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This batch of MPCs includes the results of the "Second Trojan Survey" (T-2). Observations are included in these MPCs for 36 new objects for which identifications have been found and for 67 objects that already had provisional designations--of which eight objects have been newly identified. In addition to the 44 orbits corresponding to these identifications, there are 39 improved single-opposition orbits for previously known objects and 1360 such orbits for new objects. The 18 522 observations of these 1360 objects will be incorporated in the next edition of the Minor Planet Center's magnetic tape of observational data. Publication of T-2 observations of 43 numbered minor planets will be delayed until the September MPCs. For further information on these Surveys see MPC 12493.

* * * * *

ERRATA.

MPC	Line	
14681	27	1983 PW has been numbered (4080)
14733	4	For F. N. Owen read T. J. Kreidl, S. B. Howell, L. L. Scherbarth
14733	6	For 1.1-m reflector read 1.8-m reflector
14746	1	For Susuno read Susono

* * * * *

CORRECTED OBSERVATIONS.

The following observations correct those previously published.

Object		Date	UT	R. A. (1950)	Decl.	Reference	Mag.	N Obs.
1973 SL	*	1973 09	19.26354	00 03 41.39	-01 50 50.6	MPC 4285		1 675
1973 SS	*	1973 09	19.26354	00 10 08.46	-03 11 25.4	MPC 4285		1 675
1973 SZ	*	1973 09	19.26354	00 12 35.29	-03 28 15.7	MPC 4286		1 675
1973 SC1	*	1973 09	19.26354	00 13 26.59	-05 23 43.0	MPC 4286		1 675
1973 SH1	*	1973 09	19.26354	00 17 30.92	-02 48 03.1	MPC 4287		1 675
1973 SO1		1973 09	24.45434	00 38 03.74	+01 44 45.6	MPC 4288		675
1973 SS1	*	1973 09	19.26354	00 21 54.35	-02 55 38.1	MPC 4288		1 675

1988 EO1		1988 03 19.22326	13 12 16.60	-07 00 05.1	MPC14295		809
1988 RP5		1988 09 05.28993	22 50 55.01	-03 50 57.5	MPC14138		809
1988 RP5		1988 09 05.29618	22 50 54.73	-03 51 00.0	MPC14138		809
1988 RP5		1988 09 05.30243	22 50 54.47	-03 51 02.3	MPC14138		809
1988 RA6		1988 09 05.33229	22 10 40.07	-10 38 40.0	MPC14139		809
1988 RA6		1988 09 05.33854	22 10 39.71	-10 38 39.5	MPC14139		809
1988 RA6		1988 09 05.34479	22 10 39.34	-10 38 39.1	MPC14139		809
1988 RE6	*	1988 09 05.31076	22 49 01.71	-11 15 49.5	MPC14140	17.0	809
1988 RE6		1988 09 05.31701	22 49 01.34	-11 15 52.4	MPC14140		809
1988 RE6		1988 09 05.32326	22 49 00.97	-11 15 55.4	MPC14140		809

Note 1: time originally given as 1973 09 19.26424.

* * * * *

DELETED OBSERVATION.

The following observation is to be deleted.

Object	Date	UT	R. A. (1950)	Decl.	Reference	Obs.
1989 EO	1989 03	05.58784	10 35 59.56	+00 42 42.4	MPC14425	413

* * * * *

IDENTIFICATION CHANGES.

Continuation to MPC 14667-14668.

Object		Date	UT	R. A. (1950)	Decl.	Old desig.	Mag.	Obs.
1953 GA2	*	1953 04	10.91822	10 50 15.16	+09 34 25.9	1953 EC		012
1981 UJ21	*	1981 10	28.86102	02 09 31.45	+11 57 04.6	1981 UG1	17.5	095
1986 CK2	*	1986 02	15.05556	10 04 26.50	+20 18 21.9	1986 CO		046
1988 RE9	*	1988 09	05.23229	22 17 37.30	-14 04 40.4	1988 RF5		809
1988 RE9		1988 09	05.23854	22 17 36.97	-14 04 39.8	1988 RF5		809
1988 RE9		1988 09	05.24479	22 17 36.63	-14 04 39.0	1988 RF5		809
1988 RF9	*	1988 09	05.23229	22 20 19.12	-14 36 48.5	1988 RG5		809
1988 RF9		1988 09	05.23854	22 20 18.85	-14 36 50.1	1988 RG5		809
1988 RF9		1988 09	05.24479	22 20 18.60	-14 36 51.5	1988 RG5		809
1988 RG9	*	1988 09	06.08785	22 09 14.81	-15 07 52.6	1988 RV5		809
1988 RG9		1988 09	06.09410	22 09 14.56	-15 07 55.5	1988 RV5		809
1988 RG9		1988 09	06.10035	22 09 14.30	-15 07 57.8	1988 RV5		809

* * * * *

IDENTIFICATIONS.

The following list of identifications with numbered minor planets continues that on MPC 14383.

	Note		Note		Note
1933 VF = (1352)	1	1936 FZ1 = (2881)	2	1938 VC = (255)	2
1943 TP = (1748)	2	1944 QG = (2915)	1	1949 RC = (2262)	1
1950 HN1 = (2274)	1	1950 SU = (3012)	1	1953 GA2 = (3012)	1
1953 TO3 = (2988)	2	1954 LL = (1135)	2	1962 UK = (826)	2
1964 BE = (3148)	1	1964 PQ = (993)	2	1964 US = (2045)	2
1978 RY16= (2272)	1	1978 SY3 = (2272)	1	1980 DB4 = (2986)	1
1981 ED49= (3655)	1	1983 CN1 = (3122)	1	1983 VU1 = (2736)	1
1986 ET3 = (2986)	1	1986 YV = (3284)	1	1988 HD = (1235)	1
4290 T-3 = (2469)	1				

Note 1: identification by S. Nakano. 2: identification by G. Williams.

OBSERVATIONS OF COMETS.

Observations are published here for the following observatory codes:

010 Caussols. Observer A. Maury. Measured by A. Maury and C. Mallet.
056 Skalnate Pleso. 0.3-m f/5 astrograph. Observer G. Cervak. Communicated by J. Svoren.
323 Perth. Observers P. Jekabsons and G. Lowe.
372 Geisei. Observer T. Seki.
392 JCPM Sapporo Station. Observer K. Watanabe.
400 Kitami. Observer A. Takahashi. Measured by K. Watanabe.
404 Yamamoto. Observer S. Otomo. Measured by M. Koishikawa.
413 Siding Spring. 1.2-m U.K. Schmidt. Observer K. S. Russell. Measured by R. H. McNaught.
474 Mount John University Observatory. 0.6-m reflector. Observers A. C. Gilmore and P. M. Kilmartin.
500 The geocentric code is given to observations from the SMM (Solar Maximum Mission) satellite. Observers J. Burkepile, D. Pitone, A. Stanger, O. C. St. Cyr and B. Twambly.
511 Haute Provence. Grand Schmidt. Oberver E. W. Elst.
657 University of Victoria. Observers D. D. Balam and J. B. Tatum.
675 Palomar. 1.5-m reflector + CCD. Observers J. Gibson.
801 Oak Ridge. 1.5-m reflector. Observers R. E. McCrosky and C.-Y. Shao.
808 El Leoncito. 0.5-m double astrograph. Observer J. G. Sanguin.
897 YGCO Chiyoda Observatory. Observer T. Kojima.

Object	Date	UT	R. A. (1950)	Decl.	Mag.	N Obs.
		Periodic Comet Schwassmann-Wachmann 1				
/1974 II	1989	07 06.71042	00 02 30.56	+07 23 34.2	14 T	897
/1974 II	1989	07 06.71806	00 02 30.56	+07 23 35.6	14 T	897
/1974 II	1989	07 09.27839	00 02 45.80	+07 29 51.9		801
/1974 II	1989	07 12.42993	00 02 59.32	+07 37 03.0		657
		Comet Cernis (1983 XII)				
/1983 XII	1983	11 04.08631	00 23 09.83	-26 26 30.2		808
/1983 XII	1983	11 04.10709	00 23 07.76	-26 26 46.6		808
		Periodic Comet Halley				
/1986 III	1985	10 19.29376	05 55 08.72	+20 52 52.2		808
/1986 III	1985	10 19.31869	05 55 06.21	+20 52 57.9		808
		Periodic Comet Tempel 2				
/1987g	1988	09 10.00544	17 08 31.04	-24 50 34.4		808
/1987g	1988	09 10.01929	17 08 33.61	-24 50 50.9		808
/1987g	1988	09 11.99621	17 14 39.50	-25 25 04.8		808
/1987g	1988	09 12.01556	17 14 42.65	-25 25 22.4		808
		Comet Shoemaker-Holt-Rodriquez (1988h)				
/1988h	1989	05 13.66285	23 11 15.22	-57 16 14.3	15.7N	474
/1988h	1989	05 13.66574	23 11 15.81	-57 16 19.4		474
		Comet Yanaka (1989a)				
/1989a	1989	07 09.17307	14 42 48.92	+42 09 22.3		1 801

Periodic Comet Brorsen-Metcalf

/1989o	1989	07	07.74723	00	35	41.99	+13	24	53.7				413
/1989o	1989	07	07.83194	00	36	00.22	+13	28	24.6				323
/1989o	1989	07	08.64444	00	38	57.95	+14	02	26.9	12	T		400
/1989o	1989	07	08.65278	00	39	00.11	+14	02	51.0				400
/1989o	1989	07	08.65694	00	39	00.49	+14	03	09.4	13	T		392
/1989o	1989	07	08.66528	00	39	02.62	+14	03	23.6				392
/1989o	1989	07	08.69347	00	39	08.87	+14	04	32.7				392
/1989o	1989	07	08.69965	00	39	10.42	+14	04	53.5	13	T		400
/1989o	1989	07	08.70903	00	39	12.21	+14	05	18.0				400
/1989o	1989	07	08.83472	00	39	40.74	+14	10	52.6				323
/1989o	1989	07	09.06736	00	40	32.24	+14	20	36.1				010
/1989o	1989	07	09.08819	00	40	37.98	+14	21	40.2				010
/1989o	1989	07	09.30436	00	41	26.75	+14	31	02.6				801
/1989o	1989	07	09.31696	00	41	29.52	+14	31	35.2			2	801
/1989o	1989	07	09.41215	00	41	51.13	+14	35	36.3				657
/1989o	1989	07	10.65694	00	46	42.40	+15	31	19.5				404
/1989o	1989	07	10.66076	00	46	43.25	+15	31	20.1				404
/1989o	1989	07	11.02361	00	48	10.26	+15	47	51.6				056
/1989o	1989	07	11.07257	00	48	22.68	+15	50	07.5	11.0	T		511
/1989o	1989	07	11.07951	00	48	24.36	+15	50	24.3				511
/1989o	1989	07	11.08715	00	48	26.13	+15	50	42.7				511
/1989o	1989	07	12.39486	00	53	53.01	+16	52	00.9				657
/1989o	1989	07	12.42125	00	53	59.50	+16	53	18.1				657
/1989o	1989	07	13.74028	00	59	47.08	+17	57	29.8	9.3	T		372
/1989o	1989	07	14.66632	01	04	01.96	+18	43	56.7	11	T		400
/1989o	1989	07	14.67708	01	04	05.15	+18	44	31.8				400
/1989o	1989	07	26.59627	02	18	35.93	+30	17	51.3	8	T		400
/1989o	1989	07	26.60704	02	18	40.85	+30	18	30.7				400
/1989o	1989	07	27.59659	02	27	02.65	+31	20	34.8	8	T		400
/1989o	1989	07	27.60069	02	27	04.83	+31	20	49.2				400
/1989o	1989	08	01.63698	03	16	22.35	+36	22	01.8	7.0	T		392
/1989o	1989	08	01.70278	03	17	05.36	+36	25	39.8				392
/1989o	1989	08	02.69965	03	28	15.10	+37	19	00.0	7.0	T		392
/1989o	1989	08	02.71730	03	28	27.17	+37	19	55.6				392
/1989o	1989	08	03.68258	03	39	41.00	+38	08	12.6	7.0	T		392
/1989o	1989	08	03.70069	03	39	53.69	+38	09	09.2				392
/1989o	1989	08	05.68299	04	04	09.75	+39	36	43.7	7.0	T		392
/1989o	1989	08	05.70162	04	04	23.83	+39	37	29.9				392

Periodic Comet Lovas 1

/1989p	1989	07	05.76632	02	00	20.99	+17	06	08.8	18	T		372
/1989p	1989	07	07.77206	02	04	40.92	+17	41	16.4	17.5	T		372
/1989p	1989	07	13.77326	02	17	52.2	+19	26	46	17	T		372
/1989p	1989	07	14.76944	02	20	05.24	+19	44	12.9	18	T	3	372
/1989p	1989	07	15.48476	02	21	41.53	+19	56	50.6	17	T		675
/1989p	1989	07	15.48786	02	21	41.96	+19	56	54.0				675
/1989p	1989	07	15.49294	02	21	42.63	+19	56	59.4				675

Comet 1989q (SMM 9)

/1989q	1989	07	08.64444	07	03	55	+22	08.4					500
/1989q	1989	07	08.65625	07	04	10	+22	11.4					500
/1989q	1989	07	08.69167	07	05	02	+22	19.2					500
/1989q	1989	07	08.70347	07	05	31	+22	23.4					500
/1989q	1989	07	08.70903	07	05	41	+22	25.2					500
/1989q	1989	07	08.72014	07	06	07	+22	27.0					500

Note 1: weak, diffuse. 2: very weak; difficult to measure. 3: diffuse with slight central condensation; diameter 8".

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
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.
010 Caussols						
A. Maury, CERGA Caussols, F-06460 Saint Vallier de Thiey, France						
0.9-m Schmidt telescope						
1988 YG *	1988 12 28.86319		03 40 22.19	+16 12 01.7		010
033 Tautenburg						
S. Marx, Karl Schwarzschild Observatorium, DDR-6901 Tautenburg, Democratic Republic of Germany						
Observer F. Borngen						
1.3-m Schmidt telescope						
SAOC						
1961 CR	1989 01 10.02639		09 52 48.47	+12 23 41.5	18.3	033
1961 CR	1989 01 11.11910		09 52 23.25	+12 28 08.8		033
1961 CR	1989 01 12.01528		09 52 01.21	+12 31 59.3		033
1961 CR	1989 02 02.95694		09 36 10.53	+14 44 44.3	17.5	033
1961 CR	1989 02 04.01875		09 35 09.38	+14 52 26.8		033
1961 CR	1989 02 10.94167		09 28 17.53	+15 43 16.9	17.5	033
1961 CR	1989 02 10.97431		09 28 15.49	+15 43 31.2		033

1961	CR		1989	03	07.01250	09	07	20.89	+18	12	59.0		033
1961	CR		1989	03	10.84722	09	05	14.46	+18	29	06.8	18.1	033
1961	CR		1989	03	10.87222	09	05	13.72	+18	29	12.8		033
1978	VK8		1989	03	07.01250	09	06	56.36	+19	26	57.6		033
1978	VK8		1989	03	10.84722	09	04	59.75	+19	33	55.9	19.8	033
1978	VK8		1989	03	10.87222	09	04	58.99	+19	33	59.1		033
1988	VY7	*	1988	11	03.81944	02	04	23.70	+32	41	54.7	17.8	033
1988	VY7		1988	11	03.83681	02	04	22.20	+32	42	02.3		033
1988	VY7		1988	11	03.87153	02	04	18.08	+32	42	20.6		033
1988	VY7		1988	11	03.88889	02	04	16.35	+32	42	28.6		033
1988	VZ7	*	1988	11	03.82813	02	01	40.07	+32	09	40.9	18.2	033
1988	VZ7		1988	11	03.88021	02	01	37.08	+32	09	12.8		033
1988	VA8	*	1988	11	03.82813	02	05	10.96	+32	48	53.4	17.5	033
1988	VA8		1988	11	03.88021	02	05	07.23	+32	48	42.8		033
1988	VB8	*	1988	11	03.82813	02	05	16.98	+30	22	53.4	18.0	033
1988	VB8		1988	11	03.88021	02	05	13.98	+30	22	45.7		033
1988	VC8	*	1988	11	03.96389	04	12	44.54	+29	22	24.8	N	033
1988	VC8		1988	11	04.01250	04	12	42.11	+29	22	32.1	18.8 N	033
1988	VD8		1988	11	03.93715	03	12	25.91	+11	54	02.1	18.5	033
1988	VD8	*	1988	11	03.98715	03	12	22.79	+11	54	10.4		033
1988	VE8	*	1988	11	04.80694	01	03	29.77	+00	18	21.5		033
1988	VE8		1988	11	04.83993	01	03	28.49	+00	18	13.0	18.7	033
1988	VF8	*	1988	11	04.80694	01	03	55.13	+00	12	21.3		033
1988	VF8		1988	11	04.83993	01	03	53.59	+00	12	19.7	19.1	033
1988	VG8	*	1988	11	04.80694	01	03	55.25	+02	03	35.6		033
1988	VG8		1988	11	04.83993	01	03	53.41	+02	03	45.1	18.7	033
1988	VH8	*	1988	11	04.80694	01	04	00.40	+01	30	05.1		033
1988	VH8		1988	11	04.83993	01	03	58.74	+01	30	09.1	18.5	033
1988	VJ8	*	1988	11	04.80694	01	10	31.66	+01	58	43.7		033
1988	VJ8		1988	11	04.83993	01	10	30.45	+01	58	35.1	19.0	033
1988	VK8	*	1988	11	04.80694	01	11	23.29	+01	51	02.1		033
1988	VK8		1988	11	04.83993	01	11	21.86	+01	50	58.9	18.9	033
1988	VL8	*	1988	11	04.86667	02	29	04.55	+15	28	40.5	19.5 V	033
1988	VL8		1988	11	04.92326	02	29	01.80	+15	28	28.2		033
1988	VM8	*	1988	11	04.86667	02	33	03.50	+17	24	30.0	18.5	033
1988	VM8		1988	11	04.92326	02	33	00.49	+17	24	27.9		033
1988	VN8	*	1988	11	04.86667	02	34	06.03	+16	57	41.4	18.6	033
1988	VN8		1988	11	04.92326	02	34	02.24	+16	57	38.7		033
1988	VO8	*	1988	11	04.86667	02	36	05.06	+17	53	14.5	18.5	033
1988	VO8		1988	11	04.92326	02	36	01.72	+17	53	14.0		033
1988	VP8	*	1988	11	04.86667	02	37	21.62	+15	04	29.7	19.0	033
1988	VP8		1988	11	04.92326	02	37	18.29	+15	04	18.8		033
1988	VQ8	*	1988	11	04.86667	02	40	19.34	+15	06	31.8	18.4	033
1988	VQ8		1988	11	04.92326	02	40	16.40	+15	06	23.3		033
1988	VR8	*	1988	11	04.89132	01	10	52.33	+06	14	03.3		033
1988	VS8	*	1988	11	04.95451	04	25	59.86	+02	35	21.2	18.8	033
1988	VS8		1988	11	05.00139	04	25	57.55	+02	35	11.8		033
1988	VT8	*	1988	11	05.92188	03	25	29.24	+32	34	17.1	18.5	033
1988	VT8		1988	11	05.95521	03	25	27.21	+32	34	16.1		033
1988	VU8	*	1988	11	05.92188	03	25	56.96	+33	13	50.9	18.9	033
1988	VU8		1988	11	05.95521	03	25	54.29	+33	14	03.5	I	033
1988	VV8	*	1988	11	05.92188	03	36	25.08	+33	08	10.9	19.1	033
1988	VV8		1988	11	05.95521	03	36	23.62	+33	08	06.8		033
1988	XA3	*	1988	12	07.89653	04	52	38.10	+02	32	11.0	18.9	033
1988	XA3		1988	12	07.92778	04	52	36.15	+02	32	09.9		033
1988	XB3	*	1988	12	07.95208	06	46	03.40	+07	35	47.8		033
1988	XB3		1988	12	07.99583	06	46	01.43	+07	35	53.6	19.4	033
1988	XC3	*	1988	12	07.95208	06	50	25.17	+08	52	33.3		033
1988	XC3		1988	12	07.99583	06	50	23.30	+08	52	36.9	18.1	033

1988	XD3	*	1988	12	07.95208	06	50	48.08	+09	23	40.0		033
1988	XD3		1988	12	07.99583	06	50	46.30	+09	23	34.4	19.5	033
1988	XE3	*	1988	12	07.95208	06	58	18.73	+09	00	01.9		033
1988	XE3		1988	12	07.99583	06	58	17.07	+08	59	51.2	19.3	033
1988	XF3	*	1988	12	07.97465	07	17	37.55	+21	41	06.8	18.7	033
1988	XF3		1988	12	08.01701	07	17	36.12	+21	41	16.7		033
1988	XG3	*	1988	12	07.97465	07	17	44.59	+21	14	42.6	18.8	033
1988	XG3		1988	12	08.01701	07	17	43.17	+21	14	58.3		033
1988	XH3	*	1988	12	07.97465	07	19	07.60	+20	13	36.3	18.1	033
1988	XH3		1988	12	08.01701	07	19	05.99	+20	13	17.1		033
1988	XJ3	*	1988	12	07.97465	07	25	26.72	+19	20	09.1	18.3	033
1988	XJ3		1988	12	08.01701	07	25	25.73	+19	20	30.8		033
1988	XK3	*	1988	12	07.97465	07	27	06.75	+21	15	12.2	19.7	033
1988	XK3		1988	12	08.01701	07	27	05.53	+21	15	14.5		033
1989	AY6	*	1989	01	10.02639	09	47	04.11	+12	35	53.2	18.2	033
1989	AY6		1989	01	11.11910	09	46	30.80	+12	37	02.3		033
1989	AY6		1989	01	12.01528	09	46	02.15	+12	38	06.3		033
1989	AZ6	*	1989	01	10.02639	09	47	10.73	+12	27	36.6	19.0	033
1989	AZ6		1989	01	11.11910	09	46	44.85	+12	32	11.8		033
1989	AZ6		1989	01	12.01528	09	46	22.39	+12	36	08.5		033
1989	AZ6		1989	02	02.95694	09	31	18.57	+14	45	50.2	18.3	033
1989	AZ6		1989	02	04.01875	09	30	22.81	+14	53	07.7		033
1989	AZ6		1989	02	10.94167	09	24	12.51	+15	40	45.8	18.8	033
1989	AZ6		1989	02	10.97431	09	24	10.70	+15	41	00.0		033
1989	AZ6		1989	03	10.84722	09	04	39.30	+18	13	04.3	19.4	033
1989	AZ6		1989	03	10.87222	09	04	38.75	+18	13	09.6		033
1989	AA7	*	1989	01	10.02639	09	47	21.52	+11	01	36.2	18.1	033
1989	AA7		1989	01	11.11910	09	46	47.36	+11	01	21.2		033
1989	AA7		1989	01	12.01528	09	46	18.50	+11	01	13.5		033
1989	AB7	*	1989	01	10.02639	09	48	30.15	+13	57	49.7	19.1	033
1989	AB7		1989	01	11.11910	09	48	01.70	+14	03	50.5		033
1989	AC7	*	1989	01	10.02639	09	52	18.33	+12	51	54.4	19.4	033
1989	AC7		1989	01	11.11910	09	51	46.69	+12	55	11.6		033
1989	AC7		1989	01	12.01528	09	51	19.87	+12	57	57.7		033
1989	AC7		1989	02	02.95694	09	36	37.61	+14	23	36.4	18.6	033
1989	AC7		1989	02	04.01875	09	35	47.53	+14	28	15.1		033
1989	AC7		1989	02	10.94167	09	30	16.65	+14	58	33.9	18.9	033
1989	AC7		1989	02	10.97431	09	30	15.03	+14	58	42.5		033
1989	AD7	*	1989	01	10.02639	09	52	30.60	+11	26	49.1	19.1	033
1989	AD7		1989	01	11.11910	09	52	02.65	+11	32	27.0		033
1989	AD7		1989	01	12.01528	09	51	38.79	+11	37	12.7		033
1989	AD7		1989	02	02.95694	09	37	35.43	+13	59	39.4	18.1	033
1989	AD7		1989	02	04.01875	09	36	45.86	+14	07	20.0		033
1989	AD7		1989	02	10.94167	09	31	16.81	+14	57	31.6	18.2	033
1989	AD7		1989	02	10.97431	09	31	15.17	+14	57	46.2		033
1989	AE7	*	1989	01	10.02639	09	53	13.27	+12	55	26.7	18.1	033
1989	AE7		1989	01	11.11910	09	52	42.58	+12	56	46.1		033
1989	AE7		1989	01	12.01528	09	52	16.29	+12	57	58.1		033
1989	AE7		1989	02	02.95694	09	36	17.10	+13	50	32.3	17.8	033
1989	AE7		1989	02	04.01875	09	35	20.10	+13	53	48.2		033
1989	AE7		1989	02	10.94167	09	29	02.52	+14	15	24.1	17.2	033
1989	AE7		1989	02	10.97431	09	29	00.68	+14	15	30.7		033
1989	AF7	*	1989	01	10.02639	09	53	48.04	+12	29	00.0	18.7	033
1989	AF7		1989	01	11.11910	09	53	22.64	+12	31	19.6		033
1989	AF7		1989	01	12.01528	09	53	00.81	+12	33	20.3		033
1989	AG7	*	1989	01	10.02639	09	55	43.61	+12	37	30.4	20.0	033
1989	AG7		1989	01	11.11910	09	55	17.68	+12	44	22.2		033
1989	AG7		1989	01	12.01528	09	54	55.26	+12	50	08.7		033
1989	AG7		1989	02	02.95694	09	40	27.62	+15	44	40.8	18.5	033

1989	AG7		1989	02	04.01875	09	39	33.69	+15	54	09.8		033
1989	AH7	*	1989	01	10.02639	09	57	31.63	+11	19	40.0	19.2	033
1989	AH7		1989	01	11.11910	09	57	05.97	+11	24	44.6		033
1989	AH7		1989	01	12.01528	09	56	44.04	+11	29	01.7		033
1989	AJ7	*	1989	01	10.02639	09	57	34.25	+11	06	17.3	18.5	033
1989	AJ7		1989	01	11.11910	09	57	07.42	+11	03	56.3		033
1989	AJ7		1989	01	12.01528	09	56	43.84	+11	02	08.3		033
1989	AK7	*	1989	01	10.02639	09	57	34.93	+12	36	10.9	18.6	033
1989	AK7		1989	01	11.11910	09	57	05.62	+12	39	07.7		033
1989	AK7		1989	01	12.01528	09	56	40.78	+12	41	37.8		033
1989	AK7		1989	02	04.01875	09	42	12.89	+14	04	06.8	17.7	033
1989	AL7	*	1989	01	10.02639	09	57	36.45	+11	34	12.9	19.3	033
1989	AL7		1989	01	11.11910	09	57	06.88	+11	37	19.7		033
1989	AL7		1989	01	12.01528	09	56	41.71	+11	39	59.7		033
1989	AL7		1989	02	02.95694	09	42	06.07	+13	08	15.2	19.0	033
1989	AL7		1989	02	04.01875	09	41	14.28	+13	13	19.5		033
1989	AM7	*	1989	01	10.02639	09	57	56.83	+10	50	06.4	17.9	033
1989	AM7		1989	01	11.11910	09	57	28.57	+10	51	59.0		033
1989	AM7		1989	01	12.01528	09	57	04.30	+10	53	41.4		033
1989	AN7	*	1989	01	09.73681	02	29	40.78	+17	45	41.4	17.9	033
1989	AN7		1989	01	09.81007	02	29	41.97	+17	46	04.3		033
1989	AO7	*	1989	01	09.73681	02	31	03.89	+14	55	21.1	18.7	033
1989	AO7		1989	01	09.81007	02	31	06.84	+14	55	11.6		033
1989	AP7	*	1989	01	09.73681	02	32	44.43	+16	29	22.9	19.2	033
1989	AP7		1989	01	09.81007	02	32	47.56	+16	29	20.8		033
1989	AQ7	*	1989	01	09.73681	02	35	44.47	+16	11	46.7	19.3	033
1989	AQ7		1989	01	09.81007	02	35	46.84	+16	12	02.5		033
1989	AR7	*	1989	01	09.73681	02	35	53.55	+15	56	08.1	19.1	033
1989	AR7		1989	01	09.81007	02	35	56.12	+15	56	10.4		033
1989	AS7	*	1989	01	09.73681	02	36	31.24	+17	12	51.2	18.4	033
1989	AS7		1989	01	09.81007	02	36	32.26	+17	12	56.1		033
1989	AT7	*	1989	01	09.73681	02	39	50.41	+17	17	50.5	18.9	033
1989	AT7		1989	01	09.81007	02	39	51.26	+17	17	54.4		033
1989	AU7	*	1989	01	10.02639	09	45	55.10	+13	14	14.8	18.9	033
1989	AV7	*	1989	01	10.02639	09	45	57.23	+13	50	06.7	19.0	033
1989	AW7	*	1989	01	11.16806	10	49	24.35	+01	41	07.6	18.8	033
1989	AW7		1989	01	11.18819	10	49	24.06	+01	41	03.8		033
1989	AX7	*	1989	01	11.16806	10	50	33.76	+01	41	21.3	18.9	033
1989	AX7		1989	01	11.18819	10	50	33.83	+01	41	18.1		033
1989	AY7	*	1989	01	11.16806	10	51	37.27	+02	29	05.6	18.5	033
1989	AY7		1989	01	11.18819	10	51	37.08	+02	29	05.0		033
1989	AZ7	*	1989	01	11.16806	10	51	48.03	+01	42	09.6	18.7	033
1989	AZ7		1989	01	11.18819	10	51	47.79	+01	42	05.9		033
1989	AA8	*	1989	01	11.16806	10	52	35.80	+03	24	28.6	18.2	033
1989	AA8		1989	01	11.18819	10	52	35.99	+03	24	31.8		033
1989	AB8	*	1989	01	11.16806	10	54	28.68	+02	00	14.0	19.9	033
1989	AB8		1989	01	11.18819	10	54	28.71	+02	00	11.8	V	033
1989	AC8	*	1989	01	11.16806	10	55	44.10	+02	07	16.7	18.4	033
1989	AC8		1989	01	11.18819	10	55	43.93	+02	07	17.5		033
1989	AD8	*	1989	01	11.16806	10	58	49.75	+02	21	57.0	19.7	033
1989	AD8		1989	01	11.18819	10	58	49.71	+02	21	53.3		033
1989	AE8	*	1989	01	11.16806	10	59	52.85	+02	08	55.6	20.1	033
1989	AE8		1989	01	11.18819	10	59	52.72	+02	08	59.8		033
1989	AF8	*	1989	01	11.88889	07	06	36.87	+04	41	28.9	19.7	033
1989	AF8		1989	01	11.94167	07	06	32.96	+04	41	43.5		033
1989	AG8	*	1989	01	11.91215	06	46	18.49	+44	44	11.1	17.2	033
1989	AG8		1989	01	11.96563	06	46	14.39	+44	44	13.9		033
1989	AH8	*	1989	01	14.12639	09	19	39.84	+37	57	51.4	18.3	033
1989	AH8		1989	01	14.15694	09	19	38.34	+37	58	06.3		033

1989	AJ8	*	1989	01	14.12639	09	21	19.49	+37	53	42.4	19.0	033
1989	AJ8		1989	01	14.15694	09	21	17.64	+37	53	55.2		033
1989	CN		1989	01	10.02639	09	49	17.71	+12	29	24.7	18.5	033
1989	CN		1989	01	11.11910	09	48	37.89	+12	33	13.7		033
1989	CN		1989	01	12.01528	09	48	04.00	+12	36	29.3		033
1989	CO		1989	01	10.02639	09	57	42.91	+13	33	11.6	18.4	033
1989	CO		1989	01	11.11910	09	57	08.27	+13	38	55.4		033
1989	CO		1989	01	12.01528	09	56	38.72	+13	43	45.3		033
1989	CO		1989	02	02.95694	09	39	15.25	+16	07	50.6	17.6	033
1989	CO		1989	02	04.01875	09	38	13.26	+16	15	31.5		033
1989	CO		1989	02	10.94167	09	31	19.28	+17	05	18.6	17.8	033
1989	CO		1989	02	10.97431	09	31	17.26	+17	05	33.0		033
1989	CO		1989	03	07.01250	09	09	27.35	+19	29	50.4		033
1989	CO		1989	03	10.84722	09	06	52.98	+19	46	07.7	18.4	033
1989	CO		1989	03	10.87222	09	06	52.02	+19	46	13.4		033
1989	CB1		1989	01	10.02639	09	50	16.56	+12	47	41.5	18.3	033
1989	CB1		1989	01	11.11910	09	49	43.93	+12	52	50.5		033
1989	CB1		1989	01	12.01528	09	49	15.85	+12	57	13.3		033
1989	CB1		1989	02	02.95694	09	31	20.38	+15	19	39.4	17.9	033
1989	CB1		1989	02	04.01875	09	30	14.36	+15	27	38.5		033
1989	CB1		1989	02	10.94167	09	22	52.44	+16	19	56.4	18.0	033
1989	CB1		1989	02	10.97431	09	22	50.25	+16	20	11.2		033
1989	CW1		1989	01	10.02639	09	57	46.78	+12	48	23.7	18.0	033
1989	CW1		1989	01	11.11910	09	57	23.34	+12	49	21.4		033
1989	CW1		1989	01	12.01528	09	57	03.66	+12	50	11.7		033
1989	CE5	*	1989	02	02.95694	09	30	17.81	+14	14	05.1	18.8	033
1989	CE5		1989	02	04.01875	09	29	13.75	+14	18	09.5		033
1989	CE5		1989	02	10.94167	09	22	06.31	+14	45	08.3	18.5	033
1989	CE5		1989	02	10.97431	09	22	04.24	+14	45	16.3		033
1989	CF5	*	1989	02	02.95694	09	30	32.32	+14	15	32.5	19.0	033
1989	CF5		1989	02	04.01875	09	29	22.51	+14	21	14.2		033
1989	CG5	*	1989	02	02.95694	09	30	32.48	+14	55	27.0	18.8	033
1989	CG5		1989	02	04.01875	09	29	23.97	+14	58	13.1		033
1989	CG5		1989	02	10.94167	09	21	55.53	+15	15	59.4	18.4	033
1989	CG5		1989	02	10.97431	09	21	53.37	+15	16	04.5		033
1989	CH5	*	1989	02	02.95694	09	30	33.27	+14	07	59.2	18.0	033
1989	CH5		1989	02	04.01875	09	29	45.60	+14	17	32.8		033
1989	CH5		1989	02	10.94167	09	24	30.96	+15	19	52.2	17.8	033
1989	CH5		1989	02	10.97431	09	24	29.47	+15	20	09.8		033
1989	CH5		1989	03	10.84722	09	07	04.45	+18	56	06.7	18.6	033
1989	CH5		1989	03	10.87222	09	07	03.80	+18	56	15.9		033
1989	CJ5	*	1989	02	02.95694	09	31	53.16	+15	02	30.2	18.5	033
1989	CJ5		1989	02	04.01875	09	30	45.40	+15	07	16.9		033
1989	CJ5		1989	02	10.94167	09	23	22.53	+15	37	56.6	18.1	033
1989	CJ5		1989	02	10.97431	09	23	20.39	+15	38	04.5		033
1989	CJ5		1989	03	07.01250	09	02	10.11	+16	57	23.7		033
1989	CJ5		1989	03	10.84722	09	00	00.26	+17	04	20.7	19.2	033
1989	CJ5		1989	03	10.87222	08	59	59.55	+17	04	23.8		033
1989	CK5	*	1989	02	02.95694	09	33	11.49	+13	47	16.6	18.5	033
1989	CK5		1989	02	04.01875	09	32	08.53	+13	50	28.4		033
1989	CL5	*	1989	02	02.95694	09	33	50.15	+14	37	25.2	18.7	033
1989	CL5		1989	02	04.01875	09	33	00.26	+14	41	31.1		033
1989	CM5	*	1989	02	02.95694	09	34	23.75	+15	32	54.4	18.9	033
1989	CM5		1989	02	04.01875	09	33	21.39	+15	35	16.1		033
1989	CN5	*	1989	02	02.95694	09	35	16.96	+13	57	25.5	18.7	033
1989	CN5		1989	02	04.01875	09	34	25.43	+14	02	25.2		033
1989	CO5	*	1989	02	02.95694	09	35	28.81	+14	03	55.9	18.6	033
1989	CO5		1989	02	04.01875	09	34	30.85	+14	09	44.1		033
1989	CO5		1989	02	10.94167	09	28	06.24	+14	47	46.2	18.7	033

1989	CO5		1989	02	10.97431	09	28	04.39	+14	47	57.1		033
1989	CP5	*	1989	02	02.95694	09	35	32.13	+15	01	46.0	19.1	033
1989	CP5		1989	02	04.01875	09	34	36.94	+15	05	54.8		033
1989	CP5		1989	02	10.94167	09	28	30.76	+15	33	00.5	19.1	033
1989	CP5		1989	02	10.97431	09	28	29.14	+15	33	07.1		033
1989	CQ5	*	1989	02	02.95694	09	36	56.00	+15	00	03.9	18.6	033
1989	CQ5		1989	02	04.01875	09	35	57.97	+15	06	54.7		033
1989	CR5	*	1989	02	02.95694	09	37	31.75	+15	20	07.4	18.1	033
1989	CR5		1989	02	04.01875	09	36	28.90	+15	20	56.8		033
1989	CR5		1989	02	10.94167	09	29	29.66	+15	26	13.2	17.9	033
1989	CR5		1989	02	10.97431	09	29	27.61	+15	26	14.6		033
1989	CS5	*	1989	02	02.95694	09	37	42.79	+15	44	05.9	18.8	033
1989	CS5		1989	02	04.01875	09	36	30.65	+15	46	35.7		033
1989	CS5		1989	02	10.94167	09	28	26.12	+16	02	32.2	18.8	033
1989	CS5		1989	02	10.97431	09	28	23.70	+16	02	36.5		033
1989	CT5	*	1989	02	02.95694	09	38	13.42	+16	07	05.3	19.0	033
1989	CT5		1989	02	04.01875	09	37	24.57	+16	11	41.4		033
1989	CU5	*	1989	02	02.95694	09	38	43.47	+15	00	36.9	18.9	033
1989	CU5		1989	02	04.01875	09	37	53.98	+15	06	47.4		033
1989	CV5	*	1989	02	02.95694	09	39	07.58	+14	13	06.8	19.1	033
1989	CV5		1989	02	04.01875	09	38	17.10	+14	17	23.1		033
1989	CW5	*	1989	02	02.95694	09	39	16.07	+16	13	08.6	18.9	033
1989	CW5		1989	02	04.01875	09	38	19.25	+16	19	34.1		033
1989	CX5	*	1989	02	02.95694	09	39	21.14	+13	46	36.8	18.2	033
1989	CX5		1989	02	04.01875	09	38	31.46	+13	50	55.8		033
1989	CX5		1989	02	10.94167	09	32	59.67	+14	19	32.7	17.9	033
1989	CX5		1989	02	10.97431	09	32	58.01	+14	19	41.6		033
1989	CY5	*	1989	02	02.95694	09	40	20.40	+13	48	16.7	18.7	033
1989	CY5		1989	02	04.01875	09	39	15.33	+13	52	35.2		033
1989	CZ5	*	1989	02	02.95694	09	41	06.71	+14	12	43.0	19.2	033
1989	CZ5		1989	02	04.01875	09	40	28.73	+14	17	53.5		033
1989	CA6	*	1989	02	02.95694	09	41	11.28	+14	30	05.5	18.8	033
1989	CA6		1989	02	04.01875	09	40	11.68	+14	29	36.5		033
1989	CA6		1989	02	10.94167	09	33	34.70	+14	26	26.1	18.1	033
1989	CA6		1989	02	10.97431	09	33	32.83	+14	26	25.3		033
1989	CB6	*	1989	02	02.95694	09	41	46.62	+15	46	15.9	18.7	033
1989	CB6		1989	02	04.01875	09	40	48.29	+15	52	53.9		033
1989	CB6		1989	02	10.94167	09	34	16.14	+16	35	53.0	18.9	033
1989	CB6		1989	02	10.97431	09	34	14.14	+16	36	05.1		033
1989	CC6	*	1989	02	02.95694	09	42	20.92	+14	08	39.8	19.3	033
1989	CC6		1989	02	04.01875	09	41	27.78	+14	12	57.1		033
1989	CD6	*	1989	02	02.95694	09	42	26.70	+14	34	22.8	18.6	033
1989	CD6		1989	02	04.01875	09	41	34.66	+14	39	54.3		033
1989	CE6	*	1989	02	10.94167	09	28	24.93	+16	46	59.6	18.6	033
1989	CE6		1989	02	10.97431	09	28	22.96	+16	47	02.2		033
1989	CE6		1989	03	07.01250	09	06	22.28	+17	00	57.2		033
1989	CE6		1989	03	10.84722	09	03	43.76	+16	59	06.0	19.6	033
1989	CE6		1989	03	10.87222	09	03	42.71	+16	59	04.8		033
1989	CF6	*	1989	02	03.84444	06	48	59.75	+06	04	32.5	18.4	033
1989	CF6		1989	02	03.90347	06	48	58.24	+06	05	00.2		033
1989	CG6	*	1989	02	03.84444	06	51	54.75	+08	36	21.0	18.2	033
1989	CG6		1989	02	03.90347	06	51	51.82	+08	36	15.8		033
1989	CH6	*	1989	02	04.01875	09	41	49.22	+15	30	16.5	17.9	033
1989	CJ6	*	1989	02	10.94167	09	33	49.80	+14	47	18.8	19.0	033
1989	CJ6		1989	02	10.97431	09	33	47.76	+14	47	27.7		033
1989	CK6	*	1989	02	04.04444	11	23	07.79	+26	19	58.8	17.8	033
1989	CK6		1989	02	04.06389	11	23	07.12	+26	20	12.2		033
1989	CK6		1989	02	04.10903	11	23	05.45	+26	20	46.4		033
1989	CK6		1989	02	04.12847	11	23	04.66	+26	21	02.0		033

1989	CL6	*	1989	02	04.09236	12	41	21.67	-00	10	36.1		033
1989	CL6		1989	02	04.14653	12	41	22.17	-00	10	28.3	18.6	033
1989	CM6	*	1989	02	04.09236	12	42	15.04	-01	21	30.5		033
1989	CM6		1989	02	04.14653	12	42	15.95	-01	21	11.4	18.9	033
1989	CN6	*	1989	02	04.09236	12	46	03.00	+00	43	01.6		033
1989	CN6		1989	02	04.14653	12	46	03.26	+00	43	09.0	19.0	033
1989	CO6	*	1989	02	04.09236	12	47	19.84	+00	17	32.7		033
1989	CO6		1989	02	04.14653	12	47	20.94	+00	17	29.3	18.7	033
1989	CP6	*	1989	02	04.09236	12	47	20.61	-00	00	25.6		033
1989	CP6		1989	02	04.14653	12	47	20.90	-00	00	20.2	18.4	033
1989	CP6		1989	03	06.02153	12	37	34.96	+02	04	48.1	17.7	033
1989	CP6		1989	03	06.07153	12	37	32.67	+02	05	06.5		033
1989	CQ6	*	1989	02	04.09236	12	49	35.47	-01	35	31.9		033
1989	CQ6		1989	02	04.14653	12	49	35.30	-01	35	35.2	19.5	033
1989	CR6	*	1989	02	04.09236	12	49	55.43	-01	03	48.3		033
1989	CR6		1989	02	04.14653	12	49	55.75	-01	03	45.3	19.2	033
1989	CS6	*	1989	02	04.09236	12	50	12.21	-01	33	18.2		033
1989	CS6		1989	02	04.14653	12	50	12.12	-01	33	14.8	19.3	033
1989	CT6	*	1989	02	10.94167	09	22	56.91	+16	29	48.7	18.3	033
1989	CT6		1989	02	10.97431	09	22	55.81	+16	29	51.6		033
1989	CE7		1989	03	10.84722	09	00	06.78	+16	57	00.1	19.7	033
1989	CE7		1989	03	10.87222	09	00	06.12	+16	57	07.1		033
1989	EB1		1989	03	07.01250	09	10	16.00	+18	33	53.8		033
1989	EB1		1989	03	10.84722	09	07	46.84	+18	21	20.5	18.3	033
1989	EB1		1989	03	10.87222	09	07	45.86	+18	21	14.9		033
1989	EF6	*	1989	03	07.01250	09	02	26.35	+18	17	49.6		033
1989	EF6		1989	03	10.84722	09	00	13.01	+18	13	01.4	19.1	033
1989	EF6		1989	03	10.87222	09	00	12.08	+18	12	59.0		033
1989	EG6	*	1989	03	07.01250	09	03	39.48	+17	32	41.2		033
1989	EG6		1989	03	10.84722	09	01	49.66	+17	39	31.3	19.3	033
1989	EG6		1989	03	10.87222	09	01	48.93	+17	39	34.5		033
1989	EH6		1989	02	10.94167	09	22	08.73	+16	37	22.2	19.0	033
1989	EH6		1989	02	10.97431	09	22	07.13	+16	37	30.3		033
1989	EH6	*	1989	03	07.01250	09	04	52.61	+18	02	07.1		033
1989	EH6		1989	03	10.84722	09	02	50.08	+18	11	30.8	19.0	033
1989	EH6		1989	03	10.87222	09	02	49.31	+18	11	34.6		033
1989	EJ6		1989	02	10.94167	09	22	00.84	+15	28	40.6	18.7	033
1989	EJ6		1989	02	10.97431	09	21	59.24	+15	28	47.8		033
1989	EJ6	*	1989	03	07.01250	09	05	34.52	+16	45	50.9		033
1989	EJ6		1989	03	10.84722	09	03	49.91	+16	53	47.7	19.5	033
1989	EJ6		1989	03	10.87222	09	03	49.19	+16	53	51.9		033
1989	EK6	*	1989	03	07.01250	09	09	26.33	+19	01	01.0		033
1989	EK6		1989	03	10.84722	09	07	22.07	+19	09	41.6	19.0	033
1989	EK6		1989	03	10.87222	09	07	21.39	+19	09	46.0		033
1989	EL6		1989	02	10.94167	09	31	17.97	+17	15	08.9	17.4	033
1989	EL6		1989	02	10.97431	09	31	15.91	+17	15	16.7		033
1989	EL6	*	1989	03	07.01250	09	10	37.54	+18	16	44.7		033
1989	EL6		1989	03	10.84722	09	08	37.96	+18	19	30.9	17.9	033
1989	EL6		1989	03	10.87222	09	08	37.28	+18	19	32.0		033
1989	EM6	*	1989	03	07.01250	09	10	45.37	+16	53	49.3		033
1989	EM6		1989	03	10.84722	09	08	44.27	+16	52	49.0	18.7	033
1989	EM6		1989	03	10.87222	09	08	43.62	+16	52	49.9		033
1989	EN6	*	1989	03	05.81424	08	32	29.31	+17	12	42.0	19.0	E 033
1989	EN6		1989	03	05.91736	08	32	25.40	+17	12	47.6		033
1989	EO6	*	1989	03	05.81424	08	33	04.53	+20	19	32.1	19.1	033
1989	EO6		1989	03	05.91736	08	33	01.93	+20	19	51.3		033
1989	EP6	*	1989	03	05.81424	08	33	17.15	+18	46	15.2	19.3	033
1989	EP6		1989	03	05.91736	08	33	14.30	+18	45	49.8		033
1989	EQ6	*	1989	03	05.81424	08	35	43.16	+19	41	52.5	18.9	033

1989	EQ6		1989	03	05.91736	08	35	39.41	+19	42	11.1	033
1989	ER6	*	1989	03	05.81424	08	36	38.10	+19	38	25.2	18.7 V 033
1989	ER6		1989	03	05.91736	08	36	34.37	+19	38	24.0	033
1989	ES6	*	1989	03	05.81424	08	39	12.97	+19	28	25.4	19.5 033
1989	ES6		1989	03	05.91736	08	39	09.05	+19	28	34.0	033
1989	ET6	*	1989	03	05.81424	08	42	31.81	+19	36	51.8	18.0 033
1989	ET6		1989	03	05.91736	08	42	29.18	+19	37	34.8	033
1989	EU6	*	1989	03	05.81424	08	43	05.58	+19	26	42.3	19.2 033
1989	EU6		1989	03	05.91736	08	43	02.38	+19	26	51.8	033
1989	EV6	*	1989	03	05.81424	08	43	42.46	+17	30	39.2	18.8 033
1989	EV6		1989	03	05.91736	08	43	40.24	+17	30	59.3	033
1989	EW6	*	1989	03	05.83854	08	19	20.28	+04	13	50.6	17.5 033
1989	EW6		1989	03	05.86910	08	19	19.98	+04	14	09.6	033
1989	EX6	*	1989	03	06.02153	12	29	39.86	+00	19	33.0	18.4 033
1989	EX6		1989	03	06.07153	12	29	37.19	+00	19	45.3	033
1989	EY6	*	1989	03	06.02153	12	29	43.90	+00	51	46.9	19.6 033
1989	EY6		1989	03	06.07153	12	29	42.08	+00	52	01.5	033
1989	EZ6	*	1989	03	06.02153	12	30	17.23	-00	22	51.1	19.1 033
1989	EZ6		1989	03	06.07153	12	30	15.10	-00	22	40.4	033
1989	EA7	*	1989	03	06.02153	12	30	27.37	-00	00	54.2	19.4 033
1989	EA7		1989	03	06.07153	12	30	25.47	-00	00	40.6	033
1989	EB7	*	1989	03	06.02153	12	32	33.17	+01	03	31.5	18.6 033
1989	EB7		1989	03	06.07153	12	32	30.75	+01	03	38.1	033
1989	EC7	*	1989	03	06.02153	12	35	04.12	+00	35	55.3	20.0 033
1989	EC7		1989	03	06.07153	12	35	02.21	+00	36	09.1	033
1989	ED7	*	1989	03	06.02153	12	36	07.41	-00	49	00.1	19.9 033
1989	ED7		1989	03	06.07153	12	36	04.94	-00	48	46.0	033
1989	EE7	*	1989	03	06.02153	12	37	41.35	+00	48	25.4	19.2 033
1989	EE7		1989	03	06.07153	12	37	39.51	+00	48	46.5	033
1989	EF7	*	1989	03	06.02153	12	38	52.24	+01	40	01.0	19.0 033
1989	EF7		1989	03	06.07153	12	38	50.29	+01	40	25.8	033
1989	EG7	*	1989	03	06.02153	12	38	56.97	+01	29	53.9	19.4 033
1989	EG7		1989	03	06.07153	12	38	54.76	+01	30	08.8	033
1989	EH7	*	1989	03	06.02153	12	38	58.10	+00	59	34.7	19.3 033
1989	EH7		1989	03	06.07153	12	38	55.86	+00	59	49.4	033
1989	EJ7	*	1989	03	06.02153	12	39	15.62	+00	55	05.8	20.2 033
1989	EJ7		1989	03	06.07153	12	39	13.67	+00	55	19.1	033
1989	EK7	*	1989	03	06.02153	12	39	47.64	+02	11	27.6	19.1 033
1989	EK7		1989	03	06.07153	12	39	45.46	+02	11	40.8	033
1989	EL7	*	1989	03	06.02153	12	39	54.16	+01	10	59.9	19.8 033
1989	EL7		1989	03	06.07153	12	39	51.74	+01	11	16.7	033
1989	EM7	*	1989	03	06.02153	12	39	56.20	-00	06	30.3	19.7 033
1989	EM7		1989	03	06.07153	12	39	53.87	-00	06	13.5	033
1989	EN7	*	1989	03	06.02153	12	40	13.10	-00	45	10.8	19.5 033
1989	EN7		1989	03	06.07153	12	40	10.53	-00	44	56.7	033
1989	EO7	*	1989	03	06.02153	12	40	15.85	+01	51	06.7	19.2 033
1989	EO7		1989	03	06.07153	12	40	14.27	+01	51	25.8	033
1989	EP7	*	1989	03	06.02153	12	40	53.53	-00	02	01.1	19.3 033
1989	EP7		1989	03	06.07153	12	40	51.69	-00	01	47.2	033
1989	EQ7	*	1989	03	06.02153	12	40	59.05	-00	44	51.1	19.2 033
1989	EQ7		1989	03	06.07153	12	40	57.07	-00	44	40.8	033
1989	ER7	*	1989	03	06.02153	12	41	15.76	+00	35	45.2	19.0 033
1989	ER7		1989	03	06.07153	12	41	14.06	+00	36	13.6	033
1989	ES7	*	1989	03	10.84722	09	05	18.98	+17	49	16.3	19.5 033
1989	ES7		1989	03	10.87222	09	05	17.98	+17	49	10.5	033

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0.6-m Maksutov reflector

1988	TT3	*	1988	10	03.83946	00	17	46.32	+04	35	07.6		046
1988	TT3		1988	10	03.85352	00	17	45.74	+04	35	04.6	17.3	046
1988	TU3	*	1988	10	04.88007	00	33	18.04	+08	07	32.3	17.3	046
1988	TU3		1988	10	04.89141	00	33	17.52	+08	07	32.8		046
1988	TV3	*	1988	10	04.90987	00	49	09.39	+06	41	17.8	16.7	046
1988	TV3		1988	10	04.92255	00	49	08.73	+06	41	06.2		046
1988	TW3	*	1988	10	04.90987	00	52	10.34	+06	55	28.2	17.3	046
1988	TW3		1988	10	04.92255	00	52	09.29	+06	55	38.5		046
1988	TX3	*	1988	10	04.90987	00	53	46.09	+10	15	54.5	17.2	046
1988	TX3		1988	10	04.92255	00	53	45.63	+10	15	45.3		046
1988	TY3	*	1988	10	04.90987	00	54	07.05	+10	12	56.5	17.5	046
1988	TY3		1988	10	04.92255	00	54	06.23	+10	12	58.1		046
1988	TZ3	*	1988	10	04.90987	00	54	40.68	+06	53	44.7	17.4	046
1988	TZ3		1988	10	04.92255	00	54	39.63	+06	53	47.3		046
1988	TA4	*	1988	10	04.90987	00	56	35.44	+09	42	02.8	17.4	046
1988	TA4		1988	10	04.92255	00	56	35.04	+09	42	00.3		046
1988	TB4	*	1988	10	09.85147	00	14	05.87	+06	52	53.7	17.1	046
1988	TB4		1988	10	09.86414	00	14	05.25	+06	52	52.1		046
1988	TC4	*	1988	10	09.85147	00	15	08.37	+07	35	21.5	16.1	046
1988	TC4		1988	10	09.86414	00	15	07.93	+07	35	10.6		046
1988	TD4	*	1988	10	11.99100	01	24	34.21	+08	38	26.9	17.0	046
1988	TD4		1988	10	12.00512	01	24	33.40	+08	38	33.3		046
1988	TE4	*	1988	10	14.83058	00	26	17.90	+05	28	38.6		046
1988	TE4		1988	10	14.84493	00	26	17.33	+05	28	42.1		046
1988	TF4	*	1988	10	14.86461	00	45	13.25	+05	34	31.0	17.1	046
1988	TF4		1988	10	14.87734	00	45	12.51	+05	34	26.5		046
1988	TG4	*	1988	10	14.89574	01	03	09.67	+05	24	00.3	17.0	046
1988	TG4		1988	10	14.90859	01	03	09.06	+05	24	00.8		046
1988	TH4	*	1988	10	14.90987	00	55	29.36	+08	25	48.8		046
1988	TJ4	*	1988	10	14.92705	01	24	32.21	+08	09	51.8	17.1	046
1988	TJ4		1988	10	14.93978	01	24	31.81	+08	09	51.2		046
1988	UR1	*	1988	10	16.94782	01	15	13.44	+06	53	29.0	16.7	046
1988	UR1		1988	10	16.96050	01	15	12.77	+06	53	26.4		046
1988	US1	*	1988	10	16.94782	01	24	28.32	+04	39	13.1	16.6	046
1988	US1		1988	10	16.96050	01	24	27.29	+04	39	04.1		046
1988	UT1	*	1988	10	16.97873	01	17	16.90	+07	28	04.3		046
1988	UT1		1988	10	16.99146	01	17	15.93	+07	27	56.7		046
1988	UU1	*	1988	10	16.97873	01	23	15.38	+08	48	20.2		046
1988	UU1		1988	10	16.99146	01	23	14.75	+08	48	19.8		046
1988	UV1	*	1988	10	18.90882	01	40	43.38	+08	56	42.4	15.5	046
1988	UV1		1988	10	18.92155	01	40	42.99	+08	56	39.8		046
1988	UW1	*	1988	10	18.90882	01	41	08.34	+07	21	39.5	16.7	046
1988	UW1		1988	10	18.92155	01	41	07.27	+07	21	32.2		046
1988	VA10	*	1988	11	04.81892	02	04	50.11	+14	46	38.8	16.9	046
1988	VB10	*	1988	11	04.90856	02	39	33.08	+10	24	12.4	16.7	046
1988	VB10		1988	11	04.92130	02	39	32.38	+10	24	06.8		046
1988	VC10	*	1988	11	04.93831	02	22	17.04	+14	34	35.6	17.0	046
1988	VC10		1988	11	04.94931	02	22	16.40	+14	34	29.1		046
1988	VD10	*	1988	11	04.93831	02	56	57.73	+14	39	56.3	17.0	046
1988	VD10		1988	11	04.94931	02	56	57.23	+14	40	00.2		046
1988	VE10	*	1988	11	04.96811	02	55	10.14	+16	37	57.6	17.0	046
1988	VE10		1988	11	04.98229	02	55	09.17	+16	37	56.2		046
1988	VF10	*	1988	11	05.92153	02	54	22.28	+13	49	48.2	16.9	046
1988	VF10		1988	11	05.93426	02	54	21.33	+13	49	49.0		046
1988	VG10	*	1988	11	05.92153	02	59	51.39	+15	36	55.0	17.2	046
1988	VG10		1988	11	05.93426	02	59	50.84	+15	36	52.7		046
1988	VH10	*	1988	11	05.96597	02	50	33.56	+16	26	03.2		046

1988	VJ10*	1988	11	10.78472	02	00	33.72	+12	54	33.7			046
1988	VJ10	1988	11	10.79884	02	00	33.15	+12	54	32.7			046
1988	VK10*	1988	11	10.81921	01	19	14.50	+05	14	10.1			046
1988	VK10	1988	11	10.83333	01	19	13.82	+05	14	10.0			046
1988	VL10*	1988	11	10.88495	02	26	07.82	+10	32	56.9	17.0		046
1988	VL10	1988	11	10.89769	02	26	07.20	+10	32	56.6			046
1988	VM10*	1988	11	11.85231	02	28	21.98	+13	45	37.6		V	046
1988	VM10	1988	11	11.86505	02	28	21.40	+13	45	40.0			046
1988	VN10*	1988	11	11.88403	02	44	33.42	+18	07	27.6			046
1988	VN10	1988	11	11.89670	02	44	32.52	+18	07	30.6			046
1988	VO10*	1988	11	12.89115	03	17	47.34	+18	41	03.1	17.0		046
1988	VO10	1988	11	12.90388	03	17	46.76	+18	41	00.2			046
1988	VP10*	1988	11	12.89115	03	20	12.33	+17	07	29.6	17.0		046
1988	VP10	1988	11	12.90388	03	20	11.57	+17	07	30.2			046
1988	VQ10*	1988	11	12.89115	03	21	23.03	+14	49	12.0	16.6		046
1988	VQ10	1988	11	12.90388	03	21	22.51	+14	49	08.5			046
1988	VR10*	1988	11	12.89115	03	23	28.15	+15	53	57.9	16.6		046
1988	VR10	1988	11	12.90388	03	23	26.99	+15	54	01.6			046
1988	VS10*	1988	11	12.89115	03	24	11.28	+16	40	14.2	16.6		046
1988	VS10	1988	11	12.90388	03	24	10.73	+16	40	11.9			046
1988	VT10*	1988	11	12.89115	03	26	12.12	+18	39	32.9	16.7		046
1988	VT10	1988	11	12.90388	03	26	11.25	+18	39	31.1			046
1988	VU10*	1988	11	12.92436	02	50	17.44	+13	39	11.6	17.3		046
1988	VU10	1988	11	12.93709	02	50	16.72	+13	39	09.0			046
1988	VV10*	1988	11	12.92436	02	57	11.25	+11	51	52.6			046
1988	VV10	1988	11	12.93709	02	57	10.42	+11	51	51.0			046
1988	YS *	1988	12	29.81510	05	53	17.75	+21	52	23.3			046
1988	YS	1988	12	29.82917	05	53	16.89	+21	52	22.6			046
1988	YT *	1988	12	29.84734	06	21	13.40	+19	32	07.3			046
1988	YT	1988	12	29.86146	06	21	12.78	+19	32	18.9		U	046
1988	YU *	1988	12	29.88148	06	37	53.18	+23	08	47.6			046
1988	YU	1988	12	29.89554	06	37	52.39	+23	08	48.3			046
1988	YV *	1988	12	30.77135	04	47	09.43	+18	41	43.0			046
1988	YV	1988	12	30.78547	04	47	08.98	+18	41	47.8	16.8		046
1988	YW *	1988	12	30.84988	06	00	47.25	+16	57	51.2	16.6		046
1988	YW	1988	12	30.86400	06	00	46.28	+16	57	52.8			046
1988	YX *	1988	12	30.84988	06	09	12.45	+16	38	26.2	16.6		046
1988	YX	1988	12	30.86400	06	09	11.84	+16	38	25.9			046
1988	YY *	1988	12	30.88501	06	49	09.38	+21	07	36.5	16.8		046
1988	YY	1988	12	30.89983	06	49	08.96	+21	07	42.3			046
1989	AF9 *	1989	01	02.78597	04	46	50.34	+17	13	08.8			046
1989	AF9	1989	01	02.80079	04	46	49.77	+17	13	15.9			046
1989	AG9 *	1989	01	02.85929	06	07	01.44	+17	24	28.8	16.9		046
1989	AG9	1989	01	02.87341	06	07	00.66	+17	24	31.1			046
1989	AH9 *	1989	01	04.81491	05	18	30.69	+22	04	35.7	16.6		046
1989	AH9	1989	01	04.82903	05	18	30.30	+22	04	38.1			046
1989	AJ9 *	1989	01	04.88007	07	28	29.40	+19	21	17.6	17.0		046
1989	AJ9	1989	01	04.89413	07	28	28.55	+19	21	24.8			046
1989	AK9 *	1989	01	09.92156	08	03	00.47	+19	07	22.5	17.0		046
1989	AK9	1989	01	09.93596	08	02	59.44	+19	07	26.4		F	046
1989	AL9 *	1989	01	11.92705	08	15	21.17	+21	38	31.4			046
1989	AL9	1989	01	11.93984	08	15	20.28	+21	38	35.6			046
1989	BC2 *	1989	01	28.77743	07	30	36.29	+23	19	29.9			046
1989	BC2	1989	01	28.79022	07	30	35.46	+23	19	32.0			046
1989	BD2 *	1989	01	30.89109	09	22	23.94	+16	48	16.6		U	046
1989	BD2	1989	01	30.90399	09	22	23.64	+16	48	10.5		U	046
1989	BE2 *	1989	01	30.89109	09	25	21.39	+17	45	46.5	16.9		046
1989	BE2	1989	01	30.90399	09	25	20.82	+17	45	45.5			046
1989	BF2 *	1989	01	30.92361	09	41	25.31	+16	50	06.1	16.9		046

1989	BF2		1989	01	30.93652	09	41	24.67	+16	50	04.6		046
1989	BG2	*	1989	01	31.86042	08	47	07.18	+15	18	16.4	17.0	046
1989	BG2		1989	01	31.87315	08	47	06.35	+15	18	19.1		046
1989	CP7	*	1989	02	01.84375	08	54	19.26	+17	21	51.3		046
1989	CP7		1989	02	01.85648	08	54	18.42	+17	21	56.2		046
1989	CQ7		1989	02	01.84375	08	56	30.74	+17	12	28.2		046
1989	CQ7	*	1989	02	01.85648	08	56	30.07	+17	12	35.1		046
1989	CR7	*	1989	02	02.92917	09	24	05.29	+19	20	16.4		046
1989	CR7		1989	02	02.94190	09	24	04.73	+19	20	21.5		046
1989	CS7	*	1989	02	08.86398	08	38	33.03	+12	58	57.2	N	046
1989	CS7		1989	02	08.87671	08	38	32.22	+12	58	59.9		046
1989	ER8	*	1989	03	05.89122	09	48	27.82	+15	49	13.4	17.0	046
1989	ER8		1989	03	05.90534	09	48	27.03	+15	49	24.9		046
1989	ES8	*	1989	03	06.93003	11	34	19.50	-04	08	15.6	16.8	046
1989	ES8		1989	03	06.94491	11	34	18.88	-04	08	13.8		046
1989	ET8	*	1989	03	06.93003	11	35	37.34	-02	29	49.8	16.8	046
1989	ET8		1989	03	06.94491	11	35	36.31	-02	29	39.0		046
1989	EU8	*	1989	03	07.95235	11	34	49.70	-02	41	37.2	16.9	046
1989	EU8		1989	03	07.96647	11	34	48.91	-02	41	31.9		046
1989	EV8	*	1989	03	08.00542	12	01	12.16	-02	26	39.8	16.7	046
1989	EV8		1989	03	08.01954	12	01	11.42	-02	26	31.8		046
1989	FA1	*	1989	03	28.93663	12	50	44.49	+06	36	18.7	16.7	046
1989	FA1		1989	03	28.94936	12	50	43.93	+06	36	20.9		046
1989	FB1	*	1989	03	28.96742	12	49	32.87	-01	01	19.3	17.2	046
1989	FB1		1989	03	28.98015	12	49	32.09	-01	01	19.6		046
1989	FC1	*	1989	03	28.96742	12	57	58.12	-02	38	49.7	16.8	046
1989	FC1		1989	03	28.98015	12	57	57.69	-02	38	43.7		046

049 Kvistaberg
C.-I. Lagerkvist, Astronomiska Observatoriet, Box 515,
S-75120 Uppsala, Sweden
Observers C.-I. Lagerkvist, T. Oja
AGK3

1989	CU7	*	1989	02	13.08002	09	42	05.70	+15	17	09.9	16.5	049
1989	CU7		1989	02	13.09941	09	42	04.69	+15	17	13.9		049
1989	CV7	*	1989	02	13.08002	09	43	47.47	+14	54	24.5	17	049
1989	CV7		1989	02	13.09941	09	43	46.58	+14	54	32.7		049

054 Brorfelde
H. G. Fogh Olsen, Copenhagen University Observatory, Brorfelde,
DK-4340 Tollose, Denmark
Observers K. Augustesen, P. Jensen
Measurer P. Jensen
0.45-m Schmidt
Observations in part in association with INAS

1988	VD9	*	1988	11	03.94369	03	26	35.70	+32	41	32.3		054
1988	VD9		1988	11	03.96105	03	26	34.47	+32	41	36.7		054
1988	VE9	*	1988	11	13.90701	02	03	22.78	+31	57	28.4	16.2	054
1988	VF9	*	1988	11	13.92901	02	02	14.35	+27	05	36.7	17.5	054
1988	VG9	*	1988	11	13.92901	02	13	33.00	+26	08	10.6	17.5	054
1988	VH9	*	1988	11	13.92901	02	20	47.25	+25	26	35.2	17.5	054
1988	VJ9	*	1988	11	13.92901	02	21	35.41	+27	05	07.4	17.5	054
1988	XL3	*	1988	12	01.91490	02	49	41.48	+31	00	02.2	17.5	054
1988	XM3	*	1988	12	01.91490	02	50	27.84	+34	06	43.4	17.5	054
1988	XN3	*	1988	12	01.91490	02	52	04.47	+31	45	18.1	18	054
1988	XO3	*	1988	12	01.91490	02	52	12.28	+33	11	41.6	16.0	054
1988	XP3	*	1988	12	01.91490	02	53	42.29	+30	28	29.3	17.5	054
1988	XQ3	*	1988	12	01.93197	03	03	52.74	+20	16	19.4	16.0	054
1988	XR3	*	1988	12	01.94973	03	12	17.80	+16	11	43.4	18	054

1988 XS3 * 1988 12 01.94973 03 21 08.43 +16 18 10.4 17.0 054
1988 XT3 * 1988 12 01.96652 03 15 52.74 +29 31 58.1 17.5 054
1988 XU3 * 1988 12 01.96652 03 15 58.27 +26 53 33.2 17.5 054
1988 XV3 * 1988 12 01.96652 03 21 13.74 +26 39 42.9 17.5 054
1988 XW3 * 1988 12 01.98735 05 36 16.91 +25 21 00.0 17.0 054
1988 XX3 * 1988 12 01.98735 05 38 33.86 +24 26 32.3 16.5 054
1988 XY3 * 1988 12 01.98735 05 39 02.00 +23 52 01.9 16.0 054
1988 XZ3 * 1988 12 01.98735 05 41 21.85 +25 13 18.0 16.5 054
1988 XA4 * 1988 12 01.98735 05 44 20.79 +25 53 51.7 17.5 054
1988 XB4 * 1988 12 01.98735 05 44 28.53 +27 43 30.4 17.5 054
1988 XC4 1988 12 01.98041 05 48 40.87 +23 49 43.9 054
1988 XC4 * 1988 12 01.98735 05 48 41.29 +23 49 53.5 16.0 054
1988 XC4 1988 12 01.99429 05 48 41.72 +23 50 03.2 054
1988 XD4 * 1988 12 01.98735 05 51 06.86 +26 03 20.0 17.5 054
1988 XE4 * 1988 12 07.77787 03 05 37.79 +13 14 32.2 18 V 054
1988 XE4 1988 12 07.79523 03 05 36.95 +13 14 32.0 054
1988 XF4 * 1988 12 07.77787 03 23 27.93 +12 19 23.5 18 V 054
1988 XF4 1988 12 07.79523 03 23 27.23 +12 19 15.1 054
1988 XG4 * 1988 12 07.77787 03 25 23.48 +13 21 29.8 17.5 054
1988 XG4 1988 12 07.79523 03 25 22.74 +13 21 24.1 054
1988 XH4 * 1988 12 12.95495 05 40 11.95 +23 52 09.6 17.5 054
1989 AL8 * 1989 01 10.83052 05 04 06.32 +23 15 18.1 15.8 054
1989 AL8 1989 01 10.84771 05 04 05.57 +23 15 22.2 054
1989 AM8 * 1989 01 10.89117 05 28 04.43 +20 36 11.5 17.5 054
1989 AM8 1989 01 10.90332 05 28 03.89 +20 36 14.8 054
1989 AN8 * 1989 01 10.89117 05 30 23.31 +16 36 23.6 17.5 054
1989 AN8 1989 01 10.90332 05 30 22.83 +16 36 29.3 054
1989 AO8 * 1989 01 10.91715 06 21 55.30 +30 29 05.2 17.5 054
1989 AO8 1989 01 10.92931 06 21 54.45 +30 29 05.2 054
1989 AP8 * 1989 01 10.91715 06 23 14.02 +33 37 32.1 17.5 054
1989 AP8 1989 01 10.92931 06 23 13.17 +33 37 30.9 054
1989 AQ8 * 1989 01 10.91715 06 24 54.80 +29 59 01.5 17.5 054
1989 AQ8 1989 01 10.92931 06 24 54.01 +29 58 57.8 054
1989 AR8 * 1989 01 10.92236 06 13 01.53 +31 36 05.0 17.5 P 054
1989 AS8 * 1989 01 10.95513 06 32 57.21 +35 38 13.4 17.0 054
1989 AS8 1989 01 10.96902 06 32 56.00 +35 38 00.3 054

071 Bulgarian National Observatory
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72 Lenin Boulevard, BG-1784 Sofia, Bulgaria
Observers I. Ivanova, S. Dicova, V. Shkodrov

1988 SB 1988 10 17.80028 23 03 33.86 -08 04 35.9 071
1988 SB 1988 10 17.83882 23 03 33.02 -08 04 41.7 071
1988 TJ3 * 1988 10 15.75942 23 08 36.14 -06 50 44.1 071
1988 TJ3 1988 10 15.80705 23 08 33.13 -06 50 50.0 071
1988 TK3 * 1988 10 15.75942 23 10 00.44 -04 46 01.4 071
1988 TK3 1988 10 15.80705 23 09 59.68 -04 46 21.0 071
1988 TL3 * 1988 10 15.75942 23 11 44.79 -04 22 23.2 071
1988 TL3 1988 10 15.80705 23 11 44.60 -04 22 48.7 071
1988 TM3 * 1988 10 15.78506 23 08 24.36 -08 07 40.7 071
1988 TM3 1988 10 15.83187 23 08 21.61 -08 08 52.9 071
1988 TN3 * 1988 10 15.78506 23 10 48.83 -08 17 03.0 071
1988 TN3 1988 10 15.83187 23 10 47.19 -08 16 49.2 071
1988 TO3 * 1988 10 15.85618 00 10 14.18 -00 46 50.4 071
1988 UX * 1988 10 16.76660 23 04 23.72 -06 20 10.4 071
1988 UX 1988 10 16.80780 23 04 22.78 -06 20 15.6 071
1988 UY * 1988 10 16.76660 23 07 14.74 -07 14 30.5 071
1988 UY 1988 10 16.80780 23 07 11.80 -07 14 15.7 071
1988 UZ * 1988 10 16.76660 23 17 26.68 -08 56 53.8 071

1988 UZ		1988	10	16.80780	23	17	25.29	-08	57	04.1	071
1988 UA1	*	1988	10	16.78847	23	09	52.24	-04	26	12.6	071
1988 UA1		1988	10	16.83581	23	09	49.10	-04	25	17.0	071
1988 UB1	*	1988	10	16.96648	00	55	48.82	+00	54	45.7	071
1988 UC1	*	1988	10	17.80028	23	09	10.38	-08	52	31.5	071
1988 UC1		1988	10	17.83882	23	09	08.66	-08	53	12.4	071
1988 UD1	*	1988	10	17.89171	00	38	50.76	+01	14	14.9	071
1988 UD1		1988	10	17.94021	00	38	48.85	+01	13	50.5	071
1988 UE1	*	1988	10	17.89171	00	44	13.20	+02	31	39.9	071
1988 UE1		1988	10	17.94021	00	44	10.86	+02	31	05.1	071
1988 UF1	*	1988	10	17.89171	00	44	41.72	+03	24	28.9	071
1988 UF1		1988	10	17.94021	00	44	39.53	+03	24	30.0	071
1988 UG1	*	1988	10	17.89171	00	46	15.79	+00	01	27.4	071
1988 UG1		1988	10	17.94021	00	46	13.60	+00	01	27.4	071
1988 VW8	*	1988	11	12.02740	03	41	53.61	+17	35	52.2	071
1988 VW8		1988	11	12.10598	03	41	53.10	+17	36	05.6	071
1988 VX8	*	1988	11	12.74881	21	55	02.40	+26	20	22.5	071
1988 VX8		1988	11	12.80153	21	55	02.62	+26	19	57.9	071
1988 VY8	*	1988	11	12.84714	00	38	04.37	-01	50	10.6	071
1988 VY8		1988	11	12.89482	00	38	03.32	-01	50	00.9	071
1988 VY8		1988	11	12.94186	00	38	02.02	-01	49	58.4	071
1988 VZ8	*	1988	11	12.84714	00	38	28.32	-01	08	09.1	071
1988 VZ8		1988	11	12.89482	00	38	27.28	-01	08	07.2	071
1988 VZ8		1988	11	12.94186	00	38	25.68	-01	08	02.8	071
1988 VA9	*	1988	11	12.84714	00	42	38.21	-00	49	20.4	071
1988 VA9		1988	11	12.89482	00	42	37.26	-00	49	17.5	071
1988 VA9		1988	11	12.94186	00	42	36.08	-00	49	09.6	071
1988 VB9	*	1988	11	13.80917	00	32	54.02	-00	14	51.8	071
1988 VB9		1988	11	13.85540	00	32	56.69	-00	14	06.1	071
1988 VC9	*	1988	11	13.80917	00	41	23.38	+00	12	35.0	071
1988 VC9		1988	11	13.85540	00	41	23.00	+00	12	27.1	071
1989 AK8	*	1989	01	11.03103	07	35	21.75	+19	16	00.8	071
1989 AK8		1989	01	11.07859	07	35	18.82	+19	16	11.6	071

092 Piwnice
M. Antal, Astronomical Observatory, C-94701 Hurbanovo, Czechoslovakia
Observer M. Antal
Measurer M. Antal
Reductions by E. M. Pittich and M. Antal
0.6-m Schmidt telescope
SAOC

1988 VW7	*	1988	11	07.89028	05	31	42.56	+13	11	44.1	17.7	F	092
1988 VW7		1988	11	07.93194	05	31	41.41	+13	11	27.9		F	092
1988 VX7	*	1988	11	07.89028	05	39	42.17	+15	54	00.3	18.0	F	092
1988 VX7		1988	11	07.93194	05	39	41.70	+15	53	58.2		F	092

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 N. S. Chernykh, L. I. Chernykh, L. G. Karachkina, T. M. Smirnova, L. V. Zhuravleva

1986 KT	*	1986	05	29.88462	15	58	09.15	-22	23	52.4		E	095
1986 PZ6	*	1986	08	06.96875	22	27	48.83	-09	27	20.0			095
1986 PA7	*	1986	08	08.91666	21	13	08.86	-19	14	05.5			095
1986 PB7	*	1986	08	12.88139	21	59	47.53	-06	53	42.8			095
1986 QY2		1986	08	31.89587	22	20	24.40	-14	32	21.7		N	095
1986 QO4		1986	09	15.02825	23	42	33.66	-04	38	20.6	16.0V	N	095

1986 QY5 * 1986 08 31.89587 22 17 07.70 -11 59 56.2 095
1986 RD7 1986 10 08.84440 23 29 45.77 -05 50 18.4 16.2V 095
1986 RD17* 1986 09 01.86168 21 39 48.03 -17 31 17.9 095
1986 RE17* 1986 09 08.80588 21 09 18.52 -00 55 54.3 095
1986 RF17* 1986 09 08.80588 21 20 38.51 +01 01 51.0 16.0V 095
1986 RG17* 1986 09 09.78124 21 32 01.45 -17 53 51.7 095
1986 RH17* 1986 09 09.85693 22 27 34.14 +11 39 28.2 16.0V 095
1986 RJ17* 1986 09 09.85693 22 30 24.43 +11 09 58.7 15.5V 095
1986 RK17* 1986 09 09.93366 23 49 51.57 -03 16 53.3 16.5V E 095
1986 RL17* 1986 09 10.01109 00 51 14.11 -01 11 37.4 095
1986 RM17* 1986 09 12.89567 23 09 47.74 -08 47 24.4 095
1986 RN17* 1986 09 13.85135 21 54 02.22 +02 33 57.6 E 095
1986 RO17* 1986 09 15.02825 00 05 16.67 +00 57 38.4 M 095
1986 TY3 1986 10 08.99090 01 17 23.44 +06 37 06.7 N 095
1986 TZ17* 1986 10 05.91052 00 22 53.27 +06 07 17.7 095
1986 TA18* 1986 10 07.00164 02 10 12.14 +22 20 15.7 095
1986 TB18* 1986 10 07.07490 02 30 29.29 +13 49 57.2 E 095
1986 TC18* 1986 10 08.99090 01 17 48.17 +08 35 06.1 E 095
1986 TD18* 1986 10 10.83838 00 02 09.10 +06 36 41.1 095
1986 TE18* 1986 10 12.06773 02 48 06.44 +15 40 32.1 095
1986 TF18* 1986 10 12.06773 02 54 35.01 +18 19 41.8 095

293 Burlington remote site
T. Handley, 13 Linden Avenue, Burlington, NJ 08016, U.S.A.
0.20-m f/4.0 astrograph
SAOC
1987 WR 1989 05 29.16111 14 17 55.87 -15 10 57.2 293

364 JCPM Kagoshima Station
M. Takeishi, Odori 4, Hamatonbetsu Esashigun, Hokkaido 098-57, Japan
Observer M. Mukai
Measurer M. Takeishi
0.25-m f/4.2 Wright Schmidt telescope
1988 YM * 1988 12 18.57847 04 57 16.70 +22 24 41.0 16 364
1988 YM 1988 12 18.59583 04 57 15.43 +22 24 52.3 364
1988 YP * 1988 12 28.56875 04 17 15.48 +20 58 47.2 16.5 364
1988 YP 1988 12 28.58611 04 17 14.46 +20 58 49.3 364
1988 YQ * 1988 12 28.56875 04 17 38.30 +20 59 11.6 17 364
1988 YQ 1988 12 28.58611 04 17 37.42 +20 59 09.8 364
1989 EL8 * 1989 03 10.63715 12 08 28.04 -04 51 11.6 16 364
1989 EL8 1989 03 10.65799 12 08 26.88 -04 51 10.9 364
1989 FY * 1989 03 28.52466 11 55 14.11 -03 32 07.4 16 364
1989 FY 1989 03 28.54549 11 55 13.90 -03 32 05.6 364
1989 FZ * 1989 03 28.52466 11 57 12.07 -02 56 17.2 16 364
1989 FZ 1989 03 28.54549 11 57 11.68 -02 56 15.8 364
1989 GW7 * 1989 04 10.56701 13 47 29.05 +00 24 23.2 16 364
1989 GW7 1989 04 10.58785 13 47 28.72 +00 24 39.0 364

372 Geisei
T. Seki, Kamimachi 2-9-35, Kochi, Japan
0.60-m reflector
1986 XV5 * 1986 12 03.60694 02 25 05.04 +23 36 35.9 18.5 372
1986 XV5 1986 12 03.62083 02 25 04.71 +23 36 44.3 372
1988 VL9 * 1988 11 02.59444 02 39 05.42 +14 11 59.3 17 372
1988 VL9 1988 11 02.60764 02 39 04.74 +14 11 56.9 372
1988 VN9 * 1988 11 02.65347 02 29 34.84 +13 37 20.1 18 372
1988 VN9 1988 11 02.66667 02 29 34.53 +13 37 21.6 18 372
1988 VO9 1988 11 03.61771 02 34 43.10 +13 47 36.0 19 372

1988	VO9		1988	11	03.63194	02	34	41.97	+13	47	32.1		372
1988	VO9	*	1988	11	03.65799	02	34	40.39	+13	47	28.7	19	372
1988	VP9	*	1988	11	05.68576	02	33	36.2	+14	18	01	18	372
1988	VQ9	*	1988	11	06.63889	02	32	18.0	+13	55	14	18.5	372
1988	VW9	*	1988	11	13.73542	04	46	47.57	+22	59	59.0	17	372
1988	VW9		1988	11	13.74514	04	46	47.05	+22	59	52.1		372
1988	XL4	*	1988	12	09.68715	04	33	52.77	+08	35	51.7	18	372
1988	XL4		1988	12	09.69826	04	33	52.52	+08	35	53.1		372
1988	YH	*	1988	12	16.69167	04	10	03.37	+17	54	50.9	17	372
1988	YH		1988	12	16.70313	04	10	03.02	+17	54	46.5		372
1988	YJ	*	1988	12	16.69167	04	11	36.95	+17	49	13.5	18	372
1988	YJ		1988	12	16.70313	04	11	36.63	+17	49	13.9		372
1988	YK	*	1988	12	17.69132	04	30	46.17	+13	11	57.2	18	372
1988	YK		1988	12	17.70278	04	30	45.66	+13	11	55.9		372
1988	YN	*	1988	12	27.44444	04	23	50.34	+14	26	17.4	18	372
1988	YN		1988	12	27.45868	04	23	50.06	+14	26	14.0		372
1988	YO	*	1988	12	27.44444	04	24	57.18	+13	54	43.1	18	372
1988	YO		1988	12	27.45863	04	24	56.89	+13	54	42.2		372
1989	AT8	*	1989	01	03.67986	07	50	21.57	+27	36	27.0	17	372
1989	AT8		1989	01	03.69514	07	50	21.95	+27	36	28.9		372
1989	AU8	*	1989	01	03.67986	07	52	07.10	+27	42	16.4	18.5	372
1989	AU8		1989	01	03.69514	07	52	06.68	+27	42	15.6		372
1989	AV8	*	1989	01	03.70833	07	58	56.87	+27	31	25.5	19	372
1989	AV8		1989	01	03.72014	07	58	56.54	+27	31	28.5		372
1989	AW8	*	1989	01	03.79623	11	37	55.03	+00	04	13.1	18.5	372
1989	AW8		1989	01	03.81181	11	37	54.88	+00	04	12.8		372
1989	AZ8	*	1989	01	04.69549	07	36	53.05	+20	58	15.6	19	372
1989	AZ8		1989	01	04.70764	07	36	52.48	+20	58	18.5		372
1989	CD7	*	1989	02	03.73299	10	10	03.91	+24	47	40.9	17	372
1989	CD7		1989	02	03.74514	10	10	03.74	+24	47	44.4		372
1989	CL7	*	1989	02	11.76111	10	12	21.57	+18	52	47.8	18	372
1989	CL7		1989	02	11.77222	10	12	20.99	+18	52	55.3		372
1989	CM7	*	1989	02	13.65694	09	57	37.29	+17	07	22.0	18.5	372
1989	CM7		1989	02	13.67014	09	57	36.85	+17	07	36.3		372
1989	CN7	*	1989	02	13.68056	10	10	13.52	+18	46	53.5	17.5	372
1989	CN7		1989	02	13.69271	10	10	12.74	+18	46	58.5		372
1989	EC8	*	1989	03	05.56597	09	49	12.59	+21	48	31.9	17	372
1989	EC8		1989	03	05.57674	09	49	11.85	+21	48	31.9		372
1989	ED8	*	1989	03	05.73194	11	06	27.09	-11	27	10.8	18	372
1989	ED8		1989	03	05.74306	11	06	26.91	-11	27	07.3		372
1989	EH8	*	1989	03	08.67187	11	31	14.14	+08	36	30.7	18	372
1989	EH8		1989	03	08.68576	11	31	13.29	+08	36	36.2		372
1989	EJ8	*	1989	03	08.72674	11	36	31.51	+06	46	25.4	18	372
1989	EJ8		1989	03	08.74062	11	36	30.65	+06	46	27.1		372
1989	EM8	*	1989	03	10.72708	11	35	46.70	+08	15	14.5	18	372
1989	EM8		1989	03	10.73681	11	35	46.58	+08	15	16.4		372
1989	EO8	*	1989	03	11.70243	11	38	11.84	+11	59	51.0	17	372
1989	EO8		1989	03	11.71424	11	38	11.13	+11	59	57.0		372
1989	EP8	*	1989	03	14.74792	11	29	01.04	+09	30	49.1	18	372
1989	EP8		1989	03	14.75868	11	29	00.07	+09	30	54.4		372
1989	EQ8	*	1989	03	15.78681	15	38	58.36	-17	52	37.4	17.5	372
1989	EQ8		1989	03	15.80035	15	38	58.63	-17	52	35.1		372
1989	FX	*	1989	03	27.52205	10	49	08.14	-08	50	07.4	18	372
1989	FX		1989	03	27.53299	10	49	07.78	-08	50	06.4		372
1989	GX7	*	1989	04	12.63056	10	58	29.65	+11	43	34.8	17.5	372
1989	GX7		1989	04	12.64132	10	58	29.49	+11	43	41.3		372
1989	ND1	*	1989	07	13.77326	02	20	05.02	+19	23	55.1	17	372
1989	ND1		1989	07	14.76944	02	20	38.58	+19	33	52.5	17	372

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T. Nakamura, National Astronomical Observatory, Mitaka, Tokyo 181, Japan
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1988 VS3		1988	12	05.63434	03	50	15.68	+20	12	17.5	381
1988 VS3		1988	12	06.49400	03	49	33.15	+20	05	36.3	381
1988 VS3		1988	12	07.54667	03	48	41.73	+19	57	28.8	381
1988 VS3		1988	12	08.41666	03	48	00.69	+19	50	49.7	381
1988 VD7		1988	12	05.63434	03	51	35.86	+19	11	36.0	381
1988 VD7		1988	12	06.49400	03	50	41.22	+19	12	01.7	381
1988 VD7		1988	12	07.54667	03	49	35.16	+19	12	34.4	381
1988 VD7		1988	12	08.41666	03	48	42.19	+19	13	02.3	381
1988 XJ1		1988	12	05.63434	03	53	41.52	+17	00	25.5	381
1988 XJ1		1988	12	06.49400	03	52	56.56	+17	01	56.0	381
1988 XJ1		1988	12	07.54667	03	52	01.83	+17	03	47.3	381
1988 XJ1		1988	12	08.41666	03	51	17.51	+17	05	21.4	381
1988 XD2		1988	12	05.63434	03	51	12.80	+19	16	03.0	381
1988 XD2		1988	12	06.49400	03	50	24.01	+19	16	53.1	381
1988 XD2		1988	12	07.54667	03	49	23.79	+19	17	29.9	381
1988 XD2		1988	12	08.41666	03	48	34.98	+19	18	00.6	381
1988 XV4	*	1988	12	05.63434	03	40	48.33	+18	47	35.1	381
1988 XV4		1988	12	06.49400	03	40	00.83	+18	45	59.9	381
1988 XV4		1988	12	07.54667	03	39	06.91	+18	44	14.7	381
1988 XV4		1988	12	08.41666	03	38	21.98	+18	42	47.5	381
1988 XW4	*	1988	12	05.63434	03	41	23.26	+17	58	31.6	381
1988 XW4		1988	12	06.49400	03	40	42.22	+17	56	03.1	381
1988 XW4		1988	12	07.54667	03	39	52.37	+17	53	05.7	381
1988 XW4		1988	12	08.41666	03	39	12.30	+17	50	40.3	381
1988 XX4	*	1988	12	05.63434	03	42	31.94	+18	15	52.7	381
1988 XX4		1988	12	06.49400	03	41	53.16	+18	14	20.1	381
1988 XX4		1988	12	07.54667	03	41	06.14	+18	12	26.5	381
1988 XX4		1988	12	08.41666	03	40	27.96	+18	10	54.0	381
1988 XY4	*	1988	12	05.63434	03	43	34.39	+19	12	28.3	381
1988 XY4		1988	12	06.49400	03	42	49.58	+19	13	11.0	381
1988 XY4		1988	12	07.54667	03	41	55.30	+19	14	02.1	381
1988 XY4		1988	12	08.41666	03	41	11.46	+19	14	45.7	381
1988 XZ4	*	1988	12	05.63434	03	51	51.39	+19	43	31.0	381
1988 XZ4		1988	12	06.49400	03	51	11.47	+19	41	25.7	381
1988 XZ4		1988	12	07.54667	03	50	22.83	+19	38	54.3	381
1988 XZ4		1988	12	08.41666	03	49	43.41	+19	36	49.8	381
1988 XA5	*	1988	12	05.63434	03	54	12.87	+19	22	19.5	381
1988 XA5		1988	12	06.49400	03	53	32.99	+19	18	56.1	381
1988 XA5		1988	12	07.54667	03	52	44.81	+19	14	49.5	381
1988 XA5		1988	12	08.41666	03	52	06.00	+19	11	27.8	381
1988 XB5	*	1988	12	05.63434	03	54	23.08	+20	49	34.3	381
1988 XB5		1988	12	06.49400	03	53	25.27	+20	48	51.5	381
1988 XB5		1988	12	07.54667	03	52	15.14	+20	48	01.0	381
1988 XB5		1988	12	08.41666	03	51	18.08	+20	47	19.0	381
1988 XC5	*	1988	12	05.63434	03	56	35.99	+19	23	27.2	381
1988 XC5		1988	12	06.49400	03	55	44.14	+19	23	41.2	381
1988 XC5		1988	12	07.54667	03	54	41.25	+19	23	59.5	381
1988 XC5		1988	12	08.41666	03	53	50.69	+19	24	15.6	381
1988 XD5	*	1988	12	07.54667	03	56	13.18	+19	47	47.3	381
1988 XD5		1988	12	08.41666	03	55	23.41	+19	47	01.7	381
1988 XE5	*	1988	12	08.41666	03	37	51.44	+18	42	48.2	381
1988 XF5	*	1988	12	08.41666	03	41	21.34	+17	56	40.5	381
1988 XG5	*	1988	12	08.41666	03	46	31.01	+19	08	35.9	381
1988 XH5	*	1988	12	08.41666	03	47	09.59	+20	25	47.9	381
1988 XJ5	*	1988	12	08.41666	03	58	15.83	+20	35	48.7	381

391 Sendai Observatory, Ayashi Station
M. Koishikawa, Sendai Municipal Observatory, 1-1 Sakuragaoka-koen, Sendai 980, Japan
Observer M. Koishikawa
0.20-m reflector

1988 VY9	*	1988 11 15.55556	02	20	32.73	-03	35	50.9	391
1988 VY9		1988 11 15.57639	02	20	31.76	-03	35	52.5	16 391
1989 GV7	*	1989 04 04.68750	12	38	46.38	-01	29	12.1	15.5 391
1989 GV7		1989 04 04.70833	12	38	44.99	-01	29	04.9	15.5 391

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H. Kaneda, 2-15-2H, Kawazoe 8 Jo 2 Chome, Minami-Ku, Sapporo 005, Japan
Observers S. Ueda, M. Matsuyama
Measurers H. Kaneda, K. Watanabe
0.16-m f/3.8 Wright-Schmidt camera

1977 QK1		1988 11 06.44965	00	51	19.36	+08	28	38.3	16.5 399
1977 QK1		1988 11 06.46632	00	51	19.06	+08	28	35.7	399
1987 UB1		1989 03 26.47465	11	07	25.60	+09	51	47.7	17 399
1987 UB1		1989 03 26.49063	11	07	24.68	+09	51	50.6	399
1987 UB1		1989 03 26.50729	11	07	23.79	+09	51	55.3	399
1987 UB1		1989 03 26.52326	11	07	23.25	+09	51	56.0	399
1987 UB1		1989 04 04.58611	11	00	28.11	+10	14	04.7	17 399
1987 UB1		1989 04 04.60069	11	00	27.47	+10	14	07.9	399
1987 UB1		1989 04 04.61690	11	00	26.96	+10	14	09.2	399
1987 UB1		1989 04 06.51944	10	59	11.85	+10	17	21.9	17 399
1987 UB1		1989 04 06.53403	10	59	11.24	+10	17	23.1	399
1987 UB1		1989 04 06.54965	10	59	10.66	+10	17	25.0	399
1988 FO3	*	1988 03 17.55781	11	56	55.77	+13	57	48.6	17 399
1988 FO3		1988 03 17.57431	11	56	54.83	+13	57	50.9	399
1988 FO3		1988 03 17.59456	11	56	53.86	+13	57	53.1	399
1988 FO3		1988 03 21.56753	11	53	28.65	+14	07	21.2	16.5 399
1988 FO3		1988 03 21.58281	11	53	27.85	+14	07	21.4	399
1988 FO3		1988 03 21.60023	11	53	27.02	+14	07	23.0	399
1988 TU		1988 11 06.44965	00	54	51.25	+07	22	23.0	16.5 399
1988 TU		1988 11 06.46632	00	54	50.72	+07	22	16.4	399
1988 TL1		1988 11 06.44965	01	03	32.28	+07	23	54.8	16.5 399
1988 TL1		1988 11 06.46632	01	03	31.86	+07	23	48.5	399
1988 TX1		1988 11 06.44965	01	02	32.35	+06	45	18.5	16.5 399
1988 TX1		1988 11 06.46632	01	02	31.95	+06	45	14.4	399
1988 TR2		1988 11 06.44965	01	02	30.50	+07	55	39.8	16.5 399
1988 TR2		1988 11 06.46632	01	02	29.69	+07	55	41.9	399
1988 TR3	*	1988 10 13.52014	00	58	25.00	+10	34	46.7	16.5 399
1988 TR3		1988 10 13.53889	00	58	23.98	+10	34	45.4	399
1988 TR3		1988 10 13.55799	00	58	22.85	+10	34	46.3	399
1988 TR3		1988 10 16.51736	00	55	36.44	+10	34	27.1	16.5 399
1988 TR3		1988 10 16.53333	00	55	35.45	+10	34	30.0	399
1988 TR3		1988 10 16.55041	00	55	34.61	+10	34	29.4	399
1988 TS3	*	1988 10 13.52014	01	04	52.04	+09	57	59.5	16.5 399
1988 TS3		1988 10 13.53889	01	04	51.03	+09	57	45.7	399
1988 TS3		1988 10 13.55799	01	04	50.33	+09	57	27.9	399
1988 UW	*	1988 10 31.45382	00	58	02.03	+07	21	50.4	16.5 399
1988 UW		1988 10 31.47436	00	58	00.92	+07	21	53.6	399
1988 UW		1988 10 31.49242	00	57	59.95	+07	21	56.1	399
1988 UW		1988 11 06.44965	00	52	58.46	+07	33	57.6	16.5 399
1988 UW		1988 11 06.46632	00	52	57.80	+07	33	58.0	399
1988 UN1		1988 10 16.47992	01	12	45.98	+10	01	10.1	399
1988 UN1	*	1988 10 16.64907	01	12	36.65	+09	59	54.2	16.5 399
1988 UN1		1988 10 16.66591	01	12	35.64	+09	59	44.1	399

