					
1991	01 04	07 57.99	+19 53.9	1.557	2.519	164.9	5.8	16.4
1991	01 14	07 47.54	+20 51.0					
1991	01 24	07 36.42	+21 48.3	1.506	2.480	169.4	4.2	16.2
1991	02 03	07 26.07	+22 40.5					
1991	02 13	07 17.75	+23 24.5	1.567	2.439	144.6	13.6	16.6
1991	02 23	07 12.40	+23 58.9					
1991	03 05	07 10.45	+24 23.8	1.712	2.397	122.7	20.4	17.0

3045 T-3 a,e,i = 3.25, 0.09, 15 Elements MPC 15572

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 12.59	+39 02.0	2.616	3.441	141.4	10.3	16.8
1990	12 25	08 05.97	+39 58.1					
1991	01 04	07 57.36	+40 45.8	2.522	3.452	157.7	6.2	16.6
1991	01 14	07 47.52	+41 19.9					
1991	01 24	07 37.48	+41 36.8	2.540	3.462	156.1	6.6	16.7
1991	02 03	07 28.32	+41 35.9					
1991	02 13	07 20.93	+41 18.9	2.668	3.472	138.8	10.8	16.9
1991	02 23	07 15.91	+40 49.0					
1991	03 05	07 13.52	+40 10.1	2.882	3.482	119.7	14.3	17.2

1988 JU a,e,i = 2.37, 0.18, 23 Elements MPC 13470

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 10.98	-11 18.4	2.031	2.738	126.9	16.7	17.5
1990	12 25	08 05.21	-12 06.2					
1991	01 04	07 57.35	-12 27.6	1.878	2.717	141.5	13.0	17.2
1991	01 14	07 48.08	-12 18.2					
1991	01 24	07 38.35	-11 36.5	1.813	2.694	147.2	11.4	17.1
1991	02 03	07 29.25	-10 25.2					
1991	02 13	07 21.77	-08 50.5	1.847	2.668	138.5	14.2	17.2
1991	02 23	07 16.61	-07 00.8					
1991	03 05	07 14.19	-05 04.6	1.967	2.640	122.8	18.4	17.4

(4277) 1982 AF a,e,i = 2.72, 0.14, 11 Elements MPC 15542

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 15.84	+23 27.9	1.722	2.564	141.1	13.9	16.3
1990	12 25	08 08.87	+23 16.3					
1991	01 04	07 59.53	+23 05.3	1.629	2.592	165.0	5.6	15.9
1991	01 14	07 48.85	+22 52.4					
1991	01 24	07 38.12	+22 35.5	1.646	2.620	169.6	3.9	15.9
1991	02 03	07 28.65	+22 14.2					
1991	02 13	07 21.43	+21 49.4	1.775	2.649	145.6	12.1	16.4
1991	02 23	07 17.04	+21 22.3					
1991	03 05	07 15.65	+20 53.9	1.992	2.679	124.3	17.8	16.9

1212 T-2 a,e,i = 3.02, 0.11, 10 Elements MPC 16037

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 09.54	+06 58.2	2.437	3.232	137.5	11.9	17.7
1990	12 25	08 04.07	+06 50.7					
1991	01 04	07 57.03	+06 55.6	2.314	3.247	158.1	6.5	17.4
1991	01 14	07 49.03	+07 12.5					
1991	01 24	07 40.83	+07 40.0	2.302	3.262	164.7	4.6	17.3
1991	02 03	07 33.27	+08 15.4					
1991	02 13	07 27.03	+08 55.6	2.406	3.276	146.6	9.6	17.6
1991	02 23	07 22.65	+09 37.5					
1991	03 05	07 20.39	+10 18.3	2.606	3.288	126.0	14.1	18.0