1988	UN1		1988	10	16.69091	01	12	34.30	+09	59	34.7		399
1988	UP1	*	1988	10	19.64497	01	19	29.88	+09	42	54.2	17	399
1988	UP1		1988	10	19.66157	01	19	28.65	+09	42	56.7		399
1988	UP1		1988	10	19.67963	01	19	27.56	+09	42	58.2		399
1988	UQ1	*	1988	10	31.45382	00	57	58.14	+08	17	41.1	16.5	399
1988	UQ1		1988	10	31.47436	00	57	57.00	+08	17	26.5		399
1988	UQ1		1988	10	31.49242	00	57	55.97	+08	17	09.1		399
1988	VX2		1988	11	02.56806	02	46	11.64	+16	05	06.2	16.5	399
1988	VX2		1988	11	02.58323	02	46	11.02	+16	05	00.2		399
1988	VX2		1988	11	02.60104	02	46	09.99	+16	04	49.8		399
1988	VY5		1988	11	02.56806	02	51	50.10	+14	56	59.0	16.5	399
1988	VY5		1988	11	02.58323	02	51	49.13	+14	57	00.0		399
1988	VY5		1988	11	02.60104	02	51	48.04	+14	56	59.5		399
1988	VY5		1988	11	08.60498	02	46	17.02	+14	56	15.1	16.5	399
1988	VY5		1988	11	08.61979	02	46	16.07	+14	56	14.5		399
1988	VY5		1988	11	08.63530	02	46	15.11	+14	56	13.7		399
1988	VY5		1988	11	11.62575	02	43	30.60	+14	55	51.9	16.5	399
1988	VY5		1988	11	11.64213	02	43	29.51	+14	55	51.9		399
1988	VY5		1988	11	11.66149	02	43	28.46	+14	55	52.7		399
1988	VS6		1988	10	16.57755	01	18	46.57	+09	15	20.4	16.5	399
1988	VS6		1988	10	16.59838	01	18	45.90	+09	15	16.4		399
1988	VS6		1988	10	16.61502	01	18	45.16	+09	15	08.9		399
1988	VK9	*	1988	11	02.51562	02	25	14.75	+16	23	19.0	16.5	399
1988	VK9		1988	11	02.52998	02	25	13.86	+16	23	09.9		399
1988	VK9		1988	11	02.54769	02	25	12.79	+16	22	55.2		399
1988	VX9	*	1988	11	14.54931	02	38	36.68	+18	35	50.3	16.5	399
1988	VX9		1988	11	14.57668	02	38	35.29	+18	35	38.9		399
1988	VX9		1988	11	14.59271	02	38	34.62	+18	35	32.4		399
1988	WJ	*	1988	11	17.61285	03	27	57.33	+20	36	04.7	17	399
1988	WJ		1988	11	17.62922	03	27	56.32	+20	36	01.7		399
1988	WJ		1988	11	17.64734	03	27	55.21	+20	35	59.7		399
1988	WJ		1988	11	17.66389	03	27	54.42	+20	35	56.8		399
1988	WK	*	1988	11	17.61285	03	30	40.07	+19	56	24.3	16.5	399
1988	WK		1988	11	17.62922	03	30	39.15	+19	56	23.1		399
1988	WK		1988	11	17.64734	03	30	38.07	+19	56	20.2		399
1988	WK		1988	11	17.66389	03	30	37.03	+19	56	19.0		399
1988	WL	*	1988	11	17.61285	03	34	58.22	+19	36	30.1	16.5	399
1988	WL		1988	11	17.62922	03	34	56.89	+19	36	24.2		399
1988	WL		1988	11	17.64734	03	34	55.77	+19	36	19.6		399
1988	WL		1988	11	17.66389	03	34	54.47	+19	36	15.3		399
1988	WM	*	1988	11	17.61285	03	35	21.85	+18	14	15.9	17	399
1988	WM		1988	11	17.62922	03	35	20.76	+18	14	13.8		399
1988	WM		1988	11	17.64734	03	35	19.80	+18	14	09.9		399
1988	WM		1988	11	17.66389	03	35	18.86	+18	14	07.8		399
1988	XM4	*	1988	12	11.47083	04	56	13.44	+25	39	45.4	16.5	399
1988	XM4		1988	12	11.48542	04	56	12.58	+25	39	48.0		399
1988	XM4		1988	12	11.50081	04	56	11.50	+25	39	50.2		399
1988	XM4		1988	12	11.51597	04	56	10.67	+25	39	54.9		399
1988	XN4	*	1988	12	11.47083	04	58	42.90	+25	23	39.3	16.5	399
1988	XN4		1988	12	11.48542	04	58	41.93	+25	23	40.0		399
1988	XN4		1988	12	11.50081	04	58	41.01	+25	23	42.8		399
1988	XN4		1988	12	11.51597	04	58	39.94	+25	23	44.4		399
1989	AX8	*	1989	01	04.57778	07	00	40.72	+22	47	50.3	16.5	399
1989	AX8		1989	01	04.59236	07	00	39.50	+22	47	49.9		399
1989	AX8		1989	01	04.60764	07	00	38.07	+22	47	48.8		399
1989	AX8		1989	01	04.62396	07	00	36.85	+22	47	48.5		399
1989	AD9	*	1989	01	15.68750	07	48	19.56	+25	11	00.2	16.5	399
1989	AD9		1989	01	15.70174	07	48	18.60	+25	11	03.8		399

1989	AD9		1989	01	15.71736	07	48	17.54	+25	11	08.0		399
1989	AD9		1989	01	15.73194	07	48	16.55	+25	11	12.1		399
1989	BB2	*	1989	01	29.55903	09	00	31.86	+28	30	14.1	16.5	399
1989	BB2		1989	01	29.57361	09	00	30.99	+28	30	18.0		399
1989	BB2		1989	01	29.59097	09	00	30.14	+28	30	18.3		399
1989	BB2		1989	01	29.60556	09	00	29.43	+28	30	19.0		399
1989	CE7	*	1989	02	07.50773	09	21	28.94	+12	52	50.5	16.0	399
1989	CE7		1989	02	07.52413	09	21	28.07	+12	52	59.6		399
1989	CE7		1989	02	07.54566	09	21	26.79	+12	53	10.0		399
1989	CE7		1989	02	07.56163	09	21	25.84	+12	53	19.4		399
1989	CG7	*	1989	02	07.63750	09	38	52.52	+19	57	36.9	16	399
1989	CG7		1989	02	07.65208	09	38	51.69	+19	57	43.7		399
1989	CG7		1989	02	07.66910	09	38	50.68	+19	57	52.1		399
1989	CH7	*	1989	02	07.63750	09	41	58.08	+19	31	14.7	17	399
1989	CH7		1989	02	07.65208	09	41	57.39	+19	31	20.7		399
1989	CH7		1989	02	07.66910	09	41	56.71	+19	31	32.5		399
1989	CJ7	*	1989	02	07.63750	09	44	10.81	+18	25	44.5	17	399
1989	CJ7		1989	02	07.65208	09	44	09.85	+18	25	44.3		399
1989	CJ7		1989	02	07.66910	09	44	09.09	+18	25	45.9		399
1989	DE	*	1989	02	26.47106	08	44	30.31	+31	20	03.7	16	399
1989	DE		1989	02	26.48542	08	44	29.67	+31	20	10.4		399
1989	DE		1989	02	26.50208	08	44	29.09	+31	20	19.9		399
1989	DF	*	1989	02	26.52500	10	34	34.10	-00	51	53.8	16.5	399
1989	DF		1989	02	26.53958	10	34	33.03	-00	51	53.1		399
1989	DF		1989	02	26.55556	10	34	32.12	-00	51	51.5		399
1989	DF		1989	02	26.57049	10	34	31.10	-00	51	52.0		399
1989	EC2		1989	03	08.69462	11	21	20.27	+09	32	21.7	16.5	399
1989	EC2		1989	03	08.70974	11	21	19.39	+09	32	24.4		399
1989	EC2		1989	03	08.72604	11	21	18.47	+09	32	30.1		399
1989	EC2		1989	03	26.50729	11	07	24.84	+10	25	26.1	16.5	399
1989	EC2		1989	03	26.52326	11	07	24.04	+10	25	27.6		399
1989	EC2		1989	04	04.58611	11	01	35.10	+10	39	35.6	17	399
1989	EC2		1989	04	04.60069	11	01	34.64	+10	39	36.0		399
1989	EC2		1989	04	04.61690	11	01	33.92	+10	39	37.2		399
1989	EC2		1989	04	06.51944	11	00	31.61	+10	41	12.6	16.5	399
1989	EC2		1989	04	06.53403	11	00	31.19	+10	41	14.2		399
1989	EC2		1989	04	06.54965	11	00	30.59	+10	41	14.1		399
1989	ED2		1989	03	08.69462	11	23	02.19	+08	21	16.0	16.5	399
1989	ED2		1989	03	08.70974	11	23	01.41	+08	21	18.7		399
1989	ED2		1989	03	08.72604	11	23	00.68	+08	21	25.1		399
1989	ED2		1989	03	12.55770	11	20	04.70	+08	39	17.9	16.5	399
1989	ED2		1989	03	12.57234	11	20	04.14	+08	39	23.6		399
1989	ED2		1989	03	12.64861	11	20	00.37	+08	39	46.2		399
1989	ED2		1989	03	12.66319	11	19	59.73	+08	39	48.9		399
1989	ED2		1989	03	12.68183	11	19	58.84	+08	39	52.6		399

400 Kitami
K. Watanabe, 3-8-B203, Ashibetsu Chuo 3 Jo 4 Chome, Shiroishi-Ku,
Sapporo 005, Japan
Observers K. Endate, T. Fujii, M. Yanai
Measurer K. Watanabe
0.16-m f/3.3 reflector, 0.20-m f/4.8 reflector and 0.20-m f/4.0 reflector
AGK3, SAOC

1988	TP3	*	1988	10	10.58194	01	20	27.70	+14	14	36.3	16.0	400
1988	TP3		1988	10	10.60347	01	20	26.53	+14	14	32.3		400
1988	UH1	*	1988	10	16.46076	01	24	07.84	+16	47	07.8	16.0	400
1988	UH1		1988	10	16.47743	01	24	06.92	+16	47	02.2		400
1988	UH1		1988	10	16.49028	01	24	06.05	+16	46	54.4		400
1988	UJ1	*	1988	10	16.53993	01	57	47.49	+16	04	42.3	16.0	400

1988 UJ1 1988 10 16.55729 01 57 46.48 +16 04 39.0 400
1988 UJ1 1988 10 16.56910 01 57 45.79 +16 04 40.0 400
1988 UK1 * 1988 10 16.55903 02 24 59.06 +11 52 53.2 16.0 400
1988 UK1 1988 10 16.57361 02 24 58.31 +11 52 49.6 400
1988 UK1 1988 10 16.58681 02 24 57.73 +11 52 47.6 400
1988 UL1 * 1988 10 16.58333 02 21 49.43 +14 27 59.1 16.0 400
1988 UL1 1988 10 16.60764 02 21 48.18 +14 28 13.5 400
1988 UM1 * 1988 10 16.62743 02 06 07.45 +21 59 14.3 16.0 400
1988 UM1 1988 10 16.64410 02 06 06.58 +21 59 12.0 400
1988 UM1 1988 10 16.65590 02 06 05.79 +21 59 09.3 400
1988 UO1 * 1988 10 19.62813 02 27 17.05 +21 38 03.2 16.0 400
1988 UO1 1988 10 19.64410 02 27 16.14 +21 37 59.5 400
1988 UO1 1988 10 19.65625 02 27 15.48 +21 37 52.6 400
1988 VM9 * 1988 11 02.60660 01 41 54.08 +12 05 43.3 16.0 400
1988 VM9 1988 11 02.62326 01 41 52.86 +12 05 41.4 400
1988 VM9 1988 11 02.63438 01 41 52.19 +12 05 40.4 400
1988 XJ4 * 1988 12 03.50625 05 10 13.52 +22 36 46.4 16.5 400
1988 XJ4 1988 12 03.52361 05 10 12.23 +22 36 58.5 400
1988 XJ4 1988 12 03.53611 05 10 11.48 +22 37 06.8 400
1988 YR * 1988 12 31.52572 07 30 04.64 +21 55 19.8 16 400
1988 YR 1988 12 31.54186 07 30 03.39 +21 55 16.8 400
1988 YR 1988 12 31.55488 07 30 02.52 +21 55 17.2 400
1989 AA9 * 1989 01 15.65347 08 16 09.66 +23 56 35.5 16.5 400
1989 AA9 1989 01 15.66736 08 16 08.99 +23 56 37.0 400
1989 AA9 1989 01 15.68264 08 16 07.76 +23 56 37.4 400
1989 AB9 * 1989 01 15.65347 08 16 59.53 +25 09 21.9 16.0 400
1989 AB9 1989 01 15.66736 08 16 58.53 +25 09 26.6 400
1989 AB9 1989 01 15.68264 08 16 57.30 +25 09 26.1 400
1989 AC9 * 1989 01 15.65347 08 17 46.59 +24 33 05.3 16.5 400
1989 AC9 1989 01 15.66736 08 17 45.61 +24 33 05.2 400
1989 AC9 1989 01 15.68264 08 17 44.77 +24 33 07.9 400
1989 AE9 * 1989 01 15.69722 07 51 26.47 +22 38 10.0 16.5 400
1989 AE9 1989 01 15.71458 07 51 25.33 +22 38 15.6 400
1989 AE9 1989 01 15.72778 07 51 24.37 +22 38 19.3 400
1989 CF7 * 1989 02 07.56042 10 09 43.87 +16 29 35.9 16.5 400
1989 CF7 1989 02 07.57639 10 09 42.79 +16 29 47.8 400

401 Oosato
Y. Yamagishi, 884-1, Tudashinden, Oosato, Saitama 360-01, Japan
Observer Y. Yamagishi
Measurer S. Hayakawa
0.20-m f/4.8 reflector
1988 VT9 * 1988 11 08.52535 02 59 17.99 +17 46 43.0 16.0 401
1988 VT9 1988 11 08.54618 02 59 17.02 +17 46 25.6 16.0 401
1988 VU9 * 1988 11 08.56424 04 03 48.22 +21 41 21.0 16.0 401
1988 VU9 1988 11 08.58576 04 03 46.96 +21 41 28.9 16.0 401
1988 VV9 * 1988 11 08.56493 04 02 17.51 +21 13 07.2 15.5 401
1988 VV9 1988 11 08.58576 04 02 16.59 +21 12 56.8 15.5 401

402 Dynic Astronomical Observatory
A. Sugie, Dynic Astronomical Observatoty, Taga 270, Taga-Cho, Inukami-Gun, Shiga-Ken, 522-03, Japan
1989 CO7 * 1989 02 14.52500 08 46 19.46 +18 30 10.6 17.5 402
1989 CO7 1989 02 14.62326 08 46 12.61 +18 30 35.7 17.5 402

403 Kani
T. Furuta, Mitsuike 17-2, Kakiya-Cho, Tokai, Aichi-Ken 477, Japan
Observer Y. Mizuno
Measurer T. Furuta

1964	UP		1989	07	26.57813	20	03	52.54	-20	08	35.1	403
1964	UP		1989	07	26.59271	20	03	51.59	-20	08	35.6	403
1989	NE		1989	07	24.60694	20	06	18.70	-10	38	43.0	15.5 403
1989	NE		1989	07	24.62917	20	06	17.70	-10	39	02.0	403
1989	NE		1989	07	25.53090	20	05	34.60	-10	50	14.7	403
1989	NE		1989	07	25.55556	20	05	33.19	-10	50	33.4	403
1989	NE		1989	07	28.55035	20	03	10.02	-11	28	28.5	403
1989	NE		1989	07	28.56354	20	03	09.40	-11	28	40.1	403
1989	OA	*	1989	07	27.58194	21	00	19.82	-08	47	31.7	16.0 403
1989	OA		1989	07	27.59861	21	00	18.79	-08	47	34.7	403
1989	OA		1989	07	28.60451	20	59	24.35	-08	49	23.7	403
1989	OA		1989	07	28.61875	20	59	23.51	-08	49	26.4	403

413 Siding Spring
R. H. McNaught, Siding Spring Observatory, Coonabarabran, N.S.W. 2357, Australia
Observers M. Hartley, S. M. Hughes, R. H. McNaught, Q. A. Parker, K. S. Russell, S. B. Tritton
Measurer R. H. McNaught
1.2-m U. K. Schmidt Telescope and (1) Uppsala Southern Schmidt

1978	PS4		1989	03	02.53721	10	46	44.66	+02	08	03.6	413
1978	PS4		1989	03	02.58929	10	46	41.55	+02	08	12.8	413
1978	PS4		1989	03	04.69412	10	44	39.95	+02	14	02.1	413
1979	SL7		1989	03	02.53721	10	33	00.23	+00	36	59.8	413
1979	SL7		1989	03	02.58929	10	32	57.51	+00	37	22.1	413
1979	SL7		1989	03	04.69412	10	31	09.61	+00	53	14.8	413
1982	OF1	*	1982	07	16.50400	18	07	29.34	-13	56	10.2	17.5 413
1982	OF1		1982	07	16.53525	18	07	27.46	-13	57	12.8	413
1986	VC		1984	03	29.56958	12	12	14.34	-01	06	46.3	17.5 413
1986	VC		1984	03	29.61125	12	12	12.13	-01	06	41.3	413
1986	VC		1989	04	15.74823	16	07	12.36	-32	46	07.8	1 413
1986	VC		1989	04	16.77413	16	06	40.16	-32	50	21.0	1 413
1986	VC		1989	07	21.39811	15	04	58.20	-30	51	07.6	18.5 413
1986	VC		1989	07	25.40551	15	06	23.22	-30	44	11.6	413
1988	DS4		1989	06	26.54527	15	12	12.06	-12	52	03.4	1 413
1988	DK5		1988	03	13.50167	10	14	40.07	+02	52	45.0	16 413
1988	DK5		1988	03	13.58500	10	14	35.27	+02	53	03.7	413
1988	ES2	*	1988	03	10.53479	10	11	25.89	-01	22	21.7	17.5 413
1988	ES2		1988	03	10.54660	10	11	25.23	-01	22	16.8	413
1988	ES2		1988	03	13.50167	10	09	14.50	-01	02	36.8	413
1988	ES2		1988	03	13.58500	10	09	10.81	-01	02	05.7	413
1988	ET2	*	1988	03	10.53479	10	12	12.86	+01	27	44.6	16.5 413
1988	ET2		1988	03	10.54660	10	12	12.19	+01	27	50.5	413
1988	ET2		1988	03	13.50167	10	09	47.18	+01	48	12.2	413
1988	ET2		1988	03	13.58500	10	09	43.06	+01	48	45.1	413
1988	EV2	*	1988	03	13.50167	10	10	34.56	-02	52	11.8	16.5 413
1988	EV2		1988	03	13.58500	10	10	32.92	-02	49	33.6	413
1988	EW2	*	1988	03	13.50167	10	11	22.31	+01	18	14.5	17 413
1988	EW2		1988	03	13.58500	10	11	17.86	+01	18	23.1	413
1988	FN		1988	03	13.50167	10	10	24.95	+00	44	26.5	16 413
1988	FN		1988	03	13.58500	10	10	17.44	+00	43	20.2	413
1988	TL4	*	1988	10	03.55271	00	46	08.91	-29	47	18.3	18 V 413
1988	TL4		1988	10	03.60826	00	46	18.31	-29	47	54.2	V 413
1988	TM4	*	1988	10	09.40059	21	38	48.56	-13	02	52.8	18 413
1988	TM4		1988	10	09.45962	21	38	49.70	-13	02	44.3	413
1988	TN4	*	1988	10	09.40059	21	40	00.66	-12	56	25.8	17.5 413
1988	TN4		1988	10	09.45962	21	40	01.02	-12	56	30.6	413
1988	VT		1983	06	14.76094	21	01	31.84	+00	10	43.6	17.5 413
1988	VT		1983	06	14.80260	21	01	31.85	+00	11	02.8	413

1988	VT		1983	10	07.40061	20	22	06.38	-03	16	22.3	17.5	413
1988	VT		1983	10	07.44228	20	22	07.85	-03	16	35.7		413
1989	AM9	*	1989	01	12.65241	08	36	56.83	+03	23	45.8	16.5	413
1989	AM9		1989	01	12.70796	08	36	54.32	+03	23	59.2		413
1989	EO		1989	03	04.69412	10	36	49.98	+00	40	03.5		413
1989	EQ		1989	03	02.53721	10	46	57.50	+01	19	44.9		413
1989	EQ		1989	03	02.58929	10	46	54.83	+01	19	54.0		413
1989	EQ		1989	04	29.44865	10	21	28.90	+03	15	06.0	1	413
1989	EZ4	*	1989	03	02.53721	10	31	33.86	-02	32	31.4	17.5	413
1989	EZ4		1989	03	02.58929	10	31	31.06	-02	32	14.9		413
1989	EZ4		1989	03	07.55749	10	27	19.76	-02	05	21.5		413
1989	EZ4		1989	03	07.60957	10	27	17.13	-02	05	03.9		413
1989	EA5	*	1989	03	02.53721	10	32	00.15	-00	03	46.9	17.5	413
1989	EA5		1989	03	02.58929	10	31	56.74	-00	03	32.1		413
1989	EA5		1989	03	04.69412	10	29	43.61	+00	06	35.7		413
1989	EB5	*	1989	03	02.53721	10	34	31.51	+02	49	26.7	18	413
1989	EB5		1989	03	02.58929	10	34	28.15	+02	49	40.5		413
1989	EB5		1989	03	04.69412	10	32	15.31	+02	58	43.8		413
1989	EC5	*	1989	03	02.53721	10	36	03.21	+01	09	41.0	18	413
1989	EC5		1989	03	02.58929	10	36	00.71	+01	10	10.3		413
1989	EC5		1989	03	04.69412	10	34	20.43	+01	30	16.2		413
1989	ED5	*	1989	03	02.53721	10	38	20.29	+01	52	52.8	18	413
1989	ED5		1989	03	02.58929	10	38	17.34	+01	52	59.9		413
1989	ED5		1989	03	04.69412	10	36	09.91	+01	59	38.1		413
1989	EE5	*	1989	03	02.53721	10	38	45.30	+02	09	35.4	18	413
1989	EE5		1989	03	02.58929	10	38	42.65	+02	09	51.8		413
1989	EE5		1989	03	04.69412	10	36	57.55	+02	21	11.0		413
1989	EF5	*	1989	03	02.53721	10	39	14.65	+03	10	45.6	17	413
1989	EF5		1989	03	02.58929	10	39	12.34	+03	11	08.8		413
1989	EF5		1989	03	04.69412	10	37	41.57	+03	26	53.5		413
1989	EG5	*	1989	03	02.53721	10	39	25.81	+03	07	46.9	18	413
1989	EG5		1989	03	02.58929	10	39	23.42	+03	08	03.1	F	413
1989	EG5		1989	03	04.69412	10	37	46.58	+03	17	41.2		413
1989	EH5	*	1989	03	02.53721	10	39	40.33	+01	43	15.0	18	413
1989	EH5		1989	03	02.58929	10	39	37.90	+01	43	38.6	V	413
1989	EH5		1989	03	04.69412	10	38	06.12	+01	59	22.0		413
1989	EJ5	*	1989	03	02.53721	10	39	54.28	+03	04	20.6	18	413
1989	EJ5		1989	03	02.58929	10	39	51.17	+03	04	39.2		413
1989	EJ5		1989	03	04.69412	10	37	48.84	+03	14	47.7		413
1989	EK5	*	1989	03	02.53721	10	40	27.39	+00	21	49.4	18	413
1989	EK5		1989	03	02.58929	10	40	24.24	+00	21	59.7		413
1989	EK5		1989	03	04.69412	10	38	19.88	+00	28	58.9		413
1989	EL5	*	1989	03	02.53721	10	41	35.21	+01	30	26.4	18	413
1989	EL5		1989	03	02.58929	10	41	32.13	+01	30	42.6		413
1989	EL5		1989	03	04.69412	10	39	24.33	+01	42	01.6		413
1989	EM5	*	1989	03	02.53721	10	42	14.59	+00	25	03.7	18	413
1989	EM5		1989	03	02.58929	10	42	11.16	+00	25	20.9		413
1989	EM5		1989	03	04.69412	10	39	55.89	+00	37	08.1		413
1989	EN5	*	1989	03	02.53721	10	42	21.41	+01	47	14.8	17.5	413
1989	EN5		1989	03	02.58929	10	42	18.23	+01	47	27.1		413
1989	EN5		1989	03	04.69412	10	40	12.97	+01	56	27.3		413
1989	EO5	*	1989	03	02.53721	10	43	14.06	-02	28	33.1	18	413
1989	EO5		1989	03	02.58929	10	43	11.68	-02	28	13.5		413
1989	EO5		1989	03	07.55749	10	39	29.39	-01	55	20.7		413
1989	EO5		1989	03	07.60957	10	39	27.09	-01	55	00.7		413
1989	EP5	*	1989	03	02.53721	10	43	36.49	-02	31	49.8	18	413
1989	EP5		1989	03	02.58929	10	43	33.51	-02	31	24.6	I	413
1989	EP5		1989	03	07.55749	10	39	03.50	-01	48	05.1	E	413
1989	EP5		1989	03	07.60957	10	39	00.10	-01	47	34.1	E	413

1989	EQ5	*	1989	03	02.53721	10	44	22.63	-00	16	44.7		18	413
1989	EQ5		1989	03	02.58929	10	44	19.76	-00	16	21.1		p	413
1989	EQ5		1989	03	04.69412	10	42	21.72	+00	01	00.3			413
1989	ER5	*	1989	03	02.53721	10	44	48.60	+02	35	16.8		18 F	413
1989	ER5		1989	03	02.58929	10	44	46.05	+02	35	46.4		p	413
1989	ER5		1989	03	04.69412	10	42	57.88	+02	57	00.0			413
1989	ES5	*	1989	03	02.53721	10	44	54.98	+02	42	02.7		18 V	413
1989	ES5		1989	03	02.58929	10	44	51.31	+02	42	20.1		V	413
1989	ES5		1989	03	04.69412	10	42	33.07	+02	52	32.4			413
1989	ET5	*	1989	03	02.53721	10	45	30.70	-02	54	40.2		18 F	413
1989	ET5		1989	03	02.58929	10	45	26.42	-02	54	16.1		p	413
1989	ET5		1989	03	07.55749	10	40	44.19	-02	24	14.1			413
1989	ET5		1989	03	07.60957	10	40	41.27	-02	23	56.0			413
1989	EU5	*	1989	03	02.53721	10	46	47.25	+00	18	05.1		18	413
1989	EU5		1989	03	02.58929	10	46	44.38	+00	18	25.4			413
1989	EU5		1989	03	04.69412	10	44	49.68	+00	35	07.9			413
1989	EV5	*	1989	03	02.53721	10	48	04.31	+02	06	31.4		17.5	413
1989	EV5		1989	03	02.58929	10	48	01.23	+02	06	34.9			413
1989	EV5		1989	03	04.69412	10	45	56.95	+02	08	37.4			413
1989	EW5	*	1989	03	02.53721	10	48	40.00	-02	47	32.7		18	413
1989	EW5		1989	03	02.58929	10	48	37.56	-02	47	12.9			413
1989	EW5		1989	03	07.55749	10	44	51.51	-02	12	54.6			413
1989	EW5		1989	03	07.60957	10	44	49.20	-02	12	34.2			413
1989	EX5	*	1989	03	02.53721	10	49	26.30	-01	31	27.3		18	413
1989	EX5		1989	03	02.58929	10	49	23.24	-01	31	18.7			413
1989	EX5		1989	03	04.69412	10	47	22.02	-01	25	12.2			413
1989	EY5	*	1989	03	02.53721	10	50	43.22	+00	06	49.3		18	413
1989	EY5		1989	03	02.58929	10	50	40.24	+00	07	11.7			413
1989	EY5		1989	03	04.69412	10	48	45.55	+00	22	10.9			413
1989	EZ5	*	1989	03	02.53721	10	51	05.29	+01	27	04.1		17.5	413
1989	EZ5		1989	03	02.58929	10	51	02.83	+01	27	39.4			413
1989	EZ5		1989	03	04.69412	10	49	25.77	+01	52	03.8			413
1989	EA6	*	1989	03	02.53721	10	51	23.97	-02	12	50.0		18	413
1989	EA6		1989	03	02.58929	10	51	20.80	-02	12	43.1			413
1989	EA6		1989	03	04.69412	10	49	14.14	-02	07	33.1			413
1989	EA6		1989	03	07.55749	10	46	23.39	-02	00	03.8			413
1989	EA6		1989	03	07.60957	10	46	20.16	-01	59	55.0			413
1989	EB6	*	1989	03	02.53721	10	51	47.48	-01	40	32.8		18	413
1989	EB6		1989	03	02.58929	10	51	44.46	-01	40	12.0			413
1989	EB6		1989	03	04.69412	10	49	47.91	-01	25	20.2			413
1989	EC6	*	1989	03	02.53721	10	52	08.46	+02	52	56.5		17	413
1989	EC6		1989	03	02.58929	10	52	05.45	+02	53	21.9			413
1989	EC6		1989	03	04.69412	10	50	04.98	+03	10	38.3			413
1989	ED6	*	1989	03	02.58929	10	37	36.43	+00	24	02.0		18	413
1989	ED6		1989	03	04.69412	10	35	33.49	+00	36	35.2			413
1989	EW8	*	1989	03	02.53721	10	30	59.41	-01	35	44.5			413
1989	EW8		1989	03	02.58929	10	30	56.47	-01	35	27.0			413
1989	EX8	*	1989	03	07.55749	10	28	24.32	-02	58	54.3		17	413
1989	EX8		1989	03	07.60957	10	28	21.44	-02	58	36.9			413
1989	EY8	*	1989	03	07.55749	10	37	17.69	-06	24	33.1		17	413
1989	EY8		1989	03	07.60957	10	37	14.60	-06	24	18.4			413
1989	EZ8	*	1989	03	07.55749	10	38	01.86	-03	02	59.3		17	413
1989	EZ8		1989	03	07.60957	10	37	58.88	-03	02	44.9			413
1989	EA9	*	1989	03	07.55749	10	38	49.20	-07	45	18.5		16.5	413
1989	EA9		1989	03	07.60957	10	38	46.41	-07	45	10.8			413
1989	EB9	*	1989	03	07.55749	10	42	34.55	-07	24	57.6		17	413
1989	EB9		1989	03	07.60957	10	42	31.73	-07	24	42.7			413
1989	EC9	*	1989	03	07.55749	10	47	21.05	-04	55	54.1		17.5	413
1989	EC9		1989	03	07.60957	10	47	18.46	-04	55	46.8			413

1989	ED9	*	1989	03	07.55749	10	48	01.42	-03	56	30.3	15.5	413
1989	ED9		1989	03	07.60957	10	47	58.84	-03	56	25.6		413
1989	EE9	*	1989	03	07.55749	10	49	33.72	-07	27	22.9	17	413
1989	EE9		1989	03	07.60957	10	49	30.98	-07	27	21.6		413
1989	NA		1989	07	27.65984	20	18	44.45	-40	33	45.8	15.5	413
1989	NA		1989	07	27.66406	20	18	44.50	-40	33	52.9		413
1989	NA		1989	07	27.66910	20	18	44.63	-40	33	59.9		413
1989	NE1		1989	07	27.64861	20	00	07.14	-46	56	51.1	16	1 413
1989	OB		1989	08	03.56106	21	25	58.05	-01	46	31.2		1 413
1989	OB		1989	08	03.56389	21	25	58.01	-01	46	26.3		1 413
1989	OB		1989	08	03.56771	21	25	58.02	-01	46	17.7		1 413
1989	OC	*	1989	07	21.37728	15	21	18.48	-27	36	33.8	17	413
1989	OC		1989	07	21.41895	15	21	21.93	-27	36	22.1		413
1989	OC		1989	07	25.39683	15	27	29.05	-27	18	13.2		413
1989	OC		1989	07	25.41419	15	27	30.59	-27	18	08.5		413
1989	OD	*	1989	07	21.39811	15	17	17.88	-30	19	32.2	17	413
1989	OD		1989	07	25.40551	15	19	28.20	-30	12	55.2		413
1989	OE	*	1989	07	21.39811	15	19	02.21	-27	42	01.6	17	413
1989	OE		1989	07	25.40551	15	21	04.79	-27	50	14.8		413
1989	OF	*	1989	07	21.39811	15	25	52.76	-28	10	34.9	17	413
1989	OF		1989	07	25.40551	15	29	07.72	-28	09	07.5		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

1942	DB		1988	04	15.50303	12	07	49.99	-19	06	27.5		474
1942	DB		1988	04	15.51935	12	07	49.11	-19	06	23.9		474
1972	GL		1989	06	30.53053	16	29	10.69	-29	49	25.6	17.4	474
1972	GL		1989	06	30.54326	16	29	10.09	-29	49	25.4		474
1972	GL		1989	07	01.60125	16	28	24.95	-29	49	13.5	18.2	474
1972	GL		1989	07	01.62162	16	28	24.08	-29	49	13.4		474
1972	GL		1989	07	02.42880	16	27	51.82	-29	49	07.5	17.4	474
1972	GL		1989	07	02.45044	16	27	50.84	-29	49	07.1		474
1983	CO3		1989	04	01.40825	12	29	10.69	-27	07	39.7	17.9	474
1983	CO3		1989	04	01.42486	12	29	09.83	-27	07	35.9		474
1983	CO3		1989	04	03.46178	12	27	28.21	-26	58	09.0	18.3	474
1983	CO3		1989	04	03.48065	12	27	27.27	-26	58	04.3		474
1985	KC		1988	03	18.56527	12	41	41.22	-08	48	54.3		474
1985	KC		1988	03	18.59003	12	41	39.72	-08	48	51.3		474
1985	NE		1989	05	13.69410	19	01	38.92	-33	36	26.0	16.9	474
1985	NE		1989	05	13.72257	19	01	39.41	-33	36	32.9		474
1985	NE		1989	05	15.63009	19	02	09.50	-33	44	47.5	17.0	474
1985	NE		1989	05	15.76007	19	02	10.82	-33	45	21.3		474
1986	JN1		1989	06	30.68620	20	28	36.17	-45	20	01.6	16.9	474
1986	JN1		1989	06	30.70426	20	28	35.14	-45	20	24.8		474
1986	JN1		1989	07	01.54034	20	27	46.88	-45	38	33.2		t 474
1986	JN1		1989	07	01.55322	20	27	46.06	-45	38	49.4		t 474
1986	RB		1989	05	09.63668	15	15	18.14	-57	49	18.4	18.8	474
1986	RB		1989	05	09.66017	15	15	15.49	-57	49	20.5		474
1986	RB		1989	05	13.62755	15	08	14.08	-57	52	00.3	18.0	474
1986	RB		1989	05	13.63900	15	08	13.53	-57	51	59.9		474
1986	YA		1989	03	03.56029	12	33	23.69	-26	00	50.7		474
1988	BO2		1989	03	31.46317	13	49	30.36	-32	19	24.7	17.5	474
1988	BO2		1989	03	31.48013	13	49	29.09	-32	19	31.3		474
1988	BO2		1989	04	01.44778	13	48	20.37	-32	25	28.5	17.4	474

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1988 BO2    1989 04 01.46074  13 48 19.44  -32 25 33.6                  474
1988 EG     1988 03 21.42464  10 59 22.39  +04 43 21.5          17.5    474
1988 EG     1988 03 21.43807  10 59 21.63  +04 43 39.9                  474
1988 VP4    1989 05 09.59617  15 29 48.40  -51 46 10.2          15.8    474
1988 VP4    1989 05 09.60554  15 29 46.82  -51 45 44.4                  474
1989 CT7  * 1989 02 09.61875  16 34 18.15  -30 07 35.9              W 474
1989 CT7    1989 02 09.66593  16 35 03.93  -30 09 42.6              W 474
1989 GY7  * 1989 04 01.49662  12 54 15.01  +04 32 23.6          18.7    474
1989 GY7    1989 04 01.53910  12 54 12.45  +04 32 40.2                  474
1989 MD   * 1989 06 30.53053  16 29 32.38  -29 53 29.4          17.5    474
1989 MD     1989 06 30.54326  16 29 31.84  -29 53 27.3                  474
1989 MD     1989 07 01.60125  16 28 51.80  -29 50 28.4          17.9    474
1989 MD     1989 07 01.62162  16 28 51.04  -29 50 24.4                  474
1989 MD     1989 07 02.42880  16 28 22.09  -29 48 08.4          17.8    474
1989 MD     1989 07 02.45044  16 28 21.24  -29 48 04.6                  474
1989 MD     1989 07 08.33124  16 25 16.47  -29 31 21.2          17.8    474
1989 MD     1989 07 08.36006  16 25 15.73  -29 31 16.6                  474
1989 ME   * 1989 06 30.68620  20 27 36.36  -45 25 14.6              t 474
1989 ME     1989 06 30.70426  20 27 35.21  -45 25 14.4              t 474
1989 ME     1989 07 01.54034  20 26 41.45  -45 25 28.1              t 474
1989 ME     1989 07 01.55322  20 26 40.65  -45 25 28.1              t 474
1989 ME     1989 07 02.49025  20 25 39.09  -45 25 32.2          17.4    474
1989 ME     1989 07 02.50657  20 25 38.03  -45 25 32.0                  474
1989 ME     1989 07 08.38025  20 18 46.35  -45 22 10.7          17.0    474
1989 ME     1989 07 08.39582  20 18 45.21  -45 22 09.5                  474
1989 NA     1989 07 08.43541  20 08 07.77  -30 50 43.9          15.7    474
1989 NA     1989 07 08.44113  20 08 07.91  -30 50 55.0                  474
1989 NE1  * 1989 07 08.38025  20 18 16.07  -45 26 07.1          16.2  t 474
1989 NE1    1989 07 08.39582  20 18 15.37  -45 26 15.5                t 474
```

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

```
1988 XZ2  * 1988 12 09.91319  05 11 16.05  +20 25 53.1          16.8    552
1988 XZ2    1988 12 09.93958  05 11 14.43  +20 25 56.8          16.8    552
```

567 Osservatorio Chaonis
J. M. Baur, Via Zara 20, I-33083 Chions, Italy
Observers J. M. Baur, G. Carniel
Measurer J. M. Baur
0.6-m f/3 Wright-Schmidt reflector
AGK3

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1988 VW10* 1988 11 11.92014  03 50 00.96  +21 49 00.1          17.0    567
1988 VW10  1988 11 11.93403  03 50 01.72  +21 49 05.4                  567
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568 Mauna Kea Observatory
D. J. Tholen, Institute for Astronomy, 2680 Woodlawn Drive,
Honolulu, HI 96822, U.S.A.
Observer D. J. Tholen
2.24-m telescope encoders
SAOC

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1988 VP4    1989 06 05.40624  14 57 42.12  -35 12 43.5          16.8V   568
1989 FB     1989 06 05.32288  10 48 45.22  -14 22 18.0          18.4V   568
1989 JA     1989 06 05.27175  09 30 10.84  -14 03 32.3          16.1V   568
1989 NA     1989 07 25.51537  20 17 37.37  -39 38 23.8          15.9V   568
```

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)
Observers T. Gehrels (4, L), J. Gibson (1, C), E. Helin (2, S), H. E. Holt (3, S), A. Mejia (3, S), C. Mikolajczak (2, S), B. Roman (2, S), C. Shoemaker (3, S), E. Shoemaker (3, S), D. Tracy (2, S), K. Zeigler (3, S)
Measurers J. Alu (2), J. Gibson (1), A. Mejia (2), C. Mikolajczak (2), B. Roman (2), C. Shoemaker (3), D. Tracy (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

1964 UP	1989 07 01.42448	20 26 33.84	-20 14 05.2		16.0	2	675
1964 UP	1989 07 01.44340	20 26 33.00	-20 14 04.0			2	675
1964 UP	1989 07 03.42326	20 25 15.35	-20 12 59.0			2	675
1964 UP	1989 07 03.45260	20 25 14.06	-20 12 57.6			2	675
1966 PG	1989 07 01.38194	19 55 05.58	-07 52 35.4		16.5	2	675
1966 PG	1989 07 01.41007	19 55 04.45	-07 52 34.6			2	675
1966 PG	1989 07 03.41719	19 53 37.49	-07 52 09.2			2	675
1966 PG	1989 07 03.44670	19 53 36.11	-07 52 10.0			2	675
1969 TJ1	1973 09 29.29219	00 42 25.74	-01 27 10.3		16.8	4	675
1969 TJ1	1973 09 29.35694	00 42 21.79	-01 27 19.0			4	675
1969 TJ1	1973 09 30.24826	00 41 29.85	-01 29 17.6			4	675
1969 TJ1	1973 09 30.31476	00 41 25.82	-01 29 25.6			4	675
1969 TJ1	1973 10 04.32708	00 37 29.36	-01 37 55.6			4	675
1969 TJ1	1973 10 04.38889	00 37 25.59	-01 38 01.6			4	675
1969 TJ1	1973 10 05.35382	00 36 28.69	-01 39 52.6			4	675
1969 TJ1	1973 10 05.41597	00 36 24.88	-01 40 00.6			4	675
1969 UR	1973 09 19.29705	00 20 57.62	+15 04 04.0			4	675
1969 UR	1973 09 20.21458	00 20 17.42	+14 56 37.9			4	675
1969 UR	1973 09 20.29253	00 20 13.97	+14 56 00.8			4	675
1969 UR	1973 09 24.40035	00 17 09.54	+14 20 36.6			4	675
1969 UR	1973 09 24.47986	00 17 05.73	+14 19 52.0			4	675
1969 UR	1973 09 25.29375	00 16 28.85	+14 12 23.1		16.3	4	675
1969 UR	1973 09 25.35903	00 16 25.70	+14 11 47.7			4	675
1969 UR	1973 09 29.24062	00 13 26.52	+13 34 26.9			4	675
1969 UR	1973 09 29.30486	00 13 23.43	+13 33 48.7			4	675
1969 UR	1973 09 30.19722	00 12 42.34	+13 24 50.5			4	675
1969 UR	1973 09 30.35295	00 12 34.77	+13 23 15.3			4	675
1969 UR	1973 10 04.27708	00 09 34.92	+12 42 22.6			4	675
1969 UR	1973 10 04.33906	00 09 31.99	+12 41 43.5			4	675
1969 UR	1973 10 05.36632	00 08 45.64	+12 30 43.9			4	675
1969 UR	1973 10 05.42847	00 08 42.75	+12 30 04.2			4	675
1973 RF	1973 09 19.19948	00 40 40.51	+03 28 43.2			4	675
1973 RF	1973 09 19.25006	00 40 37.19	+03 28 51.3			4	675
1973 RF	1973 09 20.26458	00 39 31.46	+03 32 03.9			4	675
1973 RF	1973 09 24.36181	00 34 57.60	+03 44 25.7			4	675
1973 RF	1973 09 24.42847	00 34 52.93	+03 44 37.3			4	675
1973 RF	1973 09 25.25642	00 33 56.69	+03 46 59.1			4	675
1973 RF	1973 09 25.32031	00 33 52.20	+03 47 10.0			4	675
1973 RF	1973 09 29.26632	00 29 17.76	+03 58 14.6			4	675
1973 RF	1973 09 29.33073	00 29 13.05	+03 58 26.1		16.1	4	675
1973 RF	1973 09 30.22257	00 28 10.75	+04 00 51.4			4	675
1973 RF	1973 09 30.28785	00 28 06.04	+04 01 02.1			4	675
1973 RF	1973 10 04.30208	00 23 25.03	+04 11 45.6			4	675
1973 RF	1973 10 04.36476	00 23 20.55	+04 11 55.2			4	675

1973	RF	1973	10	05.32917	00	22	13.84	+04	14	28.2		4 675
1973	RF	1973	10	05.39132	00	22	09.31	+04	14	38.3		4 675
1973	SL	1973	09	19.21250	00	03	43.08	-01	50	40.8		4 675
1973	SL	1973	09	24.37431	00	01	11.19	-02	07	36.7		4 675
1973	SL	1973	09	25.26875	00	00	44.85	-02	10	30.0		4 675
1973	SL	1973	09	29.27986	23	58	47.20	-02	23	23.2		4 675
1973	SL	1973	09	30.23524	23	58	19.48	-02	26	22.7	18.4	4 675
1973	SL	1973	10	04.31493	23	56	22.56	-02	38	59.3		4 675
1973	SL	1973	10	05.34167	23	55	53.65	-02	42	05.3		4 675
1973	SN	1973	09	19.18611	00	05	22.59	+02	03	07.1		4 675
1973	SN	1973	09	24.34688	00	02	07.76	+01	44	34.1		4 675
1973	SN	1973	09	25.24375	00	01	33.86	+01	41	19.4		4 675
1973	SN	1973	09	29.25330	23	59	03.59	+01	26	45.5	19.3	4 675
1973	SN	1973	09	30.21007	23	58	28.12	+01	23	18.6		4 675
1973	SN	1973	10	04.28958	23	55	59.80	+01	08	46.3		4 675
1973	SN	1973	10	05.31684	23	55	23.24	+01	05	13.9		4 675
1973	SP	1973	09	19.19948	00	31	14.01	+03	53	36.9		4 675
1973	SP	1973	09	24.36181	00	28	34.81	+03	42	43.8		4 675
1973	SP	1973	09	25.25642	00	28	06.96	+03	40	45.0		4 675
1973	SP	1973	09	29.26632	00	26	00.42	+03	31	52.9	19.6	4 675
1973	SP	1973	09	30.22257	00	25	30.00	+03	29	44.0		4 675
1973	SP	1973	10	04.30208	00	23	20.92	+03	20	36.0		4 675
1973	SP	1973	10	05.32917	00	22	48.62	+03	18	17.5		4 675
1973	SQ	1973	09	19.26354	00	09	23.60	-05	12	41.0		4 675
1973	SQ	1973	09	20.27795	00	08	53.24	-05	15	28.4		4 675
1973	SQ	1973	09	24.37431	00	06	48.74	-05	26	35.6		4 675
1973	SQ	1973	09	29.27986	00	04	19.57	-05	39	16.7		4 675
1973	SQ	1973	09	30.23524	00	03	50.82	-05	41	40.6	19.9	4 675
1973	SQ	1973	10	04.31493	00	01	48.46	-05	51	21.2		4 675
1973	SS	1973	09	19.21250	00	10	10.23	-03	11	18.2		4 675
1973	SS	1973	09	24.37431	00	07	42.53	-03	27	37.8		4 675
1973	SS	1973	09	25.26875	00	07	17.09	-03	30	28.0		4 675
1973	SS	1973	09	29.27986	00	05	21.94	-03	42	46.6		4 675
1973	SS	1973	09	30.23524	00	04	54.68	-03	45	40.2	19.6	4 675
1973	SS	1973	10	04.31493	00	02	59.69	-03	57	38.4		4 675
1973	SS	1973	10	05.34167	00	02	30.95	-04	00	34.1		4 675
1973	ST	1973	09	19.19948	00	34	44.94	+03	29	41.2		4 675
1973	ST	1973	09	24.36181	00	31	46.81	+03	10	39.2		4 675
1973	ST	1973	09	25.25642	00	31	15.46	+03	07	16.7		4 675
1973	ST	1973	09	29.26632	00	28	53.05	+02	52	02.9	19.0	4 675
1973	ST	1973	09	30.22257	00	28	18.90	+02	48	23.1		4 675
1973	ST	1973	10	04.30208	00	25	53.35	+02	32	48.5		4 675
1973	ST	1973	10	05.32917	00	25	17.01	+02	28	54.0		4 675
1973	SU	1973	09	19.18611	00	10	32.15	+02	03	09.9		4 675
1973	SU	1973	09	24.34688	00	07	56.63	+01	43	57.7		4 675
1973	SU	1973	09	25.24375	00	07	29.47	+01	40	33.3		4 675
1973	SU	1973	09	29.25330	00	05	28.25	+01	25	28.5	18.6	4 675
1973	SU	1973	09	30.21007	00	04	59.41	+01	21	52.5		4 675
1973	SU	1973	10	04.28958	00	02	58.21	+01	06	39.3		4 675
1973	SU	1973	10	05.31684	00	02	28.31	+01	02	52.9		4 675
1973	SV	1973	09	19.18611	00	11	36.98	+00	54	16.3		4 675
1973	SV	1973	09	24.34688	00	08	44.16	+00	46	10.8		4 675
1973	SV	1973	09	25.24375	00	08	14.04	+00	44	44.5		4 675
1973	SV	1973	09	29.25330	00	05	59.26	+00	38	23.4	18.8	4 675
1973	SV	1973	09	30.21007	00	05	27.12	+00	36	55.3		4 675
1973	SV	1973	10	04.28958	00	03	11.64	+00	30	37.1		4 675
1973	SV	1973	10	05.31684	00	02	38.21	+00	29	06.4		4 675
1973	SV	1973	10	05.37917	00	02	35.97	+00	29	01.7		4 675
1973	SX	1973	09	19.18611	00	11	15.44	+02	56	39.5		4 675

1973	SX	1973	09	24.34688	00	08	41.17	+02	44	36.3		4 675
1973	SX	1973	09	25.24375	00	08	14.13	+02	42	28.9		4 675
1973	SX	1973	09	29.25330	00	06	13.82	+02	32	52.1	19.7	4 675
1973	SX	1973	09	30.21007	00	05	45.07	+02	30	35.0		4 675
1973	SX	1973	10	04.28958	00	03	44.13	+02	20	46.3		4 675
1973	SX	1973	10	05.31684	00	03	14.26	+02	18	18.1		4 675
1973	SY	1973	09	19.19948	00	35	25.56	+06	19	00.1		4 675
1973	SY	1973	09	24.36181	00	33	05.27	+05	55	01.8		4 675
1973	SY	1973	09	25.25642	00	32	40.69	+05	50	46.9		4 675
1973	SY	1973	09	29.26632	00	30	48.46	+05	31	28.5	17.9	4 675
1973	SY	1973	09	30.22257	00	30	21.47	+05	26	46.3		4 675
1973	SY	1973	10	04.30208	00	28	26.38	+05	06	45.3		4 675
1973	SY	1973	10	05.32917	00	27	57.52	+05	01	41.5		4 675
1973	SZ	1973	09	19.21250	00	12	36.86	-03	28	05.0		4 675
1973	SZ	1973	09	24.37431	00	10	06.40	-03	47	53.6		4 675
1973	SZ	1973	09	25.26875	00	09	40.13	-03	51	15.2		4 675
1973	SZ	1973	09	29.27986	00	07	42.42	-04	06	11.7		4 675
1973	SZ	1973	09	30.23524	00	07	14.51	-04	09	41.4	19.7	4 675
1973	SZ	1973	10	04.31493	00	05	16.56	-04	24	09.0		4 675
1973	SZ	1973	10	05.34167	00	04	47.22	-04	27	43.1		4 675
1973	SA1	1973	09	20.22847	00	10	50.54	+01	09	46.1		4 675
1973	SA1	1973	09	24.34688	00	08	51.31	+00	52	00.0		4 675
1973	SA1	1973	09	29.25330	00	06	29.15	+00	30	44.5	19.5	4 675
1973	SA1	1973	09	30.21007	00	06	01.57	+00	26	38.7		4 675
1973	SA1	1973	10	04.28958	00	04	05.05	+00	09	12.9		4 675
1973	SA1	1973	10	05.31684	00	03	36.23	+00	04	52.8		4 675
1973	SB1	1973	09	19.27865	00	36	04.04	-03	12	48.5		4 675
1973	SB1	1973	09	24.38750	00	32	59.11	-03	36	38.5		4 675
1973	SB1	1973	09	25.28125	00	32	26.30	-03	40	47.1		4 675
1973	SB1	1973	09	29.29219	00	29	56.81	-03	58	52.4	19.0	4 675
1973	SB1	1973	09	30.24826	00	29	21.00	-04	03	02.8		4 675
1973	SB1	1973	10	04.32708	00	26	48.68	-04	20	25.8		4 675
1973	SB1	1973	10	05.35382	00	26	10.74	-04	24	36.0		4 675
1973	SC1	1973	09	19.21250	00	13	28.03	-05	23	25.5		4 675
1973	SC1	1973	09	24.37431	00	11	07.28	-05	53	34.0		4 675
1973	SC1	1973	09	29.27986	00	08	52.51	-06	21	27.5		4 675
1973	SC1	1973	09	30.23524	00	08	26.50	-06	26	50.3	19.5	4 675
1973	SC1	1973	10	04.31493	00	06	36.14	-06	48	59.6		4 675
1973	SC1	1973	10	05.34167	00	06	08.72	-06	54	23.6		4 675
1973	SD1	1973	09	19.19948	00	37	32.14	+04	18	46.7		4 675
1973	SD1	1973	09	24.36181	00	34	51.90	+04	07	06.8		4 675
1973	SD1	1973	09	25.25642	00	34	23.82	+04	04	58.3		4 675
1973	SD1	1973	09	29.26632	00	32	15.33	+03	55	28.6	17.9	4 675
1973	SD1	1973	09	30.22257	00	31	44.52	+03	53	08.8		4 675
1973	SD1	1973	10	04.30208	00	29	32.75	+03	43	13.9		4 675
1973	SD1	1973	10	05.32917	00	28	59.73	+03	40	43.8		4 675
1973	SE1	1973	09	19.19948	00	37	11.76	+02	27	39.9		4 675
1973	SE1	1973	09	24.36181	00	34	41.59	+02	13	55.9		4 675
1973	SE1	1973	09	25.25642	00	34	15.23	+02	11	28.4		4 675
1973	SE1	1973	09	29.26632	00	32	15.18	+02	00	36.4	18.6	4 675
1973	SE1	1973	09	29.29219	00	32	14.62	+02	00	31.2		4 675
1973	SE1	1973	09	30.22257	00	31	46.64	+01	57	58.0		4 675
1973	SE1	1973	09	30.24826	00	31	45.84	+01	57	58.2		4 675
1973	SE1	1973	09	30.31476	00	31	43.78	+01	57	47.5		4 675
1973	SE1	1973	10	04.30208	00	29	43.82	+01	46	55.8		4 675
1973	SE1	1973	10	04.32708	00	29	42.89	+01	46	55.7		4 675
1973	SE1	1973	10	05.32917	00	29	12.94	+01	44	09.9		4 675
1973	SE1	1973	10	05.35382	00	29	12.08	+01	44	11.0		4 675
1973	SE1	1973	10	05.41597	00	29	10.11	+01	43	59.6		4 675

1973	SF1	1973	09	19.27865	00	37	30.24	-02	47	04.5	4 675
1973	SF1	1973	09	24.38750	00	34	49.07	-02	59	54.7	4 675
1973	SF1	1973	09	25.28125	00	34	20.47	-03	02	06.5	4 675
1973	SF1	1973	09	29.29219	00	32	10.07	-03	11	53.1	18.6 4 675
1973	SF1	1973	09	30.24826	00	31	38.70	-03	14	06.1	4 675
1973	SF1	1973	10	04.32708	00	29	25.02	-03	23	24.4	4 675
1973	SF1	1973	10	05.35382	00	28	51.46	-03	25	38.4	4 675
1973	SG1	1973	09	19.21250	00	16	35.69	-05	13	08.9	4 675
1973	SG1	1973	09	19.26354	00	16	34.03	-05	13	19.6	4 675
1973	SG1	1973	09	20.27795	00	16	05.78	-05	18	00.3	4 675
1973	SG1	1973	09	24.37431	00	14	09.54	-05	36	34.0	4 675
1973	SG1	1973	09	25.26875	00	13	44.44	-05	40	35.2	4 675
1973	SG1	1973	09	29.27986	00	11	49.58	-05	58	09.2	4 675
1973	SG1	1973	09	30.23524	00	11	22.45	-06	02	16.7	19.8 4 675
1973	SG1	1973	10	04.31493	00	09	27.07	-06	19	14.0	4 675
1973	SG1	1973	10	05.34167	00	08	58.48	-06	23	22.7	4 675
1973	SH1	1973	09	19.21250	00	17	32.49	-02	47	53.7	4 675
1973	SH1	1973	09	24.37431	00	15	03.84	-03	05	12.1	4 675
1973	SH1	1973	09	25.26875	00	14	37.97	-03	08	10.9	4 675
1973	SH1	1973	09	29.27986	00	12	41.33	-03	21	17.7	4 675
1973	SH1	1973	09	30.23524	00	12	13.57	-03	24	20.9	17.8 4 675
1973	SH1	1973	10	04.31493	00	10	16.19	-03	37	04.5	4 675
1973	SH1	1973	10	05.34167	00	09	46.81	-03	40	12.4	4 675
1973	SJ1	1973	09	19.19948	00	40	28.72	+03	58	17.8	4 675
1973	SJ1	1973	09	24.36181	00	37	37.76	+03	38	05.4	4 675
1973	SJ1	1973	09	25.25642	00	37	07.72	+03	34	27.8	4 675
1973	SJ1	1973	09	29.26632	00	34	50.38	+03	18	19.2	18.8 4 675
1973	SJ1	1973	09	30.22257	00	34	17.45	+03	14	24.6	4 675
1973	SJ1	1973	10	04.30208	00	31	56.52	+02	57	48.9	4 675
1973	SJ1	1973	10	05.32917	00	31	21.08	+02	53	37.9	4 675
1973	SK1	1973	09	19.27865	00	38	59.69	-00	40	51.7	4 675
1973	SK1	1973	09	24.38750	00	36	08.00	-01	08	55.2	4 675
1973	SK1	1973	09	25.28125	00	35	37.35	-01	13	49.8	4 675
1973	SK1	1973	09	29.29219	00	33	18.11	-01	35	41.2	17.8 4 675
1973	SK1	1973	09	30.24826	00	32	44.74	-01	40	49.3	4 675
1973	SK1	1973	10	04.32708	00	30	22.50	-02	02	26.2	4 675
1973	SK1	1973	10	05.35382	00	29	46.80	-02	07	46.3	4 675
1973	SL1	1973	09	19.18611	00	15	07.08	+02	40	31.5	4 675
1973	SL1	1973	09	24.34688	00	12	42.41	+02	17	26.6	4 675
1973	SL1	1973	09	25.24375	00	12	17.06	+02	13	23.2	4 675
1973	SL1	1973	09	29.25330	00	10	23.69	+01	55	11.5	18.6 4 675
1973	SL1	1973	09	30.21007	00	09	56.69	+01	50	52.2	4 675
1973	SL1	1973	10	04.28958	00	08	02.55	+01	32	25.5	4 675
1973	SL1	1973	10	05.31684	00	07	34.22	+01	27	49.6	4 675
1973	SM1	1973	09	19.19948	00	39	48.36	+06	22	04.1	4 675
1973	SM1	1973	09	24.36181	00	37	29.21	+05	59	03.9	4 675
1973	SM1	1973	09	25.25642	00	37	04.84	+05	54	56.7	4 675
1973	SM1	1973	09	29.26632	00	35	12.94	+05	36	24.6	18.9 4 675
1973	SM1	1973	09	30.22257	00	34	46.09	+05	31	54.3	4 675
1973	SM1	1973	10	04.30208	00	32	51.06	+05	12	39.7	4 675
1973	SM1	1973	10	05.32917	00	32	22.11	+05	07	48.5	4 675
1973	SN1	1973	09	19.22500	00	37	58.31	-01	30	49.5	4 675
1973	SN1	1973	09	24.38750	00	35	34.34	-01	47	25.9	4 675
1973	SN1	1973	09	25.28125	00	35	09.03	-01	50	17.8	4 675
1973	SN1	1973	09	29.29219	00	33	13.82	-02	03	02.6	19.7 4 675
1973	SN1	1973	09	30.24826	00	32	46.13	-02	06	02.0	4 675
1973	SN1	1973	10	04.32708	00	30	48.17	-02	18	36.1	4 675
1973	SN1	1973	10	05.35382	00	30	18.55	-02	21	40.9	4 675
1973	SO1	1973	09	19.19948	00	40	26.03	+02	05	55.1	4 675

1973	SO1	1973	09	24.36181	00	38	06.37	+01	45	07.9		4 675
1973	SO1	1973	09	24.38750	00	38	05.66	+01	45	00.3		4 675
1973	SO1	1973	09	25.25642	00	37	41.73	+01	41	24.4		4 675
1973	SO1	1973	09	25.28125	00	37	40.92	+01	41	24.4		4 675
1973	SO1	1973	09	29.26632	00	35	48.91	+01	25	01.7	18.2	4 675
1973	SO1	1973	09	29.29219	00	35	48.37	+01	24	54.0		4 675
1973	SO1	1973	09	30.22257	00	35	22.01	+01	21	05.2		4 675
1973	SO1	1973	09	30.24826	00	35	21.21	+01	21	01.5		4 675
1973	SO1	1973	10	04.30208	00	33	25.72	+01	04	26.7		4 675
1973	SO1	1973	10	04.32708	00	33	24.92	+01	04	22.0		4 675
1973	SO1	1973	10	05.32917	00	32	56.61	+01	00	15.8		4 675
1973	SO1	1973	10	05.35382	00	32	55.69	+01	00	11.0		4 675
1973	SP1	1973	09	19.19948	00	40	54.79	+01	28	47.9		4 675
1973	SP1	1973	09	19.27865	00	40	52.67	+01	28	33.2		4 675
1973	SP1	1973	09	24.36181	00	38	35.64	+01	11	18.6		4 675
1973	SP1	1973	09	24.38750	00	38	34.80	+01	11	14.5		4 675
1973	SP1	1973	09	25.28125	00	38	10.22	+01	08	11.0		4 675
1973	SP1	1973	09	29.26632	00	36	19.09	+00	54	29.3	18.9	4 675
1973	SP1	1973	09	30.24826	00	35	51.43	+00	51	07.6		4 675
1973	SP1	1973	10	05.35382	00	33	27.13	+00	33	47.9		4 675
1973	SQ1	1973	09	29.26632	00	36	41.59	+07	09	48.1	17.6	4 675
1973	SQ1	1973	09	30.22257	00	36	14.27	+07	06	14.7		4 675
1973	SQ1	1973	10	04.30208	00	34	17.06	+06	50	59.0		4 675
1973	SQ1	1973	10	05.32917	00	33	47.50	+06	47	06.5		4 675
1973	SR1	1973	09	24.38750	00	38	44.81	-02	25	52.9		4 675
1973	SR1	1973	09	25.28125	00	38	18.35	-02	28	06.6		4 675
1973	SR1	1973	09	29.29219	00	36	17.76	-02	37	51.6	19.9	4 675
1973	SR1	1973	09	30.24826	00	35	48.96	-02	40	09.9		4 675
1973	SR1	1973	10	04.32708	00	33	45.11	-02	49	39.6		4 675
1973	SR1	1973	10	05.35382	00	33	13.89	-02	51	58.0		4 675
1973	SS1	1973	09	19.21250	00	21	56.15	-02	55	33.8		4 675
1973	SS1	1973	09	24.37431	00	19	20.82	-03	07	49.5		4 675
1973	SS1	1973	09	24.45434	00	19	18.26	-03	07	57.9		4 675
1973	SS1	1973	09	25.26875	00	18	53.57	-03	09	55.9		4 675
1973	SS1	1973	09	25.34601	00	18	51.27	-03	10	03.0		4 675
1973	SS1	1973	09	29.27986	00	16	51.31	-03	19	08.5		4 675
1973	SS1	1973	09	30.23524	00	16	22.21	-03	21	17.0	19.6	4 675
1973	SS1	1973	10	04.31493	00	14	18.73	-03	30	04.9		4 675
1973	SS1	1973	10	05.34167	00	13	48.09	-03	32	13.8		4 675
1973	ST1	1973	09	19.19948	00	43	40.34	+02	42	10.1		4 675
1973	ST1	1973	09	24.36181	00	40	50.89	+02	21	38.3		4 675
1973	ST1	1973	09	25.25642	00	40	20.85	+02	17	58.0		4 675
1973	ST1	1973	09	29.26632	00	38	04.13	+02	01	41.7	18.3	4 675
1973	ST1	1973	09	29.29219	00	38	03.43	+02	01	33.6		4 675
1973	ST1	1973	09	30.22257	00	37	31.38	+01	57	46.3		4 675
1973	ST1	1973	09	30.24826	00	37	30.52	+01	57	43.4		4 675
1973	ST1	1973	10	04.30208	00	35	10.60	+01	41	12.9		4 675
1973	ST1	1973	10	04.32708	00	35	09.61	+01	41	09.1		4 675
1973	ST1	1973	10	05.32917	00	34	35.16	+01	37	02.5		4 675
1973	SU1	1973	09	19.27865	00	43	52.42	-01	59	10.4		4 675
1973	SU1	1973	09	24.38750	00	41	37.81	-02	17	31.6		4 675
1973	SU1	1973	09	25.28125	00	41	13.94	-02	20	43.8		4 675
1973	SU1	1973	09	29.29219	00	39	24.15	-02	35	00.1	19.4	4 675
1973	SU1	1973	09	30.24826	00	38	57.91	-02	38	19.5		4 675
1973	SU1	1973	10	04.32708	00	37	04.91	-02	52	29.1		4 675
1973	SU1	1973	10	05.35382	00	36	36.42	-02	55	55.4		4 675
1973	SV1	1973	09	19.27865	00	40	02.45	-01	37	13.7		4 675
1973	SV1	1973	09	24.38750	00	40	01.09	-02	09	22.3		4 675
1973	SV1	1973	09	25.28125	00	39	58.67	-02	14	47.5		4 675

1973	SV1	1973	09	29.29219	00	39	37.14	-02	37	28.7	18.3 4 675
1973	SV1	1973	09	30.24826	00	39	31.14	-02	42	25.9	4 675
1973	SV1	1973	10	04.32708	00	39	02.02	-03	01	32.5	4 675
1973	SV1	1973	10	05.35382	00	38	54.83	-03	05	42.4	4 675
1973	SW1	1973	09	19.27865	00	44	36.12	-00	33	05.5	4 675
1973	SW1	1973	09	24.38750	00	42	04.15	-00	44	35.5	4 675
1973	SW1	1973	09	25.28125	00	41	37.22	-00	46	37.6	4 675
1973	SW1	1973	09	29.29219	00	39	34.21	-00	55	41.9	18.3 4 675
1973	SW1	1973	09	30.24826	00	39	04.29	-00	57	44.6	4 675
1973	SW1	1973	10	04.32708	00	36	57.13	-01	06	36.9	4 675
1973	SW1	1973	10	05.35382	00	36	25.32	-01	08	47.7	4 675
1973	SX1	1973	09	19.19948	00	46	50.20	+04	33	47.2	4 675
1973	SX1	1973	09	24.36181	00	44	30.53	+04	08	14.0	4 675
1973	SX1	1973	09	25.25642	00	44	05.70	+04	03	40.9	4 675
1973	SX1	1973	09	29.26632	00	42	11.70	+03	43	11.4	19.3 4 675
1973	SX1	1973	09	30.22257	00	41	44.17	+03	38	15.8	4 675
1973	SX1	1973	10	04.30208	00	39	45.52	+03	17	09.8	4 675
1973	SX1	1973	10	05.32917	00	39	15.73	+03	11	52.9	4 675
1973	SY1	1973	09	19.18611	00	21	03.10	+03	04	16.2	4 675
1973	SY1	1973	09	24.34688	00	18	28.46	+02	51	28.6	4 675
1973	SY1	1973	09	25.24375	00	18	01.38	+02	49	10.6	4 675
1973	SY1	1973	09	29.25330	00	15	59.49	+02	38	56.4	19.8 4 675
1973	SY1	1973	09	30.21007	00	15	30.40	+02	36	29.5	4 675
1973	SY1	1973	10	04.28958	00	13	27.18	+02	26	00.4	4 675
1973	SY1	1973	10	05.31684	00	12	56.61	+02	23	23.2	4 675
1973	SA2	1973	09	19.27865	00	45	05.69	-02	34	20.0	4 675
1973	SA2	1973	09	24.38750	00	42	42.48	-02	49	50.4	4 675
1973	SA2	1973	09	25.28125	00	42	16.97	-02	52	30.0	4 675
1973	SA2	1973	09	29.29219	00	40	20.67	-03	04	29.9	18.2 4 675
1973	SA2	1973	09	30.24826	00	39	52.70	-03	07	15.6	4 675
1973	SA2	1973	10	04.32708	00	37	52.63	-03	18	56.6	4 675
1973	SA2	1973	10	05.35382	00	37	22.54	-03	21	48.1	4 675
1973	SB2	1973	09	19.19948	00	48	06.63	+04	12	32.1	4 675
1973	SB2	1973	09	29.26632	00	43	02.63	+03	49	57.6	18.7 4 675
1973	SB2	1973	09	30.22257	00	42	32.90	+03	47	40.5	4 675
1973	SB2	1973	10	04.30208	00	40	24.69	+03	38	07.2	4 675
1973	SB2	1973	10	05.32917	00	39	52.39	+03	35	41.3	4 675
1973	SC2	1973	09	19.22500	00	34	19.45	+00	52	31.5	4 675
1973	SC2	1973	09	20.30278	00	33	47.84	+00	49	26.5	4 675
1973	SC2	1973	09	24.38750	00	31	45.67	+00	37	37.1	4 675
1973	SC2	1973	09	24.45434	00	31	43.56	+00	37	25.7	4 675
1973	SC2	1973	09	29.29219	00	29	15.73	+00	23	15.6	20.0 4 675
1973	SC2	1973	09	30.24826	00	28	46.24	+00	20	31.1	4 675
1973	SC2	1973	10	04.32708	00	26	40.28	+00	08	48.8	4 675
1973	SC2	1973	10	05.35382	00	26	08.73	+00	05	55.1	4 675
1973	SO3	1973	09	19.18611	00	15	44.41	+00	02	02.6	4 675
1973	SO3	1973	09	19.23785	00	15	41.00	+00	01	50.6	4 675
1973	SO3	1973	09	20.22847	00	14	37.42	-00	01	23.8	4 675
1973	SO3	1973	09	24.34688	00	10	10.78	-00	15	04.4	4 675
1973	SO3	1973	09	24.41597	00	10	06.12	-00	15	17.7	4 675
1973	SO3	1973	09	25.24375	00	09	12.90	-00	18	00.4	4 675
1973	SO3	1973	09	25.30729	00	09	08.78	-00	18	11.7	4 675
1973	SO3	1973	09	29.25330	00	04	57.23	-00	30	47.1	16.9 4 675
1973	SO3	1973	09	29.27986	00	04	55.54	-00	30	49.4	4 675
1973	SO3	1973	09	29.31806	00	04	52.93	-00	30	59.8	4 675
1973	SO3	1973	09	29.34375	00	04	51.29	-00	31	01.4	4 675
1973	SO3	1973	09	30.21007	00	03	57.58	-00	33	42.1	4 675
1973	SO3	1973	09	30.23524	00	03	55.93	-00	33	44.5	4 675
1973	SO3	1973	09	30.27431	00	03	53.32	-00	33	54.7	4 675

1973	SO3	1973	09	30.30174	00	03	51.54	-00	33	57.8		4 675
1973	SO3	1973	10	04.28958	23	59	50.26	-00	45	28.0		4 675
1973	SO3	1973	10	04.31493	23	59	48.75	-00	45	29.6		4 675
1973	SO3	1973	10	04.37674	23	59	44.90	-00	45	39.6		4 675
1973	SO3	1973	10	05.31684	23	58	50.53	-00	48	09.5		4 675
1973	SO3	1973	10	05.34167	23	58	48.99	-00	48	13.4		4 675
1973	SO3	1973	10	05.37917	23	58	46.72	-00	48	19.5		4 675
1973	SO3	1973	10	05.40347	23	58	45.27	-00	48	23.3		4 675
1973	SQ3	1973	09	19.18611	00	14	51.03	+03	42	05.5		4 675
1973	SQ3	1973	09	19.23785	00	14	48.60	+03	41	35.9		4 675
1973	SQ3	1973	09	20.22847	00	14	05.43	+03	31	46.5		4 675
1973	SQ3	1973	09	24.34688	00	11	01.11	+02	50	04.5		4 675
1973	SQ3	1973	09	24.41597	00	10	57.74	+02	49	20.9		4 675
1973	SQ3	1973	09	25.24375	00	10	20.85	+02	40	53.4		4 675
1973	SQ3	1973	09	25.30729	00	10	17.71	+02	40	12.8		4 675
1973	SQ3	1973	09	29.25330	00	07	20.05	+01	59	35.4	16.3	4 675
1973	SQ3	1973	09	29.31806	00	07	17.00	+01	58	55.2		4 675
1973	SQ3	1973	09	30.21007	00	06	37.62	+01	49	45.9		4 675
1973	SQ3	1973	09	30.27431	00	06	34.57	+01	49	06.4		4 675
1973	SQ3	1973	10	04.28958	00	03	41.25	+01	08	28.9		4 675
1973	SQ3	1973	10	04.35208	00	03	38.43	+01	07	51.4		4 675
1973	SQ3	1973	10	05.31684	00	02	58.56	+00	58	19.2		4 675
1973	SQ3	1973	10	05.37917	00	02	56.01	+00	57	43.0		4 675
1973	SR3	1973	09	19.18611	00	16	37.39	-00	32	10.4		4 675
1973	SR3	1973	09	19.21250	00	16	36.02	-00	32	12.8		4 675
1973	SR3	1973	09	19.23785	00	16	34.52	-00	32	23.1		4 675
1973	SR3	1973	09	19.26354	00	16	33.19	-00	32	25.5		4 675
1973	SR3	1973	09	20.22847	00	15	42.22	-00	36	20.1		4 675
1973	SR3	1973	09	20.27795	00	15	39.56	-00	36	31.3		4 675
1973	SR3	1973	09	24.34688	00	12	00.96	-00	52	54.9		4 675
1973	SR3	1973	09	24.37431	00	11	59.36	-00	52	58.4		4 675
1973	SR3	1973	09	24.41597	00	11	57.11	-00	53	10.9		4 675
1973	SR3	1973	09	24.44167	00	11	55.55	-00	53	14.5		4 675
1973	SR3	1973	09	25.24375	00	11	12.60	-00	56	28.5		4 675
1973	SR3	1973	09	25.26875	00	11	11.37	-00	56	32.1		4 675
1973	SR3	1973	09	25.30729	00	11	09.20	-00	56	43.2		4 675
1973	SR3	1973	09	25.33299	00	11	07.74	-00	56	48.2		4 675
1973	SR3	1973	09	29.25330	00	07	37.68	-01	12	00.7	16.8	4 675
1973	SR3	1973	09	29.27986	00	07	36.17	-01	12	04.3		4 675
1973	SR3	1973	09	29.31806	00	07	34.01	-01	12	12.7		4 675
1973	SR3	1973	09	29.34375	00	07	32.58	-01	12	17.7		4 675
1973	SR3	1973	09	30.23524	00	06	45.88	-01	15	35.5		4 675
1973	SR3	1973	09	30.30174	00	06	42.21	-01	15	50.9		4 675
1973	SR3	1973	10	04.28958	00	03	17.59	-01	29	49.4		4 675
1973	SR3	1973	10	04.31493	00	03	16.38	-01	29	52.9		4 675
1973	SR3	1973	10	04.35208	00	03	14.37	-01	30	02.8		4 675
1973	SR3	1973	10	04.37674	00	03	13.20	-01	30	05.7		4 675
1973	SR3	1973	10	05.31684	00	02	26.96	-01	33	08.0		4 675
1973	SR3	1973	10	05.34167	00	02	25.72	-01	33	13.0		4 675
1973	SR3	1973	10	05.37917	00	02	23.73	-01	33	20.7		4 675
1973	SR3	1973	10	05.40347	00	02	22.67	-01	33	24.2		4 675
1973	ST3	1973	09	19.18611	00	24	08.71	+03	07	50.4		4 675
1973	ST3	1973	09	19.19948	00	24	08.01	+03	07	51.4		4 675
1973	ST3	1973	09	19.23785	00	24	05.75	+03	07	47.9		4 675
1973	ST3	1973	09	19.25006	00	24	05.14	+03	07	49.9		4 675
1973	ST3	1973	09	20.22847	00	23	10.48	+03	07	24.0		4 675
1973	ST3	1973	09	24.34688	00	19	10.96	+03	04	45.7		4 675
1973	ST3	1973	09	24.41597	00	19	06.65	+03	04	43.8		4 675
1973	ST3	1973	09	25.24375	00	18	17.56	+03	04	05.6		4 675

1973	ST3	1973	09	25.30729	00	18	13.48	+03	04	03.8		4 675
1973	ST3	1973	09	29.25330	00	14	13.83	+03	00	35.7	17.0	4 675
1973	ST3	1973	09	29.31806	00	14	09.66	+03	00	32.5		4 675
1973	ST3	1973	09	30.21007	00	13	15.39	+02	59	42.6		4 675
1973	ST3	1973	09	30.27431	00	13	11.22	+02	59	38.8		4 675
1973	ST3	1973	10	04.28958	00	09	07.15	+02	55	48.6		4 675
1973	ST3	1973	10	04.35208	00	09	03.25	+02	55	45.4		4 675
1973	ST3	1973	10	05.31684	00	08	05.73	+02	54	51.5		4 675
1973	ST3	1973	10	05.37917	00	08	01.83	+02	54	48.3		4 675
1973	SG5	1973	09	19.21250	00	02	01.42	-05	03	10.0		4 675
1973	SG5	1973	09	19.26354	00	01	58.63	-05	03	23.2		4 675
1973	SG5	1973	09	20.27795	00	01	05.25	-05	07	34.7		4 675
1973	SG5	1973	09	24.37431	23	57	30.88	-05	23	28.3		4 675
1973	SG5	1973	09	24.44167	23	57	27.09	-05	23	42.1		4 675
1973	SG5	1973	09	25.26875	23	56	45.28	-05	26	43.3	17.3	4 675
1973	SG5	1973	09	25.33299	23	56	41.90	-05	26	57.2		4 675
1973	SY5	1973	09	19.18611	00	01	46.21	+03	42	58.7		4 675
1973	SY5	1973	09	19.23785	00	01	43.98	+03	42	20.4		4 675
1973	SY5	1973	09	20.22847	00	01	03.13	+03	29	18.9		4 675
1973	SY5	1973	09	24.34688	23	58	10.99	+02	34	26.2		4 675
1973	SY5	1973	09	24.41597	23	58	07.90	+02	33	29.1	17.2	4 675
1973	SY5	1973	09	25.24375	23	57	33.40	+02	22	18.6		4 675
1973	SY5	1973	09	25.30729	23	57	30.71	+02	21	29.5		4 675
1973	SY5	1973	10	04.28958	23	51	27.10	+00	20	34.4		4 675
1973	SY5	1973	10	04.35208	23	51	24.59	+00	19	44.1		4 675
1973	SB6	1973	09	19.21250	00	02	59.65	-02	00	45.1		4 675
1973	SB6	1973	09	19.26354	00	02	57.13	-02	01	05.0		4 675
1973	SB6	1973	09	20.27795	00	02	09.93	-02	07	38.2		4 675
1973	SB6	1973	09	24.37431	23	58	56.72	-02	33	52.5		4 675
1973	SB6	1973	09	24.44167	23	58	53.35	-02	34	17.8		4 675
1973	SB6	1973	09	25.26875	23	58	15.10	-02	39	31.4	17.4	4 675
1973	SB6	1973	09	25.33299	23	58	11.91	-02	39	56.7		4 675
1973	SC6	1973	09	19.18611	00	03	44.80	+00	35	58.2		4 675
1973	SC6	1973	09	19.23785	00	03	42.38	+00	35	38.8		4 675
1973	SC6	1973	09	20.22847	00	02	57.01	+00	28	51.1		4 675
1973	SC6	1973	09	24.34688	23	59	47.09	+00	00	22.0		4 675
1973	SC6	1973	09	24.41597	23	59	43.78	-00	00	06.2		4 675
1973	SC6	1973	09	25.24375	23	59	05.85	-00	05	49.8		4 675
1973	SC6	1973	09	25.30729	23	59	02.80	-00	06	16.0		4 675
1973	SC6	1973	09	29.25330	23	56	02.42	-00	33	23.2	16.6	4 675
1973	SC6	1973	09	29.27986	23	56	01.06	-00	33	31.5		4 675
1973	SC6	1973	09	29.31806	23	55	59.37	-00	33	49.3		4 675
1973	SC6	1973	09	29.34375	23	55	57.97	-00	33	57.6		4 675
1973	SC6	1973	09	30.21007	23	55	19.43	-00	39	53.0		4 675
1973	SC6	1973	09	30.27431	23	55	16.47	-00	40	19.1		4 675
1973	SC6	1973	10	04.28958	23	52	20.98	-01	06	53.2		4 675
1973	SC6	1973	10	04.31493	23	52	19.73	-01	07	01.4		4 675
1973	SC6	1973	10	04.35208	23	52	18.16	-01	07	16.7		4 675
1973	SC6	1973	10	04.37674	23	52	17.00	-01	07	24.8		4 675
1973	SC6	1973	10	05.31684	23	51	37.52	-01	13	28.0		4 675
1973	SC6	1973	10	05.34167	23	51	36.40	-01	13	35.7		4 675
1973	SC6	1973	10	05.37917	23	51	34.87	-01	13	52.1		4 675
1973	SC6	1973	10	05.40347	23	51	33.75	-01	14	00.3		4 675
1973	SD6	1973	09	19.18611	00	09	16.74	+02	25	00.6		4 675
1973	SD6	1973	09	19.23785	00	09	13.88	+02	24	45.2		4 675
1973	SD6	1973	09	20.22847	00	08	19.33	+02	20	01.3		4 675
1973	SD6	1973	09	24.34688	00	04	28.06	+01	59	42.7		4 675
1973	SD6	1973	09	24.41597	00	04	23.98	+01	59	22.6		4 675
1973	SD6	1973	09	25.30729	00	03	33.69	+01	54	52.3		4 675

1973	SD6	1973	09	29.25330	23	59	50.07	+01	34	45.1	17.2	4 675
1973	SD6	1973	09	29.31806	23	59	46.35	+01	34	25.0		4 675
1973	SD6	1973	09	30.21007	23	58	56.25	+01	29	52.7		4 675
1973	SD6	1973	09	30.27431	23	58	52.48	+01	29	32.7		4 675
1973	SD6	1973	10	04.28958	23	55	10.77	+01	09	16.4		4 675
1973	SD6	1973	10	04.35208	23	55	07.23	+01	08	56.9		4 675
1973	SD6	1973	10	05.31684	23	54	15.35	+01	04	12.6		4 675
1973	SD6	1973	10	05.37917	23	54	11.82	+01	03	53.1		4 675
1973	SF6	1973	09	19.18611	00	08	47.29	+01	17	22.4		4 675
1973	SF6	1973	09	19.23785	00	08	44.91	+01	16	46.8		4 675
1973	SF6	1973	09	20.22847	00	08	01.80	+01	05	25.2		4 675
1973	SF6	1973	09	24.34688	00	04	59.81	+00	18	02.1		4 675
1973	SF6	1973	09	24.41597	00	04	56.50	+00	17	13.8		4 675
1973	SF6	1973	09	25.24375	00	04	20.57	+00	07	45.0		4 675
1973	SF6	1973	09	25.30729	00	04	17.66	+00	07	03.4		4 675
1973	SF6	1973	09	29.25330	00	01	27.11	-00	37	22.9	16.5	4 675
1973	SF6	1973	09	29.27986	00	01	25.82	-00	37	39.0		4 675
1973	SF6	1973	09	29.31806	00	01	24.11	-00	38	06.5		4 675
1973	SF6	1973	09	29.34375	00	01	22.95	-00	38	21.9		4 675
1973	SF6	1973	09	30.21007	00	00	47.03	-00	47	54.8		4 675
1973	SF6	1973	09	30.23524	00	00	45.90	-00	48	09.5		4 675
1973	SF6	1973	09	30.27431	00	00	44.16	-00	48	36.3		4 675
1973	SF6	1973	09	30.30174	00	00	42.89	-00	48	54.4		4 675
1973	SF6	1973	10	04.28958	23	58	03.65	-01	31	14.6		4 675
1973	SF6	1973	10	04.31493	23	58	02.67	-01	31	29.1		4 675
1973	SF6	1973	10	04.35208	23	58	01.14	-01	31	52.9		4 675
1973	SF6	1973	10	04.37674	23	58	00.11	-01	32	06.0		4 675
1973	SF6	1973	10	05.34167	23	57	24.04	-01	41	54.8		4 675
1973	SF6	1973	10	05.40347	23	57	21.66	-01	42	32.2		4 675
1973	SN6	1973	09	19.18611	00	20	25.38	+01	12	46.8		4 675
1973	SN6	1973	09	19.23785	00	20	22.91	+01	12	26.1		4 675
1973	SN6	1973	09	20.22847	00	19	38.60	+01	05	53.5		4 675
1973	SN6	1973	09	24.34688	00	16	30.25	+00	38	16.5		4 675
1973	SN6	1973	09	24.41597	00	16	26.93	+00	37	48.4	18.0	4 675
1973	SN6	1973	09	25.24375	00	15	48.82	+00	32	11.2		4 675
1973	SN6	1973	09	25.30729	00	15	46.00	+00	31	48.4		4 675
1973	SN6	1973	09	29.31806	00	12	39.99	+00	04	48.7		4 675
1973	SN6	1973	09	30.21007	00	11	58.98	-00	01	07.3		4 675
1973	SN6	1973	09	30.27431	00	11	55.84	-00	01	33.3		4 675
1973	SN6	1973	10	04.28958	00	08	52.65	-00	27	55.4		4 675
1973	SN6	1973	10	04.35208	00	08	49.78	-00	28	19.5		4 675
1973	SN6	1973	10	05.31684	00	08	06.82	-00	34	33.0		4 675
1973	SN6	1973	10	05.37917	00	08	03.91	-00	34	57.2		4 675
1973	TP	1973	09	19.29705	00	20	02.37	+13	52	00.9		4 675
1973	TP	1973	09	20.21458	00	19	26.05	+13	41	13.2		4 675
1973	TP	1973	09	20.29253	00	19	22.84	+13	40	19.9		4 675
1973	TP	1973	09	24.40035	00	16	36.36	+12	49	59.1		4 675
1973	TP	1973	09	24.47986	00	16	32.89	+12	48	58.9		4 675
1973	TP	1973	09	25.29375	00	15	59.94	+12	38	33.7	16.1	4 675
1973	TP	1973	09	25.35903	00	15	57.17	+12	37	44.8		4 675
1973	TP	1973	09	29.24062	00	13	17.28	+11	46	37.2		4 675
1973	TP	1973	09	29.30486	00	13	14.43	+11	45	44.9		4 675
1973	TP	1973	09	30.19722	00	12	38.09	+11	33	42.4		4 675
1973	TP	1973	09	30.35295	00	12	31.30	+11	31	35.6		4 675
1975	BF	1973	09	19.18611	00	02	29.63	+00	08	00.3		4 675
1975	BF	1973	09	19.23785	00	02	27.26	+00	07	44.2		4 675
1975	BF	1973	09	20.22847	00	01	44.06	+00	02	38.7		4 675
1975	BF	1973	09	24.34688	23	58	42.52	-00	18	42.8		4 675
1975	BF	1973	09	24.41597	23	58	39.39	-00	19	03.6	17.4	4 675

1975	BF	1973	09	25.24375	23	58	02.92	-00	23	23.5		4 675
1975	BF	1973	09	25.26875	23	58	01.73	-00	23	28.4		4 675
1975	BF	1973	09	25.30729	23	58	00.09	-00	23	41.0		4 675
1975	BF	1973	09	25.33299	23	57	58.82	-00	23	47.8		4 675
1975	BF	1973	10	04.28958	23	51	31.24	-01	09	26.1		4 675
1975	BF	1973	10	04.31493	23	51	29.95	-01	09	29.8		4 675
1975	BF	1973	10	04.35208	23	51	28.46	-01	09	44.2		4 675
1975	BF	1973	10	04.37674	23	51	27.26	-01	09	48.5		4 675
1976	GS3	1973	09	19.19948	00	40	42.95	+02	49	52.0		4 675
1976	GS3	1973	09	19.25006	00	40	40.66	+02	49	18.5		4 675
1976	GS3	1973	09	20.26458	00	39	55.27	+02	37	25.2		4 675
1976	GS3	1973	09	24.36181	00	36	45.61	+01	49	02.6		4 675
1976	GS3	1973	09	24.38750	00	36	44.42	+01	48	45.8		4 675
1976	GS3	1973	09	24.42847	00	36	42.29	+01	48	15.0		4 675
1976	GS3	1973	09	24.45434	00	36	41.14	+01	47	57.5		4 675
1976	GS3	1973	09	25.25642	00	36	03.53	+01	38	22.6		4 675
1976	GS3	1973	09	25.28125	00	36	02.25	+01	38	08.9		4 675
1976	GS3	1973	09	25.32031	00	36	00.38	+01	37	37.7		4 675
1976	GS3	1973	09	25.34601	00	35	58.98	+01	37	22.0		4 675
1976	GS3	1973	09	29.29219	00	32	50.03	+00	50	36.3	17.2	4 675
1976	GS3	1973	09	29.35694	00	32	46.76	+00	49	50.7		4 675
1976	GS3	1973	09	30.24826	00	32	04.05	+00	39	25.0		4 675
1976	GS3	1973	09	30.31476	00	32	00.69	+00	38	38.1		4 675
1976	GS3	1973	10	04.32708	00	28	48.71	-00	07	41.6		4 675
1976	GS3	1973	10	04.38889	00	28	45.61	-00	08	25.2		4 675
1976	GS3	1973	10	05.35382	00	28	00.44	-00	19	19.6		4 675
1976	GS3	1973	10	05.41597	00	27	57.39	-00	20	01.2		4 675
1976	QN	1973	09	20.26458	00	48	00.11	+05	06	27.9		4 675
1976	QN	1973	09	24.36181	00	44	06.47	+04	42	20.5		4 675
1976	QN	1973	09	24.42847	00	44	02.42	+04	41	56.7		4 675
1976	QN	1973	09	29.26632	00	39	13.91	+04	11	54.3		4 675
1976	QN	1973	09	29.33073	00	39	09.86	+04	11	31.8	17.1	4 675
1976	QN	1973	09	30.22257	00	38	16.24	+04	05	51.5		4 675
1976	QN	1973	09	30.28785	00	38	12.10	+04	05	27.5		4 675
1976	QN	1973	10	04.30208	00	34	09.69	+03	40	08.8		4 675
1976	QN	1973	10	04.36476	00	34	05.73	+03	39	45.6		4 675
1976	QN	1973	10	05.32917	00	33	08.25	+03	33	42.2		4 675
1976	QN	1973	10	05.39132	00	33	04.47	+03	33	18.9		4 675
1978	RZ	1973	09	19.21250	00	08	01.74	-03	30	46.4		4 675
1978	RZ	1973	09	19.26354	00	07	59.35	-03	31	05.0		4 675
1978	RZ	1973	09	20.27795	00	07	13.25	-03	36	53.8		4 675
1978	RZ	1973	09	24.37431	00	04	04.80	-04	00	06.7		4 675
1978	RZ	1973	09	24.44167	00	04	01.52	-04	00	30.1		4 675
1978	RZ	1973	09	25.26875	00	03	23.75	-04	05	07.0		4 675
1978	RZ	1973	09	25.33299	00	03	20.69	-04	05	28.4		4 675
1978	RZ	1973	09	29.27986	00	00	19.75	-04	26	46.5		4 675
1978	RZ	1973	09	29.34375	00	00	16.78	-04	27	06.5		4 675
1978	RZ	1973	09	30.23524	23	59	36.58	-04	31	46.8		4 675
1978	RZ	1973	09	30.30174	23	59	33.48	-04	32	08.1	17.2	4 675
1978	RZ	1973	10	04.31493	23	56	36.10	-04	52	03.8		4 675
1978	RZ	1973	10	04.37674	23	56	33.31	-04	52	23.2		4 675
1978	RZ	1973	10	05.34167	23	55	52.12	-04	56	58.0		4 675
1978	RZ	1973	10	05.40347	23	55	49.37	-04	57	14.6		4 675
1978	TR2	1973	09	19.18611	00	19	44.64	+03	50	43.9		4 675
1978	TR2	1973	09	19.23785	00	19	42.17	+03	50	29.2		4 675
1978	TR2	1973	09	20.22847	00	18	56.31	+03	45	49.8		4 675
1978	TR2	1973	09	24.34688	00	15	41.50	+03	25	41.0		4 675
1978	TR2	1973	09	24.41597	00	15	38.05	+03	25	19.6		4 675
1978	TR2	1973	09	25.24375	00	14	58.75	+03	21	10.7		4 675

1978	TR2	1973	09	25.30729	00	14	55.61	+03	20	52.7		4 675
1978	TR2	1973	09	29.25330	00	11	46.60	+03	00	52.9	17.3	4 675
1978	TR2	1973	09	29.31806	00	11	43.37	+03	00	32.2		4 675
1978	TR2	1973	09	30.21007	00	11	00.96	+02	56	00.3		4 675
1978	TR2	1973	09	30.27431	00	10	57.78	+02	55	41.6		4 675
1978	TR2	1973	10	04.28958	00	07	48.92	+02	35	16.1		4 675
1978	TR2	1973	10	04.35208	00	07	45.92	+02	34	58.0		4 675
1978	TR2	1973	10	05.31684	00	07	01.65	+02	30	05.3		4 675
1978	TR2	1973	10	05.37917	00	06	58.65	+02	29	45.8		4 675
1979	EE	1973	09	19.29705	00	21	02.42	+15	13	26.7		4 675
1979	EE	1973	09	20.21458	00	20	08.05	+15	12	46.9		4 675
1979	EE	1973	09	20.29253	00	20	03.41	+15	12	43.5		4 675
1979	EE	1973	09	24.40035	00	15	54.59	+15	07	52.4		4 675
1979	EE	1973	09	24.47986	00	15	49.52	+15	07	44.1		4 675
1979	EE	1973	09	25.29375	00	14	59.40	+15	06	26.6	18.6	4 675
1979	EE	1973	09	25.35903	00	14	55.17	+15	06	21.5		4 675
1979	EE	1973	09	29.24062	00	10	53.21	+14	58	30.6		4 675
1979	EE	1973	09	29.30486	00	10	49.09	+14	58	21.2		4 675
1979	EE	1973	09	30.19722	00	09	53.21	+14	56	12.1		4 675
1979	EE	1973	09	30.35295	00	09	43.11	+14	55	49.8		4 675
1979	EE	1973	10	04.27708	00	05	37.58	+14	44	55.7		4 675
1979	EE	1973	10	04.33906	00	05	33.51	+14	44	44.5		4 675
1979	EE	1973	10	05.36632	00	04	29.96	+14	41	31.6		4 675
1979	EE	1973	10	05.42847	00	04	25.94	+14	41	19.8		4 675
1979	WE2	1973	09	19.18611	00	19	52.53	+01	34	28.8		4 675
1979	WE2	1973	09	19.23785	00	19	50.33	+01	34	12.1		4 675
1979	WE2	1973	09	20.22847	00	19	09.28	+01	29	04.0		4 675
1979	WE2	1973	09	24.34688	00	16	15.00	+01	07	10.3		4 675
1979	WE2	1973	09	24.41597	00	16	11.90	+01	06	48.9		4 675
1979	WE2	1973	09	25.24375	00	15	36.56	+01	02	19.5		4 675
1979	WE2	1973	09	25.30729	00	15	33.92	+01	02	02.1		4 675
1979	WE2	1973	09	29.25330	00	12	44.29	+00	40	52.2	16.9	4 675
1979	WE2	1973	09	29.31806	00	12	41.31	+00	40	31.8		4 675
1979	WE2	1973	09	30.21007	00	12	03.20	+00	35	45.6		4 675
1979	WE2	1973	09	30.27431	00	12	00.38	+00	35	24.9		4 675
1979	WE2	1973	10	04.28958	00	09	10.58	+00	14	21.7		4 675
1979	WE2	1973	10	04.35208	00	09	07.80	+00	14	02.2		4 675
1979	WE2	1973	10	05.31684	00	08	28.11	+00	09	03.4		4 675
1979	WE2	1973	10	05.37917	00	08	25.47	+00	08	44.7		4 675
1980	TX3	1989	07	01.42448	20	24	23.42	-16	55	54.1	16.5	2 675
1980	TX3	1989	07	01.44340	20	24	22.64	-16	55	55.3		2 675
1980	TX3	1989	07	03.42326	20	23	06.50	-16	59	28.9		2 675
1980	TX3	1989	07	03.45260	20	23	05.20	-16	59	31.4		2 675
1980	TM15*	1980	10	08.12014	21	51	33.61	+06	43	43.1	16.0	2 675
1980	TM15	1980	10	08.13333	21	51	33.82	+06	43	41.5		2 675
1981	ED43	1973	09	25.25642	00	44	34.63	+04	12	54.5		4 675
1981	ED43	1973	09	25.32031	00	44	31.04	+04	12	47.4		4 675
1981	ED43	1973	09	29.26632	00	40	47.28	+04	04	53.6		4 675
1981	ED43	1973	09	29.33073	00	40	43.46	+04	04	45.2	17.1	4 675
1981	ED43	1973	09	30.22257	00	39	52.73	+04	02	53.5		4 675
1981	ED43	1973	09	30.28785	00	39	48.86	+04	02	44.2		4 675
1981	ED43	1973	10	04.30208	00	35	59.70	+03	54	17.3		4 675
1981	ED43	1973	10	04.36476	00	35	56.06	+03	54	09.6		4 675
1981	ED43	1973	10	05.32917	00	35	01.38	+03	52	08.9		4 675
1981	ED43	1973	10	05.39132	00	34	57.70	+03	52	01.8		4 675
1982	FC3	1973	09	19.19948	00	40	59.91	+06	33	52.8		4 675
1982	FC3	1973	09	19.25006	00	40	57.02	+06	33	38.1		4 675
1982	FC3	1973	09	20.26458	00	40	01.77	+06	28	54.4		4 675
1982	FC3	1973	09	24.36181	00	36	10.70	+06	08	43.9		4 675

1982	FC3	1973	09	24.42847	00	36	06.73	+06	08	22.6		4 675
1982	FC3	1973	09	25.25642	00	35	19.30	+06	04	04.2		4 675
1982	FC3	1973	09	25.32031	00	35	15.52	+06	03	42.2		4 675
1982	FC3	1973	09	29.26632	00	31	23.98	+05	42	43.5		4 675
1982	FC3	1973	09	29.33073	00	31	20.06	+05	42	23.5	18.4	4 675
1982	FC3	1973	09	30.22257	00	30	27.37	+05	37	27.7		4 675
1982	FC3	1973	09	30.28785	00	30	23.45	+05	37	05.5		4 675
1982	FC3	1973	10	04.30208	00	26	25.55	+05	14	46.3		4 675
1982	FC3	1973	10	04.36476	00	26	21.76	+05	14	25.7		4 675
1982	FC3	1973	10	05.32917	00	25	25.01	+05	09	00.5		4 675
1982	FC3	1973	10	05.39132	00	25	21.27	+05	08	40.4		4 675
1982	KG1	1989	03	07.48055	13	40	49.56	-03	13	55.5	17	3 675
1982	KG1	1989	03	09.47535	13	40	07.37	-03	04	34.7		3 675
1985	PO	1973	09	19.21250	00	10	25.89	-02	40	46.0		4 675
1985	PO	1973	09	19.26354	00	10	23.28	-02	41	08.1		4 675
1985	PO	1973	09	20.27795	00	09	35.40	-02	48	24.1		4 675
1985	PO	1973	09	24.37431	00	06	18.96	-03	17	25.2		4 675
1985	PO	1973	09	24.44167	00	06	15.59	-03	17	53.9		4 675
1985	PO	1973	09	25.26875	00	05	36.38	-03	23	39.6		4 675
1985	PO	1973	09	25.33299	00	05	33.11	-03	24	05.7		4 675
1985	PO	1973	09	29.27986	00	02	24.99	-03	50	44.8		4 675
1985	PO	1973	09	29.34375	00	02	21.75	-03	51	09.5		4 675
1985	PO	1973	09	30.23524	00	01	40.28	-03	56	59.3		4 675
1985	PO	1973	09	30.30174	00	01	36.96	-03	57	25.3	16.9	4 675
1985	PO	1973	10	04.31493	23	58	34.72	-04	22	16.3		4 675
1985	PO	1973	10	04.37674	23	58	31.84	-04	22	37.7		4 675
1985	PO	1973	10	05.34167	23	57	49.76	-04	28	16.5		4 675
1985	PO	1973	10	05.40347	23	57	46.92	-04	28	37.1		4 675
1986	PE	1989	06	29.20868	15	55	26.49	-19	39	45.4	16.7	2 675
1986	PE	1989	06	29.23837	15	55	25.54	-19	39	35.6		2 675
1986	PE	1989	07	01.23542	15	54	33.64	-19	28	32.3		2 675
1986	PE	1989	07	01.25799	15	54	32.91	-19	28	25.3		2 675
1986	QT	1989	06	30.25017	16	30	05.11	-18	16	52.3	16.7	2 675
1986	QT	1989	06	30.27934	16	30	03.84	-18	16	54.8		2 675
1986	QT	1989	07	03.23594	16	28	36.96	-18	22	34.0		2 675
1986	QT	1989	07	03.26476	16	28	36.24	-18	22	37.7		2 675
1986	QR3	1989	06	30.23837	16	16	19.94	-28	15	19.1	16.5	2 675
1986	QR3	1989	06	30.26771	16	16	18.61	-28	15	16.5		2 675
1986	QR3	1989	07	03.22483	16	14	42.72	-28	10	46.7		2 675
1986	QR3	1989	07	03.25347	16	14	41.64	-28	10	42.9		2 675
1986	RV2	1989	06	30.25017	16	31	14.59	-13	03	44.6	16.5	2 675
1986	RV2	1989	06	30.27934	16	31	13.60	-13	03	44.8		2 675
1986	RV2	1989	07	03.23594	16	29	53.67	-13	05	31.0		2 675
1986	RV2	1989	07	03.26476	16	29	52.87	-13	05	31.3		2 675
1987	QA	1989	05	23.40983	21	57	29.58	+21	26	20.7		1 675
1987	QA	1989	05	23.41552	21	57	29.93	+21	26	23.4		1 675
1987	QA	1989	05	23.42094	21	57	30.26	+21	26	27.1		1 675
1987	QA	1989	06	14.41345	22	16	15.51	+24	59	12.7		1 675
1987	QA	1989	06	14.41853	22	16	15.71	+24	59	15.6		1 675
1987	QA	1989	06	14.43397	22	16	16.30	+24	59	23.6		1 675
1987	QA	1989	06	15.35487	22	16	52.71	+25	07	33.8		1 675
1987	QA	1989	06	15.36015	22	16	52.90	+25	07	36.4		1 675
1987	QA	1989	06	15.36676	22	16	53.15	+25	07	40.0		1 675
1988	EJ	1985	08	19.45035	23	59	15.87	+08	14	16.1		2 675
1988	EJ	1985	08	19.46875	23	59	15.50	+08	14	09.5		2 675
1988	EO1	1973	09	19.18611	00	24	07.83	+01	49	37.7		4 675
1988	EO1	1973	09	19.19948	00	24	07.34	+01	49	36.0		4 675
1988	EO1	1973	09	19.22500	00	24	06.29	+01	49	30.4		4 675
1988	EO1	1973	09	19.23785	00	24	05.55	+01	49	25.7		4 675

1988	EO1		1973	09	19.25006	00	24	05.37	+01	49	21.9	4 675
1988	EO1		1973	09	19.27865	00	24	04.09	+01	49	17.2	4 675
1988	EO1		1973	09	20.22847	00	23	24.84	+01	45	08.1	4 675
1988	EO1		1973	09	20.30278	00	23	21.67	+01	44	52.3	4 675
1988	EO1		1973	09	24.34688	00	20	32.38	+01	27	11.3	4 675
1988	EO1		1973	09	24.36181	00	20	31.77	+01	27	08.8	4 675
1988	EO1		1973	09	24.38750	00	20	30.55	+01	27	03.0	4 675
1988	EO1		1973	09	24.41597	00	20	29.38	+01	26	54.7	4 675
1988	EO1		1973	09	24.42847	00	20	28.91	+01	26	52.0	4 675
1988	EO1		1973	09	24.45434	00	20	27.64	+01	26	44.3	4 675
1988	EO1		1973	09	25.24375	00	19	54.58	+01	23	13.9	4 675
1988	EO1		1973	09	25.25642	00	19	54.15	+01	23	12.0	4 675
1988	EO1		1973	09	25.28125	00	19	52.85	+01	23	07.1	4 675
1988	EO1		1973	09	25.30729	00	19	51.98	+01	22	58.6	4 675
1988	EO1		1973	09	25.32031	00	19	51.33	+01	22	55.2	4 675
1988	EO1		1973	09	25.34601	00	19	50.12	+01	22	50.3	4 675
1988	EO1		1973	09	29.25330	00	17	04.59	+01	05	39.4	18.2 4 675
1988	EO1		1973	09	29.31806	00	17	01.68	+01	05	21.4	4 675
1988	EO1		1973	09	30.21007	00	16	24.00	+01	01	27.3	4 675
1988	EO1		1973	09	30.27431	00	16	21.17	+01	01	10.7	4 675
1988	EO1		1973	10	04.28958	00	13	32.67	+00	43	47.1	4 675
1988	EO1		1973	10	04.35208	00	13	29.98	+00	43	33.1	4 675
1988	EO1		1973	10	05.31684	00	12	50.07	+00	39	25.0	4 675
1988	EO1		1973	10	05.37917	00	12	47.48	+00	39	10.3	4 675
1988	NU		1988	08	07.25660	20	07	53.65	-11	15	04.1	16.5 2 675
1988	NU		1988	08	07.28333	20	07	52.41	-11	15	09.2	2 675
1988	NU		1988	08	09.30920	20	06	23.10	-11	20	57.1	2 675
1988	NU		1988	08	09.33021	20	06	22.21	-11	21	01.6	2 675
1988	PB1		1988	09	11.18872	21	10	28.60	+14	45	31.6	17.8 3 675
1988	PB1		1988	09	13.15365	21	09	43.93	+14	38	16.4	3 675
1988	PB1		1988	10	07.13767	21	04	06.41	+12	59	34.8	18.1 3 675
1988	PB1		1988	10	09.12292	21	03	57.60	+12	51	12.8	3 675
1988	PB1		1988	11	04.14392	21	06	45.27	+11	13	51.6	18.4 3 675
1988	PB1		1988	11	06.12986	21	07	18.95	+11	07	53.6	3 675
1988	RD9	*	1988	09	11.18872	21	18	10.85	+14	25	01.5	17.4 3 675
1988	RD9		1988	09	13.15365	21	17	12.00	+14	11	27.7	3 675
1988	TO4	*	1988	10	12.32535	00	27	32.09	-20	11	45.3	18.2 3 675
1988	TO4		1988	10	12.36319	00	27	30.85	-20	11	49.4	3 675
1988	TP4	*	1988	10	13.18003	22	59	52.02	+08	34	03.6	18.0 3 675
1988	TP4		1988	10	13.20712	22	59	53.72	+08	33	48.2	3 675
1988	VX10	*	1988	11	06.18385	22	55	46.79	-12	11	14.3	18.5 3 675
1988	VX10		1988	11	06.21753	22	55	47.55	-12	10	23.9	3 675
1988	XK1		1973	09	19.21250	00	14	42.70	-03	38	42.3	4 675
1988	XK1		1973	09	19.26354	00	14	40.14	-03	38	55.7	4 675
1988	XK1		1973	09	20.27795	00	13	51.89	-03	43	28.2	4 675
1988	XK1		1973	09	24.37431	00	10	33.33	-04	01	12.0	4 675
1988	XK1		1973	09	24.44167	00	10	29.78	-04	01	28.7	4 675
1988	XK1		1973	09	25.26875	00	09	50.19	-04	04	54.8	4 675
1988	XK1		1973	09	25.33299	00	09	46.82	-04	05	10.2	4 675
1988	XK1		1973	09	29.27986	00	06	36.68	-04	20	19.5	4 675
1988	XK1		1973	09	29.34375	00	06	33.40	-04	20	33.6	4 675
1988	XK1		1973	09	30.23524	00	05	51.70	-04	23	42.6	4 675
1988	XK1		1973	09	30.30174	00	05	48.24	-04	23	56.6	16.2 4 675
1988	XK1		1973	10	04.31493	00	02	46.09	-04	36	27.6	4 675
1988	XK1		1973	10	04.37674	00	02	43.22	-04	36	37.7	4 675
1988	XK1		1973	10	05.34167	00	02	01.66	-04	39	13.0	4 675
1988	XK1		1973	10	05.40347	00	01	58.69	-04	39	22.2	4 675
1988	XU4	*	1988	12	08.18872	01	50	15.11	-22	39	51.6	15.8 2 675
1988	XU4		1988	12	08.21493	01	50	18.09	-22	38	53.2	2 675

1989	AM2		1989	03	08.29844	09	08	40.86	+47	01	42.1	17.3	3 675
1989	AM2		1989	03	09.15938	09	08	16.10	+47	00	50.7		3 675
1989	AN2		1989	03	07.19063	08	00	32.24	+13	17	15.7	17.9	3 675
1989	AN2		1989	03	08.15729	08	00	20.42	+13	19	42.1		3 675
1989	AN9	*	1989	01	05.50625	08	34	27.95	+05	51	24.9	16.8	2 675
1989	AN9		1989	01	05.53420	08	34	26.83	+05	51	27.2		2 675
1989	AO9	*	1989	01	07.40694	07	57	18.92	+05	48	18.9	16.5	2 675
1989	AO9		1989	01	07.43542	07	57	17.26	+05	48	53.5		2 675
1989	AP9	*	1989	01	14.48871	08	56	26.84	+23	10	07.9	18	3 675
1989	AP9		1989	01	14.52065	08	56	24.88	+23	10	22.2		3 675
1989	BA2	*	1989	01	18.15049	01	43	51.26	+07	31	47.4	20	1 675
1989	BA2		1989	01	18.16451	01	43	52.15	+07	31	52.8		1 675
1989	BA2		1989	01	18.20062	01	43	54.04	+07	32	06.8		1 675
1989	CT		1989	03	07.19063	08	00	12.41	+18	42	19.0	18	3 675
1989	CT		1989	03	08.15729	07	59	59.06	+18	43	00.1		3 675
1989	CZ		1987	06	28.38090	18	58	08.05	-28	31	16.7	16.8	2 675
1989	CZ		1987	06	28.40764	18	58	06.34	-28	31	22.9		2 675
1989	CZ		1987	06	30.32188	18	55	55.43	-28	35	41.6		2 675
1989	CZ		1987	06	30.34722	18	55	53.43	-28	35	43.4		2 675
1989	CK1		1989	03	07.30486	09	03	49.70	+36	59	21.8	17.2	3 675
1989	CK1		1989	03	08.23534	09	03	25.97	+36	59	28.4		3 675
1989	CQ1		1989	03	07.27847	08	26	18.92	+23	32	00.2	17.7	3 675
1989	CQ1		1989	03	09.18706	08	25	41.03	+23	29	46.7		3 675
1989	CH2		1989	03	07.34947	08	38	54.92	+29	36	32.8	18.2	3 675
1989	CH2		1989	03	08.21719	08	38	36.80	+29	38	48.5		3 675
1989	CJ2		1989	03	07.34947	08	41	02.05	+31	02	01.8	18.3	3 675
1989	CJ2		1989	03	08.21719	08	40	43.12	+31	01	14.0		3 675
1989	CK2		1989	03	07.35859	08	56	03.05	+31	26	49.5	17.8	3 675
1989	CK2		1989	03	08.29219	08	55	41.88	+31	28	09.5		3 675
1989	EY4	*	1989	03	07.19063	07	59	20.73	+13	16	48.9	18	3 675
1989	EY4		1989	03	08.15729	07	59	07.21	+13	17	35.2		3 675
1989	EE6	*	1989	03	07.34947	08	37	51.64	+29	30	03.5	18.1	3 675
1989	EE6		1989	03	08.21719	08	37	28.60	+29	28	37.8		3 675
1989	EF9	*	1989	03	06.24271	10	33	59.29	-07	09	52.7	17.2	2 675
1989	EF9		1989	03	06.27066	10	33	57.72	-07	09	47.0		2 675
1989	FB		1989	04	29.18038	11	32	46.83	-03	10	31.9	16.5	2 675
1989	FB		1989	04	29.20920	11	32	41.56	-03	11	05.6		2 675
1989	FB		1989	05	01.17135	11	27	04.63	-03	48	21.1		2 675
1989	FW	*	1989	03	31.20243	11	38	02.55	+23	01	37.9	16.8	3 675
1989	FW		1989	03	31.23854	11	38	00.82	+23	01	45.4		3 675
1989	FW		1989	04	03.21319	11	35	52.27	+23	11	00.9		3 675
1989	FW		1989	04	03.24826	11	35	50.69	+23	11	07.4		3 675
1989	GO		1989	06	04.19236	13	37	06.18	-08	17	19.3	16.5	2 675
1989	GO		1989	06	06.22083	13	37	07.62	-08	22	18.8		2 675
1989	JC		1985	12	15.24826	04	42	52.05	+03	29	52.9	16.0	2 675
1989	JC		1985	12	15.27431	04	42	50.24	+03	29	26.3		2 675
1989	JC		1987	08	23.21528	19	57	40.57	+16	31	41.6	16.8	2 675
1989	JC		1987	08	23.24236	19	57	39.17	+16	31	23.8		2 675
1989	JC		1987	08	25.22361	19	56	15.21	+16	11	32.9		2 675
1989	JC		1987	08	25.24392	19	56	14.51	+16	11	20.9		2 675
1989	LA		1989	06	30.24410	16	11	44.53	-15	35	43.0	16.5	2 675
1989	LA		1989	06	30.27344	16	11	43.84	-15	35	46.6		2 675
1989	LA		1989	07	03.23038	16	10	40.81	-15	42	46.6		2 675
1989	LA		1989	07	03.25920	16	10	40.20	-15	42	49.6		2 675
1989	LE		1989	06	30.25017	16	31	15.35	-13	37	48.9	16.5	2 675
1989	LE		1989	06	30.27934	16	31	14.34	-13	37	50.0		2 675
1989	LE		1989	07	03.23594	16	29	42.53	-13	39	00.8		2 675
1989	LF		1989	06	30.26181	16	35	38.47	-11	54	14.0	16.5	2 675
1989	LF		1989	06	30.29080	16	35	37.36	-11	54	05.4		2 675

1989	LF		1989	07	03.24167	16	33	53.22	-11	39	41.9	2 675
1989	LF		1989	07	03.27031	16	33	52.21	-11	39	34.0	2 675
1989	LH		1989	06	30.26181	16	47	49.94	-09	09	30.5	17.0 2 675
1989	LH		1989	06	30.29080	16	47	49.18	-09	09	24.9	2 675
1989	LH		1989	07	03.24167	16	46	40.72	-09	00	46.7	2 675
1989	LH		1989	07	03.27031	16	46	40.22	-09	00	42.0	2 675
1989	LL		1989	06	30.23837	16	09	06.50	-27	44	00.8	17.2 2 675
1989	LL		1989	06	30.26771	16	09	05.38	-27	44	00.4	2 675
1989	LL		1989	07	03.22483	16	07	49.83	-27	45	47.9	2 675
1989	LL		1989	07	03.25347	16	07	49.01	-27	45	47.8	2 675
1989	LM		1989	06	30.23837	16	18	51.12	-24	45	12.6	16.5 2 675
1989	LM		1989	06	30.26771	16	18	50.37	-24	45	01.6	2 675
1989	LM		1989	07	03.22483	16	17	42.03	-24	28	14.3	2 675
1989	LM		1989	07	03.25347	16	17	41.22	-24	28	05.4	2 675
1989	LQ		1989	06	30.24410	16	15	46.21	-17	46	26.3	16.7 2 675
1989	LQ		1989	06	30.27344	16	15	45.38	-17	46	28.3	2 675
1989	LQ		1989	07	03.23038	16	14	26.16	-17	49	56.3	2 675
1989	LQ		1989	07	03.25920	16	14	25.31	-17	49	57.5	2 675
1989	LT		1989	06	30.25573	16	29	58.45	-24	58	46.9	16.5 2 675
1989	LT		1989	06	30.28507	16	29	57.45	-24	58	43.5	2 675
1989	LT		1989	07	03.24740	16	28	31.89	-24	53	25.6	2 675
1989	LT		1989	07	03.27622	16	28	31.09	-24	53	21.5	2 675
1989	LU		1989	06	30.25573	16	31	45.06	-24	10	29.0	16.5 2 675
1989	LU		1989	06	30.28507	16	31	43.77	-24	10	22.6	2 675
1989	LU		1989	07	03.24740	16	29	43.56	-24	01	08.3	2 675
1989	LU		1989	07	03.27622	16	29	42.17	-24	00	56.7	2 675
1989	MC	*	1989	06	30.30990	17	55	54.16	-01	44	27.6	16.5 2 675
1989	MC		1989	06	30.33663	17	55	52.79	-01	44	31.1	2 675
1989	MC		1989	07	03.28976	17	53	25.59	-01	51	02.3	2 675
1989	MC		1989	07	03.31771	17	53	24.25	-01	51	07.3	2 675
1989	MF	*	1989	06	30.40972	19	31	42.69	-07	58	17.3	16.5 2 675
1989	MF		1989	06	30.44444	19	31	41.08	-07	58	34.5	2 675
1989	MF		1989	07	03.36233	19	29	24.28	-08	23	11.8	2 675
1989	MF		1989	07	03.38976	19	29	22.86	-08	23	27.0	2 675
1989	MG	*	1989	06	30.40972	19	42	35.74	-10	14	13.9	17.0 2 675
1989	MG		1989	06	30.44444	19	42	34.58	-10	14	22.3	2 675
1989	MG		1989	07	03.36233	19	41	04.70	-10	27	47.4	2 675
1989	MG		1989	07	03.38976	19	41	03.71	-10	27	55.0	2 675
1989	MH	*	1989	06	29.20684	16	01	21.37	-17	34	56.7	16.0 2 675
1989	MH		1989	06	29.24383	16	01	20.71	-17	35	06.1	2 675
1989	MH		1989	07	01.24085	16	00	35.47	-17	46	42.6	2 675
1989	MH		1989	07	01.26361	16	00	34.88	-17	46	49.8	2 675
1989	MJ	*	1989	06	30.26181	16	34	59.84	-11	20	19.9	16.5 2 675
1989	MJ		1989	06	30.29080	16	34	58.69	-11	20	38.5	2 675
1989	MJ		1989	07	03.24167	16	33	08.31	-11	53	07.3	2 675
1989	MJ		1989	07	03.27031	16	33	07.18	-11	53	26.0	2 675
1989	MK	*	1989	06	30.25573	16	44	46.37	-24	18	43.1	17.0 2 675
1989	MK		1989	06	30.28507	16	44	45.02	-24	18	46.8	2 675
1989	MK		1989	07	03.24740	16	42	45.43	-24	24	01.8	2 675
1989	MK		1989	07	03.27622	16	42	44.32	-24	24	03.3	2 675
1989	NA		1989	07	06.34514	20	06	44.21	-29	42	06.4	15.5 3 675
1989	NA		1989	07	06.37292	20	06	45.01	-29	43	01.7	3 675
1989	NC	*	1989	07	01.33976	18	44	22.97	-22	53	19.6	2 675
1989	NC		1989	07	01.36146	18	44	21.43	-22	53	13.2	2 675
1989	NC		1989	07	04.26788	18	41	06.57	-22	41	21.3	2 675
1989	NC		1989	07	04.29410	18	41	04.54	-22	41	18.1	2 675
1989	ND	*	1989	07	01.33976	18	52	00.50	-21	22	00.6	16.5 2 675
1989	ND		1989	07	01.36146	18	51	59.22	-21	22	01.5	2 675
1989	ND		1989	07	04.26788	18	49	15.24	-21	23	22.2	2 675

1989	ND		1989	07	04.29410	18	49	13.59	-21	23	23.2	2 675
1989	NE	*	1989	07	01.38194	20	22	32.97	-06	39	24.2	16.0 2 675
1989	NE		1989	07	01.41007	20	22	32.02	-06	39	36.4	2 675
1989	NE		1989	07	03.41719	20	21	28.83	-06	55	18.3	2 675
1989	NE		1989	07	03.44670	20	21	27.82	-06	55	32.8	2 675
1989	NF	*	1989	07	01.42448	20	24	51.78	-20	59	53.7	16.2 2 675
1989	NF		1989	07	01.44340	20	24	51.15	-21	00	03.6	2 675
1989	NF		1989	07	03.42326	20	23	46.78	-21	17	37.8	2 675
1989	NF		1989	07	03.45052	20	23	45.68	-21	17	52.5	2 675
1989	NG	*	1989	07	02.31997	19	16	31.68	-02	59	59.4	16.5 2 675
1989	NG		1989	07	02.34601	19	16	30.35	-02	59	55.6	2 675
1989	NG		1989	07	04.27448	19	14	52.41	-02	51	49.0	2 675
1989	NG		1989	07	04.30052	19	14	50.95	-02	51	43.6	2 675
1989	NH	*	1989	07	02.31997	19	23	55.73	-05	21	50.3	16.0 2 675
1989	NH		1989	07	02.34601	19	23	54.36	-05	22	03.1	2 675
1989	NH		1989	07	04.27448	19	22	17.77	-05	37	57.0	2 675
1989	NJ	*	1989	07	02.31997	19	25	34.27	-05	41	00.7	15.5 2 675
1989	NJ		1989	07	02.34601	19	25	32.79	-05	40	58.8	2 675
1989	NJ		1989	07	04.27448	19	23	49.40	-05	37	29.7	2 675
1989	NJ		1989	07	04.30052	19	23	47.94	-05	37	27.7	2 675
1989	NK	*	1989	07	02.36597	19	55	57.10	+08	30	30.7	16.0 2 675
1989	NK		1989	07	02.39271	19	55	56.06	+08	30	35.9	2 675
1989	NK		1989	07	04.32795	19	54	43.02	+08	36	26.1	2 675
1989	NK		1989	07	04.35399	19	54	41.91	+08	36	28.9	2 675
1989	NL	*	1989	07	02.43420	20	23	48.11	-24	14	34.4	16.7 2 675
1989	NL		1989	07	02.45590	20	23	47.14	-24	14	33.5	2 675
1989	NL		1989	07	04.34045	20	22	17.44	-24	13	34.5	2 675
1989	NL		1989	07	04.36649	20	22	16.12	-24	13	34.6	2 675
1989	NM	*	1989	07	02.43420	20	28	19.28	-22	56	31.9	16.2 2 675
1989	NM		1989	07	02.45590	20	28	18.50	-22	56	40.6	2 675
1989	NM		1989	07	04.34045	20	27	15.64	-23	11	53.6	2 675
1989	NM		1989	07	04.36649	20	27	14.66	-23	12	08.0	2 675
1989	NN	*	1989	07	02.43420	20	33	08.21	-21	41	27.7	16.7 2 675
1989	NN		1989	07	02.45590	20	33	07.36	-21	41	34.5	2 675
1989	NN		1989	07	04.34045	20	31	58.78	-21	51	04.3	2 675
1989	NN		1989	07	04.36649	20	31	57.84	-21	51	10.9	2 675
1989	NO	*	1989	07	02.43420	20	35	58.80	-27	23	50.8	16.7 2 675
1989	NO		1989	07	02.45590	20	35	57.77	-27	23	54.2	2 675
1989	NO		1989	07	04.34045	20	34	33.39	-27	29	01.5	2 675
1989	NO		1989	07	04.36649	20	34	31.98	-27	29	07.1	2 675
1989	NP	*	1989	07	02.43420	20	39	03.89	-28	38	23.8	17.0 2 675
1989	NP		1989	07	02.45590	20	39	02.83	-28	38	23.3	2 675
1989	NP		1989	07	04.34045	20	37	34.56	-28	34	42.5	2 675
1989	NP		1989	07	04.36649	20	37	33.30	-28	34	38.5	2 675
1989	NQ	*	1989	07	02.43420	20	42	10.78	-23	13	31.7	17.0 2 675
1989	NQ		1989	07	02.45590	20	42	10.02	-23	13	38.2	2 675
1989	NQ		1989	07	04.34045	20	40	59.52	-23	26	29.1	2 675
1989	NQ		1989	07	04.36649	20	40	58.45	-23	26	39.3	2 675
1989	NR	*	1989	07	02.43420	20	48	27.34	-22	56	33.6	16.5 2 675
1989	NR		1989	07	02.45590	20	48	26.31	-22	56	28.9	2 675
1989	NR		1989	07	04.34045	20	47	02.11	-22	52	50.8	2 675
1989	NR		1989	07	04.36649	20	47	00.86	-22	52	47.6	2 675
1989	NS	*	1989	07	02.43420	20	49	48.39	-22	51	38.5	16.7 2 675
1989	NS		1989	07	02.45590	20	49	47.84	-22	51	39.9	2 675
1989	NS		1989	07	04.34045	20	49	07.13	-22	56	08.3	2 675
1989	NS		1989	07	04.36649	20	49	06.51	-22	56	12.6	2 675
1989	NT	*	1989	07	02.43420	20	49	52.03	-25	41	31.6	16.7 2 675
1989	NT		1989	07	02.45590	20	49	51.38	-25	41	45.0	2 675
1989	NT		1989	07	04.34045	20	49	00.68	-26	01	05.5	2 675

1989	NT		1989	07	04.36649	20	48	59.81	-26	01	22.7	2 675
1989	NU	*	1989	07	02.43420	20	54	04.26	-23	38	02.9	17.0 2 675
1989	NU		1989	07	02.45590	20	54	03.73	-23	38	11.5	2 675
1989	NU		1989	07	04.34045	20	53	12.38	-23	52	23.5	2 675
1989	NU		1989	07	04.36649	20	53	11.35	-23	52	36.0	2 675
1989	NV	*	1989	07	01.33976	18	41	15.83	-20	39	58.8	16.0 2 675
1989	NV		1989	07	01.36146	18	41	14.60	-20	39	55.6	2 675
1989	NV		1989	07	04.26788	18	38	32.13	-20	37	13.6	2 675
1989	NV		1989	07	04.29410	18	38	30.51	-20	37	13.2	2 675
1989	NW	*	1989	07	01.33976	19	02	06.47	-26	12	08.4	16.5 2 675
1989	NW		1989	07	01.36146	19	02	05.09	-26	12	02.6	2 675
1989	NW		1989	07	04.26788	18	59	03.38	-25	56	20.6	2 675
1989	NW		1989	07	04.29410	18	59	01.63	-25	56	13.5	2 675
1989	NX		1989	07	07.35938	20	26	39.87	+01	05	06.8	3 675
1989	NX	*	1989	07	08.36493	20	26	12.62	+00	43	19.8	16 3 675
1989	NX		1989	07	08.40208	20	26	11.42	+00	42	32.3	3 675
1989	NY	*	1989	07	02.42899	20	29	31.00	-10	00	56.6	16.0 2 675
1989	NY		1989	07	02.45035	20	29	30.40	-10	01	03.0	2 675
1989	NY		1989	07	04.33403	20	28	40.52	-10	12	08.1	2 675
1989	NY		1989	07	04.36024	20	28	39.74	-10	12	18.0	2 675
1989	NZ	*	1989	07	01.42448	20	29	48.03	-19	40	32.1	16.5 2 675
1989	NZ		1989	07	01.44340	20	29	47.47	-19	40	30.1	2 675
1989	NZ		1989	07	03.42326	20	28	46.23	-19	36	31.7	2 675
1989	NZ		1989	07	03.45260	20	28	45.18	-19	36	28.2	2 675
1989	NA1	*	1989	07	02.42899	20	19	58.76	-10	07	39.8	16.5 2 675
1989	NA1		1989	07	02.45035	20	19	57.62	-10	07	38.9	2 675
1989	NA1		1989	07	04.33403	20	18	23.35	-10	07	06.1	2 675
1989	NA1		1989	07	04.36024	20	18	21.92	-10	07	05.1	2 675
1989	NB1	*	1989	07	02.42899	20	24	41.33	-10	20	21.8	16.5 2 675
1989	NB1		1989	07	02.45035	20	24	40.50	-10	20	30.0	2 675
1989	NB1		1989	07	04.33403	20	23	37.03	-10	32	31.7	2 675
1989	NC1	*	1989	07	02.27049	17	28	38.39	-05	31	12.9	16.7 2 675
1989	NC1		1989	07	02.29392	17	28	37.21	-05	31	24.1	2 675
1989	NC1		1989	07	04.22205	17	27	09.05	-05	46	40.8	2 675
1989	NC1		1989	07	04.24566	17	27	08.00	-05	46	53.6	2 675
1989	OB	*	1989	07	29.37829	21	25	08.26	-04	28	36.6	16.5 3 675
1989	OB		1989	07	29.40938	21	25	08.72	-04	27	34.2	3 675
1989	OB		1989	07	31.34583	21	25	30.05	-03	28	59.5	3 675
2041	P-L	*	1960	09	24.45000	00	49	50.65	+09	40	43.9	19.0 4 675
2041	P-L		1960	09	26.37010	00	47	54.78	+09	40	52.5	4 675
2041	P-L		1960	09	28.45140	00	45	46.86	+09	40	39.3	4 675
2041	P-L		1960	10	17.30420	00	26	35.35	+09	25	53.0	4 675
2041	P-L		1960	10	22.27920	00	22	06.63	+09	20	27.0	4 675
2041	P-L		1960	10	25.37570	00	19	33.21	+09	17	16.4	4 675
2041	P-L		1960	10	26.36840	00	18	46.75	+09	16	20.4	4 675
2103	P-L		1973	09	19.19948	00	39	52.62	+06	50	53.8	4 675
2103	P-L		1973	09	19.25006	00	39	50.27	+06	50	37.1	4 675
2103	P-L		1973	09	20.26458	00	39	03.45	+06	45	08.5	4 675
2103	P-L		1973	09	24.36181	00	35	48.81	+06	22	05.4	4 675
2103	P-L		1973	09	24.42847	00	35	45.56	+06	21	42.0	4 675
2103	P-L		1973	09	25.25642	00	35	05.90	+06	16	51.7	4 675
2103	P-L		1973	09	25.32031	00	35	02.74	+06	16	28.3	4 675
2103	P-L		1973	09	29.26632	00	31	49.48	+05	53	07.1	4 675
2103	P-L		1973	09	29.33073	00	31	46.23	+05	52	43.7	18.4 4 675
2103	P-L		1973	09	30.22257	00	31	02.38	+05	47	18.6	4 675
2103	P-L		1973	09	30.28785	00	30	59.09	+05	46	53.1	4 675
2103	P-L		1973	10	04.30208	00	27	41.44	+05	22	24.1	4 675
2103	P-L		1973	10	04.36476	00	27	38.29	+05	22	02.2	4 675
2103	P-L		1973	10	05.32917	00	26	51.16	+05	16	07.5	4 675

2103	P-L		1973	10	05.39132	00	26	47.97	+05	15	45.4		4 675
2506	P-L	*	1960	09	24.46184	00	42	45.14	+04	22	48.9	18.1	4 675
2506	P-L		1960	09	26.37988	00	40	43.55	+04	24	50.7		4 675
2506	P-L		1960	09	28.43822	00	38	31.38	+04	26	49.4		4 675
2506	P-L		1960	09	29.39514	00	37	29.85	+04	27	42.0		4 675
2506	P-L		1960	10	17.30420	00	19	22.98	+04	42	39.8		4 675
2506	P-L		1960	10	22.22293	00	15	20.39	+04	48	14.8		4 675
2506	P-L		1960	10	22.27920	00	15	17.74	+04	48	20.7		4 675
2506	P-L		1960	10	24.35836	00	13	46.19	+04	51	10.7		4 675
2506	P-L		1960	10	25.37570	00	13	04.19	+04	52	39.9		4 675
2506	P-L		1960	10	26.32573	00	12	26.52	+04	54	07.0		4 675
2506	P-L		1960	10	26.36840	00	12	24.79	+04	54	12.3		4 675
2740	P-L	*	1960	09	24.46184	00	55	12.53	+01	58	13.6	19.6	4 675
2740	P-L		1960	09	26.37988	00	53	49.03	+01	43	46.1		4 675
2740	P-L		1960	09	28.43822	00	52	16.64	+01	28	08.7		4 675
2740	P-L		1960	09	29.39514	00	51	33.08	+01	20	50.3		4 675
2740	P-L		1960	10	25.30351	00	32	30.39	-01	34	28.1		4 675
4060	P-L	*	1960	09	24.37573	00	19	57.39	+04	28	45.3	18.7	4 675
4060	P-L		1960	09	25.42780	00	19	04.74	+04	22	49.4		4 675
4060	P-L		1960	09	26.30558	00	18	21.04	+04	17	50.3		4 675
4060	P-L		1960	09	28.36808	00	16	37.59	+04	06	01.3		4 675
4060	P-L		1960	10	17.27085	00	02	01.44	+02	20	35.4		4 675
4060	P-L		1960	10	22.22293	23	58	59.18	+01	56	57.1		4 675
4060	P-L		1960	10	24.35836	23	57	49.31	+01	47	38.8		4 675
4060	P-L		1960	10	26.32573	23	56	50.22	+01	39	33.7		4 675
4247	P-L	*	1960	09	24.37573	00	29	07.54	+05	13	28.0	19.0	4 675
4247	P-L		1960	09	25.42780	00	28	10.80	+05	07	20.4		4 675
4247	P-L		1960	09	26.30558	00	27	23.56	+05	02	12.5		4 675
4247	P-L		1960	09	28.36808	00	25	31.43	+04	50	00.3		4 675
4247	P-L		1960	10	17.27085	00	09	21.61	+02	59	20.0		4 675
4247	P-L		1960	10	22.22293	00	05	52.20	+02	33	59.2		4 675
4247	P-L		1960	10	26.32573	00	03	20.71	+02	15	06.6		4 675
4821	P-L	*	1960	09	24.38750	00	30	01.20	-01	06	48.0	19.5	4 675
4821	P-L		1960	09	24.41183	00	30	00.07	-01	06	57.9		4 675
4821	P-L		1960	09	26.31530	00	28	29.75	-01	19	26.8		4 675
4821	P-L		1960	09	27.37500	00	27	38.79	-01	26	21.3		4 675
4821	P-L		1960	09	27.40836	00	27	37.21	-01	26	35.1		4 675
4821	P-L		1960	09	28.37778	00	26	50.68	-01	32	52.4		4 675
4821	P-L		1960	09	28.39725	00	26	49.69	-01	33	00.5		4 675
4821	P-L		1960	10	22.23406	00	09	41.84	-03	38	02.0		4 675
5016	P-L	*	1960	10	22.27920	00	36	02.81	+04	25	20.6	19.5	4 675
5016	P-L		1960	10	25.37570	00	33	20.13	+04	14	46.9		4 675
5016	P-L		1960	10	26.36840	00	32	30.51	+04	11	36.2		4 675
6531	P-L	*	1960	09	24.35002	00	10	33.33	-01	22	53.4	17.6	4 675
6531	P-L		1960	09	26.28543	00	08	31.48	-01	29	23.2		4 675
6531	P-L		1960	09	27.34237	00	07	24.69	-01	32	53.6		4 675
6531	P-L		1960	09	28.33822	00	06	22.14	-01	36	07.6		4 675
6531	P-L		1960	10	17.21390	23	49	04.74	-02	18	30.4		4 675
6531	P-L		1960	10	17.28198	23	49	01.62	-02	18	34.5		4 675
6531	P-L		1960	10	22.15559	23	45	55.74	-02	21	00.0		4 675
6531	P-L		1960	10	24.18787	23	44	51.33	-02	20	45.4		4 675
6531	P-L		1960	10	26.26113	23	43	54.03	-02	19	43.7		4 675
6600	P-L	*	1960	09	24.35002	00	01	47.06	-03	11	25.1	18.4	4 675
6600	P-L		1960	09	26.28543	23	59	51.19	-03	22	45.0		4 675
6600	P-L		1960	09	27.34237	23	58	48.19	-03	28	49.8		4 675
6600	P-L		1960	09	28.33822	23	57	49.31	-03	34	27.7		4 675
6600	P-L		1960	10	17.22501	23	41	50.17	-04	57	21.9		4 675
6600	P-L		1960	10	22.16324	23	38	56.35	-05	09	07.8		4 675
6600	P-L		1960	10	24.23753	23	37	55.52	-05	12	38.5		4 675

6600	P-L		1960	10	26.27157	23	37	03.11	-05	15	15.7		4 675
6602	P-L	*	1960	09	24.35002	00	03	38.79	-02	27	33.2	18.6	4 675
6602	P-L		1960	09	26.28543	00	01	33.79	-02	28	50.4		4 675
6602	P-L		1960	09	27.34237	00	00	25.63	-02	29	24.4		4 675
6602	P-L		1960	09	28.33822	23	59	22.10	-02	29	54.3		4 675
6602	P-L		1960	10	17.21390	23	42	33.60	-02	18	00.9		4 675
6602	P-L		1960	10	22.15559	23	39	49.12	-02	06	25.4		4 675
6602	P-L		1960	10	26.26113	23	38	12.64	-01	53	43.8		4 675
6676	P-L	*	1960	09	24.35002	23	50	34.46	-00	36	26.9	19.0	4 675
6676	P-L		1960	09	26.28543	23	49	05.69	-00	45	27.2		4 675
6676	P-L		1960	09	27.34237	23	48	17.53	-00	50	19.9		4 675
6676	P-L		1960	09	28.33822	23	47	32.28	-00	54	55.7		4 675
6676	P-L		1960	10	22.15559	23	32	36.31	-02	25	42.3		4 675
6676	P-L		1960	10	26.26113	23	30	56.50	-02	35	41.5		4 675
7590	P-L	*	1960	10	17.28198	00	03	35.77	-05	36	05.3	19.7	4 675
7590	P-L		1960	10	22.23406	00	00	21.90	-05	22	26.4		4 675
7590	P-L		1960	10	26.31531	23	58	14.45	-05	07	15.6		4 675
7643	P-L	*	1960	10	17.28198	00	01	08.11	-05	24	47.4	18.8	4 675
7643	P-L		1960	10	22.23406	23	58	04.58	-05	48	21.9		4 675
7643	P-L		1960	10	25.25350	23	56	32.65	-05	59	40.5		4 675
7643	P-L		1960	10	26.31531	23	56	03.94	-06	03	03.5		4 675
1050	T-2		1973	09	19.18611	00	05	44.45	+00	21	38.5		4 675
1050	T-2		1973	09	19.23785	00	05	42.26	+00	21	13.6		4 675
1050	T-2		1973	09	20.22847	00	05	01.50	+00	13	16.3		4 675
1050	T-2		1973	09	24.34688	00	02	10.17	-00	20	09.3		4 675
1050	T-2		1973	09	24.41597	00	02	07.08	-00	20	41.5		4 675
1050	T-2		1973	09	25.24375	00	01	32.47	-00	27	28.2		4 675
1050	T-2		1973	09	25.26875	00	01	31.52	-00	27	37.8		4 675
1050	T-2		1973	09	25.30729	00	01	29.87	-00	27	57.7		4 675
1050	T-2		1973	09	25.33299	00	01	28.70	-00	28	09.3		4 675
1050	T-2	*	1973	09	29.25330	23	58	44.67	-01	00	07.4	18.2	4 675
1050	T-2		1973	09	29.27986	23	58	43.64	-01	00	20.9		4 675
1050	T-2		1973	09	29.31806	23	58	41.89	-01	00	38.2		4 675
1050	T-2		1973	09	30.21007	23	58	05.02	-01	07	51.9		4 675
1050	T-2		1973	09	30.23524	23	58	03.97	-01	08	05.6		4 675
1050	T-2		1973	09	30.27431	23	58	02.33	-01	08	24.7		4 675
1050	T-2		1973	09	30.30174	23	58	01.05	-01	08	35.7		4 675
1050	T-2		1973	10	04.31493	23	55	17.14	-01	40	43.9		4 675
1050	T-2		1973	10	04.37674	23	55	14.58	-01	41	12.7		4 675
1050	T-2		1973	10	05.34167	23	54	36.08	-01	48	48.4		4 675
1050	T-2		1973	10	05.40347	23	54	33.51	-01	49	17.8		4 675
1179	T-2		1973	09	19.18611	00	17	23.38	+03	33	19.5		4 675
1179	T-2		1973	09	19.23785	00	17	20.41	+03	32	58.7		4 675
1179	T-2		1973	09	20.22847	00	16	27.41	+03	26	42.7		4 675
1179	T-2		1973	09	24.34688	00	12	44.12	+03	00	00.2		4 675
1179	T-2		1973	09	24.41597	00	12	40.35	+02	59	34.1		4 675
1179	T-2		1973	09	25.30729	00	11	51.89	+02	53	43.4		4 675
1179	T-2	*	1973	09	29.25330	00	08	18.73	+02	27	48.3	18.9	4 675
1179	T-2		1973	09	29.31806	00	08	15.18	+02	27	21.5		4 675
1179	T-2		1973	09	30.21007	00	07	27.61	+02	21	31.4		4 675
1179	T-2		1973	09	30.27431	00	07	24.07	+02	21	06.1		4 675
1179	T-2		1973	10	04.28958	00	03	54.11	+01	55	07.5		4 675
1179	T-2		1973	10	04.35208	00	03	50.75	+01	54	45.3		4 675
1179	T-2		1973	10	05.31684	00	03	01.93	+01	48	38.4		4 675
1179	T-2		1973	10	05.37917	00	02	58.56	+01	48	14.9		4 675
1183	T-2		1973	09	19.18611	00	19	07.38	-00	50	34.2		4 675
1183	T-2		1973	09	19.21250	00	19	05.70	-00	50	31.0		4 675
1183	T-2		1973	09	19.23785	00	19	04.02	-00	50	30.8		4 675
1183	T-2		1973	09	19.26354	00	19	02.43	-00	50	26.9		4 675

1183	T-2		1973	09	20.22847	00	18	01.26	-00	49	15.2	4 675
1183	T-2		1973	09	20.27795	00	17	58.16	-00	49	10.3	4 675
1183	T-2		1973	09	24.34688	00	13	37.24	-00	44	01.1	4 675
1183	T-2		1973	09	24.37431	00	13	35.43	-00	43	55.6	4 675
1183	T-2		1973	09	24.41597	00	13	32.67	-00	43	55.6	4 675
1183	T-2		1973	09	24.44167	00	13	31.00	-00	43	50.8	4 675
1183	T-2		1973	09	25.26875	00	12	38.12	-00	42	47.3	4 675
1183	T-2		1973	09	25.30729	00	12	35.54	-00	42	46.6	4 675
1183	T-2		1973	09	25.33299	00	12	33.78	-00	42	41.9	4 675
1183	T-2	*	1973	09	29.25330	00	08	23.51	-00	37	28.7	18.0 4 675
1183	T-2		1973	09	29.27986	00	08	21.80	-00	37	24.0	4 675
1183	T-2		1973	09	29.31806	00	08	19.26	-00	37	23.9	4 675
1183	T-2		1973	09	29.34375	00	08	17.59	-00	37	17.9	4 675
1183	T-2		1973	09	30.21007	00	07	23.38	-00	36	07.6	4 675
1183	T-2		1973	09	30.23524	00	07	21.66	-00	36	03.2	4 675
1183	T-2		1973	09	30.27431	00	07	19.13	-00	36	02.1	4 675
1183	T-2		1973	09	30.30174	00	07	17.32	-00	35	56.4	4 675
1183	T-2		1973	10	04.28958	00	03	12.38	-00	29	53.9	4 675
1183	T-2		1973	10	04.35208	00	03	08.49	-00	29	49.8	4 675
1183	T-2		1973	10	05.31684	00	02	11.12	-00	28	11.8	4 675
1183	T-2		1973	10	05.37917	00	02	07.50	-00	28	05.0	4 675
1246	T-2		1973	09	19.18611	00	20	42.13	+04	45	07.9	4 675
1246	T-2		1973	09	19.23785	00	20	39.70	+04	44	45.1	4 675
1246	T-2		1973	09	20.22847	00	19	54.37	+04	37	28.3	4 675
1246	T-2		1973	09	24.34688	00	16	43.72	+04	06	41.7	4 675
1246	T-2		1973	09	24.41597	00	16	40.44	+04	06	09.6	4 675
1246	T-2		1973	09	25.24375	00	16	01.94	+03	59	52.3	4 675
1246	T-2		1973	09	25.30729	00	15	59.06	+03	59	24.9	4 675
1246	T-2	*	1973	09	29.25330	00	12	55.66	+03	29	24.6	17.6 4 675
1246	T-2		1973	09	29.31806	00	12	52.60	+03	28	54.5	4 675
1246	T-2		1973	09	30.21007	00	12	11.56	+03	22	06.8	4 675
1246	T-2		1973	09	30.27431	00	12	08.55	+03	21	39.5	4 675
1246	T-2		1973	10	04.28958	00	09	06.57	+02	51	14.0	4 675
1246	T-2		1973	10	04.35208	00	09	03.61	+02	50	45.8	4 675
1246	T-2		1973	10	05.31684	00	08	20.98	+02	43	32.9	4 675
1246	T-2		1973	10	05.37917	00	08	18.20	+02	43	06.1	4 675
1290	T-2		1973	09	19.19948	00	26	16.76	+04	14	35.8	4 675
1290	T-2		1973	09	19.25006	00	26	13.81	+04	14	35.9	4 675
1290	T-2		1973	09	20.26458	00	25	12.67	+04	14	27.2	4 675
1290	T-2		1973	09	24.34688	00	21	01.49	+04	13	22.2	4 675
1290	T-2		1973	09	24.36181	00	21	00.67	+04	13	20.7	4 675
1290	T-2		1973	09	24.41597	00	20	57.00	+04	13	21.1	4 675
1290	T-2		1973	09	24.42847	00	20	56.41	+04	13	19.3	4 675
1290	T-2		1973	09	25.25642	00	20	05.13	+04	12	57.9	4 675
1290	T-2		1973	09	25.32031	00	20	01.09	+04	12	56.4	4 675
1290	T-2	*	1973	09	29.25330	00	15	55.71	+04	11	03.2	18.4 4 675
1290	T-2		1973	09	29.31806	00	15	51.53	+04	11	00.7	4 675
1290	T-2		1973	09	30.21007	00	14	56.19	+04	10	29.7	4 675
1290	T-2		1973	09	30.27431	00	14	52.06	+04	10	29.3	4 675
1290	T-2		1973	10	04.28958	00	10	44.81	+04	08	03.9	4 675
1290	T-2		1973	10	04.35208	00	10	41.00	+04	08	02.6	4 675
1290	T-2		1973	10	05.31684	00	09	42.62	+04	07	26.1	4 675
1290	T-2		1973	10	05.37917	00	09	38.76	+04	07	24.9	4 675
1309	T-2		1973	09	19.18611	00	24	22.72	-00	07	02.4	4 675
1309	T-2		1973	09	19.22500	00	24	20.99	-00	07	11.3	4 675
1309	T-2		1973	09	19.23785	00	24	20.39	-00	07	15.7	4 675
1309	T-2		1973	09	19.27865	00	24	18.43	-00	07	26.4	4 675
1309	T-2		1973	09	20.22847	00	23	36.90	-00	11	40.8	4 675
1309	T-2		1973	09	20.27795	00	23	34.80	-00	11	50.9	4 675

1309	T-2		1973	09	20.30278	00	23	33.59	-00	12	00.7	4 675
1309	T-2		1973	09	24.34688	00	20	31.39	-00	30	20.0	4 675
1309	T-2		1973	09	24.37431	00	20	30.28	-00	30	23.1	4 675
1309	T-2		1973	09	24.38750	00	20	29.63	-00	30	29.7	4 675
1309	T-2		1973	09	24.41597	00	20	28.08	-00	30	38.7	4 675
1309	T-2		1973	09	24.44167	00	20	27.01	-00	30	41.3	4 675
1309	T-2		1973	09	24.45434	00	20	26.40	-00	30	48.4	4 675
1309	T-2		1973	09	25.26875	00	19	49.35	-00	34	28.1	4 675
1309	T-2		1973	09	25.28125	00	19	48.74	-00	34	33.6	4 675
1309	T-2		1973	09	25.30729	00	19	47.52	-00	34	40.9	4 675
1309	T-2		1973	09	25.33299	00	19	46.26	-00	34	45.0	4 675
1309	T-2		1973	09	25.34601	00	19	45.70	-00	34	51.0	4 675
1309	T-2	*	1973	09	29.25330	00	16	45.44	-00	52	31.4	17.0 4 675
1309	T-2		1973	09	29.27986	00	16	44.11	-00	52	37.2	4 675
1309	T-2		1973	09	29.31806	00	16	42.30	-00	52	50.1	4 675
1309	T-2		1973	09	29.34375	00	16	41.02	-00	52	55.4	4 675
1309	T-2		1973	09	30.21007	00	16	01.07	-00	56	47.7	4 675
1309	T-2		1973	09	30.23524	00	15	59.99	-00	56	53.8	4 675
1309	T-2		1973	09	30.27431	00	15	58.07	-00	57	05.0	4 675
1309	T-2		1973	09	30.30174	00	15	56.72	-00	57	11.3	4 675
1309	T-2		1973	10	04.28958	00	12	53.34	-01	14	37.1	4 675
1309	T-2		1973	10	04.31493	00	12	52.12	-01	14	43.9	4 675
1309	T-2		1973	10	04.35208	00	12	50.43	-01	14	53.1	4 675
1309	T-2		1973	10	04.37674	00	12	49.30	-01	14	58.8	4 675
1309	T-2		1973	10	05.31684	00	12	06.65	-01	18	58.6	4 675
1309	T-2		1973	10	05.34167	00	12	05.71	-01	19	03.4	4 675
1309	T-2		1973	10	05.37917	00	12	03.69	-01	19	13.3	4 675
1309	T-2		1973	10	05.40347	00	12	02.66	-01	19	18.8	4 675
1317	T-2		1973	09	19.22500	00	27	39.81	+00	05	23.2	4 675
1317	T-2		1973	09	19.27865	00	27	36.40	+00	05	12.1	4 675
1317	T-2		1973	09	20.30278	00	26	36.93	+00	02	00.5	4 675
1317	T-2		1973	09	24.38750	00	22	34.73	-00	10	49.1	4 675
1317	T-2		1973	09	24.45434	00	22	30.74	-00	11	02.4	4 675
1317	T-2	*	1973	09	29.25330	00	17	43.48	-00	25	53.7	20.0 4 675
1317	T-2		1973	09	29.31806	00	17	39.49	-00	26	05.0	4 675
1317	T-2		1973	09	30.21007	00	16	46.49	-00	28	44.6	4 675
1317	T-2		1973	09	30.27431	00	16	42.59	-00	28	56.5	4 675
1317	T-2		1973	10	04.35208	00	12	43.40	-00	40	37.4	4 675
1317	T-2		1973	10	05.31684	00	11	48.29	-00	43	12.4	4 675
1317	T-2		1973	10	05.37917	00	11	44.40	-00	43	21.7	4 675
2083	T-2		1973	09	19.19948	00	32	31.55	+03	00	05.4	4 675
2083	T-2		1973	09	19.25006	00	32	29.40	+02	59	50.6	4 675
2083	T-2		1973	09	20.26458	00	31	48.32	+02	55	14.5	4 675
2083	T-2		1973	09	24.36181	00	28	58.31	+02	36	03.6	4 675
2083	T-2		1973	09	24.42847	00	28	55.49	+02	35	45.5	4 675
2083	T-2		1973	09	25.25642	00	28	20.75	+02	31	47.2	4 675
2083	T-2		1973	09	25.32031	00	28	17.89	+02	31	29.1	4 675
2083	T-2		1973	09	29.26632	00	25	29.61	+02	12	35.6	4 675
2083	T-2	*	1973	09	29.33073	00	25	26.79	+02	12	16.2	18.5 4 675
2083	T-2		1973	09	30.22257	00	24	48.71	+02	07	58.5	4 675
2083	T-2		1973	09	30.28785	00	24	45.84	+02	07	40.3	4 675
2083	T-2		1973	10	04.30208	00	21	53.91	+01	48	21.7	4 675
2083	T-2		1973	10	04.32708	00	21	52.72	+01	48	18.2	4 675
2083	T-2		1973	10	04.36476	00	21	51.17	+01	48	04.3	4 675
2083	T-2		1973	10	04.38889	00	21	50.03	+01	47	59.5	4 675
2083	T-2		1973	10	05.32917	00	21	10.21	+01	43	27.2	4 675
2083	T-2		1973	10	05.35382	00	21	08.96	+01	43	24.2	4 675
2083	T-2		1973	10	05.39132	00	21	07.44	+01	43	10.4	4 675
2083	T-2		1973	10	05.41597	00	21	06.18	+01	43	06.1	4 675

2155	T-2		1973	09	19.19948	00	39	48.62	+04	12	37.6	4 675
2155	T-2		1973	09	19.25006	00	39	46.02	+04	12	14.2	4 675
2155	T-2		1973	09	20.26458	00	38	53.83	+04	04	32.9	4 675
2155	T-2		1973	09	24.36181	00	35	16.86	+03	32	44.4	4 675
2155	T-2		1973	09	24.42847	00	35	13.18	+03	32	12.9	4 675
2155	T-2		1973	09	25.25642	00	34	28.90	+03	25	39.7	4 675
2155	T-2		1973	09	25.32031	00	34	25.21	+03	25	07.6	4 675
2155	T-2		1973	09	29.26632	00	30	49.26	+02	53	39.5	4 675
2155	T-2	*	1973	09	29.33073	00	30	45.44	+02	53	08.1	18.3 4 675
2155	T-2		1973	09	30.22257	00	29	56.66	+02	45	59.6	4 675
2155	T-2		1973	09	30.28785	00	29	52.94	+02	45	28.1	4 675
2155	T-2		1973	10	04.30208	00	26	13.49	+02	13	35.5	4 675
2155	T-2		1973	10	04.36476	00	26	09.86	+02	13	04.8	4 675
2155	T-2		1973	10	05.32917	00	25	17.98	+02	05	31.0	4 675
2155	T-2		1973	10	05.39132	00	25	14.44	+02	05	02.2	4 675
2160	T-2		1973	09	19.19948	00	38	39.03	+03	00	14.4	4 675
2160	T-2		1973	09	19.25006	00	38	37.02	+03	00	01.7	4 675
2160	T-2		1973	09	20.26458	00	37	55.78	+02	55	48.7	4 675
2160	T-2		1973	09	24.36181	00	35	02.92	+02	38	18.2	4 675
2160	T-2		1973	09	24.42847	00	34	59.96	+02	38	00.9	4 675
2160	T-2		1973	09	25.25642	00	34	24.42	+02	34	20.5	4 675
2160	T-2		1973	09	25.32031	00	34	21.55	+02	34	03.1	4 675
2160	T-2		1973	09	29.26632	00	31	26.80	+02	16	27.8	4 675
2160	T-2	*	1973	09	29.33073	00	31	23.84	+02	16	11.1	17.5 4 675
2160	T-2		1973	09	30.22257	00	30	44.04	+02	12	10.9	4 675
2160	T-2		1973	09	30.28785	00	30	40.99	+02	11	52.8	4 675
2160	T-2		1973	10	04.30208	00	27	40.39	+01	53	53.1	4 675
2160	T-2		1973	10	04.36476	00	27	37.47	+01	53	36.5	4 675
2160	T-2		1973	10	05.32917	00	26	54.28	+01	49	17.7	4 675
2160	T-2		1973	10	05.35382	00	26	52.93	+01	49	15.6	4 675
2160	T-2		1973	10	05.39132	00	26	51.41	+01	49	01.7	4 675
2160	T-2		1973	10	05.41597	00	26	50.15	+01	48	58.8	4 675
2170	T-2		1973	09	19.19948	00	39	17.70	+04	39	35.6	4 675
2170	T-2		1973	09	19.25006	00	39	15.45	+04	39	04.8	4 675
2170	T-2		1973	09	20.26458	00	38	30.43	+04	28	39.7	4 675
2170	T-2		1973	09	24.36181	00	35	23.28	+03	46	02.8	4 675
2170	T-2		1973	09	24.42847	00	35	20.09	+03	45	20.6	4 675
2170	T-2		1973	09	25.25642	00	34	41.83	+03	36	34.8	4 675
2170	T-2		1973	09	25.32031	00	34	38.81	+03	35	54.0	4 675
2170	T-2		1973	09	29.26632	00	31	32.70	+02	54	05.3	4 675
2170	T-2	*	1973	09	29.33073	00	31	29.56	+02	53	24.5	18.2 4 675
2170	T-2		1973	09	30.22257	00	30	47.44	+02	43	56.6	4 675
2170	T-2		1973	09	30.28785	00	30	44.26	+02	43	15.6	4 675
2170	T-2		1973	10	04.30208	00	27	35.01	+02	00	51.9	4 675
2170	T-2		1973	10	04.36476	00	27	31.95	+02	00	11.8	4 675
2170	T-2		1973	10	05.32917	00	26	46.99	+01	50	05.6	4 675
2170	T-2		1973	10	05.35382	00	26	45.63	+01	49	56.7	4 675
2170	T-2		1973	10	05.39132	00	26	43.98	+01	49	28.8	4 675
2170	T-2		1973	10	05.41597	00	26	42.63	+01	49	16.4	4 675
2198	T-2		1973	09	19.19948	00	44	47.36	+03	22	53.8	4 675
2198	T-2		1973	09	19.25006	00	44	44.35	+03	22	42.5	4 675
2198	T-2		1973	09	20.26458	00	43	44.56	+03	18	39.1	4 675
2198	T-2		1973	09	24.36181	00	39	35.04	+03	01	36.4	4 675
2198	T-2		1973	09	24.42847	00	39	30.69	+03	01	19.8	4 675
2198	T-2		1973	09	25.25642	00	38	39.53	+02	57	42.7	4 675
2198	T-2		1973	09	25.32031	00	38	35.49	+02	57	28.8	4 675
2198	T-2		1973	09	29.26632	00	34	25.92	+02	40	18.0	4 675
2198	T-2	*	1973	09	29.33073	00	34	21.57	+02	40	00.8	19.3 4 675
2198	T-2		1973	09	30.22257	00	33	25.10	+02	36	05.5	4 675

2198	T-2		1973	09	30.28785	00	33	20.71	+02	35	46.7		4 675
2198	T-2		1973	10	04.30208	00	29	05.00	+02	18	14.4		4 675
2198	T-2		1973	10	04.36476	00	29	00.87	+02	17	58.6		4 675
2198	T-2		1973	10	05.32917	00	28	00.12	+02	13	47.8		4 675
2198	T-2		1973	10	05.39132	00	27	56.04	+02	13	33.8		4 675
2224	T-2		1973	09	19.19948	00	44	14.18	+02	20	30.2		4 675
2224	T-2		1973	09	19.25006	00	44	11.85	+02	20	18.9		4 675
2224	T-2		1973	09	20.26458	00	43	27.68	+02	16	08.2		4 675
2224	T-2		1973	09	24.36181	00	40	22.13	+01	58	56.5		4 675
2224	T-2		1973	09	24.38750	00	40	20.93	+01	58	49.5		4 675
2224	T-2		1973	09	24.42847	00	40	18.90	+01	58	39.9		4 675
2224	T-2		1973	09	24.45434	00	40	17.70	+01	58	33.5		4 675
2224	T-2		1973	09	25.25642	00	39	40.73	+01	55	04.6		4 675
2224	T-2		1973	09	25.28125	00	39	39.45	+01	55	02.2		4 675
2224	T-2		1973	09	25.32031	00	39	37.72	+01	54	47.3		4 675
2224	T-2		1973	09	25.34601	00	39	36.31	+01	54	45.4		4 675
2224	T-2		1973	09	29.26632	00	36	30.71	+01	37	46.3		4 675
2224	T-2		1973	09	29.29219	00	36	29.49	+01	37	40.0		4 675
2224	T-2	*	1973	09	29.33073	00	36	27.43	+01	37	30.4	18.0	4 675
2224	T-2		1973	09	29.35694	00	36	26.31	+01	37	22.0		4 675
2224	T-2		1973	09	30.22257	00	35	44.91	+01	33	37.7		4 675
2224	T-2		1973	09	30.24826	00	35	43.73	+01	33	35.0		4 675
2224	T-2		1973	09	30.28785	00	35	41.68	+01	33	21.0		4 675
2224	T-2		1973	09	30.31476	00	35	40.45	+01	33	19.0		4 675
2224	T-2		1973	10	04.30208	00	32	28.64	+01	16	10.6		4 675
2224	T-2		1973	10	04.32708	00	32	27.29	+01	16	07.7		4 675
2224	T-2		1973	10	04.36476	00	32	25.50	+01	15	56.1		4 675
2224	T-2		1973	10	04.38889	00	32	24.24	+01	15	51.0		4 675
2224	T-2		1973	10	05.32917	00	31	39.50	+01	11	50.6		4 675
2224	T-2		1973	10	05.35382	00	31	38.03	+01	11	47.3		4 675
2224	T-2		1973	10	05.39132	00	31	36.32	+01	11	34.7		4 675
2224	T-2		1973	10	05.41597	00	31	34.94	+01	11	31.2		4 675
2225	T-2		1973	09	19.19948	00	45	36.59	+04	15	18.4		4 675
2225	T-2		1973	09	19.25006	00	45	34.03	+04	15	04.4		4 675
2225	T-2		1973	09	20.26458	00	44	42.10	+04	10	17.3		4 675
2225	T-2		1973	09	24.36181	00	41	05.31	+03	50	25.9		4 675
2225	T-2		1973	09	24.42847	00	41	01.62	+03	50	07.4		4 675
2225	T-2		1973	09	25.25642	00	40	17.29	+03	45	56.7		4 675
2225	T-2		1973	09	25.32031	00	40	13.61	+03	45	36.1		4 675
2225	T-2		1973	09	29.26632	00	36	37.16	+03	25	38.7		4 675
2225	T-2	*	1973	09	29.33073	00	36	33.39	+03	25	18.8	19.4	4 675
2225	T-2		1973	09	30.22257	00	35	44.28	+03	20	44.8		4 675
2225	T-2		1973	09	30.28785	00	35	40.51	+03	20	24.1		4 675
2225	T-2		1973	10	04.30208	00	31	58.23	+02	59	50.3		4 675
2225	T-2		1973	10	04.36476	00	31	54.63	+02	59	31.8		4 675
2225	T-2		1973	10	05.32917	00	31	01.59	+02	54	36.6		4 675
2225	T-2		1973	10	05.39132	00	30	58.09	+02	54	17.3		4 675
2229	T-2		1973	09	19.19948	00	45	03.32	+07	03	14.1		4 675
2229	T-2		1973	09	19.25006	00	45	00.97	+07	03	00.2		4 675
2229	T-2		1973	09	20.26458	00	44	14.75	+06	58	03.1		4 675
2229	T-2		1973	09	24.36181	00	41	00.66	+06	37	03.4		4 675
2229	T-2		1973	09	24.42847	00	40	57.27	+06	36	42.8		4 675
2229	T-2		1973	09	25.25642	00	40	17.47	+06	32	15.6		4 675
2229	T-2		1973	09	25.32031	00	40	14.31	+06	31	53.6		4 675
2229	T-2		1973	09	29.26632	00	36	58.80	+06	10	12.1		4 675
2229	T-2	*	1973	09	29.33073	00	36	55.46	+06	09	52.2	18.9	4 675
2229	T-2		1973	09	30.22257	00	36	10.91	+06	04	47.2		4 675
2229	T-2		1973	09	30.28785	00	36	07.49	+06	04	24.5		4 675
2229	T-2		1973	10	04.30208	00	32	45.12	+05	41	24.3		4 675

2229	T-2		1973	10	04.36476	00	32	41.96	+05	41	03.1		4 675
2229	T-2		1973	10	05.32917	00	31	53.43	+05	35	27.9		4 675
2229	T-2		1973	10	05.39132	00	31	50.32	+05	35	06.6		4 675
2257	T-2		1973	09	19.25006	00	48	00.19	+03	29	03.0		4 675
2257	T-2		1973	09	24.36181	00	43	35.31	+03	07	02.7		4 675
2257	T-2		1973	09	24.42847	00	43	31.71	+03	06	45.5		4 675
2257	T-2		1973	09	25.25642	00	42	47.46	+03	03	00.5		4 675
2257	T-2		1973	09	25.32031	00	42	43.91	+03	02	42.6		4 675
2257	T-2		1973	09	29.26632	00	39	06.07	+02	44	45.4		4 675
2257	T-2	*	1973	09	29.33073	00	39	02.34	+02	44	26.2	18.8	4 675
2257	T-2		1973	09	30.22257	00	38	12.62	+02	40	16.1		4 675
2257	T-2		1973	09	30.28785	00	38	08.80	+02	39	58.8		4 675
2257	T-2		1973	10	04.30208	00	34	21.66	+02	21	22.7		4 675
2257	T-2		1973	10	04.36476	00	34	17.93	+02	21	04.3		4 675
2257	T-2		1973	10	05.32917	00	33	23.30	+02	16	35.8		4 675
2257	T-2		1973	10	05.39132	00	33	19.80	+02	16	20.6		4 675
2277	T-2		1973	09	20.26458	00	48	03.70	+02	37	25.2		4 675
2277	T-2		1973	09	24.36181	00	44	44.37	+02	22	01.6		4 675
2277	T-2		1973	09	24.42847	00	44	40.92	+02	21	47.0		4 675
2277	T-2		1973	09	25.25642	00	43	59.87	+02	18	29.9		4 675
2277	T-2		1973	09	25.32031	00	43	56.59	+02	18	16.7		4 675
2277	T-2		1973	09	29.26632	00	40	34.23	+02	02	51.9		4 675
2277	T-2		1973	09	29.29219	00	40	32.92	+02	02	43.5		4 675
2277	T-2	*	1973	09	29.33073	00	40	30.73	+02	02	36.7	18.1	4 675
2277	T-2		1973	09	29.35694	00	40	29.47	+02	02	28.9		4 675
2277	T-2		1973	09	30.22257	00	39	44.62	+01	59	04.2		4 675
2277	T-2		1973	09	30.24826	00	39	43.35	+01	59	00.4		4 675
2277	T-2		1973	09	30.28785	00	39	41.03	+01	58	50.9		4 675
2277	T-2		1973	09	30.31476	00	39	39.67	+01	58	45.8		4 675
2277	T-2		1973	10	04.30208	00	36	11.32	+01	43	11.2		4 675
2277	T-2		1973	10	04.32708	00	36	09.91	+01	43	09.6		4 675
2277	T-2		1973	10	04.36476	00	36	07.91	+01	42	57.4		4 675
2277	T-2		1973	10	04.38889	00	36	06.50	+01	42	52.9		4 675
2277	T-2		1973	10	05.32917	00	35	17.74	+01	39	14.2		4 675
2277	T-2		1973	10	05.35382	00	35	16.30	+01	39	11.0		4 675
2277	T-2		1973	10	05.39132	00	35	14.38	+01	39	01.0		4 675
2277	T-2		1973	10	05.41597	00	35	12.89	+01	38	57.6		4 675
3007	T-2		1973	09	19.21250	00	07	56.57	-02	09	07.0		4 675
3007	T-2		1973	09	19.26354	00	07	53.21	-02	09	16.9		4 675
3007	T-2		1973	09	20.27795	00	06	50.46	-02	12	50.9		4 675
3007	T-2		1973	09	24.37431	00	02	32.90	-02	26	58.5		4 675
3007	T-2		1973	09	24.44167	00	02	28.60	-02	27	11.1		4 675
3007	T-2		1973	09	25.26875	00	01	36.96	-02	29	57.4		4 675
3007	T-2		1973	09	25.33299	00	01	32.70	-02	30	10.6		4 675
3007	T-2		1973	09	29.27986	23	57	25.90	-02	42	49.0		4 675
3007	T-2		1973	09	30.23524	23	56	27.14	-02	45	40.9		4 675
3007	T-2	*	1973	09	30.30174	23	56	22.83	-02	45	54.0	17.9	4 675
3007	T-2		1973	10	04.31493	23	52	22.75	-02	57	00.9		4 675
3007	T-2		1973	10	04.37674	23	52	18.98	-02	57	10.1		4 675
3060	T-2		1973	09	19.21250	00	10	20.57	-03	47	00.5		4 675
3060	T-2		1973	09	19.26354	00	10	17.64	-03	47	19.1		4 675
3060	T-2		1973	09	20.27795	00	09	22.84	-03	53	07.2		4 675
3060	T-2		1973	09	24.37431	00	05	38.34	-04	16	19.1		4 675
3060	T-2		1973	09	24.44167	00	05	34.61	-04	16	43.1		4 675
3060	T-2		1973	09	25.26875	00	04	49.30	-04	21	20.0		4 675
3060	T-2		1973	09	25.33299	00	04	45.66	-04	21	42.1		4 675
3060	T-2		1973	09	29.27986	00	01	08.50	-04	43	02.3		4 675
3060	T-2		1973	09	29.34375	00	01	04.86	-04	43	23.7		4 675
3060	T-2		1973	09	30.23524	00	00	16.30	-04	48	05.2		4 675

3060	T-2	*	1973	09	30.30174	00	00	12.61	-04	48	23.8	18.9	4 675
3060	T-2		1973	10	04.31493	23	56	37.23	-05	08	28.2		4 675
3060	T-2		1973	10	04.37674	23	56	33.86	-05	08	46.2		4 675
3060	T-2		1973	10	05.34167	23	55	43.48	-05	13	24.3		4 675
3060	T-2		1973	10	05.40347	23	55	40.14	-05	13	39.4		4 675
3067	T-2		1973	09	19.21250	00	11	52.84	-01	50	01.9		4 675
3067	T-2		1973	09	19.26354	00	11	49.74	-01	50	25.3		4 675
3067	T-2		1973	09	20.27795	00	10	51.21	-01	57	42.7		4 675
3067	T-2		1973	09	24.37431	00	06	51.33	-02	27	03.4		4 675
3067	T-2		1973	09	24.44167	00	06	47.38	-02	27	31.5		4 675
3067	T-2		1973	09	25.26875	00	05	59.18	-02	33	23.7		4 675
3067	T-2		1973	09	25.33299	00	05	55.24	-02	33	49.8		4 675
3067	T-2		1973	09	29.27986	00	02	04.80	-03	01	09.9		4 675
3067	T-2		1973	09	29.34375	00	02	01.03	-03	01	36.6		4 675
3067	T-2		1973	09	30.23524	00	01	09.81	-03	07	36.1		4 675
3067	T-2	*	1973	09	30.30174	00	01	05.86	-03	08	02.1	18.3	4 675
3067	T-2		1973	10	04.31493	23	57	20.15	-03	34	01.0		4 675
3067	T-2		1973	10	04.37674	23	57	16.61	-03	34	23.1		4 675
3067	T-2		1973	10	05.34167	23	56	24.01	-03	40	21.8		4 675
3067	T-2		1973	10	05.40347	23	56	20.59	-03	40	43.0		4 675
3076	T-2		1973	09	19.21250	00	09	44.00	-02	04	33.0		4 675
3076	T-2		1973	09	19.26354	00	09	41.67	-02	04	45.7		4 675
3076	T-2		1973	09	20.27795	00	08	57.88	-02	09	30.5		4 675
3076	T-2		1973	09	24.37431	00	05	58.78	-02	28	29.7		4 675
3076	T-2		1973	09	24.44167	00	05	55.68	-02	28	47.0		4 675
3076	T-2		1973	09	25.26875	00	05	19.70	-02	32	34.9		4 675
3076	T-2		1973	09	25.33299	00	05	16.74	-02	32	51.6		4 675
3076	T-2		1973	09	29.27986	00	02	23.81	-02	50	41.9		4 675
3076	T-2		1973	09	29.34375	00	02	20.98	-02	50	57.9		4 675
3076	T-2		1973	09	30.23524	00	01	42.33	-02	54	53.3		4 675
3076	T-2	*	1973	09	30.30174	00	01	39.37	-02	55	12.7	18.2	4 675
3076	T-2		1973	10	04.31493	23	58	47.64	-03	12	25.4		4 675
3076	T-2		1973	10	04.37674	23	58	45.00	-03	12	41.4		4 675
3076	T-2		1973	10	05.34167	23	58	04.37	-03	16	40.1		4 675
3076	T-2		1973	10	05.40347	23	58	01.76	-03	16	55.4		4 675
3126	T-2		1973	09	19.21250	00	17	40.34	-01	10	51.6		4 675
3126	T-2		1973	09	19.26354	00	17	36.94	-01	10	53.5		4 675
3126	T-2		1973	09	20.27795	00	16	33.59	-01	11	43.9		4 675
3126	T-2		1973	09	24.37431	00	12	11.44	-01	14	56.6		4 675
3126	T-2		1973	09	24.44167	00	12	06.87	-01	14	59.3		4 675
3126	T-2		1973	09	25.26875	00	11	13.83	-01	15	37.4		4 675
3126	T-2		1973	09	25.33299	00	11	09.48	-01	15	40.7		4 675
3126	T-2		1973	09	29.27986	00	06	54.23	-01	18	09.9		4 675
3126	T-2		1973	09	29.34375	00	06	49.89	-01	18	12.5		4 675
3126	T-2		1973	09	30.23524	00	05	53.06	-01	18	38.3		4 675
3126	T-2	*	1973	09	30.30174	00	05	48.63	-01	18	40.2	18.8	4 675
3126	T-2		1973	10	04.28958	00	01	38.75	-01	19	55.8		4 675
3126	T-2		1973	10	04.31493	00	01	37.28	-01	19	51.8		4 675
3126	T-2		1973	10	04.35208	00	01	34.81	-01	19	55.7		4 675
3126	T-2		1973	10	04.37674	00	01	33.34	-01	19	53.8		4 675
3126	T-2		1973	10	05.31684	00	00	36.44	-01	19	57.4		4 675
3126	T-2		1973	10	05.34167	00	00	35.00	-01	19	57.6		4 675
3126	T-2		1973	10	05.37917	00	00	32.50	-01	19	57.4		4 675
3126	T-2		1973	10	05.40347	00	00	31.10	-01	19	58.0		4 675
3137	T-2		1973	09	19.21250	00	13	36.62	-01	32	23.5		4 675
3137	T-2		1973	09	19.26354	00	13	34.43	-01	32	42.2		4 675
3137	T-2		1973	09	20.27795	00	12	52.42	-01	38	47.8		4 675
3137	T-2		1973	09	24.37431	00	10	00.72	-02	03	20.7		4 675
3137	T-2		1973	09	24.44167	00	09	57.85	-02	03	44.2		4 675

3137	T-2		1973	09	25.26875	00	09	23.25	-02	08	40.3	4 675
3137	T-2		1973	09	25.33299	00	09	20.52	-02	09	04.4	4 675
3137	T-2		1973	09	29.27986	00	06	34.77	-02	32	13.3	4 675
3137	T-2		1973	09	29.34375	00	06	31.99	-02	32	34.7	4 675
3137	T-2		1973	09	30.23524	00	05	54.93	-02	37	42.8	4 675
3137	T-2	*	1973	09	30.30174	00	05	52.10	-02	38	05.5	17.7 4 675
3137	T-2		1973	10	04.31493	00	03	07.57	-03	00	38.6	4 675
3137	T-2		1973	10	04.37674	00	03	04.97	-03	00	59.5	4 675
3137	T-2		1973	10	05.34167	00	02	26.24	-03	06	13.6	4 675
3137	T-2		1973	10	05.40347	00	02	23.63	-03	06	35.0	4 675
3145	T-2		1973	09	19.21250	00	14	57.37	-05	00	43.5	4 675
3145	T-2		1973	09	19.26354	00	14	54.71	-05	01	04.9	4 675
3145	T-2		1973	09	20.27795	00	14	08.29	-05	07	42.2	4 675
3145	T-2		1973	09	24.37431	00	10	56.49	-05	34	07.0	4 675
3145	T-2		1973	09	24.44167	00	10	53.12	-05	34	33.1	4 675
3145	T-2		1973	09	25.26875	00	10	14.49	-05	39	48.4	4 675
3145	T-2		1973	09	25.33299	00	10	11.30	-05	40	12.6	4 675
3145	T-2		1973	09	29.27986	00	07	04.32	-06	04	24.5	4 675
3145	T-2		1973	09	29.34375	00	07	01.17	-06	04	47.9	4 675
3145	T-2		1973	09	30.23524	00	06	19.45	-06	10	06.0	4 675
3145	T-2	*	1973	09	30.30174	00	06	16.20	-06	10	29.4	18.3 4 675
3145	T-2		1973	10	04.31493	00	03	10.01	-06	33	08.7	4 675
3145	T-2		1973	10	04.37674	00	03	06.99	-06	33	29.5	4 675
3145	T-2		1973	10	05.34167	00	02	23.41	-06	38	41.2	4 675
3145	T-2		1973	10	05.40347	00	02	20.57	-06	39	01.2	4 675
3148	T-2		1973	09	19.21250	00	17	40.29	-01	27	10.0	4 675
3148	T-2		1973	09	19.26354	00	17	37.20	-01	27	28.1	4 675
3148	T-2		1973	09	20.27795	00	16	37.56	-01	33	38.8	4 675
3148	T-2		1973	09	24.37431	00	12	32.49	-01	58	27.8	4 675
3148	T-2		1973	09	24.44167	00	12	28.32	-01	58	52.0	4 675
3148	T-2		1973	09	25.26875	00	11	38.89	-02	03	49.9	4 675
3148	T-2		1973	09	25.33299	00	11	34.86	-02	04	12.1	4 675
3148	T-2		1973	09	29.27986	00	07	37.89	-02	27	24.0	4 675
3148	T-2		1973	09	29.34375	00	07	33.85	-02	27	45.4	4 675
3148	T-2		1973	09	30.23524	00	06	41.08	-02	32	49.7	4 675
3148	T-2	*	1973	09	30.30174	00	06	36.91	-02	33	13.1	18.6 4 675
3148	T-2		1973	10	04.31493	00	02	42.83	-02	55	12.1	4 675
3148	T-2		1973	10	04.37674	00	02	39.15	-02	55	31.6	4 675
3148	T-2		1973	10	05.34167	00	01	44.37	-03	00	32.4	4 675
3148	T-2		1973	10	05.40347	00	01	40.73	-03	00	52.3	4 675
3189	T-2		1973	09	19.21250	00	21	32.20	-03	32	06.3	4 675
3189	T-2		1973	09	19.26354	00	21	29.20	-03	32	13.6	4 675
3189	T-2		1973	09	20.27795	00	20	32.48	-03	35	00.0	4 675
3189	T-2		1973	09	24.37431	00	16	36.77	-03	45	49.6	4 675
3189	T-2		1973	09	24.44167	00	16	32.82	-03	45	59.1	4 675
3189	T-2		1973	09	25.26875	00	15	44.72	-03	48	05.3	4 675
3189	T-2		1973	09	25.33299	00	15	40.91	-03	48	13.4	4 675
3189	T-2		1973	09	29.27986	00	11	49.02	-03	57	31.5	4 675
3189	T-2		1973	09	29.34375	00	11	45.02	-03	57	39.6	4 675
3189	T-2		1973	09	30.23524	00	10	53.01	-03	59	34.2	4 675
3189	T-2	*	1973	09	30.30174	00	10	48.70	-03	59	45.6	19.6 4 675
3189	T-2		1973	10	04.31493	00	06	56.56	-04	07	18.2	4 675
3189	T-2		1973	10	04.37674	00	06	52.92	-04	07	23.6	4 675
3189	T-2		1973	10	05.34167	00	05	58.28	-04	08	55.9	4 675
3189	T-2		1973	10	05.40347	00	05	54.69	-04	09	01.8	4 675
3223	T-2		1973	09	19.18611	00	22	30.74	-00	22	51.1	4 675
3223	T-2		1973	09	19.21250	00	22	29.85	-00	23	05.1	4 675
3223	T-2		1973	09	19.22500	00	22	29.14	-00	23	12.7	4 675
3223	T-2		1973	09	19.26354	00	22	27.38	-00	23	28.6	4 675

3223	T-2		1973	09	19.27865	00	22	26.71	-00	23	32.5	4 675
3223	T-2		1973	09	20.22847	00	21	44.26	-00	30	54.4	4 675
3223	T-2		1973	09	20.27795	00	21	42.32	-00	31	15.7	4 675
3223	T-2		1973	09	24.34688	00	18	36.22	-01	02	43.6	4 675
3223	T-2		1973	09	24.37431	00	18	34.82	-01	02	54.5	4 675
3223	T-2		1973	09	24.38750	00	18	34.06	-01	03	02.2	4 675
3223	T-2		1973	09	24.41597	00	18	32.73	-01	03	15.7	4 675
3223	T-2		1973	09	24.44167	00	18	31.55	-01	03	26.8	4 675
3223	T-2		1973	09	24.45434	00	18	30.92	-01	03	32.3	4 675
3223	T-2		1973	09	25.26875	00	17	53.34	-01	09	51.3	4 675
3223	T-2		1973	09	25.28125	00	17	52.70	-01	10	00.5	4 675
3223	T-2		1973	09	25.33299	00	17	50.34	-01	10	19.6	4 675
3223	T-2		1973	09	25.34601	00	17	49.65	-01	10	28.0	4 675
3223	T-2		1973	09	29.27986	00	14	45.61	-01	40	41.5	4 675
3223	T-2	*	1973	09	30.30174	00	13	57.57	-01	48	29.2	19.5 4 675
3223	T-2		1973	10	04.31493	00	10	51.95	-02	18	16.1	4 675
3223	T-2		1973	10	04.37674	00	10	49.04	-02	18	43.8	4 675
3223	T-2		1973	10	05.34167	00	10	05.42	-02	25	41.1	4 675
3223	T-2		1973	10	05.40347	00	10	02.41	-02	26	07.9	4 675
3236	T-2		1973	09	20.27795	00	25	05.95	-04	27	24.8	4 675
3236	T-2		1973	09	24.37431	00	20	58.10	-04	46	01.7	4 675
3236	T-2		1973	09	24.44167	00	20	53.83	-04	46	19.3	4 675
3236	T-2		1973	09	25.26875	00	20	03.55	-04	49	59.4	4 675
3236	T-2		1973	09	25.33299	00	19	59.51	-04	50	15.7	4 675
3236	T-2		1973	09	29.27986	00	15	57.52	-05	06	57.5	4 675
3236	T-2		1973	09	29.34375	00	15	53.61	-05	07	14.4	4 675
3236	T-2		1973	09	30.23524	00	14	59.19	-05	10	52.1	4 675
3236	T-2	*	1973	09	30.30174	00	14	55.01	-05	11	07.0	18.1 4 675
3236	T-2		1973	10	04.31493	00	10	52.53	-05	26	11.9	4 675
3236	T-2		1973	10	04.37674	00	10	48.66	-05	26	25.5	4 675
3236	T-2		1973	10	05.34167	00	09	51.61	-05	29	48.2	4 675
3236	T-2		1973	10	05.40347	00	09	47.74	-05	30	00.9	4 675
3289	T-2		1973	09	19.22500	00	26	31.67	-00	53	39.0	4 675
3289	T-2		1973	09	19.27865	00	26	29.38	-00	54	03.6	4 675
3289	T-2		1973	09	20.30278	00	25	47.89	-01	01	49.6	4 675
3289	T-2		1973	09	24.38750	00	22	58.96	-01	32	57.1	4 675
3289	T-2		1973	09	24.45434	00	22	56.09	-01	33	25.9	4 675
3289	T-2		1973	09	25.28125	00	22	21.58	-01	39	45.7	4 675
3289	T-2		1973	09	25.34601	00	22	18.76	-01	40	15.2	4 675
3289	T-2		1973	09	29.27986	00	19	32.51	-02	09	55.9	4 675
3289	T-2		1973	09	29.29219	00	19	31.89	-02	10	01.4	4 675
3289	T-2		1973	09	29.34375	00	19	29.60	-02	10	25.6	4 675
3289	T-2		1973	09	29.35694	00	19	29.11	-02	10	30.2	4 675
3289	T-2		1973	09	30.23524	00	18	52.16	-02	17	07.3	4 675
3289	T-2		1973	09	30.24826	00	18	51.51	-02	17	10.0	4 675
3289	T-2	*	1973	09	30.30174	00	18	49.21	-02	17	36.9	18.2 4 675
3289	T-2		1973	09	30.31476	00	18	48.64	-02	17	39.4	4 675
3289	T-2		1973	10	04.31493	00	16	00.75	-02	46	53.8	4 675
3289	T-2		1973	10	04.32708	00	16	00.23	-02	46	59.0	4 675
3289	T-2		1973	10	04.37674	00	15	58.07	-02	47	21.5	4 675
3289	T-2		1973	10	04.38889	00	15	57.62	-02	47	25.7	4 675
3289	T-2		1973	10	05.34167	00	15	18.36	-02	54	16.0	4 675
3289	T-2		1973	10	05.35382	00	15	17.63	-02	54	20.8	4 675
3289	T-2		1973	10	05.40347	00	15	15.71	-02	54	42.8	4 675
3289	T-2		1973	10	05.41597	00	15	15.03	-02	54	46.2	4 675
4118	T-2		1973	09	19.22500	00	35	31.81	-00	53	39.3	4 675
4118	T-2		1973	09	19.27865	00	35	29.07	-00	54	07.2	4 675
4118	T-2		1973	09	20.30278	00	34	37.90	-01	02	50.3	4 675
4118	T-2		1973	09	24.38750	00	31	05.73	-01	38	06.7	4 675

4118	T-2		1973	09	24.45434	00	31	01.96	-01	38	42.2	4 675
4118	T-2		1973	09	25.28125	00	30	17.97	-01	45	51.7	4 675
4118	T-2		1973	09	25.34601	00	30	14.47	-01	46	25.2	4 675
4118	T-2	*	1973	09	29.29219	00	26	38.60	-02	20	27.9	18.1 4 675
4118	T-2		1973	09	29.35694	00	26	34.87	-02	21	00.7	4 675
4118	T-2		1973	09	30.24826	00	25	45.88	-02	28	35.7	4 675
4118	T-2		1973	09	30.31476	00	25	42.02	-02	29	09.8	4 675
4118	T-2		1973	10	04.32708	00	22	00.07	-03	02	27.6	4 675
4118	T-2		1973	10	04.38889	00	21	56.53	-03	02	56.3	4 675
4118	T-2		1973	10	05.35382	00	21	03.84	-03	10	43.2	4 675
4118	T-2		1973	10	05.41597	00	21	00.29	-03	11	11.3	4 675
4136	T-2		1973	09	19.22500	00	36	37.65	-03	12	08.1	4 675
4136	T-2		1973	09	19.27865	00	36	34.86	-03	12	13.2	4 675
4136	T-2		1973	09	20.30278	00	35	43.45	-03	14	11.9	4 675
4136	T-2		1973	09	24.38750	00	32	12.97	-03	21	46.4	4 675
4136	T-2		1973	09	24.45434	00	32	09.25	-03	21	53.8	4 675
4136	T-2		1973	09	25.28125	00	31	26.09	-03	23	22.1	4 675
4136	T-2		1973	09	25.34601	00	31	22.64	-03	23	28.1	4 675
4136	T-2	*	1973	09	29.29219	00	27	53.23	-03	29	50.5	17.2 4 675
4136	T-2		1973	09	29.35694	00	27	49.59	-03	29	56.4	4 675
4136	T-2		1973	09	30.24826	00	27	02.32	-03	31	10.9	4 675
4136	T-2		1973	09	30.31476	00	26	58.69	-03	31	16.8	4 675
4136	T-2		1973	10	04.32708	00	23	26.92	-03	36	08.1	4 675
4136	T-2		1973	10	04.38889	00	23	23.60	-03	36	11.3	4 675
4136	T-2		1973	10	05.35382	00	22	33.57	-03	37	05.4	4 675
4136	T-2		1973	10	05.41597	00	22	30.16	-03	37	08.6	4 675
4171	T-2		1973	09	19.22500	00	39	14.72	-02	49	55.2	4 675
4171	T-2		1973	09	19.27865	00	39	12.02	-02	50	19.8	4 675
4171	T-2		1973	09	20.30278	00	38	21.86	-02	58	03.1	4 675
4171	T-2		1973	09	24.38750	00	34	56.99	-03	28	50.8	4 675
4171	T-2		1973	09	24.45434	00	34	53.44	-03	29	17.6	4 675
4171	T-2		1973	09	25.28125	00	34	11.34	-03	35	31.1	4 675
4171	T-2		1973	09	25.34601	00	34	07.80	-03	35	59.9	4 675
4171	T-2	*	1973	09	29.29219	00	30	43.33	-04	04	49.6	19.3 4 675
4171	T-2		1973	09	29.35694	00	30	39.83	-04	05	17.8	4 675
4171	T-2		1973	09	30.24826	00	29	53.53	-04	11	35.8	4 675
4171	T-2		1973	09	30.31476	00	29	49.85	-04	12	03.2	4 675
4186	T-2		1973	09	25.28125	00	34	49.91	-00	41	32.9	4 675
4186	T-2		1973	09	25.34601	00	34	46.72	-00	41	53.0	4 675
4186	T-2	*	1973	09	29.29219	00	31	38.25	-01	07	38.8	19.7 4 675
4186	T-2		1973	09	29.35694	00	31	35.02	-01	08	02.2	4 675
4186	T-2		1973	09	30.24826	00	30	52.43	-01	13	45.8	4 675
4186	T-2		1973	09	30.31476	00	30	48.85	-01	14	11.2	4 675
4186	T-2		1973	10	04.32708	00	27	34.98	-01	39	28.3	4 675
4186	T-2		1973	10	04.38889	00	27	31.80	-01	39	53.0	4 675
4186	T-2		1973	10	05.35382	00	26	45.64	-01	45	45.8	4 675
4186	T-2		1973	10	05.41597	00	26	42.46	-01	46	09.3	4 675
4198	T-2		1973	09	19.22500	00	41	23.48	-03	35	19.9	4 675
4198	T-2		1973	09	19.27865	00	41	20.83	-03	35	25.0	4 675
4198	T-2		1973	09	20.30278	00	40	31.71	-03	37	01.2	4 675
4198	T-2		1973	09	24.38750	00	37	05.43	-03	43	08.3	4 675
4198	T-2		1973	09	24.45434	00	37	01.71	-03	43	11.6	4 675
4198	T-2		1973	09	25.28125	00	36	18.48	-03	44	22.8	4 675
4198	T-2		1973	09	25.34601	00	36	14.84	-03	44	26.8	4 675
4198	T-2	*	1973	09	29.29219	00	32	40.16	-03	49	13.6	19.2 4 675
4198	T-2		1973	09	29.35694	00	32	36.39	-03	49	18.9	4 675
4198	T-2		1973	09	30.24826	00	31	46.89	-03	50	09.7	4 675
4198	T-2		1973	09	30.31476	00	31	43.08	-03	50	13.0	4 675
4198	T-2		1973	10	04.32708	00	27	57.74	-03	53	04.8	4 675

4198	T-2		1973	10	04.38889	00	27	53.93	-03	53	06.1	4 675
4198	T-2		1973	10	05.35382	00	26	59.92	-03	53	28.5	4 675
4198	T-2		1973	10	05.41597	00	26	56.24	-03	53	29.1	4 675
4829	T-2		1973	09	19.22500	00	32	13.07	-03	20	12.9	4 675
4829	T-2		1973	09	19.27865	00	32	10.28	-03	20	36.2	4 675
4829	T-2		1973	09	20.30278	00	31	19.14	-03	27	37.3	4 675
4829	T-2		1973	09	24.38750	00	27	49.45	-03	55	31.0	4 675
4829	T-2		1973	09	24.45434	00	27	45.90	-03	55	59.1	4 675
4829	T-2		1973	09	25.28125	00	27	02.95	-04	01	34.6	4 675
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5065	T-2		1973	09	20.21458	00	13	42.72	+16	18	34.4	4 675
5065	T-2		1973	09	20.29253	00	13	38.70	+16	18	06.3	4 675
5065	T-2		1973	09	24.40035	00	10	08.06	+15	51	30.1	4 675
5065	T-2		1973	09	24.47986	00	10	03.74	+15	50	58.4	4 675
5065	T-2	*	1973	09	25.29375	00	09	22.02	+15	45	16.5	19.8 4 675
5065	T-2		1973	09	25.35903	00	09	18.40	+15	44	46.8	4 675
5065	T-2		1973	09	29.24062	00	05	57.28	+15	15	59.7	4 675
5065	T-2		1973	09	29.30486	00	05	53.71	+15	15	29.2	4 675
5065	T-2		1973	09	30.19722	00	05	07.88	+15	08	31.6	4 675
5065	T-2		1973	09	30.35295	00	04	59.47	+15	07	17.0	4 675
5065	T-2		1973	10	04.27708	00	01	40.01	+14	35	07.9	4 675
5065	T-2		1973	10	04.33906	00	01	36.98	+14	34	37.2	4 675
5065	T-2		1973	10	05.36632	00	00	45.79	+14	25	53.6	4 675
5065	T-2		1973	10	05.42847	00	00	42.58	+14	25	22.3	4 675
1060	T-3		1977	10	11.26632	00	52	21.36	+18	00	31.0	4 675
1060	T-3		1977	10	11.33351	00	52	17.64	+17	59	55.5	4 675
1060	T-3		1977	10	12.26510	00	51	28.94	+17	52	06.1	4 675
1060	T-3		1977	10	12.33125	00	51	25.14	+17	51	32.4	4 675
1060	T-3		1977	10	16.25156	00	48	02.38	+17	17	13.7	4 675
1060	T-3		1977	10	16.31684	00	47	59.02	+17	16	39.8	4 675
1060	T-3	*	1977	10	17.25365	00	47	11.86	+17	08	14.7	19.6 4 675
1060	T-3		1977	10	17.32083	00	47	08.28	+17	07	37.3	4 675
1060	T-3		1977	10	22.42812	00	43	00.14	+16	20	22.6	4 675
1060	T-3		1977	10	22.48003	00	42	57.72	+16	19	50.7	4 675
1081	T-3		1977	10	07.24652	00	56	26.65	+20	18	08.3	4 675
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1081	T-3		1977	10	12.33125	00	52	28.75	+19	20	45.8	4 675
1081	T-3		1977	10	16.25156	00	49	33.24	+18	33	59.1	4 675
1081	T-3		1977	10	16.31684	00	49	30.33	+18	33	11.9	4 675
1081	T-3	*	1977	10	17.25365	00	48	50.17	+18	21	49.2	16.5 4 675
1081	T-3		1977	10	17.32083	00	48	47.12	+18	21	01.3	4 675
1081	T-3		1977	10	22.42812	00	45	21.67	+17	18	07.7	4 675
1081	T-3		1977	10	22.48003	00	45	19.75	+17	17	29.3	4 675
3028	T-3	*	1977	10	16.27309	01	26	24.96	+09	09	01.6	18.4 4 675
3028	T-3		1977	10	16.33872	01	26	20.91	+09	08	44.4	4 675
3028	T-3		1977	10	17.27552	01	25	26.10	+09	04	48.6	4 675
3028	T-3		1977	10	17.34236	01	25	22.01	+09	04	30.9	4 675
3028	T-3		1977	10	21.39792	01	21	24.70	+08	47	22.2	4 675
3028	T-3		1977	10	21.45799	01	21	21.16	+08	47	05.8	4 675
3028	T-3		1977	10	22.39844	01	20	26.64	+08	43	05.2	4 675
3028	T-3		1977	10	22.45920	01	20	22.97	+08	42	51.4	4 675
3087	T-3		1977	10	12.28681	01	27	17.29	+09	30	40.7	4 675
3087	T-3		1977	10	12.35347	01	27	13.46	+09	30	21.7	4 675
3087	T-3	*	1977	10	16.27309	01	23	31.80	+09	11	27.4	19.2 4 675
3087	T-3		1977	10	16.33872	01	23	27.99	+09	11	08.0	4 675
3087	T-3		1977	10	17.27552	01	22	35.09	+09	06	37.5	4 675
3087	T-3		1977	10	17.34236	01	22	31.09	+09	06	17.7	4 675