(4568) a,e,i = 3.04, 0.06, 11 Elements MPC 16860

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 14.52	+34 37.4	2.293	3.125	141.7	11.3	16.7
1990	12 25	08 08.12	+35 18.7					
1991	01 04	07 59.53	+35 54.1	2.170	3.115	160.8	6.0	16.4
1991	01 14	07 49.54	+36 18.2					
1991	01 24	07 39.24	+36 27.3	2.159	3.105	160.8	6.0	16.3
1991	02 03	07 29.81	+36 20.1					
1991	02 13	07 22.23	+35 58.2	2.260	3.095	141.6	11.4	16.6
1991	02 23	07 17.18	+35 24.6					
1991	03 05	07 14.93	+34 42.9	2.448	3.084	121.5	15.9	16.9

1986 TK4 a,e,i = 2.35, 0.24, 7 Elements MPC 11345

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 20.84	+30 33.8	1.322	2.174	140.6	16.7	17.1
1990	12 25	08 13.41	+31 39.4					
1991	01 04	08 02.74	+32 39.3	1.273	2.229	162.0	7.8	16.8
1991	01 14	07 50.23	+33 24.2					
1991	01 24	07 37.76	+33 47.8	1.324	2.283	162.8	7.3	16.9
1991	02 03	07 27.17	+33 49.3					
1991	02 13	07 19.70	+33 32.3	1.478	2.337	142.2	15.0	17.4
1991	02 23	07 15.95	+33 01.9					
1991	03 05	07 15.90	+32 23.1	1.708	2.390	122.3	20.5	17.9

5174 T-3 a,e,i = 3.17, 0.19, 13 Elements MPC 15910

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 12.27	+27 46.6	2.708	3.539	142.4	9.8	17.7
1990	12 25	08 06.65	+28 40.3					
1991	01 04	07 59.23	+29 34.4	2.556	3.512	164.0	4.4	17.3
1991	01 14	07 50.58	+30 24.8					
1991	01 24	07 41.52	+31 07.2	2.523	3.484	165.4	4.1	17.2
1991	02 03	07 32.95	+31 39.2					
1991	02 13	07 25.69	+31 59.9	2.608	3.455	143.9	9.7	17.5
1991	02 23	07 20.38	+32 09.8					
1991	03 05	07 17.41	+32 10.7	2.786	3.425	122.7	14.1	17.8

5141 T-2 a,e,i = 3.01, 0.09, 10 Elements MPC 15087

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 14.69	+22 21.2	2.424	3.250	141.2	10.9	17.6
1990	12 25	08 08.46	+22 23.0					
1991	01 04	08 00.46	+22 26.5	2.300	3.259	164.8	4.5	17.2
1991	01 14	07 51.35	+22 29.4					
1991	01 24	07 42.04	+22 29.6	2.292	3.266	170.5	2.9	17.1
1991	02 03	07 33.45	+22 25.8					
1991	02 13	07 26.36	+22 18.0	2.403	3.273	146.7	9.5	17.5
1991	02 23	07 21.33	+22 06.4					
1991	03 05	07 18.64	+21 51.6	2.609	3.279	124.9	14.4	17.9

1981 JE2 a,e,i = 2.39, 0.21, 3 Elements MPC 16230

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 18.54	+22 49.5	2.030	2.859	140.4	12.7	18.5
1990	12 25	08 11.69	+23 24.2					
1991	01 04	08 02.57	+24 02.2	1.911	2.871	164.4	5.3	18.1
1991	01 14	07 52.00	+24 38.8					
1991	01 24	07 41.08	+25 09.8	1.907	2.880	169.2	3.7	18.0
1991	02 03	07 31.03	+25 32.4					
1991	02 13	07 22.85	+25 45.8	2.019	2.886	145.2	11.2	18.4
1991	02 23	07 17.22	+25 50.8					
1991	03 05	07 14.45	+25 48.7	2.223	2.889	123.3	16.7	18.8

1981 EG44 a,e,i = 3.07, 0.06, 10 Elements MPC 9964

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 16.91	+33 36.4	2.064	2.898	141.3	12.3	18.0
1990	12 25	08 10.99	+34 19.7					
1991	01 04	08 02.70	+34 57.7	1.950	2.897	160.8	6.4	17.7
1991	01 14	07 52.87	+35 24.7					
1991	01 24	07 42.68	+35 36.2	1.945	2.896	161.8	6.1	17.7
1991	02 03	07 33.40	+35 30.8					
1991	02 13	07 26.07	+35 10.0	2.049	2.897	142.7	11.9	18.0
1991	02 23	07 21.40	+34 37.0					
1991	03 05	07 19.67	+33 55.4	2.240	2.898	122.7	16.7	18.3