3087	T-3		1977	10	21.39792	01	18	43.63	+08	46	39.4		4 675
3087	T-3		1977	10	21.45799	01	18	40.14	+08	46	22.9		4 675
3180	T-3		1977	10	07.27031	01	27	41.11	+07	15	18.9		4 675
3180	T-3		1977	10	11.28819	01	23	46.24	+07	09	44.4		4 675
3180	T-3		1977	10	11.35642	01	23	42.09	+07	09	38.0		4 675
3180	T-3		1977	10	12.28681	01	22	46.79	+07	08	17.4		4 675
3180	T-3		1977	10	12.35347	01	22	42.59	+07	08	10.4		4 675
3180	T-3	*	1977	10	16.27309	01	18	46.49	+07	02	27.2	19.2	4 675
3180	T-3		1977	10	16.33872	01	18	42.43	+07	02	20.5		4 675
3180	T-3		1977	10	17.27552	01	17	46.00	+07	01	02.1		4 675
3180	T-3		1977	10	17.34236	01	17	41.80	+07	00	56.9		4 675
3180	T-3		1977	10	21.39792	01	13	39.87	+06	55	26.6		4 675
3180	T-3		1977	10	21.45799	01	13	36.26	+06	55	20.1		4 675
3180	T-3		1977	10	22.39844	01	12	41.56	+06	54	11.4		4 675
3180	T-3		1977	10	22.45920	01	12	37.87	+06	54	04.7		4 675
3217	T-3		1977	10	07.27031	01	25	21.53	+09	41	37.8		4 675
3217	T-3		1977	10	11.28819	01	21	39.86	+09	17	16.2		4 675
3217	T-3		1977	10	11.35642	01	21	35.91	+09	16	51.0		4 675
3217	T-3		1977	10	12.28681	01	20	44.45	+09	11	07.4		4 675
3217	T-3		1977	10	12.35347	01	20	40.67	+09	10	41.5		4 675
3217	T-3		1977	10	16.26233	01	17	03.90	+08	46	25.7		4 675
3217	T-3	*	1977	10	16.27309	01	17	03.10	+08	46	25.3	19.2	4 675
3217	T-3		1977	10	16.32795	01	17	00.03	+08	46	00.9		4 675
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3217	T-3		1977	10	17.26458	01	16	08.44	+08	40	14.1		4 675
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3217	T-3		1977	10	17.33177	01	16	04.71	+08	39	49.2		4 675
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3217	T-3		1977	10	21.39792	01	12	24.03	+08	14	51.9		4 675
3217	T-3		1977	10	21.45799	01	12	20.73	+08	14	29.1		4 675
3217	T-3		1977	10	22.39844	01	11	31.08	+08	08	48.6		4 675
3217	T-3		1977	10	22.45920	01	11	27.87	+08	08	23.7		4 675
3317	T-3		1977	10	07.27031	01	20	09.04	+04	14	56.6		4 675
3317	T-3		1977	10	07.28125	01	20	08.49	+04	14	52.0		4 675
3317	T-3		1977	10	11.28819	01	16	23.08	+03	54	22.7		4 675
3317	T-3		1977	10	11.30000	01	16	22.63	+03	54	18.1		4 675
3317	T-3		1977	10	11.35642	01	16	19.08	+03	54	02.0		4 675
3317	T-3		1977	10	11.36771	01	16	18.63	+03	53	58.4		4 675
3317	T-3		1977	10	12.28681	01	15	26.42	+03	49	14.4		4 675
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3317	T-3	*	1977	10	16.27309	01	11	38.28	+03	29	12.0	18.6	4 675
3317	T-3		1977	10	16.28368	01	11	37.64	+03	29	09.1		4 675
3317	T-3		1977	10	16.33872	01	11	34.34	+03	28	52.3		4 675
3317	T-3		1977	10	16.34931	01	11	33.79	+03	28	50.3		4 675
3317	T-3		1977	10	17.27552	01	10	41.00	+03	24	15.6		4 675
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3731	T-3		1977	10	07.27031	01	18	46.61	+08	52	10.2		4 675
3731	T-3		1977	10	11.27743	01	14	43.23	+08	39	59.5		4 675
3731	T-3		1977	10	11.28819	01	14	42.34	+08	39	58.7		4 675
3731	T-3		1977	10	11.34375	01	14	38.96	+08	39	47.4		4 675
3731	T-3		1977	10	11.35642	01	14	38.04	+08	39	46.7		4 675
3731	T-3		1977	10	12.27587	01	13	42.41	+08	36	54.0		4 675
3731	T-3		1977	10	12.28681	01	13	41.44	+08	36	51.5		4 675
3731	T-3		1977	10	12.34271	01	13	38.05	+08	36	39.9		4 675
3731	T-3		1977	10	12.35347	01	13	37.27	+08	36	38.1		4 675
3731	T-3	*	1977	10	16.27309	01	09	39.42	+08	24	12.7	19.8	4 675
3731	T-3		1977	10	16.33872	01	09	35.49	+08	24	00.3		4 675

3731 T-3 1977 10 17.27552 01 08 39.51 +08 21 04.1 4 675
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4386 T-3 * 1977 10 16.28368 01 36 32.40 +01 17 02.9 19.0 4 675
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4386 T-3 1977 10 17.35313 01 35 34.33 +01 10 27.4 4 675
4386 T-3 1977 10 21.38698 01 31 56.85 +00 46 46.2 4 675
4386 T-3 1977 10 21.44705 01 31 53.52 +00 46 26.7 4 675
4386 T-3 1977 10 22.44878 01 30 59.97 +00 40 51.8 4 675

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1.5-m reflector
AC
1938 DK1 1989 05 05.24775 14 57 37.69 +06 07 29.6 801
1941 HC 1989 06 29.17434 17 19 27.34 -11 52 21.4 801
1941 HC 1989 06 30.18295 17 18 42.26 -11 55 06.5 801
1966 PG 1989 06 03.29956 20 06 17.64 -08 55 00.2 801
1966 PG 1989 06 04.29680 20 06 13.32 -08 51 13.0 801
1966 PG 1989 06 30.24818 19 55 52.78 -07 53 00.3 I 801
1982 FZ1 1989 07 01.13210 14 48 50.50 -10 26 34.6 801
1984 EZ 1989 06 30.20669 18 02 02.93 -04 04 48.5 801
1988 VV7 * 1988 11 07.11452 00 38 37.53 +10 36 21.7 17 801
1989 OB 1989 08 01.11440 21 25 38.01 -03 05 07.5 801
1989 OB 1989 08 02.09995 21 25 46.96 -02 34 01.1 801

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Observers M. R. Cesco, C. E. Lopez, H. S. Lopez, H. Mira, J. G. Sanguin,
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1982 BO12* 1982 01 22.21184 08 41 28.13 +12 03 08.0 808
1982 XU4 * 1982 12 07.08004 02 43 52.03 -00 42 39.3 808
1982 XU4 1982 12 07.11536 02 43 51.94 -00 42 37.1 808
1984 QC1 1984 08 26.23243 22 33 38.83 -12 57 32.2 808
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1984 QV1 1984 08 26.26568 22 26 31.07 -12 43 04.7 808
1984 RM * 1984 09 01.17865 22 24 21.33 -14 10 40.8 808
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1984 RN * 1984 09 01.17865 22 33 24.51 -14 05 30.1 808
1984 RN 1984 09 01.22021 22 33 22.38 -14 05 47.7 808
1984 UZ4 * 1984 10 18.10365 23 24 18.81 +10 20 07.4 808
1984 UZ4 1984 10 18.15421 23 24 17.50 +10 19 49.6 808
1984 UA5 * 1984 10 28.22594 04 05 39.15 +06 10 09.9 808
1984 UA5 1984 10 28.28134 04 05 37.27 +06 09 52.1 808
1984 UB5 * 1984 10 28.22594 04 12 09.04 +07 10 13.8 808
1984 UB5 1984 10 28.28134 04 12 06.97 +07 10 10.8 808
1986 DA 1986 05 11.14778 13 12 31.66 +00 23 28.4 808

1986	JX1	*	1986	05	08.20237	14	32	41.67	-35	39	15.1	808
1986	JX1		1986	05	08.23700	14	32	39.30	-35	39	10.1	808
1986	KS	*	1986	05	31.14581	15	31	14.06	-07	53	36.3	808
1986	KS		1986	05	31.18390	15	31	11.96	-07	53	39.3	808
1987	CP	*	1987	02	05.26794	10	59	04.48	-11	17	32.6	808
1987	CP		1987	02	05.32057	10	59	03.49	-11	17	35.8	808
1987	CQ	*	1987	02	05.26794	11	01	18.19	-12	34	53.2	808
1987	CQ		1987	02	05.32057	11	01	16.77	-12	34	49.0	808
1988	EU2	*	1988	03	12.05361	09	07	44.90	+19	37	37.3	808
1988	GV2	*	1988	04	10.00074	10	19	49.83	+09	27	06.7	808
1988	GV2		1988	04	10.03191	10	19	49.92	+09	27	05.1	808
1988	TK4	*	1988	10	07.13221	23	13	03.22	-01	41	44.5	808
1988	TK4		1988	10	07.14676	23	13	02.67	-01	41	46.2	808
1988	VU7	*	1988	11	05.32698	05	23	15.97	+26	07	42.7	808
1988	VU7		1988	11	15.29790	05	23	17.27	+26	07	45.6	808
1988	XR4	*	1988	12	09.16658	04	23	31.27	+23	53	01.9	808
1988	XR4		1988	12	09.20813	04	23	29.60	+23	52	59.7	808
1988	XS4	*	1988	12	11.16804	04	47	07.18	+25	34	51.3	808
1988	XS4		1988	12	11.20440	04	47	04.68	+25	34	42.0	808
1988	XT4	*	1988	12	11.16804	04	48	03.49	+25	39	14.7	808
1988	XT4		1988	12	11.20440	04	48	01.05	+25	39	14.6	808

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Measurers H. Debehogne, E. Elst, M. Geffert
GPO 0.4-m astrograph and 1-m Schmidt

1938	DK1		1989	04	05.29140	15	18	32.02	+02	17	45.5	7 809
1938	DK1		1989	04	07.28109	15	17	38.44	+02	36	02.6	7 809
1938	DK1		1989	04	11.26325	15	15	34.24	+03	12	06.0	7 809
1938	DK1		1989	04	13.29449	15	14	22.71	+03	30	05.4	7 809
1975	VS5		1988	09	01.01840	20	56	44.84	-12	40	09.1	3 809
1975	VS5		1988	09	01.02465	20	56	44.61	-12	40	11.7	3 809
1975	VS5		1988	09	01.03090	20	56	44.39	-12	40	14.3	3 809
1975	VS5		1988	09	09.19757	20	51	56.49	-13	36	36.9	3 809
1975	VS5		1988	09	09.20382	20	51	56.27	-13	36	39.5	3 809
1975	VS5		1988	09	09.21007	20	51	56.04	-13	36	42.1	3 809
1978	QG2		1988	09	09.37049	23	16	25.17	-01	48	29.5	3 809
1978	QG2		1988	09	09.37674	23	16	24.83	-01	48	32.7	3 809
1978	QG2		1988	09	09.38299	23	16	24.49	-01	48	36.0	3 809
1978	QG2		1988	09	11.37187	23	14	37.75	-02	05	41.4	3 809
1978	QG2		1988	09	11.37812	23	14	37.41	-02	05	44.6	3 809
1978	QG2		1988	09	11.38437	23	14	37.07	-02	05	47.7	3 809
1978	QG2		1988	09	14.32153	23	12	01.48	-02	31	02.3	3 809
1978	QG2		1988	09	14.32847	23	12	01.11	-02	31	06.2	3 809
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1978	QG2		1988	09	18.29305	23	08	38.48	-03	04	37.4	3 809
1978	QG2		1988	09	18.29861	23	08	38.19	-03	04	40.2	3 809
1978	QG2		1988	09	19.28160	23	07	49.82	-03	12	48.6	3 809
1978	QG2		1988	09	19.28646	23	07	49.59	-03	12	51.0	3 809
1978	QG2		1988	09	19.29132	23	07	49.34	-03	12	53.4	3 809
1980	FJ1		1988	09	08.35104	23	21	03.40	-06	45	52.2	16.2 3 809
1980	FJ1		1988	09	08.35729	23	21	03.05	-06	45	52.0	3 809

1980	FJ1	1988	09	08.36354	23	21	02.70	-06	45	51.7	3 809
1980	FJ1	1988	09	10.37187	23	19	09.34	-06	44	41.7	3 809
1980	FJ1	1988	09	10.37812	23	19	09.00	-06	44	41.4	3 809
1980	FJ1	1988	09	10.38437	23	19	08.65	-06	44	41.2	3 809
1980	FJ1	1988	09	17.33437	23	12	38.83	-06	39	45.0	3 809
1980	FJ1	1988	09	17.34062	23	12	38.47	-06	39	44.7	3 809
1980	FJ1	1988	09	17.34687	23	12	38.12	-06	39	44.4	3 809
1980	FJ1	1988	09	18.07847	23	11	58.33	-06	39	07.7	3 809
1980	FJ1	1988	09	18.08403	23	11	58.02	-06	39	07.4	3 809
1980	FJ1	1988	09	18.08958	23	11	57.70	-06	39	07.0	3 809
1980	FJ1	1988	09	20.05486	23	10	10.84	-06	37	17.3	3 809
1980	FJ1	1988	09	20.06041	23	10	10.52	-06	37	17.1	3 809
1980	FJ1	1988	09	20.06597	23	10	10.20	-06	37	16.8	3 809
1980	NB	1988	09	08.31493	23	10	44.11	-02	19	45.3	3 809
1980	NB	1988	09	08.32118	23	10	43.77	-02	19	47.6	3 809
1980	NB	1988	09	08.32743	23	10	43.42	-02	19	49.9	3 809
1980	NB	1988	09	14.29965	23	05	22.62	-02	56	28.1	3 809
1980	NB	1988	09	14.30590	23	05	22.28	-02	56	30.1	3 809
1980	NB	1988	09	14.31215	23	05	21.94	-02	56	32.2	3 809
1980	NB	1988	09	20.27048	23	00	20.84	-03	32	08.5	3 809
1980	NB	1988	09	20.27535	23	00	20.59	-03	32	10.3	3 809
1980	NB	1988	09	20.28021	23	00	20.33	-03	32	12.0	3 809
1981	QT	1988	09	06.32674	22	42	09.55	-05	55	35.2	3 809
1981	QT	1988	09	06.33298	22	42	09.17	-05	55	36.9	3 809
1981	QT	1988	09	08.16910	22	40	27.22	-06	04	40.5	3 809
1981	QT	1988	09	08.17535	22	40	26.87	-06	04	42.6	3 809
1981	QT	1988	09	08.18160	22	40	26.52	-06	04	44.4	3 809
1981	QT	1988	09	11.05174	22	37	49.65	-06	18	49.3	3 809
1981	QT	1988	09	11.05798	22	37	49.30	-06	18	50.8	3 809
1981	QT	1988	09	11.06424	22	37	48.96	-06	18	52.8	3 809
1981	QT	1988	09	14.24340	22	35	00.48	-06	34	06.4	3 809
1981	QT	1988	09	14.24965	22	35	00.15	-06	34	07.9	3 809
1981	QT	1988	09	14.25590	22	34	59.83	-06	34	09.7	3 809
1981	QT	1988	09	18.21180	22	31	44.37	-06	52	11.0	3 809
1981	QT	1988	09	18.21736	22	31	44.11	-06	52	12.5	3 809
1981	QT	1988	09	18.22292	22	31	43.83	-06	52	13.9	3 809
1981	QT	1988	09	20.18715	22	30	13.74	-07	00	39.9	3 809
1981	QT	1988	09	20.19201	22	30	13.51	-07	00	41.0	3 809
1981	QT	1988	09	20.19687	22	30	13.28	-07	00	42.2	3 809
1981	RV4	1988	09	09.37049	23	15	55.88	-02	14	16.5	3 809
1981	RV4	1988	09	09.37674	23	15	55.59	-02	14	20.8	3 809
1981	RV4	1988	09	09.38299	23	15	55.30	-02	14	24.8	3 809
1981	RV4	1988	09	11.37187	23	14	23.44	-02	35	46.2	3 809
1981	RV4	1988	09	11.37812	23	14	23.15	-02	35	50.1	3 809
1981	RV4	1988	09	11.38437	23	14	22.86	-02	35	54.1	3 809
1981	RV4	1988	09	14.32153	23	12	08.25	-03	07	33.5	3 809
1981	RV4	1988	09	14.32847	23	12	07.93	-03	07	38.0	3 809
1981	RV4	1988	09	14.33541	23	12	07.61	-03	07	42.1	3 809
1981	RV4	1988	09	19.28160	23	08	29.41	-04	00	13.3	3 809
1981	RV4	1988	09	19.28646	23	08	29.17	-04	00	16.4	3 809
1981	RV4	1988	09	19.29132	23	08	28.96	-04	00	19.5	3 809
1982	XV	1988	09	07.22951	22	04	59.00	-14	00	30.8	3 809
1982	XV	1988	09	07.23576	22	04	58.67	-14	00	32.9	3 809
1982	XV	1988	09	07.24201	22	04	58.34	-14	00	34.9	3 809
1982	XV	1988	09	09.10521	22	03	23.85	-14	10	37.1	3 809
1982	XV	1988	09	09.11146	22	03	23.55	-14	10	39.0	3 809
1982	XV	1988	09	09.11771	22	03	23.24	-14	10	40.8	3 809
1982	XV	1988	09	12.20034	22	00	55.03	-14	26	06.6	3 809
1982	XV	1988	09	12.20660	22	00	54.74	-14	26	08.5	3 809

1982	XV	1988	09	12.21284	22	00	54.42	-14	26	10.3	3 809
1982	XV	1988	09	15.06007	21	58	49.37	-14	39	04.5	3 809
1982	XV	1988	09	15.06632	21	58	49.09	-14	39	06.2	3 809
1982	XV	1988	09	15.07257	21	58	48.81	-14	39	07.7	3 809
1982	XV	1988	09	16.28646	21	57	58.42	-14	44	10.8	3 809
1982	XV	1988	09	16.29271	21	57	58.15	-14	44	12.4	3 809
1982	XV	1988	09	16.29896	21	57	57.90	-14	44	13.9	3 809
1983	TS1	1988	09	07.22951	22	09	08.09	-14	39	57.7	3 809
1983	TS1	1988	09	07.23576	22	09	07.82	-14	39	59.6	3 809
1983	TS1	1988	09	07.24201	22	09	07.55	-14	40	01.2	3 809
1983	TS1	1988	09	09.10521	22	07	48.62	-14	47	32.8	3 809
1983	TS1	1988	09	09.11146	22	07	48.36	-14	47	34.5	3 809
1983	TS1	1988	09	09.11771	22	07	48.09	-14	47	36.1	3 809
1983	TS1	1988	09	12.20034	22	05	42.69	-14	59	14.4	3 809
1983	TS1	1988	09	12.20660	22	05	42.44	-14	59	15.7	3 809
1983	TS1	1988	09	12.21284	22	05	42.18	-14	59	17.1	3 809
1983	TS1	1988	09	15.06007	22	03	54.29	-15	09	01.8	3 809
1983	TS1	1988	09	15.06632	22	03	54.05	-15	09	03.1	3 809
1983	TS1	1988	09	15.07257	22	03	53.81	-15	09	04.4	3 809
1983	TS1	1988	09	16.28646	22	03	09.70	-15	12	53.8	3 809
1983	TS1	1988	09	16.29271	22	03	09.48	-15	12	54.6	3 809
1983	TS1	1988	09	16.29896	22	03	09.25	-15	12	55.8	3 809
1984	HG1	1988	09	10.30729	22	05	50.39	-05	25	37.4	3 809
1984	HG1	1988	09	10.31354	22	05	50.09	-05	25	39.6	3 809
1984	HG1	1988	09	10.31979	22	05	49.77	-05	25	41.7	3 809
1984	HG1	1988	09	13.18403	22	03	40.80	-05	39	54.3	3 809
1984	HG1	1988	09	13.19514	22	03	40.30	-05	39	57.5	3 809
1984	HG1	1988	09	13.20625	22	03	39.79	-05	40	00.8	3 809
1984	HG1	1988	09	17.20451	22	01	00.26	-05	58	52.2	3 809
1984	HG1	1988	09	17.21111	22	01	00.01	-05	58	54.1	3 809
1984	HG1	1988	09	17.21771	22	00	59.75	-05	58	56.1	3 809
1985	UA	1988	09	12.31146	22	56	54.29	-04	53	14.8	3 809
1985	UA	1988	09	12.31771	22	56	53.89	-04	53	16.3	3 809
1985	UA	1988	09	12.32396	22	56	53.51	-04	53	18.0	3 809
1985	UA	1988	09	14.26562	22	54	53.26	-05	02	16.3	3 809
1985	UA	1988	09	14.27187	22	54	52.87	-05	02	18.0	3 809
1985	UA	1988	09	14.27812	22	54	52.47	-05	02	19.7	3 809
1985	UA	1988	09	15.32396	22	53	48.31	-05	07	06.3	3 809
1985	UA	1988	09	15.33854	22	53	47.40	-05	07	10.2	3 809
1985	UA	1988	09	15.34687	22	53	46.87	-05	07	12.5	3 809
1985	UA	1988	09	18.23680	22	50	53.71	-05	20	10.4	3 809
1985	UA	1988	09	18.24236	22	50	53.38	-05	20	11.9	3 809
1985	UA	1988	09	18.24791	22	50	53.05	-05	20	13.5	3 809
1985	UA	1988	09	20.20521	22	48	59.59	-05	28	43.1	3 809
1985	UA	1988	09	20.21007	22	48	59.31	-05	28	44.4	3 809
1985	UA	1988	09	20.21493	22	48	59.02	-05	28	46.0	3 809
1985	UK	1988	09	04.99896	20	57	51.51	-15	05	40.0	3 809
1985	UK	1988	09	05.00521	20	57	51.29	-15	05	40.7	3 809
1985	UK	1988	09	05.01146	20	57	51.04	-15	05	41.2	3 809
1985	UK	1988	09	06.99687	20	56	46.48	-15	08	05.2	3 809
1985	UK	1988	09	07.00312	20	56	46.30	-15	08	05.4	3 809
1985	UK	1988	09	07.00938	20	56	46.09	-15	08	06.0	3 809
1985	UK	1988	09	09.17743	20	55	44.76	-15	10	13.0	3 809
1985	UK	1988	09	09.18368	20	55	44.58	-15	10	13.0	3 809
1985	UK	1988	09	09.18993	20	55	44.40	-15	10	13.3	3 809
1985	UK	1988	09	10.99791	20	55	02.36	-15	11	31.7	3 809
1985	UK	1988	09	11.00625	20	55	02.19	-15	11	32.0	3 809
1985	UK	1988	09	11.01458	20	55	02.00	-15	11	32.7	3 809
1985	UK	1988	09	13.99861	20	54	08.43	-15	12	47.8	3 809

1985	UK	1988	09	14.00694	20	54	08.29	-15	12	48.0		3 809
1985	UK	1988	09	14.01527	20	54	08.14	-15	12	48.2		3 809
1985	UK	1988	09	16.07812	20	53	43.29	-15	12	59.4		3 809
1985	UK	1988	09	16.08437	20	53	43.22	-15	12	59.7		3 809
1985	UK	1988	09	16.09062	20	53	43.15	-15	12	59.7		3 809
1985	UK	1988	09	18.99062	20	53	26.18	-15	12	17.1		3 809
1985	UK	1988	09	19.00798	20	53	26.09	-15	12	16.7		3 809
1985	UK	1988	09	19.02534	20	53	26.00	-15	12	16.3		3 809
1988	PM1	1988	09	04.24549	22	38	26.97	-07	58	49.0		3 809
1988	PM1	1988	09	04.25174	22	38	26.71	-07	58	51.7		3 809
1988	PM1	1988	09	04.25799	22	38	26.41	-07	58	54.4		3 809
1988	PM1	1988	09	05.26562	22	37	43.60	-08	05	52.2		3 809
1988	PM1	1988	09	05.27187	22	37	43.32	-08	05	54.8		3 809
1988	PM1	1988	09	05.27812	22	37	43.03	-08	05	57.4		3 809
1988	PM1	1988	09	07.35521	22	36	16.06	-08	20	08.5		3 809
1988	PM1	1988	09	07.36146	22	36	15.80	-08	20	11.3		3 809
1988	PM1	1988	09	07.36771	22	36	15.53	-08	20	13.7		3 809
1988	PM1	1988	09	10.28229	22	34	18.64	-08	39	37.0		3 809
1988	PM1	1988	09	10.28889	22	34	18.38	-08	39	39.6		3 809
1988	PM1	1988	09	10.29549	22	34	18.12	-08	39	42.2		3 809
1988	PM1	1988	09	14.22326	22	31	52.88	-09	04	23.9		3 809
1988	PM1	1988	09	14.22951	22	31	52.65	-09	04	25.5		3 809
1988	PM1	1988	09	14.23576	22	31	52.42	-09	04	27.9		3 809
1988	PM1	1988	09	15.19548	22	31	19.70	-09	10	11.3		3 809
1988	PM1	1988	09	15.20173	22	31	19.49	-09	10	13.8		3 809
1988	PM1	1988	09	15.20799	22	31	19.29	-09	10	15.9		3 809
1988	PM1	1988	09	16.31910	22	30	42.44	-09	16	41.8		3 809
1988	PM1	1988	09	16.32569	22	30	42.23	-09	16	44.1		3 809
1988	PM1	1988	09	16.33229	22	30	42.03	-09	16	46.3		3 809
1988	PM1	1988	09	19.16354	22	29	17.45	-09	32	16.0		3 809
1988	PM1	1988	09	19.17048	22	29	17.22	-09	32	18.3		3 809
1988	PM1	1988	09	19.17743	22	29	17.00	-09	32	20.6		3 809
1988	PM1	1988	09	20.01284	22	28	54.79	-09	36	38.1		3 809
1988	PM1	1988	09	20.01771	22	28	54.68	-09	36	39.4		3 809
1988	PM1	1988	09	20.02257	22	28	54.55	-09	36	40.8		3 809
1988	PR1	1988	09	11.32326	22	34	02.33	-07	32	07.3		3 809
1988	PR1	1988	09	11.32951	22	34	02.07	-07	32	10.7		3 809
1988	PR1	1988	09	11.33576	22	34	01.82	-07	32	14.0		3 809
1988	PR1	1988	09	13.28576	22	32	44.47	-07	49	39.2		3 809
1988	PR1	1988	09	13.29201	22	32	44.22	-07	49	42.7		3 809
1988	PR1	1988	09	13.29826	22	32	43.97	-07	49	46.1		3 809
1988	PR1	1988	09	15.19548	22	31	31.28	-08	06	24.3		3 809
1988	PR1	1988	09	15.20173	22	31	31.04	-08	06	27.3		3 809
1988	PR1	1988	09	15.20799	22	31	30.80	-08	06	30.5		3 809
1988	PR1	1988	09	15.21910	22	31	30.33	-08	06	35.5		3 809
1988	PR1	1988	09	15.22535	22	31	30.08	-08	06	38.6		3 809
1988	PR1	1988	09	15.23159	22	31	29.84	-08	06	41.9		3 809
1988	PR1	1988	09	18.19028	22	29	42.16	-08	31	50.1		3 809
1988	PR1	1988	09	18.19618	22	29	41.96	-08	31	53.1		3 809
1988	PR1	1988	09	18.20208	22	29	41.74	-08	31	56.2		3 809
1988	PR1	1988	09	19.16354	22	29	08.55	-08	39	54.5	16.1	3 809
1988	PR1	1988	09	19.17048	22	29	08.32	-08	39	58.0		3 809
1988	PR1	1988	09	19.17743	22	29	08.08	-08	40	01.4		3 809
1988	PR1	1988	09	20.01284	22	28	40.05	-08	46	49.8		3 809
1988	PR1	1988	09	20.01771	22	28	39.89	-08	46	52.2		3 809
1988	PR1	1988	09	20.02257	22	28	39.74	-08	46	54.7		3 809
1988	RR2	1988	09	20.22118	22	50	10.41	-09	05	03.5	16.7	3 809
1988	RR2	1988	09	20.22604	22	50	10.18	-09	05	05.1		3 809
1988	RR2	1988	09	20.23090	22	50	09.95	-09	05	06.7		3 809

1988	RF4	1988	09	09.07257	21	57	12.38	-13	18	28.0	3 809
1988	RF4	1988	09	09.07882	21	57	12.09	-13	18	27.7	3 809
1988	RF4	1988	09	09.08507	21	57	11.80	-13	18	27.5	3 809
1988	RF4	1988	09	12.22292	21	54	57.36	-13	15	55.6	3 809
1988	RF4	1988	09	12.23125	21	54	57.01	-13	15	55.2	3 809
1988	RF4	1988	09	12.23958	21	54	56.65	-13	15	54.8	3 809
1988	RF4	1988	09	15.14757	21	53	08.70	-13	12	26.5	3 809
1988	RF4	1988	09	15.15451	21	53	08.43	-13	12	26.0	3 809
1988	RF4	1988	09	15.16215	21	53	08.13	-13	12	24.9	3 809
1988	RG4	1988	09	05.16493	22	00	02.88	-18	23	25.0	3 809
1988	RG4	1988	09	05.17118	22	00	02.56	-18	23	27.2	3 809
1988	RG4	1988	09	05.17743	22	00	02.24	-18	23	29.4	3 809
1988	RG4	1988	09	07.04062	21	58	32.25	-18	33	51.1	3 809
1988	RG4	1988	09	07.04687	21	58	31.95	-18	33	53.3	3 809
1988	RG4	1988	09	07.05312	21	58	31.64	-18	33	55.2	3 809
1988	RG4	1988	09	07.06146	21	58	31.21	-18	33	57.7	3 809
1988	RG4	1988	09	07.06771	21	58	30.91	-18	33	59.8	3 809
1988	RG4	1988	09	10.01979	21	56	14.93	-18	49	10.0	3 809
1988	RG4	1988	09	10.02604	21	56	14.64	-18	49	11.7	3 809
1988	RG4	1988	09	10.03229	21	56	14.33	-18	49	13.5	3 809
1988	RG4	1988	09	10.03993	21	56	14.08	-18	49	16.7	3 809
1988	RG4	1988	09	10.04618	21	56	13.78	-18	49	18.6	3 809
1988	RG4	1988	09	10.05243	21	56	13.50	-18	49	20.5	3 809
1988	RG4	1988	09	11.19271	21	55	23.11	-18	54	45.9	3 809
1988	RG4	1988	09	11.19896	21	55	22.83	-18	54	47.7	3 809
1988	RG4	1988	09	11.20521	21	55	22.55	-18	54	49.5	3 809
1988	RG4	1988	09	13.10173	21	54	03.14	-19	03	21.0	3 809
1988	RG4	1988	09	13.10798	21	54	02.88	-19	03	22.6	3 809
1988	RG4	1988	09	13.11423	21	54	02.61	-19	03	24.2	3 809
1988	RG4	1988	09	14.12187	21	53	22.06	-19	07	39.7	3 809
1988	RG4	1988	09	14.12812	21	53	21.80	-19	07	41.2	3 809
1988	RG4	1988	09	14.13437	21	53	21.55	-19	07	42.5	3 809
1988	RG4	1988	09	16.22187	21	52	01.88	-19	15	53.2	3 809
1988	RG4	1988	09	16.22847	21	52	01.62	-19	15	54.8	3 809
1988	RG4	1988	09	16.23507	21	52	01.36	-19	15	56.3	3 809
1988	RG4	1988	09	17.15660	21	51	28.29	-19	19	17.4	3 809
1988	RG4	1988	09	17.16493	21	51	27.99	-19	19	19.3	3 809
1988	RG4	1988	09	17.17257	21	51	27.71	-19	19	21.0	3 809
1988	RG4	1988	09	18.03229	21	50	58.11	-19	22	19.3	3 809
1988	RG4	1988	09	18.03750	21	50	57.94	-19	22	20.4	3 809
1988	RG4	1988	09	18.04271	21	50	57.77	-19	22	21.4	3 809
1988	RG4	1988	09	19.03507	21	50	24.66	-19	25	37.0	3 809
1988	RG4	1988	09	19.04896	21	50	24.21	-19	25	39.8	3 809
1988	RG4	1988	09	19.06285	21	50	23.70	-19	25	42.6	3 809
1988	RH4	1988	09	05.16493	22	01	55.73	-17	22	41.4	3 809
1988	RH4	1988	09	05.17118	22	01	55.40	-17	22	40.0	3 809
1988	RH4	1988	09	05.17743	22	01	55.07	-17	22	39.4	3 809
1988	RH4	1988	09	07.06146	22	00	24.70	-17	16	03.6	3 809
1988	RH4	1988	09	07.06771	22	00	24.40	-17	16	02.3	3 809
1988	RH4	1988	09	10.01979	21	58	13.59	-17	04	43.6	3 809
1988	RH4	1988	09	10.02604	21	58	13.31	-17	04	42.1	3 809
1988	RH4	1988	09	10.03229	21	58	13.03	-17	04	40.5	3 809
1988	RH4	1988	09	13.02534	21	56	15.91	-16	51	58.7	3 809
1988	RH4	1988	09	13.03160	21	56	15.67	-16	51	57.1	3 809
1988	RH4	1988	09	13.03785	21	56	15.43	-16	51	55.7	3 809
1988	RH4	1988	09	17.18090	21	54	01.41	-16	32	19.9	3 809
1988	RH4	1988	09	17.18715	21	54	01.23	-16	32	18.1	3 809
1988	RH4	1988	09	17.19340	21	54	01.04	-16	32	16.5	3 809
1988	RJ4	1988	09	06.32674	22	41	09.82	-05	37	00.3	3 809

1988	RJ4	1988	09	06.33298	22	41	09.52	-05	37	02.3	3 809
1988	RJ4	1988	09	08.16910	22	39	41.31	-05	47	43.5	3 809
1988	RJ4	1988	09	08.17535	22	39	41.02	-05	47	46.0	3 809
1988	RJ4	1988	09	08.18160	22	39	40.72	-05	47	48.2	3 809
1988	RJ4	1988	09	11.05174	22	37	25.28	-06	04	24.4	3 809
1988	RJ4	1988	09	11.05798	22	37	24.99	-06	04	26.6	3 809
1988	RJ4	1988	09	11.06424	22	37	24.69	-06	04	28.7	3 809
1988	RJ4	1988	09	14.24340	22	34	59.33	-06	22	31.3	3 809
1988	RJ4	1988	09	14.24965	22	34	59.04	-06	22	33.4	3 809
1988	RJ4	1988	09	14.25590	22	34	58.76	-06	22	35.5	3 809
1988	RL4	1988	09	03.20660	22	46	28.76	-06	47	59.9	3 809
1988	RL4	1988	09	03.21285	22	46	28.42	-06	48	02.5	3 809
1988	RL4	1988	09	03.21910	22	46	28.10	-06	48	05.3	3 809
1988	RL4	1988	09	06.33993	22	43	46.12	-07	10	38.7	3 809
1988	RL4	1988	09	06.34618	22	43	45.79	-07	10	41.5	3 809
1988	RL4	1988	09	08.19132	22	42	12.20	-07	23	49.6	3 809
1988	RL4	1988	09	08.19757	22	42	11.88	-07	23	52.4	3 809
1988	RL4	1988	09	08.20382	22	42	11.57	-07	23	55.0	3 809
1988	RL4	1988	09	12.25035	22	38	52.57	-07	51	52.7	3 809
1988	RL4	1988	09	12.25660	22	38	52.28	-07	51	55.1	3 809
1988	RL4	1988	09	12.26284	22	38	51.95	-07	51	57.7	3 809
1988	RL4	1988	09	12.29097	22	38	50.56	-07	52	09.1	3 809
1988	RL4	1988	09	12.29652	22	38	50.28	-07	52	11.4	3 809
1988	RL4	1988	09	12.30208	22	38	50.02	-07	52	13.3	3 809
1988	RL4	1988	09	13.28576	22	38	03.57	-07	58	47.7	3 809
1988	RL4	1988	09	13.29201	22	38	03.29	-07	58	50.3	3 809
1988	RL4	1988	09	13.29826	22	38	03.02	-07	58	52.8	3 809
1988	RL4	1988	09	15.19548	22	36	36.03	-08	11	16.2	3 809
1988	RL4	1988	09	15.20173	22	36	35.74	-08	11	18.6	3 809
1988	RL4	1988	09	15.20799	22	36	35.45	-08	11	21.2	3 809
1988	RL4	1988	09	15.21910	22	36	34.91	-08	11	25.1	3 809
1988	RL4	1988	09	15.22535	22	36	34.64	-08	11	27.5	3 809
1988	RL4	1988	09	15.23159	22	36	34.34	-08	11	29.9	3 809
1988	RM4	1988	09	06.32674	22	44	46.73	-06	34	34.4	3 809
1988	RM4	1988	09	06.33298	22	44	46.42	-06	34	37.1	3 809
1988	RM4	1988	09	08.16910	22	43	17.12	-06	47	10.1	3 809
1988	RM4	1988	09	08.17535	22	43	16.81	-06	47	12.7	3 809
1988	RM4	1988	09	08.18160	22	43	16.52	-06	47	15.4	3 809
1988	RM4	1988	09	11.05174	22	41	00.22	-07	06	28.6	3 809
1988	RM4	1988	09	11.05798	22	40	59.94	-07	06	31.2	3 809
1988	RM4	1988	09	11.06424	22	40	59.65	-07	06	33.7	3 809
1988	RM4	1988	09	14.24340	22	38	34.81	-07	27	07.3	3 809
1988	RM4	1988	09	14.24965	22	38	34.52	-07	27	09.7	3 809
1988	RM4	1988	09	14.25590	22	38	34.24	-07	27	12.0	3 809
1988	RN4	1988	09	06.32674	22	45	36.98	-05	51	22.5	3 809
1988	RN4	1988	09	06.33298	22	45	36.59	-05	51	22.7	3 809
1988	RN4	1988	09	08.16910	22	43	40.70	-05	52	41.5	3 809
1988	RN4	1988	09	08.17535	22	43	40.31	-05	52	41.9	3 809
1988	RN4	1988	09	08.18160	22	43	39.89	-05	52	42.2	3 809
1988	RN4	1988	09	11.05174	22	40	42.94	-05	54	38.9	3 809
1988	RN4	1988	09	11.05798	22	40	42.56	-05	54	39.1	3 809
1988	RN4	1988	09	11.06424	22	40	42.17	-05	54	39.3	3 809
1988	RN4	1988	09	14.24340	22	37	33.84	-05	56	34.9	3 809
1988	RN4	1988	09	14.24965	22	37	33.47	-05	56	35.1	3 809
1988	RN4	1988	09	14.25590	22	37	33.10	-05	56	35.3	3 809
1988	RN4	1988	09	18.17152	22	33	56.90	-05	58	24.9	3 809
1988	RN4	1988	09	18.17708	22	33	56.59	-05	58	25.0	3 809
1988	RN4	1988	09	18.18333	22	33	56.24	-05	58	25.2	3 809
1988	RN4	1988	09	19.22361	22	33	01.89	-05	58	45.8	3 809

1988	RN4	1988	09	19.22916	22	33	01.61	-05	58	46.1	3 809
1988	RN4	1988	09	19.23472	22	33	01.32	-05	58	46.3	3 809
1988	RO4	1988	09	06.33993	22	41	27.96	-07	56	52.6	3 809
1988	RO4	1988	09	06.34618	22	41	27.69	-07	56	55.8	3 809
1988	RO4	1988	09	08.19132	22	40	10.62	-08	12	18.3	3 809
1988	RO4	1988	09	08.19757	22	40	10.36	-08	12	21.5	3 809
1988	RO4	1988	09	08.20382	22	40	10.09	-08	12	24.5	3 809
1988	RO4	1988	09	12.25035	22	37	23.77	-08	45	40.4	3 809
1988	RO4	1988	09	12.25660	22	37	23.51	-08	45	43.3	3 809
1988	RO4	1988	09	12.26284	22	37	23.25	-08	45	46.1	3 809
1988	RO4	1988	09	15.19548	22	35	27.33	-09	09	16.4	3 809
1988	RO4	1988	09	15.20173	22	35	27.07	-09	09	19.7	3 809
1988	RO4	1988	09	15.20799	22	35	26.82	-09	09	22.6	3 809
1988	RO4	1988	09	18.19028	22	33	34.12	-09	32	32.9	3 809
1988	RO4	1988	09	18.19618	22	33	33.89	-09	32	35.8	3 809
1988	RO4	1988	09	18.20208	22	33	33.69	-09	32	38.4	3 809
1988	RO4	1988	09	20.15243	22	32	23.49	-09	47	20.2	3 809
1988	RO4	1988	09	20.15729	22	32	23.34	-09	47	22.2	3 809
1988	RO4	1988	09	20.16215	22	32	23.20	-09	47	24.3	3 809
1988	RP4	1988	09	06.33993	22	40	25.38	-07	05	56.5	3 809
1988	RP4	1988	09	06.34618	22	40	25.00	-07	05	57.6	3 809
1988	RP4	1988	09	11.32326	22	35	28.23	-07	21	42.1	3 809
1988	RP4	1988	09	11.32951	22	35	27.86	-07	21	43.3	3 809
1988	RP4	1988	09	11.33576	22	35	27.48	-07	21	44.5	3 809
1988	RR4	1988	09	06.33993	22	42	42.73	-08	46	57.1	3 809
1988	RR4	1988	09	06.34618	22	42	42.43	-08	46	59.5	3 809
1988	RR4	1988	09	08.19132	22	41	13.32	-08	58	34.7	3 809
1988	RR4	1988	09	08.19757	22	41	13.05	-08	58	37.1	3 809
1988	RR4	1988	09	08.20382	22	41	12.74	-08	58	39.6	3 809
1988	RR4	1988	09	12.25035	22	38	01.54	-09	23	21.0	3 809
1988	RR4	1988	09	12.25660	22	38	01.24	-09	23	23.2	3 809
1988	RR4	1988	09	12.26284	22	38	00.94	-09	23	25.5	3 809
1988	RR4	1988	09	15.19548	22	35	48.31	-09	40	31.4	3 809
1988	RR4	1988	09	15.20173	22	35	48.01	-09	40	33.6	3 809
1988	RR4	1988	09	15.20799	22	35	47.70	-09	40	35.8	3 809
1988	RR4	1988	09	20.15243	22	32	18.74	-10	07	30.8	3 809
1988	RR4	1988	09	20.15729	22	32	18.54	-10	07	32.4	3 809
1988	RR4	1988	09	20.16215	22	32	18.31	-10	07	33.8	3 809
1988	RS4	1988	09	06.33993	22	43	47.74	-08	37	06.6	3 809
1988	RS4	1988	09	06.34618	22	43	47.43	-08	37	08.1	3 809
1988	RS4	1988	09	08.19132	22	42	16.45	-08	45	19.0	3 809
1988	RS4	1988	09	08.19757	22	42	16.13	-08	45	20.6	3 809
1988	RS4	1988	09	08.20382	22	42	15.84	-08	45	22.3	3 809
1988	RS4	1988	09	12.25035	22	39	00.34	-09	02	40.2	3 809
1988	RS4	1988	09	12.25660	22	39	00.03	-09	02	41.6	3 809
1988	RS4	1988	09	12.26284	22	38	59.73	-09	02	43.0	3 809
1988	RS4	1988	09	15.19548	22	36	44.18	-09	14	34.4	3 809
1988	RS4	1988	09	15.20173	22	36	43.89	-09	14	35.9	3 809
1988	RS4	1988	09	15.20799	22	36	43.60	-09	14	37.4	3 809
1988	RT4	1988	09	06.33993	22	44	22.48	-08	32	22.4	3 809
1988	RT4	1988	09	06.34618	22	44	22.20	-08	32	24.3	3 809
1988	RT4	1988	09	08.19132	22	43	01.35	-08	41	59.8	3 809
1988	RT4	1988	09	08.19757	22	43	01.08	-08	42	01.5	3 809
1988	RT4	1988	09	08.20382	22	43	00.78	-08	42	03.6	3 809
1988	RT4	1988	09	12.25035	22	40	05.66	-09	02	40.1	3 809
1988	RT4	1988	09	12.25660	22	40	05.40	-09	02	41.9	3 809
1988	RT4	1988	09	12.26284	22	40	05.14	-09	02	43.7	3 809
1988	RT4	1988	09	15.19548	22	38	01.60	-09	17	13.2	3 809
1988	RT4	1988	09	15.20173	22	38	01.34	-09	17	15.2	3 809

1988	RT4	1988	09	15.20799	22	38	01.08	-09	17	16.9	3 809
1988	RV4	1988	09	05.35521	23	19	06.73	-02	09	16.7	3 809
1988	RV4	1988	09	05.36146	23	19	06.43	-02	09	18.2	3 809
1988	RV4	1988	09	05.36771	23	19	06.12	-02	09	19.8	3 809
1988	RV4	1988	09	09.37049	23	15	48.40	-02	27	00.6	3 809
1988	RV4	1988	09	09.37674	23	15	48.09	-02	27	02.3	3 809
1988	RV4	1988	09	09.38299	23	15	47.80	-02	27	03.9	3 809
1988	RV4	1988	09	11.37187	23	14	08.90	-02	36	04.1	3 809
1988	RV4	1988	09	11.37812	23	14	08.58	-02	36	05.7	3 809
1988	RV4	1988	09	11.38437	23	14	08.32	-02	36	08.2	3 809
1988	RV4	1988	09	14.32153	23	11	43.40	-02	49	33.3	3 809
1988	RV4	1988	09	14.32847	23	11	43.04	-02	49	35.2	3 809
1988	RV4	1988	09	14.33541	23	11	42.70	-02	49	37.1	3 809
1988	RV4	1988	09	18.28750	23	08	32.80	-03	07	31.9	3 809
1988	RV4	1988	09	18.29305	23	08	32.54	-03	07	33.4	3 809
1988	RV4	1988	09	18.29861	23	08	32.25	-03	07	35.0	3 809
1988	RV4	1988	09	19.28160	23	07	46.45	-03	11	57.4	3 809
1988	RV4	1988	09	19.28646	23	07	46.22	-03	11	58.8	3 809
1988	RV4	1988	09	19.29132	23	07	46.00	-03	12	00.1	3 809
1988	RX4	1988	09	05.16493	21	54	18.97	-18	44	54.0	3 809
1988	RX4	1988	09	05.17118	21	54	18.72	-18	44	55.7	3 809
1988	RX4	1988	09	05.17743	21	54	18.47	-18	44	57.3	3 809
1988	RX4	1988	09	07.04062	21	53	07.35	-18	52	43.6	3 809
1988	RX4	1988	09	07.04687	21	53	07.10	-18	52	45.2	3 809
1988	RX4	1988	09	07.05312	21	53	06.87	-18	52	46.6	3 809
1988	RX4	1988	09	09.05174	21	51	55.29	-19	00	16.1	3 809
1988	RX4	1988	09	09.05798	21	51	55.08	-19	00	17.4	3 809
1988	RX4	1988	09	09.06424	21	51	54.84	-19	00	19.0	3 809
1988	RX4	1988	09	11.19271	21	50	44.67	-19	07	16.0	3 809
1988	RX4	1988	09	11.19896	21	50	44.47	-19	07	17.3	3 809
1988	RX4	1988	09	11.20521	21	50	44.26	-19	07	18.3	3 809
1988	RX4	1988	09	13.10173	21	49	48.77	-19	12	36.6	3 809
1988	RX4	1988	09	13.10798	21	49	48.59	-19	12	37.6	3 809
1988	RX4	1988	09	13.11423	21	49	48.40	-19	12	38.6	3 809
1988	RX4	1988	09	14.12187	21	49	21.25	-19	15	05.9	3 809
1988	RX4	1988	09	14.12812	21	49	21.09	-19	15	06.8	3 809
1988	RX4	1988	09	14.13437	21	49	20.92	-19	15	07.8	3 809
1988	RX4	1988	09	16.22187	21	48	30.39	-19	19	25.7	3 809
1988	RX4	1988	09	16.22847	21	48	30.23	-19	19	26.4	3 809
1988	RX4	1988	09	16.23507	21	48	30.07	-19	19	27.3	3 809
1988	RX4	1988	09	17.15660	21	48	10.75	-19	21	01.3	3 809
1988	RX4	1988	09	17.16493	21	48	10.57	-19	21	01.8	3 809
1988	RX4	1988	09	17.17257	21	48	10.43	-19	21	02.5	3 809
1988	RX4	1988	09	18.03229	21	47	54.15	-19	22	18.6	3 809
1988	RX4	1988	09	18.03750	21	47	54.05	-19	22	19.0	3 809
1988	RX4	1988	09	18.04271	21	47	53.94	-19	22	19.4	3 809
1988	RX4	1988	09	19.03507	21	47	36.48	-19	23	33.4	3 809
1988	RX4	1988	09	19.04896	21	47	36.23	-19	23	34.4	3 809
1988	RX4	1988	09	19.06285	21	47	35.98	-19	23	35.4	3 809
1988	RY4	1988	09	05.13576	21	54	48.23	-18	08	15.2	3 809
1988	RY4	1988	09	05.14201	21	54	47.90	-18	08	12.9	3 809
1988	RY4	1988	09	05.14826	21	54	47.56	-18	08	10.6	3 809
1988	RY4	1988	09	09.03021	21	51	47.05	-17	38	59.8	3 809
1988	RY4	1988	09	09.03646	21	51	46.78	-17	38	56.9	3 809
1988	RY4	1988	09	09.04271	21	51	46.51	-17	38	54.1	3 809
1988	RY4	1988	09	14.10173	21	48	28.45	-16	57	23.6	3 809
1988	RY4	1988	09	14.10798	21	48	28.21	-16	57	20.4	3 809
1988	RY4	1988	09	14.11423	21	48	27.97	-16	57	17.3	3 809
1988	RZ4	1988	09	10.16146	21	53	54.89	-21	03	48.8	3 809

1988	RZ4	1988	09	10.16771	21	53	54.66	-21	03	50.9	3 809
1988	RZ4	1988	09	10.17396	21	53	54.42	-21	03	53.0	3 809
1988	RZ4	1988	09	13.13021	21	52	09.81	-21	19	16.3	3 809
1988	RZ4	1988	09	13.13646	21	52	09.58	-21	19	18.5	3 809
1988	RZ4	1988	09	13.14271	21	52	09.36	-21	19	20.5	3 809
1988	RZ4	1988	09	15.11979	21	51	03.55	-21	28	54.8	3 809
1988	RZ4	1988	09	15.12604	21	51	03.34	-21	28	56.7	3 809
1988	RZ4	1988	09	15.13229	21	51	03.13	-21	28	58.6	3 809
1988	RA5	1988	09	05.16493	21	58	28.63	-18	48	30.5	3 809
1988	RA5	1988	09	05.17118	21	58	28.35	-18	48	32.0	3 809
1988	RA5	1988	09	05.17743	21	58	28.07	-18	48	33.8	3 809
1988	RA5	1988	09	07.04062	21	57	10.51	-18	55	33.3	3 809
1988	RA5	1988	09	07.04687	21	57	10.22	-18	55	33.9	3 809
1988	RA5	1988	09	07.05312	21	57	09.95	-18	55	35.4	3 809
1988	RA5	1988	09	09.05174	21	55	50.94	-19	02	20.0	3 809
1988	RA5	1988	09	09.05798	21	55	50.69	-19	02	21.3	3 809
1988	RA5	1988	09	09.06424	21	55	50.45	-19	02	22.6	3 809
1988	RA5	1988	09	10.03993	21	55	13.95	-19	05	19.5	3 809
1988	RA5	1988	09	10.04618	21	55	13.71	-19	05	20.7	3 809
1988	RA5	1988	09	10.05243	21	55	13.47	-19	05	22.8	3 809
1988	RA5	1988	09	11.19271	21	54	31.98	-19	08	35.1	3 809
1988	RA5	1988	09	11.19896	21	54	31.75	-19	08	36.2	3 809
1988	RA5	1988	09	11.20521	21	54	31.51	-19	08	37.4	3 809
1988	RA5	1988	09	13.10173	21	53	27.93	-19	13	20.6	3 809
1988	RA5	1988	09	13.10798	21	53	27.73	-19	13	21.5	3 809
1988	RA5	1988	09	13.11423	21	53	27.51	-19	13	22.7	3 809
1988	RA5	1988	09	14.12187	21	52	55.80	-19	15	33.1	3 809
1988	RA5	1988	09	14.12812	21	52	55.55	-19	15	33.6	3 809
1988	RA5	1988	09	14.13437	21	52	55.36	-19	15	34.5	3 809
1988	RA5	1988	09	16.22187	21	51	55.03	-19	19	21.2	3 809
1988	RA5	1988	09	16.22847	21	51	54.83	-19	19	21.6	3 809
1988	RA5	1988	09	16.23507	21	51	54.64	-19	19	22.3	3 809
1988	RA5	1988	09	17.15660	21	51	30.70	-19	20	43.9	3 809
1988	RA5	1988	09	17.16493	21	51	30.47	-19	20	44.6	3 809
1988	RA5	1988	09	17.17257	21	51	30.27	-19	20	45.0	3 809
1988	RA5	1988	09	18.03229	21	51	09.57	-19	21	50.8	3 809
1988	RA5	1988	09	18.03750	21	51	09.45	-19	21	51.5	3 809
1988	RA5	1988	09	18.04271	21	51	09.34	-19	21	51.7	3 809
1988	RA5	1988	09	19.03507	21	50	46.67	-19	22	54.3	3 809
1988	RA5	1988	09	19.04896	21	50	46.34	-19	22	55.0	3 809
1988	RA5	1988	09	19.06285	21	50	45.95	-19	22	56.2	3 809
1988	RB5	1988	09	07.25174	22	18	31.76	-20	20	28.8	3 809
1988	RB5	1988	09	07.25799	22	18	31.43	-20	20	31.4	3 809
1988	RB5	1988	09	10.19062	22	16	06.45	-20	39	58.7	3 809
1988	RB5	1988	09	10.19688	22	16	06.14	-20	40	01.2	3 809
1988	RB5	1988	09	10.20312	22	16	05.84	-20	40	03.8	3 809
1988	RB5	1988	09	11.08021	22	15	24.20	-20	45	31.8	3 809
1988	RB5	1988	09	11.08646	22	15	23.89	-20	45	34.2	3 809
1988	RB5	1988	09	11.09271	22	15	23.58	-20	45	36.2	3 809
1988	RC5	1988	09	07.25174	22	18	41.71	-21	31	31.6	3 809
1988	RC5	1988	09	07.25799	22	18	41.36	-21	31	32.3	3 809
1988	RC5	1988	09	10.19062	22	16	11.24	-21	35	47.5	3 809
1988	RC5	1988	09	10.19688	22	16	10.91	-21	35	48.1	3 809
1988	RC5	1988	09	10.20312	22	16	10.60	-21	35	48.7	3 809
1988	RC5	1988	09	11.08021	22	15	27.73	-21	36	42.0	3 809
1988	RC5	1988	09	11.08646	22	15	27.45	-21	36	42.4	3 809
1988	RC5	1988	09	11.09271	22	15	27.15	-21	36	41.7	3 809
1988	RC5	1988	09	14.18507	22	13	02.22	-21	38	20.9	3 809
1988	RC5	1988	09	14.19132	22	13	01.91	-21	38	21.1	3 809

1988	RC5	1988	09	14.19757	22	13	01.63	-21	38	21.5	3 809
1988	RD5	1988	09	07.26632	22	15	24.98	-13	59	34.8	3 809
1988	RD5	1988	09	07.27257	22	15	24.69	-13	59	36.1	3 809
1988	RD5	1988	09	10.21562	22	13	17.97	-14	09	46.1	3 809
1988	RD5	1988	09	10.22187	22	13	17.70	-14	09	47.4	3 809
1988	RD5	1988	09	10.22813	22	13	17.43	-14	09	48.7	3 809
1988	RD5	1988	09	11.23646	22	12	35.26	-14	13	05.5	3 809
1988	RD5	1988	09	11.24271	22	12	35.00	-14	13	06.4	3 809
1988	RD5	1988	09	11.24896	22	12	34.75	-14	13	07.6	3 809
1988	RD5	1988	09	14.14410	22	10	38.32	-14	21	56.3	3 809
1988	RD5	1988	09	14.15034	22	10	38.07	-14	21	57.5	3 809
1988	RD5	1988	09	14.15660	22	10	37.83	-14	21	58.7	3 809
1988	RD5	1988	09	17.23889	22	08	41.92	-14	30	15.0	3 809
1988	RD5	1988	09	17.24548	22	08	41.71	-14	30	15.6	3 809
1988	RD5	1988	09	17.25174	22	08	41.52	-14	30	16.1	3 809
1988	RE5	1988	09	07.26632	22	16	01.54	-15	01	00.4	3 809
1988	RE5	1988	09	07.27257	22	16	01.25	-15	01	02.5	3 809
1988	RE5	1988	09	10.21562	22	13	58.49	-15	16	10.4	3 809
1988	RE5	1988	09	10.22187	22	13	58.22	-15	16	12.3	3 809
1988	RE5	1988	09	10.22813	22	13	57.96	-15	16	14.2	3 809
1988	RE5	1988	09	11.23646	22	13	18.15	-15	21	02.7	3 809
1988	RE5	1988	09	11.24271	22	13	17.90	-15	21	04.4	3 809
1988	RE5	1988	09	11.24896	22	13	17.65	-15	21	05.9	3 809
1988	RE5	1988	09	14.14410	22	11	31.08	-15	33	49.0	3 809
1988	RE5	1988	09	14.15034	22	11	30.79	-15	33	50.6	3 809
1988	RE5	1988	09	14.15660	22	11	30.49	-15	33	52.3	3 809
1988	RF5	1988	09	05.23229	22	17	34.94	-14	16	37.6	3 809
1988	RF5	1988	09	05.23854	22	17	34.62	-14	16	38.4	3 809
1988	RF5	1988	09	05.24479	22	17	34.30	-14	16	39.2	3 809
1988	RF5	1988	09	07.26632	22	15	51.97	-14	20	38.8	3 809
1988	RF5	1988	09	07.27257	22	15	51.64	-14	20	39.2	3 809
1988	RF5	1988	09	10.21562	22	13	26.67	-14	25	56.7	3 809
1988	RF5	1988	09	10.22187	22	13	26.36	-14	25	57.4	3 809
1988	RF5	1988	09	10.22813	22	13	26.04	-14	25	58.1	3 809
1988	RF5	1988	09	11.23646	22	12	37.51	-14	27	36.1	3 809
1988	RF5	1988	09	11.24271	22	12	37.20	-14	27	36.7	3 809
1988	RF5	1988	09	11.24896	22	12	36.89	-14	27	37.4	3 809
1988	RF5	1988	09	14.14410	22	10	21.87	-14	31	50.5	3 809
1988	RF5	1988	09	14.15034	22	10	21.58	-14	31	51.1	3 809
1988	RF5	1988	09	14.15660	22	10	21.28	-14	31	51.8	3 809
1988	RJ5	1988	09	07.26632	22	20	14.58	-15	06	41.1	3 809
1988	RJ5	1988	09	07.27257	22	20	14.29	-15	06	42.4	3 809
1988	RJ5	1988	09	10.21562	22	18	01.95	-15	17	02.0	3 809
1988	RJ5	1988	09	10.22187	22	18	01.65	-15	17	03.5	3 809
1988	RJ5	1988	09	10.22813	22	18	01.36	-15	17	05.0	3 809
1988	RJ5	1988	09	11.23646	22	17	17.29	-15	20	24.0	3 809
1988	RJ5	1988	09	11.24271	22	17	17.00	-15	20	25.5	3 809
1988	RJ5	1988	09	11.24896	22	17	16.69	-15	20	27.3	3 809
1988	RK5	1988	09	05.26562	22	31	12.41	-08	12	36.9	3 809
1988	RK5	1988	09	05.27187	22	31	12.08	-08	12	39.4	3 809
1988	RK5	1988	09	05.27812	22	31	11.74	-08	12	41.9	3 809
1988	RK5	1988	09	07.35521	22	29	18.12	-08	26	14.8	3 809
1988	RK5	1988	09	07.36146	22	29	17.77	-08	26	17.1	3 809
1988	RK5	1988	09	07.36771	22	29	17.43	-08	26	19.5	3 809
1988	RK5	1988	09	10.25035	22	26	45.55	-08	44	36.8	3 809
1988	RK5	1988	09	10.25764	22	26	45.16	-08	44	39.8	3 809
1988	RK5	1988	09	10.26493	22	26	44.80	-08	44	42.5	3 809
1988	RK5	1988	09	13.24791	22	24	16.35	-09	02	45.4	3 809
1988	RK5	1988	09	13.25625	22	24	15.88	-09	02	49.0	3 809

1988	RK5	1988	09	13.26458	22	24	15.41	-09	02	52.3	3 809
1988	RM5	1988	09	05.26562	22	33	03.95	-08	53	32.4	3 809
1988	RM5	1988	09	05.27187	22	33	03.66	-08	53	36.8	3 809
1988	RM5	1988	09	05.27812	22	33	03.38	-08	53	41.3	3 809
1988	RM5	1988	09	07.35521	22	31	31.39	-09	17	45.9	3 809
1988	RM5	1988	09	07.36146	22	31	31.13	-09	17	50.3	3 809
1988	RM5	1988	09	07.36771	22	31	30.87	-09	17	54.4	3 809
1988	RM5	1988	09	10.25035	22	29	26.05	-09	50	56.3	3 809
1988	RM5	1988	09	10.25764	22	29	25.74	-09	51	01.5	3 809
1988	RM5	1988	09	10.26493	22	29	25.43	-09	51	06.4	3 809
1988	RM5	1988	09	13.24791	22	27	21.10	-10	24	30.8	3 809
1988	RM5	1988	09	13.25625	22	27	20.75	-10	24	36.4	3 809
1988	RM5	1988	09	13.26458	22	27	20.40	-10	24	42.0	3 809
1988	RN5	1988	09	09.23368	22	42	34.46	-03	46	17.4	3 809
1988	RN5	1988	09	09.23993	22	42	34.16	-03	46	19.0	3 809
1988	RN5	1988	09	09.24618	22	42	33.87	-03	46	20.6	3 809
1988	RO5	1988	09	09.23368	22	43	26.27	-02	55	21.3	3 809
1988	RO5	1988	09	09.23993	22	43	25.90	-02	55	21.9	3 809
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1988	RP5	1988	09	08.25035	22	48	43.74	-04	09	05.7	3 809
1988	RP5	1988	09	08.25660	22	48	43.46	-04	09	08.1	3 809
1988	RP5	1988	09	08.26285	22	48	43.18	-04	09	10.4	3 809
1988	RP5	1988	09	09.25590	22	47	59.65	-04	15	14.9	3 809
1988	RP5	1988	09	09.26215	22	47	59.39	-04	15	17.2	3 809
1988	RP5	1988	09	09.26840	22	47	59.13	-04	15	19.6	3 809
1988	RP5	1988	09	15.26910	22	43	47.83	-04	51	16.8	3 809
1988	RP5	1988	09	15.27535	22	43	47.56	-04	51	19.0	3 809
1988	RP5	1988	09	15.28160	22	43	47.30	-04	51	21.3	3 809
1988	RQ5	1988	09	08.25035	22	50	31.09	-04	27	04.7	3 809
1988	RQ5	1988	09	08.25660	22	50	30.82	-04	27	07.0	3 809
1988	RQ5	1988	09	08.26285	22	50	30.53	-04	27	09.2	3 809
1988	RQ5	1988	09	09.25590	22	49	45.51	-04	33	03.3	3 809
1988	RQ5	1988	09	09.26215	22	49	45.23	-04	33	05.5	3 809
1988	RQ5	1988	09	09.26840	22	49	44.96	-04	33	08.0	3 809
1988	RR5	1988	09	06.28368	22	43	28.53	-11	00	15.8	3 809
1988	RR5	1988	09	06.28993	22	43	28.12	-11	00	17.4	3 809
1988	RR5	1988	09	06.29618	22	43	27.72	-11	00	19.0	3 809
1988	RR5	1988	09	10.06354	22	39	45.78	-11	15	23.0	3 809
1988	RR5	1988	09	10.06979	22	39	45.40	-11	15	24.5	3 809
1988	RR5	1988	09	10.07604	22	39	45.04	-11	15	25.7	3 809
1988	RR5	1988	09	11.34618	22	38	31.59	-11	20	09.0	3 809
1988	RR5	1988	09	11.35243	22	38	31.23	-11	20	10.4	3 809
1988	RR5	1988	09	11.35868	22	38	30.87	-11	20	11.8	3 809
1988	RU5	1988	09	09.07257	21	53	46.89	-13	41	15.6	3 809
1988	RU5	1988	09	09.07882	21	53	46.62	-13	41	17.4	3 809
1988	RU5	1988	09	09.08507	21	53	46.38	-13	41	19.2	3 809
1988	RU5	1988	09	12.22292	21	51	50.59	-13	55	18.4	3 809
1988	RU5	1988	09	12.23125	21	51	50.28	-13	55	20.4	3 809
1988	RU5	1988	09	12.23958	21	51	49.97	-13	55	22.6	3 809
1988	RU5	1988	09	16.19965	21	49	46.48	-14	10	41.2	3 809
1988	RU5	1988	09	16.20590	21	49	46.29	-14	10	42.6	3 809
1988	RU5	1988	09	16.21215	21	49	46.10	-14	10	44.0	3 809
1988	RY5	1988	09	06.22118	22	09	24.12	-09	41	50.9	3 809
1988	RY5	1988	09	06.22743	22	09	23.84	-09	41	52.7	3 809
1988	RY5	1988	09	06.23368	22	09	23.57	-09	41	54.6	3 809
1988	RY5	1988	09	08.06632	22	08	04.09	-09	51	03.9	3 809
1988	RY5	1988	09	08.07257	22	08	03.81	-09	51	05.7	3 809
1988	RY5	1988	09	08.07882	22	08	03.54	-09	51	07.6	3 809
1988	RY5	1988	09	10.32812	22	06	28.69	-10	02	03.9	3 809

1988	RY5	1988	09	10.33437	22	06	28.43	-10	02	05.7	3 809
1988	RY5	1988	09	10.34062	22	06	28.16	-10	02	07.5	3 809
1988	RY5	1988	09	13.21944	22	04	33.94	-10	15	36.6	3 809
1988	RY5	1988	09	13.22604	22	04	33.68	-10	15	38.6	3 809
1988	RY5	1988	09	13.23229	22	04	33.44	-10	15	40.3	3 809
1988	RY5	1988	09	16.26632	22	02	42.26	-10	29	03.5	3 809
1988	RY5	1988	09	16.27257	22	02	42.04	-10	29	05.2	3 809
1988	RY5	1988	09	16.27882	22	02	41.80	-10	29	06.8	3 809
1988	RZ5	1988	09	06.22118	22	09	34.45	-09	45	53.3	3 809
1988	RZ5	1988	09	06.22743	22	09	34.16	-09	45	55.9	3 809
1988	RZ5	1988	09	06.23368	22	09	33.87	-09	45	58.5	3 809
1988	RZ5	1988	09	08.06632	22	08	11.67	-09	58	25.9	3 809
1988	RZ5	1988	09	08.07257	22	08	11.38	-09	58	28.4	3 809
1988	RZ5	1988	09	08.07882	22	08	11.10	-09	58	31.0	3 809
1988	RZ5	1988	09	10.32812	22	06	33.60	-10	13	22.8	3 809
1988	RZ5	1988	09	10.33437	22	06	33.33	-10	13	25.3	3 809
1988	RZ5	1988	09	10.34062	22	06	33.06	-10	13	27.7	3 809
1988	RZ5	1988	09	13.21944	22	04	38.29	-10	31	38.7	3 809
1988	RZ5	1988	09	13.22604	22	04	38.02	-10	31	41.1	3 809
1988	RZ5	1988	09	13.23229	22	04	37.77	-10	31	43.4	3 809
1988	RZ5	1988	09	16.26632	22	02	48.98	-10	49	39.2	3 809
1988	RZ5	1988	09	16.27257	22	02	48.75	-10	49	41.4	3 809
1988	RZ5	1988	09	16.27882	22	02	48.52	-10	49	43.4	3 809
1988	RA6	1988	09	06.22118	22	09	50.39	-10	36	32.4	3 809
1988	RA6	1988	09	06.22743	22	09	50.02	-10	36	31.4	3 809
1988	RA6	1988	09	06.23368	22	09	49.65	-10	36	30.6	3 809
1988	RA6	1988	09	08.06632	22	08	10.02	-10	31	53.7	3 809
1988	RA6	1988	09	08.07257	22	08	09.67	-10	31	52.6	3 809
1988	RA6	1988	09	08.07882	22	08	09.32	-10	31	51.7	3 809
1988	RA6	1988	09	10.32812	22	06	11.38	-10	25	48.9	3 809
1988	RA6	1988	09	10.33437	22	06	11.05	-10	25	47.8	3 809
1988	RA6	1988	09	10.34062	22	06	10.72	-10	25	46.8	3 809
1988	RA6	1988	09	13.21944	22	03	52.88	-10	17	25.7	3 809
1988	RA6	1988	09	13.22604	22	03	52.56	-10	17	24.5	3 809
1988	RA6	1988	09	13.23229	22	03	52.26	-10	17	23.4	3 809
1988	RA6	1988	09	16.26632	22	01	42.90	-10	07	42.4	3 809
1988	RA6	1988	09	16.27257	22	01	42.64	-10	07	41.4	3 809
1988	RA6	1988	09	16.27882	22	01	42.37	-10	07	40.2	3 809
1988	RB6	1988	09	08.35104	23	18	58.39	-06	35	09.1	3 809
1988	RB6	1988	09	08.35729	23	18	58.20	-06	35	14.9	3 809
1988	RB6	1988	09	08.36354	23	18	57.99	-06	35	20.6	3 809
1988	RB6	1988	09	10.37187	23	17	49.02	-07	05	41.1	3 809
1988	RB6	1988	09	10.37812	23	17	48.81	-07	05	46.7	3 809
1988	RB6	1988	09	10.38437	23	17	48.60	-07	05	52.3	3 809
1988	RB6	1988	09	16.34271	23	14	27.00	-08	33	20.0	3 809
1988	RB6	1988	09	16.34896	23	14	26.79	-08	33	25.3	3 809
1988	RB6	1988	09	16.35521	23	14	26.57	-08	33	30.8	3 809
1988	RB6	1988	09	17.31076	23	13	55.48	-08	47	01.7	3 809
1988	RB6	1988	09	17.31701	23	13	55.28	-08	47	06.9	3 809
1988	RB6	1988	09	17.32326	23	13	55.07	-08	47	12.1	3 809
1988	RB6	1988	09	18.05521	23	13	32.30	-08	57	25.7	3 809
1988	RB6	1988	09	18.06111	23	13	32.10	-08	57	30.6	3 809
1988	RB6	1988	09	18.06701	23	13	31.90	-08	57	35.5	3 809
1988	RB6	1988	09	19.30069	23	12	52.32	-09	14	35.2	3 809
1988	RB6	1988	09	19.30625	23	12	52.14	-09	14	39.9	3 809
1988	RB6	1988	09	19.31180	23	12	51.96	-09	14	44.5	3 809
1988	RB6	1988	09	19.31805	23	12	51.75	-09	14	49.5	3 809
1988	RB6	1988	09	19.32361	23	12	51.56	-09	14	54.1	3 809
1988	RB6	1988	09	19.32917	23	12	51.39	-09	14	58.7	3 809

1988	RC6	1988	09	10.16146	21	54	14.67	-21	35	39.1	3 809
1988	RC6	1988	09	10.16771	21	54	14.42	-21	35	41.2	3 809
1988	RC6	1988	09	10.17396	21	54	14.19	-21	35	43.4	3 809
1988	RC6	1988	09	13.13021	21	52	30.27	-21	51	05.1	3 809
1988	RC6	1988	09	13.13646	21	52	30.05	-21	51	07.1	3 809
1988	RC6	1988	09	13.14271	21	52	29.82	-21	51	09.2	3 809
1988	RC6	1988	09	15.11979	21	51	25.11	-22	00	35.8	3 809
1988	RC6	1988	09	15.12604	21	51	24.91	-22	00	37.6	3 809
1988	RC6	1988	09	15.13229	21	51	24.69	-22	00	39.4	3 809
1988	RD6	1988	09	09.03021	21	48	59.99	-17	21	41.2	3 809
1988	RD6	1988	09	09.03646	21	48	59.73	-17	21	42.0	3 809
1988	RD6	1988	09	09.04271	21	48	59.45	-17	21	42.9	3 809
1988	RD6	1988	09	14.10173	21	45	54.17	-17	29	46.2	3 809
1988	RD6	1988	09	14.10798	21	45	53.96	-17	29	46.7	3 809
1988	RD6	1988	09	14.11423	21	45	53.74	-17	29	47.2	3 809
1988	RD6	1988	09	16.13923	21	44	52.00	-17	31	36.5	3 809
1988	RD6	1988	09	16.14549	21	44	51.78	-17	31	36.9	3 809
1988	RD6	1988	09	16.15173	21	44	51.59	-17	31	36.8	3 809
1988	RE6	1988	09	10.06354	22	44	31.44	-11	43	22.6	3 809
1988	RE6	1988	09	10.06979	22	44	31.08	-11	43	24.7	3 809
1988	RE6	1988	09	10.07604	22	44	30.68	-11	43	26.7	3 809
1988	RE6	1988	09	11.34618	22	43	18.44	-11	50	28.1	3 809
1988	RE6	1988	09	11.35243	22	43	18.06	-11	50	30.2	3 809
1988	RE6	1988	09	11.35868	22	43	17.70	-11	50	32.0	3 809
1988	RG6	1988	09	09.07257	21	55	20.64	-12	53	50.9	3 809
1988	RG6	1988	09	09.07882	21	55	20.38	-12	53	52.0	3 809
1988	RG6	1988	09	09.08507	21	55	20.12	-12	53	53.6	3 809
1988	RG6	1988	09	12.22292	21	53	20.09	-13	03	36.7	3 809
1988	RG6	1988	09	12.23125	21	53	19.76	-13	03	38.1	3 809
1988	RG6	1988	09	12.23958	21	53	19.45	-13	03	39.7	3 809
1988	RG6	1988	09	16.19965	21	51	03.13	-13	14	31.5	3 809
1988	RG6	1988	09	16.20590	21	51	02.92	-13	14	32.5	3 809
1988	RG6	1988	09	16.21215	21	51	02.71	-13	14	33.5	3 809
1988	RH6	1988	09	10.30729	22	03	44.25	-06	37	29.2	3 809
1988	RH6	1988	09	10.31354	22	03	43.89	-06	37	29.4	3 809
1988	RH6	1988	09	10.31979	22	03	43.52	-06	37	30.0	3 809
1988	RH6	1988	09	13.18403	22	01	12.77	-06	39	07.7	3 809
1988	RH6	1988	09	13.19514	22	01	12.18	-06	39	08.0	3 809
1988	RH6	1988	09	13.20625	22	01	11.58	-06	39	08.4	3 809
1988	RH6	1988	09	17.20451	21	58	02.64	-06	40	45.8	3 809
1988	RH6	1988	09	17.21111	21	58	02.32	-06	40	46.0	3 809
1988	RH6	1988	09	17.21771	21	58	02.01	-06	40	46.2	3 809
1988	RJ6	1988	09	08.31493	23	08	06.13	-02	17	51.0	3 809
1988	RJ6	1988	09	08.32118	23	08	05.78	-02	17	52.0	3 809
1988	RJ6	1988	09	08.32743	23	08	05.42	-02	17	53.1	3 809
1988	RJ6	1988	09	14.29965	23	02	22.14	-02	31	34.2	3 809
1988	RJ6	1988	09	14.30590	23	02	21.79	-02	31	35.1	3 809
1988	RJ6	1988	09	14.31215	23	02	21.44	-02	31	36.0	3 809
1988	RJ6	1988	09	20.27048	22	56	50.38	-02	45	49.0	3 809
1988	RJ6	1988	09	20.27535	22	56	50.12	-02	45	49.7	3 809
1988	RJ6	1988	09	20.28021	22	56	49.87	-02	45	50.6	3 809
1988	RK6	1988	09	08.31493	23	09	08.18	-01	59	37.2	3 809
1988	RK6	1988	09	08.32118	23	09	07.91	-01	59	41.1	3 809
1988	RK6	1988	09	08.32743	23	09	07.65	-01	59	45.0	3 809
1988	RK6	1988	09	14.29965	23	04	36.65	-03	03	05.7	3 809
1988	RK6	1988	09	14.30590	23	04	36.37	-03	03	09.7	3 809
1988	RK6	1988	09	14.31215	23	04	36.08	-03	03	13.7	3 809
1988	RK6	1988	09	20.27048	23	00	21.71	-04	05	48.1	3 809
1988	RK6	1988	09	20.27535	23	00	21.51	-04	05	51.1	3 809

1988	RK6	1988	09	20.28021	23	00	21.31	-04	05	54.3	3 809
1988	RL6	1988	09	08.35104	23	20	45.55	-06	16	54.0	3 809
1988	RL6	1988	09	08.35729	23	20	45.27	-06	16	58.0	3 809
1988	RL6	1988	09	08.36354	23	20	45.01	-06	17	02.1	3 809
1988	RL6	1988	09	19.30069	23	12	45.16	-08	09	26.4	3 809
1988	RL6	1988	09	19.30625	23	12	44.91	-08	09	29.8	3 809
1988	RL6	1988	09	19.31180	23	12	44.67	-08	09	33.3	3 809
1988	RL6	1988	09	20.03472	23	12	15.32	-08	16	32.1	3 809
1988	RL6	1988	09	20.04028	23	12	15.09	-08	16	35.2	3 809
1988	RL6	1988	09	20.04583	23	12	14.85	-08	16	38.4	3 809
1988	RM6	1988	09	09.03021	21	46	59.55	-18	19	37.3	3 809
1988	RM6	1988	09	09.03646	21	46	59.33	-18	19	38.9	3 809
1988	RM6	1988	09	09.04271	21	46	59.10	-18	19	40.4	3 809
1988	RN6	1988	09	08.04201	21	48	00.94	-17	16	55.6	3 809
1988	RN6	1988	09	08.04826	21	48	00.62	-17	16	55.9	3 809
1988	RN6	1988	09	08.05451	21	48	00.30	-17	16	56.3	3 809
1988	RN6	1988	09	14.10173	21	43	36.29	-17	19	55.9	3 809
1988	RN6	1988	09	14.10798	21	43	36.04	-17	19	55.9	3 809
1988	RN6	1988	09	14.11423	21	43	35.79	-17	19	56.0	3 809
1988	RN6	1988	09	16.13923	21	42	21.88	-17	19	35.4	3 809
1988	RN6	1988	09	16.14549	21	42	21.64	-17	19	35.3	3 809
1988	RN6	1988	09	16.15173	21	42	21.41	-17	19	35.1	3 809
1988	RO6	1988	09	09.03021	21	47	15.88	-16	36	11.2	3 809
1988	RO6	1988	09	09.03646	21	47	15.55	-16	36	11.1	3 809
1988	RO6	1988	09	09.04271	21	47	15.23	-16	36	10.7	3 809
1988	RO6	1988	09	14.10173	21	43	17.71	-16	32	10.9	3 809
1988	RO6	1988	09	14.10798	21	43	17.43	-16	32	10.6	3 809
1988	RO6	1988	09	14.11423	21	43	17.15	-16	32	10.2	3 809
1988	RO6	1988	09	16.13923	21	41	54.15	-16	29	28.9	3 809
1988	RO6	1988	09	16.14549	21	41	53.90	-16	29	28.4	3 809
1988	RO6	1988	09	16.15173	21	41	53.66	-16	29	28.1	3 809
1988	RS6	1988	09	12.31146	22	55	20.80	-05	48	29.7	3 809
1988	RS6	1988	09	12.31771	22	55	20.56	-05	48	31.8	3 809
1988	RS6	1988	09	12.32396	22	55	20.32	-05	48	33.9	3 809
1988	RS6	1988	09	14.26562	22	54	08.86	-05	59	18.1	3 809
1988	RS6	1988	09	14.27187	22	54	08.63	-05	59	20.2	3 809
1988	RS6	1988	09	14.27812	22	54	08.40	-05	59	22.3	3 809
1988	RS6	1988	09	15.32396	22	53	31.05	-06	05	00.4	3 809
1988	RS6	1988	09	15.33854	22	53	30.53	-06	05	05.2	3 809
1988	RS6	1988	09	15.34687	22	53	30.22	-06	05	08.0	3 809
1988	RS6	1988	09	18.23680	22	51	54.26	-06	20	05.7	3 809
1988	RS6	1988	09	18.24236	22	51	54.08	-06	20	07.5	3 809
1988	RS6	1988	09	18.24791	22	51	53.89	-06	20	09.2	3 809
1988	RT6	1988	09	12.31146	22	55	20.65	-04	31	42.4	3 809
1988	RT6	1988	09	12.31771	22	55	20.38	-04	31	47.4	3 809
1988	RT6	1988	09	12.32396	22	55	20.11	-04	31	52.3	3 809
1988	RT6	1988	09	14.26562	22	53	59.33	-04	56	59.0	3 809
1988	RT6	1988	09	14.27187	22	53	59.08	-04	57	03.5	3 809
1988	RT6	1988	09	14.27812	22	53	58.81	-04	57	08.4	3 809
1988	RT6	1988	09	15.32396	22	53	16.08	-05	10	32.5	3 809
1988	RT6	1988	09	15.33854	22	53	15.48	-05	10	43.5	3 809
1988	RT6	1988	09	15.34687	22	53	15.13	-05	10	49.9	3 809
1988	RT6	1988	09	18.23680	22	51	21.31	-05	47	18.1	3 809
1988	RT6	1988	09	18.24236	22	51	21.12	-05	47	22.3	3 809
1988	RT6	1988	09	18.24791	22	51	20.90	-05	47	26.2	3 809
1988	RT6	1988	09	20.20521	22	50	07.59	-06	11	33.7	3 809
1988	RT6	1988	09	20.21007	22	50	07.41	-06	11	37.4	3 809
1988	RT6	1988	09	20.21493	22	50	07.23	-06	11	41.0	3 809
1988	RU6	1988	09	12.31146	22	56	40.54	-05	05	14.2	3 809

1988	RU6	1988	09	12.31771	22	56	40.22	-05	05	16.3		3 809
1988	RU6	1988	09	12.32396	22	56	39.91	-05	05	18.5		3 809
1988	RU6	1988	09	14.26562	22	55	04.88	-05	16	25.2		3 809
1988	RU6	1988	09	14.27187	22	55	04.57	-05	16	27.5		3 809
1988	RU6	1988	09	14.27812	22	55	04.27	-05	16	29.6		3 809
1988	RU6	1988	09	15.32396	22	54	13.73	-05	22	24.9		3 809
1988	RU6	1988	09	15.33854	22	54	13.03	-05	22	29.9		3 809
1988	RU6	1988	09	15.34687	22	54	12.63	-05	22	32.6		3 809
1988	RU6	1988	09	18.23680	22	51	56.61	-05	38	36.3		3 809
1988	RU6	1988	09	18.24236	22	51	56.36	-05	38	38.1		3 809
1988	RU6	1988	09	18.24791	22	51	56.10	-05	38	40.0		3 809
1988	RU6	1988	09	20.20521	22	50	27.18	-05	49	14.8		3 809
1988	RU6	1988	09	20.21007	22	50	26.97	-05	49	16.3		3 809
1988	RU6	1988	09	20.21493	22	50	26.74	-05	49	17.9		3 809
1988	RW6	1988	09	12.31146	22	57	31.96	-05	18	51.5		3 809
1988	RW6	1988	09	12.31771	22	57	31.59	-05	18	52.2		3 809
1988	RW6	1988	09	12.32396	22	57	31.22	-05	18	53.2		3 809
1988	RW6	1988	09	14.26562	22	55	40.32	-05	23	36.3		3 809
1988	RW6	1988	09	14.27187	22	55	39.97	-05	23	37.2		3 809
1988	RW6	1988	09	14.27812	22	55	39.61	-05	23	38.3		3 809
1988	RW6	1988	09	15.32396	22	54	41.00	-05	26	06.0		3 809
1988	RW6	1988	09	15.33854	22	54	40.18	-05	26	08.0		3 809
1988	RW6	1988	09	15.34687	22	54	39.71	-05	26	09.2		3 809
1988	RW6	1988	09	18.23680	22	52	04.37	-05	32	35.5		3 809
1988	RW6	1988	09	18.24236	22	52	04.07	-05	32	36.2		3 809
1988	RW6	1988	09	18.24791	22	52	03.78	-05	32	36.9		3 809
1988	RC7	1988	09	14.29965	23	07	56.28	-02	20	34.3		3 809
1988	RC7	1988	09	14.30590	23	07	56.03	-02	20	39.6		3 809
1988	RC7	1988	09	14.31215	23	07	55.79	-02	20	44.9		3 809
1988	RC7	1988	09	19.28160	23	04	50.67	-03	31	34.1		3 809
1988	RC7	1988	09	19.28646	23	04	50.49	-03	31	38.0		3 809
1988	RC7	1988	09	19.29132	23	04	50.31	-03	31	42.0		3 809
1988	RE7	1988	09	03.23646	23	23	15.03	-02	17	52.1		3 809
1988	RE7	1988	09	03.24271	23	23	14.68	-02	17	52.1		3 809
1988	RE7	1988	09	03.24896	23	23	14.34	-02	17	52.1		3 809
1988	RF7	1988	09	04.18924	22	24	25.52	-21	22	50.1		3 809
1988	RF7	1988	09	04.19549	22	24	25.26	-21	22	52.9		3 809
1988	RF7	1988	09	04.20173	22	24	25.04	-21	22	55.9		3 809
1988	RF7	1988	09	07.25174	22	22	41.22	-21	42	52.7		3 809
1988	RF7	1988	09	07.25799	22	22	41.02	-21	42	55.0		3 809
1988	RF7	1988	09	10.19062	22	21	10.47	-21	59	03.9		3 809
1988	RF7	1988	09	10.19688	22	21	10.26	-21	59	06.0		3 809
1988	RF7	1988	09	10.20312	22	21	10.10	-21	59	08.1		3 809
1988	RF7	1988	09	11.08021	22	20	45.50	-22	03	19.8		3 809
1988	RF7	1988	09	11.08646	22	20	45.33	-22	03	21.7		3 809
1988	RF7	1988	09	11.09271	22	20	45.15	-22	03	23.6		3 809
1988	RF7	1988	09	17.99965	22	18	09.72	-22	26	11.9		3 809
1988	RF7	1988	09	18.00590	22	18	09.57	-22	26	12.9		3 809
1988	RF7	1988	09	18.01215	22	18	09.45	-22	26	13.6		3 809
1988	RF7	1988	09	19.12048	22	17	51.88	-22	28	10.8		3 809
1988	RF7	1988	09	19.13021	22	17	51.70	-22	28	11.8		3 809
1988	RF7	1988	09	19.14410	22	17	51.45	-22	28	12.6		3 809
1988	RH8	1988	09	18.28750	23	15	32.58	-02	35	34.5	16.6	3 809
1988	RH8	1988	09	18.29305	23	15	32.22	-02	35	35.5		3 809
1988	RH8	1988	09	18.29861	23	15	31.87	-02	35	36.7		3 809
1988	RF9	1988	09	02.10104	22	23	16.32	-14	19	31.5	17.4	3 809
1988	RF9	1988	09	02.10729	22	23	15.94	-14	19	33.5		3 809
1988	RF9	1988	09	02.11354	22	23	15.57	-14	19	35.8		3 809
1988	RF9	1988	09	07.26632	22	18	28.74	-14	47	11.2		3 809

1988	RF9		1988	09	07.27257	22	18	28.39	-14	47	12.9	3 809
1988	RF9		1988	09	10.21562	22	15	55.34	-15	01	09.4	3 809
1988	RF9		1988	09	10.22187	22	15	55.00	-15	01	11.0	3 809
1988	RF9		1988	09	10.22813	22	15	54.66	-15	01	12.7	3 809
1988	RF9		1988	09	11.23646	22	15	04.35	-15	05	38.6	3 809
1988	RF9		1988	09	11.24271	22	15	04.04	-15	05	40.2	3 809
1988	RF9		1988	09	11.24896	22	15	03.74	-15	05	41.9	3 809
1988	RG9		1988	09	03.08368	22	11	52.17	-14	48	51.7	16.6 3 809
1988	RG9		1988	09	03.08993	22	11	51.84	-14	48	53.7	3 809
1988	RG9		1988	09	03.09618	22	11	51.51	-14	48	56.0	3 809
1988	RG9		1988	09	07.22951	22	08	16.71	-15	14	46.5	3 809
1988	RG9		1988	09	07.23576	22	08	16.40	-15	14	48.7	3 809
1988	RG9		1988	09	07.24201	22	08	16.07	-15	14	50.7	3 809
1988	RG9		1988	09	09.10521	22	06	44.96	-15	25	36.9	3 809
1988	RG9		1988	09	09.11146	22	06	44.65	-15	25	39.0	3 809
1988	RG9		1988	09	09.11771	22	06	44.34	-15	25	41.2	3 809
1988	RG9		1988	09	12.20034	22	04	21.62	-15	42	06.5	3 809
1988	RG9		1988	09	12.20660	22	04	21.32	-15	42	08.4	3 809
1988	RG9		1988	09	12.21284	22	04	21.03	-15	42	10.5	3 809
1988	RH9	*	1988	09	01.01840	21	00	53.20	-11	19	04.6	16.3 3 809
1988	RH9		1988	09	01.02465	21	00	52.93	-11	19	07.8	3 809
1988	RH9		1988	09	01.03090	21	00	52.71	-11	19	11.2	3 809
1988	RH9		1988	09	03.03646	20	59	39.52	-11	37	08.5	3 809
1988	RH9		1988	09	03.04271	20	59	39.27	-11	37	12.0	3 809
1988	RH9		1988	09	03.04896	20	59	39.03	-11	37	15.4	3 809
1988	RH9		1988	09	06.01215	20	57	59.28	-12	02	59.9	3 809
1988	RH9		1988	09	06.01840	20	57	59.07	-12	03	03.4	3 809
1988	RH9		1988	09	06.02465	20	57	58.86	-12	03	06.6	3 809
1988	RH9		1988	09	07.01701	20	57	27.81	-12	11	30.7	3 809
1988	RH9		1988	09	07.02326	20	57	27.62	-12	11	33.8	3 809
1988	RH9		1988	09	07.02951	20	57	27.42	-12	11	37.0	3 809
1988	RH9		1988	09	09.19757	20	56	23.62	-12	29	33.0	3 809
1988	RH9		1988	09	09.20382	20	56	23.45	-12	29	36.2	3 809
1988	RH9		1988	09	09.21007	20	56	23.28	-12	29	39.3	3 809
1988	RH9		1988	09	11.13715	20	55	31.98	-12	45	07.1	3 809
1988	RH9		1988	09	11.14340	20	55	31.81	-12	45	10.2	3 809
1988	RH9		1988	09	11.14965	20	55	31.63	-12	45	13.2	3 809
1988	RH9		1988	09	12.00000	20	55	10.75	-12	51	52.9	3 809
1988	RH9		1988	09	12.00833	20	55	10.53	-12	51	56.8	3 809
1988	RH9		1988	09	12.01667	20	55	10.31	-12	52	00.7	3 809
1988	RJ9	*	1988	09	01.06285	22	04	15.30	-16	57	56.1	16.6 3 809
1988	RJ9		1988	09	01.06910	22	04	14.96	-16	57	56.6	3 809
1988	RJ9		1988	09	01.07535	22	04	14.61	-16	57	56.8	3 809
1988	RJ9		1988	09	03.11875	22	02	21.41	-16	59	01.2	3 809
1988	RJ9		1988	09	03.12500	22	02	21.07	-16	59	01.4	3 809
1988	RJ9		1988	09	03.13090	22	02	20.74	-16	59	01.6	3 809
1988	RJ9		1988	09	04.14132	22	01	25.58	-16	59	24.9	3 809
1988	RJ9		1988	09	04.14757	22	01	25.24	-16	59	25.0	3 809
1988	RJ9		1988	09	04.15382	22	01	24.90	-16	59	25.1	3 809
1988	RJ9		1988	09	05.16493	22	00	30.33	-16	59	42.4	3 809
1988	RJ9		1988	09	05.17118	22	00	29.98	-16	59	42.7	3 809
1988	RJ9		1988	09	05.17743	22	00	29.63	-16	59	42.0	3 809
1988	RJ9		1988	09	07.06146	21	58	50.02	-16	59	59.5	3 809
1988	RJ9		1988	09	07.06771	21	58	49.69	-16	59	59.5	3 809
1988	RJ9		1988	09	10.01979	21	56	18.87	-16	59	42.9	3 809
1988	RJ9		1988	09	10.02604	21	56	18.57	-16	59	42.9	3 809
1988	RJ9		1988	09	10.03229	21	56	18.25	-16	59	42.9	3 809
1988	RJ9		1988	09	13.02534	21	53	53.29	-16	58	32.1	3 809
1988	RJ9		1988	09	13.03160	21	53	52.99	-16	58	32.1	3 809

1988	RJ9		1988	09	13.03785	21	53	52.70	-16	58	31.7	3 809
1988	RJ9		1988	09	17.18090	21	50	47.29	-16	55	18.9	3 809
1988	RJ9		1988	09	17.18715	21	50	47.00	-16	55	18.4	3 809
1988	RJ9		1988	09	17.19340	21	50	46.71	-16	55	17.7	3 809
1988	RJ9		1988	09	19.07291	21	49	29.44	-16	53	13.9	3 809
1988	RJ9		1988	09	19.08333	21	49	29.00	-16	53	13.2	3 809
1988	RJ9		1988	09	19.09375	21	49	28.57	-16	53	12.2	3 809
1988	RK9	*	1988	09	01.99618	21	07	49.21	-16	02	07.5	15.9 3 809
1988	RK9		1988	09	02.00243	21	07	49.04	-16	02	10.7	3 809
1988	RK9		1988	09	02.00868	21	07	48.85	-16	02	13.7	3 809
1988	RK9		1988	09	05.19062	21	06	18.07	-16	28	48.5	3 809
1988	RK9		1988	09	05.19688	21	06	17.89	-16	28	51.5	3 809
1988	RK9		1988	09	05.20312	21	06	17.70	-16	28	54.5	3 809
1988	RK9		1988	09	07.99896	21	05	09.09	-16	51	03.6	3 809
1988	RK9		1988	09	08.00521	21	05	08.94	-16	51	06.6	3 809
1988	RK9		1988	09	08.01146	21	05	08.78	-16	51	09.5	3 809
1988	RK9		1988	09	09.99826	21	04	26.14	-17	06	11.0	3 809
1988	RK9		1988	09	10.00451	21	04	26.01	-17	06	13.8	3 809
1988	RK9		1988	09	10.01076	21	04	25.86	-17	06	16.6	3 809
1988	RK9		1988	09	17.11215	21	02	40.21	-17	54	42.1	3 809
1988	RK9		1988	09	17.11840	21	02	40.13	-17	54	44.4	3 809
1988	RK9		1988	09	17.12465	21	02	40.07	-17	54	46.8	3 809
1988	RL9	*	1988	09	01.99618	21	12	54.13	-16	14	25.2	3 809
1988	RL9		1988	09	02.00243	21	12	53.81	-16	14	25.2	3 809
1988	RL9		1988	09	02.00868	21	12	53.48	-16	14	25.4	3 809
1988	RL9		1988	09	05.19062	21	10	18.86	-16	14	58.5	3 809
1988	RL9		1988	09	05.19688	21	10	18.57	-16	14	58.6	3 809
1988	RL9		1988	09	05.20312	21	10	18.28	-16	14	58.7	3 809
1988	RL9		1988	09	07.99896	21	08	18.15	-16	14	26.2	3 809
1988	RL9		1988	09	08.00521	21	08	17.88	-16	14	26.1	3 809
1988	RL9		1988	09	08.01146	21	08	17.63	-16	14	26.1	3 809
1988	RL9		1988	09	09.99826	21	07	00.92	-16	13	27.0	3 809
1988	RL9		1988	09	10.00451	21	07	00.68	-16	13	26.8	3 809
1988	RL9		1988	09	10.01076	21	07	00.43	-16	13	26.4	3 809
1988	RL9		1988	09	14.02465	21	04	50.61	-16	09	52.6	3 809
1988	RL9		1988	09	14.03090	21	04	50.38	-16	09	52.3	3 809
1988	RL9		1988	09	14.03715	21	04	50.22	-16	09	52.4	3 809
1988	RM9	*	1988	09	03.14201	22	09	01.84	-16	01	39.0	16.3 3 809
1988	RM9		1988	09	03.14826	22	09	01.49	-16	01	39.7	3 809
1988	RM9		1988	09	03.15451	22	09	01.13	-16	01	40.4	3 809
1988	RN9	*	1988	09	03.23646	23	21	56.85	-03	20	36.6	16.6 3 809
1988	RN9		1988	09	03.24271	23	21	56.53	-03	20	38.0	3 809
1988	RN9		1988	09	03.24896	23	21	56.21	-03	20	39.8	3 809
1988	RO9	*	1988	09	03.25660	23	15	32.07	-04	51	14.4	3 809
1988	RO9		1988	09	03.26285	23	15	31.73	-04	51	16.8	3 809
1988	RO9		1988	09	03.26910	23	15	31.39	-04	51	19.2	3 809
1988	RP9	*	1988	09	03.25660	23	20	34.70	-05	19	43.8	17.0 3 809
1988	RP9		1988	09	03.26285	23	20	34.51	-05	19	45.5	3 809
1988	RP9		1988	09	03.26910	23	20	34.23	-05	19	47.4	3 809
1988	RQ9	*	1988	09	05.35521	23	23	50.44	-03	14	11.0	3 809
1988	RQ9		1988	09	05.36146	23	23	50.12	-03	14	11.4	3 809
1988	RQ9		1988	09	05.36771	23	23	49.79	-03	14	12.0	3 809
1988	RQ9		1988	09	08.37396	23	21	15.61	-03	19	00.8	3 809
1988	RQ9		1988	09	08.38021	23	21	15.29	-03	19	01.0	3 809
1988	RQ9		1988	09	08.38646	23	21	14.97	-03	19	01.4	3 809
1988	RQ9		1988	09	09.37049	23	20	23.99	-03	20	39.1	3 809
1988	RQ9		1988	09	09.37674	23	20	23.67	-03	20	39.8	3 809
1988	RQ9		1988	09	09.38299	23	20	23.34	-03	20	40.5	3 809
1988	RQ9		1988	09	11.37187	23	18	39.97	-03	24	01.0	3 809

1988	RQ9		1988	09	11.37812	23	18	39.64	-03	24	01.5	3 809
1988	RQ9		1988	09	11.38437	23	18	39.32	-03	24	02.5	3 809
1988	RQ9		1988	09	14.32153	23	16	06.83	-03	29	00.9	3 809
1988	RQ9		1988	09	14.32847	23	16	06.47	-03	29	01.7	3 809
1988	RQ9		1988	09	14.33541	23	16	06.10	-03	29	02.5	3 809
1988	RQ9		1988	09	18.28750	23	12	43.55	-03	35	40.2	3 809
1988	RQ9		1988	09	18.29305	23	12	43.27	-03	35	40.7	3 809
1988	RQ9		1988	09	18.29861	23	12	42.99	-03	35	41.3	3 809
1988	RQ9		1988	09	19.28160	23	11	53.51	-03	37	17.4	3 809
1988	RQ9		1988	09	19.28646	23	11	53.26	-03	37	17.8	3 809
1988	RQ9		1988	09	19.29132	23	11	53.02	-03	37	18.2	3 809
1988	RR9	*	1988	09	06.38785	23	18	42.88	-05	32	12.5	3 809
1988	RR9		1988	09	06.39410	23	18	42.60	-05	32	14.2	3 809
1988	RR9		1988	09	06.40035	23	18	42.31	-05	32	16.0	3 809
1988	RR9		1988	09	08.35104	23	17	13.58	-05	41	36.5	17.0 3 809
1988	RR9		1988	09	08.35729	23	17	13.29	-05	41	38.3	3 809
1988	RR9		1988	09	08.36354	23	17	13.00	-05	41	40.1	3 809
1988	RR9		1988	09	10.37187	23	15	40.94	-05	51	19.0	3 809
1988	RR9		1988	09	10.37812	23	15	40.66	-05	51	20.8	3 809
1988	RR9		1988	09	10.38437	23	15	40.36	-05	51	22.5	3 809
1988	RR9		1988	09	12.35035	23	14	09.83	-06	00	47.1	3 809
1988	RR9		1988	09	12.35659	23	14	09.55	-06	00	48.7	3 809
1988	RR9		1988	09	12.36285	23	14	09.27	-06	00	50.5	3 809
1988	RR9		1988	09	18.07847	23	09	47.61	-06	27	50.7	3 809
1988	RR9		1988	09	18.08403	23	09	47.36	-06	27	52.2	3 809
1988	RR9		1988	09	18.08958	23	09	47.11	-06	27	54.1	3 809
1988	RS9	*	1988	09	07.20799	22	19	11.09	-11	02	44.4	16.4 3 809
1988	RS9		1988	09	07.21424	22	19	10.74	-11	02	44.9	3 809
1988	RS9		1988	09	07.22049	22	19	10.39	-11	02	45.5	3 809
1988	RS9		1988	09	08.12257	22	18	19.67	-11	03	51.4	3 809
1988	RS9		1988	09	08.12882	22	18	19.31	-11	03	52.0	3 809
1988	RS9		1988	09	08.13507	22	18	18.94	-11	03	52.4	3 809
1988	RS9		1988	09	11.21632	22	15	32.25	-11	07	07.7	3 809
1988	RS9		1988	09	11.22257	22	15	31.93	-11	07	08.1	3 809
1988	RS9		1988	09	11.22882	22	15	31.59	-11	07	08.5	3 809
1988	RS9		1988	09	14.16354	22	13	04.74	-11	09	28.3	3 809
1988	RS9		1988	09	14.16979	22	13	04.41	-11	09	28.6	3 809
1988	RS9		1988	09	14.17604	22	13	04.09	-11	09	28.9	3 809
1988	RS9		1988	09	17.25868	22	10	42.92	-11	11	01.5	3 809
1988	RS9		1988	09	17.26493	22	10	42.64	-11	11	01.7	3 809
1988	RS9		1988	09	17.27118	22	10	42.36	-11	11	01.8	3 809
1988	RT9	*	1988	09	08.25035	22	56	27.35	-02	57	24.5	3 809
1988	RT9		1988	09	08.25660	22	56	27.05	-02	57	26.3	3 809
1988	RT9		1988	09	08.26285	22	56	26.75	-02	57	28.1	3 809
1988	RU9	*	1988	09	08.27187	22	58	34.30	-05	15	31.8	17.2 3 809
1988	RU9		1988	09	08.27812	22	58	33.95	-05	15	36.0	3 809
1988	RU9		1988	09	08.28437	22	58	33.59	-05	15	40.2	3 809
1988	RU9		1988	09	18.23680	22	49	12.94	-07	07	04.9	3 809
1988	RU9		1988	09	18.24236	22	49	12.63	-07	07	08.7	3 809
1988	RU9		1988	09	18.24791	22	49	12.31	-07	07	12.3	3 809
1988	RV9	*	1988	09	09.37049	23	16	07.29	-03	25	12.4	3 809
1988	RV9		1988	09	09.37674	23	16	06.86	-03	25	13.5	3 809
1988	RV9		1988	09	09.38299	23	16	06.43	-03	25	14.7	3 809
1988	RW9	*	1988	09	10.06354	22	41	18.11	-10	23	15.8	3 809
1988	RW9		1988	09	10.06979	22	41	17.82	-10	23	17.7	3 809
1988	RW9		1988	09	10.07604	22	41	17.51	-10	23	19.5	3 809
1988	RW9		1988	09	11.34618	22	40	20.57	-10	29	32.9	3 809
1988	RW9		1988	09	11.35243	22	40	20.29	-10	29	35.1	3 809
1988	RW9		1988	09	11.35868	22	40	20.01	-10	29	37.0	3 809

1988	RX9	*	1988	09	10.25035	22	24	58.43	-09	05	27.8	17.2	3	809
1988	RX9		1988	09	10.25764	22	24	58.07	-09	05	28.7		3	809
1988	RX9		1988	09	10.26493	22	24	57.71	-09	05	29.6		3	809
1988	RX9		1988	09	13.24791	22	22	29.25	-09	11	24.3		3	809
1988	RX9		1988	09	13.25625	22	22	28.85	-09	11	25.0		3	809
1988	RX9		1988	09	13.26458	22	22	28.44	-09	11	26.0		3	809
1988	RY9	*	1988	09	11.37187	23	19	40.01	-01	34	44.3	16.9	3	809
1988	RY9		1988	09	11.37812	23	19	39.68	-01	34	47.0		3	809
1988	RY9		1988	09	11.38437	23	19	39.35	-01	34	49.6		3	809
1988	RY9		1988	09	14.32153	23	17	06.07	-01	55	51.2		3	809
1988	RY9		1988	09	14.32847	23	17	05.71	-01	55	54.1		3	809
1988	RY9		1988	09	14.33541	23	17	05.34	-01	55	57.1		3	809
1988	RZ9	*	1988	09	13.24791	22	22	04.36	-09	12	39.5	17.1	3	809
1988	RZ9		1988	09	13.25625	22	22	04.08	-09	12	37.9		3	809
1988	RZ9		1988	09	13.26458	22	22	03.84	-09	12	36.3		3	809
1988	RA10	*	1988	09	14.26562	22	55	41.73	-06	03	05.9	16.3	3	809
1988	RA10		1988	09	14.27187	22	55	41.41	-06	03	06.4		3	809
1988	RA10		1988	09	14.27812	22	55	41.09	-06	03	06.6		3	809
1988	RA10		1988	09	15.32396	22	54	46.87	-06	04	09.8		3	809
1988	RA10		1988	09	15.33854	22	54	46.10	-06	04	10.7		3	809
1988	RA10		1988	09	15.34687	22	54	45.67	-06	04	11.0		3	809
1988	RA10		1988	09	18.23680	22	52	19.11	-06	06	50.3		3	809
1988	RA10		1988	09	18.24236	22	52	18.83	-06	06	50.9		3	809
1988	RA10		1988	09	18.24791	22	52	18.55	-06	06	51.3		3	809
1988	RA10		1988	09	20.20521	22	50	42.18	-06	08	25.4		3	809
1988	RA10		1988	09	20.21007	22	50	41.95	-06	08	25.7		3	809
1988	RA10		1988	09	20.21493	22	50	41.71	-06	08	25.9		3	809
1988	RB10	*	1988	09	14.35451	23	05	45.82	-10	25	07.3	16.7	3	809
1988	RB10		1988	09	14.36076	23	05	45.67	-10	25	08.0		3	809
1988	RB10		1988	09	14.36701	23	05	45.53	-10	25	08.7		3	809
1988	SP		1988	09	08.29271	22	58	56.58	-10	02	43.9	16.9	3	809
1988	SP		1988	09	08.29896	22	58	56.22	-10	02	46.1		3	809
1988	SP		1988	09	08.30521	22	58	55.88	-10	02	48.3		3	809
1988	SP		1988	09	09.15035	22	58	08.88	-10	07	47.0		3	809
1988	SP		1988	09	09.15660	22	58	08.53	-10	07	49.0		3	809
1988	SP		1988	09	09.16285	22	58	08.20	-10	07	51.2		3	809
1988	SP		1988	09	12.33160	22	55	10.58	-10	26	00.0		3	809
1988	SP		1988	09	12.33646	22	55	10.31	-10	26	01.4		3	809
1988	SP		1988	09	12.34132	22	55	10.04	-10	26	03.2		3	809
1988	SP		1988	09	15.29340	22	52	27.67	-10	42	08.8		3	809
1988	SP		1988	09	15.29965	22	52	27.31	-10	42	10.3		3	809
1988	SP		1988	09	15.30590	22	52	26.95	-10	42	12.1		3	809
1988	SE1	*	1988	09	16.34271	23	14	58.00	-09	22	00.7	17.0	3	809
1988	SE1		1988	09	16.34896	23	14	56.95	-09	21	56.2		3	809
1988	SE1		1988	09	16.35521	23	14	55.91	-09	21	51.8		3	809
1988	SE1		1988	09	18.05521	23	10	15.80	-09	03	13.4		3	809
1988	SE1		1988	09	18.06111	23	10	14.90	-09	03	07.3		3	809
1988	SE1		1988	09	18.06701	23	10	13.92	-09	03	03.7		3	809
1988	SF1	*	1988	09	18.17152	22	29	55.92	-05	21	32.6	16.6	3	809
1988	SF1		1988	09	18.17708	22	29	55.66	-05	21	34.2		3	809
1988	SF1		1988	09	18.18333	22	29	55.37	-05	21	36.3		3	809
1988	SF1		1988	09	19.20208	22	29	09.00	-05	27	25.8		3	809
1988	SF1		1988	09	19.20903	22	29	08.68	-05	27	28.2		3	809
1988	SF1		1988	09	19.21597	22	29	08.38	-05	27	30.5		3	809
1988	SF1		1988	09	19.22361	22	29	07.96	-05	27	33.7		3	809
1988	SF1		1988	09	19.22916	22	29	07.71	-05	27	35.3		3	809
1988	SF1		1988	09	19.23472	22	29	07.44	-05	27	37.3		3	809
1988	SF1		1988	09	20.16979	22	28	25.98	-05	32	53.5		3	809
1988	SF1		1988	09	20.17465	22	28	25.76	-05	32	55.3		3	809

1988	SF1		1988	09	20.17951	22	28	25.55	-05	32	56.9	3 809
1988	SG1	*	1988	09	18.28750	23	08	15.99	-03	39	06.1	17.0 3 809
1988	SG1		1988	09	18.29305	23	08	15.57	-03	39	11.4	3 809
1988	SG1		1988	09	18.29861	23	08	15.16	-03	39	16.6	3 809
1988	SH1	*	1988	09	20.28785	23	00	18.15	-01	18	19.4	16.7 3 809
1988	SH1		1988	09	20.29271	23	00	17.92	-01	18	21.8	3 809
1988	SH1		1988	09	20.29757	23	00	17.68	-01	18	24.4	3 809
1988	SJ1	*	1988	09	20.28785	23	06	26.82	-00	51	51.0	17.0 3 809
1988	SJ1		1988	09	20.29271	23	06	26.58	-00	51	52.7	3 809
1988	SJ1		1988	09	20.29757	23	06	26.34	-00	51	54.5	3 809
1988	SK1	*	1988	09	20.28785	23	07	15.11	-00	27	04.9	17.0 3 809
1988	SK1		1988	09	20.29271	23	07	14.83	-00	27	06.7	3 809
1988	SK1		1988	09	20.29757	23	07	14.56	-00	27	08.5	3 809
1989	CM3		1989	03	03.12396	08	54	15.38	+08	10	27.6	4 809
1989	CM3		1989	03	03.14132	08	54	14.67	+08	10	32.8	4 809
1989	CM3		1989	03	03.15868	08	54	14.02	+08	10	39.2	4 809
1989	CU6	*	1989	02	04.18681	08	57	17.09	+04	17	19.5	18.8 4 809
1989	CU6		1989	02	04.19931	08	57	16.32	+04	17	21.1	4 809
1989	CU6		1989	02	04.21181	08	57	15.65	+04	17	22.2	4 809
1989	CV6	*	1989	02	04.18681	09	01	31.22	+07	31	12.0	17.5 4 809
1989	CV6		1989	02	04.19931	09	01	30.39	+07	31	19.4	4 809
1989	CV6		1989	02	04.21181	09	01	29.66	+07	31	26.1	4 809
1989	CW6	*	1989	02	04.18681	09	04	10.22	+07	50	13.2	19.5 4 809
1989	CW6		1989	02	04.19931	09	04	09.58	+07	50	17.9	4 809
1989	CW6		1989	02	04.21181	09	04	08.99	+07	50	21.0	4 809
1989	CW6		1989	03	03.07049	08	45	30.78	+10	06	33.3	4 809
1989	CW6		1989	03	03.08785	08	45	30.22	+10	06	38.0	4 809
1989	CW6		1989	03	03.10521	08	45	29.62	+10	06	44.3	4 809
1989	CX6	*	1989	02	04.18681	09	07	14.67	+03	11	12.5	19.8 4 809
1989	CX6		1989	02	04.19931	09	07	13.95	+03	11	13.3	4 809
1989	CX6		1989	02	04.21181	09	07	13.32	+03	11	13.6	4 809
1989	CY6	*	1989	02	04.18681	09	07	59.72	+06	50	56.1	20.0 4 809
1989	CY6		1989	02	04.19931	09	07	59.12	+06	51	02.7	4 809
1989	CY6		1989	02	04.21181	09	07	58.39	+06	51	09.7	4 809
1989	CZ6	*	1989	02	04.18681	09	11	28.94	+07	49	40.1	18.5 4 809
1989	CZ6		1989	02	04.19931	09	11	28.21	+07	49	45.4	4 809
1989	CZ6		1989	02	04.21181	09	11	27.53	+07	49	50.2	4 809
1989	CA7	*	1989	02	04.18681	09	16	46.31	+06	59	18.2	20.5 4 809
1989	CA7		1989	02	04.19931	09	16	45.49	+06	59	21.9	4 809
1989	CA7		1989	02	04.21181	09	16	44.72	+06	59	25.1	4 809
1989	CA7		1989	03	02.15868	08	53	12.81	+09	08	22.1	19.3 4 809
1989	CA7		1989	03	02.17604	08	53	12.19	+09	08	25.5	4 809
1989	CA7		1989	03	02.19340	08	53	11.58	+09	08	30.5	4 809
1989	CB7	*	1989	02	05.10972	07	44	06.70	+07	19	53.6	17.7 4 809
1989	CB7		1989	02	05.12222	07	44	06.20	+07	20	00.5	4 809
1989	CB7		1989	02	05.13472	07	44	05.65	+07	20	06.4	4 809
1989	CC7	*	1989	02	07.18333	09	11	46.15	+03	02	09.6	17.5 4 809
1989	CC7		1989	02	07.19583	09	11	45.51	+03	02	31.0	4 809
1989	CC7		1989	02	07.20833	09	11	44.91	+03	02	51.2	4 809
1989	ET7	*	1989	03	02.10521	08	38	53.62	+08	48	30.1	19.6 4 809
1989	ET7		1989	03	02.12257	08	38	53.27	+08	48	33.1	4 809
1989	ET7		1989	03	02.13993	08	38	52.99	+08	48	36.3	4 809
1989	EU7	*	1989	03	02.10521	08	41	45.91	+09	57	34.6	19.5 4 809
1989	EU7		1989	03	02.12257	08	41	45.12	+09	57	37.0	4 809
1989	EU7		1989	03	02.13993	08	41	44.36	+09	57	38.7	4 809
1989	EV7	*	1989	03	02.10521	08	42	24.38	+08	52	52.2	19.6 4 809
1989	EV7		1989	03	02.12257	08	42	23.80	+08	52	53.2	4 809
1989	EV7		1989	03	02.13993	08	42	23.28	+08	52	55.2	4 809
1989	EW7	*	1989	03	02.10521	08	42	39.51	+10	21	36.9	20.0 4 809

1989	EW7		1989	03	02.12257	08	42	38.45	+10	21	36.3		4 809
1989	EW7		1989	03	02.13993	08	42	37.83	+10	21	35.9		4 809
1989	EX7	*	1989	03	02.10521	08	49	06.76	+09	27	21.6	20.0	4 809
1989	EX7		1989	03	02.12257	08	49	06.09	+09	27	29.5		4 809
1989	EX7		1989	03	02.13993	08	49	05.38	+09	27	36.2		4 809
1989	EY7	*	1989	03	02.15868	09	07	30.31	+09	12	26.3	19.7	4 809
1989	EY7		1989	03	02.17604	09	07	29.69	+09	12	31.1		4 809
1989	EY7		1989	03	02.19340	09	07	29.24	+09	12	35.3		4 809
1989	EZ7	*	1989	03	03.07049	08	35	39.32	+09	07	54.6		4 809
1989	EZ7		1989	03	03.08785	08	35	38.76	+09	08	03.4		4 809
1989	EZ7		1989	03	03.10521	08	35	38.08	+09	08	15.2		4 809
1989	EA8	*	1989	03	03.12396	08	59	45.71	+07	53	13.3		4 809
1989	EA8		1989	03	03.14132	08	59	44.93	+07	53	15.1		4 809
1989	EA8		1989	03	03.15868	08	59	44.18	+07	53	16.4		4 809
1989	EB8	*	1989	03	03.12396	09	05	03.74	+10	22	45.9		4 809
1989	EB8		1989	03	03.14132	09	05	03.25	+10	22	49.8		4 809
1989	EB8		1989	03	03.15868	09	05	02.76	+10	22	53.2		4 809
1989	GP6	*	1989	04	05.29140	15	13	33.52	+01	45	56.6	16.5V	7 809
1989	GP6		1989	04	07.28109	15	12	44.47	+01	59	02.9		7 809
1989	GP6		1989	04	11.26325	15	10	52.22	+02	24	53.3		7 809
1989	GP6		1989	04	13.29449	15	09	47.91	+02	37	49.1		7 809
1989	GQ6	*	1989	04	05.29140	15	17	21.67	+02	36	36.1	18.0V	7 809
1989	GQ6		1989	04	07.28109	15	16	26.73	+02	50	30.9		7 809
1989	GQ6		1989	04	11.26325	15	14	18.47	+03	18	02.2		7 809
1989	GQ6		1989	04	13.29449	15	13	04.02	+03	31	47.3		7 809
1989	GR6	*	1989	04	05.29140	15	17	39.76	+01	23	21.6	16.5V	7 809
1989	GR6		1989	04	07.28109	15	16	36.43	+01	34	28.8		7 809
1989	GR6		1989	04	11.26325	15	14	15.56	+01	56	24.6		7 809
1989	GR6		1989	04	13.29449	15	12	56.94	+02	07	19.8		7 809
1989	GS6	*	1989	04	05.29140	15	17	43.12	+00	00	34.7	16.0V	7 809
1989	GS6		1989	04	07.28109	15	16	53.26	+00	10	00.4		7 809
1989	GS6		1989	04	11.26325	15	14	59.21	+00	28	36.8		7 809
1989	GS6		1989	04	13.29449	15	13	54.02	+00	37	54.0		7 809
1989	GT6	*	1989	04	05.29140	15	18	51.21	+00	16	23.0	17.5V	7 809
1989	GT6		1989	04	07.28109	15	17	53.23	+00	32	12.4		7 809
1989	GT6		1989	04	11.26325	15	15	40.87	+01	03	37.2		7 809
1989	GT6		1989	04	13.29449	15	14	25.70	+01	19	21.4		7 809
1989	GU6	*	1989	04	05.29140	15	20	47.76	+01	18	19.7	17.5V	7 809
1989	GU6		1989	04	07.28109	15	19	44.83	+01	10	40.8		7 809
1989	GU6		1989	04	11.26325	15	17	11.84	+00	53	31.2		7 809
1989	GU6		1989	04	13.29449	15	15	40.85	+00	43	44.8		7 809
1989	GV6	*	1989	04	05.29140	15	25	16.54	+02	26	40.2	17.5V	7 809
1989	GV6		1989	04	07.28109	15	24	15.80	+02	36	13.8		7 809
1989	GV6		1989	04	11.26325	15	21	54.72	+02	54	30.1		7 809
1989	GV6		1989	04	13.29449	15	20	33.51	+03	03	14.0		7 809
1989	GW6	*	1989	04	03.17153	12	42	55.03	-07	25	48.2	17.6	4 809
1989	GW6		1989	04	03.18264	12	42	54.39	-07	25	43.0		4 809
1989	GW6		1989	04	03.19306	12	42	53.78	-07	25	38.9		4 809
1989	GX6	*	1989	04	03.24375	13	31	44.86	-15	25	45.1	18.0	4 809
1989	GX6		1989	04	03.25417	13	31	44.18	-15	25	43.7		4 809
1989	GX6		1989	04	03.26458	13	31	43.52	-15	25	43.0		4 809
1989	GY6	*	1989	04	03.24375	13	45	31.68	-15	57	16.3	20.0	4 809
1989	GY6		1989	04	03.25417	13	45	30.88	-15	57	12.8		4 809
1989	GY6		1989	04	03.26458	13	45	30.31	-15	57	10.8		4 809
1989	GZ6	*	1989	04	04.24792	13	10	35.61	-07	00	50.3	18.5	4 809
1989	GZ6		1989	04	04.25833	13	10	34.79	-07	00	47.8		4 809
1989	GZ6		1989	04	04.26875	13	10	34.03	-07	00	44.7		4 809
1989	GA7	*	1989	04	04.24792	13	18	39.41	-07	11	18.5	17.7	4 809
1989	GA7		1989	04	04.25833	13	18	38.78	-07	11	15.5		4 809

1989	GA7		1989	04	04.26875	13	18	38.19	-07	11	13.2		4 809
1989	GB7	*	1989	04	05.21181	13	01	13.65	-02	47	13.7	18.0	4 809
1989	GB7		1989	04	05.22708	13	01	12.92	-02	47	11.4		4 809
1989	GB7		1989	04	05.23750	13	01	12.27	-02	47	10.1		4 809
1989	GC7	*	1989	04	05.22917	13	36	47.76	-13	26	10.8	20.0	4 809
1989	GC7		1989	04	05.23958	13	36	47.32	-13	26	07.2		4 809
1989	GC7		1989	04	05.25000	13	36	46.84	-13	26	04.8		4 809
1989	GD7	*	1989	04	05.22917	13	36	56.28	-17	14	10.8		4 809
1989	GD7		1989	04	05.23958	13	36	55.75	-17	14	06.9		4 809
1989	GD7		1989	04	05.25000	13	36	55.20	-17	14	04.1		4 809
1989	GE7	*	1989	04	05.22917	13	47	36.95	-17	17	07.8		4 809
1989	GE7		1989	04	05.23958	13	47	36.47	-17	17	02.7		4 809
1989	GE7		1989	04	05.25000	13	47	36.06	-17	16	58.4		4 809
1989	GF7	*	1989	04	05.22917	13	49	18.51	-15	35	21.5	19.8	4 809
1989	GF7		1989	04	05.23958	13	49	17.94	-15	35	19.3		4 809
1989	GF7		1989	04	05.25000	13	49	17.34	-15	35	17.0		4 809
1989	GG7	*	1989	04	06.11389	12	27	30.44	-04	55	07.8		4 809
1989	GG7		1989	04	06.12431	12	27	29.96	-04	55	05.4		4 809
1989	GG7		1989	04	06.13472	12	27	29.39	-04	55	01.8		4 809
1989	GH7	*	1989	04	08.21181	13	33	18.55	-14	22	07.2	19.5	4 809
1989	GH7		1989	04	08.22222	13	33	17.83	-14	22	06.0		4 809
1989	GH7		1989	04	08.23264	13	33	17.19	-14	22	05.5		4 809
1989	GJ7	*	1989	04	08.21181	13	36	04.73	-15	11	24.0	20.0	4 809
1989	GJ7		1989	04	08.22222	13	36	04.24	-15	11	19.9		4 809
1989	GJ7		1989	04	08.23264	13	36	03.85	-15	11	14.1		4 809
1989	GK7	*	1989	04	08.21181	13	36	20.91	-15	49	18.2		4 809
1989	GK7		1989	04	08.22222	13	36	20.37	-15	49	16.1		4 809
1989	GK7		1989	04	08.23264	13	36	19.77	-15	49	14.1		4 809
1989	GL7	*	1989	04	08.21181	13	40	36.89	-13	03	39.1	20.5	4 809
1989	GL7		1989	04	08.22222	13	40	36.36	-13	03	34.7		4 809
1989	GL7		1989	04	08.23264	13	40	35.83	-13	03	30.5		4 809
1989	GM7	*	1989	04	08.21181	13	41	24.07	-14	12	06.4	20.5	4 809
1989	GM7		1989	04	08.22222	13	41	23.32	-14	12	03.5		4 809
1989	GM7		1989	04	08.23264	13	41	22.66	-14	11	58.7		4 809
1989	GN7	*	1989	04	08.21181	13	48	54.54	-12	36	15.0	20.0	4 809
1989	GN7		1989	04	08.22222	13	48	54.01	-12	36	10.4		4 809
1989	GN7		1989	04	08.23264	13	48	53.41	-12	36	05.9		4 809
1989	GO7	*	1989	04	09.11667	12	24	46.41	-05	34	11.4	18.3	4 809
1989	GO7		1989	04	09.12708	12	24	45.94	-05	34	06.1		4 809
1989	GO7		1989	04	09.13750	12	24	45.40	-05	34	02.8		4 809
1989	GP7	*	1989	04	09.16285	12	38	58.97	-08	29	51.0		4 809
1989	GP7		1989	04	09.17292	12	38	58.37	-08	29	49.1		4 809
1989	GP7		1989	04	09.18333	12	38	57.75	-08	29	47.7		4 809
1989	GQ7	*	1989	04	10.22778	12	49	43.70	-12	33	34.3	16.3	4 809
1989	GQ7		1989	04	10.23819	12	49	43.16	-12	33	27.6		4 809
1989	GQ7		1989	04	10.25000	12	49	42.60	-12	33	19.8		4 809
1989	GR7	*	1989	04	10.25417	13	42	08.61	-13	07	30.8		4 809
1989	GR7		1989	04	10.26458	13	42	07.80	-13	07	26.3		4 809
1989	GR7		1989	04	10.27500	13	42	07.06	-13	07	23.3		4 809
1989	GS7	*	1989	04	10.25417	13	48	17.33	-12	16	14.0	18.0	4 809
1989	GS7		1989	04	10.26458	13	48	16.67	-12	16	11.7		4 809
1989	GS7		1989	04	10.27500	13	48	16.02	-12	16	09.9		4 809
1989	GT7	*	1989	04	10.25417	13	48	20.70	-13	28	12.0	18.7	4 809
1989	GT7		1989	04	10.26458	13	48	20.07	-13	28	09.1		4 809
1989	GT7		1989	04	10.27500	13	48	19.46	-13	28	06.3		4 809
1989	GU7	*	1989	04	12.28681	13	20	08.61	-08	00	40.7		4 809
1989	GU7		1989	04	12.29861	13	20	08.01	-08	00	36.4		4 809
1989	GU7		1989	04	12.30903	13	20	07.47	-08	00	32.3		4 809
4016	P-L		1988	09	11.37187	23	21	13.38	-02	45	17.1	16.6	3 809

4016 P-L 1988 09 11.37812 23 21 13.06 -02 45 18.4 3 809
4016 P-L 1988 09 11.38437 23 21 12.74 -02 45 19.7 3 809
4016 P-L 1988 09 14.32153 23 18 42.62 -02 55 47.7 3 809
4016 P-L 1988 09 14.32847 23 18 42.27 -02 55 49.3 3 809
4016 P-L 1988 09 14.33541 23 18 41.92 -02 55 50.7 3 809
4016 P-L 1988 09 18.28750 23 15 21.91 -03 09 57.8 3 809
4016 P-L 1988 09 18.29305 23 15 21.63 -03 09 59.0 3 809
4016 P-L 1988 09 18.29861 23 15 21.34 -03 10 00.4 3 809
9522 P-L 1988 09 19.30069 23 08 08.07 -08 32 46.1 16.3 3 809
9522 P-L 1988 09 19.30625 23 08 07.78 -08 32 46.7 3 809
9522 P-L 1988 09 19.31180 23 08 07.47 -08 32 47.3 3 809
9522 P-L 1988 09 20.03472 23 07 30.59 -08 34 09.0 3 809
9522 P-L 1988 09 20.04028 23 07 30.30 -08 34 10.0 3 809
9522 P-L 1988 09 20.04583 23 07 30.00 -08 34 10.6 3 809

872 Tokushima
T. Furuta, Mitsuike 17-2, Kakiya-Cho, Tokai, Aichi-Ken 477, Japan
Observers M. Iwamoto
Measurer T. Furuta
0.25-m Wright-Schmidt
1989 CK7 * 1989 02 10.54071 09 32 26.4 +13 02 38 17.0 872
1989 CK7 1989 02 10.55576 09 32 25.61 +13 02 43.2 872

875 Yorii
M. Arai, 2695, Tomita, Saitama, 369-12 Japan
Observers M. Arai, H. Mori
Measurer H. Mori
0.30-m f/3.8 reflector
1988 VZ9 * 1988 11 15.56944 03 37 49.02 +17 03 57.4 17 875
1988 VZ9 1988 11 15.58958 03 37 47.62 +17 03 53.8 875
1989 EF8 * 1989 03 08.60104 11 08 05.81 +06 19 24.5 16.5 875
1989 EF8 1989 03 08.62118 11 08 04.87 +06 19 32.8 875
1989 EG8 * 1989 03 08.64028 11 43 30.89 +04 41 58.3 16.5 875
1989 EG8 1989 03 08.65972 11 43 30.04 +04 42 08.5 875

877 Okutama
N. Kawasato, 3-51, Hana-Koganei, Kodaira, Tokyo 187, Japan
Observer T. Hioki
Measurers N. Kawasato, T. Hioki
0.30-m f/3.8 hyperboloid astrocamera
1988 VR9 * 1988 11 07.60313 03 34 20.7 +12 04 44 17 w 877
1988 VR9 1988 11 07.66354 03 34 18.9 +12 05 00 w 877
1988 VS9 * 1988 11 07.71215 04 04 34.01 +15 44 02.3 17 877
1988 VS9 1988 11 07.72951 04 04 33.54 +15 44 03.4 877
1989 AY8 * 1989 01 04.65712 07 47 41.74 +23 22 37.5 17 877
1989 AY8 1989 01 04.67882 07 47 40.66 +23 22 40.6 877
1989 EN8 * 1989 03 10.73507 11 51 15.5 +10 49 49 17.5 877
1989 EN8 1989 03 10.75799 11 51 14.5 +10 49 59 877

881 Toyota
T. Furuta, Mitsuike 17-2, Kakiya-Cho, Tokai, Aichi-Ken 477, Japan
Observer K. Suzuki
Measurer T. Furuta
0.31-m f/5.7 reflector
1988 TQ3 * 1988 10 11.69688 02 21 37.40 +09 43 55.8 881
1988 TQ3 1988 10 11.71771 02 21 36.58 +09 43 51.2 881
1988 XK4 * 1988 12 06.57813 05 35 27.64 +26 35 31.0 16.5 881
1989 EK8 * 1989 03 10.59861 11 16 50.21 +05 05 10.5 16.5 881
1989 EK8 1989 03 10.61319 11 16 49.59 +05 05 17.2 881

888 Gekko
Y. Oshima, Gekko Observatory, Kan-nami, Shizuoka 419-01, Japan
Observer Y. Oshima
0.5-m f/4 reflector

1988 XD2		1989 01 01.50208	03 31 46.08	+19 41 28.2		17.0	888
1988 XD2		1989 01 01.53472	03 31 45.25	+19 41 30.7			888
1988 XP4	*	1988 12 14.49514	02 33 19.91	+20 08 20.0		17.5	888
1988 XP4		1988 12 14.52708	02 33 18.95	+20 08 13.3			888
1988 XQ4	*	1988 12 15.59931	03 40 34.18	+19 02 42.4		17.5	888
1988 XQ4		1988 12 15.63194	03 40 32.74	+19 02 44.6			888
1988 YL	*	1988 12 17.74722	09 13 00.98	+23 49 21.6		18.0	888
1988 YL		1988 12 17.77917	09 13 00.50	+23 49 27.3			888
1989 DG	*	1989 02 27.52500	08 46 25.67	+26 53 34.8		18.5	888
1989 DG		1989 02 27.55833	08 46 24.03	+26 53 29.1			888

894 Kiyosato
S. Miyasaka, 3-8-501, 4 Chome, Nagayama, Tama, Tokyo 206, Japan
Observer S. Miyasaka
0.25-m f/4.8 reflector

1988 XO4	*	1988 12 11.56698	05 12 56.90	+21 12 03.9		16	894
1988 XO4		1988 12 11.60294	05 13 01.24	+21 11 37.5			894

897 YGCO Chiyoda Station
T. Kojima, 45 Shimonakamori, Chiyoda-cyo, Ora-Gun,
Gunma-ken, 370-07 Japan
Observer T. Kojima
0.25-m f/3.4 Wright-Schmidt camera

1989 EE8	*	1989 03 08.52847	10 04 36.43	-02 47 23.6		16	897
1989 EE8		1989 03 08.56667	10 04 34.85	-02 47 10.9			897

* * * * *

ORBITAL ELEMENTS.

Orbital elements have been computed by the following contributors:

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

Comet Cernis (1983 XII)
Epoch 1983 July 5.0 ET = JDE 2445520.5
T 1983 July 21.21841 ET Kobayashi

q	3.3178941	(1950.0)	P	Q
z	-0.0005920	Peri.	186.21863	+0.90725558	+0.24294161
	+/-0.0000020	Node	208.88381	+0.40996827	-0.32863165
e	1.0019642	Incl.	134.70402	+0.09387934	-0.91267772

From 154 observations 1983 July 21-1988 Aug. 20, mean residual 0".9.

Comet Wilson (1987 VII)
Epoch 1987 May 5.0 ET = JDE 2446920.5
T 1987 Apr. 20.78084 ET Kobayashi

q	1.1996510	(1950.0)	P	Q
z	-0.0002674	Peri.	238.29631	-0.47925987	-0.71646679
	+/-0.0000023	Node	110.95839	-0.50095059	+0.69757028
e	1.0003208	Incl.	147.12200	-0.72066530	-0.00842896

From 516 observations 1986 Aug. 5-1988 Sept. 12, mean residual 1".1.

Comet Bradfield (1987 XXIX)
Epoch 1987 Nov. 21.0 ET = JDE 2447120.5
T 1987 Nov. 7.27408 ET Kobayashi

q	0.8689556	(1950.0)	P	Q
z	+0.0060581	Peri.	73.91102	+0.78226727	+0.27311416
	+/-0.0000034	Node	267.38484	-0.50155825	+0.80917822
e	0.9947358	Incl.	34.08793	+0.36945532	+0.52023000

From 477 observations 1987 Aug. 12-1988 Apr. 13, mean residual 1".3.

Comet McNaught (1987 XXXII)
Epoch 1987 Dec. 31.0 ET = JDE 2447160.5
T 1987 Dec. 11.94452 ET Kobayashi

q	0.8412881	(1950.0)	P	Q
z	+0.0013412	Peri.	17.42629	-0.19176314	-0.06808612
	+/-0.0000162	Node	260.64382	-0.97638083	-0.08793891
e	0.9988717	Incl.	97.12534	-0.09953577	+0.99379627

From 75 observations 1987 Oct. 11-1988 Apr. 15, mean residual 1".4.

Comet Jensen-Shoemaker (1987g1)
Epoch 1987 Dec. 31.0 ET = JDE 2447160.5

T 1988 Jan. 18.78798 ET			Kobayashi
q 3.3329211	(1950.0)	P	Q
z -0.0014637	Peri. 194.73400	+0.90390615	-0.30968857
+/-0.0000163	Node 197.64617	+0.41851608	+0.49794793
e 1.0048785	Incl. 76.72406	-0.08830612	-0.81002522

From 18 observations 1987 Sept. 24-1988 Aug. 12, mean residual 1".2.

Comet Shoemaker-Holt-Rodriquez (1988h)
Epoch 1989 June 3.0 ET = JDE 2447680.5

T 1989 June 12.46577 ET			Kobayashi
q 2.4742703	(1950.0)	P	Q
z -0.0002176	Peri. 232.14021	+0.15887599	-0.40287949
+/-0.0000057	Node 114.55626	-0.24114896	+0.86946729
e 1.0005385	Incl. 97.69728	-0.95739522	-0.28585793

From 98 observations 1988 June 11-1989 Apr. 18, mean residual 0".9.

One-opposition minor planets

Planet	H	Epoch	M	Peri.	Node	Incl.	e	a	Arc	O	N	C
1973 RF	13.5	730915	358.09	359.54	5.66	15.84	0.1389	2.5869	54	0	D	G
1973 SL	11.0	730915	317.37	296.56	110.84	1.77	0.0713	5.2028	16	0	E	G
1973 SN	13.2	730915	63.43	304.91	337.28	2.53	0.1301	3.9665	16	0		B
1973 SP	12.3	730915	339.08	26.18	3.59	8.75	0.0701	5.2528	16	0		G
1973 SQ	12.3	730915	282.29	48.08	42.29	6.71	0.1220	5.1717	15	0		G
1973 SS	11.8	730915	247.82	24.51	96.87	3.22	0.0933	5.1411	16	0		G
1973 ST	12.4	730915	178.84	104.06	82.67	0.18	0.0861	3.9324	16	0		G
1973 SU	11.7	730915	353.85	175.19	194.10	2.99	0.1394	5.1643	16	0	E	B
1973 SV	11.3	730915	253.86	110.04	2.43	17.32	0.0475	5.0206	16	0		B
1973 SX	12.1	730915	288.98	85.85	352.51	7.56	0.0488	5.3135	16	0	E	B
1973 SY	10.5	730915	301.11	237.69	194.69	14.66	0.0635	5.0842	16	0		G
1973 SZ	12.4	730915	314.53	270.50	142.78	5.76	0.0878	5.1156	16	0		G
1973 SA1	12.4	730915	334.29	210.22	181.57	8.15	0.0902	5.0983	15	0	E	B
1973 SB1	13.2	730915	40.83	191.06	118.93	5.20	0.1449	3.9340	16	0		G
1973 SC1	12.2	730915	346.13	210.20	166.91	21.24	0.0930	5.2764	16	0		G
1973 SD1	10.8	730915	329.48	37.26	5.70	7.19	0.0872	5.1035	16	0		G
1973 SE1	11.1	730915	67.63	272.17	22.34	4.29	0.0398	5.1821	16	0		G
1973 SF1	11.7	730915	348.58	339.50	39.95	8.49	0.1414	5.2183	16	0		G
1973 SG1	12.5	730915	329.32	244.00	153.71	11.19	0.1000	5.1993	16	0		G
1973 SH1	10.3	730915	322.90	289.92	112.72	3.70	0.0597	5.2588	16	0		G
1973 SK1	11.5	730915	76.59	109.46	164.64	9.40	0.1261	3.9595	16	0		G
1973 SL1	11.3	730915	305.98	235.16	186.56	11.29	0.0560	5.0775	16	0		B
1973 SM1	11.6	730915	349.25	184.70	195.06	13.06	0.0507	5.1606	16	0	E	G
1973 SN1	12.0	730915	187.60	76.76	101.56	4.21	0.0305	5.1265	16	0		G
1973 SO1	10.9	730915	318.34	243.87	175.17	7.91	0.1226	5.3244	16	0		G
1973 SP1	11.2	730915	269.41	308.63	155.47	4.15	0.0567	5.2592	16	0		G
1973 SR1	12.2	730915	265.02	66.40	39.55	9.00	0.0482	5.2246	15	0		G
1973 SS1	11.8	730915	141.01	190.28	26.29	9.68	0.0610	5.1029	16	0		G
1973 SU1	11.5	730915	233.54	358.58	143.01	7.30	0.0976	5.1859	16	0		G
1973 SV1	18.0	730915	6.55	188.21	149.48	3.34	0.4507	2.5626	16	0		G
1973 SX1	12.5	730915	347.19	199.87	187.14	11.95	0.1829	5.2600	16	0		G
1973 SY1	12.4	730915	346.53	20.85	358.04	5.62	0.0616	5.3179	16	0	E	B
1973 SB2	11.3	730915	1.33	352.57	14.74	7.37	0.0699	5.2608	16	0		G
1973 SC2	12.8	730915	311.18	24.89	40.77	3.59	0.1223	5.1775	16	0		G
1973 SQ3	14.0	731005	10.14	163.15	189.05	6.27	0.1547	2.3514	16	0	D	N
1973 SG5	15.0	730915	22.92	253.90	62.46	2.34	0.2548	2.2916	9	8		B
1973 SY5	13.9	730915	326.67	215.22	186.07	14.89	0.1398	2.5787	15	9		B
1973 SB6	15.2	730915	356.72	219.73	141.29	1.71	0.1988	2.3768	10	8		B
1973 SD6	13.8	730915	296.08	101.39	337.97	1.96	0.1513	2.4136	16	0		B

1987	SK10	14.0	870902	45.16	260.03	50.82	5.37	0.0423	2.5045	34	8	D	G
1988	FN	14.5	880409	359.60	204.16	333.42	23.58	0.2412	2.4010	58	9		N
1988	NU	14.0	880718	345.10	94.58	229.08	4.69	0.2061	2.6321	29	6		B
1988	PM1	14.5	880827	3.61	164.49	165.95	2.44	0.2268	2.3700	38	0		g
1988	RR2	14.5	880827	356.07	197.83	146.67	1.89	0.1450	2.1703	10	7	E	M
1988	RF4	14.0	880827	7.89	338.70	341.51	4.66	0.1730	2.2681	14	0		g
1988	RH4	13.5	880916	24.18	304.12	354.67	6.96	0.2517	2.4233	16	0		N
1988	RJ4	13.0	880916	353.12	148.50	203.54	2.18	0.0869	2.6580	13	0		N
1988	RM4	13.5	880916	47.83	101.80	175.29	3.00	0.1964	2.5593	13	0		N
1988	RO4	12.0	880916	305.43	246.76	161.51	11.29	0.1110	2.9922	19	0		N
1988	RP4	12.5	880827	201.81	168.45	335.59	8.87	0.2096	2.3590	10	0		g
1988	RS4	12.5	880827	53.19	281.71	356.42	1.20	0.0729	2.7549	14	0		g
1988	RT4	11.5	880916	237.73	321.78	154.35	3.21	0.1331	3.0388	14	0		N
1988	RV4	13.0	880827	12.76	22.30	302.93	1.65	0.1724	2.6680	19	0		g
1988	RX4	13.5	880916	353.37	245.41	103.27	3.55	0.2143	2.4156	17	0		N
1988	RY4	15.0	880827	349.71	4.39	347.94	9.86	0.3492	2.7751	12	0		g
1988	RZ4	11.5	880827	216.71	346.21	129.50	15.03	0.0533	3.1124	13	0		g
1988	RB5	12.5	880916	82.06	85.96	128.43	13.07	0.3651	2.5614	9	0		N
1988	RC5	13.5	880916	355.76	295.78	48.58	5.79	0.1215	2.4212	12	0		N
1988	RD5	12.0	880827	324.96	335.11	52.30	1.92	0.2294	3.2153	15	0	E	M
1988	RE5	13.5	880916	40.90	151.22	124.05	3.91	0.2500	2.5465	12	0		N
1988	RF5	11.5	880827	179.90	164.23	348.82	9.52	0.1347	2.8180	12	0		M
1988	RJ5	12.5	880827	100.74	165.71	58.25	2.98	0.0809	2.9137	9	0		B
1988	RK5	14.5	880827	41.46	107.19	179.95	1.46	0.0909	2.1650	11	0		B
1988	RM5	13.5	880827	302.19	244.61	159.40	15.22	0.0937	2.6120	11	0		B
1988	RN5	14.0	880827	346.94	110.59	246.80	2.31	0.1627	2.7233	7	9		B
1988	RO5	13.5	880827	290.18	102.17	327.34	10.52	0.1706	2.6557	7	0		g
1988	RP5	13.5	880827	37.26	81.17	196.38	3.52	0.2753	3.1074	13	0		B
1988	RQ5	14.0	880827	186.65	327.31	187.84	4.34	0.0657	2.8461	7	0		B
1988	RR5	14.0	880827	48.65	264.00	15.31	2.44	0.0989	2.1841	9	0		B
1988	RU5	14.0	880827	340.48	217.63	142.21	1.82	0.1901	2.4239	13	0		g
1988	RY5	13.5	880827	328.54	190.38	186.88	1.83	0.1742	2.8811	13	0		B
1988	RZ5	14.0	880827	347.93	178.24	170.70	3.25	0.1262	2.3563	13	0		B
1988	RA6	14.5	880827	343.68	23.98	335.27	6.25	0.2241	2.2148	13	0		B
1988	RB6	14.0	880827	10.69	161.38	162.15	12.07	0.2462	2.5159	16	0		g
1988	RC6	12.0	880827	314.42	269.60	124.14	11.86	0.1971	3.2195	10	0	E	B
1988	RD6	14.0	880827	344.90	301.08	49.89	2.10	0.1645	2.3937	11	0		g
1988	RE6	13.5	880827	297.19	346.31	79.13	1.93	0.2183	2.4160	6	0		M
1988	RG6	12.0	880827	60.10	253.58	346.50	0.67	0.2680	3.0867	10	0		B
1988	RH6	14.0	880827	340.75	38.74	318.82	7.34	0.1034	2.2365	11	0		M
1988	RJ6	15.0	880827	325.76	69.80	325.99	4.18	0.2399	2.3784	14	0		g
1988	RK6	15.0	880827	348.50	177.13	179.89	6.62	0.1421	2.2816	14	0		g
1988	RL6	14.0	880827	1.69	180.76	159.49	7.33	0.1475	2.3925	14	0		M
1988	RM6	14.5	880827	334.35	267.73	110.49	2.72	0.3073	2.2761	4	0		g
1988	RN6	14.0	880827	64.21	244.56	5.85	3.84	0.1351	2.2200	9	0		M
1988	RO6	13.5	880827	319.32	32.01	349.58	6.17	0.1337	2.3526	9	0		g
1988	RS6	15.0	880827	2.63	146.79	186.95	1.13	0.2493	2.1905	10	0		M
1988	RT6	13.0	880827	37.06	123.95	170.56	14.86	0.1207	2.5346	12	0		M
1988	RW6	15.0	880827	15.68	340.76	337.61	3.64	0.1533	2.1610	10	0		M
1988	RC7	13.0	880827	333.57	206.61	176.62	10.99	0.2229	2.4144	15	0		g
1988	RF9	14.0	880827	71.25	146.72	97.19	2.53	0.1628	2.2560	9	0		M
1988	RG9	13.5	880827	330.18	244.05	122.72	3.35	0.0734	2.2229	9	0		B
1988	RH9	11.0	880827	96.85	39.58	153.01	19.19	0.3034	2.6331	11	0		M
1988	RK9	11.5	880827	353.07	186.76	145.20	13.94	0.1484	2.9879	15	0		M
1988	RL9		880827	318.93	62.67	328.22	4.29	0.2569	2.3687	12	0		M
1988	RQ9		880827	358.10	2.71	344.90	8.61	0.1252	3.0186	14	0		M
1988	RR9	11.5	880827	239.74	70.67	57.47	0.76	0.2711	2.9586	12	0		M
1988	RS9	13.0	880827	52.31	272.21	340.32	6.82	0.2717	2.4998	10	0	E	M

1988	RA10	12.0	880916	331.86	45.12	343.33	9.27	0.2005	3.0782	6	0		M
1988	SB	14.5	880916	52.54	262.65	17.48	4.07	0.1767	2.2510	33	8		N
1988	SF1	12.0	880916	127.33	340.15	220.79	2.90	0.1888	2.4130	2	0		M
1988	TU	14.0	881026	348.58	180.04	223.47	2.97	0.2209	2.3472	24	0		N
1988	TL1	13.5	881026	356.90	176.22	213.90	4.88	0.1398	2.2838	24	0		N
1988	TX1	11.0	881026	75.37	91.63	205.91	9.24	0.0922	3.0270	32	0		N
1988	TR2	12.5	881026	337.23	38.94	25.89	15.74	0.2714	3.0448	25	0		N
1988	VX2	12.0	881115	22.84	152.48	222.65	10.25	0.1391	3.1932	9	9		N
1988	VY5	11.5	881115	318.49	44.38	47.58	12.75	0.0605	3.1308	9	0		N
1988	VS6	13.5	881026	334.42	213.72	208.72	5.18	0.2061	3.9182	22	9		N
1988	XV4		881205	179.23	172.52	70.51	3.84	0.1192	2.6336	3	3	E	M
1988	XW4		881205	359.29	226.51	197.84	1.37	0.1266	2.8069	3	4	E	M
1988	XX4		881205	359.41	323.57	100.29	1.49	0.1568	3.2050	3	4	E	M
1988	XY4		881205	359.35	358.51	65.60	9.25	0.0979	2.9958	3	4	E	M
1988	XZ4		881205	359.42	231.16	194.29	0.38	0.1599	3.2256	3	4	E	M
1988	XA5		881205	359.41	188.35	237.42	4.39	0.1482	3.1830	3	4	E	M
1988	XB5		881205	178.89	183.55	62.96	6.19	0.1140	2.2110	3	4	E	M
1988	XC5		881205	359.02	353.49	74.65	3.88	0.1373	2.2809	3	4	E	M
1989	AN2	10.0	890203	37.48	274.06	169.72	9.07	0.0451	5.2189	58	6		B
1989	AY6	14.0	881225	280.92	295.07	302.11	3.00	0.2709	2.4166	2	3		M
1989	AZ6	15.0	890203	6.86	352.08	136.99	4.77	0.1018	2.5970	59	9		N
1989	AA7	12.0	881225	257.20	304.62	306.56	10.61	0.1450	3.1987	2	3		M
1989	AC7	13.5	890114	94.05	246.01	136.56	1.99	0.1769	3.1450	32	7		M
1989	AD7	13.5	890114	76.67	264.17	139.86	10.88	0.1288	3.0022	32	7		M
1989	AE7	13.5	890114	33.87	137.98	313.86	3.05	0.1127	2.8401	32	7		M
1989	AF7	13.5	881225	356.72	337.04	157.12	0.49	0.1187	3.0838	2	3	E	M
1989	AG7	14.5	890114	252.14	122.31	134.16	12.64	0.1322	2.6120	25	5		M
1989	AH7	14.0	881225	176.32	175.48	139.99	8.94	0.0173	2.8046	2	3	E	M
1989	AJ7	15.0	881225	355.39	187.77	303.86	6.12	0.1355	2.4575	2	3	E	M
1989	AL7	15.0	890114	212.37	143.45	149.27	2.78	0.1502	2.8307	25	5		M
1989	AM7	13.5	881225	355.35	260.70	232.83	0.98	0.0173	2.4408	2	3	E	M
1989	BC1	14.0	890114	45.31	287.99	118.85	27.95	0.2868	2.6894	23	0	D	b
1989	CN	13.0	890114	120.12	210.03	149.84	1.31	0.1359	2.2227	33	0		M
1989	CK1	9.5	890203	15.07	33.50	81.36	19.45	0.1103	5.1514	56	6		B
1989	CW1	10.5	890114	58.75	109.59	322.00	8.87	0.0973	5.1943	36	7	E	M
1989	CH2	10.0	890203	14.56	0.39	115.75	29.83	0.0280	5.2112	56	6		B
1989	CK2	10.0	890203	43.00	341.14	102.09	20.26	0.0875	5.2018	57	6		B
1989	CM3	15.0	890203	71.25	132.81	253.68	6.63	0.3466	2.8631	27	9		N
1989	CE5	15.0	890203	297.44	266.28	308.02	1.77	0.1313	2.4151	8	4		M
1989	CG5	16.0	890203	36.27	128.80	318.44	3.36	0.1670	2.3166	8	4		M
1989	CH5	13.0	890203	63.00	280.70	139.42	17.80	0.1373	3.1783	36	6		M
1989	CJ5	14.5	890203	91.30	54.90	326.44	1.55	0.2281	2.3915	36	7		M
1989	CO5	15.0	890203	0.01	355.72	142.68	2.15	0.0345	2.5690	8	4	E	M
1989	CP5	15.0	890203	0.01	152.22	346.00	0.85	0.1304	2.8520	8	4	E	M
1989	CR5	14.0	890203	0.01	175.60	322.79	8.67	0.0930	2.7329	8	4	E	M
1989	CS5	15.0	890203	263.65	287.90	325.42	6.93	0.1720	2.2571	8	4		M
1989	CX5	14.5	890203	10.86	316.55	162.40	0.33	0.2756	3.0973	8	4		M
1989	CA6	14.0	890203	350.26	191.03	321.09	13.26	0.1284	3.1450	8	4		M
1989	CB6	16.0	890203	13.31	7.55	113.17	2.30	0.1355	2.3987	8	4		M
1989	CE6	14.0	890223	236.77	313.24	325.52	12.03	0.1581	2.6995	28	5		M
1989	EQ	12.5	890404	73.56	120.09	313.81	8.21	0.1852	3.0451	58	0		m
1989	EB1	12.0	890223	0.31	171.92	329.82	16.81	0.0999	3.1623	9	7		M
1989	EC2	11.0	890404	315.20	205.12	22.73	5.66	0.1164	3.1511	32	0		N
1989	ED2	12.0	890315	17.84	74.94	70.72	2.59	0.1410	3.1688	7	0		N
1989	EH6	13.0	890315	248.95	153.38	116.60	2.16	0.1537	3.1207	28	5		N
1989	EJ6	14.0	890315	31.25	332.69	134.89	0.47	0.1035	3.2404	28	5		N
1989	GO	12.5	890424	27.47	111.17	65.28	3.15	0.1332	2.4103	60	0		B
1989	GQ6	14.0	890404	272.13	206.33	118.49	13.13	0.2069	2.4790	8	4		M
1989	GU6	15.5	890404	15.81	103.19	69.51	14.62	0.3695	2.7232	8	4		M

1989	GV6	14.0	890404	52.16	38.34	103.29	13.69	0.1904	2.5995	8	4		M
1989	LH	14.0	890603	9.80	14.21	224.78	10.00	0.2174	2.3933	29	8		M
1989	LL	14.0	890603	20.13	176.87	49.21	6.62	0.1158	2.2199	29	8		M
1989	LT	13.5	890603	3.89	247.99	0.20	1.69	0.1443	2.4101	30	8		B
1989	MD	12.5	890623	333.92	294.75	351.02	5.36	0.0254	2.9258	8	8		B
1989	ME	12.0	890623	296.36	38.59	326.97	28.33	0.1434	3.1990	8	8		B
1989	NE	12.5	890802	11.38	147.98	139.50	15.73	0.1620	2.5799	27	0		N
1001	T-2	13.5	730915	282.56	267.55	179.00	2.29	0.0951	2.9424	15	0		B
1002	T-2	15.4	730915	325.52	29.90	6.37	1.95	0.0614	2.3936	10	0		B
1003	T-2	13.8	730915	246.21	271.08	217.00	0.72	0.1603	3.0791	16	0		B
1004	T-2	14.8	730915	349.78	12.71	356.59	7.04	0.0392	2.5790	10	9		B
1005	T-2	13.8	730915	349.50	163.90	207.17	2.20	0.0886	3.0302	15	0		B
1006	T-2	11.7	730915	39.50	110.78	195.01	5.02	0.1606	3.8987	16	0		B
1007	T-2	15.6	730915	6.42	134.02	216.21	3.18	0.1053	2.4820	15	0		B
1008	T-2	14.8	730915	332.12	44.05	350.48	11.00	0.1193	3.0930	15	0		B
1009	T-2	12.7	730915	115.75	35.48	192.42	19.42	0.1722	3.1811	6	6	E	B
1010	T-2	12.1	730915	188.85	329.38	203.22	9.65	0.0965	2.9996	6	8	E	B
1012	T-2	16.2	730915	324.80	224.59	186.59	12.72	0.2196	2.5758	16	0		B
1013	T-2	16.7	730915	45.89	99.39	194.46	2.67	0.1823	2.1592	15	0		B
1014	T-2	15.1	730915	20.10	326.52	358.61	7.47	0.2359	3.0811	16	0		B
1015	T-2	16.0	730915	357.96	359.35	0.41	6.23	0.2785	2.4017	15	0		B
1016	T-2	14.2	730915	154.83	202.86	359.23	5.31	0.0349	2.7444	15	0		B
1017	T-2	14.0	730915	159.50	15.75	182.19	10.16	0.0321	3.0574	16	0		B
1019	T-2	17.0	730915	344.40	226.72	162.42	0.56	0.3395	2.8349	16	0		B
1020	T-2	16.5	730915	5.68	165.97	183.80	6.21	0.1361	2.4014	16	0		B
1021	T-2	16.1	730915	2.86	166.16	186.88	2.61	0.1612	2.3680	16	0		B
1023	T-2	15.1	730915	49.20	104.93	188.28	20.60	0.1577	2.2755	10	0		B
1024	T-2	16.1	730915	345.56	179.53	199.66	7.05	0.2018	2.2566	10	0		B
1025	T-2	16.8	730915	22.21	71.56	254.15	2.01	0.1806	2.3185	16	0		B
1026	T-2	15.3	730915	46.74	298.89	0.18	4.77	0.1277	2.3320	15	0		B
1027	T-2	15.1	730915	58.98	107.20	178.96	8.90	0.1239	2.9249	15	0		B
1028	T-2	14.7	730915	297.41	84.47	2.23	21.02	0.2289	3.0393	11	0		B
1031	T-2	16.8	730915	357.18	179.72	181.12	6.91	0.1251	2.3105	16	0		B
1032	T-2	14.8	730915	27.16	323.65	3.43	2.46	0.0698	2.7299	16	0		B
1033	T-2	15.6	730915	15.40	150.94	185.32	9.29	0.1666	2.8032	16	0		B
1034	T-2	16.6	730915	309.77	250.66	189.99	6.16	0.2998	2.3466	16	0		B
1035	T-2	15.8	730915	308.76	244.78	186.15	22.69	0.2113	2.2643	11	0		B
1036	T-2	15.2	730915	46.42	72.88	219.61	2.57	0.1959	2.2983	16	0		B
1037	T-2	17.5	730915	357.46	133.85	227.31	1.47	0.2228	2.3936	16	0		B
1038	T-2	17.8	730915	332.24	183.56	211.10	1.52	0.1516	2.1703	10	9		B
1039	T-2	16.0	730915	311.24	68.88	358.82	9.58	0.2039	2.6446	16	0		B
1040	T-2	15.7	730915	180.00	331.43	207.29	1.48	0.0749	2.3022	16	0		B
1041	T-2	13.5	730915	29.11	146.32	175.89	2.15	0.1104	2.9530	16	0		B
1042	T-2	14.8	730915	2.95	139.54	215.02	1.89	0.1211	2.6452	16	0		B
1043	T-2	15.7	730915	264.30	166.45	307.02	2.06	0.1687	2.4000	16	0		B
1044	T-2	15.3	730915	52.90	320.50	327.29	4.05	0.1752	2.3049	15	0		B
1045	T-2	13.8	730915	13.71	143.44	197.26	9.52	0.1255	2.3851	6	8		B
1046	T-2	17.0	730915	344.92	94.20	289.80	1.99	0.2605	2.5462	16	0		B
1047	T-2	15.1	730915	37.59	313.85	349.09	9.46	0.2189	3.1145	16	0		B
1048	T-2	15.0	730915	311.49	62.47	354.42	14.59	0.0898	3.1457	11	9	E	B
1051	T-2	13.4	730915	245.92	303.52	178.96	13.02	0.0965	2.7249	16	0		B
1052	T-2	14.0	730915	63.76	274.07	2.21	0.76	0.1703	3.1262	16	0		B
1053	T-2	14.3	730915	322.29	223.35	189.00	0.93	0.1945	2.6269	16	0		B
1054	T-2	13.7	730915	7.94	159.10	186.98	3.54	0.2034	3.0678	16	0		B
1055	T-2	14.8	730915	18.43	343.50	352.12	2.37	0.1079	2.7565	16	0		B
1056	T-2	15.1	730915	351.26	14.92	354.57	3.90	0.1069	2.8081	16	0		B
1058	T-2	14.1	730915	201.74	315.68	205.09	5.23	0.0620	3.0539	16	0		B
1059	T-2	14.4	730915	87.31	57.42	209.30	3.81	0.0450	2.4062	16	0		B
1060	T-2	16.2	730915	352.87	182.04	186.32	13.57	0.1780	2.6313	16	0		B

1062	T-2	16.1	730915	323.08	52.53	354.86	2.86	0.1550	2.3494	16	0		B
1063	T-2	15.4	730915	285.30	256.18	197.56	1.81	0.1772	2.3732	16	0		B
1064	T-2	13.4	730915	11.63	357.13	340.17	1.77	0.2874	3.9740	16	0		B
1066	T-2	14.2	730915	18.61	136.28	199.32	3.88	0.1174	3.0277	16	0		B
1067	T-2	15.8	730915	271.45	193.75	270.66	1.66	0.1449	2.4092	16	0		B
1069	T-2	16.6	730915	58.20	68.52	216.45	2.60	0.1461	2.2757	16	0		B
1070	T-2	15.2	730915	77.25	83.59	187.42	5.72	0.0922	2.4072	16	0		B
1071	T-2	16.0	730915	4.20	348.29	3.71	6.74	0.1419	2.3849	15	0		B
1072	T-2	16.1	730915	295.77	290.07	148.15	1.06	0.1454	2.2539	16	0		B
1073	T-2	16.3	730915	15.82	345.70	355.01	5.77	0.0631	2.3702	16	0		B
1074	T-2	15.5	730915	317.26	225.06	191.46	11.40	0.1633	2.6742	16	0		B
1075	T-2	15.6	730915	76.10	272.96	350.31	7.35	0.1727	2.2268	16	0		B
1076	T-2	16.3	730915	345.29	30.59	351.81	8.34	0.2272	2.7234	16	0		B
1077	T-2	17.0	730915	349.93	167.47	206.65	4.52	0.2097	2.6440	6	8		B
1078	T-2	16.1	730915	44.75	298.73	3.34	6.88	0.1258	2.3434	16	0		B
1079	T-2	14.0	730915	35.08	306.76	6.56	1.92	0.1341	2.7270	16	0		B
1080	T-2	14.1	730915	257.70	304.31	161.22	1.18	0.0343	3.3079	10	8	E	B
1082	T-2	15.0	730915	18.70	158.64	173.67	2.63	0.1601	2.7172	16	0		B
1083	T-2	14.7	730915	259.22	121.17	359.90	3.06	0.1982	2.5996	16	0		B
1084	T-2	17.5	730915	22.01	100.82	221.95	1.26	0.2252	2.3818	15	0		B
1085	T-2	17.3	730915	330.61	80.60	320.28	1.70	0.1895	2.3857	15	0		B
1086	T-2	16.2	730915	5.73	100.65	248.21	1.41	0.2129	2.4440	16	0		B
1087	T-2	14.5	730915	76.89	288.21	325.10	4.91	0.2689	3.2020	6	6	E	B
1089	T-2	14.3	730915	91.16	282.38	338.41	6.25	0.0795	3.2329	10	6		B
1090	T-2	16.7	730915	292.12	79.44	359.50	19.12	0.1122	1.9228	16	0		B
1093	T-2	15.9	730915	298.95	71.00	0.54	6.33	0.1114	2.3267	16	0		B
1094	T-2	15.3	730915	279.85	282.37	177.30	2.48	0.1782	2.5650	11	8	E	B
1095	T-2	15.9	730915	16.15	155.73	182.79	7.93	0.1071	2.5863	16	0		B
1096	T-2	15.1	730915	11.01	154.41	191.33	9.55	0.1099	2.9651	16	0		B
1097	T-2	14.7	730915	354.71	65.70	300.30	1.83	0.0867	2.7771	16	0		B
1098	T-2	15.9	730915	16.21	65.01	274.23	2.11	0.1128	2.6721	16	0		B
1099	T-2	16.0	730915	39.11	344.99	319.55	1.40	0.1740	2.3599	16	0		B
1100	T-2	15.0	730915	172.21	359.29	187.02	9.93	0.1102	2.6697	16	0		B
1101	T-2	12.7	730915	190.53	192.38	339.42	1.63	0.1150	2.9247	16	0		B
1102	T-2	14.6	730915	78.22	72.79	198.73	1.59	0.0876	2.9478	16	0		B
1103	T-2	14.8	730915	304.63	57.74	3.57	9.55	0.0652	3.1366	16	0		B
1104	T-2	15.5	730915	297.72	60.51	12.88	3.29	0.1190	2.2827	16	0		B
1105	T-2	14.3	730915	241.35	307.47	183.88	2.73	0.1413	2.6153	16	0		B
1107	T-2	14.2	730915	34.90	33.43	276.58	2.21	0.1861	2.7481	16	0		B
1108	T-2	14.9	730915	43.28	311.30	352.98	6.37	0.1310	2.3982	16	0		B
1109	T-2	15.7	730915	75.08	293.53	333.11	2.19	0.1556	2.3968	16	0		B
1110	T-2	17.5	730915	359.84	173.10	184.22	3.49	0.2232	2.2993	16	0		B
1112	T-2	15.2	730915	18.39	226.30	106.67	0.34	0.1697	3.0583	16	0		B
1113	T-2	17.2	730915	33.02	129.14	176.62	2.35	0.2351	2.3792	16	0		B
1114	T-2	16.4	730915	346.61	76.33	301.65	0.39	0.1942	2.4024	16	0		B
1115	T-2	15.8	730915	73.38	76.75	192.92	5.56	0.1415	2.2434	16	0		B
1116	T-2	17.0	730915	354.59	59.14	306.25	1.35	0.0955	2.2953	15	7		B
1118	T-2	15.5	730915	348.15	125.69	248.84	1.20	0.1221	2.6360	16	0		B
1119	T-2	16.8	730915	13.04	339.56	359.75	5.11	0.1687	2.2201	16	0		B
1120	T-2	16.5	730915	286.67	118.47	343.78	4.77	0.2480	2.5578	11	9		B
1121	T-2	16.3	730915	36.02	92.80	211.86	4.46	0.2172	2.3821	6	8		B
1123	T-2	16.5	730915	311.17	56.59	1.14	8.18	0.1068	2.2774	16	0		B
1125	T-2	13.9	730915	356.91	172.21	191.72	1.01	0.1669	3.1899	16	0		B
1126	T-2	12.8	730915	358.72	178.41	183.96	9.72	0.0093	5.1515	6	6	E	B
1127	T-2	15.1	730915	81.20	277.03	358.22	5.25	0.0313	2.7165	15	0		B
1128	T-2	17.3	730915	342.16	37.54	347.07	4.76	0.1923	2.1814	16	0		B
1129	T-2	15.8	730915	6.43	359.75	349.33	7.12	0.2159	2.6807	16	0		B
1130	T-2	15.2	730915	335.28	47.51	342.61	6.62	0.0829	3.0039	16	0		B
1131	T-2	16.4	730915	66.34	332.07	307.20	1.73	0.1278	2.3240	10	8		B

1132	T-2	16.1	730915	334.26	186.13	211.32	2.70	0.1968	2.6626	16	0	B
1133	T-2	12.9	730915	264.91	243.01	214.98	1.30	0.0221	2.9047	16	0	B
1135	T-2	13.4	730915	171.40	7.13	180.85	22.75	0.0173	2.6089	16	0	B
1136	T-2	13.9	730915	196.75	351.48	173.84	3.16	0.0737	2.5479	16	0	B
1139	T-2	14.0	730915	64.89	91.02	183.83	7.02	0.1798	2.8124	16	0	B
1140	T-2	17.4	730915	355.43	3.18	0.75	2.19	0.0521	2.2146	6	6 E	B
1141	T-2	16.8	730915	18.47	129.50	200.66	1.81	0.2046	2.4253	16	0	B
1142	T-2	14.8	730915	173.35	272.17	273.84	1.31	0.1136	2.4162	16	0	B
1143	T-2	16.6	730915	331.30	71.37	327.41	2.92	0.1704	2.1625	11	0	B
1144	T-2	15.8	730915	231.43	214.09	281.65	2.21	0.0775	2.2997	10	0	B
1146	T-2	17.5	730915	356.73	357.85	4.53	7.82	0.1651	2.2195	16	0	B
1147	T-2	16.0	730915	49.59	288.89	4.60	5.94	0.1635	2.5760	16	0	B
1149	T-2	16.8	730915	4.85	344.50	6.48	5.43	0.1703	2.3136	16	0	B
1150	T-2	16.0	730915	38.54	258.02	44.64	1.22	0.1962	2.3728	16	0	B
1152	T-2	14.7	730915	51.04	274.09	13.39	4.86	0.1958	2.4066	16	0	B
1153	T-2	13.6	730915	290.35	275.92	161.67	1.02	0.0688	3.2493	16	0	B
1155	T-2	15.0	730915	333.72	205.36	189.77	4.03	0.1537	2.7211	16	0	B
1156	T-2	15.5	730915	339.97	197.71	190.56	6.03	0.1883	2.5136	16	0	B
1157	T-2	15.2	730915	156.61	355.60	203.33	2.57	0.1255	2.3342	16	0	B
1158	T-2	16.0	730915	325.38	186.14	223.87	1.66	0.2034	2.3843	16	0	B
1159	T-2	13.0	730915	161.01	5.13	192.30	16.39	0.0766	2.5967	6	8	B
1160	T-2	15.8	730915	37.30	322.96	352.36	7.53	0.0962	2.3872	16	0	B
1161	T-2	15.3	730915	71.06	270.50	3.37	25.53	0.1296	2.3838	16	0	B
1162	T-2	14.7	730915	338.88	1.53	24.15	2.87	0.1152	2.6938	16	0	B
1164	T-2	15.8	730915	4.32	345.93	6.17	2.11	0.2009	2.6695	16	0	B
1166	T-2	15.5	730915	58.88	284.42	355.99	6.91	0.1891	2.4339	16	0	B
1167	T-2	15.7	730915	311.56	172.41	240.81	1.32	0.0480	2.6856	15	0	B
1168	T-2	17.5	730915	10.37	339.59	0.92	12.56	0.2593	2.6446	16	0	B
1169	T-2	13.9	730915	181.13	201.83	338.57	2.15	0.1170	2.8654	16	0	B
1170	T-2	15.0	730915	298.03	250.89	187.01	11.21	0.1454	2.6027	16	0	B
1171	T-2	14.0	730915	55.10	296.54	359.80	9.38	0.0925	2.9744	16	0	B
1172	T-2	15.7	730915	317.08	54.25	358.21	5.29	0.1081	2.7561	16	0	B
1173	T-2	14.4	730915	312.40	52.02	0.89	9.65	0.0527	2.9774	16	0	B
1174	T-2	14.2	730915	78.72	267.48	6.91	9.03	0.0635	3.0160	16	0	B
1175	T-2	15.3	730915	147.40	340.04	226.00	0.80	0.1349	2.4204	16	0	B
1176	T-2	15.3	730915	72.93	328.58	304.10	2.19	0.1292	2.2446	11	0	B
1177	T-2	14.7	730915	318.21	234.53	193.56	11.23	0.2712	2.5506	6	8	B
1178	T-2	14.5	730915	56.63	96.00	197.17	9.59	0.1121	3.0876	10	8	B
1180	T-2	15.7	730915	330.95	93.67	302.00	0.90	0.0977	2.9380	11	0	B
1181	T-2	13.9	730915	321.99	62.62	342.67	1.07	0.0873	2.9642	16	0	B
1182	T-2	15.8	730915	103.72	72.01	168.84	2.39	0.1475	2.4545	16	0	B
1184	T-2	15.3	730915	278.68	278.39	168.71	4.31	0.0533	2.5568	16	0	B
1185	T-2	16.1	730915	23.67	314.70	9.63	7.79	0.1762	2.2741	16	0	B
1186	T-2	13.2	730915	268.34	271.25	189.16	5.96	0.0650	3.3740	16	0	B
1187	T-2	16.4	730915	348.75	31.38	346.39	3.35	0.2428	2.5783	16	0	B
1188	T-2	13.6	730915	135.09	338.22	240.04	2.36	0.1088	2.4478	15	0	B
1189	T-2	16.7	730915	337.07	45.49	346.12	5.22	0.1665	2.3784	16	0	B
1190	T-2	16.4	730915	41.09	9.97	294.54	1.92	0.1627	2.3153	10	9	B
1191	T-2	14.4	730915	41.73	65.68	230.68	1.65	0.2276	2.3766	16	0	B
1192	T-2	15.2	730915	33.65	328.57	356.57	2.77	0.0266	2.6733	16	0	B
1193	T-2	16.8	730915	354.25	3.12	4.72	5.51	0.2234	2.5681	11	0	B
1194	T-2	16.8	730915	1.62	173.80	180.91	8.50	0.3188	2.8489	15	0	B
1195	T-2	15.1	730915	37.80	290.92	17.96	3.09	0.1552	2.6500	16	0	B
1196	T-2	14.6	730915	99.50	243.68	1.68	5.04	0.1469	2.5980	16	0	B
1197	T-2	15.8	730915	62.76	60.11	213.22	1.81	0.2137	2.3698	16	0	B
1198	T-2	15.4	730915	335.82	84.60	303.14	1.05	0.0589	2.6488	16	0	B
1199	T-2	16.7	730915	6.56	30.79	316.23	1.64	0.2707	2.6383	16	0	B
1200	T-2	15.3	730915	279.64	104.00	356.20	13.31	0.1594	2.6142	16	0	B
1202	T-2	15.8	730915	340.33	23.70	3.58	14.77	0.1710	2.5604	16	0	B

1203	T-2	13.7	730915	141.46	34.95	178.40	1.95	0.1002	3.1321	16	0		B
1204	T-2	15.6	730915	108.59	217.39	22.71	3.35	0.1061	2.2267	16	0		B
1205	T-2	16.6	730915	328.15	27.72	11.06	6.70	0.1192	2.2606	16	0		B
1206	T-2	15.8	730915	340.87	211.97	174.66	5.46	0.1737	2.7384	16	0		B
1207	T-2	17.0	730915	18.79	312.86	9.20	5.74	0.2950	2.2871	16	0		B
1208	T-2	16.8	730915	15.43	327.34	5.10	3.48	0.2488	2.5386	16	0		B
1210	T-2	14.5	730915	131.34	235.42	347.76	3.53	0.0771	2.2422	16	0		B
1211	T-2	15.3	730915	215.12	164.47	347.49	6.52	0.0946	2.2633	16	0		B
1212	T-2	12.7	730915	357.83	164.74	199.29	8.83	0.1342	2.9907	6	8		B
1213	T-2	17.1	730915	13.87	335.88	3.24	1.69	0.1593	2.1802	16	0		B
1214	T-2	15.4	730915	330.97	32.74	6.89	4.78	0.1509	3.2179	10	6		B
1216	T-2	17.0	730915	43.66	122.38	179.84	7.65	0.1461	2.2552	16	0		B
1217	T-2	15.0	730915	305.15	51.78	20.45	3.98	0.1620	3.1637	16	0		B
1218	T-2	14.5	730915	285.90	288.29	154.34	0.99	0.0753	2.4126	16	0		B
1219	T-2	16.2	730915	261.15	98.74	6.42	5.09	0.0528	2.4600	10	8	E	B
1220	T-2	14.0	730915	328.80	145.53	257.96	0.27	0.1607	3.2123	16	0		B
1221	T-2	13.5	730915	114.27	330.93	268.41	1.68	0.0857	3.0634	16	0		B
1223	T-2	15.8	730915	355.17	169.81	197.63	9.68	0.1588	2.8183	6	8		B
1224	T-2	16.7	730915	38.18	300.38	3.59	6.34	0.1994	2.3768	16	0		B
1225	T-2	15.5	730915	6.77	164.55	183.48	6.18	0.2191	2.5369	16	0		B
1226	T-2	14.4	730915	191.37	164.07	7.33	5.99	0.0650	3.0823	16	0		B
1227	T-2	14.8	730915	316.72	245.54	171.07	3.34	0.1576	2.2908	16	0		B
1230	T-2	17.6	730915	27.26	297.98	16.93	2.80	0.2304	2.2350	16	0		B
1231	T-2	13.8	730915	311.58	44.55	8.89	1.89	0.0446	2.9330	16	0		B
1232	T-2	14.4	730915	99.56	45.09	201.40	0.99	0.1441	3.0053	16	0		B
1234	T-2	15.8	730915	258.36	240.80	228.57	2.90	0.0590	2.3023	6	8		B
1235	T-2	16.4	730915	5.83	356.86	356.28	4.05	0.1031	2.5528	10	8	E	B
1236	T-2	15.0	730915	357.41	16.10	346.99	1.78	0.1422	2.4014	16	0		B
1237	T-2	14.4	730915	203.15	170.74	351.42	1.63	0.0864	2.8973	16	0		B
1238	T-2	14.1	730915	254.83	206.36	278.64	0.23	0.1734	3.1733	16	0		B
1239	T-2	14.1	730915	7.51	163.60	185.33	14.43	0.1831	2.7701	16	0		B
1240	T-2	15.2	730915	355.24	3.15	4.27	22.42	0.1645	3.1636	16	0		B
1241	T-2	14.5	730915	73.43	271.86	4.91	9.10	0.0987	3.0575	16	0		B
1242	T-2	14.3	730915	127.45	36.53	183.64	13.27	0.1752	2.6077	16	0		B
1243	T-2	15.5	730915	348.61	125.79	250.39	0.90	0.1423	2.9270	11	0		B
1244	T-2	15.4	730915	276.77	265.30	189.81	14.26	0.0908	2.6986	16	0		B
1245	T-2	16.0	730915	296.86	84.02	352.52	5.55	0.1121	2.5649	10	9		B
1247	T-2	16.9	730915	324.39	213.33	195.59	2.61	0.1690	2.4023	16	0		B
1250	T-2	16.1	730915	54.89	109.65	177.07	5.45	0.1768	2.5426	16	0		B
1251	T-2	13.4	730915	277.39	310.59	151.29	1.22	0.1557	3.0861	16	0		B
1252	T-2	16.4	730915	9.34	337.54	10.72	2.07	0.1168	2.5923	11	0		B
1253	T-2	17.1	730915	29.47	110.77	205.64	3.25	0.1936	2.2790	16	0		B
1254	T-2	17.5	730915	0.23	160.77	196.98	4.71	0.2566	2.3055	11	0		B
1255	T-2	16.3	730915	38.86	39.67	265.92	1.49	0.1856	2.4371	11	0		B
1256	T-2	17.2	730915	338.23	183.08	206.10	4.24	0.1481	2.2669	6	8		B
1257	T-2	16.2	730915	302.19	89.49	351.67	7.58	0.1991	2.6420	6	6		B
1258	T-2	15.5	730915	197.82	162.46	2.78	7.52	0.0574	2.3893	16	0		B
1259	T-2	13.3	730915	234.54	99.40	31.56	2.39	0.0480	2.8902	16	0		B
1260	T-2	14.6	730915	258.65	295.05	179.06	7.47	0.1063	2.6512	16	0		B
1261	T-2	16.7	730915	18.67	301.10	32.18	0.78	0.1489	2.1039	16	0		B
1262	T-2	16.2	730915	108.94	228.68	7.32	5.08	0.1577	2.1968	16	0		B
1263	T-2	16.7	730915	338.33	207.56	182.19	2.94	0.1770	2.1996	16	0		B
1264	T-2	14.6	730915	333.12	39.71	355.05	2.22	0.1207	2.6279	16	0		B
1265	T-2	15.0	730915	244.55	283.48	206.00	1.42	0.1288	2.5483	15	0		B
1266	T-2	14.7	730915	44.18	319.42	352.38	6.45	0.0615	2.3607	16	0		B
1267	T-2	15.6	730915	14.91	347.54	355.59	9.35	0.1143	2.9753	16	0		B
1269	T-2	14.4	730915	2.22	65.73	293.47	0.91	0.0693	2.9551	16	0		B
1270	T-2	17.0	730915	50.16	288.29	359.72	4.87	0.2098	2.1862	15	0		B
1271	T-2	16.5	730915	7.83	91.74	255.85	0.46	0.1949	2.4151	16	0		B

1272	T-2	16.1	730915	328.39	42.88	4.42	7.80	0.2114	2.4404	16	0		B
1273	T-2	17.3	730915	27.92	309.77	5.12	2.99	0.2283	2.2698	16	0		B
1274	T-2	14.4	730915	317.73	36.52	10.33	1.80	0.0427	2.7250	16	0		B
1275	T-2	16.1	730915	355.14	347.36	21.28	3.84	0.2962	3.1377	16	0		B
1276	T-2	14.6	730915	293.28	51.41	32.36	2.85	0.1517	2.4400	16	0		B
1277	T-2	14.2	730915	359.75	198.79	162.06	1.56	0.2021	3.1138	16	0		B
1278	T-2	14.7	730915	320.81	227.17	181.69	10.31	0.1051	2.9666	16	0		B
1279	T-2	15.9	730915	340.73	213.06	172.97	1.32	0.1668	2.2319	16	0		B
1281	T-2	14.9	730915	306.06	238.47	195.79	10.18	0.1818	2.5363	6	8		B
1282	T-2	13.5	730915	348.29	124.31	250.91	1.16	0.0667	2.8464	16	0		B
1283	T-2	13.8	730915	273.79	269.33	190.82	0.81	0.1021	3.2479	16	0		B
1285	T-2	16.6	730915	357.50	179.30	182.71	2.38	0.1890	2.1424	16	0		B
1286	T-2	16.4	730915	283.30	275.44	175.92	4.57	0.1251	2.2890	16	0		B
1287	T-2	15.1	730915	324.47	222.02	180.26	11.22	0.0734	3.1016	16	0		B
1288	T-2	15.2	730915	137.02	144.54	78.77	1.72	0.0091	2.7845	15	0		B
1289	T-2	16.6	730915	303.94	219.90	211.03	1.87	0.1337	2.4271	6	5	E	B
1291	T-2	15.7	730915	314.07	216.37	216.01	1.78	0.2448	3.0288	11	9		B
1292	T-2	17.2	730915	21.66	129.56	198.11	2.69	0.1897	2.2863	16	0		B
1294	T-2	16.1	730915	27.24	152.94	157.79	0.07	0.3017	3.2067	16	0		B
1295	T-2	14.8	730915	328.09	46.87	6.98	12.28	0.2712	2.6251	16	0		B
1296	T-2	14.8	730915	135.75	55.23	161.27	2.00	0.1325	2.5754	15	0		B
1297	T-2	16.4	730915	15.07	327.98	9.52	6.56	0.1668	2.1902	16	0		B
1298	T-2	14.8	730915	229.14	326.43	171.33	5.55	0.0775	2.2259	16	0		B
1300	T-2	17.1	730915	23.06	338.56	347.86	2.46	0.1862	2.3720	16	0		B
1301	T-2	17.2	730915	345.08	22.10	357.93	6.20	0.1446	2.2630	16	0		B
1302	T-2	16.7	730915	25.46	119.45	205.86	2.85	0.1655	2.5218	16	0		B
1303	T-2	14.3	730915	59.50	85.39	200.07	4.96	0.1626	3.1646	16	0		B
1304	T-2	13.3	730915	353.50	142.12	228.30	1.08	0.1380	3.0671	16	0		B
1305	T-2	15.8	730915	4.89	353.78	0.06	6.88	0.1317	2.3512	16	0		B
1306	T-2	13.7	730915	335.38	286.08	109.16	0.51	0.1591	3.1900	16	0		B
1307	T-2	17.7	730915	345.73	277.82	103.87	0.62	0.2361	2.2675	16	0		B
1308	T-2	14.9	730915	353.95	213.93	154.04	2.83	0.0942	2.7591	16	0		B
1310	T-2	15.6	730915	338.57	345.32	45.13	2.09	0.1866	2.3989	16	0		B
1312	T-2	15.1	730915	340.06	26.05	3.64	15.66	0.1664	3.1119	16	0		B
1313	T-2	16.5	730915	342.92	28.39	357.31	9.49	0.1771	2.6298	16	0		B
1314	T-2	15.5	730915	58.90	282.25	5.83	2.18	0.1339	2.5110	16	0		B
1315	T-2	16.1	730915	27.07	314.74	5.47	11.77	0.1991	2.6100	16	0		B
1316	T-2	17.3	730915	333.62	16.18	21.90	1.45	0.1869	2.4199	16	0		B
1318	T-2	15.9	730915	318.29	40.55	9.38	9.06	0.0881	2.5766	16	0		B
1319	T-2	16.4	730915	302.44	234.78	198.20	6.19	0.1351	2.2936	16	0		B
1320	T-2	14.4	730915	40.64	315.63	358.71	9.79	0.0937	2.9364	16	0		B
1321	T-2	16.0	730915	342.98	210.99	171.02	2.92	0.1134	2.5419	16	0		B
1322	T-2	16.3	730915	351.06	214.79	156.84	2.38	0.1364	2.3886	16	0		B
1323	T-2	16.1	730915	32.64	144.69	174.28	7.06	0.1225	2.4195	16	0		B
1324	T-2	13.9	730915	79.54	246.89	19.62	4.94	0.1283	2.3599	16	0		B
1325	T-2	14.1	730915	350.32	354.41	17.98	5.04	0.0763	2.7215	16	0		B
1326	T-2	14.7	730915	335.88	260.66	128.94	1.26	0.0811	2.7876	16	0		B
1327	T-2	14.4	730915	32.56	292.85	13.68	0.70	0.2678	3.0607	16	0		B
1328	T-2	16.3	730915	309.96	68.17	2.10	5.83	0.1883	2.5010	16	0		B
1329	T-2	14.1	730915	314.68	205.78	218.79	1.86	0.1785	2.9776	16	0		B
1330	T-2	16.0	730915	287.57	129.51	314.17	1.08	0.0881	2.2459	16	0		B
1331	T-2	14.9	730915	22.01	69.34	266.94	1.63	0.0851	2.7106	16	0		B
1332	T-2	14.8	730915	313.56	106.90	316.28	2.29	0.1480	2.9684	16	0		B
1333	T-2	15.8	730915	2.61	34.15	323.55	2.27	0.2172	3.0422	16	0		B
1335	T-2	13.9	730915	273.78	288.95	177.00	0.66	0.1489	3.1290	16	0		B
1336	T-2	15.0	730915	325.98	238.36	174.84	5.69	0.2222	2.9507	16	0		B
1337	T-2	14.4	730915	52.82	220.25	72.61	1.71	0.1567	3.1169	16	0		B
1338	T-2	15.3	730915	353.84	353.47	15.16	7.50	0.1132	2.7819	16	0		B
1339	T-2	15.0	730915	338.49	12.64	12.42	9.85	0.0426	2.9586	15	0		B

1341	T-2	15.2	730915	280.56	87.49	0.63	2.78	0.0568	2.6738	16	0		B
1342	T-2	16.4	730915	324.49	220.45	190.98	7.23	0.1891	2.3579	16	0		B
1343	T-2	15.6	730915	179.04	186.91	356.19	2.82	0.0767	2.3369	16	0		B
1344	T-2	14.7	730915	277.10	317.63	137.51	2.32	0.0904	2.8720	16	0		B
1345	T-2	15.5	730915	4.77	171.35	180.55	15.41	0.2736	3.1528	16	0		B
1346	T-2	13.8	730915	213.09	102.04	56.25	1.75	0.1572	3.2001	16	0		B
1347	T-2	14.1	730915	293.75	271.85	174.79	1.18	0.1576	3.1861	16	0		B
1348	T-2	14.8	730915	249.22	303.61	189.14	4.88	0.2019	2.3672	16	0		B
1349	T-2	17.1	730915	346.30	190.01	193.21	2.41	0.2502	2.5530	16	0		B
1350	T-2	14.8	730915	67.07	62.93	216.95	1.62	0.1438	3.0211	16	0		B
1351	T-2	14.4	730915	101.64	275.79	331.86	1.85	0.1292	2.7426	16	0		B
1352	T-2	14.3	730915	190.75	319.84	214.88	0.56	0.1416	2.4414	16	0		B
1353	T-2	15.1	730915	291.22	76.57	7.67	0.84	0.1214	2.5312	16	0		B
1354	T-2	14.2	730915	174.98	5.38	181.81	4.67	0.0970	2.8629	16	0		B
1355	T-2	13.7	730915	206.45	99.93	64.73	0.33	0.1789	3.0491	16	0		B
1356	T-2	16.1	730915	22.02	144.27	176.60	4.52	0.2867	3.0236	16	0		B
1357	T-2	15.3	730915	14.37	326.74	16.20	4.39	0.1193	2.7296	16	0		B
1358	T-2	15.2	730915	358.49	186.40	176.09	1.99	0.1368	2.3957	16	0		B
1359	T-2	16.5	730915	105.23	236.96	6.96	5.83	0.1199	2.2327	15	0		B
1360	T-2	14.3	730915	49.24	105.23	200.79	1.30	0.0794	2.8635	16	0		B
1361	T-2	14.9	730915	98.64	46.75	216.36	1.81	0.0116	2.7970	16	0		B
1362	T-2	16.5	730915	312.80	45.32	10.55	6.26	0.1005	2.3019	16	0		B
1363	T-2	14.7	730915	69.58	101.83	169.47	3.09	0.1690	2.4227	16	0		B
1364	T-2	14.9	730915	30.85	128.88	199.79	5.88	0.0482	2.7020	16	0		B
1400	T-2	15.8	730915	349.46	23.67	348.33	6.27	0.1136	2.7838	16	0		B
1401	T-2	16.7	730915	51.73	337.37	311.36	1.89	0.1747	2.4069	15	0		B
1402	T-2	16.3	730915	359.67	20.21	338.23	2.50	0.1302	2.5156	11	0		B
1405	T-2	15.9	730915	282.14	99.82	351.91	1.14	0.1360	2.4081	16	0		B
1406	T-2	17.7	730915	355.72	171.47	192.05	6.32	0.1866	2.2457	11	0		B
1408	T-2	17.6	730915	340.85	48.24	339.79	4.86	0.2164	2.3886	16	0		B
1409	T-2	15.7	730915	357.30	213.36	148.98	0.40	0.1817	3.1370	15	0		B
1413	T-2	17.8	730915	15.93	34.86	298.14	1.52	0.2166	2.4105	10	7		B
1414	T-2	15.5	730915	282.31	258.11	193.96	10.44	0.1263	2.6479	16	0		B
1416	T-2	12.4	730915	329.82	211.28	185.29	13.46	0.0901	5.1008	16	0	E	B
1417	T-2	15.8	730915	292.19	151.41	285.53	2.08	0.0810	2.6218	11	7		B
1418	T-2	15.4	730915	84.30	36.24	210.54	5.56	0.2649	2.6014	6	8	E	B
1421	T-2	17.5	730915	351.32	2.06	8.39	3.01	0.1901	2.2756	16	0		B
1422	T-2	16.9	730915	291.79	74.24	5.09	5.52	0.1085	2.2665	16	0		B
1424	T-2	17.1	730915	325.35	128.22	277.79	1.76	0.1555	2.3034	10	8		B
1426	T-2	14.3	730915	143.95	218.51	351.81	11.27	0.1409	3.1939	10	7		B
1428	T-2	17.7	730915	331.07	46.05	354.82	5.85	0.1898	2.2642	16	0		B
1430	T-2	14.9	730915	50.50	87.49	206.30	0.74	0.1638	3.1547	16	0		B
1435	T-2	16.8	730915	343.00	186.30	196.73	9.17	0.1530	2.4741	5	6		B
1436	T-2	13.1	730915	339.26	51.07	340.24	5.87	0.1573	5.2498	11	0		B
1437	T-2	15.1	730915	89.12	274.51	352.82	7.49	0.0469	3.2176	15	9		B
1438	T-2	14.8	730915	19.94	336.01	1.51	13.95	0.0836	3.1813	14	6		B
1441	T-2	15.3	730915	143.46	216.74	359.23	2.77	0.0262	2.8257	15	0		B
1443	T-2	16.5	730915	305.62	106.20	328.86	3.22	0.1907	2.3249	6	6		B
1444	T-2	14.5	730915	88.15	70.89	191.96	15.88	0.0956	3.0740	11	0		B
1445	T-2	14.6	730915	83.90	262.04	356.35	12.28	0.1761	3.1565	16	0		B
1447	T-2	15.9	730915	35.22	307.45	3.35	8.35	0.1782	2.7467	16	0		B
1448	T-2	15.6	730915	345.38	219.57	157.62	2.51	0.0700	2.8500	6	0		B
1451	T-2	16.7	730915	322.61	222.31	186.98	13.96	0.1456	2.5195	11	9		B
1453	T-2	18.2	730915	10.09	355.42	344.92	2.75	0.2683	2.3908	15	0		B
1454	T-2	16.7	730915	56.78	297.86	352.20	7.03	0.1336	2.3606	16	0		B
1455	T-2	12.7	730915	113.91	22.67	200.81	9.39	0.2872	2.7794	5	6		B
1456	T-2	14.7	730915	39.16	121.49	190.97	18.69	0.1241	3.2024	5	6		B
1460	T-2	14.4	730915	136.96	23.81	187.91	6.69	0.2096	2.9182	16	0		B
1464	T-2	15.5	730915	71.93	81.21	187.49	4.53	0.1789	2.5821	16	0		B