1989 TT11 a,e,i = 2.89, 0.07, 2 Elements MPC 15896

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 12 15	08 16.29	+17 32.8	2.057	2.880	139.8	12.7	17.0
1990 12 25	08 10.79	+17 45.2					
1991 01 04	08 03.28	+18 04.6	1.940	2.895	163.2	5.6	16.6
1991 01 14	07 54.47	+18 28.3					
1991 01 24	07 45.34	+18 53.4	1.933	2.910	171.6	2.8	16.5
1991 02 03	07 36.94	+19 17.0					
1991 02 13	07 30.15	+19 37.3	2.041	2.925	147.9	10.3	17.0
1991 02 23	07 25.60	+19 53.1					
1991 03 05	07 23.61	+20 03.9	2.242	2.940	126.2	15.8	17.4

1986 TK1 a,e,i = 2.25, 0.20, 5 Elements MPC 15886

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 12 15	08 24.10	+17 51.1	1.735	2.553	138.1	14.9	17.6
1990 12 25	08 16.99	+17 53.8					
1991 01 04	08 07.37	+18 03.6	1.628	2.582	162.3	6.7	17.2
1991 01 14	07 56.15	+18 17.7					
1991 01 24	07 44.59	+18 32.7	1.630	2.607	171.4	3.2	17.0
1991 02 03	07 34.05	+18 46.0					
1991 02 13	07 25.62	+18 56.1	1.747	2.630	146.9	11.8	17.5
1991 02 23	07 20.00	+19 02.5					
1991 03 05	07 17.45	+19 04.9	1.954	2.649	124.9	17.9	18.0

1984 UB3 a,e,i = 2.99, 0.10, 1 Elements MPC 15884

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 12 15	08 17.82	+18 59.8	2.077	2.899	139.8	12.7	17.2
1990 12 25	08 12.41	+19 13.5					
1991 01 04	08 04.99	+19 33.1	1.963	2.918	163.3	5.6	16.8
1991 01 14	07 56.26	+19 55.6					
1991 01 24	07 47.20	+20 18.0	1.959	2.937	172.1	2.7	16.6
1991 02 03	07 38.86	+20 37.6					
1991 02 13	07 32.10	+20 53.0	2.071	2.956	148.2	10.1	17.1
1991 02 23	07 27.57	+21 03.2					
1991 03 05	07 25.56	+21 08.4	2.276	2.975	126.6	15.5	17.5

1980 TP a,e,i = 2.16, 0.19, 2 Elements MPC 8284

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 12 15	08 25.76	+17 10.0	1.473	2.297	137.5	16.8	18.4
1990 12 25	08 19.00	+17 32.2					
1991 01 04	08 09.36	+18 04.5	1.381	2.335	161.8	7.5	18.0
1991 01 14	07 57.87	+18 42.7					
1991 01 24	07 45.99	+19 21.4	1.392	2.371	171.8	3.4	17.9
1991 02 03	07 35.29	+19 56.0					
1991 02 13	07 26.99	+20 24.2	1.514	2.404	147.1	12.9	18.5
1991 02 23	07 21.84	+20 44.9					
1991 03 05	07 20.08	+20 58.4	1.723	2.434	125.3	19.4	19.0

1986 RR2 a,e,i = 2.27, 0.24, 6 Elements MPC 11349

Date ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990 12 15	08 26.77	+12 08.4	1.552	2.359	135.7	16.9	17.6
1990 12 25	08 20.33	+12 26.0					
1991 01 04	08 11.25	+12 58.5	1.466	2.411	159.3	8.3	17.2
1991 01 14	08 00.49	+13 42.7					
1991 01 24	07 49.37	+14 33.6	1.484	2.461	171.0	3.6	17.1
1991 02 03	07 39.29	+15 25.9					
1991 02 13	07 31.36	+16 15.3	1.613	2.508	148.4	11.9	17.7
1991 02 23	07 26.28	+16 58.8					
1991 03 05	07 24.32	+17 34.9	1.833	2.552	126.7	18.2	18.2