1467	T-2	15.9	730915	341.33	70.51	321.59	2.89	0.2409	3.1029	6	6		B
1468	T-2	15.3	730915	18.48	128.62	209.93	4.68	0.0925	2.3875	5	6		B
1469	T-2	15.4	730915	28.05	17.26	292.84	1.87	0.2901	2.6570	5	5		B
1470	T-2	15.2	730915	22.30	153.49	184.68	11.02	0.0263	3.0110	15	0		B
1471	T-2	17.1	730915	330.37	37.47	6.20	2.25	0.2013	2.4588	16	0		B
1474	T-2	15.8	730915	51.69	67.46	224.44	2.61	0.1671	2.1791	16	0		B
1475	T-2	15.9	730915	332.40	202.76	206.01	5.05	0.2748	2.7898	5	6		B
1476	T-2	15.1	730915	297.80	82.64	355.92	10.47	0.1241	3.1475	16	0		B
1478	T-2	16.6	730915	294.34	194.53	250.47	1.20	0.1640	2.2897	10	9		B
1481	T-2	16.6	730915	4.64	42.21	312.58	0.79	0.1521	2.8859	11	8		B
1483	T-2	16.2	730915	48.62	103.74	183.88	5.91	0.2387	2.7083	11	9		B
1488	T-2	18.5	730915	346.54	194.02	185.56	0.43	0.2143	2.1999	11	7		B
1489	T-2	16.1	730915	268.65	117.17	346.05	5.37	0.0851	2.4123	11	0		B
1493	T-2	14.3	730915	257.30	56.76	66.78	1.57	0.1792	3.0830	11	0		B
1494	T-2	15.6	730915	107.43	179.19	74.09	1.55	0.0043	2.5788	16	0		B
1496	T-2	15.4	730915	325.10	11.04	37.15	1.70	0.1543	3.0632	15	0		B
1503	T-2	16.1	730915	291.27	232.69	215.42	2.18	0.1540	2.4005	16	0		B
1504	T-2	16.0	730915	26.89	108.93	222.51	1.25	0.0765	2.8482	11	0		B
1507	T-2	15.4	730915	30.46	144.04	177.76	6.61	0.1221	2.2578	16	0		B
1508	T-2	16.8	730915	66.44	284.24	352.84	8.37	0.1512	2.3502	16	0		B
1509	T-2	16.8	730915	12.11	3.08	338.81	5.27	0.1331	2.1878	10	9		B
1510	T-2	17.0	730915	341.97	214.94	178.64	1.61	0.3082	3.1310	11	8	E	B
1512	T-2	17.1	730915	334.34	198.62	198.01	0.79	0.1832	2.5411	6	6		B
1514	T-2	15.9	730915	310.17	175.30	238.94	0.51	0.0398	2.6019	16	0		B
1524	T-2	18.1	730915	7.09	4.01	344.50	1.07	0.1973	2.3328	11	0		B
1528	T-2	15.9	730915	2.82	23.90	329.78	1.86	0.2132	2.3741	16	0		B
1531	T-2	18.1	730915	11.25	116.43	224.67	1.22	0.2006	2.2032	16	0		B
1541	T-2	16.4	730915	61.93	27.02	249.72	1.61	0.1810	2.4509	16	0		B
1543	T-2	17.5	730915	29.28	321.92	357.29	2.07	0.1583	2.2286	10	7	E	B
1549	T-2	15.9	730915	348.08	171.48	201.55	3.78	0.1164	2.7241	6	7		B
1550	T-2	14.0	730915	226.65	315.40	191.53	6.58	0.2133	2.5722	6	7		B
1551	T-2	16.9	730915	340.30	36.71	350.49	5.13	0.2061	2.5202	6	7		B
1552	T-2	12.5	730915	139.29	27.77	184.02	13.02	0.1117	2.9480	6	7		B
1555	T-2	15.0	730915	292.79	89.21	350.16	4.82	0.1281	2.3842	6	7		B
1564	T-2	16.4	730915	25.86	322.37	354.37	5.73	0.2146	2.3479	6	7		B
1579	T-2	17.8	730915	9.46	146.89	190.60	5.82	0.3027	2.4471	6	6		B
1580	T-2	15.4	730915	11.23	353.11	347.58	5.88	0.1767	2.3408	6	7		B
1582	T-2	15.4	730915	78.27	76.51	180.84	1.96	0.1910	2.2683	6	7		B
1601	T-2	13.8	730915	106.27	39.33	185.78	20.29	0.2823	2.8019	5	5		B
1602	T-2	13.6	730915	153.49	3.96	194.38	8.65	0.1656	2.9991	6	6	E	B
1603	T-2	16.5	730915	309.51	188.38	233.51	2.43	0.1360	2.6304	5	5		B
1604	T-2	15.9	730915	12.68	355.89	344.66	9.19	0.1600	2.6661	6	7		B
1606	T-2	13.7	730915	270.94	133.94	334.17	7.39	0.1720	3.0734	6	7		B
1607	T-2	15.0	730915	328.99	51.84	345.37	8.09	0.1220	2.4019	6	7		B
1609	T-2	13.7	730915	178.59	299.48	241.03	3.10	0.1870	2.7798	6	7		B
1610	T-2	16.8	730915	28.08	109.47	203.44	4.91	0.2277	2.3205	6	7		B
1611	T-2	15.8	730915	85.29	287.21	326.81	4.16	0.1710	2.3548	6	7		B
1612	T-2	17.0	730915	349.25	28.35	345.61	7.27	0.2091	2.2973	6	6		B
1613	T-2	15.9	730915	27.52	60.95	253.16	2.15	0.2248	2.2445	6	7		B
1615	T-2	15.4	730915	55.31	102.97	178.74	4.62	0.1845	2.2672	5	5		B
1616	T-2	15.4	730915	358.81	169.14	190.01	1.07	0.1575	3.0727	6	6	E	B
1617	T-2	13.6	730915	120.90	224.93	356.30	4.27	0.1826	2.3640	6	7	E	B
1618	T-2	15.7	730915	331.97	238.02	162.16	1.17	0.2203	2.6153	6	0		B
1619	T-2	15.2	730915	334.44	36.88	354.85	1.68	0.1484	2.6557	6	7		B
1620	T-2	15.6	730915	7.53	2.64	344.99	4.49	0.1424	2.9307	6	6		B
1711	T-2	16.5	730915	30.79	325.29	358.35	6.86	0.1084	2.4469	16	0		B
1801	T-2	16.6	730915	359.36	18.98	341.53	4.18	0.1305	2.3226	10	9		B
1806	T-2	16.7	730915	326.61	80.31	326.60	1.52	0.2052	2.4178	6	7		B
2001	T-2	15.4	730915	302.29	208.82	219.34	3.92	0.0744	2.6882	10	9		G

2002	T-2	16.4	730915	350.16	69.20	305.61	2.08	0.1628	2.3907	10	9		G
2005	T-2	16.9	730915	305.11	254.89	189.70	3.09	0.2601	2.3922	11	9		B
2014	T-2	16.1	730915	232.93	283.81	215.48	3.77	0.1128	2.2498	15	0		G
2019	T-2	14.5	730915	234.64	135.23	6.44	14.36	0.1602	2.7366	16	0		B
2022	T-2	15.8	730915	330.68	206.04	191.96	7.10	0.1157	2.3816	16	0		B
2023	T-2	17.2	730915	359.24	166.03	195.12	8.24	0.2195	2.3671	15	0		G
2024	T-2	13.6	730915	305.98	78.49	353.61	8.74	0.1456	2.7701	15	0		G
2025	T-2	15.1	730915	342.75	58.23	326.91	3.62	0.1077	3.2298	16	0		G
2026	T-2	16.2	730915	283.83	250.83	201.54	6.33	0.1224	2.2992	16	0		G
2027	T-2	16.6	730915	309.47	109.06	321.56	1.73	0.1812	2.4079	16	0		B
2028	T-2	15.1	730915	145.08	212.42	0.97	7.09	0.0820	2.7937	16	0		B
2030	T-2	16.1	730915	345.38	10.77	8.67	2.52	0.1034	2.5534	16	0		B
2031	T-2	17.1	730915	316.25	55.34	7.13	4.39	0.1896	2.4271	16	0		G
2032	T-2	18.0	730915	320.35	49.22	11.86	1.77	0.2320	2.3217	5	7		G
2033	T-2	13.7	730915	210.46	335.36	183.89	14.35	0.1191	3.1787	16	0		G
2034	T-2	13.6	730915	255.74	62.77	57.30	0.98	0.1192	3.1760	16	0		B
2035	T-2	16.4	730915	68.49	106.54	179.67	1.83	0.0611	2.2394	16	0		B
2036	T-2	15.2	730915	26.77	343.69	339.32	5.12	0.2019	2.9969	16	0		G
2038	T-2	14.6	730915	252.37	276.97	204.98	6.34	0.0956	3.1724	11	8		G
2039	T-2	14.2	730915	176.44	186.48	359.45	6.57	0.0521	2.3582	16	0		B
2040	T-2	14.4	730915	216.07	320.73	187.82	7.77	0.0206	2.9296	16	0		G
2041	T-2	16.3	730915	17.98	156.10	177.57	1.02	0.1786	2.1768	16	0		G
2042	T-2	14.6	730915	350.17	199.42	175.64	2.97	0.1533	2.7755	16	0		G
2043	T-2	14.0	730915	249.76	297.35	186.47	7.03	0.1026	2.7119	16	0		G
2045	T-2	13.3	730915	76.29	266.18	3.19	12.18	0.1516	2.6831	16	0		G
2046	T-2	16.0	730915	312.55	123.32	299.07	1.80	0.1364	2.3655	16	0		G
2047	T-2	15.4	730915	18.04	347.89	347.96	4.57	0.1785	2.5784	16	0		G
2048	T-2	13.6	730915	309.09	224.26	196.10	10.44	0.0610	3.0470	16	0		G
2049	T-2	15.8	730915	84.25	274.84	341.14	1.57	0.1962	2.3348	16	0		G
2050	T-2	16.2	730915	46.50	117.83	176.35	1.97	0.2080	2.4110	16	0		G
2051	T-2	16.8	730915	16.67	328.53	359.70	5.22	0.3057	2.6604	16	0		G
2052	T-2	13.8	730915	64.38	345.84	308.85	1.21	0.0418	2.8397	16	0		G
2053	T-2	14.4	730915	41.47	98.13	203.68	7.54	0.2128	2.8025	11	0		G
2054	T-2	15.3	730915	26.33	322.39	350.68	8.05	0.3085	2.8847	16	0		G
2055	T-2	15.2	730915	31.79	124.66	193.79	14.47	0.1710	2.8034	11	0		G
2056	T-2	15.5	730915	4.96	5.48	350.53	4.61	0.0774	2.2640	16	0		G
2057	T-2	17.2	730915	356.49	134.64	231.58	1.69	0.2051	2.4319	16	0		G
2058	T-2	16.2	730915	283.03	268.81	174.29	1.92	0.0376	2.3128	16	0		G
2059	T-2	16.5	730915	22.03	148.79	179.94	3.19	0.1915	2.6041	16	0		G
2060	T-2	18.1	730915	351.04	198.05	175.77	0.74	0.2022	2.3698	5	6		G
2061	T-2	17.8	730915	346.60	210.69	167.95	0.17	0.1391	2.3253	16	0		G
2062	T-2	16.4	730915	11.43	151.30	190.30	4.61	0.2401	2.5934	16	0		G
2063	T-2	15.5	730915	320.95	47.57	1.84	4.70	0.0973	2.6873	16	0		G
2064	T-2	15.4	730915	325.72	205.65	194.44	5.93	0.0416	2.6752	16	0		G
2065	T-2	16.5	730915	4.63	354.46	358.22	3.97	0.2114	2.2865	16	0		G
2066	T-2	14.1	730915	31.66	113.62	213.61	5.19	0.0773	2.9663	11	0		G
2067	T-2	12.8	730915	172.53	225.19	325.93	3.67	0.1110	2.9309	16	0		G
2068	T-2	12.9	730915	177.38	189.63	358.46	18.59	0.1437	3.0724	6	6	E	G
2069	T-2	11.4	730915	147.88	11.58	199.98	11.80	0.0985	2.9721	10	0		G
2070	T-2	14.1	730915	133.73	223.24	1.46	19.52	0.0895	3.1506	16	0		G
2071	T-2	14.8	730915	19.12	114.24	213.20	3.08	0.2694	2.5986	16	0		G
2073	T-2	14.1	730915	20.14	333.86	3.96	6.64	0.1185	3.2191	16	0		G
2074	T-2	15.4	730915	10.90	157.29	190.41	0.47	0.1539	3.0942	16	0		G
2075	T-2	15.3	730915	82.53	70.75	185.82	4.95	0.2046	2.3401	16	0		G
2076	T-2	15.9	730915	113.12	58.08	180.37	3.00	0.1053	2.1547	16	0		G
2077	T-2	15.9	730915	246.00	357.98	134.57	1.01	0.1687	2.3096	11	0		G
2078	T-2	15.7	730915	358.09	177.58	185.64	4.55	0.1657	2.3271	16	0		G
2079	T-2	15.4	730915	31.28	104.98	212.53	4.00	0.1712	2.1825	10	0		G
2080	T-2	13.7	730915	227.17	293.29	214.69	4.84	0.1475	2.4259	11	0		G

2081	T-2	15.8	730915	220.14	206.62	307.04	2.57	0.1458	2.4374	11	0		G
2082	T-2	17.4	730915	356.96	4.12	0.67	4.94	0.2399	2.3192	16	0		G
2084	T-2	15.8	730915	222.64	317.82	187.06	21.52	0.0790	1.9611	16	0		G
2085	T-2	14.9	730915	239.61	146.78	348.79	4.40	0.1202	2.6291	16	0		G
2086	T-2	12.8	730915	211.01	175.96	350.31	6.01	0.2512	3.0327	16	0		G
2087	T-2	14.2	730915	19.11	357.50	342.34	4.21	0.1048	2.7372	16	0		G
2088	T-2	15.9	730915	302.46	225.66	208.10	4.29	0.1331	2.2494	16	0		G
2089	T-2	16.7	730915	324.30	213.36	195.92	6.48	0.1530	2.2996	16	0		G
2090	T-2	17.1	730915	4.94	357.28	356.65	4.37	0.1638	2.2798	16	0		G
2091	T-2	16.6	730915	55.43	299.67	342.55	0.59	0.2196	2.1790	16	0		G
2092	T-2	14.9	730915	211.10	337.25	181.19	5.42	0.1122	2.6447	16	0		G
2093	T-2	17.2	730915	3.76	344.73	10.35	5.03	0.1537	2.2233	16	0		G
2095	T-2	16.4	730915	355.56	50.41	318.07	1.10	0.1098	2.7025	16	0		G
2096	T-2	18.2	730915	0.70	160.11	198.61	4.12	0.2424	2.3188	15	0		G
2097	T-2	15.2	730915	213.38	163.46	350.64	6.79	0.0581	2.3901	16	0		G
2098	T-2	14.7	730915	320.69	66.20	343.37	5.38	0.0895	2.4002	6	8		G
2099	T-2	16.3	730915	320.43	58.11	2.22	10.56	0.2013	2.7298	16	0		G
2100	T-2	14.4	730915	326.62	216.59	188.73	16.45	0.1152	3.1104	16	0		G
2102	T-2	16.0	730915	216.61	127.54	24.61	2.22	0.0930	2.3570	11	0		G
2103	T-2	16.3	730915	339.22	191.65	199.42	5.80	0.1806	2.2645	15	0		G
2104	T-2	14.5	730915	358.06	114.69	251.36	1.15	0.1087	2.9244	16	0		G
2105	T-2	16.7	730915	346.90	14.47	9.39	4.72	0.2683	2.6137	16	0		G
2106	T-2	17.6	730915	27.53	154.89	168.60	1.09	0.1668	2.4879	15	0		G
2107	T-2	15.3	730915	35.71	122.21	188.65	13.04	0.1933	2.6002	16	0		G
2108	T-2	15.2	730915	46.23	107.88	199.50	3.11	0.0984	2.3332	16	0		G
2109	T-2	16.7	730915	33.73	315.49	356.55	5.60	0.2014	2.3109	16	0		G
2110	T-2	14.8	730915	335.40	37.59	358.90	8.82	0.1378	3.0437	16	0		G
2111	T-2	16.8	730915	30.72	134.61	185.94	5.83	0.1478	2.2953	16	0		G
2112	T-2	13.6	730915	10.46	278.97	69.19	0.19	0.1772	3.2094	16	0		G
2113	T-2	15.9	730915	318.78	249.13	178.63	1.91	0.2464	3.0336	16	0		G
2114	T-2	14.5	730915	249.37	307.78	182.63	3.55	0.1651	2.3864	16	0		G
2115	T-2	15.4	730915	257.19	99.62	14.77	2.10	0.0827	2.2218	16	0		G
2116	T-2	15.4	730915	260.05	68.63	52.06	0.39	0.1641	2.3058	16	0		G
2118	T-2	15.4	730915	138.70	44.39	178.19	3.41	0.0332	2.7254	16	0		G
2120	T-2	15.9	730915	18.90	322.15	12.31	5.35	0.1630	2.2685	16	0		G
2121	T-2	16.8	730915	0.42	171.48	187.83	4.77	0.2026	2.1995	16	0		G
2122	T-2	17.0	730915	342.19	196.46	191.13	1.46	0.2009	2.2888	16	0		G
2123	T-2	16.2	730915	181.83	347.66	194.82	8.40	0.1139	2.2440	6	6	E	G
2124	T-2	15.4	730915	345.54	96.25	285.94	1.62	0.1617	2.3636	15	0		G
2125	T-2	14.0	730915	47.17	298.27	359.18	11.47	0.1947	2.6555	16	0		G
2126	T-2	15.8	730915	336.28	187.25	202.23	6.27	0.0617	2.2413	11	0		G
2127	T-2	15.8	730915	77.78	318.60	324.52	1.97	0.0279	2.5501	15	0		G
2128	T-2	15.4	730915	47.49	290.69	12.46	8.60	0.1166	2.2272	16	0		G
2129	T-2	15.7	730915	34.92	300.68	17.00	5.80	0.1235	2.4190	16	0		G
2130	T-2	14.5	730915	28.80	311.75	13.82	9.40	0.1263	2.6935	16	0		G
2132	T-2	15.0	730915	273.24	268.26	188.73	12.49	0.0509	2.9276	15	0		G
2133	T-2	15.2	730915	5.75	160.49	195.77	1.94	0.0967	2.7171	16	0		G
2134	T-2	16.0	730915	322.86	67.27	342.29	1.67	0.1165	2.6308	16	0		G
2135	T-2	15.9	730915	289.47	209.57	233.27	2.20	0.0689	2.7971	16	0		G
2136	T-2	16.9	730915	25.06	121.05	205.44	2.57	0.1768	2.4407	15	0		G
2137	T-2	15.8	730915	23.80	118.68	213.52	1.52	0.1088	2.1597	16	0		G
2139	T-2	16.3	730915	294.03	274.12	167.76	3.24	0.1237	2.3182	16	0		G
2140	T-2	12.9	730915	80.47	249.23	12.94	13.20	0.1864	3.0903	16	0		G
2141	T-2	13.7	730915	41.37	310.85	9.33	5.49	0.0307	2.8009	16	0		G
2142	T-2	14.8	730915	31.14	122.87	187.57	11.26	0.2594	2.6718	16	0		G
2143	T-2	14.6	730915	76.06	272.83	2.49	11.61	0.1202	2.9891	16	0		G
2144	T-2	14.5	730915	76.30	274.67	357.38	4.55	0.1369	2.5351	16	0		G
2145	T-2	14.6	730915	341.72	200.20	187.84	14.06	0.1586	2.6770	16	0		G
2146	T-2	17.7	730915	346.33	201.06	184.98	5.24	0.2918	2.5504	16	0		G

2147	T-2	15.3	730915	15.94	335.65	9.97	10.29	0.0678	2.9261	11	0	G
2148	T-2	14.1	730915	345.74	195.16	188.22	12.13	0.1885	2.6132	16	0	G
2149	T-2	14.6	730915	50.43	99.36	190.90	17.31	0.2280	3.1007	16	0	G
2150	T-2	13.6	730915	25.67	129.22	192.79	11.95	0.2331	2.8314	16	0	G
2151	T-2	14.2	730915	346.38	36.64	353.76	4.05	0.3300	3.0945	16	0	G
2153	T-2	14.5	730915	22.28	335.94	358.18	4.59	0.1533	3.1472	16	0	G
2154	T-2	15.4	730915	233.87	142.66	352.48	2.49	0.0516	2.5455	16	0	G
2156	T-2	15.7	730915	309.54	247.08	179.99	7.72	0.1429	2.4317	16	0	G
2157	T-2	13.6	730915	345.83	10.62	10.27	17.49	0.0919	3.1244	16	0	G
2158	T-2	16.5	730915	59.18	114.26	172.21	2.84	0.1566	2.3283	16	0	G
2159	T-2	15.7	730915	224.77	69.33	71.77	0.88	0.0274	2.5384	16	0	G
2161	T-2	14.6	730915	63.17	94.65	188.15	10.04	0.1698	3.1276	16	0	G
2162	T-2	15.4	730915	82.84	79.85	192.65	4.52	0.0777	2.6260	16	0	G
2164	T-2	13.3	730915	147.23	2.28	205.09	8.30	0.2452	2.7526	6	8	E G
2166	T-2	14.1	730915	230.08	139.29	359.83	4.62	0.0418	3.1879	16	0	G
2167	T-2	16.7	730915	54.54	95.82	191.62	5.97	0.1947	2.2675	16	0	G
2168	T-2	13.8	730915	337.85	193.85	197.56	1.71	0.1025	2.9438	16	0	G
2169	T-2	17.1	730915	332.93	24.93	10.44	3.43	0.1053	2.2722	5	5	E G
2171	T-2	15.1	730915	25.30	321.31	14.27	6.18	0.0695	3.2213	6	6	E G
2172	T-2	16.4	730915	13.00	337.91	5.12	13.46	0.1927	2.5572	15	0	G
2174	T-2	14.4	730915	294.61	97.90	342.01	4.72	0.0848	2.7811	6	6	G
2175	T-2	14.8	730915	43.85	315.33	0.13	13.07	0.0773	3.0742	15	0	G
2176	T-2	14.9	730915	21.31	334.79	2.38	13.78	0.1205	2.6932	16	0	G
2177	T-2	13.4	730915	139.43	224.35	352.69	5.33	0.1271	2.2624	16	0	G
2178	T-2	15.0	730915	147.91	349.67	224.37	1.23	0.0607	2.8239	15	0	G
2180	T-2	13.1	730915	267.91	93.59	6.72	8.37	0.0253	3.1299	16	0	G
2181	T-2	13.4	730915	93.95	77.65	187.89	3.18	0.0437	2.6814	16	0	G
2183	T-2	14.8	730915	333.98	227.77	174.33	4.12	0.2180	2.5454	16	0	G
2184	T-2	16.7	730915	30.05	283.33	31.86	2.56	0.2175	2.3567	16	0	G
2185	T-2	14.6	730915	291.15	58.73	30.21	1.66	0.1339	3.2377	16	0	G
2186	T-2	15.5	730915	349.93	6.18	10.00	1.89	0.0760	2.9337	16	0	G
2187	T-2	15.5	730915	251.69	146.80	341.27	2.08	0.1469	2.4320	16	0	G
2188	T-2	15.8	730915	324.28	220.31	204.75	4.93	0.2898	2.6434	11	0	G
2189	T-2	14.3	730915	77.65	357.94	275.16	1.14	0.1236	2.6203	16	0	G
2190	T-2	17.2	730915	359.24	167.97	193.01	6.69	0.2726	2.2420	11	0	G
2191	T-2	16.3	730915	36.09	296.92	11.99	4.33	0.1974	2.1870	16	0	G
2192	T-2	16.2	730915	340.76	207.47	181.45	7.37	0.1708	2.3640	16	0	G
2193	T-2	15.2	730915	52.34	102.04	188.83	2.14	0.2048	2.9926	15	0	G
2194	T-2	16.4	730915	358.34	351.31	13.49	11.47	0.1576	2.6764	16	0	G
2195	T-2	16.4	730915	348.37	203.36	173.77	2.24	0.1396	2.2414	16	0	G
2197	T-2	15.4	730915	62.59	253.59	16.96	4.04	0.2692	2.5808	16	0	G
2199	T-2	15.0	730915	137.41	42.47	181.63	3.13	0.0421	2.5976	16	0	G
2200	T-2	14.9	730915	76.98	296.73	336.87	0.32	0.1185	2.4328	16	0	G
2201	T-2	15.6	730915	224.21	311.06	197.76	4.21	0.1144	2.3249	16	0	G
2202	T-2	13.5	730915	246.20	198.91	295.54	0.55	0.1482	3.1463	16	0	G
2203	T-2	16.3	730915	312.68	238.17	189.74	8.42	0.1730	2.5961	15	0	G
2204	T-2	14.8	730915	314.13	25.20	38.39	1.26	0.1455	2.8506	16	0	G
2205	T-2	13.9	730915	227.25	92.81	55.61	1.85	0.1312	3.2202	16	0	G
2207	T-2	14.0	730915	33.60	208.24	110.47	0.26	0.1639	3.1136	16	0	G
2208	T-2	16.5	730915	32.79	309.10	12.78	3.48	0.1147	2.3032	16	0	G
2209	T-2	15.8	730915	350.86	157.10	219.14	2.30	0.1327	2.7194	10	0	G
2210	T-2	13.5	730915	275.58	291.83	193.75	23.29	0.3135	2.8527	6	8	G
2212	T-2	14.8	730915	190.59	146.51	28.61	2.01	0.0315	2.7746	16	0	G
2213	T-2	15.7	730915	81.42	234.73	24.81	4.11	0.1982	2.3262	16	0	G
2215	T-2	15.5	730915	16.72	169.60	165.15	2.43	0.2227	2.3969	16	0	G
2216	T-2	13.5	730915	38.83	275.37	30.65	0.86	0.2224	3.1779	16	0	G
2217	T-2	16.2	730915	24.64	148.15	180.64	1.72	0.1716	2.6868	14	9	G
2218	T-2	14.9	730915	2.24	197.54	162.44	0.17	0.0952	2.2715	16	0	G
2219	T-2	15.1	730915	53.55	330.13	319.17	2.24	0.2057	2.5143	6	8	G

2220	T-2	16.8	730915	10.39	342.39	0.59	4.81	0.2438	2.1926	16	0	G
2222	T-2	12.4	730915	67.44	130.72	158.50	3.88	0.0818	3.4720	16	0	G
2223	T-2	15.5	730915	25.10	290.15	25.47	4.44	0.3119	3.1482	16	0	G
2227	T-2	17.0	730915	3.24	18.35	337.82	2.51	0.2516	2.4185	11	0	G
2228	T-2	16.7	730915	25.34	24.24	299.37	1.29	0.2172	2.4089	15	0	G
2230	T-2	15.3	730915	274.03	282.47	185.85	10.26	0.1519	2.6270	16	0	G
2231	T-2	15.0	730915	35.31	301.83	12.63	8.91	0.1770	2.7668	16	0	G
2232	T-2	15.2	730915	7.11	179.94	174.50	3.90	0.0924	2.3725	16	0	G
2233	T-2	15.1	730915	22.13	194.09	142.77	2.41	0.1059	2.8534	16	0	G
2234	T-2	14.2	730915	95.65	244.55	10.84	12.21	0.1355	3.0914	16	0	G
2235	T-2	15.1	730915	4.62	183.44	174.35	2.02	0.1845	3.1928	16	0	G
2236	T-2	17.3	730915	348.60	27.13	355.94	3.40	0.2874	2.5701	16	0	G
2237	T-2	15.2	730915	12.58	148.62	200.38	4.36	0.1003	2.5538	16	0	G
2238	T-2	14.2	730915	282.15	90.18	6.55	8.48	0.1092	3.1608	16	0	G
2239	T-2	14.1	730915	339.29	211.81	182.57	1.59	0.1739	3.1245	16	0	G
2240	T-2	14.1	730915	172.14	175.26	16.09	6.99	0.0717	2.3500	16	0	G
2241	T-2	18.0	730915	6.62	167.95	181.24	11.14	0.2396	2.2469	6	0	G
2243	T-2	14.9	730915	270.19	303.00	167.54	2.55	0.1441	2.4077	16	0	G
2244	T-2	15.3	730915	34.36	146.70	173.55	0.96	0.1272	2.5495	16	0	G
2245	T-2	16.0	730915	74.20	84.36	186.15	2.60	0.1719	2.3796	16	0	G
2246	T-2	14.5	730915	34.97	126.09	186.29	3.72	0.2046	2.7100	16	0	G
2247	T-2	14.5	730915	14.44	23.61	325.16	1.19	0.0766	2.8641	16	0	G
2248	T-2	16.1	730915	348.85	185.96	191.67	5.89	0.1475	2.2583	16	0	G
2249	T-2	12.5	730915	221.27	336.16	177.73	1.89	0.1249	3.0964	16	0	G
2250	T-2	14.7	730915	265.13	87.24	16.52	3.48	0.0293	2.7967	16	0	G
2251	T-2	14.6	730915	338.06	39.05	356.83	6.84	0.1532	3.0997	16	0	G
2252	T-2	13.7	730915	350.53	17.01	1.13	9.08	0.1604	2.7737	16	0	G
2254	T-2	15.4	730915	314.32	54.94	8.95	12.43	0.1498	2.5477	11	0	G
2255	T-2	15.3	730915	351.21	4.07	10.45	5.24	0.1532	2.2951	15	0	G
2256	T-2	13.4	730915	277.76	329.12	135.28	0.75	0.1389	3.1085	16	0	G
2258	T-2	15.5	730915	18.21	188.11	154.25	2.06	0.0899	2.6186	16	0	G
2259	T-2	15.7	730915	31.20	78.94	245.19	0.26	0.1301	2.5195	16	0	G
2260	T-2	16.1	730915	11.17	151.70	196.74	4.85	0.1866	2.9832	16	0	G
2261	T-2	14.7	730915	318.40	70.81	349.90	2.14	0.1689	2.4391	16	0	G
2262	T-2	16.1	730915	316.42	60.85	0.76	6.44	0.1571	2.2918	11	0	G
2263	T-2	15.9	730915	268.45	280.02	200.22	5.55	0.2040	2.5072	11	0	G
2264	T-2	13.9	730915	275.01	94.07	5.08	9.69	0.0630	3.0755	16	0	G
2265	T-2	16.3	730915	23.35	152.94	181.45	2.50	0.1089	2.3093	16	0	G
2266	T-2	15.4	730915	62.03	124.74	173.51	5.55	0.0363	2.3302	15	0	G
2267	T-2	16.6	730915	21.51	322.47	8.49	10.44	0.2034	2.5855	10	0	G
2268	T-2	14.3	730915	24.27	141.35	191.29	5.08	0.1566	3.1839	16	0	G
2270	T-2	15.4	730915	70.82	80.35	208.86	1.33	0.0564	2.8694	15	0	G
2271	T-2	15.6	730915	29.54	136.30	191.21	12.45	0.1211	2.6490	16	0	G
2272	T-2	13.8	730915	203.73	159.41	4.36	6.17	0.0538	2.2305	10	0	G
2273	T-2	14.3	730915	308.59	58.92	8.26	4.35	0.0953	3.2348	16	0	G
2275	T-2	13.4	730915	247.29	328.23	172.38	2.92	0.2219	3.1456	16	0	G
2276	T-2	15.0	730915	105.85	224.64	28.97	2.52	0.0560	2.6269	15	0	G
2278	T-2	15.1	730915	34.96	244.32	73.63	2.24	0.1586	3.2296	15	0	G
2279	T-2	14.6	730915	337.25	231.12	162.91	1.87	0.1218	2.8740	16	0	G
2280	T-2	15.1	730915	217.52	333.97	176.48	3.10	0.0529	2.1806	10	0	G
2281	T-2	13.8	730915	87.78	288.70	347.25	2.14	0.0238	2.7659	15	0	G
2282	T-2	15.3	730915	22.30	138.88	190.69	5.86	0.1971	2.3394	15	0	G
2283	T-2	14.8	730915	167.89	357.95	196.87	0.74	0.2171	2.3847	10	8	E G
2284	T-2	16.6	730915	66.07	96.72	185.52	2.54	0.1396	2.1655	6	7	G
2285	T-2	13.7	730915	322.24	43.18	9.80	9.17	0.1243	2.8003	10	0	G
2286	T-2	16.7	730915	355.23	197.86	171.83	0.57	0.2122	2.3819	15	0	G
2287	T-2	13.8	730915	8.07	182.69	174.02	6.03	0.0292	2.7365	15	0	G
2288	T-2	14.5	730915	326.52	342.59	68.53	2.19	0.1677	3.0722	15	0	G
2289	T-2	13.4	730915	19.39	143.88	199.06	9.73	0.1018	3.0772	6	8	E G

2290	T-2	15.7	730915	293.24	206.55	239.15	1.71	0.1209	2.4289	6	7	E	G
2291	T-2	14.6	730915	299.54	107.30	337.37	1.71	0.1750	2.4233	6	8	E	G
2292	T-2	13.9	730915	256.14	115.03	7.76	24.95	0.1054	2.9637	6	7	E	G
2295	T-2	16.4	730915	325.83	61.01	355.44	2.88	0.2177	2.6284	6	8		G
2296	T-2	13.9	730915	138.19	224.02	350.23	4.50	0.2599	2.5831	6	8	E	G
2297	T-2	14.1	730915	78.09	28.68	223.74	2.50	0.3197	2.5367	6	8	E	G
2298	T-2	14.5	730915	311.92	82.32	355.95	4.12	0.2333	2.9530	6	8		G
2299	T-2	14.7	730915	135.91	211.36	5.17	6.86	0.2334	2.5550	6	5	E	G
2300	T-2	15.4	730915	350.52	190.46	187.82	9.31	0.1826	2.7322	6	6		G
2302	T-2	13.6	730915	145.13	196.38	17.36	10.46	0.1322	2.7498	6	8	E	G
2303	T-2	15.5	730915	302.15	357.99	86.43	1.91	0.2086	2.3997	6	0		G
2304	T-2	16.4	730915	351.22	321.59	56.28	1.73	0.2213	2.8575	6	0		G
2305	T-2	15.8	730915	32.54	130.24	177.08	2.18	0.2794	2.5200	6	6		G
2306	T-2	14.3	730915	9.59	157.51	194.92	1.12	0.1241	2.5886	6	6	E	G
2307	T-2	13.9	730915	240.49	237.74	269.28	0.90	0.2207	3.0538	5	5	E	G
2308	T-2	15.0	730915	85.33	88.33	178.77	4.47	0.1061	2.2203	6	6	E	G
2309	T-2	14.3	730915	11.94	332.33	15.51	13.80	0.1535	2.7956	6	0		G
2310	T-2	17.3	730915	344.10	202.08	184.75	9.01	0.1973	2.4000	6	8		G
2312	T-2	15.4	730915	315.89	234.36	182.29	2.51	0.0865	2.4735	6	8		G
2313	T-2	15.9	730915	16.36	204.02	137.72	1.30	0.1423	2.4062	6	7		G
2314	T-2	14.9	730915	78.09	119.84	159.35	3.28	0.0620	2.2516	6	0		G
2315	T-2	15.1	730915	305.26	275.13	171.07	2.57	0.2335	2.9691	6	8		G
2316	T-2	15.3	730915	233.49	319.12	179.27	3.06	0.0757	2.2267	6	6	E	G
2317	T-2	13.8	730915	124.32	17.48	204.88	5.31	0.2708	2.3501	6	5	E	G
2319	T-2	13.9	730915	76.35	67.73	210.87	3.36	0.0945	2.2975	6	8		G
2320	T-2	13.4	730915	181.41	350.86	196.24	8.63	0.1630	2.6959	6	6	E	G
2321	T-2	17.3	730915	359.61	187.68	174.61	2.21	0.2300	2.2943	6	8		G
2322	T-2	13.7	730915	94.80	94.67	145.81	2.80	0.3072	3.0407	6	8		G
2325	T-2	15.7	730915	16.10	167.25	177.31	4.90	0.0884	2.5610	16	0		G
2330	T-2	15.3	730915	247.00	124.82	4.68	4.92	0.1061	2.5349	15	0		G
2331	T-2	17.0	730915	354.33	197.38	173.34	0.72	0.1803	2.3237	5	6	E	G
2402	T-2	15.6	730915	328.97	94.24	329.37	3.02	0.3561	2.8818	5	5		G
2404	T-2	16.8	730915	337.52	188.28	214.18	4.21	0.2990	2.7472	6	7		G
2406	T-2	13.8	730915	278.91	267.40	200.33	9.50	0.2006	3.2642	6	6		G
2409	T-2	15.6	730915	65.04	315.48	317.96	2.53	0.2067	2.3188	6	7		G
2410	T-2	16.9	730915	41.82	70.78	228.46	2.47	0.2131	2.3074	6	7		G
2414	T-2	14.7	730915	342.65	29.68	358.00	12.52	0.2008	2.6984	6	7		G
2415	T-2	14.0	730915	11.61	320.85	17.54	7.60	0.3283	2.8029	5	6		G
2638	T-2	12.2	730915	247.45	74.66	51.59	2.38	0.0649	5.2670	16	0	E	G
2692	T-2	16.5	730915	328.06	250.30	177.07	5.38	0.3522	3.0348	11	0		G
2696	T-2	14.3	730915	265.67	96.51	17.28	12.38	0.1228	3.1687	16	0		G
2754	T-2	16.6	730915	324.16	232.93	170.97	4.66	0.0511	2.3795	5	7	E	G
2903	T-2	16.1	730915	322.97	43.34	19.22	4.53	0.2548	2.3222	5	6		G
2904	T-2	14.5	730915	350.95	335.66	43.62	1.67	0.2125	3.0782	5	5		G
2906	T-2	13.7	730915	75.17	249.51	12.75	5.97	0.2563	2.7843	5	5	E	G
2907	T-2	14.9	730915	354.42	177.82	193.59	4.78	0.1381	2.3479	5	6	E	G
2908	T-2	15.6	730915	12.56	148.94	197.33	2.58	0.1496	2.2387	5	5		G
2909	T-2	15.3	730915	96.10	39.12	217.89	2.27	0.1167	2.2674	5	6	E	G
2910	T-2	15.9	730915	286.80	97.91	353.81	3.94	0.1131	2.3178	5	6		G
2911	T-2	16.5	730915	349.67	75.47	304.67	0.72	0.1473	2.9319	5	6	E	G
2912	T-2	17.5	730915	340.13	41.93	348.08	1.32	0.1500	2.1708	5	6		G
2947	T-2	16.6	730915	13.93	327.37	16.77	3.00	0.1188	2.3494	6	6	E	G
3002	T-2	15.1	730915	333.98	29.00	9.15	7.80	0.2273	2.7920	16	0		G
3003	T-2	15.2	730915	20.23	156.52	174.36	8.96	0.1345	2.7608	16	0		G
3004	T-2	15.9	730915	321.06	272.14	138.27	1.81	0.1707	2.4271	11	0		G
3005	T-2	15.9	730915	252.54	47.91	66.42	2.25	0.0928	2.2278	15	0		G
3006	T-2	16.6	730915	353.82	192.12	174.97	13.45	0.2900	2.4620	16	0		G
3008	T-2	15.0	730915	38.28	134.18	176.45	9.42	0.1121	2.7406	16	0		G
3011	T-2	12.7	730915	38.63	306.08	5.15	8.72	0.1061	3.1654	16	0		G

3012	T-2	16.2	730915	55.46	265.78	15.64	2.35	0.1903	2.1557	16	0 G
3013	T-2	14.3	730915	308.39	255.69	160.92	4.26	0.0775	2.6275	16	0 G
3014	T-2	15.1	730915	352.06	0.71	6.80	17.01	0.1205	3.1285	15	0 G
3015	T-2	15.0	730915	325.63	240.57	159.91	10.37	0.1213	3.1476	10	7 G
3016	T-2	15.8	730915	351.08	217.99	152.37	7.36	0.2027	3.1546	11	9 G
3018	T-2	17.0	730915	349.65	207.66	162.32	7.18	0.1284	2.3718	10	9 G
3020	T-2	14.1	730915	11.07	334.34	5.22	13.93	0.2215	2.8652	16	0 G
3021	T-2	16.8	730915	347.59	230.55	145.39	2.07	0.2088	2.5519	11	9 G
3022	T-2	14.6	730915	328.21	230.55	170.23	11.13	0.1569	3.0834	16	0 G
3023	T-2	16.6	730915	350.52	354.63	16.22	6.76	0.2163	2.3352	16	0 G
3024	T-2	15.6	730915	277.93	81.07	7.41	22.29	0.0827	2.6918	6	5 G
3025	T-2	15.8	730915	344.59	257.62	121.18	2.33	0.1886	2.2921	16	0 G
3026	T-2	16.2	730915	62.11	205.30	66.95	3.39	0.1992	2.3479	16	0 G
3028	T-2	14.6	730915	358.83	278.39	80.12	3.10	0.0867	2.8367	16	0 G
3029	T-2	15.5	730915	24.45	202.04	127.87	0.83	0.0744	2.8042	16	0 G
3031	T-2	15.7	730915	337.92	14.16	13.91	3.01	0.1579	2.6948	16	0 G
3033	T-2	13.9	730915	14.31	265.65	75.18	2.98	0.0715	2.8714	16	0 G
3034	T-2	16.7	730915	304.69	269.46	158.41	6.56	0.1486	2.3820	5	6 B
3035	T-2	15.4	730915	325.61	262.02	144.20	2.77	0.1888	2.3975	16	0 G
3036	T-2	15.1	730915	359.73	352.25	5.68	11.91	0.2342	2.9970	16	0 G
3038	T-2	14.1	730915	168.70	175.76	11.60	14.04	0.0908	3.1384	6	5 G
3039	T-2	16.4	730915	14.85	188.20	148.68	4.75	0.1457	2.5673	11	9 G
3040	T-2	15.9	730915	26.91	154.33	162.72	9.06	0.1974	2.6893	16	0 G
3041	T-2	14.7	730915	338.05	218.53	167.68	15.86	0.1290	3.2172	16	0 G
3042	T-2	15.6	730915	271.88	306.69	144.39	4.05	0.0491	2.2204	16	0 G
3043	T-2	15.8	730915	80.90	247.85	18.70	6.78	0.0880	2.3675	16	0 G
3044	T-2	13.4	730915	292.79	313.51	122.14	2.66	0.0923	3.2709	16	0 G
3045	T-2	15.3	730915	48.34	129.34	172.89	9.97	0.0850	2.9149	16	0 G
3046	T-2	16.1	730915	10.48	168.80	177.67	3.01	0.0608	2.5208	16	0 B
3048	T-2	15.0	730915	60.47	135.79	154.53	2.49	0.0723	2.6428	16	0 G
3049	T-2	17.6	730915	19.79	170.41	155.54	3.11	0.2092	2.2462	15	0 G
3051	T-2	16.2	730915	309.11	276.83	150.87	5.18	0.1916	2.4215	16	0 G
3052	T-2	14.7	730915	308.79	313.12	123.20	3.77	0.2556	3.1212	16	0 G
3053	T-2	15.3	730915	349.21	347.04	28.22	4.37	0.2615	2.5974	16	0 G
3054	T-2	16.5	730915	332.75	16.06	14.65	8.57	0.1086	2.2905	16	0 G
3055	T-2	16.2	730915	315.91	16.89	31.45	3.11	0.0792	2.2430	16	0 G
3056	T-2	18.3	730915	347.15	209.20	172.12	4.92	0.3212	2.3259	16	0 G
3057	T-2	16.1	730915	10.35	175.57	159.04	2.34	0.3407	2.9227	16	0 G
3059	T-2	14.6	730915	332.05	19.07	15.87	6.77	0.1383	3.1767	16	0 G
3061	T-2	14.8	730915	356.86	191.05	170.81	15.86	0.0289	3.0805	16	0 G
3062	T-2	14.2	730915	105.28	153.27	85.56	2.92	0.1365	3.0016	16	0 G
3063	T-2	14.9	730915	286.46	71.46	9.57	14.22	0.0849	2.5976	16	0 G
3068	T-2	15.2	730915	312.32	258.55	156.44	5.34	0.0984	2.8403	16	0 G
3069	T-2	15.3	730915	83.04	110.65	160.34	8.16	0.0343	2.5122	16	0 G
3070	T-2	13.8	730915	232.24	359.96	132.15	3.99	0.0778	2.2578	16	0 G
3071	T-2	14.8	730915	60.78	240.81	47.11	5.28	0.0814	2.5351	16	0 G
3072	T-2	13.6	730915	24.34	246.29	83.44	3.19	0.0724	2.8354	16	0 G
3073	T-2	17.9	730915	1.49	308.80	43.57	2.78	0.3368	2.6036	11	8 G
3075	T-2	16.6	730915	303.27	6.80	69.65	1.72	0.2014	2.4384	11	0 G
3077	T-2	14.8	730915	289.80	269.16	176.26	15.22	0.1430	2.9926	16	0 G
3078	T-2	15.3	730915	51.25	286.92	8.31	11.67	0.1217	2.7001	16	0 G
3079	T-2	16.3	730915	35.95	277.15	23.81	2.45	0.2415	2.5774	16	0 G
3080	T-2	16.8	730915	25.89	311.23	11.12	6.04	0.1548	2.3396	16	0 G
3083	T-2	16.5	730915	315.44	40.93	7.83	6.39	0.0683	2.3250	16	0 B
3084	T-2	15.3	730915	126.08	50.09	174.62	6.89	0.0935	2.2987	16	0 G
3085	T-2	14.8	730915	27.93	151.11	174.12	10.26	0.0943	2.9694	16	0 G
3086	T-2	14.5	730915	7.37	286.34	62.34	4.16	0.0791	2.6356	16	0 G
3087	T-2	17.1	730915	359.48	188.94	167.94	8.65	0.2216	2.2497	16	0 G
3088	T-2	15.9	730915	359.91	292.56	65.11	3.22	0.1171	2.7243	16	0 G

3089	T-2	14.0	730915	159.36	92.84	103.05	2.80	0.1028	3.0912	16	0	G
3090	T-2	16.5	730915	325.79	5.47	40.76	1.84	0.1839	2.3787	16	0	G
3091	T-2	15.0	730915	129.80	41.86	179.11	9.42	0.1112	2.7661	16	0	G
3092	T-2	14.6	730915	284.34	72.10	7.54	12.75	0.0466	2.5747	16	0	G
3093	T-2	15.3	730915	27.31	314.72	9.81	10.30	0.1144	3.0126	15	9	G
3094	T-2	15.7	730915	41.09	259.46	37.12	2.95	0.2177	2.5290	16	0	G
3095	T-2	17.4	730915	26.62	287.95	30.32	3.76	0.1834	2.1475	16	0	G
3096	T-2	15.1	730915	74.59	246.31	24.54	6.71	0.1084	2.3685	16	0	G
3098	T-2	16.9	730915	359.77	333.08	23.79	6.61	0.1614	2.2784	16	0	G
3099	T-2	12.9	730915	273.76	294.91	168.31	9.91	0.1553	3.2033	16	0	G
3100	T-2	15.5	730915	83.25	93.11	161.08	2.93	0.1880	2.4057	16	0	G
3102	T-2	12.9	730915	255.34	111.61	6.78	13.07	0.1367	2.6968	16	0	G
3103	T-2	14.9	730915	28.41	309.72	9.38	12.21	0.1672	3.0918	16	0	G
3104	T-2	15.3	730915	15.08	293.90	46.63	2.31	0.0921	2.8821	16	0	G
3105	T-2	15.8	730915	39.38	175.24	141.62	3.43	0.0321	2.7441	16	0	G
3106	T-2	15.1	730915	318.90	36.77	16.57	13.81	0.1731	2.5870	11	0	G
3107	T-2	13.6	730915	35.15	291.29	26.43	9.61	0.0667	3.0028	16	0	G
3109	T-2	14.8	730915	38.76	141.95	167.22	10.91	0.1311	2.9943	16	0	G
3111	T-2	14.5	730915	209.79	338.28	178.09	14.53	0.1284	2.5438	16	0	G
3112	T-2	15.7	730915	14.18	313.96	20.92	7.76	0.2124	2.5817	16	0	G
3113	T-2	15.3	730915	343.99	347.68	32.90	3.84	0.1712	2.6021	16	0	G
3115	T-2	13.8	730915	321.25	5.55	36.22	2.54	0.0499	2.8659	16	0	G
3116	T-2	16.3	730915	304.54	313.17	116.29	2.11	0.1514	2.3990	16	0	G
3118	T-2	15.9	730915	37.94	143.68	161.10	6.44	0.1771	2.3369	16	0	G
3119	T-2	16.0	730915	57.38	252.81	22.83	10.04	0.2193	2.3034	11	0	G
3120	T-2	14.2	730915	248.26	58.98	69.11	3.91	0.1793	2.9864	5	6	G
3122	T-2	15.0	730915	122.75	204.35	16.99	6.28	0.1818	2.4539	16	0	G
3125	T-2	14.3	730915	269.30	282.17	180.32	27.93	0.1010	3.1664	15	0	B
3127	T-2	15.6	730915	40.72	275.81	28.83	2.88	0.1567	2.7254	16	0	G
3129	T-2	13.8	730915	58.52	107.97	166.14	13.70	0.2296	2.4304	11	0	G
3130	T-2	14.0	730915	220.19	102.69	40.27	7.09	0.0693	2.8521	16	0	G
3131	T-2	15.2	730915	47.40	277.43	16.65	13.30	0.1661	2.5390	16	0	G
3132	T-2	15.3	730915	9.16	292.94	53.94	4.20	0.0962	2.6868	16	0	G
3133	T-2	15.7	730915	22.80	150.01	173.49	15.85	0.2051	2.6435	16	0	G
3135	T-2	16.1	730915	20.31	184.66	143.29	3.43	0.1936	2.7003	16	0	G
3136	T-2	14.9	730915	318.47	261.35	150.98	4.26	0.1348	3.0512	16	0	G
3139	T-2	16.0	730915	333.49	12.75	15.94	7.34	0.0567	2.7864	11	0	G
3141	T-2	16.2	730915	50.71	269.82	19.78	2.68	0.1830	2.4321	16	0	B
3143	T-2	15.1	730915	4.40	320.05	32.96	2.44	0.0859	2.2365	16	0	G
3144	T-2	17.0	730915	358.53	226.53	133.04	2.93	0.1738	2.4000	16	0	G
3146	T-2	16.4	730915	308.30	310.49	105.67	3.71	0.0702	2.3299	16	0	G
3147	T-2	13.8	730915	225.51	36.60	104.56	3.40	0.0960	3.0494	16	0	G
3151	T-2	15.2	730915	280.91	54.24	32.69	3.74	0.0807	2.2410	16	0	G
3152	T-2	16.0	730915	187.04	149.42	23.24	6.28	0.0609	2.2463	16	0	G
3154	T-2	16.3	730915	74.10	225.64	44.08	4.14	0.1282	2.3434	5	6	G
3155	T-2	13.5	730915	255.00	335.40	138.48	6.29	0.0899	3.1822	16	0	G
3156	T-2	12.1	730915	179.25	133.85	47.75	2.47	0.0422	5.1656	10	0	E G
3159	T-2	14.4	730915	344.17	209.48	169.48	11.63	0.1228	2.6188	16	0	G
3160	T-2	14.1	730915	351.60	208.41	161.09	10.83	0.1082	3.1251	16	0	G
3161	T-2	15.5	730915	10.00	267.62	74.92	3.44	0.1906	2.5703	16	0	G
3162	T-2	13.8	730915	342.39	214.95	168.53	13.68	0.1810	2.5613	15	0	G
3163	T-2	13.3	730915	166.87	115.43	74.72	3.54	0.1258	3.1815	16	0	G
3164	T-2	14.8	730915	96.47	171.38	85.33	2.61	0.0473	2.1839	16	0	G
3165	T-2	15.0	730915	55.20	274.29	27.02	7.65	0.0283	3.0719	11	8	G
3167	T-2	16.1	730915	44.13	178.29	105.64	2.30	0.2917	2.3294	16	0	G
3169	T-2	16.1	730915	327.84	24.50	15.49	8.58	0.1399	2.1995	16	0	G
3173	T-2	16.3	730915	295.42	44.48	32.04	6.11	0.1241	2.2889	16	0	G
3174	T-2	17.2	730915	332.89	11.78	32.85	5.90	0.2755	2.5673	11	0	G
3175	T-2	16.2	730915	45.86	267.29	30.21	5.50	0.1563	2.2469	16	0	G

3176	T-2	15.0	730915	223.90	115.20	25.24	4.25	0.0602	2.4261	16	0 G
3177	T-2	15.5	730915	161.23	118.38	78.88	1.39	0.0289	2.2396	16	0 G
3178	T-2	14.1	730915	348.99	342.98	29.50	3.20	0.0616	2.8817	16	0 G
3179	T-2	16.7	730915	350.90	276.09	94.79	1.31	0.1544	2.3343	16	0 G
3180	T-2	13.6	730915	103.41	136.96	114.54	3.32	0.0453	2.9503	16	0 G
3181	T-2	14.2	730915	340.00	285.54	95.20	3.36	0.0337	2.8711	16	0 G
3182	T-2	14.8	730915	104.82	86.23	149.92	6.94	0.1776	2.3293	16	0 G
3187	T-2	14.3	730915	322.08	27.89	16.69	6.98	0.0958	2.4291	16	0 G
3188	T-2	17.0	730915	39.28	151.03	148.93	2.94	0.2154	2.3309	16	0 G
3190	T-2	14.9	730915	96.90	94.31	155.67	9.40	0.1153	2.7785	16	0 G
3191	T-2	16.9	730915	0.75	190.10	165.55	9.62	0.2401	2.3489	11	0 G
3192	T-2	14.3	730915	7.13	311.43	34.13	7.63	0.2513	3.0626	16	0 G
3193	T-2	13.9	730915	321.29	251.95	150.00	9.05	0.0512	3.0825	11	0 G
3195	T-2	18.2	730915	16.38	260.54	54.50	2.78	0.4072	2.4062	16	0 G
3196	T-2	16.7	730915	27.13	289.79	30.61	2.87	0.1754	2.3976	16	0 G
3197	T-2	14.7	730915	253.68	98.10	13.84	9.30	0.0458	3.0273	16	0 G
3198	T-2	13.6	730915	273.31	67.72	34.74	5.56	0.1363	3.1045	16	0 G
3199	T-2	14.2	730915	141.55	175.66	36.49	5.69	0.1035	3.1601	15	0 G
3200	T-2	14.9	730915	10.66	237.19	109.33	3.41	0.0942	2.9231	16	0 G
3201	T-2	13.6	730915	33.04	188.93	130.19	4.19	0.1023	2.7628	16	0 G
3202	T-2	14.6	730915	41.51	220.52	90.51	4.11	0.0801	2.7719	16	0 G
3203	T-2	15.7	730915	14.19	313.09	25.92	7.11	0.1397	2.2841	16	0 G
3204	T-2	14.6	730915	340.68	6.02	21.40	6.36	0.1744	3.0833	16	0 G
3205	T-2	16.5	730915	1.48	211.74	144.33	3.29	0.2164	2.5996	16	0 G
3207	T-2	15.3	730915	206.30	119.55	37.63	7.17	0.0982	2.2480	16	0 G
3209	T-2	13.1	730915	67.07	140.81	138.01	5.92	0.1264	3.1499	16	0 G
3210	T-2	13.8	730915	354.65	194.65	170.97	12.34	0.0231	2.5609	16	0 G
3211	T-2	13.5	730915	139.00	140.21	73.93	2.62	0.1179	3.2115	16	0 G
3212	T-2	15.5	730915	338.50	220.95	167.23	6.47	0.1500	2.4654	16	0 G
3214	T-2	15.7	730915	13.80	301.78	32.11	6.10	0.2567	2.6118	16	0 G
3216	T-2	14.2	730915	139.57	115.46	100.01	2.42	0.0903	3.1414	16	0 G
3217	T-2	15.8	730915	347.81	206.53	171.64	7.12	0.1862	3.0661	16	0 G
3220	T-2	16.5	730915	21.21	184.31	147.67	2.30	0.1278	2.3982	16	0 G
3221	T-2	14.5	730915	46.60	176.44	120.59	1.88	0.1776	3.1234	16	0 G
3222	T-2	15.8	730915	6.68	319.18	30.62	3.32	0.1441	2.3192	16	0 G
3224	T-2	15.1	730915	301.53	351.62	79.68	2.84	0.1198	2.8955	16	0 G
3225	T-2	16.5	730915	20.53	278.95	53.14	4.27	0.1201	2.2816	15	0 G
3226	T-2	17.2	730915	7.44	279.19	66.76	3.46	0.2120	2.4061	16	0 G
3227	T-2	15.0	730915	358.86	314.10	46.08	6.77	0.0533	2.6831	16	0 G
3228	T-2	15.9	730915	192.02	114.74	55.75	2.69	0.1000	2.2513	16	0 G
3229	T-2	16.0	730915	347.34	316.71	60.97	2.06	0.1977	2.4072	16	0 G
3230	T-2	14.3	730915	321.55	300.23	103.60	3.57	0.0630	3.3114	16	0 G
3232	T-2	15.3	730915	82.28	136.93	123.87	4.53	0.1407	2.2691	16	0 G
3233	T-2	11.7	730915	287.32	310.80	133.14	6.43	0.0990	3.1413	16	0 G
3234	T-2	15.8	730915	345.40	312.75	67.57	3.66	0.2088	2.3928	16	0 G
3235	T-2	14.8	730915	72.36	230.54	46.26	6.19	0.0965	3.0833	16	0 G
3237	T-2	14.5	730915	270.90	87.98	22.04	9.49	0.1790	3.1496	16	0 G
3238	T-2	14.8	730915	3.82	178.96	177.27	20.10	0.1124	3.1917	16	0 G
3239	T-2	16.2	730915	38.05	82.67	181.11	25.12	0.5152	2.6911	16	0 G
3240	T-2	14.6	730915	7.03	245.99	106.16	1.82	0.0954	2.9973	16	0 G
3243	T-2	16.8	730915	285.57	332.01	103.76	1.51	0.0137	2.1439	16	0 G
3244	T-2	15.3	730915	309.45	273.63	143.66	3.90	0.0662	2.7864	16	0 G
3245	T-2	15.2	730915	7.51	330.81	19.21	10.69	0.1333	3.0686	16	0 G
3246	T-2	16.3	730915	19.85	212.70	115.47	4.01	0.1945	2.3005	11	9 G
3247	T-2	16.9	730915	18.78	300.99	27.99	8.15	0.2026	2.2894	10	0 G
3248	T-2	14.5	730915	2.73	341.69	13.32	17.08	0.2087	3.1123	16	0 G
3249	T-2	16.2	730915	338.26	347.45	39.28	4.43	0.1098	2.6001	16	0 G
3250	T-2	15.6	730915	41.13	285.84	21.09	6.95	0.1411	2.7266	16	0 G
3255	T-2	15.3	730915	65.55	134.93	152.50	3.85	0.0744	2.8156	16	0 G

3256	T-2	15.8	730915	55.52	250.19	43.18	2.81	0.1097	2.3707	16	0	G
3257	T-2	17.4	730915	331.29	1.40	39.92	3.01	0.1962	2.3948	11	0	G
3258	T-2	13.9	730915	211.13	139.42	14.19	15.83	0.0661	3.2350	16	0	G
3259	T-2	15.6	730915	358.03	304.44	58.26	3.73	0.1916	3.1053	16	0	G
3260	T-2	14.5	730915	291.75	331.62	100.65	4.37	0.0381	2.7183	16	0	G
3262	T-2	14.1	730915	39.21	251.65	43.09	3.41	0.2647	2.3132	16	0	G
3266	T-2	14.6	730915	355.88	265.58	98.08	4.04	0.1167	2.3251	9	8	G
3267	T-2	16.2	730915	190.31	50.57	119.06	4.35	0.0228	2.1868	6	8	G
3269	T-2	14.6	730915	347.12	214.95	165.51	8.31	0.2348	2.7625	16	0	G
3270	T-2	14.8	730915	237.58	61.73	72.62	3.32	0.1281	2.3888	16	0	G
3275	T-2	17.7	730915	357.88	264.48	97.23	1.76	0.2252	2.3598	16	0	G
3276	T-2	14.4	730915	129.16	97.90	126.59	5.77	0.0796	2.6143	6	8	G
3277	T-2	15.7	730915	26.75	289.67	31.76	5.86	0.1668	2.2821	16	0	G
3278	T-2	15.7	730915	38.30	176.33	126.61	3.02	0.2075	2.4164	16	0	G
3279	T-2	14.9	730915	10.94	331.17	15.98	11.20	0.1112	3.1067	16	0	G
3281	T-2	15.3	730915	18.13	172.19	160.42	4.43	0.1813	2.2679	16	0	G
3282	T-2	15.4	730915	56.11	262.26	34.42	5.49	0.0741	2.4570	16	0	G
3283	T-2	15.8	730915	359.68	199.44	160.23	8.94	0.1909	2.6484	5	6	G
3284	T-2	15.6	730915	293.49	318.48	132.95	5.07	0.2202	2.4065	6	8	G
3285	T-2	14.4	730915	348.08	320.79	56.52	3.62	0.2317	2.3349	6	8	G
3286	T-2	16.1	730915	330.82	242.77	154.37	6.48	0.1333	2.3453	16	0	G
3288	T-2	13.7	730915	127.10	156.26	66.82	2.11	0.1531	3.1359	16	0	G
3290	T-2	13.0	730915	223.07	108.27	31.72	6.13	0.0179	3.1948	16	0	G
3291	T-2	17.8	730915	2.55	186.00	167.24	8.88	0.2528	2.3087	16	0	G
3292	T-2	15.9	730915	357.32	297.50	65.37	4.35	0.1104	2.5611	6	8	G
3293	T-2	12.1	730915	235.24	29.05	101.97	4.54	0.0686	2.4030	6	8	G
3294	T-2	11.6	730915	82.40	168.96	85.60	4.78	0.2123	3.2185	6	8	E B
3295	T-2	14.9	730915	15.17	179.67	159.74	6.73	0.1404	2.4381	16	0	G
3296	T-2	16.3	730915	18.43	318.89	14.53	12.45	0.1769	2.6652	15	0	G
3297	T-2	14.0	730915	136.35	173.96	40.01	4.45	0.1633	2.3922	16	0	G
3299	T-2	16.9	730915	341.23	246.63	137.14	3.13	0.1350	2.2091	16	0	G
3300	T-2	15.5	730915	90.18	219.64	38.36	7.47	0.1021	2.3442	6	8	G
3301	T-2	17.7	730915	19.65	164.78	164.27	3.91	0.2110	2.3786	11	0	G
3303	T-2	15.9	730915	43.64	255.63	44.03	3.04	0.1824	2.4339	16	0	G
3304	T-2	15.0	730915	339.21	334.46	52.66	3.02	0.1074	2.9476	16	0	G
3305	T-2	15.4	730915	95.78	201.38	48.56	3.21	0.1407	2.3962	16	0	G
3306	T-2	16.0	730915	311.68	22.57	37.10	4.45	0.1249	2.1673	16	0	G
3310	T-2	15.7	730915	340.22	278.37	106.71	2.31	0.1185	2.3535	16	0	G
3311	T-2	17.3	730915	355.38	242.33	123.63	2.47	0.2364	2.3233	16	0	G
3313	T-2	15.5	730915	25.16	157.66	161.00	9.34	0.2003	2.6053	6	6	G
3317	T-2	15.9	730915	356.18	317.88	43.67	1.95	0.1717	2.5987	5	5	G
3318	T-2	16.0	730915	332.09	343.83	57.97	1.10	0.2389	2.9869	6	7	G
3319	T-2	17.0	730915	8.53	173.80	169.21	2.55	0.1908	2.1977	6	9	E B
3320	T-2	15.2	730915	62.79	162.74	119.62	3.34	0.1040	2.5923	6	7	G
3322	T-2	16.0	730915	22.91	162.71	168.02	11.67	0.0628	2.5524	6	7	E G
3324	T-2	15.7	730915	3.05	344.30	8.12	7.60	0.1740	2.9792	6	7	G
3326	T-2	14.5	730915	46.99	237.28	51.73	4.24	0.2028	2.8971	6	7	G
3327	T-2	13.1	730915	308.05	338.93	80.76	3.37	0.1136	3.1669	6	7	G
3328	T-2	13.7	730915	13.06	175.74	164.31	7.28	0.1144	2.5568	6	7	E G
3329	T-2	14.2	730915	101.39	246.46	1.12	25.87	0.0809	3.1164	6	6	E G
3330	T-2	16.7	730915	34.61	144.29	162.16	3.08	0.1904	2.2728	6	7	B
3331	T-2	16.3	730915	2.25	351.08	3.14	9.17	0.0944	2.4578	6	7	G
3332	T-2	17.2	730915	335.36	12.48	20.10	2.94	0.2004	2.1917	6	7	G
3333	T-2	15.8	730915	356.97	228.91	131.82	2.55	0.1253	2.8309	6	7	G
3334	T-2	14.6	730915	201.00	354.06	166.52	4.30	0.1137	2.2479	6	7	E G
3335	T-2	15.6	730915	321.03	343.89	65.13	3.64	0.1689	2.5966	5	5	G
3336	T-2	15.4	730915	337.36	233.57	157.07	4.98	0.2127	2.3701	6	7	G
3337	T-2	15.0	730915	63.87	127.57	162.30	7.23	0.0266	2.2226	6	7	G
3338	T-2	16.0	730915	303.85	257.68	163.43	8.25	0.0414	2.5195	16	0	G

3340	T-2	15.9	730915	56.56	107.97	160.56	9.09	0.2797	2.4832	6	7		G
3342	T-2	16.6	730915	326.32	13.30	27.75	2.62	0.1492	2.2301	6	7		G
3343	T-2	14.1	730915	347.95	251.79	120.77	0.92	0.1006	3.1246	6	9	E	G
3346	T-2	17.3	730915	20.07	172.79	153.88	1.34	0.1888	2.2204	6	9		G
3347	T-2	15.4	730915	178.75	89.06	88.70	3.24	0.1639	2.3079	6	6		B
3348	T-2	13.7	730915	197.02	147.93	16.86	11.31	0.1802	2.7216	6	7		G
3351	T-2	14.2	730915	223.63	82.39	65.49	2.96	0.2183	2.3877	6	7		G
3352	T-2	16.1	730915	10.66	334.70	5.80	13.38	0.1907	2.6506	6	7		G
3353	T-2	13.8	730915	24.49	293.35	26.46	5.13	0.2051	3.1474	16	0		G
3354	T-2	15.3	730915	107.38	106.34	124.87	4.42	0.1811	2.3552	6	7		G
3355	T-2	15.0	730915	327.53	242.70	159.26	9.34	0.1717	2.7258	10	9		G
3356	T-2	14.8	730915	297.81	81.61	13.66	4.66	0.3072	2.6161	15	0		B
3357	T-2	16.0	730915	306.55	13.27	48.96	0.87	0.1195	2.1077	6	9		G
3358	T-2	16.3	730915	3.29	335.63	18.43	1.27	0.0900	2.8098	5	5	E	G
3359	T-2	16.8	730915	12.01	302.68	34.79	3.89	0.1894	2.4251	6	7		G
3360	T-2	13.3	730915	358.69	291.86	66.27	3.92	0.1580	3.9150	6	6	E	G
3361	T-2	14.4	730915	83.94	175.65	85.28	2.45	0.1041	2.8816	6	7		G
3363	T-2	16.9	730915	350.33	357.29	15.40	0.70	0.2295	2.7676	5	6		G
3364	T-2	15.9	730915	48.73	284.72	7.56	9.48	0.1619	2.6018	6	7		G
3365	T-2	13.3	730915	292.97	27.64	49.79	2.55	0.1167	3.1596	6	7		G
3366	T-2	15.0	730915	154.58	63.99	130.61	4.27	0.2014	2.4987	6	6		G
3367	T-2	15.5	730915	9.77	196.93	146.33	5.79	0.1514	3.1010	15	0		G
3369	T-2	14.3	730915	129.31	42.08	167.82	10.46	0.2613	2.7573	6	7		G
3370	T-2	16.1	730915	314.98	31.40	27.13	4.18	0.1773	2.5574	6	7		G
3371	T-2	15.0	730915	74.35	186.67	78.84	3.67	0.1459	2.4832	6	7		G
3372	T-2	15.0	730915	279.72	316.47	141.49	6.05	0.1770	2.6543	10	9		G
3418	T-2	16.0	730915	65.84	246.42	29.94	4.34	0.1608	2.5573	16	0		G
3420	T-2	16.1	730915	314.04	49.29	14.25	12.96	0.1880	2.7696	16	0		G
3473	T-2	17.1	730915	356.41	329.17	33.24	4.24	0.2360	2.6085	6	6		G
3699	T-2	12.2	730915	235.02	100.23	25.63	9.18	0.0002	5.1989	6	7	E	G
3704	T-2	16.1	730915	29.65	179.25	141.99	2.03	0.0958	2.3370	6	7		G
3919	T-2	15.9	730915	289.68	301.23	150.29	4.97	0.1902	2.3829	16	0		B
4019	T-2	16.4	730915	0.67	248.60	110.75	1.94	0.1222	2.5626	10	0		G
4028	T-2	15.7	730915	242.27	51.97	77.78	3.36	0.1205	2.3434	16	0		G
4036	T-2	15.9	730915	283.39	69.52	28.76	6.22	0.1807	2.5445	11	8		G
4039	T-2	16.3	730915	254.00	330.52	152.80	2.59	0.1501	2.4135	16	0		G
4041	T-2	15.8	730915	0.13	332.98	28.10	2.29	0.0986	2.6241	16	0		B
4047	T-2	13.6	730915	244.48	119.73	11.29	16.11	0.1412	2.7203	16	0		B
4048	T-2	15.4	730915	325.03	10.67	35.40	4.03	0.1249	3.1276	15	0		G
4053	T-2	12.8	730915	293.98	291.69	139.13	2.79	0.0255	2.8889	16	0		B
4059	T-2	15.2	730915	21.39	168.46	163.05	9.38	0.1520	2.7477	11	0		G
4060	T-2	15.7	730915	272.78	302.71	151.38	2.50	0.0400	2.7496	16	0		G
4062	T-2	14.6	730915	223.58	326.19	180.41	12.63	0.1003	2.7149	16	0		G
4063	T-2	16.1	730915	354.63	353.01	14.13	7.49	0.1392	2.2967	16	0		G
4064	T-2	14.7	730915	239.69	307.98	176.22	8.23	0.0241	2.2857	16	0		G
4066	T-2	17.4	730915	19.26	235.33	97.58	1.54	0.1557	2.1647	16	0		G
4068	T-2	15.5	730915	300.20	16.86	51.81	3.61	0.0717	2.7144	16	0		G
4069	T-2	13.7	730915	334.80	243.08	155.31	6.00	0.2099	2.6251	16	0		G
4071	T-2	14.8	730915	41.38	247.76	68.83	3.64	0.0444	2.8501	16	0		G
4072	T-2	16.8	730915	28.46	283.70	33.95	4.68	0.1887	2.1860	16	0		G
4073	T-2	15.1	730915	340.21	4.34	21.05	9.85	0.0891	3.1896	16	0		G
4074	T-2	17.5	730915	353.51	317.00	54.39	2.28	0.2911	2.6650	16	0		G
4075	T-2	16.8	730915	354.63	189.82	178.62	8.95	0.1721	2.5726	16	0		G
4076	T-2	15.0	730915	169.71	160.13	30.59	2.78	0.1185	2.4103	16	0		G
4077	T-2	16.6	730915	313.11	50.56	12.24	8.38	0.1526	2.5540	16	0		G
4079	T-2	15.2	730915	23.96	311.78	15.64	5.12	0.1699	2.6052	16	0		G
4080	T-2	16.8	730915	358.22	342.57	20.07	7.28	0.2083	2.5849	16	0		G
4081	T-2	15.5	730915	30.17	283.61	31.63	6.37	0.2006	2.5677	16	0		G
4082	T-2	16.8	730915	22.57	294.46	30.46	1.72	0.2241	2.5406	6	7		B

4087	T-2	15.2	730915	44.86	181.84	114.34	1.87	0.2161	3.0216	16	0	G
4089	T-2	16.4	730915	345.38	247.17	135.37	3.62	0.2138	2.5368	16	0	G
4090	T-2	15.1	730915	90.20	151.84	101.68	3.78	0.1559	2.4650	15	0	G
4091	T-2	14.7	730915	31.69	204.70	109.02	3.44	0.1989	2.6434	16	0	G
4092	T-2	14.9	730915	355.62	347.49	20.43	8.88	0.2883	2.9107	16	0	G
4093	T-2	15.8	730915	279.67	47.61	49.36	2.21	0.1268	2.5236	16	0	G
4094	T-2	14.7	730915	347.91	243.61	135.01	1.82	0.1488	3.0642	16	0	G
4095	T-2	14.3	730915	60.55	108.63	178.31	15.14	0.1435	3.0780	16	0	G
4096	T-2	14.2	730915	4.15	186.29	170.34	10.04	0.1270	3.0562	16	0	G
4097	T-2	15.8	730915	333.81	17.20	16.61	13.24	0.1173	2.6245	16	0	G
4098	T-2	16.6	730915	330.19	280.82	122.50	3.09	0.2000	2.2341	16	0	G
4101	T-2	13.4	730915	74.50	184.72	87.51	1.84	0.1439	3.1666	16	0	G
4102	T-2	14.5	730915	154.67	183.63	15.35	10.03	0.2549	2.4285	6	6	E G
4105	T-2	15.7	730915	336.04	232.21	174.17	5.59	0.3044	3.0509	16	0	G
4106	T-2	15.1	730915	18.49	252.56	87.70	2.57	0.0879	3.0366	16	0	G
4107	T-2	15.6	730915	60.00	166.77	127.94	2.95	0.0692	2.5959	6	6	G
4108	T-2	16.2	730915	289.56	299.99	141.57	4.70	0.0926	2.2645	16	0	G
4109	T-2	16.0	730915	317.87	255.22	158.73	7.77	0.1273	2.4667	11	9	G
4110	T-2	14.8	730915	340.66	224.15	165.50	9.33	0.2128	2.4370	10	9	G
4112	T-2	14.7	730915	343.14	233.71	150.14	5.80	0.1251	3.1605	16	0	G
4113	T-2	15.6	730915	355.85	283.23	83.59	1.69	0.1381	2.6049	16	0	G
4114	T-2	14.1	730915	76.67	101.17	176.52	9.80	0.0802	3.1026	16	0	G
4117	T-2	13.0	730915	50.77	166.74	130.53	2.18	0.1504	3.1258	16	0	G
4119	T-2	18.2	730915	16.48	272.61	52.03	3.20	0.3279	2.4013	16	0	G
4120	T-2	16.6	730915	335.76	258.19	134.37	3.94	0.1518	2.2591	15	0	G
4121	T-2	16.7	730915	349.18	324.77	56.38	3.77	0.2990	3.1015	10	9	G
4122	T-2	13.6	730915	246.79	38.57	82.66	2.89	0.0532	2.7666	16	0	G
4123	T-2	17.1	730915	15.10	170.97	170.02	7.58	0.1350	2.4186	16	0	G
4124	T-2	15.2	730915	325.63	249.64	151.58	2.86	0.0534	3.0391	15	0	G
4125	T-2	14.1	730915	4.94	183.76	173.51	12.67	0.0815	3.2164	16	0	G
4126	T-2	15.7	730915	272.31	15.93	88.69	2.73	0.1322	2.4209	16	0	G
4127	T-2	15.7	730915	301.65	267.37	162.06	8.35	0.0957	2.3598	16	0	G
4128	T-2	16.2	730915	7.41	221.55	127.13	3.70	0.1920	2.4366	16	0	G
4129	T-2	14.6	730915	122.68	197.58	29.12	5.28	0.1511	2.3008	16	0	G
4131	T-2	13.7	730915	169.63	139.41	51.67	3.25	0.2194	3.0676	16	0	G
4132	T-2	15.7	730915	56.49	124.53	179.12	6.20	0.0340	2.7979	16	0	G
4134	T-2	17.3	730915	20.39	294.63	35.38	1.99	0.1978	2.3571	15	0	G
4135	T-2	14.1	730915	28.75	302.43	28.39	8.68	0.0395	2.7286	16	0	G
4137	T-2	14.9	730915	309.33	267.06	152.33	6.33	0.0662	2.8898	16	0	G
4139	T-2	17.6	730915	359.28	272.13	88.27	2.00	0.2249	2.3180	16	0	G
4141	T-2	15.0	730915	54.53	269.64	22.10	5.57	0.1543	2.5647	16	0	G
4142	T-2	15.5	730915	354.67	187.76	182.02	14.25	0.2789	2.5584	16	0	G
4143	T-2	17.1	730915	301.74	304.20	124.27	0.98	0.0802	2.2862	10	0	B
4149	T-2	16.3	730915	5.59	293.71	57.82	2.69	0.1646	2.1543	16	0	G
4151	T-2	16.7	730915	66.42	250.37	31.16	7.38	0.1191	2.3313	16	0	G
4153	T-2	15.0	730915	34.85	269.30	53.85	2.77	0.0702	2.8657	16	0	G
4155	T-2	15.6	730915	217.64	129.64	20.40	5.90	0.0792	2.2188	16	0	G
4156	T-2	15.5	730915	49.91	231.40	68.33	1.48	0.1334	2.6074	16	0	G
4159	T-2	14.2	730915	247.78	64.37	67.01	1.85	0.1506	3.1344	16	0	G
4163	T-2	15.3	730915	26.90	161.97	166.35	11.19	0.1255	3.0801	16	0	G
4164	T-2	15.5	730915	276.12	48.11	55.48	3.22	0.1525	2.3953	16	0	G
4165	T-2	15.0	730915	321.80	237.79	170.56	4.75	0.0951	2.6140	16	0	G
4167	T-2	15.7	730915	42.41	279.82	16.59	11.32	0.2399	2.7024	16	0	G
4168	T-2	10.9	730915	330.95	27.94	11.24	34.57	0.1024	5.1629	16	0	G
4169	T-2	15.3	730915	347.82	305.10	73.55	3.38	0.2038	2.4601	16	0	G
4170	T-2	13.8	730915	271.90	315.61	150.52	6.79	0.1442	2.2805	10	9	G
4172	T-2	14.1	730915	180.52	75.98	106.56	4.14	0.1449	2.4639	16	0	G
4173	T-2	16.2	730915	87.53	103.52	159.12	6.47	0.1038	2.2695	16	0	G
4174	T-2	15.1	730915	55.99	167.56	136.47	3.02	0.0355	2.9076	15	0	G

4175	T-2	16.4	730915	24.87	310.26	14.04	8.82	0.1884	2.2559	16	0	G
4180	T-2	14.9	730915	355.76	263.44	103.37	1.81	0.2353	2.3807	16	0	G
4181	T-2	14.8	730915	78.95	257.87	22.25	11.23	0.0378	3.0962	16	0	G
4182	T-2	17.5	730915	342.57	18.57	14.04	13.14	0.2906	2.6579	15	0	G
4184	T-2	15.6	730915	329.30	337.24	66.57	1.90	0.1658	2.3870	16	0	G
4185	T-2	15.9	730915	5.19	172.58	180.04	17.02	0.2266	2.5672	16	0	G
4188	T-2	15.1	730915	273.79	328.29	124.55	3.15	0.0289	2.7333	16	0	G
4192	T-2	15.6	730915	283.59	306.47	157.34	3.69	0.2061	2.6883	11	0	G
4194	T-2	14.9	730915	84.07	119.28	146.30	3.83	0.1231	2.7932	16	0	G
4195	T-2	14.7	730915	37.39	188.99	130.86	3.46	0.0761	2.7278	16	0	G
4196	T-2	13.1	730915	55.36	225.68	75.80	3.23	0.0648	2.8371	16	0	G
4197	T-2	16.0	730915	328.40	344.70	57.87	3.10	0.1420	2.2746	16	0	G
4199	T-2	15.7	730915	318.33	324.56	91.63	3.42	0.1463	2.5393	16	0	G
4200	T-2	16.8	730915	17.47	225.27	108.95	3.09	0.1974	2.4026	16	0	G
4201	T-2	14.5	730915	116.89	208.37	33.97	6.48	0.0451	2.9284	15	0	G
4203	T-2	15.8	730915	166.30	178.55	16.44	8.48	0.1176	2.4173	10	0	G
4205	T-2	17.5	730915	22.13	305.45	19.36	5.32	0.2318	2.2755	16	0	G
4206	T-2	14.5	730915	340.64	7.97	20.51	9.58	0.1325	3.0527	16	0	G
4207	T-2	15.9	730915	1.32	187.03	173.86	9.35	0.1263	2.6495	16	0	G
4209	T-2	13.9	730915	133.49	179.08	42.25	5.96	0.1256	3.0722	15	0	G
4210	T-2	13.7	730915	181.34	37.35	145.63	5.10	0.1254	2.6619	16	0	G
4212	T-2	15.2	730915	283.01	43.51	49.70	5.31	0.1262	2.3072	16	0	G
4213	T-2	16.7	730915	334.16	272.38	125.65	1.88	0.1742	2.3875	16	0	G
4215	T-2	15.9	730915	313.35	350.59	70.79	2.34	0.1289	2.5621	16	0	G
4216	T-2	12.3	730915	39.69	142.16	169.72	9.54	0.1574	3.9167	16	0	G
4218	T-2	14.5	730915	82.21	249.07	22.87	15.30	0.0759	3.0351	16	0	G
4219	T-2	17.0	730915	326.42	261.39	152.90	5.66	0.2356	2.5520	15	7	G
4220	T-2	15.2	730915	67.04	106.34	171.89	13.09	0.1638	2.8059	16	0	G
4221	T-2	13.3	730915	286.74	342.68	111.01	2.09	0.1390	3.1000	16	0	G
4223	T-2	15.4	730915	177.58	14.64	171.37	11.25	0.1236	2.4285	11	0	G
4224	T-2	17.5	730915	12.18	198.34	144.88	4.26	0.1705	2.2857	15	0	G
4225	T-2	15.3	730915	239.98	91.49	38.63	6.39	0.0800	2.3053	16	0	G
4226	T-2	16.9	730915	43.77	187.00	114.91	3.76	0.1698	2.3357	11	0	G
4227	T-2	13.9	730915	264.84	51.94	60.08	6.01	0.1184	3.1779	15	0	G
4228	T-2	14.9	730915	98.03	226.19	35.84	5.69	0.0336	2.7663	16	0	G
4229	T-2	16.9	730915	63.90	252.95	24.65	6.37	0.1843	2.1930	11	0	G
4230	T-2	14.6	730915	25.83	241.51	90.98	3.41	0.0909	2.9220	16	0	G
4231	T-2	15.1	730915	6.47	323.04	29.52	7.41	0.1333	2.3447	16	0	G
4232	T-2	15.2	730915	334.32	328.19	69.27	3.99	0.1747	2.4505	16	0	G
4233	T-2	16.0	730915	337.05	247.34	145.99	3.99	0.1506	2.5818	16	0	G
4234	T-2	12.8	730915	52.03	267.64	30.17	5.08	0.1463	3.1980	16	0	G
4238	T-2	14.5	730915	121.19	209.26	21.10	11.27	0.1424	2.6804	16	0	G
4239	T-2	14.0	730915	98.88	211.88	38.67	4.45	0.1250	2.2549	16	0	G
4240	T-2	15.1	730915	330.43	318.82	84.94	3.48	0.1883	2.3873	16	0	G
4241	T-2	15.0	730915	28.38	241.31	78.75	4.04	0.2011	2.8409	16	0	G
4243	T-2	15.7	730915	333.27	356.43	38.72	5.54	0.0928	2.7194	16	0	G
4248	T-2	16.8	730915	42.29	262.95	42.01	3.51	0.1645	2.2998	16	0	G
4249	T-2	15.8	730915	20.72	314.68	20.17	8.72	0.1285	2.2766	15	0	G
4250	T-2	14.2	730915	182.90	5.90	176.75	14.08	0.1181	2.5405	16	0	G
4251	T-2	16.8	730915	339.39	14.37	25.56	9.40	0.3048	2.7611	16	0	G
4253	T-2	16.1	730915	11.94	189.31	151.74	6.04	0.2252	2.3604	11	0	G
4254	T-2	14.2	730915	19.10	261.73	67.82	3.38	0.2340	2.4027	16	0	G
4255	T-2	15.2	730915	24.46	162.67	168.02	11.98	0.1538	3.1664	16	0	G
4256	T-2	15.0	730915	26.66	302.87	28.48	10.21	0.0963	3.0756	16	0	G
4257	T-2	14.4	730915	53.22	235.52	70.57	3.17	0.0519	2.8895	16	0	G
4258	T-2	15.3	730915	94.99	138.11	122.10	2.88	0.0778	2.5385	16	0	G
4259	T-2	16.8	730915	27.23	203.73	113.10	1.67	0.2441	2.3351	16	0	G
4261	T-2	14.9	730915	310.86	8.07	49.80	4.85	0.0578	2.6711	16	0	G
4262	T-2	16.3	730915	103.21	167.17	77.56	3.52	0.1411	2.1670	11	9	G

4263	T-2	16.2	730915	315.85	322.93	101.60	3.24	0.1971	2.3535	16	0		G
4264	T-2	15.2	730915	84.34	240.40	24.86	13.86	0.1168	2.6902	15	0		G
4265	T-2	12.3	730915	20.62	308.76	28.12	10.98	0.1202	3.0048	16	0		G
4266	T-2	16.7	730915	340.16	217.02	172.92	11.66	0.1795	2.3143	11	0		G
4269	T-2	15.2	730915	26.94	154.84	176.78	9.73	0.1109	3.1825	15	0		G
4270	T-2	15.1	730915	123.36	178.18	51.26	2.83	0.1378	2.4460	16	0		G
4271	T-2	14.1	730915	42.69	294.20	19.56	11.10	0.0977	3.1275	16	0		G
4272	T-2	15.2	730915	255.50	1.61	118.54	2.58	0.1160	2.1985	15	0		G
4273	T-2	14.3	730915	165.28	180.33	17.66	17.76	0.0630	3.1635	6	8	E	G
4275	T-2	16.4	730915	35.90	154.34	157.92	6.89	0.1694	2.2962	16	0		G
4276	T-2	17.7	730915	8.06	199.93	147.84	4.56	0.2184	2.3461	11	0		G
4278	T-2	15.6	730915	288.01	284.03	171.83	12.78	0.1741	2.5933	16	0		G
4279	T-2	16.9	730915	347.09	255.89	125.12	3.16	0.2016	2.4409	16	0		G
4280	T-2	14.4	730915	125.36	201.37	29.04	9.82	0.1056	3.0348	11	8		G
4281	T-2	14.7	730915	74.82	254.26	18.19	11.36	0.1540	2.8645	15	0		G
4282	T-2	17.0	730915	352.14	351.85	21.44	7.20	0.1583	2.4687	6	7		G
4283	T-2	13.6	730915	258.74	11.75	110.98	2.49	0.1450	3.2058	16	0		G
4284	T-2	14.4	730915	145.10	66.09	144.18	3.69	0.1965	2.8259	6	8	E	G
4285	T-2	14.7	730915	345.42	9.85	14.00	29.76	0.1732	3.3455	6	8		G
4286	T-2	14.5	730915	207.03	127.86	32.59	10.32	0.0617	3.0657	15	0		G
4287	T-2	16.5	730915	359.31	209.08	152.78	5.57	0.1998	2.3470	16	0		G
4289	T-2	14.9	730915	54.52	209.48	93.41	3.80	0.0641	2.6474	15	0		G
4292	T-2	15.6	730915	15.19	209.35	137.24	2.87	0.0722	2.6801	15	0		G
4293	T-2	13.7	730915	3.52	267.50	92.25	3.29	0.0874	2.8585	16	0		G
4294	T-2	15.1	730915	308.50	324.28	104.15	2.75	0.1470	2.2377	6	8		G
4296	T-2	15.7	730915	63.83	128.10	145.93	4.11	0.2261	2.3904	6	8		G
4297	T-2	13.1	730915	317.15	338.12	77.35	3.38	0.0849	3.4383	10	0		G
4301	T-2	14.4	730915	355.71	342.21	28.23	6.47	0.1489	3.1826	6	8		G
4302	T-2	15.6	730915	295.20	27.26	61.21	2.86	0.1766	2.5168	6	8		G
4304	T-2	15.4	730915	62.46	189.86	89.36	3.56	0.1882	2.2765	6	8		G
4305	T-2	14.8	730915	93.51	202.65	50.44	5.17	0.1497	2.2401	6	8		G
4306	T-2	14.3	730915	28.07	301.42	18.69	8.91	0.2013	2.3230	6	0		G
4310	T-2	14.0	730915	213.19	9.85	154.01	5.34	0.2278	2.4024	6	6		G
4311	T-2	15.3	730915	128.19	81.39	142.71	3.95	0.1550	2.2721	6	8		G
4312	T-2	13.4	730915	313.31	265.51	154.47	5.75	0.0848	3.3338	6	8		G
4314	T-2	14.4	730915	312.91	330.00	95.43	3.77	0.1625	2.4713	6	8		G
4315	T-2	14.3	730915	313.45	288.94	135.95	5.34	0.1641	2.4737	6	8		G
4317	T-2	16.1	730915	11.95	199.94	141.77	3.18	0.2337	2.4131	6	8		G
4318	T-2	15.5	730915	222.09	4.54	144.54	4.02	0.0952	2.3126	6	6		G
4319	T-2	16.1	730915	9.16	294.18	51.85	3.37	0.2398	2.4693	6	8		G
4320	T-2	15.8	730915	28.56	289.31	28.53	8.29	0.2294	2.7232	6	8		G
4323	T-2	15.0	730915	293.36	275.81	166.25	5.50	0.1083	2.2200	6	8		G
4326	T-2	17.5	730915	20.66	294.39	20.37	5.68	0.3581	2.2028	6	0	E	G
4327	T-2	15.5	730915	359.67	343.58	20.00	10.06	0.1492	2.5656	6	8		G
4328	T-2	15.6	730915	241.83	82.79	51.27	3.95	0.1233	2.2648	6	8		G
4331	T-2	11.9	730915	164.67	18.89	180.88	31.94	0.1145	3.2240	6	8	E	G
4362	T-2	14.8	730915	263.47	77.73	34.69	4.95	0.0920	3.1771	15	0		G
4427	T-2	17.6	730915	4.37	297.64	55.30	2.92	0.1627	2.3283	15	0		B
4466	T-2	13.6	730915	189.15	101.56	73.10	2.29	0.0216	3.9567	5	6	E	G
4473	T-2	17.9	730915	338.84	344.17	46.51	2.22	0.1945	2.2399	5	6		G
4474	T-2	15.4	730915	335.40	256.69	142.15	1.94	0.2020	3.1573	11	0		G
4492	T-2	17.0	730915	10.81	320.46	24.06	5.17	0.1608	2.2436	15	0		G
4500	T-2	15.6	730915	46.73	261.19	49.95	2.78	0.0532	2.8635	16	0		G
4524	T-2	14.9	730915	302.76	333.65	99.53	2.10	0.1238	3.1321	11	0		G
4536	T-2	11.9	730915	271.68	293.59	174.17	15.63	0.1265	5.1250	16	0		G
4564	T-2	17.7	730915	7.09	306.65	43.00	2.13	0.1984	2.3560	15	0		G
4570	T-2	15.3	730915	333.61	8.47	29.88	4.40	0.1409	3.2585	11	0		G
4581	T-2	16.1	731005	356.65	350.61	21.56	9.20	0.1284	2.8739	5	6		N
4596	T-2	16.7	730915	340.23	345.57	44.40	3.29	0.1754	2.5701	15	9		G

4613	T-2	11.7	730915	248.55	303.58	175.56	28.81	0.0139	5.1822	15	0	G
4616	T-2	15.2	730915	31.11	161.20	171.55	10.24	0.0075	3.0092	15	0	G
4621	T-2	17.1	730915	29.48	299.38	24.22	8.35	0.1301	2.3570	16	0	G
4633	T-2	14.9	730915	86.99	159.80	111.49	4.02	0.0461	2.8144	15	0	G
4634	T-2	16.3	730915	62.20	134.93	154.53	7.14	0.1008	2.4051	16	0	G
4646	T-2	13.0	730915	292.98	39.83	50.66	8.12	0.1641	5.3319	9	8	G
4648	T-2	15.9	730915	341.12	225.09	162.77	5.11	0.1357	2.6719	16	0	G
4649	T-2	16.2	730915	275.33	86.65	14.49	11.83	0.1078	2.5829	10	8	G
4729	T-2	16.8	730915	327.31	334.79	75.15	4.11	0.1972	2.5236	6	8	G
4733	T-2	15.6	730915	1.24	199.04	163.30	8.35	0.0900	2.6378	6	8	G
4742	T-2	12.0	730915	348.82	216.94	163.65	7.23	0.0639	5.2313	6	8	E G
4744	T-2	16.5	730915	7.54	299.90	51.79	4.15	0.1701	2.4958	5	6	G
4748	T-2	15.5	730915	38.76	285.02	30.13	11.57	0.1149	2.6396	5	6	G
4749	T-2	16.8	730915	21.97	289.74	36.46	8.32	0.2338	2.5791	5	6	G
4753	T-2	14.9	730915	6.25	207.89	144.64	3.31	0.1865	2.3083	5	6	G
4810	T-2	15.2	730915	344.87	217.75	159.16	7.27	0.0282	2.8001	6	7	E G
4817	T-2	15.3	730915	184.31	150.19	27.17	8.13	0.1536	2.2870	6	7	E G
4830	T-2	14.9	730915	246.51	24.61	104.66	4.30	0.1436	2.7113	5	5	G
4832	T-2	14.2	730915	324.17	328.13	74.31	4.83	0.0645	2.6353	6	7	G
4834	T-2	15.2	730915	101.74	143.63	105.79	4.71	0.1054	2.3228	6	7	G
5001	T-2	14.3	730915	240.96	210.97	280.05	10.26	0.0913	2.9159	5	5	G
5002	T-2	15.7	730915	357.02	152.83	211.95	19.52	0.1440	3.0165	5	6	G
5003	T-2	16.5	730915	343.29	129.66	258.19	5.50	0.2604	2.4719	5	6	G
5005	T-2	15.0	730915	345.56	92.16	287.91	8.18	0.1071	3.0966	5	6	G
5006	T-2	13.3	730915	329.93	88.50	310.57	9.18	0.1058	3.0933	6	7	G
5008	T-2	16.4	730915	44.00	25.40	286.49	5.73	0.0520	2.2062	5	6	G
5009	T-2	16.4	730915	355.41	36.28	331.73	12.99	0.1907	2.5963	5	6	G
5010	T-2	13.0	730915	94.15	299.26	322.58	14.12	0.0730	3.2566	6	7	E G
5011	T-2	15.6	730915	333.15	186.55	213.79	13.00	0.2067	2.5799	5	6	G
5013	T-2	14.5	730915	238.60	289.82	219.49	13.35	0.3308	2.7759	5	6	G
5015	T-2	15.8	730915	47.85	34.60	274.27	5.73	0.0437	2.3038	5	6	G
5019	T-2	16.7	730915	14.14	1.41	338.81	15.44	0.1900	2.5163	5	6	G
5021	T-2	16.1	730915	325.05	141.77	281.22	8.02	0.2925	3.0397	5	6	G
5022	T-2	16.3	730915	28.91	79.44	233.08	8.51	0.2456	2.3486	5	6	G
5026	T-2	14.6	730915	12.87	4.50	336.21	16.55	0.2542	3.2455	6	7	G
5027	T-2	13.8	730915	194.47	306.98	222.42	11.64	0.0823	2.6153	6	7	G
5030	T-2	11.6	730915	289.22	162.16	289.54	11.00	0.1381	5.1612	10	0	G
5034	T-2	15.5	730915	32.45	48.21	260.55	7.73	0.2459	2.5514	11	0	G
5036	T-2	13.9	730915	292.68	169.85	262.55	8.45	0.0238	2.6315	11	0	G
5038	T-2	16.4	730915	352.06	80.32	290.95	5.52	0.1590	2.4018	10	0	G
5039	T-2	13.6	730915	179.87	214.38	329.71	12.85	0.0906	3.0774	10	0	G
5040	T-2	15.3	730915	88.76	265.88	345.31	18.26	0.2062	2.5916	5	6	G
5042	T-2	14.2	730915	37.84	81.02	228.73	11.00	0.1684	2.7249	11	0	G
5043	T-2	15.4	730915	16.78	4.87	327.85	11.52	0.2532	2.6183	11	0	G
5046	T-2	14.8	730915	353.20	55.62	316.92	11.59	0.1491	2.7792	10	0	G
5049	T-2	15.1	730915	149.06	287.75	280.82	8.22	0.1002	2.3085	10	0	G
5050	T-2	16.5	730915	346.64	165.64	216.50	12.59	0.2345	2.5968	15	0	G
5051	T-2	15.5	730915	341.38	66.21	328.37	11.25	0.2784	2.5920	11	0	G
5052	T-2	16.0	730915	55.36	333.43	306.16	8.59	0.2521	2.7018	10	0	G
5053	T-2	14.2	730915	92.06	334.22	278.95	7.76	0.1589	2.5551	10	0	G
5054	T-2	14.9	730915	9.73	82.89	268.06	7.36	0.0687	2.5214	11	0	G
5055	T-2	17.8	730915	338.71	102.33	298.19	6.52	0.2985	2.7494	9	8	G
5056	T-2	15.0	730915	282.34	128.14	334.19	13.19	0.1888	2.4397	10	0	G
5057	T-2	17.5	730915	19.36	52.01	281.82	5.96	0.1586	2.2749	9	8	G
5058	T-2	13.6	730915	151.99	295.36	270.47	7.13	0.1156	2.7860	14	0	G
5059	T-2	12.1	730915	59.93	59.62	213.40	16.49	0.2611	3.1010	16	0	G
5060	T-2	16.1	730915	11.50	54.29	291.25	5.55	0.1346	2.3233	14	0	G
5061	T-2	14.9	730915	18.01	26.53	303.46	6.09	0.2378	2.2052	15	0	G
5062	T-2	16.1	730915	12.17	73.40	266.05	6.76	0.2580	2.5228	16	0	G

5063	T-2	15.3	730915	320.76	177.56	232.39	7.02	0.1229	2.2808	11	0 G
5064	T-2	14.5	730915	20.99	6.24	329.83	13.18	0.1404	3.0759	15	0 G
5066	T-2	13.3	730915	306.24	200.74	228.79	12.35	0.1308	2.6295	16	0 G
5067	T-2	14.1	730915	71.52	324.60	317.79	13.09	0.1038	3.1907	15	0 G
5068	T-2	14.2	730915	78.25	293.78	325.20	11.24	0.2309	2.6396	14	0 G
5069	T-2	13.9	730915	335.02	161.57	238.53	7.22	0.2176	2.7709	16	0 G
5070	T-2	13.0	730915	56.30	30.66	260.20	6.94	0.1522	3.1674	15	0 G
5071	T-2	15.9	730915	341.10	73.48	312.36	6.33	0.1347	2.3587	14	0 G
5072	T-2	14.4	730915	64.21	311.36	335.37	14.68	0.1210	2.7399	15	0 G
5073	T-2		730915	180.23	335.43	207.01	17.53	0.1230	2.6472	5	6 G
5074	T-2	16.2	730915	328.81	145.91	268.36	7.95	0.2591	2.7266	15	0 G
5076	T-2	15.4	730915	346.71	163.88	215.19	15.05	0.1282	2.5917	15	0 G
5077	T-2	16.6	730915	16.56	44.38	296.20	5.51	0.1135	2.4226	9	8 G
5078	T-2	14.8	730915	331.69	106.14	294.97	8.84	0.1432	2.7668	15	0 G
5080	T-2	15.5	730915	50.79	29.08	267.44	5.72	0.1438	2.2822	16	0 G
5081	T-2	15.0	730915	161.27	348.84	210.86	14.27	0.0448	2.6382	9	8 G
5082	T-2	14.5	730915	26.79	106.48	220.94	13.43	0.1445	3.1872	15	0 G
5083	T-2	15.6	730915	342.10	48.43	337.52	13.42	0.1199	2.6850	15	0 G
5085	T-2	16.5	730915	311.41	184.05	242.85	7.98	0.1638	2.5183	15	0 G
5086	T-2	16.9	730915	4.81	51.20	304.17	6.30	0.1191	2.3341	14	0 G
5087	T-2	12.9	730915	328.47	158.08	242.43	10.15	0.0759	3.1117	16	0 G
5088	T-2	15.0	730915	75.02	297.82	334.80	15.01	0.1509	2.6938	15	0 G
5089	T-2	15.7	730915	63.98	56.82	225.10	8.57	0.1426	2.2692	6	8 G
5091	T-2	16.4	730915	11.42	69.71	276.85	5.89	0.1362	2.3872	15	0 G
5092	T-2	16.8	730915	296.12	131.44	307.38	7.34	0.1138	2.2952	15	0 G
5093	T-2	14.9	730915	312.33	216.53	203.45	21.69	0.1128	2.6031	15	0 G
5096	T-2	15.7	730915	351.59	35.52	340.51	16.06	0.2117	2.5515	16	0 G
5097	T-2	13.9	730915	268.17	246.35	227.71	12.01	0.1642	2.7703	15	0 G
5099	T-2	15.5	730915	286.08	170.16	282.67	7.14	0.1340	2.5723	15	0 G
5100	T-2	14.7	730915	40.94	3.20	313.33	9.62	0.0893	3.0749	15	0 G
5102	T-2	17.8	730915	10.48	132.15	206.28	11.94	0.3105	2.4699	10	0 G
5104	T-2	14.9	730915	303.31	169.31	252.82	7.64	0.0133	2.9530	15	0 G
5105	T-2	13.9	730915	179.74	252.16	293.28	7.73	0.1927	2.7501	15	0 G
5107	T-2	13.7	730915	76.51	281.97	342.50	14.80	0.2083	3.1739	6	7 G
5112	T-2	13.3	730915	248.65	232.42	260.19	9.67	0.1586	3.1720	15	0 G
5113	T-2	16.7	730915	347.37	143.43	240.03	8.80	0.2496	2.7372	10	8 G
5114	T-2	15.6	730915	289.79	197.10	240.71	10.55	0.0324	2.6342	15	0 G
5117	T-2	14.9	730915	45.70	32.23	266.26	5.40	0.1909	2.6481	11	0 G
5118	T-2	13.2	730915	81.03	64.62	205.27	18.03	0.1099	3.2009	6	7 G
5119	T-2	15.5	730915	42.41	354.54	313.25	6.64	0.1375	2.3271	16	0 G
5120	T-2	15.7	730915	355.49	28.37	340.66	13.82	0.1036	2.5442	15	0 G
5124	T-2	14.1	730915	155.49	327.93	236.85	11.80	0.1161	2.6846	15	0 G
5125	T-2	13.3	730915	62.89	340.28	296.29	9.43	0.2323	3.0762	16	0 G
5128	T-2	14.6	730915	45.02	72.27	225.95	8.24	0.1996	2.5994	11	0 G
5132	T-2	15.6	730915	296.06	245.23	217.18	12.64	0.3029	2.7115	15	0 G
5133	T-2	15.1	730915	345.23	61.55	319.47	9.00	0.0579	2.7405	15	0 G
5134	T-2	16.1	730915	26.50	12.01	317.62	8.30	0.1280	2.6687	15	0 G
5135	T-2	15.9	730915	284.40	214.68	233.42	7.51	0.0879	2.2488	15	0 G
5137	T-2	15.0	730915	149.44	356.10	213.35	13.91	0.0923	2.5411	15	0 G
5139	T-2	15.1	730915	39.19	347.22	326.98	8.70	0.1326	3.0181	10	0 G
5140	T-2	12.1	730915	57.24	17.89	279.85	9.09	0.1056	3.0070	16	0 G
5141	T-2	12.7	730915	41.62	13.90	301.42	9.54	0.1073	3.0190	16	0 G
5142	T-2	14.2	730915	135.71	262.71	314.28	11.34	0.2169	2.5940	15	0 G
5143	T-2	17.0	730915	13.70	33.75	307.43	7.35	0.2022	2.3121	15	0 G
5146	T-2	11.9	730915	320.29	113.41	301.07	10.79	0.0798	5.2651	15	0 G
5148	T-2	15.0	730915	9.48	37.34	308.79	6.35	0.2202	2.2960	16	0 G
5149	T-2	13.4	730915	344.68	143.01	239.60	9.37	0.0746	3.0584	16	0 G
5151	T-2	11.8	730915	348.17	68.84	313.44	9.77	0.1080	5.3543	15	0 G
5153	T-2	16.2	730915	331.41	148.03	249.88	5.32	0.1153	2.3377	10	0 G

5155	T-2	14.8	730915	228.26	238.40	267.18	5.10	0.1336	2.2786	5	6	G
5157	T-2	14.8	730915	109.22	355.49	253.53	9.25	0.0750	3.0779	15	0	G
5158	T-2	14.8	730915	118.41	16.13	227.55	12.31	0.0329	2.9836	15	0	G
5159	T-2	11.1	730915	34.97	7.26	321.96	10.34	0.0506	5.2558	15	0	G
5160	T-2	14.6	730915	17.27	85.84	252.08	5.71	0.1817	2.7781	15	0	G
5161	T-2	14.1	730915	316.39	85.27	337.75	12.17	0.1638	2.6687	15	0	G
5162	T-2	12.6	730915	47.97	352.62	316.01	8.65	0.0977	3.0709	15	0	G
5163	T-2	13.8	730915	206.34	231.74	296.58	10.07	0.1628	3.0131	15	0	G
5164	T-2	13.9	730915	330.50	134.88	268.12	9.05	0.1185	3.0942	11	0	G
5165	T-2	15.0	730915	55.46	18.09	276.97	8.91	0.1516	3.1011	15	0	G
5166	T-2	14.9	730915	45.54	346.71	321.94	9.65	0.1251	3.0120	15	0	G
5167	T-2	11.2	730915	326.01	92.50	311.00	10.69	0.0114	5.0980	15	0	G
5168	T-2	14.1	730915	16.51	115.16	228.47	9.58	0.1105	2.9637	15	0	G
5174	T-2	15.7	730915	18.24	356.67	342.47	15.62	0.1647	2.6469	11	0	G
5175	T-2	14.4	730915	22.96	6.65	320.22	8.87	0.2326	2.6676	11	0	G
5177	T-2	15.2	730915	18.76	101.32	239.47	8.79	0.1245	3.0139	11	0	G
5178	T-2	14.0	730915	293.70	191.70	246.14	8.65	0.0534	3.0145	11	0	G
5179	T-2	14.7	730915	278.02	224.43	230.00	9.74	0.0629	2.9680	11	0	G
5184	T-2	14.5	730915	330.00	173.25	228.41	8.95	0.1061	3.0816	11	0	G
5185	T-2	13.8	730915	131.91	265.45	323.18	8.27	0.0633	2.7419	11	0	G
5187	T-2	11.6	730915	339.40	148.10	240.42	8.48	0.0132	5.1601	6	8	E G
5189	T-2	15.6	730915	354.53	126.27	245.69	7.27	0.1284	3.0845	11	8	G
5192	T-2	16.6	730915	271.77	112.02	348.89	18.86	0.0778	1.9223	11	0	G
5197	T-2	15.0	730915	22.57	55.92	281.47	8.64	0.1232	3.0467	10	0	G
5200	T-2	13.3	730915	145.35	278.15	301.40	7.66	0.0259	2.9971	11	0	G
5205	T-2	14.7	730915	218.33	215.39	293.99	5.81	0.0426	2.3587	10	0	G
5206	T-2	13.9	730915	17.21	357.24	345.90	16.17	0.1477	3.2140	10	0	G
5207	T-2	15.5	730915	0.28	50.95	311.86	5.50	0.1266	2.4468	10	0	G
5209	T-2	14.5	730915	54.17	59.06	241.01	8.66	0.1008	3.2011	15	0	G
5211	T-2	13.0	730915	307.78	208.07	228.48	9.23	0.2099	2.9002	11	0	G
5213	T-2	16.5	730915	20.25	46.18	283.41	5.97	0.2117	2.2131	15	0	G
5214	T-2	12.8	730915	309.65	145.29	277.49	9.99	0.0478	5.1585	15	0	G
5215	T-2	14.8	730915	39.88	56.94	257.16	7.90	0.1208	3.0877	15	0	G
5319	T-2	14.4	730915	280.95	223.82	235.79	12.58	0.1520	2.5652	5	6	G
5332	T-2	14.5	730915	284.02	208.65	239.20	9.89	0.0756	2.9895	6	6	G
5340	T-2	14.9	730915	337.90	129.98	260.26	8.55	0.0947	3.0399	15	0	G
5347	T-2	16.9	730915	344.51	148.52	238.44	8.64	0.2400	2.6346	6	8	G
5366	T-2	13.6	730915	117.45	343.55	258.03	7.57	0.0536	3.0251	15	9	G
5380	T-2	15.4	730915	345.21	108.26	273.30	9.48	0.0441	2.9585	6	6	G
5396	T-2	14.7	730915	357.39	146.24	219.99	14.01	0.1857	2.6089	6	8	G
5397	T-2	12.8	730915	332.79	138.80	260.61	9.97	0.0919	5.1451	15	0	G
5408	T-2	16.7	730915	18.62	108.41	227.99	12.42	0.1784	2.6597	6	7	G
5412	T-2	15.4	730915	4.85	84.17	275.10	8.98	0.1160	2.9801	6	6	G
5415	T-2	16.0	730915	310.34	129.97	294.29	5.78	0.1236	2.2046	15	0	G
5429	T-2	14.2	730915	2.45	142.88	218.31	17.30	0.1437	3.1265	6	8	G
5447	T-2	14.6	730915	51.42	332.63	314.47	8.44	0.2444	2.3584	6	8	G
5449	T-2	15.8	730915	8.34	101.70	251.29	7.47	0.1586	2.9349	6	8	G
5458	T-2	15.5	730915	110.45	300.68	304.90	6.15	0.0845	2.2789	6	8	G
5459	T-2	15.2	730915	128.06	322.74	264.96	6.30	0.1129	2.2826	6	8	G
5463	T-2	14.6	730915	322.62	82.15	347.64	19.99	0.2787	3.0283	6	8	G
5464	T-2	15.2	730915	317.51	141.65	277.90	7.88	0.1298	2.7623	6	8	G
5465	T-2	13.9	730915	336.14	161.35	232.71	11.14	0.0978	2.6619	6	8	G
5468	T-2	12.3	730915	354.16	49.23	324.80	9.77	0.1415	3.1463	6	8	G
5469	T-2	14.0	730915	265.32	213.97	252.22	6.89	0.0597	2.3209	6	8	G
5473	T-2	13.9	730915	281.13	248.16	222.52	12.13	0.2209	3.3509	6	8	E G
5474	T-2	13.9	730915	348.67	148.62	231.44	9.03	0.1253	3.1337	6	8	E G
5475	T-2	15.9	730915	344.26	46.41	343.94	13.77	0.2419	2.6756	6	8	G
5476	T-2	14.7	730915	47.15	5.21	294.63	7.02	0.1860	2.5904	6	8	G
5478	T-2	16.4	730915	353.71	139.58	233.71	10.08	0.1683	2.6830	6	8	G

5479 T-2 16.0 730915 65.19 87.87 204.03 23.94 0.0481 1.9152 5 6 G
5480 T-2 13.8 730915 241.45 273.66 224.74 14.81 0.1450 2.6411 6 8 G
5481 T-2 15.9 730915 197.65 324.47 204.56 23.60 0.0917 2.0054 6 8 G
5482 T-2 14.6 730915 28.42 6.26 314.88 6.91 0.2003 2.2954 6 8 G
5483 T-2 14.5 730915 1.40 28.93 334.76 10.53 0.1720 2.9994 6 8 G
5485 T-2 13.9 730915 311.63 123.66 297.64 5.56 0.0919 2.3671 6 8 G
5489 T-2 13.7 730915 32.84 77.82 244.84 5.90 0.1154 2.2785 5 6 G
5490 T-2 15.4 730915 31.92 78.07 244.62 6.68 0.1343 2.3816 5 6 G
5491 T-2 13.9 730915 97.66 298.37 328.33 11.91 0.0354 3.0776 5 6 G
5493 T-2 10.2 730915 8.31 39.42 321.49 12.95 0.0776 5.1809 5 6 E G
1973 RF = 1973 UQ (B. G. Marsden, MPC 9064)
1973 SQ3 = 1973 SJ6 (S. Nakano)
1987 SK10 = 1987 QN9 (D. W. E. Green)
1989 BC1 = 1989 AC3 (F. N. Bowman)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(404) Arsinoe Obs. 106 M 248.28686 Peri. 121.08275
H 9.05 G 0.19 Opp. 28 n 0.23575902 Node 92.09049
rms res. 1".0 (M-N) 1895-1986 e 0.2004456 Incl. 14.12473

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(444) Gyptis Obs. 457 M 77.54536 Peri. 154.75893
H 7.85 G 0.23 Opp. 54 n 0.21339013 Node 195.44626
rms res. 1".1 (M-N) 1899-1983 e 0.1738175 Incl. 10.25921

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(488) Kreusa Obs. 150 M 276.93537 Peri. 69.68959
H 7.83 G 0.15 Opp. 43 n 0.17654673 Node 84.55328
rms res. 1".0 (M-N) 1901-1983 e 0.1784473 Incl. 11.51136

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(521) Brixia Obs. 164 M 341.13636 Peri. 315.58405
H 8.51 G 0.15 Opp. 35 n 0.21708530 Node 89.49776
rms res. 1".0 (M-N) 1904-1983 e 0.2794075 Incl. 10.57245

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(559) Nanon Obs. 112 M 283.78954 Peri. 130.89358
H 9.44 G 0.15 Opp. 27 n 0.22086660 Node 111.67084
rms res. 0".9 (M-N) 1905-1989 e 0.0665547 Incl. 9.30926

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(584) Semiramis Obs. 141 M 45.33398 Peri. 84.71160
H 8.74 G 0.34 Opp. 36 n 0.26939586 Node 281.83995
rms res. 0".9 (M-N) 1906-1984 e 0.2341590 Incl. 10.71071

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(679) Pax Obs. 90 M 231.97045 Peri. 265.74561
H 9.01 G 0.15 Opp. 26 n 0.23690216 Node 112.16260
rms res. 1".0 (M-N) 1909-1986 e 0.3114105 Incl. 24.39011

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(690) Wratislavia Obs. 145 M 116.01545 Peri. 117.31180
H 7.66 G 0.15 Opp. 37 n 0.17717284 Node 252.75653
rms res. 0".9 (M-N) 1902-1987 e 0.1858298 Incl. 11.28159

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(712) Boliviana Obs. 129 M 41.80999 Peri. 180.85638
H 8.35 G 0.06 Opp. 32 n 0.23862615 Node 230.51884
rms res. 0".9 (M-N) 1911-1988 e 0.1898734 Incl. 12.80890

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(762) Pulcova Obs. 70 M 77.41757 Peri. 181.95163
H 8.58 G 0.50 Opp. 26 n 0.17508852 Node 305.59091
rms res. 1".0 (M-N) 1913-1983 e 0.0918355 Incl. 13.01316

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(895) Helio Obs. 63 M 350.19122 Peri. 182.06346
H 8.60 G 0.25 Opp. 21 n 0.17198731 Node 264.19868
rms res. 1".1 (M-N) 1918-1988 e 0.1495160 Incl. 26.07477

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Goffin
(1151) Ithaka Obs. 22 M 38.39501 Peri. 122.40187
H 13.70 G 0.25 Opp. 8 n 0.26393330 Node 225.06707
rms res. 1".3 (M-N) 1929-1987 e 0.2753169 Incl. 6.56514

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(1352) Wawel Obs. 96 M 21.24688 Peri. 213.78114
H 11.25 G 0.15 Opp. 16 n 0.21277494 Node 185.92111
rms res. 1".34 (M-P) 1935-1988 e 0.0657818 Incl. 3.75076

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2272) 1972 FA Obs. 14 M 27.69956 Peri. 277.98502
H 14.04 G 0.25 Opp. 4 n 0.38644496 Node 174.99133
rms res. 1".00 (M-P) 1972-1980 e 0.0902206 Incl. 24.33417

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2274) Ehrsson Obs. 53 M 215.35432 Peri. 187.20474
H 12.70 G 0.25 Opp. 8 n 0.26394485 Node 348.02462
rms res. 1".04 (M-P) 1976-1988 e 0.2320866 Incl. 2.24941

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2469) Tadjikistan Obs. 38 M 138.93277 Peri. 136.97297
H 12.1 G 0.25 Opp. 5 n 0.17851706 Node 151.99234
rms res. 1".38 (M-P) 1949-1982 e 0.1229853 Incl. 9.61870

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2736) Ops Obs. 40 M 334.41504 Peri. 63.95466
H 12.98 G 0.25 Opp. 5 n 0.28427775 Node 255.10966
rms res. 0".87 (M-P) 1979-1988 e 0.0851153 Incl. 7.45963

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2765) 1981 EY Obs. 30 M 218.67856 Peri. 142.66990
H 11.7 G 0.25 Opp. 4 n 0.17658182 Node 347.78195
rms res. 0".73 (M-P) 1978-1987 e 0.0544044 Incl. 14.02428

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(2986) Mrinalini Obs. 29 M 42.82030 Peri. 301.23620
H 12.04 G 0.15 Opp. 6 n 0.17335411 Node 51.73700
rms res. 0".98 (M-P) 1960-1988 e 0.1399850 Incl. 2.55002

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(3012) Minsk Obs. 31 M 196.18325 Peri. 78.61701
H 11.1 G 0.25 Opp. 6 n 0.17003778 Node 355.00288
rms res. 1".27 (M-P) 1950-1985 e 0.0599117 Incl. 18.29385

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(3122) 1981 ET3 Obs. 40 M 37.49185 Peri. 27.48704
H 14.3 G 0.25 Opp. 4 n 0.41899441 Node 335.57424
rms res. 1".02 (M-P) 1981-1988 e 0.4223887 Incl. 22.18115

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(3148) Grechko Obs. 25 M 281.48195 Peri. 43.00597
H 12.6 G 0.25 Opp. 8 n 0.17924974 Node 0.99629
rms res. 0".83 (M-P) 1964-1985 e 0.1780500 Incl. 0.74412

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(3284) 1953 NB Obs. 27 M 298.60182 Peri. 258.91596
H 12.84 G 0.15 Opp. 4 n 0.21442961 Node 73.41653
rms res. 1".31 (M-P) 1953-1987 e 0.3875182 Incl. 6.66539

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
(3655) Eupraksia Obs. 30 M 125.15941 Peri. 42.79890
H 11.0 G 0.25 Opp. 6 n 0.12358988 Node 337.87010
rms res. 0".82 (M-P) 1978-1989 e 0.2089317 Incl. 3.84534

(4133)* 1942 DB = 1985 QY
Discovered 1942 Feb. 17 by L. Oterma at Turku.
Id. B. G. Marsden (MPC 10157)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M 116.18135	(1950.0)	P	Q	
n 0.23747316	Peri. 246.20947	-0.85025067	+0.51193685	
a 2.5826151	Node 324.23508	-0.37347367	-0.75064854	
e 0.1171612	Incl. 12.09378	-0.37093291	-0.41766904	
P 4.15	H 11.9	G 0.25		

Residuals in seconds of arc

420217 062	0.2-	1.0+	850909 046	1.3+	0.4+	861201 801	0.4+	2.0-
420217 062	2.7+	0.1-	850910 046	0.4-	0.1-	861228 801	0.4-	0.2-
420219 062	1.0-	1.4+	850910 046	0.8+	0.3+	870226 801	0.0	2.1+
420313 062	0.6-	0.9-	850911 046	1.5-	0.9-	880323 474	1.2+	0.1+
850822 046	(6.1+	0.8+)	850911 046	1.6-	0.4-	880323 474	0.7-	0.1-
850822 046	(5.9+	2.1+)	850913 046	0.8+	0.5+	880415 474	0.1-	0.0
850909 046	0.8-	2.1+	850913 046	(2.4-	1.1-)	880415 474	0.2-	0.1+

(4134)* 1961 CR = 1961 EG = 1979 HK5
Discovered 1961 Feb. 15 by F. Borngen at Tautenburg.
Id. T. Kobayashi (MPC 13151)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Schmadel

M 3.78044	(1950.0)	P	Q	
n 0.28230053	Peri. 77.84504	-0.84129121	+0.53808916	
a 2.3014149	Node 134.68152	-0.51998562	-0.77927823	
e 0.0974418	Incl. 4.18245	-0.14779736	-0.32122499	
P 3.49	H 14.0	G 0.25		

Residuals in seconds of arc

610215 033	0.5+	0.1+	890112 033	0.5+	0.9+	890205 399	0.9-	1.0-
610215 033	0.6-	0.9+	890202 033	0.3+	0.4+	890210 033	0.4+	0.7+
610217 033	2.6-	1.7+	890204 033	0.9+	0.3+	890210 033	0.4+	0.6+
610217 033	3.2+	1.2-	890204 399	0.0	0.6-	890211 399	0.8+	1.0-
610309 033	0.9-	0.9+	890204 399	0.5-	0.9-	890211 399	1.5-	0.9-
790425 095	0.6+	0.6-	890204 399	2.6+	0.5-	890211 399	1.1-	2.6-
790428 095	1.1-	0.3+	890204 399	1.6-	2.5-	890307 033	0.1-	0.6+
790430 095	0.2+	0.5+	890205 399	1.9-	1.7+	890310 033	0.5+	0.5+
890110 033	0.3+	0.9+	890205 399	0.9-	0.6+	890310 033	1.1+	0.7+
890111 033	0.3+	0.3+						

(4135)* 1966 PG = 1929 UK = 1985 VM = 1987 DO4

Discovered 1966 Aug. 14 by L. I. Chernykh and T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. S. Nakano (MPC 11852; unpublished)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano

M	321.49408	(1950.0)	P	Q
n	0.21138798	Peri. 174.76667	+0.96764142	-0.24799257
a	2.7909316	Node 199.78186	+0.22621462	+0.93437161
e	0.2295250	Incl. 7.91096	+0.11179013	+0.25583078
P	4.66	H 12.1	G 0.25	

Residuals in seconds of arc

291002	690	1.4+	1.2-	851109	095	0.4+	0.8+	870224	010	1.3+	0.2-
291026	690	0.5+	0.8-	851111	095	0.4+	0.4-	890603	801	0.7-	0.8+
291027	690	0.9-	1.0-	851114	054	1.0+	0.8-	890604	801	0.5+	1.4+
291103	690	1.5+	1.0-	851115	054	0.2-	0.4+	890630	801	0.3-	2.1+
660814	095	(8.0-	1.4+)	851115	054	0.0	0.9+	890701	675	0.2+	2.8-
660913	095	4.9-	1.4+	851120	095	1.1-	2.4+	890701	675	1.8+	2.6-
660914	095	0.6-	1.1+	870223	010	0.9-	0.9-	890703	675	1.4+	0.0
851022	095	0.4+	1.7-	870224	010	2.2-	1.1+	890703	675	1.1+	0.9-

(4136)* 1968 FJ = 1950 HW = 1975 EW3 = 1986 GE

Discovered 1968 Mar. 28 by T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. E. Bowell (MPC 10612), T. Urata (ibid.), C. M. Bardwell (ibid.)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M	334.38777	(1950.0)	P	Q
n	0.27295710	Peri. 56.20315	-0.85751263	+0.51389094
a	2.3536386	Node 154.69463	-0.48876121	-0.79905305
e	0.1340848	Incl. 3.25264	-0.16057573	-0.31213831
P	3.61	H 13.4	G 0.25	

Residuals in seconds of arc

500420	760	0.1+	0.6-	860305	688	0.6+	1.1-	860404	054	0.5-	1.2+
500420	760	2.6-	1.8-	860401	046	0.2+	1.1-	860405	054	0.5-	1.1+
680328	095	(1.7-	5.1-)	860402	046	1.6+	2.1-	860409	688	0.0	0.5-
680329	095	1.3+	0.7+	860402	054	0.1+	2.3+	860409	688	0.6-	1.2-
680424	095	2.3+	1.4-	860402	054	0.9-	2.5+	860409	046	(5.0-	2.7-)
680430	095	(3.5-	5.6+)	860403	054	0.3-	2.4+	860410	054	(0.4-	3.7+)
750315	095	0.4-	0.0	860403	413	0.6-	0.4+	890106	801	0.5+	1.3-
860305	688	0.3+	0.1-	860403	413	0.1-	1.0-	890209	801	0.3-	0.2+

(4137)* 1970 WC = 1972 GK1 = 1977 RO6 = 1986 AV1

Discovered 1970 Nov. 24 by L. Kohoutek at Bergedorf.

Id. S. Nakano (MPC 10630), K. Hurukawa (MPC 12450)

Epoch 1989 Oct. 1.O ET = JDE 2447800.5 Hurukawa

M	278.69180	(1950.0)	P	Q
n	0.27103378	Peri. 209.17066	-0.92951425	+0.36868312
a	2.3647602	Node 352.44818	-0.32416970	-0.82810322
e	0.0167774	Incl. 3.80377	-0.17583304	-0.42227693
P	3.64	H 13.3	G 0.25	

Residuals in seconds of arc

701124	029	0.3-	0.8+	720409	805	0.4-	0.0	860112	688	0.9-	0.3-
701124	029	0.5+	0.4-	720410	805	0.7-	0.6+	860112	688	2.1+	0.1-
701221	029	0.1+	0.3+	720410	805	1.0-	0.0	881010	400	2.9-	2.5-
701221	029	0.1-	0.2-	770911	095	1.1+	1.4+	881010	400	1.0-	2.5-
701221	029	0.3-	0.2+	770918	095	0.6+	0.6+	881010	400	2.8+	0.8+
701221	029	0.5-	0.4+	830311	381	0.2+	1.2-	881112	801	0.6-	0.4+
720409	805	0.5+	0.9+	830311	381	0.6+	1.1-				

(4138)* 1973 SM = 1986 VU6

Discovered 1973 Sept. 19 by C. J. van Houten and I. van Houten-Groeneveld on Palomar Schmidt plates taken by T. Gehrels.

Id. K. Hurukawa (MPC 12451)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Hurukawa

M	123.90658	(1950.0)	P	Q
n	0.08409448	Peri. 166.32803	+0.97186733	-0.23492855
a	5.1596994	Node 207.27704	+0.21248774	+0.90533882
e	0.0414271	Incl. 2.10166	+0.10160147	+0.35379400
P	11.72	H 9.8	G 0.25	

Residuals in seconds of arc

730919	675	0.1-	0.0	861130	381	0.5-	0.5+	880123	801	0.7-	0.7+
730920	675	0.8-	0.3-	861201	381	2.2+	1.4+	881208	801	(1.4+	4.0+)
730924	675	0.2-	0.5+	861201	381	1.2-	0.7+	881217	888	0.6+	0.2-
730925	675	0.4-	0.6+	871123	675	0.6+	2.0-	881217	888	0.7+	0.4+
730929	675	0.2+	0.3-	871124	675	0.4-	0.3-	890103	888	0.3+	0.6-
730930	675	0.5+	1.2-	871218	801	0.0	0.3+	890103	888	1.0-	0.5-
731004	675	0.2+	0.1-	871223	688	0.4+	1.5+	890106	801	1.0-	0.0
731005	675	0.9+	0.1-	871223	688	0.1+	1.7-	890128	888	0.8+	0.8-
861106	688	2.0+	0.5-	880112	033	0.4+	0.9+	890128	888	0.8-	0.2-
861106	688	1.8-	0.5+	880112	033	0.6-	0.3+	890129	888	0.2+	0.5+
861130	381	1.1-	1.4-	880116	801	0.1+	0.1+	890129	888	0.0	0.5+

(4139)* 1975 VE2 = 1975 WX1 = 1979 HK3 = 1981 UR7 = 1986 TF17 = 1989 AK7

Discovered 1975 Nov. 2 by T. M. Smirnova at the Crimean Astrophysical Observatory.

Id. H. Oishi (d, JAM 735), C. M. Bardwell

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Bardwell

M	226.98873	(1950.0)	P	Q
n	0.17749056	Peri. 183.86573	+0.73830787	+0.67416458
a	3.1358303	Node 133.72334	-0.61802998	+0.68815925
e	0.1736193	Incl. 1.59297	-0.27007487	+0.26821440
P	5.55	H 11.9	G 0.25	

Residuals in seconds of arc

751102	095	0.6+	0.7+	751128	381	0.4+	0.8+	861011	095	(3.2+	5.6-)
751107	095	0.1+	2.7+	790425	095	0.5+	0.2+	890110	033	0.5-	0.3+
751109	381	1.3-	0.8-	811030	381	0.4-	0.2-	890111	033	0.1-	0.1+
751109	381	0.8-	1.2-	811030	381	1.3+	0.0	890112	033	0.2-	0.3+
751128	381	0.5-	0.1+	861010	095	0.8+	1.9-	890204	033	0.1+	0.9-

(4140)* 1976 VA = 1929 RW = 1952 BZ = 1986 PL2 = 1989 CJ

Discovered 1976 Nov. 11 at the Felix Aguilar Observatory, El Leoncito.

Id. L. D. Schmadel (MPC 14343), S. Nakano (ibid.)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano

M	199.97204	(1950.0)	P	Q
n	0.18950015	Peri. 216.51954	+0.95451691	+0.27811944
a	3.0019009	Node 126.98409	-0.23164380	+0.91865633
e	0.1242612	Incl. 7.73103	-0.18771953	+0.28057106
P	5.20	H 11.4	G 0.25	

Residuals in seconds of arc

290905	094	(14.0+	21.5+)X	860801	675	(53.3+	0.3-)	890202	372	1.9-	1.9+
520125	711	0.0	2.7+ Y	860801	675	(55.1+	1.8+)	890203	372	0.9-	2.8+
761111	808	0.1+	0.4+	860802	675	(11.5+	2.2-)	890203	372	(7.5-	0.5+)
761111	808	0.0	0.6-	860802	675	(12.4+	0.9-)	890204	372	0.3-	0.3-
761118	808	0.3+	1.1-	860811	095	1.4+	0.0	890204	372	1.1-	0.1-
761118	808	0.6-	0.2+	860813	095	3.1-	4.3+	890207	046	2.4+	1.5-
761122	808	0.5+	0.3-	860901	095	3.9+	0.4-	890207	046	1.8+	2.1-
761122	808	0.2+	0.0	860909	095	2.9-	0.5-				

(4141)* 1978 PG3 = 1978 RD3 = 1978 TY = 1974 SK2 = 1979 YN9 = 1980 BK3

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

Id. T. Furuta (MPC 11632)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

M	4.09710	(1950.0)	P	Q
n	0.23958482	Peri. 258.69009	-0.70284723	+0.70599722
a	2.5674176	Node 326.11175	-0.57642995	-0.63695594
e	0.0119242	Incl. 8.97951	-0.41681445	-0.30960469
P	4.11	H 12.7	G 0.25	

Residuals in seconds of arc

740920	095	0.9+	0.5-	791225	095	0.3+	1.4+	890329	888	0.4-	0.2-
740922	095	0.0	1.2-	800122	095	0.2-	1.6-	890329	888	0.5-	0.3-
780808	095	0.3-	0.5-	890205	888	0.2-	0.6+	890401	888	0.1+	0.6-
780903	095	0.6+	1.7+	890205	888	0.3-	0.7+	890401	888	0.6-	0.5-
781002	095	1.2-	0.2+	890310	801	1.7+	0.6+				

(4142)* 1981 KE = 1970 AB = 1982 VB

Discovered 1981 May 28 by Z. Vavrova at Klet.

Id. B. G. Marsden (MPC 7460)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M	153.59034	(1950.0)	P	Q
n	0.37288221	Peri. 55.12502	-0.35208886	-0.85223432
a	1.9117082	Node 60.14185	+0.64465819	-0.52053694
e	0.1508548	Incl. 26.49852	+0.67856410	+0.05232548
P	2.64	H 13.9	G 0.25	

Residuals in seconds of arc

700104	095	1.7+	1.6-	821112	675	0.3+	1.0-	821214	801	0.2+	1.0-
810528	046	2.6-	2.6-	821112	675	0.2+	1.1-	830108	801	2.4-	2.2+
810528	046	1.7-	0.1+	821113	675	0.7+	0.6-	830118	801	0.7-	0.4+
810531	046	0.9+	0.3-	821113	675	0.1+	1.0-	890409	801	0.3-	0.9+
810531	046	0.5-	1.4-	821114	675	0.9+	1.0-	890505	801	2.4+	1.2+
810601	046	0.6+	1.2+	821114	675	0.8+	1.5+				
810601	046	1.6-	1.8-	821206	675	0.4-	0.3+				

(4143)* 1981 QN1 = 1970 QP1 = 1976 UB3 = 1982 YT3 = 1989 AQ6

Discovered 1981 Aug. 29 by L. G. Taff at the Lincoln Laboratory ETS, New Mexico.

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M	169.05388	(1950.0)	P	Q
n	0.18220636	Peri. 245.99177	+0.98136279	+0.18902112
a	3.0814871	Node 103.09796	-0.16084797	+0.90655374
e	0.1945445	Incl. 2.03660	-0.10514276	+0.37740077
P	5.41	H 12.5	G 0.25	

Residuals in seconds of arc

700829	095	0.7+	3.2-	810831	704	1.9+	2.6+	890111	033	0.3-	0.1+
761026	095	1.0+	1.6-	810901	704	0.7+	0.4+	890114	033	0.1-	0.5+
810829	704	2.4-	1.0-	810902	704	1.3+	0.5-	890202	033	0.2-	0.3+
810829	704	1.4-	0.4-	810903	704	0.3-	3.5+	890203	033	0.2+	0.3+
810829	704	1.7-	1.8-	821223	095	0.6-	0.1+	890205	033	1.8+	0.2+
810830	704	0.2+	2.1+	890111	033	0.8-	0.1+				

(4144)* 1981 SW6 = 1979 HW4

Discovered 1981 Sept. 28 by L. V. Zhuravleva at the Crimean Astrophysical Observatory.

Id. K. Hurukawa (MPC 10027)

Epoch 1989 Oct. 1.O ET = JDE 2447800.5 Hurukawa

M	139.85469	(1950.0)	P	Q
n	0.17602198	Peri. 220.54301	+0.84411800	-0.53566197
a	3.1532479	Node 171.74982	+0.52401186	+0.81513718
e	0.0504917	Incl. 9.24138	+0.11347408	+0.22049407
P	5.60	H 11.6	G 0.25	

Residuals in seconds of arc

790425	095	1.2+	1.3+	860829	095	1.3+	1.1-	871022 801 (1.0- 4.9+)
790428	095	0.2-	0.8+	860907	801	1.0+	0.2+	890105 888 0.5- 1.1-
790430	095	1.5+	2.2+	861031	801	1.2-	1.8-	890105 888 0.9- 1.0-
810928	095	0.3-	0.1-	871020	801	1.8-	0.8+	890129 888 0.6- 0.0
811006	095	1.5-	0.2-	871021	092	0.6+	0.7+	890129 888 0.1- 0.2+
811026	095	0.2-	0.4-	871021	092	0.6+	1.1+	890205 888 0.1- 0.4+
860805	801	1.0-	1.4+	871022	092	0.6+	1.4+	890205 888 0.6- 0.4+
860812	095	0.9-	0.0	871022	092	2.8+	2.3+	

(4145)* 1981 SJ7 = 1981 WB5 = 1967 PB = 1974 RC1

Discovered 1981 Sept. 29 by L. V. Zhuravleva at the Crimean Astrophysical Observatory.

Id. H. Oishi (MPC 12453)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

M	161.70633	(1950.0)	P	Q
n	0.28785193	Peri. 35.09720	+0.84066928	+0.53582779
a	2.2717295	Node 292.31725	-0.51423070	+0.74436604
e	0.2000734	Incl. 4.86834	-0.16982915	+0.39850693
P	3.42	H 13.7	G 0.25	

Residuals in seconds of arc

670814	095	0.8+	1.8-	811124	095	0.3+	1.7+	881202 888 1.6- 0.0
740912	095	0.6-	1.3+	811124	095	1.8-	0.3+	881202 888 0.0 0.1-
810929	095	0.9+	0.7+	881110	888	1.1+	0.1-	881210 888 0.7+ 1.0-
811002	095	0.2-	0.5-	881110	888	0.4-	0.6-	881210 888 0.8+ 1.8-

(4146)* 1982 DD2 = 1938 GM = 1979 HT4 = 1984 YL2

Discovered 1982 Feb. 16 by L. Brozek at Klet.

Id. T. Kobayashi (MPC 11144)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M	104.59643	(1950.0)	P	Q
n	0.29025549	Peri. 320.58344	-0.64213314	-0.76644305
a	2.2591709	Node 169.33807	+0.72239001	-0.61161006
e	0.1061749	Incl. 4.70273	+0.25654962	-0.19620954
P	3.40	H 13.8	G 0.25	

Residuals in seconds of arc

380405	062	0.8-	2.1+	820220	704	2.3-	0.6-	841223 095 0.5+ 1.2-
380405	062	2.0+	1.5-	820220	046	0.2-	0.8+	890328 046 2.1+ 1.6-
380405	062	1.3-	1.9-	820220	046	1.3-	1.9+	890328 046 0.0 0.2-
790425	095	(1.6-	3.7+)	820221	704	(2.1+	6.0-)	890330 046 0.1+ 0.1-
790430	095	0.7-	1.2+	820221	046	0.6+	0.3-	890330 046 1.5- 1.7-
820216	046	0.9+	0.2+	820221	046	(2.8-	4.2+)	890509 801 0.1+ 1.0+
820216	046	0.0	0.8+	820222	704	1.9+	0.4+	

(4147)* 1983 AY = 1971 YG = 1980 KA

Discovered 1983 Jan. 12 by B. A. Skiff at the Anderson Mesa Station of the Lowell Observatory.

Id. H. Oishi (MPC 12453)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

M	201.24323	(1950.0)		P	Q
n	0.27138680	Peri.	301.10031	-0.64688059	+0.75668384
a	2.3627090	Node	288.28735	-0.66123215	-0.61844229
e	0.0803384	Incl.	5.72628	-0.37989150	-0.21203465
P	3.63	H	12.9	G 0.25	

Residuals in seconds of arc

711216	095	0.0	0.1-	830109	688	2.2-	1.0-	880811	413	0.5-	0.6-
800518	805	0.3-	1.3-	830112	688	1.7+	0.2-	880811	413	1.0+	0.9-
800523	805	0.2-	1.2+	830112	688	1.3+	0.1+	880912	801	0.2-	1.1+
800523	805	0.1+	0.3-	830121	688	(3.7-	1.0-)				
800523	805	0.3+	0.2+	830121	688	0.9-	0.7+				

(4148)* 1983 NT = 1935 EH = 1952 HT1 = 1984 YM1

Discovered 1983 July 11 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Id. T. Kobayashi (MPC 10841)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M	62.87155	(1950.0)		P	Q
n	0.29303646	Peri.	214.94497	-0.99865145	+0.00536113
a	2.2448549	Node	325.25211	+0.01926778	-0.88534189
e	0.0969498	Incl.	5.19808	-0.04820823	-0.46490967
P	3.36	H	12.6	G 0.25	

Residuals in seconds of arc

350307	024	0.4+	0.7+	830813	688	1.1+	1.0+	890410	809	0.4+	0.4-
520421	094	(17.3+	83.1+)X	830813	688	0.2-	0.3-	890410	809	0.1+	0.4-
830711	688	0.2+	0.2+	841217	095	1.0+	0.7+	890411	809	0.0	0.1-
830711	688	0.3+	1.6-	841223	095	1.7-	2.7-	890411	809	0.3+	0.3-
830713	688	0.6-	1.3-	841227	095	1.0+	0.8-	890505	801	1.7-	0.5-
830713	688	(3.9-	1.4-)	890410	809	0.3-	0.4-				

(4149)* 1984 EZ

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

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M	55.76038	(1950.0)		P	Q
n	0.22657817	Peri.	74.46561	-0.64524442	+0.75788938
a	2.6647553	Node	154.55670	-0.75822507	-0.61985599
e	0.1248465	Incl.	12.94569	-0.09356485	-0.20342622
P	4.35	H	12.4	G 0.25	

Residuals in seconds of arc

771012	675	0.3-	1.3-	840304	675	0.9-	0.7-	850811	046	0.0	0.8-
771012	675	0.5-	1.3-	840309	688	0.1+	1.6-	850811	046	1.2-	1.0-
771016	675	1.0+	1.3-	840309	688	0.7-	0.9+	850812	046	(4.4+	3.2-)
771016	675	1.5+	2.6-	840329	095	1.1+	0.9-	850812	046	1.3+	3.3-
771017	675	0.4+	1.9-	840403	688	0.7-	3.2-	850813	801	0.7-	1.0-
771017	675	0.2-	1.3-	840403	688	0.0	2.8-	850813	046	3.8+	0.1+
771021	675	0.4+	0.6+	840403	095	1.9+	1.5-	850813	046	(4.5+	0.0)
771021	675	0.6-	0.8+	840405	095	1.6+	0.8+	861031	801	0.4-	0.1+
771022	675	0.0	0.2+	840408	688	1.4-	3.1-	890602	801	1.4+	0.4+
771022	675	0.3-	0.8-	840408	688	(0.2+	4.1-)	890603	801	1.4+	0.1+
840301	675	2.0-	0.7-	840605	801	0.4-	0.9+	890604	801	(5.0-	2.8-)
840301	675	0.7-	0.4+	850809	552	2.0-	0.4-	890630	801	3.1-	1.0+
840304	675	0.4-	0.7-	850809	552	0.7+	0.6-				

(4150)* 1984 QC1 = 1957 KG = 1964 RH = 1973 FD2 = 1974 QM1 = 1980 EA2
= 1981 TO2 = 1981 WJ3 = 1981 WE6 = 1988 YC

Discovered 1984 Aug. 31 by B. A. Skiff at the Anderson Mesa Station of the Lowell Observatory.

Id. T. Furuta (d, MPC 10195), S. Nakano

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano

M 200.06082		(1950.0)	P	Q
n 0.29553850	Peri.	196.93663	+0.75899792	+0.64938943
a 2.2321669	Node	122.47300	-0.59068382	+0.71718609
e 0.1671556	Incl.	3.19836	-0.27388827	+0.25285862
P 3.33	H	13.0	G 0.25	

Residuals in seconds of arc

570529	760	(7.7-	2.2+)	811124	095	1.8-	0.2-	840901	808	0.5+	2.3-
570529	760	1.3+	0.9+	811124	033	0.1-	0.9+	840919	071	(5.4-	0.1+)
640908	095	(20.6+	9.7+)	811124	033	0.4-	0.5+	840919	071	1.7-	1.8+
640910	095	0.3-	2.3-	840826	808	(22.1-	7.7-)	881229	046	1.2+	1.0-
730330	095	3.2-	1.1-	840826	808	(2.3-	6.8-)	881229	046	1.1+	0.7-
730331	095	(5.5-	0.2+)	840831	688	0.3+	0.3-	881230	046	1.4+	0.9-
740822	095	3.4+	2.5-	840831	688	0.6-	3.0+	881230	046	1.4+	1.3-
800315	095	1.1-	1.3-	840831	688	0.1+	0.9+				
811004	095	2.2-	1.3+	840901	808	0.2+	3.2-				

(4151)* 1985 HV1 = 1985 JX = 1968 HD = 1976 SO1 = 1979 FX1 = 1982 SZ4

Discovered 1985 Apr. 24 by C. S. Shoemaker and E. M. Shoemaker at Palomar.

Id. F. N . Bowman (d, MPC 10151), K. Hurukawa (JAM 1964)

Epoch 1989 Oct. 1.O ET = JDE 2447800.5 Hurukawa

M 357.27021		(1950.0)	P	Q
n 0.17705429	Peri.	66.19218	-0.67848812	-0.73443095
a 3.1409794	Node	66.54374	+0.66733471	-0.62546493
e 0.1515360	Incl.	1.01687	+0.30711277	-0.26344791
P 5.57	H	12.0	G 0.25	

Residuals in seconds of arc

680417	026	0.9+	0.7-	850424	675	0.5+	3.0-	881111	897	(3.8+	0.6+)
680420	026	1.3+	0.0	850425	675	2.1+	0.4+	881202	888	0.3+	0.7-
760924	095	0.9-	0.5-	850513	675	1.7-	1.7-	881202	888	0.6+	0.3-
760928	095	0.0	1.1-	850515	675	0.2-	0.6+	881211	888	0.2+	0.1+
790323	095	2.8-	0.2+	881106	888	0.9+	0.6+	881211	888	0.2-	0.2+
790329	095	1.2-	0.6+	881106	888	0.2+	0.3+				
820926	095	0.2+	1.0-	881111	897	0.2+	2.2-				

(4152)* 1985 JF = 1976 UO10

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

Id. T. Furuta (MPC 10403)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

M 335.41271		(1950.0)	P	Q
n 0.17362851	Peri.	321.24514	-0.94494984	-0.30808654
a 3.1821601	Node	201.60249	+0.32064418	-0.93901948
e 0.0839965	Incl.	17.42315	-0.06524646	-0.15272560
P 5.68	H	12.3	G 0.25	

Residuals in seconds of arc

761022	381	0.2-	0.3+	850518	688	0.4-	0.6+	881105	888	0.2-	0.2+
761022	381	0.4-	0.1-	850521	688	0.2+	1.1+	881203	888	0.8+	0.5-
761024	381	0.6+	0.8+	850521	688	0.1+	0.0	881203	888	0.1-	0.7-
850515	688	1.0+	1.0-	870831	010	0.5-	1.3-	881207	888	0.1+	0.0
850515	688	0.7+	1.7-	870831	010	0.7+	0.0	881207	888	0.4+	0.2-
850518	688	1.7-	0.4+	881105	888	1.2-	0.2+				

(4153)* 1985 JT1 = 1985 KE1 = 1979 HK2 = 1981 UF17 = 1981 UJ21 = 1984 DM2 = 1986 RJ3 = 1986 WE8

Discovered 1985 May 14 by C. S. Shoemaker at Palomar.

Id. T. Kobayashi; 1979 GE = 1985 JT1 (MPC 10630) is invalid

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M 250.62382	(1950.0)	P	Q	
n 0.17673787	Peri. 210.73948	+0.11179081	+0.99347228	
a 3.1447272	Node 65.68742	-0.90654378	+0.11131590	
e 0.1643302	Incl. 1.42784	-0.40703954	+0.02493205	
P 5.58	H 12.0	G 0.25		

Residuals in seconds of arc

790424 095	0.7+	0.5+	850514 675	0.9-	0.5+	860911 688	1.2+	1.0+
790424 095	0.3-	1.0+	850514 675	1.8-	0.7+	860912 095	1.7+	1.0-
811024 095	0.3+	4.3+	850515 675	2.7+	0.6+	861130 381	2.9-	1.4-
811028 095	1.8-	0.5+	850523 095	0.6+	0.2-	861130 381	0.3+	0.2+
840226 095	0.3-	1.8-	860907 095	1.8+	1.3-	861201 381	1.0-	0.5-
850511 675	0.2-	0.2+	860911 688	0.2+	2.0+	861201 381	2.3-	3.2-

(4154)* 1985 NE = 1956 EV

Discovered 1985 July 10 by A. C. Gilmore and P. M. Kilmartin at Mount John University Observatory.

Id. W. Landgraf (MPC 10530)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M 45.92432	(1950.0)	P	Q	
n 0.24331956	Peri. 244.61957	-0.45624486	+0.88984682	
a 2.5410782	Node 358.22289	-0.76835888	-0.39601246	
e 0.1956703	Incl. 6.74247	-0.44884881	-0.22659824	
P 4.05	H 13.4	G 0.25		

Residuals in seconds of arc

560309 760	0.5+	0.3+	850720 474	0.1+	0.2-	861205 801	1.3+	0.3-
850710 474	1.7-	0.5-	850813 474	0.1-	0.1-	871224 010	0.2-	2.4+
850710 474	0.4-	3.0+	850813 474	0.3-	0.1+	871224 010	1.1+	2.3+
850715 474	1.2-	2.2+	850817 474	1.0+	0.1-	871224 010	0.8+	3.0+
850718 474	0.9-	0.9+	850917 474	0.1+	0.0	890513 474	0.3+	0.6-
850718 474	0.6-	1.0+	850917 474	0.3-	0.8+	890513 474	1.0+	0.2-
850719 474	1.1-	1.2-	851016 474	0.5+	0.9+	890515 474	1.1+	0.2-
850720 474	1.1+	0.3+	851016 474	1.4+	1.4+	890515 474	0.1+	0.5-

(4155)* 1987 UB1 = 1977 AO1 = 1983 RT5

Discovered 1987 Oct. 25 by S. Ueda and H. Kaneda at Kushiro.

Id. T. Kobayashi (MPC 14353), S. Nakano (ibid.)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano

M 196.89990	(1950.0)	P	Q	
n 0.25977080	Peri. 354.33026	+0.97990367	-0.19707567	
a 2.4326287	Node 17.12980	+0.18686975	+0.85292420	
e 0.2403587	Incl. 6.00666	+0.06977453	+0.48340613	
P 3.79	H 12.6	G 0.25		

Residuals in seconds of arc

770113 095	0.2-	1.0-	871114 400	0.0	2.1+	871122 399	0.9+	0.2-
830902 095	0.2+	0.3-	871114 400	0.8-	2.2+	871212 399	0.9-	0.9-
871025 399	0.4+	0.5-	871114 400	2.3-	1.9+	871212 399	0.3+	1.0-
871025 399	0.5+	1.3-	871114 392	0.7+	0.7-	890308 399	1.3-	1.1+
871025 399	0.3-	1.6-	871114 392	0.3-	1.5-	890308 399	1.4+	1.3+
871031 399	0.1+	1.1-	871115 400	0.0	2.9+	890308 399	0.6-	1.4+
871031 399	0.2+	0.6-	871115 400	1.8+	2.6+	890312 399	0.5+	0.1+
871031 399	0.6+	1.8-	871115 400	(3.1+	4.6+)	890312 399	(3.1+	0.6-)
871113 399	0.2+	1.1+	871115 392	1.6-	1.7-	890312 399	0.5-	0.2+
871113 399	0.5+	0.3+	871122 399	0.3-	0.2-	890312 399	0.7+	0.7+

890312 399 1.6+ 1.1- 890326 399 0.0 1.2- 890406 399 0.1+ 0.6-
890326 399 1.4- 1.3- 890404 399 1.4- 0.6- 890406 399 0.5+ 0.4-
890326 399 1.8- 0.4+ 890404 399 1.8- 1.0+ 890406 399 0.6+ 0.1-
890326 399 2.4+ 1.8- 890404 399 0.7+ 0.5+

(4156)* 1988 BE = A917 BC = 1979 BL
Discovered 1988 Jan. 16 by T. Kojima at YGCO Chiyoda Observatory.
Id. T. Kobayashi (MPC 12951)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

		(1950.0)	P	Q
M 172.71482				
n 0.22194208	Peri.	128.89336	+0.20891444	-0.95856210
a 2.7017362	Node	307.94410	+0.80382870	+0.28111805
e 0.1898440	Incl.	14.21737	+0.55696874	-0.04616648
P 4.44	H 11.9	G 0.25		

Residuals in seconds of arc
170128 024 0.8+ 1.2+ 880206 897 (1.2+ 5.6-) 880219 894 0.6+ 0.1-
790124 095 0.6+ 1.2- 880206 897 1.5+ 2.2- 880219 894 0.6+ 0.5+
790125 330 1.2- 0.7+ 880210 675 1.6+ 1.2- 880220 894 0.8- 0.3+
880116 897 0.9- 2.1- 880212 894 1.5- 0.5+ 880220 894 2.5+ 0.0
880116 897 2.2- 1.4+ 880212 894 0.8- 0.6+ 890213 474 2.7- 0.1-
880120 897 1.8- 0.4- 880213 894 0.2+ 2.1- 890213 474 1.5- 0.9-
880120 897 0.8- 0.6- 880213 894 0.5- 2.1+ 890405 474 1.3+ 0.5+
880123 897 1.9+ 2.4+ 880214 675 0.3- 1.6- 890405 474 1.6+ 0.0
880123 897 1.2+ 1.7+ 880219 897 0.2- 0.1+

(4157)* 1988 XD2 = 1934 HB = 1975 VX1 = 1975 WJ1 = 1979 WK7 = 1982 HW1
Discovered 1988 Dec. 11 by Y. Oshima at the Gekko Observatory.
Id. H. Oishi (MPC 14204)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

		(1950.0)	P	Q
M 208.67844				
n 0.22537382	Peri.	206.16335	+0.03936584	+0.97821467
a 2.6742402	Node	66.67204	-0.87337446	+0.13278802
e 0.1622942	Incl.	12.82506	-0.48545585	-0.15957254
P 4.37	H 11.8	G 0.25		

Residuals in seconds of arc
340419 012 0.8+ 0.8- 881112 877 1.3- 1.4+ 881214 888 1.1- 1.2-
340422 012 2.0- 0.6- 881205 381 (9.8- 20.3-) 881215 888 0.9- 1.2-
751102 095 2.3+ 1.0+ 881206 381 0.3+ 0.3+ 881215 888 0.3- 1.4-
751126 330 0.8- 1.8+ 881207 381 0.1+ 0.2+ 890101 888 1.1+ 0.3-
791117 095 3.1+ 2.0- 881208 381 0.7+ 0.2+ 890101 888 1.6+ 0.7-
820428 688 0.7- 0.9+ 881211 877 (4.4- 1.9+) 890103 888 2.3+ 0.1+
820428 688 0.1+ 0.0 881211 877 2.0- 0.8- 890103 888 1.4+ 0.1-
820526 688 0.0 1.1- 881211 888 0.6- 2.7- 890128 888 1.1- 2.4+
820526 688 0.2+ 1.7- 881211 888 1.3- 1.1- 890128 888 0.2+ 1.7+
881112 877 0.0 0.6+ 881214 888 1.1- 1.0-

(4158)* 1989 BE = 1933 FJ = 1974 WK1 = 1980 TF8
Discovered 1989 Jan. 28 at the Osservatorio San Vittore.
Id. B. G. Marsden (MPC 14477)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

		(1950.0)	P	Q
M 344.25057				
n 0.15759582	Peri.	183.12683	-0.99045972	+0.13750117
a 3.3944774	Node	4.80513	-0.12394807	-0.86004706
e 0.0174068	Incl.	6.24248	-0.06021971	-0.49133744
P 6.25	H 11.4	G 0.25		

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

330324	029(99.8+	33.8-)Y	861002	095	1.1-	0.3-	890201	552	0.3+	1.6-
330325	029(0.03+	0.01-)Y	890128	552	0.3-	1.4-	890201	552	1.0+	0.6+
741118	330	0.0	0.2+	890128	552	0.8+	1.1-	890207	552	1.2-	1.3+
801010	095	1.3-	0.0	890129	552	1.5-	0.1+	890207	552	0.8-	1.0+
801015	095	1.8+	0.4-	890129	552	1.1-	0.1-	890306	552	1.3+	0.5+
860906	095	0.9+	0.9+	890130	552	0.7+	0.1-	890306	552	0.6+	0.3+
860915	095	(2.3-	11.8-)	890130	552	0.3+	0.7+				

(4159)* 1989 GK = 1937 NT = 1938 WH = 1940 GM = 1957 LO = 1977 LN

Discovered 1989 Apr. 5 by E. Helin at Palomar.

Id. B. G. Marsden (MPC 14626), H. Oishi (ibid.)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Marsden

M	203.26453	(1950.0)	P	Q
n	0.24198077	Peri. 312.33189	+0.70153963	-0.66286033
a	2.5504422	Node 91.00789	+0.70621408	+0.59751050
e	0.0727758	Incl. 15.17012	+0.09541396	+0.45121767
P	4.07	H 11.0	G 0.25	

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

370714	078	(5.3+	10.5-)X	850519	675	1.6+	1.9+	890430	054	0.4-	0.3+
381123	020	(44.1+	17.0+)X	850520	675	0.2+	1.7+	890501	883	1.3+	0.9-
381125	020	3.9-	1.9+	850520	675	0.3-	0.4+	890501	883	1.8-	1.2+
381216	029	(0.06-	0.03+)X	880214	675	(1.8-	6.0-)	890501	883	0.0	2.7+
381221	020	2.5+	1.6+	880214	675	0.3-	0.6-	890502	675	(1.9+	3.2-)
400409	062	0.4-	0.3-	890405	675	0.4+	0.7-	890502	675	2.5+	1.6-
400410	062	1.2-	1.4-	890405	675	0.1-	1.3-	890502	385	2.8-	1.3+
570607	081	(0.17+	0.02+)X	890407	675	1.5+	0.3-	890502	385	(5.8-	1.2+)
760226	675	1.1+	1.5-	890407	675	0.6+	0.3-	890503	054	0.7+	0.7+
760226	675	2.1+	0.4-	890429	385	0.2-	2.5+	890509	385	1.5+	1.9+
770609	808	0.2+	0.2-	890429	385	0.1-	0.8+	890509	385	0.9+	2.1+
770609	808	0.9+	0.7-	890429	054	0.4-	0.6+	890604	675	0.4-	0.7-
840130	675	1.8-	0.3+	890429	054	0.6-	0.2-	890604	675	0.3+	0.8-
840130	675	(6.2-	2.2-)	890430	675	0.6+	2.6-	890606	675	2.4-	0.6-
850519	675	0.1-	1.3+	890430	675	0.6-	2.6-	890606	675	0.7-	1.5-

(4160)* 1989 LE = 1975 VD1 = 1977 FA2 = 1979 YN4 = 1982 QQ2 = 1985 KA1 = 1986 TH9

Discovered 1989 June 3 by E. Helin at Palomar.

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Bardwell

M	64.59819	(1950.0)	P	Q
n	0.25625898	Peri. 25.82973	-0.83936030	+0.54346661
a	2.4548030	Node 187.11960	-0.51267566	-0.79813896
e	0.0882856	Incl. 5.03517	-0.18065977	-0.26003506
P	3.85	H 13.1	G 0.25	

Residuals in seconds of arc

751101	095	0.7+	1.1+	850518	688	0.1+	0.1-	890605	675	1.1-	1.1+
770326	095	0.4-	1.5+	850518	688	3.5+	1.0-	890630	675	0.2-	0.0
791218	095	0.9-	0.8-	861002	095	1.5+	0.2+	890630	675	0.2+	0.8-
820816	095	1.7-	1.3+	890603	675	0.2+	0.5-	890703	675	0.4-	0.8-
850513	675	0.2+	0.9-	890603	675	0.2+	1.5-				
850515	675	0.8-	1.9+	890605	675	1.0-	2.2+				

(4161)* 6627 P-L = 1982 VF3

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

Id. K. Hurukawa (MPC 8385)

Epoch 1989 Oct. 1.O ET = JDE 2447800.5 Hurukawa

M 114.89711		(1950.0)	P	Q
n 0.18381546	Peri.	223.48915	+0.80930605	-0.58733981
a 3.0634774	Node	172.46839	+0.55327627	+0.75798129
e 0.1018487	Incl.	3.26278	+0.19725385	+0.28371870
P 5.36	H 13.1	G 0.25		

Residuals in seconds of arc

600924	675	0.1-	0.4+	821114	381	0.5+	1.5+	881217	888	0.2-	0.4-
600926	675	0.5-	0.4+	821114	381	1.7-	0.1+	881217	888	0.0	0.3-
600927	675	1.0+	1.3+	821213	381	0.7+	0.1+	890102	888	0.1-	0.9+
600928	675	0.2+	0.6-	821213	381	1.1-	0.1-	890102	888	0.6-	1.0+
601017	675	0.4+	1.3-	821214	381	0.8+	0.4+	890128	888	0.4-	1.1-
601022	675	0.7-	1.2-	821214	381	0.6+	0.3-	890128	888	1.0+	1.3-
601024	675	0.6+	0.0	840209	801	0.1+	0.1+				
601026	675	0.2-	0.8-	840402	801	0.9-	0.6+				

1950 TF = 1950 TU2 = 1930 UE1 = 1975 BR = 1984 YR5 = 1987 WJ
Id. O. Kippes (d, MPC 650), H. Oishi
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Oishi

M 214.34039		(1950.0)	P	Q
n 0.29452766	Peri.	91.43151	+0.78724244	-0.61303797
a 2.2372713	Node	306.38299	+0.52772475	+0.72564386
e 0.1475514	Incl.	4.74430	+0.31899204	+0.31245069
P 3.35	H 13.8	G 0.25		

Residuals in seconds of arc

301017	690	0.9+	0.7-	501006	024	1.6-	4.3-	841228	095	1.7-	1.9+
301019	690	0.5-	0.4-	501013	760	0.1-	1.2+	871119	688	0.1-	1.5+
501005	024	2.1+	1.6+	750117	095	0.5+	3.5-	871119	688	0.1+	1.0+

1973 SW1 = 1989 CJ2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M 17.50054		(1950.0)	P	Q
n 0.08501112	Peri.	103.10459	-0.66483604	-0.74156885
a 5.1225527	Node	29.19149	+0.59389372	-0.59767942
e 0.0379963	Incl.	10.61282	+0.45308199	-0.30472110
P 11.59	H 10.5	G 0.25		

Residuals in seconds of arc

730919	675	0.3+	0.7+	730929	675	(5.1+	4.7-)	731005	675	0.1+	0.7+
730919	675	2.2+	1.6-	730929	675	0.1-	0.3+	890108	675	0.7-	0.9+
730920	675	0.3-	0.5+	730930	675	0.7+	0.1-	890108	675	0.4+	0.1+
730924	675	1.5-	0.3+	730930	675	0.9-	0.6-	890201	675	1.6+	0.7-
730924	675	0.1+	0.6+	731004	675	1.3-	0.3-	890307	675	0.7-	0.4+
730925	675	0.5+	0.6-	731004	675	0.4-	0.0	890308	675	0.6-	1.4-
730925	675	0.2+	1.1+	731005	675	1.3+	0.5-				

1973 SO3 = 1979 FK3 = 1983 RS1
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano

M 330.60940		(1950.0)	P	Q
n 0.29277189	Peri.	274.75929	+0.23139452	+0.97276964
a 2.2462116	Node	8.65425	-0.85395608	+0.20962342
e 0.1837136	Incl.	5.05518	-0.46606394	+0.09887994
P 3.37	H 14.0	G 0.25		

Residuals in seconds of arc

730919 675	0.1-	0.8+	730929 675	0.4-	1.3-	731005 675	0.1-	0.1-
730919 675	0.0	1.1-	730929 675	0.3+	1.9+	731005 675	0.5-	0.3-
730920 675	0.2+	0.5+	730930 675	1.6+	0.2+	731005 675	0.5-	0.3-
730924 675	0.3+	2.3-	730930 675	1.2+	2.4+	790331 095	1.1-	2.0-
730924 675	0.1+	1.9-	730930 675	0.1+	0.7-	830902 688	1.4+	0.0
730925 675	2.9-	1.7-	730930 675	0.1+	1.2+	830902 688	0.5+	1.1+
730925 675	0.7-	0.5-	731004 675	0.1+	1.9-	830906 688	0.5-	0.3+
730925 095	(4.2+	2.5+)	731004 675	0.8+	0.6+	830906 688	0.6+	0.2+
730929 675	0.4+	0.6-	731004 675	0.3-	0.6+	830906 095	2.5-	0.8-
730929 675	1.2+	2.1+	731005 675	0.6+	0.0			

1973 SR3 = 1931 TK1 = 1977 VM = 1981 XN

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Bardwell	
M 88.40825		(1950.0)		P	Q
n 0.25758813	Peri.	305.22700		+0.87857323	+0.47724495
a 2.4463561	Node	26.28209		-0.42338125	+0.79626371
e 0.1859193	Incl.	2.40878		-0.22103709	+0.37175443
P 3.83	H	14.0	G	0.25	

Residuals in seconds of arc

311006 024	0.5-	1.1+	730925 675	0.7-	1.2+	731004 675	0.4-	2.8-
730919 675	0.2-	0.4-	730925 675	0.3-	0.8-	731004 675	1.4+	0.9-
730919 675	0.8+	3.5+	730925 675	0.3-	0.3+	731005 675	0.2+	0.6-
730919 675	0.9-	0.7-	730925 095	2.3+	0.7+	731005 675	0.9+	0.9-
730919 675	0.4+	3.1+	730929 675	0.5+	2.9-	731005 675	0.1-	1.4-
730920 675	1.1-	0.7+	730929 675	0.1+	0.5-	731005 675	2.7+	0.3-
730920 675	0.3+	1.5+	730929 675	0.2-	0.3-	771111 805	0.5-	0.3+
730924 675	0.4-	1.5-	730929 675	0.1-	0.5+	771112 805	0.5+	0.3+
730924 675	1.0-	1.5+	730930 675	0.9+	1.2+	811204 511	0.0	0.2+
730924 675	0.7+	1.0-	730930 675	1.1+	0.5+	811204 511	0.2-	0.2+
730924 675	0.9-	1.5+	731004 675	1.4-	1.8-			
730925 675	3.5-	1.2-	731004 675	0.4+	0.3-			

1973 ST3 = 1973 UJ = 1984 UV2

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Bardwell	
M 117.80894		(1950.0)		P	Q
n 0.27134877	Peri.	49.94000		+0.66238266	-0.74916128
a 2.3629344	Node	358.57041		+0.65216943	+0.57830535
e 0.2303371	Incl.	5.90598		+0.36867904	+0.32298655
P 3.63	H	15.0	G	0.25	

Residuals in seconds of arc

730919 675	0.8-	0.2-	730925 675	1.4-	0.8+	731005 675	0.7+	1.4-
730919 675	0.1+	1.1+	730925 095	2.0+	0.4+	731005 675	0.7+	1.2-
730919 675	0.7-	1.5-	730929 675	0.1+	0.8+	731026 095	(3.7-	6.8+)
730919 675	0.8+	0.7+	730929 675	0.2+	1.2+	841026 688	0.1-	0.4+
730920 675	0.9-	0.8+	730930 675	0.1-	1.7+	841026 688	0.3-	0.0
730924 675	0.3+	2.4-	730930 675	0.7-	1.5+	841120 688	0.8+	0.3-
730924 675	0.7+	1.1-	731004 675	0.6-	0.7-	841120 688	0.3-	0.1+
730925 675	0.5-	0.5-	731004 675	0.3+	0.4-			

1973 SC6 = 1955 SM2 = 1955 UH = 1964 TO1 = 1982 RD

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Bardwell	
M 177.21956		(1950.0)		P	Q
n 0.21723449	Peri.	195.81375		+0.96009559	-0.27967164
a 2.7406341	Node	180.42776		+0.26308417	+0.90373489
e 0.1101843	Incl.	3.70830		+0.09488508	+0.32410958
P 4.54	H	13.0	G	0.25	

Residuals in seconds of arc

550923	024	2.1+	0.9-	730928	095	2.2+	0.5-	731005	675	1.1-	2.2+
551020	760	0.7+	0.1+	730929	675	0.9+	0.3+	731005	675	0.5+	0.1+
551020	760	0.7-	1.4-	730929	675	0.6-	2.8+	731005	675	0.6-	1.1+
641009	330	0.9+	0.7+	730929	675	1.1+	0.6+	820915	688	1.6+	0.2+
641101	330	0.1-	2.3-	730929	675	1.7-	2.8+	820915	688	2.2+	2.6-
730919	675	0.7+	1.6-	730930	675	0.6+	0.4-	820916	095	0.7-	1.0+
730919	675	0.9+	0.2+	730930	675	1.2+	0.5-	820921	688	0.3-	0.3-
730920	675	1.4-	0.1+	731004	675	1.6+	0.4-	820921	095	2.1-	1.8+
730924	675	0.7+	0.6-	731004	675	0.2-	1.2+	820922	688	0.2-	0.1+
730924	675	1.0+	0.1-	731004	675	1.0+	0.3+	820922	688	4.0+	1.7-
730925	675	0.2+	0.3+	731004	675	0.0	1.7+				
730925	675	0.4+	0.5+	731005	675	0.6-	0.4+				

1973 SF6 = 1983 UK

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Bardwell	
M	333.74896	(1950.0)		P	Q
n	0.29916631	Peri.	146.06307	+0.82923474	+0.55890048
a	2.2140893	Node	179.95688	-0.53372909	+0.79193130
e	0.1985026	Incl.	6.19162	-0.16584030	+0.24591681
P	3.29	H	14.5	G 0.25	

Residuals in seconds of arc

730919	675	0.8+	0.7-	730929	675	0.2-	0.5+	731004	675	1.2-	1.9-
730919	675	0.8+	0.8-	730929	675	1.2-	2.0+	731004	675	0.0	0.8-
730920	675	0.9+	0.1-	730929	675	0.6-	0.2-	731004	675	0.1+	1.8-
730924	675	0.2-	0.0	730929	675	0.3-	1.5+	731004	675	0.1-	0.3+
730924	675	0.6-	0.8-	730930	675	0.8-	0.1-	731005	675	1.2-	1.2-
730925	675	1.7-	1.1-	730930	675	0.8-	1.7+	731005	675	0.0	1.4-
730925	675	0.0	0.8+	730930	675	0.4-	0.5+	831030	675	1.2+	1.1-
730928	095	1.6+	1.2+	730930	675	0.8-	0.4+	831104	675	1.8-	1.5+

1973 SN6 = 1976 GE3 = 1982 RK2 = 1985 FQ1 = 1987 SH12

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Nakano	
M	53.61500	(1950.0)		P	Q
n	0.21301136	Peri.	301.41072	-0.43621692	-0.89980678
a	2.7767390	Node	174.43449	+0.85076691	-0.41527399
e	0.0099761	Incl.	4.67765	+0.29310486	-0.13377320
P	4.63	H	12.5	G 0.25	

Residuals in seconds of arc

730919	675	0.1+	0.2-	730929	675	0.9+	1.1-	760402	095	0.5-	0.7-
730919	675	1.4-	0.4-	730930	675	1.3+	0.2+	760404	095	0.3-	1.8-
730920	675	0.0	0.8+	730930	675	0.2+	0.1-	760405	095	3.5-	1.4-
730924	675	0.1-	0.2-	731004	675	0.7-	1.2+	820912	095	0.4-	2.6+
730924	675	0.4-	0.4-	731004	675	0.1-	1.3+	850322	688	1.9+	1.0-
730925	675	2.0-	2.8-	731005	675	1.7+	0.2+	850322	688	0.2+	0.4+
730925	675	1.4+	0.1+	731005	675	1.1+	0.1-	870921	071	0.4-	2.4-
730928	095	(7.1+	3.3+)	760401	095	0.7+	0.1-	870921	071	0.3+	2.9-

1973 TP = 1973 UG3 = 1952 TF = 1969 TM6 = 1986 WC3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green	
M	302.43421	(1950.0)		P	Q
n	0.23411553	Peri.	141.05878	+0.96706827	+0.22640031
a	2.6072545	Node	206.55894	-0.24401892	+0.95461689
e	0.1462753	Incl.	15.07442	+0.07234456	+0.19351873
P	4.21	H	12.5	G 0.25	

Residuals in seconds of arc

521011 012	0.3-	1.5+	730924 675	0.9-	1.7+	730930 675	0.9-	1.8-
691015 095	0.1-	2.8+	730925 675	0.9+	0.7-	731001 095	(5.2-	1.3-)
730919 675	(5.0+	5.8+)	730925 675	2.1+	0.7+	731029 095	1.5-	2.4-
730920 675	0.5-	0.8+	730929 675	1.0+	1.5-	861127 033	0.0	1.0-
730920 675	0.2+	2.3+	730929 675	0.2+	2.1-	861127 033	0.1-	0.3-
730924 675	0.2-	1.0+	730930 675	0.0	1.5-			

1977 EM5 = 1986 RK3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi	
M 253.46753		(1950.0)	P	Q	
n 0.26638642	Peri.	223.60057	+0.75367424	-0.65720661	
a 2.3921844	Node	177.45256	+0.63935958	+0.73050934	
e 0.2111629	Incl.	9.57116	+0.15229731	+0.18556829	
P 3.70	H	14.0	G 0.25		

Residuals in seconds of arc

770312 381	1.4-	0.8+	770315 381	0.5+	0.1+	860906 071	2.2-	1.4-
770312 381	0.3+	0.5+	770315 381	0.9-	0.1-	860907 071	0.9+	0.5+
770314 381	0.0	0.3+	860812 095	0.3+	0.2+	860907 071	1.5+	0.8+
770314 381	1.4+	1.5-	860906 071	0.7-	0.1-			

1978 RZ = 1977 LH1
Id. E. Bowell (MPC 11050)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green	
M 71.72362		(1950.0)	P	Q	
n 0.19862039	Peri.	250.92385	+0.97486590	-0.21825970	
a 2.9092946	Node	121.66044	+0.21901176	+0.90201053	
e 0.0788454	Incl.	3.01114	+0.04086962	+0.37247780	
P 4.96	H	13.0	G 0.25		

Residuals in seconds of arc

730919 675	0.4-	0.6+	730929 675	0.3+	0.1+	770613 675	(4.5-	0.4+)
730919 675	0.4-	0.4-	730930 675	0.6-	1.0-	770613 675	(4.9+	0.1-)
730920 675	0.8+	0.1-	730930 675	0.4-	1.6-	770614 675	2.5+	0.8-
730924 675	1.3+	0.6-	731004 675	0.8-	2.6+	780901 095	1.5-	0.2+
730924 675	0.3+	1.5-	731004 675	1.0-	0.9+	780905 095	0.5-	2.2+
730925 675	1.6+	2.4-	731005 675	0.3+	0.9-	780907 095	0.8+	0.7+
730925 675	1.8+	2.4-	731005 675	0.1-	0.3-	780912 095	1.0+	1.7+
730929 675	0.3-	0.0	770613 675	2.5-	0.5+	781009 095	1.9-	2.0+

1978 VR4 = 1989 EX4

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi	
M 87.43462		(1950.0)	P	Q	
n 0.30273361	Peri.	239.18964	-0.27848506	-0.95901186	
a 2.1966572	Node	227.07626	+0.90377840	-0.24321500	
e 0.1145164	Incl.	4.10097	+0.32500874	-0.14540534	
P 3.26	H	14.0	G 0.25		

Residuals in seconds of arc

781105 675	0.1-	0.1-	781108 675	0.1-	0.1+	890307 675	0.4-	0.8-
781106 675	0.2+	0.8-	781129 675	0.7-	0.1+	890308 675	0.4+	0.8+
781107 675	0.1+	0.9+	781130 675	0.6+	0.2-			

1979 SG = 1979 SN = 1977 FG2 = 1986 CO = 1988 RJ9
Id. S. Nakano (d, MPC 10610; unpublished)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Nakano	
M 307.81639		(1950.0)	P	Q	
n 0.21108820	Peri.	127.33388	-0.38297097	-0.92189009	
a 2.7935789	Node	344.85434	+0.76032504	-0.27845459	
e 0.0811528	Incl.	12.99527	+0.52463232	-0.26940990	
P 4.67	H	12.5	G 0.25		

Residuals in seconds of arc

770326 095	0.1+	0.4+	880901 809	1.1+	0.2+	880910 809	1.2-	0.8+
790917 046	1.5+	1.2+	880903 809	0.1+	0.3+	880910 809	0.9-	0.7+
790917 046	0.7+	0.9+	880903 809	0.3+	0.2+	880910 809	0.9-	0.7+
790925 046	0.4+	0.4+	880903 809	0.4+	0.2+	880913 809	0.8-	0.1-
790925 046	1.4+	0.4-	880904 809	0.2-	0.3+	880913 809	0.7-	0.2-
790926 046	1.2-	0.9-	880904 809	0.1-	0.3+	880913 809	0.5-	0.0
790926 046	0.2+	0.1-	880904 809	0.0	0.3+	880917 809	0.6+	0.7-
790927 046	0.8-	1.5-	880905 809	0.3-	0.6+	880917 809	0.3+	0.6-
790927 046	1.8-	0.2+	880905 809	0.4-	0.4+	880917 809	0.1+	0.3-
860207 046	1.7+	2.5+	880905 809	0.5-	1.2+	880919 809	0.4+	1.0-
880901 809	0.8+	0.4+	880907 809	0.9-	0.4+	880919 809	0.3+	1.0-
880901 809	1.0+	0.2+	880907 809	0.8-	0.5+	880919 809	0.4+	0.7-

1980 LU = 1980 KP = 1988 RL4
Id. C. Shoemaker (d), S. Nakano
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano

M 155.98805		(1950.0)	P	Q
n 0.25980288	Peri.	99.30936	-0.02074357	+0.99973388
a 2.4324333	Node	169.48624	-0.93759051	-0.01594697
e 0.1696368	Incl.	3.17097	-0.34712208	-0.01666940
P 3.79	H	14.5	G 0.25	

Residuals in seconds of arc

800516 675	0.1-	3.0+	880903 809	0.4-	0.7-	880912 809	1.1+	0.3+
800610 675	0.7-	0.3-	880903 809	0.4-	0.6-	880912 809	1.3+	0.6+
800611 675	1.1+	0.7-	880903 809	0.1-	0.6-	880913 809	0.9+	1.3+
800612 675	(7.0+	0.4-)	880906 809	1.2-	1.8-	880913 809	1.3+	1.2+
800618 675	0.3-	1.1-	880906 809	1.2-	1.9-	880913 809	1.8+	1.1+
800709 675	(75.3-	68.3-)	880908 809	0.9-	1.4-	880915 809	0.4-	2.2+
880901 809	0.7-	1.4-	880908 809	0.7-	1.5-	880915 809	0.3-	2.2+
880901 809	0.4-	1.6-	880908 809	0.4-	1.5-	880915 809	0.2-	2.0+
880901 809	0.6-	1.4-	880912 809	1.1+	0.5+	880915 809	0.5-	2.4+
880903 809	0.9-	1.7-	880912 809	1.4+	0.6+	880915 809	0.1-	2.4+
880903 809	0.7-	1.5-	880912 809	1.1+	0.5+	880915 809	0.2-	2.4+
880903 809	0.5-	1.7-	880912 809	1.2+	0.4+			

1980 TV2 = 1987 WG = 1989 GH1
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M 205.10140		(1950.0)	P	Q
n 0.28632823	Peri.	32.37482	+0.78130337	-0.62403930
a 2.2797817	Node	6.27667	+0.54708850	+0.67558887
e 0.2471495	Incl.	6.21314	+0.30043173	+0.39262531
P 3.44	H	15.0	G 0.25	

Residuals in seconds of arc

801010 095	1.4+	2.2+	890403 809	0.3+	1.0-	890408 809	0.0	0.9+
801014 511	0.4+	0.8-	890403 809	0.4-	1.1-	890408 809	0.3-	1.0+
801014 511	0.3-	0.4-	890403 809	1.0-	0.7-	890410 809	1.1+	0.1+
801014 511	1.3-	0.9-	890405 809	(5.1+	2.6-)	890410 809	0.5+	0.9+
801015 095	(6.3+	0.1-)	890405 809	(5.5+	2.5-)	890410 809	0.0	0.5+
871119 688	0.3-	0.3+	890405 809	(5.3+	3.6-)			
871119 688	0.4+	0.1-	890408 809	0.0	0.3-			

1981 DX1 = 1987 SN4 = 1989 EA6
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M 161.42701		(1950.0)	P	Q
n 0.23877521	Peri.	79.08492	+0.79659503	-0.58641965
a 2.5732230	Node	316.60620	+0.43665200	+0.72610510
e 0.1835953	Incl.	12.33754	+0.41805668	+0.35900331
P 4.13	H	14.5	G 0.25	

Residuals in seconds of arc

810209	413	1.0-	0.1+	810308	413	2.1+	0.6-	870929	688	0.2-	1.2+
810212	413	0.9+	0.5-	810312	413	0.8-	1.0-	870929	688	1.9+	1.3+
810228	413	2.2-	0.9+	810312	413	2.0+	1.0-	890302	413	1.3-	0.8+
810228	413	3.3-	1.1-	810409	413	0.0	1.0+	890302	413	0.5-	0.4+
810306	413	2.7-	0.9+	810409	413	2.3+	0.3+	890304	413	1.4+	2.3+
810306	413	2.4+	1.2-	810501	413	0.4-	0.0	890307	413	0.9+	1.6-
810308	413	0.5-	0.7+	810502	413	0.9+	1.3-	890307	413	0.0	1.3-

1981 SA5 = 1976 SF6 = 1986 TC10 = 1988 BR

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 255.51299	(1950.0)	P		Q
n 0.20380326	Peri. 145.03676	+0.93922719		+0.34323184
a 2.8597537	Node 194.89364	-0.32055617		+0.86991747
e 0.0872970	Incl. 1.48208	-0.12286591		+0.35416875
P 4.84	H 12.5	G 0.25		

Residuals in seconds of arc

760925	095	0.5-	1.1+	811005	095	2.8-	0.0	880123	552	1.0+	2.0-
810925	095	2.6+	3.8+	861003	095	1.4-	1.6-	880123	552	0.8-	2.9+
810928	095	0.3+	2.8-	861008	095	1.9+	0.2-				

1981 TJ4 = 1954 SW = 1986 TX4 = 1986 TK10

Id. T. Kobayashi, S. Nakano (d)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 246.43622	(1950.0)	P		Q
n 0.18649238	Peri. 300.28323	+0.83559696		+0.54226486
a 3.0340914	Node 27.17199	-0.41422752		+0.72705591
e 0.1125204	Incl. 11.09784	-0.36082306		+0.42111581
P 5.28	H 11.5	G 0.25		

Residuals in seconds of arc

540927	760	0.9-	0.4+	811024	095	0.2-	1.9-	861003	095	2.5-	1.5+
540927	760	0.4+	0.4+	861001	010	(8.0+	1.7-)	861008	095	0.2+	0.1+
811008	095	0.8-	2.0+	861001	010	3.2+	3.1-				
811022	095	0.6+	0.8+	861001	010	(12.8+	3.0-)				

1983 HB1 = 1934 PK = 1989 GS6

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P)				Marsden
M 322.54629	(1950.0)	P		Q
n 0.17688936	Peri. 191.20016	+0.54126529		+0.81492717
a 3.1429377	Node 111.88023	-0.75314703		+0.57942716
e 0.1564001	Incl. 12.90105	-0.37390030		+0.01256471
P 5.57	H 11.5	G 0.25		

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

340807	078(0.16-	0.02-)X		830418	688	0.4+	2.4-	890411	809	0.5+	0.0
830410	095	1.0+	1.5+	830501	095	0.3-	0.3-	890413	809	0.7-	0.1+
830412	095	0.2-	2.7+	890405	809	0.2-	0.1-				
830418	688	1.1-	1.7-	890407	809	0.5+	0.2+				

1983 XE = 1979 YD4 = 1989 GM6

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 162.38252	(1950.0)	P		Q
n 0.24566860	Peri. 192.80341	+0.34690110		-0.93347106
a 2.5248541	Node 236.96584	+0.86975924		+0.35650773
e 0.1796196	Incl. 6.23550	+0.35096795		+0.03916667
P 4.01	H 14.5	G 0.25		

Residuals in seconds of arc

791218 095	0.0	0.4-	831209 688	0.8-	0.5+	890408 809	0.8+	0.4+
831201 688	0.6+	0.9-	831209 688	0.8-	1.6-	890408 809	0.7+	0.7+
831201 688	1.1-	0.0	890405 809	0.8-	0.6+	890410 809	0.3+	0.1-
831206 688	0.4-	0.0	890405 809	1.2-	0.2+	890410 809	0.1-	0.9-
831206 688	2.2+	0.5-	890405 809	0.4-	0.6-	890410 809	0.3-	1.0-
831206 801	0.3+	2.9+	890408 809	1.0+	0.8+			

1984 BK = 1973 AF2 = 1979 VE2 = 1986 RS10 = 1986 VV8

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 285.04489		(1950.0)	P	Q
n 0.26972436	Peri.	80.99476	+0.90465389	-0.42171122
a 2.3724074	Node	303.92546	+0.35614001	+0.82719718
e 0.1019490	Incl.	4.23852	+0.23402058	+0.37135492
P 3.65	H	13.0	G 0.25	

Residuals in seconds of arc

730101 095	0.8+	3.0+	840126 046	2.2-	0.5-	840131 372	0.5-	0.4-
791114 095	0.0	0.9+	840127 046	0.6-	0.9-	840131 372	1.9+	1.1+
840125 372	1.4-	1.9-	840127 046	0.5-	0.2-	860909 095	0.4+	1.6-
840125 372	(2.6-	5.0-)	840129 046	0.5-	0.7-	860912 095	0.4+	1.7-
840126 046	(6.5-	3.5-)	840129 046	2.4+	1.1-	861104 095	0.3-	1.8+

1985 GU1 = 1976 GH1 = 1976 GW7 = 1982 TS2 = 1982 VY9 = 1986 TF15

Id. T. Kobayashi, K. Ichikawa, S. Nakano (d)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 308.25446		(1950.0)	P	Q
n 0.22642608	Peri.	272.45863	+0.24364758	+0.96835125
a 2.6659485	Node	12.06480	-0.75454866	+0.22433581
e 0.2065304	Incl.	15.01349	-0.60933749	+0.10940431
P 4.35	H	12.0	G 0.25	

Residuals in seconds of arc

760401 095	4.0+	4.7+	850412 675	0.3-	0.6-	861006 095	1.8-	3.0+
760404 095	1.7+	3.5+	850415 675	(5.7-	1.7-)	861010 095	2.1-	3.1+
821015 095	2.2+	2.6-	850423 675	1.1+	0.7-	861011 095	2.8-	1.9+
821111 095	1.4+	2.6-	850424 675	0.7-	0.4-			
850411 675	1.0-	0.4-	850425 675	0.9-	0.5-			

1986 AE

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Bardwell
M 337.21033		(1950.0)	P	Q
n 0.21850267	Peri.	110.06885	+0.65040465	-0.60876332
a 2.7300140	Node	290.40257	+0.37668964	+0.77785256
e 0.3766331	Incl.	28.99273	+0.65960496	+0.15605324
P 4.51	H	13.5	G 0.25	

Residuals in seconds of arc

860110 675	0.7+	0.5-	860207 675	0.6+	1.3+	860408 675	0.1+	0.0
860111 675	(3.1+	7.0-)	860304 675	0.4-	0.3-	860408 675	0.2+	0.1-
860116 675	0.1-	0.8-	860304 675	0.0	0.5-	890615 675	0.1-	0.1+
860203 054	1.6-	0.2-	860304 675	0.3-	0.4-	890615 675	0.0	0.1+
860204 675	1.3+	0.5+	860405 675	0.3+	0.0	890615 675	0.2-	0.0
860207 675	0.7-	0.8+	860405 675	0.1+	0.2+			

1986 PK6 = 1989 LS

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5	(J-P)			Nakano
M 39.40716		(1950.0)	P	Q
n 0.29267240	Peri.	345.91042	-0.44688492	+0.89166695
a 2.2467206	Node	257.50380	-0.81339414	-0.43862793
e 0.1610391	Incl.	4.24551	-0.37240280	-0.11196244
P 3.37	H	13.5	G 0.25	

Residuals in seconds of arc

860812 095	1.2-	1.4+	890603 675	0.4+	0.6-	890605 675	0.1-	0.1+
860829 095	1.3+	1.6-	890603 675	0.0	0.4-			
860906 095	0.1-	0.2+	890605 675	0.3-	0.7+			

1986 RS1 = 1979 OE11

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M 325.34834		(1950.0)		P	Q
n 0.28773162	Peri.	175.86912		+0.93292077	+0.35879119
a 2.2723627	Node	163.00743		-0.33326760	+0.89238518
e 0.1981397	Incl.	5.98233		-0.13635084	+0.27371075
P 3.43	H	14.5	G	0.25	

Residuals in seconds of arc

790724 413	1.8-	0.1-	860830 095	1.1-	2.8+	860907 095	3.3-	1.4-
790726 675	0.8+	1.0+	860905 046	3.8+	0.3+	860912 095	1.2-	1.3-
790728 413	1.4+	1.2-	860905 046	2.3+	0.1-			

1986 RF13 = 1971 SV = 1976 SG7

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M 259.74023		(1950.0)		P	Q
n 0.19807020	Peri.	183.89800		+0.61627997	+0.78618021
a 2.9146738	Node	124.15333		-0.72099335	+0.58676690
e 0.0714027	Incl.	3.18929		-0.31680843	+0.19397237
P 4.98	H	11.5	G	0.25	

Residuals in seconds of arc

710916 808	0.0	0.1+	860909 095	1.4-	1.7-	861002 095	2.6-	1.8+
760925 095	0.3-	0.9+	860929 095	2.0+	0.8-	861006 095	2.6+	0.3-

1986 SF = 1975 EL5 = 1976 UZ1

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi

M 32.77061		(1950.0)		P	Q
n 0.28980863	Peri.	280.02697		-0.03505577	+0.99927869
a 2.2614926	Node	347.93524		-0.88732820	-0.03784379
e 0.1835928	Incl.	4.00578		-0.45980405	-0.00315488
P 3.40	H	13.5	G	0.25	

Residuals in seconds of arc

750315 095	0.5-	0.1+	860930 046	0.6-	0.8+	861001 046	0.7+	0.5-
750317 095	0.8+	0.3+	860930 046	1.2+	0.6+	861010 095	1.7-	0.1+
761026 095	0.1+	0.1-	861001 046	0.4+	0.2-			

1986 UD3 = 1961 VU = 1978 YA2 = 1982 VY10

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano

M 219.91101		(1950.0)		P	Q
n 0.23235990	Peri.	162.75066		+0.76459398	-0.61906499
a 2.6203710	Node	236.86365		+0.56315712	+0.77701207
e 0.1643975	Incl.	12.36523		+0.31344874	+0.11406485
P 4.24	H	12.5	G	0.25	

Residuals in seconds of arc

611111 760 (2.9+	8.1+)		781231 808	0.5+	0.1+	861006 095	1.0+	3.1+
611111 760	0.1+	3.1+	781231 808	0.8+	0.0	861028 010	2.5-	0.2-
781229 808	1.1-	0.7+	821114 095	1.3+	3.2-	861028 010	0.7-	1.8-
781229 808	0.5-	1.4-	861003 095	1.3+	0.4+	861028 010	0.2-	0.7-

1986 VC
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Marsden
M 246.53419 (1950.0) P Q
n 0.22631185 Peri. 23.58468 +0.87323833 -0.48691294
a 2.6668508 Node 5.66717 +0.41026112 +0.71330304
e 0.0887965 Incl. 11.24195 +0.26294608 +0.50409777
P 4.36 H 12.5 G 0.25
Residuals in seconds of arc

840329	413	1.8-	0.3+	861105	413	0.6-	0.0	861203	413	0.5+	1.1+
840329	413	1.6+	0.6-	861105	413	1.2+	2.4-	890415	413	0.4+	0.5-
861104	010	0.1-	0.4-	861105	010	(5.3-	1.1-)	890416	413	0.6-	2.0-
861104	010	0.6+	0.1+	861105	010	(3.5+	0.5-)	890721	413	0.5+	0.7+
861104	413	0.6+	1.0+	861109	413	1.6-	0.0	890725	413	0.4-	0.8+
861104	413	0.5+	1.0-	861202	413	0.5-	0.6+				

1987 QA
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Bardwell
M 312.68662 (1950.0) P Q
n 0.46632930 Peri. 278.88025 -0.00446990 -0.99177288
a 1.6469266 Node 168.68831 +0.95793282 +0.03246508
e 0.4686315 Incl. 40.70974 -0.28695773 +0.12382480
P 2.11 H 15.5 G 0.25
Residuals in seconds of arc

870823	675	1.3+	1.0-	871118	474	(0.5+	4.2+)	880520	688	0.7-	1.0-
870823	675	1.9-	1.3+	871118	474	(0.0	4.0+)	880520	688	0.7-	1.0-
870826	675	1.7+	1.7-	880121	474	0.2+	1.7+	890523	675	0.3-	1.5+
870826	675	0.4+	0.1-	880121	474	2.2+	1.4+	890523	675	0.2-	0.7+
870903	675	1.0-	2.8-	880125	474	1.7-	1.4-	890523	675	0.1-	1.1+
870903	675	0.4-	0.8-	880125	474	1.3+	1.5-	890614	675	0.4+	0.1+
870904	675	1.5+	1.5-	880212	691	1.0-	0.3-	890614	675	0.4+	0.3+
870904	675	0.7-	1.3+	880212	691	0.6-	0.1-	890614	675	0.4+	0.1-
870915	474	1.0-	0.8+	880212	691	0.9-	0.5-	890615	675	0.4+	0.5+
870915	474	(5.1-	6.6+)	880213	691	1.4+	0.8+	890615	675	0.2+	0.3+
870919	474	0.1+	1.3+	880213	691	0.9+	0.8+	890615	675	0.3+	0.3+
871018	474	1.4-	2.3+	880213	691	0.8+	0.9+				
871018	474	0.7+	1.2-	880317	568	0.7-	0.4-				

1987 SC4 = 1989 EL5
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 218.98044 (1950.0) P Q
n 0.29129506 Peri. 72.22038 +0.99465892 +0.06442843
a 2.2537972 Node 284.02672 -0.09227334 +0.90513632
e 0.2309640 Incl. 4.76776 +0.04625210 +0.42021093
P 3.38 H 14.5 G 0.25
Residuals in seconds of arc

870921	688	0.7+	0.7-	870929	688	0.3-	1.0+	890302	413	0.8-	0.2-
870921	688	0.0	0.4+	871016	688	1.4-	0.2-	890302	413	1.8+	0.6-
870929	688	0.1+	1.0+	871016	688	0.7+	0.1-	890304	413	1.1-	0.8+

1987 YS1 = 1989 GT6
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Marsden
M 152.27172 (1950.0) P Q
n 0.24134772 Peri. 305.64350 -0.08830327 -0.98920740
a 2.5549051 Node 148.79795 +0.97120455 -0.11157780
e 0.1214457 Incl. 13.04388 +0.22127868 +0.09496905
P 4.08 H 13.5 G 0.25

Residuals in seconds of arc

871217 809	0.7-	0.4-	871223 809	0.4-	0.1-	890411 809	0.5-	0.5+
871217 809	1.1+	0.7+	871223 809	0.2+	0.4-	890413 809	0.2-	0.6-
871220 809	0.2-	0.1-	890405 809	0.4-	0.4+			
871220 809	0.0	0.3+	890407 809	1.0+	0.2-			

1988 CT2 = 1978 RN4 = 1989 LQ
Id. C. M. Bardwell, T. Kobayashi
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M 16.06722		(1950.0)	P	Q
n 0.25465601	Peri.	147.64993	-0.01571772	+0.99886917
a 2.4650986	Node	121.41328	-0.92815408	+0.00211417
e 0.1083324	Incl.	3.01379	-0.37186416	-0.04749645
P 3.87	H	13.5	G 0.25	

Residuals in seconds of arc

780905 095	0.5+	1.7+	880217 809	0.6+	0.2-	890603 675	0.1-	0.6+
880211 809	1.4-	0.1-	880221 809	0.4+	1.2-	890605 675	0.0	0.5+
880215 809	2.8+	0.4-	880221 809	0.8+	0.3-	890605 675	0.3+	0.0
880216 809	0.5+	0.8-	880221 809	0.2+	0.2+	890630 675	0.1+	0.0
880216 809	0.4+	0.7-	880223 809	(8.4-	1.4+)	890630 675	1.7+	0.2-
880216 809	0.9-	0.4+	880223 809	(9.0-	2.7+)	890703 675	1.3+	0.6+
880217 809	0.2+	0.0	880223 809	(7.6-	4.2+)	890703 675	0.1+	1.7+
880217 809	0.1-	0.3+	890603 675	0.5-	1.5+			

1988 CK4 = 1989 NW
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M 24.47038		(1950.0)	P	Q
n 0.22379951	Peri.	345.20316	+0.10974441	+0.97463329
a 2.6867720	Node	290.79460	-0.88938245	+0.00866899
e 0.1561084	Incl.	12.04298	-0.44379615	+0.22363987
P 4.40	H	14.0	G 0.25	

Residuals in seconds of arc

880213 809	0.3+	2.3-	880221 809	1.0-	0.2+	880225 413	1.3+	0.0
880215 809	0.6+	0.0	880223 809	0.6+	0.7+	890701 675	0.4+	0.7+
880216 809	0.0	0.5-	880223 809	0.2+	0.1-	890701 675	0.9+	0.4-
880216 809	0.4+	0.7-	880223 809	0.5-	0.0	890704 675	0.0	1.7-
880216 809	0.2+	0.7-	880223 413	0.7+	0.2-	890704 675	0.5-	3.1-
880221 809	0.5-	0.3+	880223 413	1.4+	1.4+			
880221 809	0.9-	1.1+	880225 413	0.4-	0.6+			

1988 PB1
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Bardwell

M 304.15391		(1950.0)	P	Q
n 0.08289753	Peri.	164.15747	+0.39722433	-0.81010319
a 5.2092477	Node	260.73608	+0.78735317	+0.54222732
e 0.0460007	Incl.	25.90706	+0.47147409	-0.22298511
P 11.89	H	10.0	G 0.25	

From 8 observations 1988 Aug. 13-Nov. 6, mean residual 0".8.