1979 QT8 a,e,i = 2.27, 0.16, 3 Elements MPC 15877

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 30.94	+21 55.0	1.648	2.465	137.4	15.7	18.3
1990	12 25	08 24.50	+22 18.5					
1991	01 04	08 15.23	+22 47.0	1.540	2.492	161.4	7.2	17.9
1991	01 14	08 04.06	+23 15.6					
1991	01 24	07 52.30	+23 39.4	1.539	2.518	172.2	3.0	17.7
1991	02 03	07 41.45	+23 54.9					
1991	02 13	07 32.72	+24 01.3	1.650	2.541	147.8	11.9	18.2
1991	02 23	07 26.93	+23 59.3					
1991	03 05	07 24.39	+23 50.4	1.851	2.562	125.9	18.3	18.7

(4291) 1989 VH a,e,i = 2.99, 0.07, 14 Elements MPC 15546

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 23.69	+05 22.6	2.379	3.140	133.6	13.1	16.6
1990	12 25	08 18.71	+04 44.8					
1991	01 04	08 11.89	+04 19.3	2.218	3.130	153.7	8.0	16.3
1991	01 14	08 03.77	+04 07.3					
1991	01 24	07 55.12	+04 08.7	2.164	3.120	163.4	5.2	16.1
1991	02 03	07 46.82	+04 22.0					
1991	02 13	07 39.67	+04 44.8	2.224	3.109	148.5	9.6	16.3
1991	02 23	07 34.32	+05 13.7					
1991	03 05	07 31.16	+05 45.2	2.382	3.097	128.5	14.5	16.7

(4335) Verona a,e,i = 2.21, 0.22, 3 Elements MPC 15689

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 34.26	+23 30.0	1.420	2.243	137.0	17.4	16.9
1990	12 25	08 27.67	+24 11.6					
1991	01 04	08 17.88	+24 57.7	1.340	2.292	160.8	8.1	16.5
1991	01 14	08 05.98	+25 41.1					
1991	01 24	07 53.54	+26 15.1	1.362	2.339	170.8	3.9	16.4
1991	02 03	07 42.28	+26 35.8					
1991	02 13	07 33.53	+26 43.0	1.493	2.384	147.3	12.9	17.0
1991	02 23	07 28.10	+26 38.6					
1991	03 05	07 26.20	+26 25.1	1.710	2.427	125.8	19.4	17.6

1989 NR a,e,i = 2.21, 0.08, 9 Elements MPC 15071

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 35.42	+24 33.4	1.498	2.316	136.9	16.9	17.0
1990	12 25	08 28.81	+24 33.1					
1991	01 04	08 18.97	+24 34.2	1.380	2.330	160.6	8.1	16.5
1991	01 14	08 06.87	+24 32.1					
1991	01 24	07 54.04	+24 22.6	1.364	2.343	172.1	3.3	16.3
1991	02 03	07 42.21	+24 03.9					
1991	02 13	07 32.77	+23 37.1	1.459	2.355	147.9	12.9	16.8
1991	02 23	07 26.63	+23 04.4					
1991	03 05	07 24.09	+22 28.1	1.641	2.365	126.0	19.8	17.3

1989 SA3 a,e,i = 3.19, 0.11, 8 Elements MPC 15895

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1990	12 15	08 27.32	+27 42.1	2.110	2.925	139.0	12.7	17.6
1990	12 25	08 22.64	+28 32.5					
1991	01 04	08 15.69	+29 23.9	1.995	2.941	160.7	6.4	17.3
1991	01 14	08 07.13	+30 10.9					
1991	01 24	07 57.96	+30 48.3	1.988	2.957	167.6	4.1	17.2
1991	02 03	07 49.29	+31 12.9					
1991	02 13	07 42.13	+31 23.8	2.095	2.974	147.4	10.3	17.6
1991	02 23	07 37.21	+31 22.0					
1991	03 05	07 34.92	+31 09.9	2.294	2.992	126.5	15.4	17.9