1988 RG4 = 1976 HE = 1983 CU = 1985 VW4
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano

M 229.18353		(1950.0)	P	Q
n 0.26625818	Peri.	81.89531	-0.92718849	+0.36170459
a 2.3929572	Node	119.26233	-0.37234740	-0.86146211
e 0.0697450	Incl.	6.41182	-0.04097453	-0.35644470
P 3.70	H	13.0	G 0.25	

Residuals in seconds of arc

760423	095	0.6-	1.8-	880907	809	1.1+	0.1-	880914	809	0.1+	0.3-
830215	688	0.4+	0.7-	880907	809	1.1+	0.0	880914	809	0.1+	0.2-
830215	688	1.5+	1.8-	880907	809	0.9+	0.3+	880914	809	0.3+	0.0
830219	688	0.8-	0.5+	880907	809	1.0+	0.3+	880916	809	0.1+	0.4-
830219	688	1.5-	0.1+	880910	809	1.0+	0.8+	880916	809	0.0	0.6-
851111	095	0.1+	0.4-	880910	809	1.0+	1.0+	880916	809	0.1-	0.7-
880901	809	1.0-	0.8+	880910	809	0.7+	1.0+	880917	809	1.2-	1.0-
880901	809	0.7-	1.0+	880910	809	2.1+	0.1+	880917	809	1.0-	1.1-
880901	809	0.5-	1.1+	880910	809	2.0+	0.1+	880917	809	0.9-	1.2-
880903	809	0.7-	0.7+	880910	809	2.1+	0.0	880918	809	2.2-	1.7-
880903	809	0.6-	1.0+	880911	809	0.5+	1.2+	880918	809	2.0-	1.7-
880903	809	0.9-	0.9+	880911	809	0.5+	1.1+	880918	809	1.7-	1.6-
880905	809	0.8+	0.4+	880911	809	0.6+	1.1+	880919	809	3.0-	2.6-
880905	809	0.8+	0.4+	880913	809	1.0+	0.4+	880919	809	2.6-	2.7-
880905	809	0.9+	0.3+	880913	809	1.1+	0.4+	880919	809	3.0-	2.8-
880907	809	1.0+	0.0	880913	809	1.1+	0.5+				

1988 RN4 = 1983 EQ

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Nakano	
M 149.56942		(1950.0)		P	Q
n	0.23720897	Peri.	279.33787	-0.24024210	+0.96759334
a	2.5845375	Node	336.31827	-0.79714150	-0.24236445
e	0.2608220	Incl.	11.16310	-0.55393968	-0.07087034
P	4.16	H	13.0	G 0.25	

Residuals in seconds of arc

830310	688	0.6-	0.1+	880903	809	0.0	0.8-	880914	809	0.7-	0.0
830310	688	0.6-	0.6+	880906	809	0.3-	0.4+	880914	809	0.7-	0.0
830316	688	0.9-	0.7-	880906	809	0.0	0.4+	880914	809	0.7-	0.0
830316	688	1.9+	0.3-	880908	809	0.2-	0.1+	880918	809	0.6+	0.2-
880901	809	0.0	0.2+	880908	809	0.1+	0.1-	880918	809	0.6+	0.2-
880901	809	0.2+	0.1+	880908	809	0.1-	0.1-	880918	809	0.5+	0.2-
880901	809	0.1-	0.1+	880911	809	1.1-	0.2+	880919	809	1.1+	0.5+
880903	809	0.2+	0.8-	880911	809	1.0-	0.2+	880919	809	1.4+	0.3+
880903	809	0.1+	0.9-	880911	809	1.0-	0.3+	880919	809	1.5+	0.1+

1988 RR4 = 1982 BY2 = 1982 BJ10

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Nakano	
M 194.49813		(1950.0)		P	Q
n	0.22583216	Peri.	62.27452	-0.78828577	+0.61450626
a	2.6706259	Node	155.60109	-0.58791053	-0.73713060
e	0.1568088	Incl.	4.36307	-0.18156751	-0.28110592
P	4.36	H	12.5	G 0.25	

Residuals in seconds of arc

820119	095	1.2+	1.4-	880903	809	0.4-	0.5+	880912	809	0.4-	0.3-
820120	095	0.8+	1.5+	880903	809	0.2-	0.4+	880912	809	0.4-	0.4-
820127	046	(1.0-	4.5+)	880906	809	0.2-	0.4-	880915	809	0.1-	0.2-
820127	046	2.0-	0.1-	880906	809	0.0	0.4-	880915	809	0.3-	0.3-
880901	809	0.8+	0.2+	880908	809	0.3-	0.1-	880915	809	0.6-	0.3-
880901	809	0.8+	0.1+	880908	809	0.3+	0.1-	880920	809	0.3+	0.5+
880901	809	0.9+	0.1+	880908	809	0.3+	0.3-	880920	809	0.4+	0.4+
880903	809	0.7-	0.7+	880912	809	0.3-	0.4-	880920	809	0.0	0.5+

1988 RA5 = 1957 SA = 1968 KD = 1969 VD1 = 1976 MG = 1985 XZ1
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
M 97.57682 (1950.0) P Q
n 0.25365627 Peri. 242.13027 +0.91041452 +0.40887677
a 2.4715666 Node 93.67706 -0.35388102 +0.84854217
e 0.1744980 Incl. 3.61775 -0.21427465 +0.33585111
P 3.89 H 13.0 G 0.25
Residuals in seconds of arc

570918	760	1.9-	0.1+	880905	809	0.2+	0.2-	880913	809	1.2+	0.8-
570918	760	1.7-	1.8+	880905	809	0.3+	0.2-	880914	809	0.3+	0.5-
680522	095	1.8+	1.4+	880905	809	0.4+	0.6-	880914	809	0.3-	0.3-
691111	095	2.6+	1.2+	880907	809	0.7+	0.1-	880914	809	0.0	0.4-
691113	095	1.4+	2.0+	880907	809	0.5+	0.7+	880916	809	0.1+	0.5-
760620	095	0.7+	0.5+	880907	809	0.5+	0.6+	880916	809	0.0	0.4-
851214	675	(8.9-	1.0+)	880909	809	0.3-	0.6-	880916	809	0.1+	0.5-
851214	675	3.9-	0.9+	880909	809	0.2-	0.7-	880917	809	0.6-	0.2-
880902	809	0.9-	0.1+	880909	809	0.0	0.7-	880917	809	0.5-	0.2-
880902	809	0.4-	0.2+	880910	809	0.6+	0.6+	880917	809	0.3-	0.0
880902	809	0.5-	0.2+	880910	809	0.7+	0.6+	880918	809	0.4-	0.5-
880903	809	0.8-	1.1+	880910	809	0.8+	0.4-	880918	809	0.2-	0.8-
880903	809	0.8-	1.1+	880911	809	0.6+	0.3+	880918	809	0.2+	0.6-
880903	809	0.7-	1.0+	880911	809	0.7+	0.2+	880919	809	0.1-	0.1-
880904	809	1.1-	0.1+	880911	809	0.7+	0.0	880919	809	0.1+	0.1+
880904	809	0.9-	0.0	880913	809	0.9+	0.4-	880919	809	0.5-	0.3-
880904	809	0.7-	0.0	880913	809	1.2+	0.4-				

1988 RU6 = 1979 OL = 1987 HY
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano
M 195.87620 (1950.0) P Q
n 0.23044547 Peri. 25.15802 -0.72766872 +0.68585725
a 2.6348635 Node 198.15626 -0.63454993 -0.67857577
e 0.1437116 Incl. 1.82123 -0.26047000 -0.26293491
P 4.28 H 13.5 G 0.25
Residuals in seconds of arc

790724	675	0.1-	2.4+	880908	809	0.1+	0.5-	880915	809	0.6-	0.5-
790725	675	0.7-	2.6+	880909	809	0.5+	0.0	880915	809	0.4-	0.6-
870423	046	0.3+	1.5-	880909	809	0.5+	0.2+	880915	809	0.3-	0.5-
870423	046	2.1-	1.5-	880909	809	0.5+	0.5+	880918	809	0.2-	0.2-
870424	046	1.3-	0.9-	880912	809	0.5+	0.6-	880918	809	0.0	0.2-
870424	046	0.7-	0.5-	880912	809	0.4+	0.5-	880918	809	0.1+	0.3-
870427	046	1.6+	0.1+	880912	809	0.5+	0.6-	880920	809	0.6+	0.5-
870427	046	0.4+	0.6-	880914	809	0.5-	0.3-	880920	809	0.8+	0.4-
880908	809	0.0	0.5-	880914	809	0.4-	0.5-	880920	809	0.8+	0.5-
880908	809	0.0	0.5-	880914	809	0.2-	0.5-				

1988 RF7 = 1988 RL7 = 1936 OJ = 1939 HF = 1949 OD = 1949 OK1 = 1962 PS
Id. H. Debehogne (d, MPC 14668), S. Nakano (unpublished), O.Kippes (d, MPC 777)
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Nakano
M 115.50579 (1950.0) P Q
n 0.30391884 Peri. 234.15566 +0.95258576 +0.28943854
a 2.1909424 Node 108.85644 -0.23725000 +0.89965392
e 0.2446390 Incl. 5.69083 -0.19050672 +0.32687635
P 3.24 H 13.5 G 0.25

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

```
360716 078(23.3- 36.9-)X  880902 809  0.3-  0.6-    880910 809  0.5+  0.5-
360723 078 (1.6- 38.3-)X  880904 809  0.4-  0.2-    880911 809  1.0-  0.4+
390422 020(0.05+ 0.05-)   880904 809  0.5-  0.4-    880911 809  0.5-  0.3+
390422 020(0.05+ 0.04-)   880904 809  0.1-  0.8-    880911 809  0.2-  0.2+
490720 078(10.7-  7.8-)Y  880905 809  1.5+  1.7+    880917 809 (0.1-  5.5+)
490725 760  0.4+  0.3+    880905 809  1.8+  1.4+    880918 809 (0.5-  5.4+)
490725 760  0.3-  0.4-    880905 809  2.2+  1.0+    880918 809 (0.4-  5.5+)
620802 760  1.1-  0.6+    880907 809  0.6-  0.1-    880919 809 (0.6-  6.8+)
620802 760  0.9+  0.3-    880907 809  0.1-  0.2-    880919 809 (0.5-  6.7+)
880902 809  0.9-  1.3-    880910 809  0.3-  0.1+    880919 809 (0.2-  7.1+)
880902 809  0.6-  1.1-    880910 809  0.3-  0.2-
```

1988 VT = 1984 YL3
Id. S. Nakano

```
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5  (J-P)           Marsden
M 114.42714             (1950.0)            P              Q
n   0.21812152     Peri.  106.25992     +0.87304411     +0.46291232
a   2.7331989      Node   226.46128     -0.48754134     +0.83496498
e   0.1218026      Incl.   12.21019     +0.00987030     +0.29756624
P   4.52           H   13.0           G   0.25
```

Residuals in seconds of arc

```
830614 413  0.4-  1.8-    881102 888  2.5-  0.9-    881107 888  0.7+  0.2+
830614 413  0.9-  2.1-    881103 888  0.2+  0.7+    881107 888  0.2+  0.1-
831007 413  1.2+  0.8+    881103 888(13.8+  0.7+)   881111 888  0.0   0.2+
831007 413  1.4+  0.7-    881103 888  1.0+  0.7+    881111 888  0.6-  0.3+
841227 095  0.4-  4.6-    881105 888  0.8+  0.2+    881130 888  0.7-  1.0+
881102 888  0.1-  0.2-    881105 888  0.4+  0.1-    881130 888  0.1-  1.1+
```

1989 AM2 = 1975 XX3 = 1986 XN = 1987 WP2

```
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5  (J-P)           Bardwell
M  73.46841             (1950.0)            P              Q
n   0.08205885     Peri.  350.57632     +0.38796952     -0.79820900
a   5.2446916      Node    75.40174     +0.87356668     +0.15904883
e   0.1362136      Incl.   28.43610     +0.29387226     +0.58100418
P  12.01           H    9.5           G   0.25
```

Residuals in seconds of arc

```
751202 095  0.7+  1.8-    871126 033  0.4-  1.0+    890202 675  0.3+  1.3+
861202 688  0.2+  0.1-    890111 675  0.7-  0.1-    890308 675  0.6+  0.8+
861202 688  0.6-  0.3+    890111 675  0.3+  0.8+    890309 675  0.9+  0.2-
871126 033  0.2-  1.4+    890202 675  1.3-  1.3+
```

1989 AZ5 = 1956 TA

```
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5                  Kobayashi
M  67.07793             (1950.0)            P              Q
n   0.25133291     Peri.   12.22867     -0.51626795     -0.85342966
a   2.4867749      Node   108.89201     +0.77920334     -0.50276138
e   0.1496695      Incl.    4.33953     +0.35540057     -0.13743657
P   3.92           H   13.0           G   0.25
```

Residuals in seconds of arc

```
561011 057  0.5-  0.8+    890104 413  1.3+  0.7-    890111 033  0.0   0.9-
561012 057  0.4+  0.8-    890110 413  1.4-  0.8+    890111 033  0.9+  0.6-
890104 413  1.0-  0.6+    890110 413  0.8+  0.6+
```

1989 AT6 = 1978 EW5 = 1979 QE3 = 1986 KH

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 318.56753		(1950.0)	P	Q
n 0.26516099	Peri.	140.39154	-0.31918287	+0.94700488
a 2.3995491	Node	110.96801	-0.87896429	-0.28157341
e 0.1532022	Incl.	2.21633	-0.35432198	-0.15459036
P 3.72	H 13.5		G 0.25	

Residuals in seconds of arc

780306 095	0.0	0.0	790823 809	0.3+	0.2+	890202 033	0.0	1.0+
790822 809	0.1-	0.8+	860529 095	0.1+	0.8+	890203 033	0.1+	1.0+
790822 809	0.8-	0.6+	890111 033	0.1-	0.4+	890205 033	0.4+	0.3+
790822 809	0.3-	0.3+	890111 033	0.0	0.0			
790823 809	0.1-	0.3+	890114 033	0.1+	0.4+			

1989 AW6 = 1976 UR7

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5				Kobayashi
M 72.31482		(1950.0)	P	Q
n 0.25953900	Peri.	59.71586	-0.46093830	-0.88712972
a 2.4340769	Node	57.74951	+0.80446159	-0.42872247
e 0.1406636	Incl.	1.56976	+0.37466976	-0.17087395
P 3.80	H 14.5		G 0.25	

Residuals in seconds of arc

761022 381	0.2-	0.1-	890111 033	0.1-	0.2-	890202 033	0.0	0.1+
761022 381	0.3-	0.1-	890111 033	0.4+	0.0	890205 033	0.5+	0.1-
761024 381	1.4+	0.6+	890114 033	0.6+	0.1-			

1989 CO = 1931 TH3 = 1955 KA = 1955 MD = 1976 NF

Id. B. G. Marsden, S. Kanda (d, MPC 1596)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P)				Marsden
M 258.04675		(1950.0)	P	Q
n 0.28243501	Peri.	183.45638	+0.67196947	+0.73387743
a 2.3006889	Node	128.79257	-0.67633853	+0.66280798
e 0.2203142	Incl.	7.32715	-0.30170057	+0.14869265
P 3.49	H 13.0		G 0.25	

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

311010 690(0.04-	0.02-)X	890111 033	0.7-	0.2+	890210 033	0.7-	0.4-	
311012 690(0.04-	0.03-)X	890112 033	0.7-	0.2+	890210 033	0.8-	0.1+	
550517 760	1.9-	0.6-	890202 033	1.2-	0.5-	890213 875	60.3-	52.0+
550517 760	2.4+	2.2-	890204 033	0.7-	0.4-	890301 875	1.4+	0.3-
550619 760	0.2-	0.6+	890205 875	1.2+	0.9+	890301 875	1.9+	0.2+
550619 760	0.4-	1.5+	890205 875	1.5+	1.1+	890307 033	0.2-	0.9-
760701 095	0.2+	1.2+	890207 875	0.4-	1.1+	890310 033	0.0	0.4-
890110 033	1.0-	0.7+	890207 875	0.6+	0.4+	890310 033	0.1+	0.6-

1989 CB1 = 1974 VA3 = 1974 WN1

Id. B. G. Marsden; 1974 VD3 = 1974 WN1 (MPC 9041) is invalid

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P)				Marsden
M 319.51148		(1950.0)	P	Q
n 0.30211558	Peri.	131.91265	-0.07884871	+0.99478971
a 2.1996563	Node	133.44169	-0.93891312	-0.05232249
e 0.1532806	Incl.	5.10638	-0.33500004	-0.08749735
P 3.26	H 13.5		G 0.25	

Residuals in seconds of arc

741109	808	0.6-	0.1+		890204	399	1.0+	0.9-		890210	400 (4.7+ 3.2-)
741109	808	0.6+	0.1-		890204	399	0.1-	0.6+		890210	400 1.6+ 0.8+
741117	808	(42.1-	0.0)		890204	399	(1.6-	2.6+)		890210	033 1.0+ 0.5+
741117	808	(49.0-	0.1-)		890205	399	1.0-	0.1+		890210	033 0.7+ 0.6+
890110	033	0.6-	0.1+		890205	399	1.1-	0.2+		890211	399 (2.7+ 0.1+)
890111	033	0.0	0.2-		890205	399	1.2-	1.9-		890211	399 (0.1- 1.0+)
890112	033	0.5+	0.5-		890207	400	(5.4+	1.1-)		890211	399 (2.3+ 0.8-)
890202	033	0.4-	0.1+		890207	400	(2.8+	0.2-)		890312	400 0.2+ 0.1-
890204	033	0.7+	0.1-		890207	400	(3.9+	0.8-)		890312	400 0.7- 0.6-
890204	399	0.7-	0.9+		890210	400	(5.0+	2.8+)		890312	400 (3.1- 1.4+)

1989 EL6 = 1970 EY1 = 1976 UK3

Epoch 1989 Mar. 15.0 ET = JDE 2447600.5			(J-P)		Nakano
M 59.44617		(1950.0)		P	Q
n 0.25878373	Peri.	74.44347		+0.26747315	-0.96356531
a 2.4388154	Node	0.04260		+0.86904111	+0.24122199
e 0.1487440	Incl.	2.14549		+0.41620388	+0.11555881
P 3.81	H	14.5	G	0.25	

Residuals in seconds of arc

700303	805	0.7-	0.3-		761024	381	2.8-	3.1-		890307	033 0.2+ 0.3+
700303	805	0.7+	0.5-		761026	095	2.7+	4.1+		890310	033 0.2- 0.2-
700303	805	0.3-	0.1+		890210	033	0.3-	0.1+		890310	033 0.5+ 0.2+
761024	381	0.2+	1.2-		890210	033	0.0	0.3+			

1989 FB

Epoch 1989 Apr. 24.0 ET = JDE 2447640.5					Marsden
M 225.08389		(1950.0)		P	Q
n 0.92633630	Peri.	333.58655		+0.99332419	+0.06180653
a 1.0422141	Node	23.49098		+0.00782123	+0.80632500
e 0.2503992	Incl.	14.14375		-0.11509076	+0.58823460
P 1.06	H	17.5	G	0.25	

From 7 observations 1989 Apr. 8-June 5.

1989 GP4 = 1933 SP1 = 1976 UJ8

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5					Kobayashi
M 357.67497		(1950.0)		P	Q
n 0.27739790	Peri.	50.63360		-0.28700926	+0.95695304
a 2.3284519	Node	202.79909		-0.90956912	-0.28639191
e 0.0837774	Incl.	6.40141		-0.30051572	-0.04712281
P 3.55	H	14.5	G	0.25	

Residuals in seconds of arc

330927	012	0.5+	1.5-		890403	809	0.4-	0.5+		890405	809 0.1+ 0.1-
761022	381	0.0	0.7-		890403	809	0.1+	0.5+		890410	809 (0.8+ 4.8-)
761022	381	0.9+	0.6-		890403	809	0.3+	0.2+		890410	809 1.6- 1.7-
761024	381	0.0	1.9-		890405	809	1.2+	1.3-		890410	809 1.3- 2.1-

1989 GT4 = 1949 SR1 = 1966 TB = 1983 TS2 = 1986 NT

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5					Kobayashi
M 324.71345		(1950.0)		P	Q
n 0.29094961	Peri.	119.80509		+0.61396616	+0.78929434
a 2.2555763	Node	188.08519		-0.74184844	+0.57365174
e 0.1823116	Incl.	3.15709		-0.26964131	+0.21894778
P 3.39	H	14.0	G	0.25	

Residuals in seconds of arc

490925	760	2.3+	0.3+	860710	010	2.0+	1.2+	890409	809	0.0	0.1+
490925	760	0.3-	3.3-	890403	809	0.0	0.1+	890409	809	0.4+	0.8+
661010	095	2.0-	0.4-	890403	809	0.1+	0.1-	890411	809	0.2-	0.1+
831004	688	1.3+	1.4-	890403	809	2.1-	0.3+	890411	809	0.9+	0.9-
831004	688	0.3-	1.6-	890405	809	0.5-	0.4-	890412	809	0.9-	0.8-
831011	688	0.1+	1.7+	890405	809	0.5+	0.4-	890412	809	0.0	1.1-
831011	688	0.4-	2.3+	890405	809	0.6+	0.1-	890412	809	0.3-	0.3-
860710	010	2.1-	0.3+	890409	809	0.4+	0.2+				

1989 GP6 = 1975 XV6

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)	Marsden
M 340.59208	(1950.0)	P	Q
n 0.18491199	Peri. 141.23680	+0.11556622	+0.97964669
a 3.0513606	Node 134.70619	-0.95911135	+0.15303189
e 0.0841834	Incl. 13.35158	-0.25835995	-0.12989845
P 5.33	H 12.0	G 0.25	

Residuals in seconds of arc

751206	809	0.2+	0.3+	751207	809	0.1+	0.2+	890411	809	0.7+	0.7-
751206	809	0.4+	0.3-	890405	809	0.4+	0.2-	890413	809	0.7-	0.6+
751207	809	0.7-	0.2-	890407	809	0.4-	0.3+				

1989 GR6 = 1965 SL = 1975 AC1 = 1975 BD = 1980 DN1 = 1980 FW11

Id. B. G. Marsden (unpublished; d, MPC 9064)

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)	Marsden
M 232.54434	(1950.0)	P	Q
n 0.23298188	Peri. 272.57236	+0.85088734	-0.47991074
a 2.6157053	Node 116.18293	+0.52437804	+0.80057074
e 0.1928836	Incl. 13.77784	-0.03191247	+0.35884840
P 4.23	H 12.0	G 0.25	

Residuals in seconds of arc

650927	822	0.2+	1.6-	750117	095	2.3-	1.1-	890405	809	0.4-	0.7+
650927	822	0.6+	0.0	800221	033	1.3-	1.0+	890407	809	1.2+	0.0
750110	330	0.4+	1.5+	800222	033	1.5-	1.1+	890411	809	0.5+	0.4+
750116	330	1.4+	0.7+	800316	095	1.6+	5.7-	890413	809	0.7-	0.6+

1989 JA

Epoch 1989 Apr. 24.0 ET = JDE 2447640.5			Marsden
M 328.45246	(1950.0)	P	Q
n 0.41894278	Peri. 231.62657	+0.36149133	+0.90353376
a 1.7688849	Node 61.05659	-0.75220156	+0.42844440
e 0.4840078	Incl. 15.24540	-0.55092362	+0.00788326
P 2.35	H 16.5	G 0.25	

From 17 observations 1989 Apr. 6-June 5.

1989 JC

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)	Bardwell
M 149.73125	(1950.0)	P	Q
n 0.38890805	Peri. 239.44957	-0.33330538	-0.90518059
a 1.8588269	Node 232.40274	+0.93808293	-0.29038944
e 0.0700771	Incl. 19.44267	+0.09438192	-0.31035797
P 2.53	H 13.5	G 0.25	

Residuals in seconds of arc

851215	675	0.8-	0.2-	870825	675	1.2+	0.4-	890603	675	0.3+	0.1+
851215	675	0.5+	0.6-	890502	675	1.8+	0.2+	890603	675	0.4+	1.2-
870823	675	1.1+	1.6+	890502	675	0.6+	0.9+	890605	675	0.7-	0.1+
870823	675	0.6-	0.5-	890504	675	0.8-	0.1+	890605	675	2.2-	1.2-
870825	675	1.3-	0.9-	890504	675	0.1+	0.0				

1989 LA = 1955 QK1 = 1972 NE
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Nakano
M 12.53313 (1950.0) P Q
n 0.22858754 Peri. 144.11095 +0.03211312 +0.99781617
a 2.6491215 Node 127.65851 -0.93313087 +0.05062218
e 0.1837264 Incl. 4.18115 -0.35809989 -0.04242987
P 4.31 H 13.0 G 0.25
Residuals in seconds of arc

550825	760(19.1-	39.1+)X	890603	675	0.1+	0.1+	890605 675	2.9+ 0.5+
720715	095	0.7+ 0.0	890603	675	0.5-	1.8+	890630 675	0.8- 0.4+
720718	095	0.7- 0.0	890605	675	0.2-	0.1+	890630 675	0.5+ 0.6+
890603	675	1.9- 0.0	890605	675	0.4+	1.2+	890703 675	0.0 1.2-
890603	675	2.6- 2.4-	890605	675	2.2+	1.2-	890703 675	0.1- 0.1+

1989 LM = 1971 BX3 = 1983 VM2 = 1986 RM13 = 1986 SP1
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Marsden
M 14.84819 (1950.0) P Q
n 0.28515348 Peri. 356.24614 +0.14477163 +0.98567238
a 2.2860434 Node 282.06336 -0.90545076 +0.09669824
e 0.1496155 Incl. 5.07766 -0.39899887 +0.13820064
P 3.46 H 13.5 G 0.25
Residuals in seconds of arc

710129	805	0.3- 0.7-	860929	010(30.0+	3.1+)		890630 675	1.1- 0.9+
831108	381	1.4+ 0.5+	890604	675	0.2+	1.7-	890630 675	0.6+ 1.6+
831108	381	1.2- 0.3-	890604	675	0.1+	1.9-	890703 675	1.6+ 1.6+
860911	095	0.5+ 1.5-	890606	675	0.7-	0.9-	890703 675	0.4- 0.9+
860929	010(29.4+	1.0+)	890606	675	0.1+	0.3-		

1989 LU = 1974 HJ1 = 1982 OH = 1986 TU12
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 335.20375 (1950.0) P Q
n 0.27265158 Peri. 34.85915 +0.87354575 +0.48543607
a 2.3554013 Node 296.06178 -0.45509090 +0.78858347
e 0.1789136 Incl. 2.27325 -0.17265600 +0.37747575
P 3.61 H 13.5 G 0.25
Residuals in seconds of arc

740424	805	0.3+ 0.9+	890603	675	2.0+	1.3-	890630 675	0.8- 2.1+
740425	805	0.4+ 0.7+	890603	675	0.1+	0.5-	890703 675	0.2+ 0.3-
820717	688	0.8- 0.1-	890605	675	0.7-	0.1-	890703 675	(2.8- 5.9+)
820717	688	0.9+ 0.0	890605	675	0.9+	0.9-		
861005	095	0.4- 1.1+	890630	675	1.7-	1.4+		

1989 NA
Epoch 1989 July 13.0 ET = JDE 2447720.5 Marsden
M 358.08960 (1950.0) P Q
n 0.22886911 Peri. 201.83301 +0.46544499 +0.85079435
a 2.6469431 Node 96.64092 -0.77132548 +0.52508814
e 0.4552682 Incl. 14.21696 -0.43407138 -0.02077054
P 4.31 H 15.5 G 0.25
From 16 observations 1989 July 2-27.

1989 OB
Epoch 1989 Aug. 2.0 ET = JDE 2447740.5 Marsden
M 348.11545 (1950.0) P Q
n 0.21676112 Peri. 69.38287 +0.99110588 +0.01001204
a 2.7446172 Node 289.85365 -0.06768109 +0.89649188
e 0.5562652 Incl. 8.11058 +0.11457928 +0.44294703
P 4.55 H 16.5 G 0.25
From 6 observations 1989 July 31-Aug. 3.

2041 P-L = 1290 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 316.02864 (1950.0) P Q
n 0.22633071 Peri. 286.37817 +0.28202844 +0.95940604
a 2.6667026 Node 0.00324 -0.75344475 +0.22149308
e 0.0534659 Incl. 14.80330 -0.59395367 +0.17458769
P 4.35 H 14.5 G 0.25
Residuals in seconds of arc

600924	675	0.1+	0.4-	730919	675	0.8+	0.7+	730929	675	0.3- 0.7+
600926	675	0.1-	1.0-	730920	675	2.1+	0.5-	730929	675	0.6- 0.3+
600928	675	0.6-	0.6-	730924	675	0.8-	1.0+	730930	675	0.5- 0.7-
601017	675	0.2-	0.8+	730924	675	1.2+	0.2-	730930	675	0.9- 1.0+
601022	675	0.6+	1.1+	730924	675	2.0-	1.5+	731004	675	0.6- 1.0-
601025	675	0.3-	0.4-	730924	675	1.1+	0.0	731004	675	0.9+ 0.0
601026	675	0.7+	0.1-	730925	675	0.2-	1.6-	731005	675	0.1+ 1.2-
730919	675	1.5-	0.4+	730925	675	0.6+	1.6-	731005	675	0.2+ 0.1-

2506 P-L = 1183 T-2 = 1986 SR2
Id. C. J. van Houten (k), C. M. Bardwell
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 271.78282 (1950.0) P Q
n 0.22675482 Peri. 315.53371 +0.79075006 +0.61163045
a 2.6633765 Node 6.89418 -0.48754735 +0.65392825
e 0.2102366 Incl. 11.99704 -0.37015122 +0.44529321
P 4.35 H 15.0 G 0.25
Residuals in seconds of arc

600924	675	0.7+	0.9-	730919	675	0.3-	0.4-	730929	675	0.3- 1.8-
600926	675	0.5+	0.7-	730919	675	1.0+	1.5+	730929	675	0.0 2.0+
600928	675	0.4+	1.1-	730920	675	1.5-	1.0-	730930	675	0.8+ 1.4-
600929	675	0.9+	0.6-	730920	675	0.8+	0.2+	730930	675	0.5- 0.9+
601017	675	0.4+	1.0+	730924	675	0.6-	1.5-	730930	675	0.2- 1.4-
601022	675	0.9-	0.8-	730924	675	0.2-	1.9+	730930	675	0.5- 2.0+
601022	675	0.2-	0.8+	730924	675	0.1+	1.3-	731004	675	0.6+ 0.4-
601024	675	1.2-	1.0+	730924	675	0.6+	1.5+	731004	675	0.7+ 2.4-
601025	675	0.5+	0.4+	730925	675	0.8-	0.9+	731005	675	1.0- 0.1-
601026	675	0.1-	0.9-	730925	675	0.8-	1.4-	731005	675	2.0+ 0.4+
601026	675	0.0	0.5+	730925	675	1.4-	1.3+	860929	095	0.2+ 0.2-
730919	675	0.2-	0.1+	730929	675	0.5-	1.2-			
730919	675	0.2+	1.3+	730929	675	0.0	1.3+			

2740 P-L = 3223 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 206.87302 (1950.0) P Q
n 0.22629622 Peri. 243.74842 +0.66100894 -0.74996225
a 2.6669736 Node 164.79305 +0.71792950 +0.62239252
e 0.1040730 Incl. 5.46380 +0.21827600 +0.22401825
P 4.36 H 13.8 G 0.25
Residuals in seconds of arc

600924	675	0.3+	0.2-	730919	675	(0.6+	4.1+)	730924	675	0.2+ 1.2+
600926	675	0.3+	0.7-	730919	675	0.2+	1.0+	730924	675	1.0- 0.7-
600928	675	0.3+	0.0	730920	675	(3.4-	1.0-)	730925	675	0.8+ 1.5+
600929	675	0.1+	0.8-	730920	675	2.0+	0.5+	730925	675	0.0 0.9-
601025	675	1.1-	2.2+	730924	675	1.7-	0.4-	730925	675	1.1- 0.1-
730919	675	2.5-	3.0+	730924	675	0.4-	0.5+	730925	675	(1.6- 3.5-)
730919	675	0.1+	0.8-	730924	675	1.2+	0.7-	730929	675	1.1+ 0.7+
730919	675	2.2+	1.1+	730924	675	0.1-	0.1+	730930	675	1.3- 1.6-

731004 675 0.4- 0.7- 731005 675 0.4- 1.5-
731004 675 0.0 1.5- 731005 675 1.2+ 1.2-

4060 P-L = 2229 T-2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 91.84912 (1950.0) P Q
n 0.22829805 Peri. 291.77340 -0.99199729 -0.12385131
a 2.6513605 Node 241.11954 +0.12370261 -0.91445979
e 0.0356859 Incl. 1.60599 +0.02527939 -0.38525853
P 4.32 H 14.5 G 0.25
Residuals in seconds of arc
600924 675 0.2- 1.3- 730919 675 0.6- 0.2+ 730929 675 0.4- 1.4+
600925 675 0.8- 0.9- 730919 675 0.7- 0.8+ 730930 675 0.4+ 1.6-
600926 675 0.3- 0.7- 730920 675 0.1- 0.5+ 730930 675 0.1- 2.2-
600928 675 0.3+ 0.3- 730924 675 (4.1- 0.2+) 731004 675 0.7- 1.6-
601017 675 0.9- 0.3+ 730924 675 (4.8- 0.9+) 731004 675 0.9+ 1.1-
601022 675 0.0 0.3+ 730925 675 1.9- 1.1- 731005 675 0.8- 1.3-
601024 675 1.3+ 1.7+ 730925 675 0.9- 2.5- 731005 675 0.9+ 1.0-
601026 675 1.2+ 1.5+ 730929 675 0.4- 0.4-

4247 P-L = 1989 GC2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi
M 46.76706 (1950.0) P Q
n 0.26102584 Peri. 303.22210 -0.92984341 +0.36730764
a 2.4248249 Node 258.33577 -0.32972480 -0.85809216
e 0.1290469 Incl. 1.27695 -0.16331807 -0.35883553
P 3.78 H 14.5 G 0.25
Residuals in seconds of arc
600924 675 0.5- 0.0 890403 809 0.4- 0.3- 890408 809 0.7+ 1.4+
600925 675 0.0 0.8- 890403 809 1.2- 0.6- 890408 809 0.8+ 1.3+
600926 675 0.6+ 0.2- 890403 809 0.5- 1.2- 890410 809 0.3- 0.3+
600928 675 0.5+ 0.4+ 890405 809 0.0 0.4- 890410 809 0.6- 0.3-
601017 675 0.6- 0.2- 890405 809 0.1+ 0.1- 890410 809 1.2- 0.4-
601022 675 1.0- 0.2+ 890405 809 0.4+ 0.5-
601026 675 1.0+ 0.6+ 890408 809 1.4+ 0.8+

4821 P-L = 4186 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 235.21536 (1950.0) P Q
n 0.22747376 Peri. 245.89239 +0.90389759 -0.42609743
a 2.6577617 Node 139.29977 +0.41037239 +0.83906238
e 0.1128229 Incl. 3.30125 +0.12067998 +0.33825333
P 4.33 H 14.0 G 0.25
Residuals in seconds of arc
600924 675 2.1- 0.0 600928 675 0.4+ 0.5- 730930 675 (3.4+ 0.6+)
600924 675 1.0- 0.3- 601022 675 0.8- 0.4+ 730930 675 0.1+ 0.8+
600926 675 1.4- 0.1+ 730925 675 (0.8+ 5.3-) 731004 675 0.3+ 0.7+
600927 675 1.7- 0.5+ 730925 675 0.9+ 0.0 731004 675 0.8- 1.2-
600927 675 0.3- 0.2- 730929 675 0.7- 2.1- 731005 675 0.3- 0.0
600928 675 0.6+ 0.0 730929 675 0.1- 0.4- 731005 675 1.6- 0.9-

5016 P-L = 2198 T-2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 107.53352 (1950.0) P Q
n 0.30228670 Peri. 205.56285 -0.77222491 +0.63501485
a 2.1988261 Node 13.91746 -0.56719224 -0.67440349
e 0.1078597 Incl. 4.91599 -0.28628947 -0.37674404
P 3.26 H 16.0 G 0.25

Residuals in seconds of arc

601022	675	0.8-	0.8-		730924	675	(3.0- | 0.8+)	730930	675	0.7+	0.5+
601025	675	1.3+	0.8+		730924	675	(4.0- | 1.3+)	730930	675	0.7-	1.1-
601026	675	0.8-	0.1+		730925	675	2.3-	2.7-	731004	675	0.1+	1.0-
730919	675	0.7-	0.7-		730925	675	0.9-	0.1-	731004	675	0.3-	0.5-
730919	675	0.4-	0.1-		730929	675	0.8-	1.0+	731005	675	1.5+	1.9-
730920	675	1.0-	0.1+		730929	675	2.4-	0.8+	731005	675	0.9+	0.1+

6531 P-L = 3007 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M	302.12420		(1950.0)		P		Q
n	0.30307156	Peri.	19.29959		+0.81706184		-0.57611007
a	2.1950283	Node	15.93903		+0.51757963		+0.71572331
e	0.0684044	Incl.	4.70383		+0.25401040		+0.39476237
P	3.25	H	15.0	G	0.25		

Residuals in seconds of arc

600924	675	0.6-	0.1+		601024	675	1.5-	0.8-	730925	675	1.1+	0.6-
600926	675	0.1+	1.1+		601026	675	1.1-	1.3-	730925	675	0.7+	0.9-
600927	675	0.2-	0.1+		730919	675	1.0+	0.6+	730929	675	0.3-	0.2+
600928	675	0.1-	0.2+		730919	675	0.4-	1.5+	730930	675	0.9-	1.3+
601017	675	0.1+	0.3-		730920	675	1.9+	0.4-	730930	675	1.6-	0.1+
601017	675	0.4-	0.6-		730924	675	1.0-	1.8-	731004	675	0.3+	0.8-
601022	675	1.4-	0.6-		730924	675	0.6+	0.9-	731004	675	0.1+	0.7-

6600 P-L = 3148 T-2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M	135.48657		(1950.0)		P		Q
n	0.30373463	Peri.	136.15545		-0.93846116		+0.34401833
a	2.1918326	Node	63.98951		-0.32553728		-0.85134265
e	0.0632296	Incl.	1.95713		-0.11539552		-0.39606448
P	3.24	H	15.1	G	0.25		

Residuals in seconds of arc

600924	675	0.0	0.6+		730919	675	1.3+	1.4+	730929	675	1.2-	0.9-
600926	675	1.1-	1.0+		730919	675	1.2+	1.9+	730930	675	0.1-	0.0
600927	675	0.2-	0.9+		730920	675	1.7+	0.3+	730930	675	1.2-	0.8-
600928	675	0.2+	1.5+		730924	675	1.4-	1.0-	731004	675	2.3+	1.2-
601017	675	0.5+	1.0+		730924	675	1.1-	0.9-	731004	675	2.1+	1.2-
601022	675	2.1-	0.6+		730925	675	1.1-	1.3-	731005	675	1.4+	0.7-
601024	675	0.3-	1.2+		730925	675	1.2-	0.4-	731005	675	0.9+	1.5-
601026	675	0.7-	1.5+		730929	675	0.0	1.6-				

6602 P-L = 3126 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M	326.22186		(1950.0)		P		Q
n	0.30346829	Peri.	2.31139		+0.97269506		-0.23103761
a	2.1931148	Node	11.12116		+0.21104916		+0.84101007
e	0.1366664	Incl.	6.56254		+0.09655351		+0.48920720
P	3.25	H	16.6	G	0.25		

Residuals in seconds of arc

600924	675	1.8+	0.8-		601017	675	1.7+	1.0+	730919	675	1.0-	1.7+
600926	675	0.6+	1.2-		601022	675	1.2+	2.0+	730920	675	0.1+	0.2-
600927	675	0.6+	0.5+		601026	675	2.7+	2.9+	730924	675	0.2-	1.3+
600928	675	2.2+	0.4-		730919	675	0.4+	1.1+	730924	675	0.0	1.0+

730925 675 0.2- 0.5- 730930 675 0.0 1.5+ 731005 675 0.9+ 1.0+
730925 675 0.7- 0.0 731004 675 0.4- 2.0- 731005 675 2.7+ 0.4+
730929 675 0.7+ 1.4+ 731004 675 2.1+ 2.2+ 731005 675 2.9+ 0.8+
730929 675 0.5+ 0.8+ 731004 675 0.9+ 1.5- 731005 675 0.8+ 1.0+
730930 675 0.7+ 1.5+ 731004 675 2.6+ 0.6+

6676 P-L = 1989 GF6
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 Kobayashi
M 110.77345 (1950.0) P Q
n 0.18992340 Peri. 130.31645 -0.42953900 -0.90303414
a 2.9974393 Node 345.11945 +0.82240059 -0.38885894
e 0.1071360 Incl. 1.12846 +0.37303287 -0.18253235
P 5.19 H 14.5 G 0.25
Residuals in seconds of arc
600924 675 0.3- 0.6- 601022 675 0.5+ 1.2+ 890408 809 0.8+ 0.5+
600926 675 0.1- 0.0 601026 675 0.1+ 0.2- 890410 809 0.5+ 1.1-
600927 675 2.0+ 0.9+ 890408 809 0.1+ 0.4+ 890410 809 0.9+ 0.1-
600928 675 0.5+ 0.1+ 890408 809 0.1+ 0.3- 890410 809 0.6+ 0.5-

7590 P-L = 4198 T-2
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 227.43383 (1950.0) P Q
n 0.22723065 Peri. 11.37342 +0.69557787 -0.71515536
a 2.6596571 Node 34.61889 +0.64927688 +0.58476464
e 0.2874831 Incl. 6.94892 +0.30758896 +0.38288788
P 4.34 H 16.6 G 0.25
Residuals in seconds of arc
601017 675 0.9+ 0.2- 730924 675 0.1- 0.0 730930 675 0.9- 0.1-
601022 675 0.8+ 0.7+ 730924 675 0.7- 2.2+ 730930 675 0.6+ 0.4+
601026 675 0.9+ 0.8+ 730925 675 1.1- 0.4- 731004 675 1.2+ 0.3-
730919 675 1.0+ 0.7- 730925 675 1.1- 0.8+ 731004 675 1.1- 0.1+
730919 675 0.9+ 0.6- 730929 675 1.6+ 0.8- 731005 675 0.3- 0.6+
730920 675 2.6- 0.0 730929 675 1.9+ 2.1- 731005 675 0.7- 1.1+

7643 P-L = 4118 T-2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green
M 273.50894 (1950.0) P Q
n 0.30358498 Peri. 287.47906 +0.21591637 -0.97567921
a 2.1925528 Node 149.97154 +0.92203192 +0.19099291
e 0.1048094 Incl. 4.33403 +0.32130554 +0.10757224
P 3.25 H 15.6 G 0.25
Residuals in seconds of arc
601017 675 0.1- 0.5- 730924 675 0.5- 0.8+ 730930 675 0.9+ 0.7-
601022 675 1.1+ 0.2+ 730924 675 1.1- 0.0 731004 675 0.1- 0.6-
601025 675 0.6+ 0.2- 730925 675 2.0- 0.9+ 731004 675 0.1+ 0.7+
601026 675 1.9- 0.9+ 730925 675 0.5+ 1.1+ 731005 675 0.9+ 1.2-
730919 675 0.9+ 0.4- 730929 675 0.4- 0.6- 731005 675 0.8+ 0.3+
730919 675 1.1+ 0.9- 730929 675 0.1+ 0.3-
730920 675 1.9- 0.6+ 730930 675 0.9+ 0.4-

1050 T-2 = 1981 EY21
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 255.46238 (1950.0) P Q
n 0.17831567 Peri. 272.66767 -0.02037463 -0.99977951
a 3.1261555 Node 178.47183 +0.97619578 -0.02099103
e 0.2351127 Incl. 10.98268 +0.21593210 +0.00056139
P 5.53 H 13.0 G 0.25

Residuals in seconds of arc

730919	675	2.1+	0.7-	730930	675	0.5+	1.1-	810311	413	1.1-	0.6+
730919	675	1.8+	0.7-	730930	675	1.0-	1.2+	810311	413	0.1-	0.0
730920	675	0.6-	0.6-	731004	675	0.9+	0.7-	810316	413	0.3+	0.6-
730924	675	1.0+	1.2-	731004	675	1.0+	0.2-	810316	413	0.8-	0.2+
730924	675	0.5-	0.4+	731005	675	0.5+	0.7-	810329	413	0.7-	0.0
730925	675	2.9-	1.1-	731005	675	0.0	1.1-	810329	413	0.8+	0.4-
730925	675	0.9-	1.5+	810209	413	0.4-	0.2-	810407	413	0.6+	1.1-
730925	675	0.5-	0.5+	810213	413	0.8+	0.0	810408	413	0.2-	2.0+
730925	675	1.3-	1.5+	810302	413	1.9-	1.4+	810408	413	0.9+	0.4+
730929	675	1.5-	0.1-	810302	413	1.1+	0.9-	810411	413	0.5-	0.1+
730929	675	0.3+	0.7-	810303	413	2.1-	1.0+	810411	413	0.9+	0.8-
730929	675	1.2-	0.6+	810303	413	0.1+	0.5-	810426	413	3.7+	3.8-
730930	675	0.5-	0.5+	810307	413	0.6-	0.0	810502	413	1.1-	0.6+
730930	675	0.1-	1.0-	810307	413	0.1+	1.0-				

1179 T-2 = 3217 T-3
Id. C. J. van Houten

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)	Bardwell
M 164.25393	(1950.0)	P	Q
n 0.25735776	Peri. 33.65830	-0.39082350	+0.92030926
a 2.4478158	Node 213.34499	-0.85112987	-0.36834088
e 0.1642469	Incl. 1.76875	-0.35047815	-0.13174162
P 3.83	H 15.0	G 0.25	

Residuals in seconds of arc

730919	675	1.7+	0.3-	731004	675	0.6-	0.2+	771016	675	0.5-	0.7+
730919	675	0.3-	1.5-	731005	675	1.4+	0.2+	771017	675	0.5-	1.2-
730920	675	0.3+	0.7+	731005	675	0.2-	0.3+	771017	675	1.3-	1.8+
730924	675	0.8-	0.5-	771007	675	1.1+	0.1-	771017	675	0.8+	1.1-
730924	675	0.9+	0.6+	771011	675	1.4-	0.6+	771017	675	0.8-	0.6+
730925	675	2.1-	0.6+	771011	675	1.9-	0.6+	771021	675	1.2-	1.6+
730929	675	0.1-	1.4+	771012	675	0.0	0.8+	771021	675	1.7-	0.9+
730929	675	0.6+	0.1+	771012	675	0.7+	0.4-	771022	675	0.3-	2.1+
730930	675	0.8-	0.4+	771016	675	2.4+	2.5-	771022	675	0.6+	0.6-
730930	675	0.9-	0.2+	771016	675	0.3-	1.1+				
731004	675	0.1+	1.5-	771016	675	0.6+	2.9-				

1246 T-2 = 1972 HY = 1981 GT

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)	Bardwell
M 252.82718	(1950.0)	P	Q
n 0.21297111	Peri. 61.33685	-0.25392189	+0.96670833
a 2.7770889	Node 194.06069	-0.92658020	-0.25249362
e 0.1763532	Incl. 7.47395	-0.27743975	-0.04149666
P 4.63	H 13.0	G 0.25	

Residuals in seconds of arc

720419	095	1.1+	0.3+	730929	675	0.3-	1.1+	810405	688	0.6-	0.3-
730919	675	0.4+	0.0	730929	675	0.3+	0.6+	810405	688	0.0	1.7-
730919	675	0.1+	0.2-	730930	675	0.5-	0.5+	810407	688	1.9-	0.4-
730920	675	1.9-	0.6-	730930	675	0.1+	2.5+	810407	688	1.0-	0.3-
730924	675	1.1-	0.2-	731004	675	2.4+	0.7-	810409	688	0.2-	0.6-
730924	675	0.4-	1.0-	731004	675	1.3+	0.8-	810409	688	1.9-	0.2+
730925	675	3.4-	2.2-	731005	675	2.0+	1.0-				
730925	675	0.7-	0.7-	731005	675	2.9+	0.1+				

1309 T-2 = 1951 SN = 1957 UD1 = 1979 VJ3 = 1979 YD2
Id. N. S Chernykh (d), C. M. Bardwell
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M	288.97248	(1950.0)		P	Q
n	0.18117340	Peri.	10.83742	+0.40817416	-0.91243804
a	3.0931950	Node	55.07851	+0.83484833	+0.36015730
e	0.1610303	Incl.	2.03853	+0.36935365	+0.19427697
P	5.44	H	12.5	G 0.25	

Residuals in seconds of arc

510925	839	0.4- 1.1+	730924	675	2.1- 1.4-	730930	675	1.3+ 0.2+
571021	760	0.5- 0.2-	730924	675	0.0 3.0+	730930	675	0.6+ 0.5-
571021	760	0.4+ 0.3+	730924	675	0.2- 0.6-	730930	675	0.1+ 0.5+
730919	675	0.1+ 1.6-	730925	675	0.6- 1.8+	731004	675	0.3- 0.8-
730919	675	0.2+ 0.1-	730925	675	0.8- 0.3-	731004	675	0.6- 1.2-
730919	675	0.2- 1.1-	730925	675	0.5- 0.4-	731004	675	0.3+ 0.9-
730919	675	2.0- 0.9-	730925	675	1.1- 2.5+	731004	675	0.8+ 0.3-
730920	675	0.7- 0.4-	730925	675	0.2- 0.0	731005	675	0.7- 1.2-
730920	675	1.6+ 2.9+	730929	675	1.4+ 0.5-	731005	675	2.6+ 0.2+
730920	675	0.5+ 0.2-	730929	675	0.6+ 0.8+	731005	675	1.4- 0.2-
730924	675	1.5- 1.5-	730929	675	1.0+ 1.8-	731005	675	0.2+ 0.4+
730924	675	1.4+ 2.9+	730929	675	0.3+ 0.2-	791114	095	1.9+ 1.0+
730924	675	1.0+ 0.1-	730930	675	0.5- 0.4-	791223	095	2.0- 0.6-

1317 T-2 = 3731 T-3
Id. C. J. van Houten
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell

M	120.21896	(1950.0)		P	Q
n	0.25435011	Peri.	261.02620	+0.11047380	+0.99341359
a	2.4670747	Node	15.41584	-0.86094173	+0.11094132
e	0.1293335	Incl.	6.56978	-0.49656306	+0.02866133
P	3.88	H	16.5	G 0.25	

Residuals in seconds of arc

730919	675	0.5+ 0.6+	731004	675	0.5+ 0.6-	771012	675	0.8- 1.7+
730919	675	2.6- 0.5-	731005	675	1.9+ 0.3+	771012	675	1.2+ 0.7+
730920	675	0.4+ 0.7-	731005	675	1.3- 0.9+	771012	675	0.3- 0.9+
730924	675	0.7+ 0.6+	771007	675	0.8- 0.9-	771016	675	2.5- 1.0-
730924	675	2.7+ 0.1-	771011	675	1.7+ 0.4+	771016	675	0.2- 0.9-
730929	675	0.7+ 0.2-	771011	675	1.4- 1.6+	771017	675	0.6+ 0.7+
730929	675	0.9+ 0.2+	771011	675	0.5+ 0.7+	771017	675	0.4- 0.2-
730930	675	0.3- 1.1+	771011	675	1.3- 2.4+	771021	675	1.1- 0.7+
730930	675	0.4+ 0.7+	771012	675	3.4+ 2.2+	771021	675	0.7+ 1.7+

2083 T-2 = 1976 GJ5 = 1981 AL2 = 1987 EK = 1987 FM
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M	175.65348	(1950.0)		P	Q
n	0.17542227	Peri.	341.92062	-0.83541785	-0.54959724
a	3.1604367	Node	164.73753	+0.50630662	-0.77272079
e	0.1547182	Incl.	0.97091	+0.21384720	-0.31756174
P	5.62	H	13.0	G 0.25	

Residuals in seconds of arc

730919	675	0.5+ 0.4-	730930	675	0.8+ 0.3-	731005	675	2.2- 1.8+
730919	675	0.6- 1.4-	730930	675	0.9+ 0.3+	760402	095	0.1- 0.6+
730920	675	0.1- 0.9+	731004	675	1.0+ 1.2-	810108	381	0.4+ 0.9+
730924	675	0.1- 0.6-	731004	675	0.4- 2.5+	810108	381	0.2- 1.6+
730924	675	0.8+ 0.3+	731004	675	1.1+ 0.6-	870303	688	(8.6- 1.6-)
730925	675	1.1+ 1.9-	731004	675	0.1- 1.5+	870303	688	0.7- 2.1-
730925	675	0.1- 1.7-	731005	675	1.6+ 1.9-	870321	046	0.9+ 0.7-
730929	675	0.3- 0.3+	731005	675	1.0- 2.2+	870321	046	2.2- 1.0-
730929	675	0.0 0.4-	731005	675	0.7+ 0.9-			

2155 T-2 = 1979 KP
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M 306.56000		(1950.0)	P	Q
n 0.28209935	Peri.	72.87595	-0.23232115	+0.97262835
a 2.3025135	Node	183.69945	-0.91715237	-0.22063302
e 0.1122607	Incl.	4.07035	-0.32381848	-0.07290517
P 3.49	H	15.0	G 0.25	

Residuals in seconds of arc

730919 675	1.7+	0.7+	730929 675	0.6+	0.5+	731005 675	0.3+	0.5+
730919 675	2.4+	0.1+	730929 675	1.4-	0.0	790519 809	2.1-	0.1+
730920 675	0.0	0.0	730930 675	0.6-	0.4-	790521 809	1.7-	0.4+
730924 675	1.2-	1.3+	730930 675	0.5-	0.6-	790523 809	1.6-	1.0+
730924 675	0.4-	1.4+	731004 675	1.4+	1.0+	790523 809	1.7-	0.2+
730925 675	2.0+	1.2+	731004 675	0.1-	0.1-	790524 809	1.3-	0.8+
730925 675	0.7+	0.5-	731005 675	1.3+	0.1+			

2160 T-2 = 1985 VL3 = 1987 GH
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M 250.04214		(1950.0)	P	Q
n 0.17154225	Peri.	3.80479	+0.62941252	-0.77697090
a 3.2079150	Node	47.18894	+0.71246356	+0.57058825
e 0.1894488	Incl.	0.97585	+0.31021855	+0.26597983
P 5.75	H	13.5	G 0.25	

Residuals in seconds of arc

730919 675	0.1+	1.5+	730929 675	0.1+	0.7-	731005 675	1.2-	2.2+
730919 675	1.4+	1.1+	730930 675	0.4+	0.3-	851110 095	0.7+	0.6-
730920 675	0.0	0.2-	730930 675	0.3+	0.9-	851120 095	0.5-	0.6+
730924 675	1.5-	1.0+	731004 675	0.7+	0.4-	870401 675	1.9-	0.3+
730924 675	0.9-	1.2+	731004 675	0.8+	0.2-	870401 675	0.5+	0.4-
730925 675	0.9+	1.0-	731005 675	0.4+	2.0-	870403 675	0.4+	0.2+
730925 675	1.3+	1.5-	731005 675	2.7-	2.5+	870403 675	1.1+	0.9-
730929 675	0.5-	1.3-	731005 675	0.6+	1.4-			

2170 T-2 = 1988 FG3
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M 81.19513		(1950.0)	P	Q
n 0.24203974	Peri.	60.28390	-0.40430613	+0.91425195
a 2.5500330	Node	186.04669	-0.90113818	-0.40306059
e 0.1362150	Incl.	14.33180	-0.15648175	-0.04105519
P 4.07	H	14.0	G 0.25	

Residuals in seconds of arc

730919 675	0.3+	0.9+	730929 675	0.3-	0.2+	731005 675	2.1-	2.9+
730919 675	0.8+	0.9+	730930 675	0.9-	0.4+	880321 809	1.0-	0.9+
730920 675	0.1+	1.5-	730930 675	0.5-	0.9+	880321 809	0.2-	0.1+
730924 675	1.1-	0.8+	731004 675	1.5+	0.0	880321 809	0.1-	0.6+
730924 675	0.7-	0.7+	731004 675	1.3+	0.7-	880322 809	1.1+	1.7-
730925 675	0.1-	1.3-	731005 675	0.7+	2.2-	880322 809	0.2-	0.0
730925 675	1.1+	1.7-	731005 675	(1.9-	4.3+)			
730929 675	0.7-	0.1-	731005 675	0.4+	0.2-			

2224 T-2 = 1978 RC2
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Green

M 59.53108		(1950.0)	P	Q
n 0.19464342	Peri.	324.34705	+0.99442137	-0.10176908
a 2.9487895	Node	41.52116	+0.10385290	+0.89861412
e 0.0794550	Incl.	2.39786	+0.01845865	+0.42677361
P 5.06	H	14.0	G 0.25	

Residuals in seconds of arc

730919	675	0.2+	0.6+	730925	675	0.8-	2.0+	731004	675	1.2-	2.7+
730919	675	1.1-	1.6+	730929	675	0.5+	1.6-	731004	675	0.0	0.6+
730920	675	0.5+	0.4-	730929	675	1.4+	1.2-	731004	675	0.9-	1.7+
730924	675	0.4-	0.2+	730929	675	0.8-	0.8-	731005	675	1.9+	1.2-
730924	675	0.2+	0.2-	730929	675	2.0+	2.4-	731005	675	1.8-	1.7+
730924	675	0.8-	0.7+	730930	675	0.3+	2.1-	731005	675	0.3+	1.5-
730924	675	0.2-	0.9+	730930	675	1.7+	1.8+	731005	675	2.2-	1.2+
730925	675	0.3+	1.9-	730930	675	0.5+	1.9-	780907	095	0.9+	0.9+
730925	675	0.9-	2.1+	730930	675	2.2+	3.1+	780912	095	0.6-	0.6-
730925	675	1.6+	2.8-	731004	675	0.4+	0.8-				

2225 T-2 = 3087 T-3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 198.15107		(1950.0)	P	Q
n 0.25584407	Peri.	201.40149	-0.79340973	+0.60859767
a 2.4574613	Node	16.10000	-0.55280157	-0.71324834
e 0.1347256	Incl.	2.16620	-0.25477719	-0.34768618
P 3.85	H	15.0	G 0.25	

Residuals in seconds of arc

730919	675	0.6-	0.3-	730929	675	1.5-	1.2+	771012	675	0.8-	0.8+
730919	675	0.4+	0.2-	730930	675	0.1+	1.1+	771016	675	1.0+	1.8-
730920	675	1.0+	1.4-	730930	675	0.6-	0.4+	771016	675	1.3+	2.1-
730924	675	(2.6-	1.5+)	731004	675	1.6+	0.4-	771017	675	1.6+	0.0
730924	675	(2.3-	2.9+)	731004	675	1.2+	0.3+	771017	675	0.1+	0.3-
730925	675	0.2+	0.1+	731005	675	1.6+	0.5-	771021	675	1.6+	0.0
730925	675	1.3-	1.4-	731005	675	1.9+	0.9-	771021	675	0.3+	1.0+
730929	675	0.1-	1.3+	771012	675	1.5-	0.8+				

2257 T-2 = 3028 T-3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 298.65515		(1950.0)	P	Q
n 0.25452474	Peri.	108.02890	-0.64340575	-0.76519316
a 2.4659461	Node	22.06557	+0.67765640	-0.58300908
e 0.1299962	Incl.	3.44121	+0.35610510	-0.27309309
P 3.87	H	15.0	G 0.25	

Residuals in seconds of arc

730919	675	0.5+	1.4+	730930	675	1.3+	1.4-	771016	675	0.2-	0.0
730924	675	1.5-	0.3+	730930	675	0.8+	0.5-	771017	675	0.2-	1.1+
730924	675	0.0	0.9+	731004	675	0.5+	1.4+	771017	675	0.7-	0.3+
730925	675	1.4+	1.6-	731004	675	0.4-	0.4+	771021	675	0.4+	1.6+
730925	675	1.8+	2.3-	731005	675	1.1-	0.8-	771021	675	0.9+	0.6+
730929	675	0.8-	2.3+	731005	675	0.9+	1.2+	771022	675	0.0	2.3-
730929	675	0.8-	0.9+	771016	675	0.9+	0.7+	771022	675	1.1-	0.5-

2277 T-2 = 1978 VA10

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 225.84022		(1950.0)	P	Q
n 0.22041132	Peri.	316.53247	+0.97008854	+0.24090943
a 2.7142363	Node	29.56602	-0.20285501	+0.87203725
e 0.0990442	Incl.	3.46794	-0.13333441	+0.42604422
P 4.47	H	14.5	G 0.25	

Residuals in seconds of arc

730920 675	1.5+	0.1-	730930 675	0.2+	1.5-	731005 675	0.8-	0.8+
730924 675	1.9-	1.5+	730930 675	1.9+	0.8+	731005 675	0.7+	0.6-
730924 675	1.8-	2.3+	730930 675	0.8-	0.6+	731005 675	1.7-	1.6+
730925 675	0.6+	2.8-	730930 675	0.7+	1.8+	781105 675	1.0-	0.5-
730925 675	1.6+	1.2-	731004 675	0.6+	0.6-	781106 675	0.9+	0.0
730929 675	0.7-	0.7+	731004 675	(0.2-	3.6+)	781107 675	0.7-	0.5+
730929 675	0.6+	1.6-	731004 675	0.4+	0.1+	781108 675	1.3+	0.7+
730929 675	1.0-	0.7+	731004 675	1.1-	1.1+			
730929 675	1.3+	1.0-	731005 675	0.8+	1.6-			

3060 T-2 = 3317 T-3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 308.38485		(1950.0)	P	Q
n 0.25826147	Peri.	64.51482	-0.71622013	-0.69615955
a 2.4421022	Node	71.32212	+0.62029012	-0.66713691
e 0.1561838	Incl.	2.95847	+0.31979508	-0.26512305
P 3.82	H	15.0	G 0.25	

Residuals in seconds of arc

730919 675	0.7+	1.2+	731004 675	0.3+	1.6+	771012 675	0.1-	1.0-
730919 675	0.9-	0.2+	731004 675	0.2+	1.4+	771012 675	1.0+	1.2-
730920 675	0.4-	0.4+	731005 675	(2.3+	2.2-)	771012 675	0.0	0.7-
730924 675	1.0-	0.1+	731005 675	1.9+	0.0	771016 675	0.3-	0.1+
730924 675	0.3+	1.3-	771007 675	0.7-	0.5-	771016 675	0.5-	0.3+
730925 675	0.4+	1.9-	771007 675	0.4+	1.8-	771016 675	1.2-	0.2-
730925 675	(0.7+	2.7-)	771011 675	(2.4-	2.2+)	771016 675	0.1-	1.0+
730929 675	0.2+	0.7+	771011 675	1.3+	1.2+	771017 675	1.1-	0.7-
730929 675	0.2-	0.4-	771011 675	(2.2-	2.5+)	771017 675	1.1-	0.1+
730930 675	1.3-	1.7-	771011 675	1.0+	2.3+			
730930 675	0.6-	0.5+	771012 675	1.2+	0.2-			

3067 T-2 = 1979 MN6 = 1986 TV4 = 1988 FL

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 161.60566		(1950.0)	P	Q
n 0.30690169	Peri.	60.47758	-0.97641197	+0.21399003
a 2.1767275	Node	131.86263	-0.20904970	-0.90359005
e 0.0685578	Incl.	2.21421	-0.05401747	-0.37112436
P 3.21	H	15.0	G 0.25	

Residuals in seconds of arc

730919 675	0.5-	2.0+	730930 675	0.7-	0.4+	790724 413	0.9-	1.3-
730919 675	1.5-	0.7+	731004 675	1.9+	1.0-	790725 675	2.6+	0.6+
730920 675	0.2+	0.7+	731004 675	1.7+	0.1-	790727 675	3.0+	1.3-
730924 675	1.8-	1.2-	731005 675	0.5+	2.1-	790823 675	0.6-	0.2-
730924 675	0.3+	0.6-	731005 675	1.2+	0.7-	861001 010	(8.3-	2.3+)
730925 675	0.5+	1.7-	790623 413	0.7-	0.8-	861001 010	1.0-	3.3+
730925 675	0.2+	0.6-	790624 413	2.5-	1.5-	880317 399	0.8-	1.1+
730929 675	0.9-	0.2-	790625 413	0.8-	0.6-	880317 399	(5.0-	2.6-)
730929 675	0.2+	0.9-	790629 413	0.1+	0.9-	880317 399	0.7+	1.9-
730930 675	1.0-	0.3-	790724 675	1.0+	0.7+			

3076 T-2 = 1984 SL6

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 190.76067		(1950.0)	P	Q
n 0.17953515	Peri.	71.11866	-0.82639126	-0.56199700
a 3.1119832	Node	74.67295	+0.50190631	-0.76346617
e 0.1083765	Incl.	2.08980	+0.25527932	-0.31824327
P 5.49	H	12.5	G 0.25	

Residuals in seconds of arc

730919	675	1.8-	1.2-		731005	675	1.5-	1.6-		840927	809	0.6-	0.1+
730919	675	2.9-	0.4+		731005	675	1.0-	1.8-		840928	809	0.9-	0.8+
730920	675	0.8-	1.5-		840923	809	0.9+	0.8-		840928	809	0.9-	0.8+
730924	675	1.3+	2.2-		840923	809	0.9+	0.6-		840928	809	1.2-	0.8+
730924	675	0.3+	0.9-		840923	809	1.1+	0.2-		840929	809	0.3+	0.1+
730925	675	2.5+	0.9-		840926	809	0.3+	1.0+		840929	809	0.4+	0.1+
730925	675	1.7+	0.1+		840926	809	0.5+	1.0+		840929	809	0.4+	0.1+
730929	675	0.5+	0.5-		840926	809	0.5+	0.9+		840930	809	2.3-	0.4-
730929	675	1.0+	0.5+		840927	809	0.4+	0.7+		840930	809	2.1-	0.5-
730930	675	0.5+	1.5+		840927	809	0.6+	0.6+		840930	809	1.8-	0.4-
730930	675	0.7+	0.4-		840927	809	0.9+	0.8+		841001	809	1.2-	1.1+
731004	675	1.5+	1.3-		840927	809	0.8-	0.6+		841001	809	1.1-	0.9+
731004	675	2.0+	1.9-		840927	809	0.7-	0.4+		841001	809	1.0-	0.9+

3137 T-2 = 1971 FQ = 1982 HU2 = 1988 PG3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5	(J-P)	P	Green Q
M 122.21743	(1950.0)		
n 0.17936910	Peri. 44.24039	-0.90682813	+0.42021190
a 3.1139036	Node 160.53380	-0.40892518	-0.85813929
e 0.0620085	Incl. 5.67175	-0.10219070	-0.29498970
P 5.49	H 12.5	G 0.25	

Residuals in seconds of arc

710319	095(87.5+ 34.0-)		730929	675	0.8+	0.9-		820425	033	1.8-	0.0
730919	675	0.6- 2.4+		730929	675	0.5+	0.1-		820425	033	1.2-	0.8+
730919	675	1.0- 2.1+		730930	675	0.1-	0.1+		820427	033	0.8-	0.6+
730920	675	0.8- 1.5+		730930	675	0.3+	0.3+		820427	033	0.8-	0.5+
730924	675	1.1- 0.2-		731004	675	2.7+	0.2-		880804	413	1.2-	0.3-
730924	675	0.5- 0.3+		731004	675	2.3+	0.8-		880804	413	1.2-	0.5-
730925	675	0.2- 0.6-		731005	675	1.8+	0.4+					
730925	675	0.7+ 1.8-		731005	675	0.7+	1.0-					

3145 T-2 = 1961 CW = 1989 AX3

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5	(J-P)	P	Green Q
M 96.43898	(1950.0)		
n 0.21104172	Peri. 303.53133	+0.33000064	-0.94160552
a 2.7939891	Node 127.05757	+0.89147845	+0.28754903
e 0.1186374	Incl. 4.81045	+0.31042834	+0.17519877
P 4.67	H 14.0	G 0.25	

Residuals in seconds of arc

610215	033 (4.3+ 1.1-)		730924	675	0.8-	0.8-		731004	675	1.7-	2.4+
610215	033	1.2+ 0.8-	730925	675	2.1+	2.2-		731005	675	0.1-	0.7+
610217	033	1.4- 0.5+	730925	675	1.6+	2.2-		731005	675	0.6+	0.2+
610217	033	0.0 0.1-	730929	675	0.7-	1.1+		890104	413	0.7+	0.3+
730919	675	1.2+ 0.8+	730929	675	0.9-	0.6+		890104	413	2.4-	1.5+
730919	675	2.6- 0.4-	730930	675	0.2+	0.4-		890110	413	1.1+	0.5+
730920	675	0.4+ 0.0	730930	675	0.2+	0.3-		890110	413	1.0+	1.3-
730924	675	0.3+ 0.2-	731004	675	(0.3-	3.2+)					

3189 T-2 = 3180 T-3

Id. C. J. van Houten

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5	(J-P)	P	Green Q
M 8.87008	(1950.0)		
n 0.25311656	Peri. 17.15590	+0.71819202	-0.69403719
a 2.4750836	Node 27.00605	+0.62473888	+0.61140428
e 0.1517004	Incl. 6.33773	+0.30643360	+0.38012786
P 3.89	H 16.5	G 0.25	

Residuals in seconds of arc

730919 675	1.5+	0.2-	730930 675	(4.5-	2.4-)	771016 675	0.8-	0.2-
730919 675	0.6+	0.9+	731004 675	0.3+	1.0-	771016 675	0.4+	1.2-
730920 675	1.3+	0.2-	731004 675	0.9+	0.3-	771017 675	1.1-	0.9+
730924 675	2.5-	0.9-	731005 675	0.1+	0.5-	771017 675	0.9-	1.4+
730924 675	0.5-	0.2-	731005 675	0.6+	0.9-	771021 675	0.9-	1.0+
730925 675	(3.1-	1.1-)	771007 675	0.4-	1.2-	771021 675	0.5-	0.7-
730925 675	1.3-	0.5+	771011 675	1.6-	0.9+	771022 675	1.7+	0.7+
730929 675	0.4-	0.0	771011 675	0.1-	0.4+	771022 675	0.9+	1.4-
730929 675	1.5-	0.3+	771012 675	1.0+	1.0+			
730930 675	0.8-	0.6+	771012 675	0.6+	0.2-			

3236 T-2 = 1972 HJ = 1989 GD

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 51.07948		(1950.0)	P	Q
n 0.28674530	Peri.	149.16859	-0.98987992	+0.12230756
a 2.2775751	Node	38.06565	-0.14185983	-0.86601874
e 0.1363202	Incl.	6.70258	+0.00367863	-0.48482204
P 3.44	H	14.0	G 0.25	

Residuals in seconds of arc

720418 095	0.4+	1.0+	731004 675	0.1-	0.9+	890413 391	(1.2+	3.6-)
730920 675	(3.6+	0.6-)	731005 675	2.1+	0.2-	890413 391	(3.7+	2.7+)
730924 675	0.7+	1.2-	731005 675	0.3+	0.3-	890413 391	(5.9+	0.5+)
730924 675	0.1+	0.9-	890402 391	1.0-	0.7+	890413 391	2.7+	0.3+
730925 675	0.2-	1.9-	890402 391	1.3-	0.4+	890413 391	(7.6+	1.7-)
730925 675	0.0	1.3-	890404 391	2.8-	1.9-	890428 391	2.5+	1.1-
730929 675	0.5-	0.8+	890404 391	1.8-	0.4-	890428 391	1.4+	1.4-
730929 675	1.4+	0.5-	890405 391	1.4-	0.5+	890429 391	1.5+	1.5-
730930 675	0.2-	2.7-	890405 391	1.4-	1.4-	890429 391	1.7+	0.3-
730930 675	0.1-	1.7-	890406 391	0.1-	1.3-			
731004 675	0.9+	1.4+	890406 391	2.7-	0.3-			

3289 T-2 = 1983 QN

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 277.05004		(1950.0)	P	Q
n 0.19090495	Peri.	315.42959	-0.56364273	-0.82535425
a 2.9871621	Node	168.74084	+0.79727864	-0.55408010
e 0.0214250	Incl.	9.76771	+0.21599453	-0.10856152
P 5.16	H	13.5	G 0.25	

Residuals in seconds of arc

730919 675	0.0	0.4-	730929 675	0.2+	1.6+	731005 675	1.2-	1.0-
730919 675	1.0-	0.6-	730930 675	0.7+	2.5-	731005 675	1.7+	1.9-
730920 675	1.5-	0.1+	730930 675	0.5-	0.6+	731005 675	0.6-	0.0
730924 675	0.4+	0.2+	730930 675	0.1+	2.4-	830830 675	1.0+	1.5-
730924 675	0.7+	1.9+	730930 675	0.1+	0.9+	830831 675	1.0+	0.2-
730925 675	0.5+	0.3-	731004 675	0.0	1.3+	830901 675	0.1-	0.4+
730925 675	0.6+	0.2-	731004 675	0.0	1.3+	830902 675	0.3-	0.8+
730929 675	0.5+	1.3+	731004 675	0.4-	0.2+	830902 675	0.5-	1.9+
730929 675	0.7-	1.4+	731004 675	0.7+	1.2+			
730929 675	1.1-	0.3+	731005 675	2.0+	1.4-			

4136 T-2 = 1987 KV1 = 1988 RD4

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green
M 91.42105		(1950.0)	P	Q
n 0.19726117	Peri.	306.42592	+0.92625966	+0.37051043
a 2.9226435	Node	31.99231	-0.29041046	+0.81839815
e 0.2133494	Incl.	7.48647	-0.24021824	+0.43925675
P 5.00	H	13.5	G 0.25	

Residuals in seconds of arc

730919 675	0.9+	1.1-	730929 675	1.5+	1.1-	731005 675	1.4-	0.9+
730919 675	0.4+	0.1+	730929 675	0.9+	1.3-	870530 413	3.0+	1.6+
730920 675	1.6-	0.1+	730930 675	0.2-	0.6+	870530 413	2.8-	1.2-
730924 675	0.4+	1.3+	730930 675	0.6+	0.2+	880909 033	0.4+	0.2+
730924 675	0.8-	1.0+	731004 675	0.2-	0.9-	880909 033	0.8-	0.1-
730925 675	1.2-	0.2-	731004 675	0.3+	0.4-	880910 033	0.6+	0.4-
730925 675	0.5+	0.6+	731005 675	0.2-	0.8+			

4171 T-2 = 4386 T-3
Id. C. J. van Houten, D. W. E. Green

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green	
M 155.09428		(1950.0)		P	Q
n 0.25587191	Peri.	119.24677		-0.21753990	+0.97390955
a 2.4572830	Node	138.02828		-0.92566633	-0.18485891
e 0.0831788	Incl.	5.54548		-0.30954520	-0.13163350
P 3.85	H	15.5	G	0.25	

Residuals in seconds of arc

730919 675	1.5+	0.9-	730925 675	1.3-	0.0	771016 675	0.2+	0.2-
730919 675	1.2+	1.1-	730929 675	0.8+	0.8-	771017 675	0.4+	0.7-
730920 675	2.7-	1.2+	730929 675	0.9+	1.2-	771017 675	1.1-	1.7-
730924 675	0.3+	0.6+	730930 675	0.1+	0.9+	771021 675	1.0+	0.1-
730924 675	(0.2+	3.7+)	730930 675	1.2-	1.7+	771021 675	0.7+	0.8+
730925 675	0.2-	0.1-	771016 675	0.5-	0.1+	771022 675	0.7-	1.4+

4829 T-2 = 1975 BS = 1979 FX2 = 1981 UM10 = 1983 EO3 = 1988 RZ1

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green	
M 295.32204		(1950.0)		P	Q
n 0.25869287	Peri.	22.58521		-0.79903368	-0.59786170
a 2.4393864	Node	120.54017		+0.53964928	-0.76004483
e 0.0149878	Incl.	4.26700		+0.26518641	-0.25474153
P 3.81	H	13.0	G	0.25	

Residuals in seconds of arc

730919 675	0.1+	0.3+	730925 675	0.9+	0.3+	880908 046	0.2+	0.4+
730919 675	0.6-	0.8-	750117 095	0.8-	0.2-	880909 046	0.4-	0.7-
730920 675	0.8-	0.7+	790331 095	1.8-	1.0-	880909 046	0.2+	0.2-
730924 675	0.6-	1.5+	811025 330	1.1+	1.3-	880910 046	0.5+	1.8-
730924 675	0.3+	0.4+	830314 095	1.1+	1.9-	880910 046	0.3-	2.1-
730925 675	0.4+	0.4-	880908 046	(3.5-	2.5-)			

5065 T-2 = 1060 T-3
Id. C. J. van Houten

Epoch 1989 Oct. 1.0 ET = JDE 2447800.5		(J-P)		Green	
M 284.59642		(1950.0)		P	Q
n 0.25286578	Peri.	243.88731		-0.58632864	-0.79574518
a 2.4767198	Node	242.84122		+0.79070865	-0.52149263
e 0.0741544	Incl.	9.81581		+0.17606407	-0.30795300
P 3.90	H	15.5	G	0.25	

Residuals in seconds of arc

730920 675	0.3-	1.3-	730930 675	0.5+	0.6+	771012 675	1.2+	1.5-
730920 675	0.4+	1.4-	730930 675	0.8-	0.3-	771012 675	1.6-	1.5-
730924 675	0.2-	0.8-	731004 675	1.1-	1.9-	771016 675	(2.2-	2.5-)
730924 675	1.4-	0.8+	731004 675	1.7+	1.2-	771016 675	0.8-	1.3-
730925 675	0.6+	0.3-	731005 675	0.8+	1.2-	771017 675	1.3+	0.5+
730925 675	(0.9-	2.3-)	731005 675	0.1+	0.3-	771017 675	0.4+	0.3-
730929 675	1.2+	0.5-	771011 675	0.9+	1.5-	771022 675	0.0	0.6-
730929 675	0.5-	1.2-	771011 675	(0.3+	3.3-)	771022 675	(0.5+	2.8-)

1081 T-3 = 1989 LF
Epoch 1989 Oct. 1.0 ET = JDE 2447800.5 (J-P) Bardwell
M 341.72834 (1950.0) P Q
n 0.23434730 Peri. 88.76736 +0.77308752 +0.61147160
a 2.6055352 Node 233.50879 -0.63264470 +0.72412984
e 0.2190167 Incl. 12.10829 -0.04578612 +0.31896467
P 4.21 H 13.0 G 0.25
Residuals in seconds of arc

771007	675	1.6+	1.4-	771017	675	0.0	0.6+	890605	675	0.6+ 0.3+
771011	675	1.1+	0.3+	771017	675	0.1-	1.9+	890630	675	0.9- 0.0
771011	675	0.4+	0.6+	771022	675	1.5-	1.1-	890630	675	0.1- 0.4-
771012	675	0.3+	0.4+	771022	675	0.4-	0.5-	890703	675	0.8- 0.0
771012	675	0.2+	1.0+	890603	675	0.3+	0.4-	890703	675	0.8- 0.0
771016	675	1.4-	0.5-	890603	675	0.5+	1.4-			
771016	675	0.1-	0.2-	890605	675	0.7+	1.2+			

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NEW NAMES OF MINOR PLANETS.

(2650) Elinor = 1931 EG
Discovered 1931 Mar. 14 by M. Wolf at Heidelberg.
Named by the Minor Planet Center in honor of Elinor Gates in appreciation of her assistance in preparing and checking observations as a summer student, 1989 May-August.

(3076) Garber = 1982 RB1
Discovered 1982 Sept. 13 at the Oak Ridge Observatory.
Named in honor of Paul E. Garber, historian emeritus and Ramsey fellow of the Smithsonian Institution’s National Air and Space Museum, on the occasion of his ninetieth birthday and in recognition of his lifelong commitment to aviation and the exploration of both air and space. Citation prepared by J. C. Cornell.

(3737) Beckman = 1983 PA
Discovered 1983 Aug. 8 by E. F. Helin at Palomar.
Named in honor of Arnold O. Beckman, the inventor of the first practical electrical pH meter. Through his personal efforts and accomplishments, he has created scientific instrumentation of extraordinary consequence to the world in the areas of chemistry and medicine. He is an alumnus, former professor and past chairman of the Board of Trustees of Caltech. Beckman and his wife, Mabel, throughout their 63 years of marriage developed a partnership that has made a lasting impact on scientific research and education. This minor planet is named in part to commemorate their immeasurable philanthropic gestures.

(3828) Hoshino = 1986 WC
Discovered 1986 Nov. 22 by K. Suzuki and T. Urata at Toyota.
Named in honor of Jiro Hoshino, an amateur astronomer who has ground more than seven hundred telescope mirrors, one of which is in the telescope with which this minor planet was found. Formerly a public officer in Fukuoka prefecture, he is author of "How to make a reflecting telescope" and "Album of astrophotography".

(3947) Swedenborg = 1983 XD
Discovered 1983 Dec. 1 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.
Named for Emanuel Swedenborg (1688-1772), Swedish scientist, philosopher, poet and theologian. Swedenborg began publication of Sweden’s

first scientific journal in 1715. His work on the philosophy of nature included a cosmological theory that was a precursor to the now widely accepted Kant-Laplace nebular theory. Soon after his death, Swedenborg societies were formed to study his thoughts, which he had published in numerous Latin volumes. His ideas have been a source of inspiration for many prominent writers, including Honore de Balzac, Charles Baudelaire, Ralph Waldo Emerson and William Butler Yeats. Name suggested and citation provided by C. J. Cunningham.

(3953) Perth = 1986 VB6

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

Named for the Perth Observatory in recognition of its many notable contributions to astronomy. These have included the Perth 70 catalogue, co-discovery of the rings of Uranus, and extensive work on Comet Halley during both its 1910 and 1986 apparitions. Founded in 1896 on Mount Eliza, overlooking the city of Perth, Western Australia, the observatory initially undertook timekeeping, weather reporting and seismographic monitoring, as well as telescopic observations for such programs as the Carte du Ciel and the Astrographic Catalogue. City expansion and a need for darker skies led to a move to the Darling Range, east of Perth, in 1965. Current work includes astrometry and photometry of solar system objects, particularly minor planets and comets. Citation prepared by P. V. Birch at the request of the discoverer.

(3974) Verveer = 1982 FS

Discovered 1982 Mar. 28 by E. Bowell at the Anderson Mesa Station of the Lowell Observatory.

Named in honor of Arie J. B. Verveer, technical manager of the Perth Observatory, in recognition of his many contributions to research. Since 1974, he has provided wide-ranging support for staff and visiting astronomers. His electronic, mechanical, and computer expertise, together with his broad astronomical knowledge and experience, have made him a great asset to the Observatory. Name proposed by the discoverer, following a suggestion by M. P. Candy, who also prepared the citation.

(4061) Martelli = 1988 FF3

Discovered 1988 Mar. 19 by W. Ferreri at the European Southern Observatory.

Named in honor of Giuseppe Martelli, head of the Space and Plasma Physics Group at the University of Sussex from 1964 to 1986. Martelli pioneered the development and use of explosive accelerating techniques for the study of macroscopic hypervelocity impacts. His experimental and theoretical work constitutes a major contribution to the understanding of impact magnetization of ferromagnetic rocks, a problem particularly relevant to the origin of lunar magnetism. Over the years he has organized numerous series of experiments to study catastrophic fragmentation of free falling bodies, thereby providing experimental input to theories of asteroidal evolution and other impact phenomena of astrophysical interest.

(4076) Dorffel = 1982 UF4

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

Named in memory of Georg Samuel Dorffel (1643-1688), whose computations on the orbit of the great comet of 1680/1681 were the first to be made on the assumption of parabolic motion with the sun at the focus.

(4093) Bennett = 1986 VD

Discovered 1986 Nov. 4 by R. H. McNaught at Siding Spring.

Named in honor of Jack C. Bennett, prominent South African amateur astronomer. Jack Bennett's interest in comets developed from stories told by his mother about seeing Halley's comet in 1910. His dedication to comet searching resulted in an excellent catalogue of southern comet-like objects, discovery of the bright comet 1970 II and also 1974 XV. During routine comet searches he discovered the bright supernova 1968L in M83, the first amateur discovery of a supernova. His interests covered a wide range from involvement in Moonwatch to holding many posts within the South African Astronomical Society, including its presidency. The sight of 1970 II was one of the first and most spectacular astronomical observations made by the discoverer of this minor planet.

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EPHEMERIDES.

1989 JA a,e,i = 1.77, 0.48, 15 Elements MPC 14957

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	08 22	04 40.56	-14 47.3	0.448	1.062	84.0	71.2	17.2
1989	09 01	04 39.15	-12 50.0					
1989	09 11	04 33.90	-11 06.9	0.474	1.191	100.9	56.1	17.1
1989	09 21	04 23.39	-09 28.8					
1989	10 01	04 06.70	-07 45.7	0.482	1.332	124.1	38.5	16.9
1989	10 11	03 44.17	-05 47.1					
1989	10 21	03 18.12	-03 28.9	0.520	1.475	152.0	18.5	16.8
1989	10 31	02 52.19	-00 57.3					
1989	11 10	02 30.03	+01 37.0	0.639	1.613	163.2	10.2	17.1
1989	11 20	02 13.76	+04 04.3					
1989	11 30	02 03.67	+06 20.6	0.850	1.744	143.4	19.7	18.2
1989	12 10	01 59.18	+08 26.5					
1989	12 20	01 59.28	+10 23.7	1.130	1.866	123.8	26.0	19.2
1989	12 30	02 03.00	+12 13.9					
1990	01 09	02 09.61	+13 58.9	1.454	1.980	107.1	28.3	19.9

1989 NA a,e,i = 2.65, 0.46, 14 Elements MPC 14958

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	08 22	20 36.95	-46 43.0	0.543	1.474	141.0	25.6	16.0
1989	09 01	20 48.21	-46 48.6					
1989	09 11	21 01.78	-45 52.7	0.668	1.524	129.9	30.5	16.7
1989	09 21	21 17.11	-44 09.9					
1989	10 01	21 33.52	-41 52.5	0.832	1.594	120.5	32.8	17.3
1989	10 11	21 50.59	-39 10.5					
1989	10 21	22 07.95	-36 12.8	1.032	1.678	111.7	33.4	17.9
1989	10 31	22 25.36	-33 05.3					
1989	11 10	22 42.74	-29 53.1	1.269	1.773	102.7	33.0	18.5
1989	11 20	22 59.99	-26 39.8					
1989	11 30	23 17.08	-23 28.0	1.538	1.875	93.4	31.7	19.0
1989	12 10	23 34.06	-20 19.5					
1989	12 20	23 50.89	-17 15.8	1.832	1.981	83.6	29.6	19.4
1989	12 30	00 07.60	-14 17.8					
1990	01 09	00 24.24	-11 26.0	2.143	2.089	73.5	26.8	19.8

1989 OB a,e,i = 2.74, 0.56, 8 Elements MPC 14958

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	08 22	21 27.95	+09 20.0	0.289	1.282	157.0	17.9	15.2
1989	08 27	21 29.19	+12 31.2					
1989	09 01	21 31.20	+15 38.4	0.270	1.251	150.6	23.3	15.1
1989	09 06	21 34.31	+18 36.7					
1989	09 11	21 38.74	+21 22.2	0.262	1.230	144.8	28.2	15.1

1989 09 16	21 44.68	+23 51.5						
1989 09 21	21 52.22	+26 01.8	0.263	1.219	140.7	31.5	15.2	
1989 09 26	22 01.37	+27 50.7						
1989 10 01	22 12.12	+29 17.1	0.273	1.219	138.6	32.9	15.3	
1989 10 06	22 24.33	+30 21.0						
1989 10 11	22 37.82	+31 03.1	0.291	1.231	138.2	32.7	15.5	
1989 10 16	22 52.26	+31 24.8						
1989 10 21	23 07.34	+31 27.6	0.318	1.252	138.9	31.5	15.7	
1989 10 26	23 22.75	+31 13.9						
1989 10 31	23 38.23	+30 47.0	0.355	1.284	139.5	30.1	15.9	
1989 11 05	23 53.58	+30 10.3						
1989 11 10	00 08.63	+29 27.4	0.405	1.324	139.3	29.2	16.3	

1986 AE a,e,i = 2.73, 0.38, 29 Elements MPC 14948

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 08 22		21 23.89	+23 57.7	1.135	2.034	142.8	17.5	16.1
1989 09 01		21 09.17	+25 29.8					
1989 09 11		20 56.14	+26 17.1	1.120	1.959	134.2	21.6	16.1
1989 09 21		20 46.46	+26 27.1					
1989 10 01		20 41.11	+26 10.8	1.166	1.890	121.2	26.9	16.3

3137 T-2 a,e,i = 3.11, 0.06, 6 Elements MPC 14968

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 08 22		21 46.60	-11 13.0	2.195	3.205	176.1	1.2	16.9
1989 09 01		21 39.60	-12 05.2					
1989 09 11		21 33.56	-12 52.5	2.281	3.215	153.8	7.9	17.3
1989 09 21		21 29.04	-13 31.9					
1989 10 01		21 26.40	-14 01.2	2.465	3.225	132.3	13.3	17.7

3076 T-2 a,e,i = 3.11, 0.11, 2 Elements MPC 14967

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 08 22		22 07.93	-14 33.1	2.438	3.449	177.1	0.8	17.2
1989 09 01		22 00.50	-15 13.2					
1989 09 11		21 53.65	-15 47.2	2.496	3.447	157.3	6.5	17.6
1989 09 21		21 47.99	-16 12.4					
1989 10 01		21 43.96	-16 27.5	2.659	3.444	135.4	11.8	17.9

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
1989 08 22		22 10.94	-14 28.7	2.061	3.071	176.7	1.1	16.6
1989 09 01		22 03.11	-15 09.9					
1989 09 11		21 55.82	-15 44.6	2.084	3.040	157.8	7.2	17.0
1989 09 21		21 49.81	-16 09.4					
1989 10 01		21 45.65	-16 22.6	2.208	3.008	135.8	13.4	17.3

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
1989 08 22		22 13.54	-14 45.3	1.264	2.274	176.1	1.7	17.6
1989 09 01		22 03.42	-15 38.5					
1989 09 11		21 54.42	-16 19.5	1.323	2.285	157.2	9.8	18.1
1989 09 21		21 47.65	-16 44.3					
1989 10 01		21 43.76	-16 51.7	1.473	2.295	135.2	17.9	18.6

2170 T-2 a,e,i = 2.55, 0.14, 14 Elements MPC 14965

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 08 22		22 20.02	+03 24.0	1.497	2.485	163.9	6.5	17.3
1989 09 01		22 12.26	+01 41.2					
1989 09 11		22 05.18	-00 09.7	1.538	2.514	162.0	7.1	17.4

1989 09 21	21 59.68	-01 58.9					
1989 10 01	21 56.37	-03 38.2	1.680	2.544	141.9	14.1	17.9

3067 T-2 a,e,i = 2.18, 0.07, 2 Elements MPC 14967

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 08 22		23 55.39	-02 44.5	1.373	2.308	150.4	12.5	18.2
1989 09 01		23 48.04	-03 46.6					
1989 09 11		23 38.95	-04 57.4	1.311	2.314	174.0	2.6	17.7
1989 09 21		23 29.26	-06 08.1					
1989 10 01		23 20.24	-07 10.2	1.351	2.319	160.6	8.2	18.0
1989 10 11		23 13.04	-07 56.5					
1989 10 21		23 08.44	-08 23.3	1.487	2.323	137.8	16.7	18.5

1988 PB1 a,e,i = 5.21, 0.05, 26 Elements MPC 14951

Date	ET	R. A. (1950)	Decl.	Delta	r	Variation		V
1989 08 22		23 46.37	+31 28.0	4.388	5.095	-0.45	-1.9	17.3
1989 09 01		23 41.92	+31 33.2					
1989 09 11		23 36.82	+31 23.4	4.245	5.089	-0.47	-2.1	17.1
1989 09 21		23 31.47	+30 58.6					
1989 10 01		23 26.27	+30 20.2	4.198	5.083	-0.47	-2.3	17.1
1989 10 11		23 21.63	+29 30.5					
1989 10 21		23 17.90	+28 32.9	4.254	5.077	-0.45	-2.3	17.1

3289 T-2 a,e,i = 2.99, 0.02, 10 Elements MPC 14969

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 10 01		03 29.71	+08 29.2	2.196	2.981	134.1	14.0	18.3
1989 10 11		03 26.60	+07 33.6					
1989 10 21		03 21.41	+06 34.3	2.046	2.976	154.7	8.2	17.9
1989 10 31		03 14.58	+05 35.5					
1989 11 10		03 06.84	+04 42.2	1.997	2.972	167.6	4.1	17.7
1989 11 20		02 59.03	+03 59.3					
1989 11 30		02 52.01	+03 30.5	2.062	2.968	151.8	9.0	18.0
1989 12 10		02 46.50	+03 17.9					
1989 12 20		02 42.98	+03 21.7	2.226	2.964	130.8	14.6	18.3

1988 RR4 a,e,i = 2.67, 0.16, 4 Elements MPC 14952

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 10 21		04 08.11	+14 57.7	2.213	3.072	143.7	11.1	17.3
1989 10 31		04 01.79	+14 25.3					
1989 11 10		03 53.75	+13 50.9	2.092	3.063	166.3	4.4	16.9
1989 11 20		03 44.75	+13 17.2					
1989 11 30		03 35.68	+12 47.4	2.086	3.052	166.0	4.5	16.9
1989 12 10		03 27.47	+12 24.7					
1989 12 20		03 20.88	+12 11.5	2.195	3.039	143.1	11.2	17.2
1989 12 30		03 16.42	+12 09.2					
1990 01 09		03 14.35	+12 17.9	2.393	3.025	121.4	16.1	17.6

(3934) 1987 DF1 a,e,i = 2.59, 0.14, 13 Elements MPC 13850

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989 10 21		04 24.04	+03 35.5	2.116	2.940	138.8	12.9	17.7
1989 10 31		04 18.36	+02 35.0					
1989 11 10		04 10.81	+01 41.3	2.014	2.949	156.5	7.7	17.4
1989 11 20		04 02.10	+00 59.3					
1989 11 30		03 53.09	+00 32.9	2.019	2.956	157.9	7.2	17.4
1989 12 10		03 44.72	+00 24.7					
1989 12 20		03 37.81	+00 35.0	2.133	2.961	140.8	12.1	17.7
1989 12 30		03 32.89	+01 02.2					
1990 01 09		03 30.28	+01 43.6	2.334	2.965	121.2	16.5	18.1

(3894) 1980 PQ2 a,e,i = 2.63, 0.17, 13 Elements MPC 13587

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	10 21	04 24.09	+02 02.2	1.511	2.351	138.5	16.3	15.6
1989	10 31	04 19.05	+00 40.2					
1989	11 10	04 11.66	-00 30.1	1.450	2.384	154.9	10.2	15.4
1989	11 20	04 02.88	-01 21.4					
1989	11 30	03 53.87	-01 48.2	1.485	2.418	155.7	9.7	15.4
1989	12 10	03 45.83	-01 48.3					
1989	12 20	03 39.71	-01 23.3	1.617	2.453	139.9	15.0	15.8
1989	12 30	03 36.09	-00 37.0					
1990	01 09	03 35.19	+00 25.6	1.828	2.489	121.7	19.6	16.3

1979 SG a,e,i = 2.79, 0.08, 13 Elements MPC 14945

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	10 21	04 31.08	+39 39.1	1.879	2.653	132.2	16.1	16.8
1989	10 31	04 25.70	+40 32.0					
1989	11 10	04 17.19	+41 07.7	1.733	2.639	150.4	10.7	16.4
1989	11 20	04 06.40	+41 20.8					
1989	11 30	03 54.67	+41 08.7	1.680	2.627	159.6	7.5	16.2
1989	12 10	03 43.66	+40 32.9					
1989	12 20	03 34.80	+39 39.9	1.733	2.615	147.4	11.7	16.4
1989	12 30	03 29.05	+38 38.0					
1990	01 09	03 26.86	+37 35.6	1.876	2.605	128.5	17.2	16.7

1978 PR4 a,e,i = 2.24, 0.10, 5 Elements MPC 9424

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	10 21	04 35.34	+24 31.5	1.615	2.432	136.2	16.5	17.2
1989	10 31	04 29.62	+24 46.0					
1989	11 10	04 20.79	+24 52.3	1.469	2.420	159.2	8.4	16.8
1989	11 20	04 09.70	+24 49.0					
1989	11 30	03 57.63	+24 36.0	1.423	2.406	173.7	2.6	16.4
1989	12 10	03 46.19	+24 16.3					
1989	12 20	03 36.80	+23 54.7	1.488	2.390	149.8	12.0	16.9
1989	12 30	03 30.42	+23 36.3					
1990	01 09	03 27.51	+23 25.4	1.644	2.373	127.3	19.2	17.3

1988 RN4 a,e,i = 2.58, 0.26, 11 Elements MPC 14952

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	10 21	04 36.63	+36 47.1	2.460	3.216	132.4	13.2	18.2
1989	10 31	04 29.86	+37 10.5					
1989	11 10	04 20.71	+37 20.2	2.318	3.230	152.7	8.1	17.9
1989	11 20	04 09.97	+37 13.4					
1989	11 30	03 58.64	+36 49.4	2.283	3.242	163.9	4.8	17.7
1989	12 10	03 47.93	+36 10.3					
1989	12 20	03 38.86	+35 21.1	2.365	3.250	149.4	8.9	18.0
1989	12 30	03 32.12	+34 27.5					
1990	01 09	03 28.12	+33 35.3	2.549	3.256	128.7	13.6	18.3

(3937) 1932 EO a,e,i = 3.07, 0.04, 9 Elements MPC 14004

Date	ET	R. A. (1950)	Decl.	Delta	r	Elong.	Phase	V
1989	10 21	04 31.58	+32 27.7	2.204	2.991	134.9	13.6	16.6
1989	10 31	04 26.42	+32 55.3					
1989	11 10	04 18.87	+33 11.6	2.055	2.985	155.6	7.9	16.2
1989	11 20	04 09.63	+33 14.3					
1989	11 30	03 59.69	+33 02.7	2.010	2.980	167.5	4.1	16.0
1989	12 10	03 50.23	+32 38.5					
1989	12 20	03 42.31	+32 06.0	2.079	2.976	150.7	9.3	16.3
1989	12 30	03 36.68	+31 30.2					
1990	01 09	03 33.80	+30 56.2	2.245	2.972	129.7	14.7	16.6